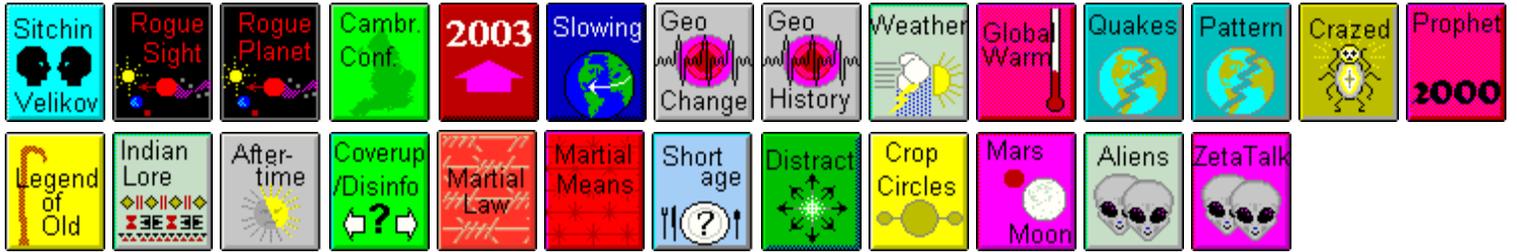


Troubled Times



The Word



Click on the icons above to go to your area of interest.



Troubled Times



TOPIC: Sitchin and Velikovsky

Are the wide spread predictions of a Millennium Comet based on fact? [Zecharia Sitchin](#) wrote the book [The 12th Planet](#), documenting that Nibiru makes periodic visits in comet fashion every [3,600 Years](#), and the [Earth Chronicles](#) book. Regarding the [Return of Nibiru](#), Sitchin is [Noncommittal](#). [Sitchin](#) defends against [Disinfo](#). His books are published by Avon Books, and his theories echoed by many other [Authors](#). [Immanuel Velikovsky](#) wrote three controversial books, [Worlds in Collision](#) in 1950, [Ages in Chaos](#) in 1952, and [Earth in Upheaval](#) in 1955. He wrote the last, which documented geological changes, to support his first two books, which documented folklore on a [Rotation Stoppage](#), [Upheaval](#), [Rotation Restart](#), [Crust Shift](#), [Tipped World](#), [New Calendar](#), [New Sky](#) and a [New Day](#) in the past. His work met with irrational ridicule that frankly disgusted many including [Carl Sagan](#). Judge for yourself. Visit web sites maintained by fans, which include the [Fortean Times](#), and a Velikovsky [Archive](#). Velikovsky's books are reprinted and offered by: **Buccaneer Books, Inc.**, P.O. Box 168, Cutchogue, New York 11935. The [Supplement](#) in Velikovsky's last book is more relevant today than in the past.

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TOPIC: **Rogue Sighting**

ZetaTalk states this is a [Comet Visible](#) and states 2003 will be the next passage, with unaided eye visibility by [April, 2003](#). The Zetas provided the [Path](#) of this inbound planet and the degree of [Variance](#) from this graphic of the path to anticipate. For those doing a serious look, the Zetas have provided the [Coordinates](#) ([Convert](#) to degrees), and the [Visibility Factors](#) (including [Offset](#) factor), and the latest sci.astro [Viewing Specs](#) on the [Smoldering](#) and [Red](#) nature of the planet, viewing [History](#), [Passage](#), summarize it all. Viewing in 2000 and 2001 are aided by [Side of the Eye](#) viewing. During May-June, 2002 the spot was [In The Sun](#), but could be viewed by amateurs by [Fall, 2002](#). An observatory [Sighting](#) was first made based on these Zeta coordinates on Feb 7, 2001, followed by a [Second](#) sighting on April 1, 2001. The Zetas explain, [Why Now?](#) A [Third](#) sighting encountered stalling, and the Zetas explain, [Why Stalling?](#) On Jan 5, 2002, [Imaging](#) began, a [New Object](#), [Absent](#) before, identified at the Zeta coordinates, and on Jan 19, 2002 a [Second Image](#) showed the object [Moving](#). Details on these and subsequent sightings on the [TEAM](#) page. It approaches from Orion at an ultimate [32 Degree Angle](#) to the ecliptic, assuming a [Retrograde Orbit](#). The riddle of why Sitchen feels it may approach from [Sagittarius](#) has been solved. The [Point of Passage](#) has been diagramed. The 12th Planet has a [Reddish Glow](#) and has a visible [Magnitude](#), though until 6 months before passage will not be that [Bright](#) due to its [Distance from Earth](#). The Troubled Times TEAM established to search for the 12th Planet has calculating the passage based on a [Table of Distance](#) based on [Variables](#) in an [Equation](#) taking into consideration the [Orbit](#) and [Transit Time](#). A pending [Asteroid Pass](#) points the public to [Orion](#), encouraging a [Look-See](#). Download a trial copy of [SkyMap](#) or get an [Actual Photo](#) or [Live View](#) of the sky.

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TOPIC: **Rogue Planet**

During the 1980's newspapers frankly carried articles about the [Historical](#) search for [Planet X](#), also known as Nibiru by the ancient [Sumerians](#) or as Marduk or the [Dark Star](#), which became a [1983 Discovery](#). [Infrared Scrutiny](#) continues however, in spite of [NASA Denials](#) and [IRAS Denials](#), with the [Hubble](#) and a scope in [Hawaii](#) recently outfitted and a computer [Model](#) attesting to its existence. A [Pope-Scope](#) points toward Orion and a [Pioneer Probe](#) diagram attests to its existence too. A synopsis of information on this [Traveling](#) planet and it's [Orbit](#), [Passage](#), [Turn-Around](#) and [Return](#) has been compiled. [Bodes Law](#) points to such an additional planet, and there is a lean in the direction of [Orion](#). Wandering [Asteroids](#) and [Comets](#) point to past passages. Such long [Elliptical Orbits](#), like a recently discovered [New Mini-Planet](#), are now even considered [Normal](#). [Wandering](#) or [Migrating](#) planets, or [Brown Dwarfs](#) or [Methane Dwarfs](#), which are [Common](#) and even [Nearby](#), and the [Definitions](#) not clear. Planets in a [Binary System](#) are also not unknown, and as our [Comets](#) pull in the direction of Orion, our sun is suspected of being a Binary too, as NASA admits. There are [Life Bearing](#) wanderers, and [New Planets](#) are being discovered lately outside of the solar system. Are we being prepared for an announcement? By late 2001, [Russian Billboards](#) were hinting at this, and by early 2002 a [UN Site](#) made mention. Sitchin reported [Correlations](#) between [Planet X](#) and the 12th Planet, and [Alford](#) also links a passage to [The Flood](#).

Troubled Times



TOPIC: Cambridge Conference

[Abstracts](#) are available from a 1997 [Cambridge Conference](#) which proposed a giant comet explanation and presented the following findings:

- [Mammoth](#)
- [Garuda](#)
- [Bible](#)
- [Volcanic Disasters](#)
- [Climate Changes](#)
- [Civilization Collapse](#)
- [Ireland Tree Rings](#)
- [Cosmic Dust](#)
- [NEO News](#)
- [Skeptical Inquirer](#)
- [Andean Civilization](#)
- [Astrophysics](#)
- [Thera Catastrophy](#)
- [William Beaumont](#)
- [Beaumont/Velikovsky](#)
- [Clementine](#)
- [Popocatepetl](#)
- [Shaky End](#)
- [Sea-Floor Dust](#)
- [Climate Change](#)
- [Tektites](#)
- [Global Disaster](#)
- [Greenland Ice](#)
- [Jewish Exodus](#)
- [Volcanic Eruptions](#)
- [No Impact](#)
- [Noah's Arc](#)
- [10th Planet](#)

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TOPIC: 2003 Pointers

Bob Dole pushed for an operational [Star Wars](#) by the year 2003, [Missile Defense](#) and [Asteroid Defense](#) is to be operational by 2003, the [NASA Q&A](#) site indicating anxiety over an asteroid strike in 2003, comet smashing operation [Deep Impact](#) to be ready by 2003, and the possibility of a [Mars Passby](#) in 2003 causing a pole shift. Where the NASA 1997 [Launch Manifest](#) used to show no activity beyond 2003, the [Space Station](#) is to be dedicated in 2003, the [Mars Express](#) must be ready by June 2003, and is a [Return Flight](#). [Air to Breathe](#) and [Propellant](#) on Mars are to be created by 2003, and a [Space Escape](#) is available for the rich by 2003, with [European](#) participation and [Human Exploration](#), the mission [Postponed](#) until 2003 in spite of [Setbacks](#), with [Enhanced Telecom](#) by 2003. Lawrence Livermore is developing a [Crystal Laser](#) by 2003, the [SOHO Sunscan](#) continued to 2003, the [Solar Cycle](#) moved to 2003, space [Interferometers](#) and a mission to [Europa](#) launched in 2003, [Sea Launch](#) of satellites expanded to 2003, NASA's [GIFTS Mission](#) targeting early 2003, and an [ESA Rendezvous](#) with a comet is planned for 2003.

A pattern of pointers to the year 2003 can be found in plans laid by the establishment. Weinberger predicts a [War with Mexico](#) in 2003, and the Russian predict [Disaster](#) in 2003. Recently the Pentagon included a [20 Billion Stash](#) in their budget to prepare for the year 2003, [PDD 63](#) ensuring infrastructure protection by 2003, the [DoD Records](#) are to be consolidated by 2003, [Base Closings](#) by 2003, and [Navy Plans](#) show them intent on refurbishing their ships by 2003. Both super powers agreed in [Start II](#) to reduce their [Nuclear Weapons](#) by 2/3 by the year 2003, including nukes in [Russian Subs](#), [Nuclear Wastes](#) stored in Nevada by 2003, with [Monitoring](#) in place by 2003, the [ABM System](#) is to be in place by 2003, [SAFTA](#) is to be in place by 2003, [Land Mines](#) are to be eliminated by 2003, and disposing of [Biological Weapons](#) scheduled for late 2003 but with a [Catch](#). [Medicare](#) is expected to go bankrupt in 2003, [Social Security](#) eligibility changes are pushed past 2003, a [Balanced Budget](#) is pushed past 2003 as is [NOx Compliance](#), the [Alaska Coffers](#) empty by 2003, electric utility [Deregulation](#) targets 2003, and [Fuel Cells](#) cost effective by 2003. Japan's [IRIS](#) launched in early 2003, reform of [Japan's Finances](#) targets 2003, the massive Chinese [Yangtze Dam](#) to be in place by 2003, the European [Framework Program](#) changed to be completed by 2003, German [Nuclear Plants](#) closed by 2003, an international [Search and Rescue](#) agreement is in place through the year 2003, and [Firearms Registration](#) in Canada must be complete by the year 2003.

[Hoagland](#) has insider info on a 2003 catastrophe, Sylvia Browne's [Mayan Calendar](#) puts 2003 at the end date, and a [Baktun Analysis](#) confirms this, and the [Great Pyramid Dateline](#) does not go past 2003, [Russian Rumors](#) cite the end of the world in 2003, and a [Ghostwolf Prophecy](#) predicts a pole shift in 2003 with several days of darkness.

Troubled Times



TOPIC: Slowing Rotation

A slowing rotation is a [Prelude](#) to the rotation stoppage that occurs during the passage of the 12th Planet. By April, 2003, [Seconds/Day](#) was the slowing rate, but by May the Navy realized it had [Gone Too Far](#). At the start of 2003, by comparing [Old Data](#) to new data, [Lost Minutes](#) were noted for [Moon Phases](#) and [Sun Rise/Set](#), confirmed by [Star Position](#) changes and [Clock Comparisons](#) were obvious, and others, including [Sprint](#), noted these [Clock Differences](#) with the atomic clock maintained by the Navy. The Earth's slowing rotation is [Measureable](#) and [Recorded](#), with [Past Adjustments](#) on [Leap Seconds](#) since [1972](#) standing as a basis of comparison. [Dropping](#) leap seconds was proposed recently by the [Navy](#). The [Lunar Month](#) can be used as a basis of comparison, too, as it will and has become [Shorter](#). For the 1990's, the [Navy Stats](#), available for [Full Moon](#), [Earth Orbit](#) and [Equinox](#), show an [Aberation](#) indicating [Manipulation](#) of data, [Not Present](#) in earlier data, and the [Formula](#) for the equinox changed. Analyzing data from 1950 shows the [Equinox Trend](#), and [Full Moon Trend](#) being [Adjusted](#). An analysis from the [Prior Shift](#) gives evidence of a slowdown then. Where [Atomic Clocks](#) are deemed the most accurate, the Navy can [Reset](#) them. Another proof can be gained by [Sighting Stars](#), and the [Earth Rotation Service](#) based on this shows a distinct slowing trend. The slowing trend is being attributed to [Global Warming](#). [Satellites](#) will be affected. A Troubled Times team member suggests an experiment using [Clocks](#), set [Times](#), and a standard [Method](#). [Battery Life](#) differs by battery type. Government reporting, such as the [IERS](#) or [NEOS](#), is subject to disinformation unlike other methods such as the [Superfluid SQUID](#). Excuses, such as the [El Nino Excuse](#), are also proffered. A Troubled Times [TEAM](#) has been formed to keep an eye on these matters, and has discovered a [Slowing Trend](#) due to atomic clock changes, as noted in charts on Watched Clocks [A1](#), [A2](#), [A3](#); Majority Clocks [B1](#), [B2](#), [B3](#); Casio Wristwatch [C1](#), [C2](#), [C3](#); and Summary [D1](#) and Projection [D2](#), [D3](#) by May 15, 2003, so that [Future Trends](#) can be hypothesized.

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TOPIC: Geo Change

The [Slowing Rotation](#) of the Earth is linked to the rotation of the [Core of the Earth](#), which drives the rotation, by 2003, obvious as [Lost Minutes](#). Concurrently, the core of the Earth is exhibiting [Magnetic Dispersion](#), and [Magnetic Decay](#), the reason for [GPS Satellites](#) and detectable by [Fluxgate](#), creating fears of a magnetic [Field Failure](#), by late 2002, [Dramatic](#). This [Magnetic Confusion](#) is reflected in [Bee Hive](#) behavior, [Confused Pigeons](#), and [Satellite Malfunctions](#). The swirling core is causing wandering hotspots, [Hot Rocks](#) and [Ocean Warming](#), from the [Bottom Up](#), not admitted until [Early 2002](#). This has resulted in [Antartic Melt](#) with [Rapid Disintegration](#), loss of [Arctic Ice](#) to the point of a [Melting Pole](#), a melting Greenland, altogether a [Record Loss](#) of ice, and in increased [Ocean Conveyor](#) activity and [Tsunamis](#), [Walls of Water](#) sinking tankers, [Coral Kills](#), and [Seaweed Invasions](#). [Rising Seas](#) cause [Vanishing Islands](#) and [Coastlines](#), and an [Out of Balance](#) Pacific. Land masses are also heating from the bottom up, resulting in [Melting Glaciers](#) and [Permafrost](#), [Baked Alaska](#), sunburned [Canadians](#), [Thinning Glaciers](#), [Artic Vegetation](#), receding [Great Lakes](#) and [Disappearing Lakes](#). The [Worldwatch Institute](#) points to a [Global Melt](#). [Weather Forcasts](#) are a challenge, [US Wildfires](#) and in [Russia](#) and the [Balkans](#) a worry, falling [Iceballs](#) a surprise, [Dying Trees](#) a puzzle and the incidence of [Catastrophes](#) on the increase. Booms in [Europe](#), [Ohio](#), [California](#), [Delaware](#), and [Nebraska](#) result, which the Zetas say are caused by [Heaving Seas](#) and land. An [Earth Hum](#) is detectable. Earth Alert keeps a pulse on the changes. [Meteor Impacts](#) causing [Explosions](#), [Meteor Showers](#), [Fireballs](#) and [Green Fireballs](#) have begun and are on the [Increase](#), with [DoD Confirmation](#). In 1999, a satellite boosted by a [Titan Rocket](#) went into the wrong orbit, another boosted by an [Athena 2](#) disappeared, putting [Launches on Hold](#) pending an investigation. [Solar Flares](#) are nothing new, and those looking for [Connections](#) are still confused. In 2002, the Earth's [Gravity Field](#) mysteriously developed a fat middle, and since 1998, the [Core-Mantle](#) boundary changing.

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TOPIC: **Geo History**

Standford University proffers a [Pattern Analysis](#) of cataclysmic changes, as does a web site in the [UK](#). Evidence of a [Radical Shift](#) in the Earth's past, as well as [Pole Shifts](#) and [Magnetic Reversals](#), is abundant, recorded in lava at [Steens Mountain](#), and in [Atlantic Excursions](#), [Methuselah Trees](#), [Greenland Ice](#), [Methane Ice](#), New England [SeaMounts](#), the extinction of the [Mammoth](#), [Devil's Lake](#) boulders, and abrupt [Climate Changes](#). Continental Drift reflects violent changes, as do [Tsunami Signatures](#). [Theories](#) to explain recent cataclysms analyze [Tree Rings](#), [Volcanoes](#), and postulate a [Bolide Impact](#).

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TOPIC: Weather

The weather has become increasingly unpredictable and extreme, a point noted at a recent [UN Convention](#), affecting the entire globe. A [Weather Watch](#) page summarized the increase of truly unusual weather during [1995](#), [1996](#), [1997](#), [1998](#), and [1999](#). The [Up-Tick](#) of severe weather and the [Warming Trend](#) and tendency toward [Simultaneous](#) weather extremes had become measurable. By 2001, a major [Climate Shift](#) was blamed for the [Hurricane](#) increase. [During 2001](#), extremes were noted, with a record [Tornado Count](#) in the USA, record [Heatwaves](#), the warming trend [Established](#). Weather variables are linked with warmer oceans and [Ocean Turbulence](#). In 1996 [Food Shortages](#) were evident, by 1997 [Obvious](#), and by 1998 [Devastating](#), aggravated by [El Nino](#). Some [Speculate](#) that [Hypercanes](#) may develop. The art of [Forecasting](#) weather can be learned. Web sites affording a weather watch around the world are:

University of Michigan [WeatherNet](#)
[NOAA](#) Monthly Report

FEMA's [Storm Watch](#)

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TOPIC: Global Warming

A group of scientist forming [SEPP](#) are claiming that the Earth is not getting warmer as claimed, and by late 2001 the [Consensus](#) on cause had deteriorated. NASA records from satellites and [Balloon Data](#) show a [Cooling Trend](#) resulting in a [Shrinking Atmosphere](#) and enlarging [Ozone Hole](#), but NASA equates this to [Trapped Heat](#) a [Snow Cover](#) is reduced. The [Riddle](#) remains unsolved, while the [Pace of Change](#) and [Warming Trend](#) per NOAA are on the uptick and [Wildlife](#) adjust. There is debate over the role of [CO2](#), the [Sun's Influence](#), or [Human Induced](#) factors. A major flaw in the [Computer Model](#) used was discovered, casting doubt on the projections, and the [IPCC](#) also disagrees. Evidence of [Past Swings](#) and [Rapid Swings](#) in the climate, based on [Ice Core](#) samples, is ignored. If [Ozone](#) destruction is the cause, odd that [Shuttle Damage](#) is allowed to continue and a [Bush Retreat](#) on Kyoto! Other scientists see the [Sun as the Cause](#), as [Neptune's Moon](#), Triton, is also warming. Another theory points to the heating oceans associated with each [El Nino](#) being caused by underwater [Volcanism](#) along the [Ocean Floor](#). The globe is in fact heating up from the [Core of the Earth](#), the [Ocean Warming](#). The [Debate](#) continues. What is clear is that there is an increased [El Nino Frequency](#), the [Hottest Year](#) on record, increased [Nighttime Heat](#), [Thinning Ozone](#) layers, melting [Polar Ice](#) and [Mountain Ice](#). The potential impact on society brings a [UN Warning](#) and [Climate Change](#) dangers. [Spy Satellite](#) photos are helpful.

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TOPIC: Quakes

A [Quake Alert](#) can be purchased. Web sites reporting on earthquakes and volcanism include:

- [USGS Quakes](#)
- [Comprehensive](#)
- [Bob Fryer](#)
- [Tectonics](#)
- [CERI](#)
- [Michigan Tech](#)
- [Hidden Hazards](#)
- [Earth's Crust](#)
- [Top 10](#)
- [USGS Volcanoes](#)
- [Volcanism](#)
- [Current Volcanoes](#)
- [Tsumamis Intro](#)

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TOPIC: Patterns

Earthquakes and volcanic activity are on the rise, with a [Correlation](#) between the two. A [Quake Watch](#) page summarizes the increase in truly unusual activity during [1995](#), [1996](#), [1997](#), [1998](#), and [1999](#). By [2001](#) the increase was obvious, [Confirmed](#) by program analysis, and rapidly [Increasing](#), and [During 2001](#) the death toll was noted. The trend continued in [2002](#), a [Dramatic Increase](#) noted, with [Pre-Shift Adjustments](#) evident. By 2007, the quake increase had moved from a lineal increase to an [Exponential](#) increase. The [National Seismic](#) database shows the incidence of [Deep Quakes](#) increasing dramatically, [Since 1946](#), [Since 1976](#), [Since 1986](#), and [Since 1996](#), then [Stabilizing](#) in 1999. A [Quake Analysis](#) shows an [El Nino Correlation](#), with a [1997-98 Lull](#) before the storm. A [Magnitude](#) increase is apparent, and as deep quakes lock plates together, first a decrease, then an increase in [Frequency](#) in [Richter 3+](#), [Richter 6+](#), and [Richter 7+](#) quakes. [Domino](#) quakes emerged in 1999, [Noted](#) in Turkey, with a [Ricochet](#) effect exhibited due to plate lock, by 2002 evident. [NEIS](#) lists largest, but a [USGS Coverup](#) on the increased has emerged, by late 2002 [Dropping Quakes](#) from the database by the hundreds! By 2003, [Global](#) quakes where the entire globe participated were noted. [Active Volcanoes](#) are on the increase, a [Record Number](#) recently erupting, the [Inactive](#) coming to life, [Rifts](#) growing, and [Superplumes](#) rising. This has [Congress Concerned](#). A [Cayce Prediction](#) re [Mt. Edna](#) applies. The [Impact](#) that [Megathrusts](#) or [Blind Faults](#) or [Tsunamis](#) have are described in the [Great Lisbon](#) quake and the [23 Foot Wave](#) striking New Guinea. The explosion at [Thera](#) in 1,628 BC holds the record. [Plates](#) and [Plate Tectonics](#) play a part, as in this description of a [California](#) quake due.

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TOPIC: Crazy

More than the weather changes during an approach of the 12th Planet, as animals and insects behave in atypical ways. [Red Ants](#) invade Columbia and [Kill Crabs](#) in India, [Beetles](#) destroy California trees, [Caper Butterflies](#) mass in Australia, and [Giant Grasshoppers](#) threaten Britain. [Deer](#) are attacking automobiles, [Charging Sheep](#) their shepherds, [Jack Rabbits](#) biting pedestrians, [Moose](#) are wandering into towns, [Polar Bears](#) moving north, and [Cattle](#) are stampeding in Australia for no reason. [Carp](#) are leaping from rivers, [Penguins](#) invade Rio, [Bullfrogs](#) swamp Canada, and [Jellyfish](#) invade the Gulf of Mexico. [Whale Migration](#) is delayed. [Gray Whales](#), [Dolphins](#) in the Atlantic, [Sea Lions](#) and [Sea Otters](#) in the Pacific, [Sea-Bed Fish](#), [Sea Turtles](#), and even predators such as [Sharks](#) and [Vultures](#) are dying mysteriously. [Pilot Whales](#), [Killer Whales](#), [Dolphins](#), and [Sea Turtles](#) are beaching themselves in record numbers. [Magnetism](#), used by [Many Creatures](#) is the suspected culprit. [Snowbirds](#) are appearing in Florida, [Artic Birds](#) disappearing, and [Homing Pigeons](#) go awry in what has become a [Continuing Trend](#). Weather changes are suspected in the [Sea Slugs](#) invasion in New Zealand, [Killer Bee](#) migrations, [Marine Organism](#) changes, and [Bear Attacks](#). Microscopic creatures and DNA are acting atypically, too, with [Purple Pigs](#), and dead [Crocodiles](#), [Sea Birds](#), [Lobsters](#) and [Frogs](#) resulting.

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Prophet

TOPIC: 2000 Prophecy

Millennium [Prophecies](#) speak of geological changes and spiritual awakening. [Tom Brown](#) describes [Grandfather's](#) ability re [Prophecy](#), his [Lessons](#) and Red Sky [Warnings](#) and the [Four Signs](#) - the [First](#), [Second](#), [Third](#), and [Fourth](#) signs of impending change. [The MOBIUS Projects](#) address them with breath-taking insights, as does an extended article on the [Coming Attraction](#) which includes discussion on the [Immortal Soul](#), the [12th Planet](#), [Pole Shift](#) and earth changes, [Genetic Engineering](#), the [Great Pyramid](#), [Spiritual Preparation](#), the [Government & Aliens](#), the [New World Order](#), [FEMA](#), [Emerging Diseases](#), [Health Concerns](#), [Survival](#), and [Sitchin & Velikovsky](#). These transformative times have both [Good and Bad](#) aspects to them. The [White Buffalo](#), and [Red Heifer](#) prophecies are being fulfilled, even a [White Crab](#) appearing. Gordon-Michael Scallion's [4 Quake Predictions](#) for 1995 were on target and he predicts a [Pole Shift](#). [Nostradamus](#), a [Swedish](#) site, [Marianne Rasmussen](#) in Denmark, [Marianna Guanter](#) in Germany, [David Jevons](#) in Britain, a [Hopi Prophecy](#), a [Catholic Prophecy](#), the *Bible* in [Revelations](#) and in [Amos](#), the [3rd Fatima](#), [Saints&Priests](#) prophecy, the [Kolbrin](#), the [Islam Haidiths](#), and Bulgaria's [Vanga](#) all allude to coming cataclysms. [Isaiah 24](#), [Barbara Clow](#), and the [Oahspe](#) describe a past shift. The [Pope's Denial](#) is contrary. [Shiva](#) represents the pole shift. Web sites are proliferating.

- [Robert Monroe](#) on Out-Of-Body
- [Whitley Strieber](#) Home Page
- [The Well](#) - Transforming Experiences
- [End of the World](#)
- [White Buffalo](#) calves
- [Edgar Cayce](#) on [Earth Changes](#)
- [Mother Shipton](#) Prophecies
- Annie Kirkwood's [Mary's Message](#)
- Boylan on [Indian Prophecies](#)
- [Prophets & Prophecies](#)
- [Jason Martell](#) on Planet X

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TOPIC: Legends

Legends point to [Pole Shifts](#) of yor, such as the legend of the day the [Earth Stood Still](#) during the battle of [Beth Horon](#), or the history recorded by [Plato](#), or the [52 Year Round](#), or the Cherokee [Mother Sun](#) story, or the [Aztecs](#) report, or the [Hopi Worlds](#). Legends point to a rogue planet that terrorizes earth, such as [Henny Penny](#) or the Mormon planet [Kolob](#). The movie [Prince of Egypt](#) had a historical basis, as do details on the [Jewish Exodus](#), also recorded in the [Ipuwer](#). New Guinea folklore includes the [Red Rain](#) legend.

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TOPIC: Indian Lore

A respected [Cree Medicine Man](#) told a dream of fire falling from the sky and of a great calamity in which many people would die. The [Cherokee](#) speak of the great flood and volcanic activity, forcing the ancestors to live underground for a time, and have a [Mother Sun](#) legend. The [Aztec](#) speak of a time of darkness. The [Hopi](#) speak of visitors from other worlds, four [Worlds](#) and [Hopi Elders](#) give current advice. Living in harmony with Mother Earth, rather than ravishing the landscape, is a longstanding Indian teaching. Here a Troubled Times member helps us look to the troubled times ahead with less emphasis on [Material Goods](#).

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TOPIC: Aftertime

Life in the Aftertime, in the years following the coming pole shift, is under speculation. [Chet Snow](#) described his vision, more benign than a [Worst Case](#) scenario. Keeping a [Low Profile](#) for a time will allow the dust to settle. The [Atmosphere](#) will likely rebuild from abundant CO2, requiring temporary [Adjustments](#), and the [Latitude Climate](#) the same as today. [New Land](#) might emerge from the sea, and polar regions affected by [Melting Ice](#), creating a [Water World](#). There will be a lack of [Sunlight](#) in the gloom of [Volcanic Dust](#), which will change the [Food Chain](#), so start [Preparations, Without Delay!](#) [Communications](#) supported by [Satellites](#) will be nil. Due to extensive [Homelessness](#), the pole shift will be a [Social Leveler](#), with little energy for rebuilding [Infrastructure](#). Helping others survive through [Sharing](#) can result in [Hard Choices](#), and the [Barter System](#) will be in effect. [Knowledge](#), however, will be more important than possessions.

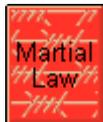
Troubled Times



TOPIC: Cover-Up

Cover-ups exist because the public is [Gullible](#) and willingly buys [Bush Scams](#). During an Art Bell late show, an outage occurred to [Stop a Leak](#) while a [Doomsday](#) sceniario is used as a panic test. ZetaTalk Accuracy on [Crop Shortages](#) results in a [Saudi Ban](#), and [Bumper Harvest](#) reports sound suspect. An [F-15 Excuse](#) does not explain an Atlanta boom, and a 2003 [FEMA Disaster Plan](#) for cities cites natural disasters of epic proportions. NASA insists on controlling [Asteroid Sightings](#) and [Mar's Photos](#), and many [Smell a Rat](#) in this tactic. The date for the closest pass of [2001 PM9](#) is reported as May 10, 2003, but not true! Mars as a [Red Planet](#) and comet [2002/V1](#) or [2002/X5](#) in 2003 will be used as an explanation for the approaching Planet X. The explanation for a recent [3D Mapping](#) of earth and [Infrared Flights](#) appears suspect, as does [Whale Monitoring](#), a [NASA/FEMA](#) alliance, [Deep Space Probes](#), and withdrawal of info on [Zeta Reticuli](#). A [Phil Schneider](#) assassination is evident, as is the death of [Robert Harrington](#). [Black Vault](#) has FOIA documents. Government [Contradictions](#) fuel cover-up theories about [Roswell](#), the [Crash Dummies](#) excuse, the real purpose of [Star Wars](#), [Pentagon Denials](#), [Triangular UFOs](#), and [Mutilations](#). The March 13, 1997 sighting was reported after a curious [3 Month Delay](#), and [Governor Flipflops](#). A rash of [Military Crashes](#) implies a battle between the NWO and aliens. [OKC Murders](#) point to a cover-up, and [Bombing Evidence](#) is being suppressed. [TWA800](#) evidence points to a cover-up over a [Missile](#), per [Cmdr. Donaldson](#). A Mars Pathfinder landing involved a sudden [NASA Death](#) and [Gene Shoemaker](#) accident. A [CSETI Announcement](#) details Steven Greer's cancer, right after the [CSETI DC Briefing](#), and the [Disclosure Project](#) takes revenge. [Commerce Secretary](#) Ron Brown and [John Kennedy, Jr.](#) plane crashes point to murder. The [Rockefeller Report](#) and [Dr. Len Horowitz](#) indicates population reduction via immunizations, [Goo Globs](#) point to a military experiment, and [Blaming Chemtrails](#) on UFO's may be a coverup too.

Troubled Times



TOPIC: Martial Law

To effect Martial Law in the US, the New World Order need only create a [Panic Excuse](#) or a [Terrorism Excuse](#), real or [Potential](#), an [Outside Threat](#) such as the [FBI Warning](#) for [New Year's Eve](#), 2000. Other countries, such as the UK are ready to follow suit with [UK Martial Law](#). There is evidence that flight [TWA800](#) (downed by a [Missile](#)), an [Anthrax Scare](#), and the [OKC Bombing](#) (where a soldier's leg was found) were engineered situations. [FEMA](#), manned by political [Appointees](#), is authorized to take over, in spite of the [Posse Comitatus](#) laws. The US was placed in a continuing [State of Emergency](#) in 1994, and a [Rapid Deployment](#) force is ready to act in the US. The [War Powers Act](#) of 1933 positioned citizens as the enemy, and has never been repealed. [Erosion](#) of Constitutional Rights has occurred under the guise of a potential [National Emergency](#), real or [Fabricated](#).

Troubled Times



TOPIC: Martial Means

The [Y2K Bug](#) offers a [Test Opportunity](#), practice such as [CB Exercises](#) occurring in 1999, but some states are [Resisting](#). Hoarding is forbidden by numerous Executive Orders, but [Hunger](#) can be used as a control mechanism. Civilian internment camps have long been [Rumored](#), and many [Military Bases](#) make the point, Nellis Air Force base near [Area 51](#) among them. [Bunker Government](#) plans are in evidence. The [Contrails](#) test in January, 1999 created illness and [Uproar](#) in the populace. [Media Control](#) is key. As [47 National Parks](#) have been ceded to the UN under the [Biodiversity](#) umbrella, [Foreign Troops](#) may be the means to this end, regardless of the Constitutionality. A [Military Presence](#) is already unloaded in the US. A one [World Government](#) may be the goal. The technology for [Implants](#) allowing humans and animals to be [Tagged](#) and located by [Satellite](#) such as the [GPS](#) exists, and [Remote Control](#) is a possibility. The inventor, Dr. Carl Sanders, had [Ethical Questions](#). The new [Health ID Card](#) is more direct. The late 2001 shooting death of [William Cooper](#), who warned about [Anthrax](#) vaccinations, is suspect, as are [Germ Warfare](#) experiments by the US.

Troubled Times



TOPIC: Shortages

Starting in 1999, food shortages caused by drought or deluge began appearing, and by 1999 in the US, [Fish in Maryland](#) and the [East Coast](#) were affected.

By 2000 shortages were in evidence worldwide in [Afghanistan](#), [Albania](#), [Algeria](#), [Argentina](#), [Armenia](#), [Austria](#), [Australia](#), [Bolivia](#), [Brazil](#), [Bulgaria](#), [Burundi](#), [Cambodia](#), [Canada](#), [China](#), [Croatia](#), [Cuba](#), [Cyprus](#), [Ethiopia](#), [France](#), [Georgia](#), [Ghana](#), [Greece](#), [Guyana](#), [Honduras](#), [India](#), [Iran](#), [Iraq](#), [Iraq](#), [Israel](#), [Italy](#), [Jamaica](#), [Jordan](#), [Kazakhstan](#), [Kenya](#), [Korea](#), [Laos](#), [Liberia](#), [Madagascar](#), [Mexico](#), [Moldova](#), [Mongolia](#), [Morocco](#), [Mozambique](#), [Nepal](#), [Pakistan](#), [Palestine](#), [Paraguay](#), [Peru](#), [Philippines](#), [Poland](#), [Romania](#), [Russia](#), [Saudi Arabia](#), [Serbia](#), [Slovakia](#), [South Africa](#), [Sudan](#), [Syria](#), [Tajikistan](#), [Tanzania](#), [Thailand](#), [Uganda](#), [Ukraine](#), [United Kingdom](#), [Uruguay](#), [Uzbekistan](#), [Vietnam](#), [Yugoslavia](#). By 2000, it was clear that floods were devastating crops in [Asia](#), while a [World Drought](#) was devastating crops in [Africa](#), [Europe](#), and the [Balkans](#), resulting in [Civil Unrest](#) and [Violence](#) while shortages in [Wheat](#) loomed. By 2000 the [Cornbelt](#), [Hawaii](#), [Texas](#), the [West](#), [North Dakota](#), the [Midwest](#), [New England](#), [Fisheries](#), the [Southeast](#), and the [Apple Harvest](#) suffered weather related shortages, with [Ag Disasters](#) declared. In 2000, plagues and blights had affected crops in the US with the [Citrus Canker](#), [Grape Sharpshooter](#), [Banana Virus](#), [Red Tide](#), [Soybean Aphid](#) and [Sudden Death](#), [Grasshopper](#), [Cutworm](#), [Pine Beetle](#), and [Fire Blight](#) among them. In 2000 a worldwide [Fuel Crisis](#) emerged, and in the US [Gasoline](#), [Oil](#), [Natural Gas](#), [Firewood](#), and [Electricity](#) prices rose. For [Year 2000](#), [NiCAD](#) batteries and [Distillers](#) were in short supply. As [Maine](#) demonstrated, [Monitoring](#) may ensue. The government is stockpiling [Meals Ready-to-Eat](#), a [Hot Item](#). [Blood](#) continues in short supply.

In 2001 matters had not changed per reports on [England](#), the [Midwest](#), [El Salvador](#), [Africa](#), [Central America](#), and [United Nations](#) and [FAO Reports](#). During 2001, [Starvation Denial](#) in a media hush was evident, while [Devastating Weather](#) created a [Silent Famine](#) and [South African](#) price increases. In 2001 sporadic reports of the effect weather has having on crop shortages were reported in [Malaysia](#), [Iowa](#), [Ireland](#), [North America](#), and the [World at Large](#).

By 2002, a reduced [Cocoa](#) crop and a crisis in [Mozambique](#) was admitted. Reports on the effect of drought on grain crops came in from the [US](#), [Australia](#), and [Canada](#) while flood damage to grain crops was reported in the [UK and Europe](#). Finally, despite media under-reporting, a [2002 UN Report](#) shows the picture of worldwide crop shortages due to weather.

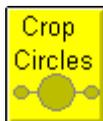
Troubled Times



TOPIC: **Distractions**

The [Year 2000](#) bug is blown out of all [Proportion](#), giving an excuse to stockpile and call out the [Marines](#), distracting the populace with [Dire Warnings](#) when [The Fix](#) is in fact [Known](#) and at hand. [Global Warming](#) does not stand up to scientific [Scrutiny](#) either, so a new [Climate Pattern](#) is proffered and drought blamed on [Urban Sprawl](#). NASA's [Magnetar Theory](#) is used to explain magnetic disturbances, or alternatively the [Sun's Magnetism](#) causing Global Warming and [Magnetic Storms](#) on earth. [Solar Flares](#), [Sun Spots](#), and [CMEs](#) in an 11 year [Solar Cycle](#) which should be [No Big Deal](#), a fact even [NASA Admits](#). Anticipated [Tsunamis](#) are underplayed while monitoring [Volcanos](#) begins. Are [Hale-Bopp](#) or [Comet Lee](#) or a [Neutron Star](#) the millennium comet or a distraction ([Denied by JPL](#)) from the approach of the 12th Planet? [C/1997 K2](#) was brighter, but ignored! Are [Near Earth Asteroids](#) such as [QW20007](#) or [2001 PM9](#) a [Threat](#) requiring action in [Britain](#) and [Russia](#) or a [Desensitization](#) tool for the [Pending Disasters](#) and [Devastation](#) that a pole shift would bring? Alternative excuses are also given for a possible [Giant Wave](#) caused by [Plate Shifts](#) and newly issued warnings on [Earthquakes](#). A newly discovered [Rogue Planet](#) is termed a star by NASA, but pointing the public to [Orion](#) continues.

Troubled Times



TOPIC: Crop Circles

[Crop Circles](#) have been [Proliferating](#), as recent [Canadian](#) and [Russian](#) reports shows. A [Russian Officials](#) admit they indicate an alien presence. They carry a compelling [Message](#) not yet understood (although at least one claim is that crop circles are describing the return of Sitchen's 12th Planet, Nibiru). Some web sites are carrying pictures of these beautiful geometric designs, occurring with increasing [Complexity](#) and [Frequency](#), [Stunning](#) by 2001. Stephen Hawkins was astonished to discover that crop circles contain complex inherent [Mathematics](#). A [NASA Astrophysicist](#) finds them compelling and debunks the debunkers.

- [Crop Circle Connector](#)
- [Swirled News](#)

Scientific studies have been done on the biological changes as represented by plant growth and the findings on [Magnetic Fields](#) and [Radionuclides](#) within soil samples from within crop circles, demonstrating that crop circles are *not* a hoax, and are [Not Man-Made](#).

Troubled Times



TOPIC: Mars and Moon

Richard [Hoagland](#) is known for asserting that in spite of [20,000 Images](#) recently released, NASA is withholding evidence that man is not alone, as the images of the Face on Mars and the Lunar Shard attest. A spectacular Hoagland coverup catch shows an image by the Mar's Surveyor, and Hoagland is suing NASA re the coverup. Congradulation Hoagland! MUFON and [Jason Martell](#) have noticed, and [Van Flandern](#) has shared Hoagland's conclusions [Since 1995](#). [Bauval and Hancock](#) comment on the [Coherent Shapes, Pyramids and Towers](#), and [War or Flood](#) explanations. An [Orion Connection](#) has been noted. Hoagland's 1996 [Press Conference](#) and [Press Release](#) asserted a [NASA Coverup](#) and that in the [Brookings Report](#), NASA withheld evidence from the general public. During the 1998 Cydonia flyover NASA provided a [Negative](#) to the public, confusing the issue. To many, the [Triangular Foundation](#) were conclusive, including [Van Flandern](#), again. The Zetas support Hoagland in his conclusions about [Moon Cities](#), [Structures on Mars](#), and [Tetrahedral Crystals](#). Recently NASA seems to have changed its tune, informing the public of life on Mars, an issue President [Clinton](#) addressed. The [Pathfinder](#) is confirming that Mars was a [Water](#) planet, [Awash in Water](#) leaving [Ancient Channels](#) and [Lakebeds](#), and in fact [Warm Water](#) that would have supported life. They appear eager to send a manned mission to Mars, but have experienced perplexing [Mission Failures](#) and have a poor [Batting Average](#). Information on [Moon Ice](#), [Moon Cities](#), and [Moon UFO's](#) has been withheld from the public.

Troubled Times



TOPIC: Alien Presence

[Sightings](#) are on the increase, as noted during a conference in [Brazil](#). Evidence of the alien presence can be found in the [Past Century](#) of sightings; in [Traces](#) such as [Skulls](#) and [Skeletons](#) on Earth and in [DNA Analysis](#); in the [Betty/Barney Hill](#) case with [Zeta Reticuli](#) recognition; in the [Travis Walton](#) documentation; in the 1997 [Arizona Mothership](#) seen by the whole state (known as the [Phoenix Lights](#)); in the 1998 [RAF Chase](#) and in 1999 [Orange Fireballs](#) seen also in [Finland](#); in recent [Air Force One](#) disappearances and [FBI Files](#); in past [Mass Sightings](#); in the continuing [Mexico Sightings](#) and a [Popo Visit](#); in the [China Boom](#) including the [Shanghai](#), [Beijing](#) and [Jianjiao Encounter](#); in a recent Wisconsin [UFO Chase](#), an [Illinois](#) sightings observed by [Police](#), in a [Russian Official](#) admission; in a [New Jersey](#) mass sighting; and sightings in [Peru](#), [Malaysia](#), [New Zealand](#), [Pakistan](#), [South Korea](#), and [Turkey](#); in [Astronaut Admissions](#), [Aerospace Engineer](#) reports; in [NASA Cuts](#) and [Mars Probe](#) failures, and a deliberate [NASA Contractor](#) leak; in a [NOAA Satellite](#) image; in [MUFON Reports](#); and in increasingly credible [NUFORC](#) reports. The Discovery Channel documents encounters, as does [ABC News](#), [UFO Roundup](#), and [UFO Encounters](#).

A massive 1996 [Power Outage](#) occurred on the day the movie *Independence Day* premiered, followed by a [Second Outage](#). Evidence of life elsewhere is in the [Murchison Meteorite](#); in [Primordial Soup](#) in space; in [Europa Studies](#); and in [Life on Mars](#) admissions, a point noted by [President Clinton](#) and [Admitted](#) by other Presidents. There is even a recent [Vatican Admission](#) that aliens exist and a [CSETI Interview](#)! Where [UFOlogists](#) gain support abroad, a [NASA Law](#) on the books, [Title 14 Section 1211](#), forbids contact with extraterrestrials, but as ZetaTalk has always asserted and [Case Studies](#) demonstrate, humans can [Just Say No](#). The [Sturrock Panel](#) and [Life Poll](#) shows that most Americans believe the Earth is being visited; as do the [Falun Gong](#), [Philippine Astronomers](#), the [French Government](#) in the [COMETA Report](#) which details [Facts](#), [Knowledge](#), [Defense](#), [Cases](#); and [Joe Firmage](#) risked his career on such beliefs. Stan Friedman speaks out on [Roswell Disinfo](#), and the [Missouri Initiative](#) against coverups.

Troubled Times



TOPIC: ZetaTalk Accuracy

ZetaTalk continues to gain credibility as what the Zetas have said is confirmed to be true. To date, ZetaTalk fans have pointed out the accuracy of their past statements, on:

- | | | | |
|--|--|--------------------------------------|---|
| 2001 Predictions, | Crane Collapse, | Israel Aggression, | Planet X Triangulation, |
| AIDS, | Crash at Kecksburg, | Jet Stream Changes, | Pole Shift Equator, |
| Airforce One Flyover, | Crop Circles, | JFK, | Probe Behavior, |
| Air France 447 | Crop Circle Video, | John, Jr., | Red Rain Microbes, |
| Airplane Crashes, | Crop Failures, | JP Morgan, | Red Sea Stretch, |
| Albinos, | Dark Matter, | Lebanon Invasion, | Repulsion Force, |
| Animal Illness, | Deflecting Asteroids, | List to Left, | Roswell, |
| Annunaki Gold, | Deformed Frogs, | Illness, | Rotation, |
| Antartica Ice Fractures, | Devil's Triangle, | Iran Invasion, | Russian Overflights, |
| Anthrax Attack, | Dinosaur Dieoff, | Iran Oil, | Santilli Tapes, |
| Area 51, | Discovery Shuttle, | Loch Ness, | Satellite Failure, |
| Assassinations, | Dogon Tribe, | Magma Slam, | Saudi Takeover, |
| Asteroid Threat, | Domino Quakes, | Magnetic Field, | Sea Level Rise, |
| Atlantic Rift, | Dr. Reed, | Magnetic Whamy, | Seaway Rip, |
| Atlantis, | Early Man, | Magnetic Trimesters, | Shroud of Yurin, |
| Attack on America, | Earth Core, | Mammoth Lake, | Sighting Aliens, |
| Australian Artifacts, | Earth Hum, | Marilyn Monroe, | Slowing Rotation, |
| Autism, | Earth Plates, | Mars Exploration, | Social Security, |
| Bank Freeze, | Earth Plate Movement, | Mars Water, | Solar Reversals, |
| Bank Supports, | Earthquake Reports, | Martial Law, | Solar System Magnetism, |
| Barter, | Earthquake Quickening, | May 5 2000, | Starvation Denial, |
| Bee Colony Collapse, | Earth Torque, | Melting Poles, | Stretch Zones, |
| Bigfoot, | Earth Twin, | Memphis Bridge, | Summer Snowstorms, |
| Big Bang/Black Holes, | Earth Wobble, | Meteor Upticks, | Sun Binary, |
| Billy Meier, | Easter Island, | Migrations, | Sun Scald, |
| Bin Laden, | Ebola Spread, | Military Rebellion | Suppressing Word, |
| Bird Flu Pandemic, | Economic Collapse, | Mississippi Bridges, | Swine Flu, |
| Blaming the Sun, | Face on Mars, | MJ12 Documents, | Syria Strike, |
| Booms, | Faked Terrorism, | Moon Base, | Tornadoes, |
| Brazilian Roswell, | Faster than Light, | Moon Cities, | Triangular UFO, |
| Brown Dwarf, | Fisheries, | Moon Plume, | Troops Home, |
| Bush Clone, | Flashes, | Moon Rotation, | Tunguska, |
| Bush Insanity, | Flying Triangles, | Moon Swirls, | TWA800, |
| Bush Decapitation, | Fossett Disappearance, | N America Bowing, | UFO Increase, |
| Cataclysm Masks, | Frog Populations, | Neanderthal Man, | UK Food and Mouth, |
| Cattle Mutilations, | Giant Hominoids, | New Land, | Ummo, |
| Cell Evolution, | Global Warming, | Newman's Machine, | Volcano Uptick, |
| Centrifugal Force, | Gonzales Resignation, | Newton's Laws, | Vote Fraud |
| Chemtrails, | GPS Failure, | Ocean Rebound, | Wandering Planets, |
| China as Investor, | Great Pyramids, | Ocean Vortex, | Warm Winters, |
| China Threats, | Hale Bopp, | Omnipotent Krilll, | Waves, Monstrous, |

[Chinese Pyramids,](#)
[Chupacabras,](#)
[Clinton Demise,](#)
[Columbia Shuttle,](#)
[Comet Behavior,](#)
[Comet Origin,](#)
[Contradictory,](#)
[Cover-up Increase,](#)
[Cover-up Crack,](#)

[Hezbollah,](#)
[Hoagland,](#)
[High Tides,](#)
[Human Combustion,](#)
[Hurricanes, Atypical,](#)
[Implants,](#)
[Imploding Building,](#)
[Iowa Floods,](#)

[Orbit Halt,](#)
[Outages,](#)
[Pakistan Sinking,](#)
[Permafrost Melt,](#)
[Philadelphia Experiment,](#)
[Planet X,](#)
[Planet X Denial,](#)
[Planet X Gravity,](#)

[Weather Changes,](#)
[Weather Swings,](#)
[Weather Predictions,](#)
[Whirlpools,](#)
[Work Camps,](#)
[Worldwide Infertility,](#)
[Yellowstone](#)

Troubled Times



Zacharia Sitchin

Sitchin, UFOs And All That Jazz. Part 2. Mar. 15, 1998.

We will now continue our interview of Zacharia Sitchin by J. Antonio Huneeus of FATE magazine.

Huneeus:

I am sure you are familiar with recent scientific articles in mainstream publications stating that there is no Planet X [an "invisible" planet rumored to exist in Earth's orbit, but on the opposite side of the sun].

Sitchin:

The notion that there is no Planet X stems from the work of Dr. Myles Standish at JPL [NASA's Jet Propulsion Laboratory]. In 1993 he said, "There remains no need to hypothesize the existence of a tenth planet in the solar system." Traditionally, scientists have said that if there was a Planet X, we would have found it by now. I think somebody also said that if there are extraterrestrials, we would have met them by now. So if we don't meet ET's, they don't exist, and if we don't find Planet X, it doesn't exist.

There's the story about the thief who was brought to court and two witnesses gave evidence that they saw him steal. The judge turned to him and said, "What do you have to say for yourself? We just heard two witnesses that say that they saw you steal." The thief said, "Your honor, two people may have seen me steal, but I can bring you a hundred that did not see me steal." That's the same kind of evidence used to refute the existence of Planet X.

I wrote a letter to Standish asking him to corroborate his his statement, and he wrote back, saying, "What I said or what I wrote does not mean there is no Planet X; it merely means that I think it would be futile to look for it."

The interest in Planet X began when it was sighted by IRAS [Infrared Astronomical Satellite] in 1983. There was a clamp-down on the press after the sighting and hurried discussions between Reagan and Gorbachev, and between Bush and Gorbachev, all leading to the agreements to cooperate in space. Suddenly, Gorbachev dropped his objection to Star Wars.

As you know, there is no more Star Wars program, yet the budget for Star Wars has been increased [under the name Ballistic Missile Defense program]. It's about \$4.5 billion a year, officially -- unofficially, who knows! So I ask you, against who is the defense intended?

Huneeus:

The latest public relations statement claims that it's intended for use against asteroids.

Sitchin:

I don't buy it. For the video *Are We Alone?* I interviewed the late Dr. [Robert S.] Harrington, supervising astronomer at the United States Naval Observatory, which is part of the U.S. Department of Defense - this isn't a university project we're talking about. I talked to him for almost two hours on camera, and neither I nor the producer could believe our ears.

He used our meeting as an example to explain his beliefs about Planet X: "If you ask me if there is a

person named Zecharia Sitchin, for instance, I cannot tell you for sure that he exists. But if there is such a person, I would say he probably has gray hair and he wears glasses and he lives in New York City."

In effect, Harrington said, "I don't know if there is such a person," yet he still goes on to describe me in perfect detail. On the subject of Planet X, he had similar comments: "It's probably three to four times the size of Earth and it could have an atmosphere. It's a nice planet that has life on it. He went on and on, describing a planet that officially doesn't exist. He said, "It's as you said in The 12th Planet. The planet comes at a 30-degree angle to the ecliptic. In Biblical times it would come in Sagittarius the way you say, and now it would be from Libra, where we are looking.



Troubled Times



The 12th Planet

by Zecharia Sitchin

Landing on Planet Earth, pages 260-263, 178, and 201

In February, 1971, the United States launched Pioneer 10. Pioneer 10 scientists attached to it an engraved aluminum plaque. It attempts to tell whoever might find the plaque that Mankind is male and female, etc., and that (Pioneer 10) is from the 3rd planet of this Sun. Our astronomy is geared to the notion that Earth is the 3rd planet, which indeed it is if one begins the count from the center of our system, the Sun. But to someone nearing our solar system from the outside, the 1st planet to be encountered would be Pluto, the 2nd Neptune, the 3rd Uranus, the 4th Saturn, the 5th Jupiter, the 6th Mars .. and the Earth would be 7th.

We know today that beyond the giant planets Jupiter and Saturn lie more major planets, Uranus and Neptune, and a small planet, Pluto. But such knowledge is quiet recent. Uranus was discovered, through the use of improved telescopes, in 1781. Neptune was pinpointed by astronomers (guided by mathematical calculations) in 1846. It became evident that Neptune was being subjected to unknown gravitational pull, and in 1930 Pluto (was located).

In Assyrian times, the celestial count of a god's planet was often indicated by the appropriate number of symbols placed alongside the god's throne. Thus, a plaque depicting the god (of Saturn) placed 4 star symbols at his throne. Many cylinder seals and other graphic relics depict Mars as the 6th planet. A cylinder seal shows the god associated with Mars seated on a throne under a 6-pointed star. Ample evidence shows that Venus was depicted as an 8 pointed star. Other symbols on the seal show the Sun, much in the same manner we would depict it today; the Moon; and the cross, the symbol of the Planet of Crossing, the 12th Planet.

Kingship of Heaven, pages 246-248

The (12th) Planet's periodic appearance and disappearance from Earth's view confirms the assumption of its permanence in solar orbit. In this it acts like many comets. If so, why are our astronomers not aware of the existence of this planet? The fact is that even an orbit half as long as the lower figure for (the comet) Kohoutek, (every 7,500 years), would take the 12th Planet about 6 times farther away from us than Pluto - a distance at which such a planet would not be visible from Earth. In fact, the known planets beyond Saturn were first discovered not visually but mathematically.

The Mesopotamian and biblical sources present strong evidence that the orbital period of the 12th Planet is 3,600 years. The number 3,600 was written in Sumerian as a large circle. The epithet for the planet, shar, also meant "a perfect circle" or "a completed cycle". It also meant the number 3,600. The identity of the three terms - planet/orbit/3,600 - could not be a mere coincidence. The reign periods (a Sumarian text) gives are also perfect multiples of the 3,600 year shar. The conclusion that suggests itself is that these shar's of rulership were related to the orbital period shar, 3,600 years.

Kingship of Heaven, pages 242-245

All the people of the ancient world considered the periodic nearing of the 12th Planet as a sign of great upheavals, great changes, new eras. The Mesopotamian texts spoke of the planet's periodic appearance as

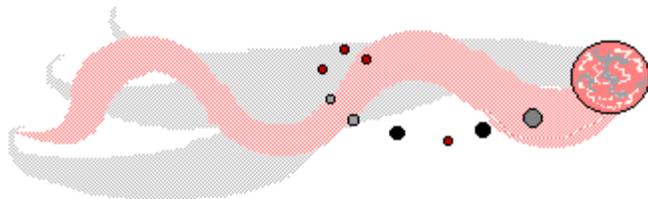
an anticipated, predictable, and observable event. "The great planet, at his appearance dark red."

The day itself was described by the Old Testament as a time of rains, inundations, and earthquakes. If we think of the biblical passages as referring, like their Mesopotamian counterparts, to the passage in Earth's vicinity of a large planet with a strong gravitational pull, the words of Isaiah can be plainly understood. "From a far away land they came, from the end-point of Heaven do the Lord and his weapons of wrath come to destroy the whole Earth. Therefore will I agitate the Heaven and Earth shall be shaken out of its place. When the Lord of Hosts shall be crossing, the day of his burning wrath."

The prophet Amos explicitly predicted: "It shall come to pass on that Day, sayeth the Lord God, and I will cause the Sun to go down at noon and I will darken the Earth in the midst of daytime."

The prophet Zechariah informed the people that this phenomenon of an arrest in Earth's spin around its own axis would last only one day: "And it shall come to pass on that Day that there shall be no light uncommonly shall it freeze. And there shall be one day, known to the Lord, which there shall be neither day or night."

The prophet Joel said: "The Sun shall be turned into darkness, and the Moon shall be as red blood."



Troubled Times



Earth Chronicles

Interview with Zecharia Sitchin: An Introduction

From *Connecting Link* (electronic magazine), Issue 17

Zecharia Sitchin was born in Russia and raised in Palestine, where he acquired a profound knowledge of modern and ancient Hebrew, other Semitic and European languages, the Old Testament, and the history and archeology of the Near East. He is one of the few scholars who is able to read and understand Sumerian. Sitchin attended and graduated from the University of London, majoring in economic history. A leading journalist and editor in Israel for many years, he now lives and writes in New York. His books have been widely translated, converted to Braille for the blind, and featured on radio and television. The Earth Chronicles series is based on the premise that mythology is not fanciful but the repository of ancient memories; that the Bible ought to be read literally as a historic/scientific document; and that ancient civilizations--older and greater than assumed--were the product of knowledge brought to Earth by the Anunnaki, "Those Who from Heaven to Earth Came." ...I trust that modern science will continue to confirm ancient knowledge.

CL: What are the Earth Chronicles about?

ZS: The first book, *The Twelfth Planet*, refers to the probability that there is one more planet in our solar system. That there are twelve members, counting sun, moon and ten planets, not the nine we know of. That people from that planet came to earth almost half a million years ago and did many of the things about which we read in the Bible, in the book of Genesis. But that was not my starting point at all. My starting point was, going back to my childhood and schooldays, the puzzle of who were the Nefilim, that are mentioned in Genesis, Chapter six, as the sons of the gods who married the daughters of Man in the days before the great flood, the Deluge. The word Nefilim is commonly, or used to be, translated "giants." And I am sure that you and your readers are familiar with quotes and Sunday preachings, etc., that those were the days when there were giants upon the earth. I questioned this interpretation as a child at school, and I was reprimanded for it because the teacher said "you don't question the Bible." But I did not question the Bible, I questioned an interpretation that seemed inaccurate, because the word, Nefilim, the name by which those extraordinary beings, "the sons of the gods" were known, means literally, "Those who have come down to earth from the heavens."

CL: From the Hebrew word Nafal, which means "fall"?

ZS: Right. Fall, come down, descend. So, what did it mean? This led me to biblical studies and then to mythology and archeology and all the other subjects, including the study of ancient languages, which became my education and avocation. So, my research and my decision to write about it started with a question, Who were the Nefilim? All the ancient scriptures, the Bible, the Greek myths, the Egyptian myth and texts, the pyramid texts, everything, led to the Sumerians, whose civilization was the first known one six thousand years ago. I focused on Sumer, the source of these legends and myths and texts and information. I learned to read the cuneiform Sumerian texts and came upon their persistent and repeated statements that those beings, whom the Sumerians called Anunnaki, came to earth from a planet called Nibiru. The planet was designated by the sign of the cross and Nibiru meant, "planet of crossing."

The question thus shifted in my research from who were the Nefilim and the Anunnaki, to, what planet is

Nibiru? Forced to become proficient in astronomy, I had to learn enough about it to deal with the subject. I found out that the scholars were divided. Some said it (Nibiru) was Mars, which of course was described and known to the ancient people, and others said, no, it was Jupiter. Those who said it was Jupiter and not Mars, had very convincing arguments why it could not be Mars. And those who said it was Mars and not Jupiter had very convincing arguments also. Being able to go directly to those ancient sources, clay tablets and cuneiform scripts, it seemed to me that neither was right, because the description of Nibiru and its position when it nears the Sun indicated that it could not be Mars, and it could not be Jupiter. And then one night I woke up with the answer: Of course, it is one more planet that comes periodically between Mars and Jupiter; it is sometimes nearer to Mars and sometimes nearer to Jupiter, but it isn't Mars or Jupiter.

Once I realized that this was the answer, that there is one more planet, everything else fell into place. The meaning of the Mesopotamian Epic of Creation on which the first chapters of Genesis are based and all details about the Anunnaki, who they were and who their leaders were and how they traveled from their planet to Earth and how they splashed down in the Persian Gulf and about their first settlement, their leaders and so on and so on, everything became clear! The Sumerians had immense knowledge. They knew about Uranus and Neptune and described them and they knew about Pluto. They were proficient in mathematics and, in many respects, their knowledge surpassed modern times. They said, "All that we know was told to us by the Anunnaki." The first book's innovation, its impact, was the realization that the ancient peoples, beginning with the Sumerians, knew of and described and spoke of one more planet in our solar system. It was not a discovery like that of Pluto in 1930 (of which the Sumerians knew six thousand years ago). Pluto was a very interesting astronomical discovery; textbooks had to be revised. But to the average person, the man on the street, it really made no difference. Nibiru, on the other hand was a different story. If Nibiru exists, (and this is the planet that astronomers nowadays call planet X) then the Anunnaki exist. So the existence of Nibiru is not a matter of just one more globe in our solar system. This is different, because if Nibiru exists, and the Anunnaki exist, then the Sumerian claim that they come back to our vicinity every 3,600 years, at which times in the past they gave us civilization, then we are not alone and there are more advanced people than us in our solar system.



Troubled Times



Return of Nibiru

Here is the section of Alex Merklinger's interview with Jerry Wills. I transcribed it last night. During a recent [Mysteries of the Mind](#) interview of *Xpeditions Magazine's* Jerry Wills (made by Alex Merklinger on Nov 9, 2001). Alex made the following comments, which I've transcribed below.

Offered by [Tim](#).

[\[Transcript begins at approximately 2:18 into the show\]](#)

Alex: What is interesting is that everything that we are talking about and speculating on, we will see the answers to it very soon. I think we are, and the reason I say what I am going to say is because of some conversations I've had just in the last two days with some people, we will see all of the things that the ancients left information for us. Whether it's the Pyramids, whether it's Stonehenge, whether it's wherever; and I think that now because of some information Zecharia Sitchin gave at the last conference, which was I think a week ago or maybe two weeks ago down in Sedona, where he actually said when this planet will be coming back. I think he did not say not to say it but I think what I'll do is just kind-of wait 'cause I know some people are doing the story on it and I don't want to blow it for them. But, let me say this everybody, the belief of Zecharia Sitchin about the return of the planet Nibiru is going to be within, let's see we're coming up on 2002, I would say within the next two years. Does that fit with anything you know Jerry?

Jerry: Well, you know we don't have any estimations on that at all Alex. We haven't been privileged to any ancient manuscripts that insinuate that. However, it is clear to us that it is within our lifetime, and we're quite certain that it's within the next few years. But, there's no way of nailing that down or saying with any certainty. However, I've been reading the reports from various astronomy groups, that have forwarded information to us because they know we're interested, and it insinuates this as well.

Alex: I have to tell you, I don't know exactly where Sitchin got his information but obviously, not obviously, my guess would be that it's in his work of translating the Sumerian texts. So that whatever it is that he knows - well - he is now for the first time beginning to tell people actual timeframes and that's interesting because that's going to open up a whole lot of oh, man alive a whole lot of conjecture and a whole lot of speculation by people all over the world, if it is allowed to get out. And I think that's again Jerry like we've been saying. That is kind-of the bottom line. Is the information going to be allowed to get out? I don't know. I don't know how people would react to it. I don't know if they would freak out.

[\[end transcript\]](#)



Troubled Times



Noncommittal

However, it seems that Merklinger's sources were incorrect. Below are several replies I have already received from other guests of the Cosmic Connections Conference.

Offered by [Tim](#).

I received a further communication from Zecharia Sitchin, which included this paragraph: "*The Return is a complex matter of a significance that goes beyond me telling one fan. The answer is VERY complex, and I have touched on it [during] the the Q&A period in Sedona. As a guide I will tell you that the return of the Anunnaki need not and probably does not coincide with the return of the planet. As to 'May 15 2003' I have no idea what the date signifies.*" From this response, it would appear to me that he really doesn't expect the planet back anytime soon, and that whatever contacts he has had with Tom Van Flandern and Richard Hoagland have not convinced him otherwise.

[Bob Avery](#)

Dear Tim,

While Mr. Sitchin did address the possible return of Nibiru at the Cosmic Connections Conference, I certainly DO NOT feel he said that it would be within 2 years time from now. He NEVER makes such comments with dates or hints of dates. I've known him for over 8 years and have never heard him to make such a specific reference. What he DID say was that contact from Nibiru's Anunnaki inhabitants, if via space craft, would NOT come when Nibiru was at its closest to the Sun as the planet moves faster at that time; such visits would come EITHER while the planet was INCOMING towards the inner Solar System, OR while it was OUTGOING from its innermost point. We do have a 3-audio tape set of his entire lecture available by mail order for \$30 if you want to verify exactly what he said. Do not contact me by e-mail for ordering but either phone (928) 204-1962 or send me your "US mail" address and I will send you the audio tape mail order form. I am experiencing e-mail problems (a worm virus!) and may not receive any more email this week. I hope that this reply comes with no problems to you.

[Chet Snow Ph.D.](#)

Dear Tim:

As I recall from listening to Zecharia Sitchin's Sedona lecture earlier this month, he had NO idea when Nibiru would be returning, and responded to several written questions from the audience to the effect that calculating its return would be difficult, if not impossible. To verify his statements regarding this question, I suggest you either obtain a copy of his recorded address from Dr. Chet Snow, who hosted the event, or contact Mr. Sitchin directly via his web-site.

Sincerely, Frank Joseph
Editor of [Ancient American](#) Magazine



Troubled Times



Disinfo

Zechariah [Sitchin](#) responds personally to recent criticism

The Case of the ???? Astronomer

This is a sequel to the previous case, that of the Misplaced Teapot, in which I reported the challenge, in *Sky & Telescope* magazine, to my assertion that the depiction on a 4,500 year-old Mesopotamian cylinder seal (Berlin Museum VA./243) shows our solar system with the sun in the center and *all* the planets we know of today, plus one more - **Nibiru**, the home planet of the Anunnaki.

What the magazine's article (by Dr. E. C. Krupp) and artwork (see previous entry on this website) argued in essence was that this central piece of evidence by me in my book *The Twelfth Planet* (1976) is no evidence at all, because this depiction shows the planet Jupiter (known to the ancients) passing within the central portion (the "teapot") of the constellation Sagittarius (also known in antiquity). Hence: No extraordinary knowledge, No extraterrestrial teachers, No Anunnaki, No 12th planet...

But Jupiter, orbiting the Sun almost precisely in the ecliptic, *never* moves 11-12 degrees south to appear in the Teapot! Hence, No alternative interpretation, and No toppling of this piece of evidence (one of hundreds of textual and pictorial ancient data in support of the Sumerian extraordinary knowledge and the Nibiru/Anunnaki explanation).

After several fruitless letters and faxes to *Sky & Telescope* seeking a correction and an admission of their error, I received a two page letter from Dr. E.C. Krupp, signed by him with his title Director on official stationery of the Griffith Observatory, Los Angeles, dated 4 August 2000. It explains that my letter to the magazine was forwarded to him, but his response was delayed due to absence in Iran.

And what does the distinguished astronomer say? I quote:

It is a delight to hear from you. I have all of your books, have read most of them, and have listened to you on the radio a couple of times. I have of course dedicated thought to the arguments you have developed. Although your handling of the data has inspired my skepticism, please let me acknowledge the courtesy and logic of your complaint about the way I evaluated your Twelfth Planet notions in my monthly column on astronomy and culture in Sky & Telescope.

Well, well - but what about the impossibility of his assertion of Jupiter being in the Teapot of Sagittarius? Finally, the "operative" paragraph:

You are correct to point out that I was hasty in offering Sagittarius as an option for the imagery on the Akkadian cylinder seal VA/243. Certainly we cannot regard the figure as an accurate map of the Teapot with Jupiter brewing inside.

So, was the distinguished astronomer "hasty" and not actually plain wrong? The letter continues: "If you'll allow me Saturn, we get a little closer, but you are right - no tea caddied planet. My caption highlights Jupiter, positions it within Sagittarius, and suggests a real mapping. Your objection is sustained" (emphasis added).

Does, then, an apology follow? Not at all, because the letter continues:

Of course, there are other candidates among the stars. A planet could have been in the vicinity of Leo, for example, enclosed by Regulus, gamma Leonis, zeta Leonis, epsilon Leonis, alpha Cancri, 38 Cancri, delta Cancri, zeta Hydrae, epsilon Hydrae, and iota Hydra. Given the lack of precision on the cylinder seal, that set of stars works pretty well. If they be unacceptable, however, we can alternatively imagine a planet in a larger enclosure...

After jumping from Jupiter to Saturn, and from Sagittarius to Leo to Regulus to Cancer, the letter to me offers still other stars in various constellations as alternatives... But what about the obvious alternative, that the depiction indeed represents our solar system? That, in spite of all, is not an alternative for Dr. Krupp.

In my respectful response to Dr. Krupp, I wrote:

*It truly chagrins me that someone like you, in searching for explanations for the seal's depictions (you list some of the most improbable ones in your letter), would not even consider our solar system as a possibility. This can only stem from an absolute refusal to accept the Extraterrestrial nature of the Anunnaki. But why would someone - I am sure you are included - who would deem it possible that Man from Earth would one day travel to another planet, deem it totally unacceptable that someone from another planet might have come here? If not scientific but religious objections lie therein, please read my dialogue with a Vatican theologian on my website [SITCHIN.com](http://www.sitchin.com). (Dialogue in Bellaria)
<http://www.sitchin.com/vatican.htm>*

And I signed my letter: "Looking forward to a dialogue with you."

As of this date (September 26th), there has been no response from the magazine to my request for a correction, the publication of my letter to them in the Letters to the Editor column, or for the acceptance of an article from me: and no further communication from Dr. E.C. Krupp - whom I have quoted with respect in my book *The Lost Realms* - and whose attitude I could not define in the heading of this article: Should the missing word in the title be "Wrong", "Embarrassed", "Reluctant", or (in his own words) just "Hasty"?

Zecharia Sitchin
September 2000

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Zecharia's books are available in paperback from Avon Books. Some reprints in hardcover are available from Bear & Co.

Webmaster: [Erik Parker](#)



Troubled Times



Authors

Authors repeating Sitchin's claim include:

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- Bruce Rux: *Architects of the Underworld: Unriddling Atlantis, Anomalies of Mars, and the Mystery of the Sphinx*. Frog Ltd., Berkeley, 1996.
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Troubled Times



Worlds in Collision

by Immanuel Velikovsky

The Red World, pages 48-49

In the middle of the second millennium before the present era (approximately 3,500 years ago), the earth underwent one of the greatest catastrophes in its history. A celestial body ... came very close to the earth. The account of this catastrophe can be reconstructed from evidence supplied by a large number of documents. The comet .. touched the earth first with its gaseous tail. .. Servius wrote, "It was not of a flaming but of a bloody redness."

One of the first visible signs of this encounter was the reddening of the earth's surface by a fine dust of rusty pigment. In sea, lake, and river this pigment gave a bloody coloring to the water. Because of these particles of ferruginous or other soluble pigment, the world turned red.

The *Manuscript Quiche* of the Mayas tells that in the Western Hemisphere, in the days of a great cataclysm, when the earth quaked and the sun's motion was interrupted, the water in the rivers turned to blood.

Ipuwer, the Egyptian eyewitness to the catastrophe, wrote his lament on papyrus, "The river is blood", and this corresponds with the Book of Exodus 7:20: "All the waters that were in the river were turned to blood".

The Shadow of Death, pages 127-128

If the eruption of a single volcano can darken the atmosphere over the entire globe, a simultaneous and prolonged eruption of thousands of volcanoes would blacken the sky. Volcanoes vomit water vapor as well as cinders. Following the cataclysm, the author of *Codex Chimalpopoca*, in his history of the suns, shows us terrifying celestial phenomena .. followed by darkness that covered the face of the earth, in one instance for a period of 25 years.

In the Ermitage Papyrus in Leningrad .. there are lamentations about a terrible catastrophe, when heaven and earth turned upside down. After this catastrophe darkness covered the earth. The "shadow of death" is related to the time of the wandering in the desert after the Exodus from Egypt. The sinister meaning of the words "shadow of death" corresponds with the description of the Ermitage Papyrus: "None can live when the sun is veiled by clouds."

The phenomenon of gloom enduring for years impressed itself on the memory of the Twelve Tribes and is mentioned in many passages in the Bible. Psalms 44:19 - "The people that walked in darkness .. in the land of the shadow of death."

The Most Incredible Story, page 39

(A) story is told about Joshua ben Num who, when pursuing the Canaanite kings at Beth-horon, implored the sun and the moon to stand still. Joshua (10:12-13):

And the sun stood still, and the moon stayed, until the people had avenged themselves upon their enemies. Is it not written in the book of Jasher? So the sun stood still in the midst of heaven, and hasted not to go down about a whole day.

On the Other Side of the Ocean, pages 45-46

The Book of Joshua, compiled from the more ancient Book of Jasher, states that the sun stood still over Gibeon and the moon over the valley of Ajalon. This description of the position of the luminaries implies that the sun was in the forenoon position. The Book of Joshua says that the luminaries stood in the midst of the sky. Allowing for the difference in longitude, it must have been early morning or night in the Western Hemisphere.

We go to the shelf where stand books with the historical traditions of the aborigines of Central America. The sailors of Columbus and Cortes, arriving in America, found there literate peoples who had books of their own. In the Mexican *Annals of Cuauhtitlan*, written in Nahuatl-Indian, it is related that during a cosmic catastrophe that occurred in the remote past, the night did not end for a long time.

Sahagun, the Spanish savant who came to America a generation after Columbus and gathered the traditions of the aborigines, wrote that at the time of one cosmic catastrophe the sun rose only a little way over the horizon and remained there without moving. The moon also stood still. The biblical stories were not known to the aborigines. Also, the tradition preserved by Sahagun bears no trace of having been introduced by the missionaries.

Naphtha, pages 53-55

Crude petroleum is composed of two elements, carbon and hydrogen. The inorganic theory (of the origin of petroleum states that) hydrogen and carbon were brought together in the rock formations of the earth under great heat and pressure. The tails of comets are composed mainly of carbon and hydrogen gases. Lacking oxygen, they do not burn in flight, but the inflammable gases, passing through an atmosphere containing oxygen, will be set on fire, binding all the oxygen available at the moment. The descent of a sticky fluid which came earthward and blazed with heavy smoke is recalled in the oral and written traditions of the inhabitants of both hemispheres.

Popol-Vuh, the sacred book of the Mayas, narrates "People were drowned in a sticky substance raining from the sky .. and then there was a great din of fire above their heads". The entire population of the land was annihilated. A similar account is preserved in the *Annals of Cuauhtitlan*. The age which ended in the rain of fire was called "the sun of fire-rain"

In Siberia, the Voguls carried down through the centuries and millennia this memory. "God sent a sea of fire upon the earth. In the East Indies, the aboriginal tribes relate that in the remote past "water of fire" rained from the sky. With very few exceptions, all men died. The (Egyptian) papyrus Ipuwer describes this consuming fire. "Gates, columns, and walls are consumed by fire. The sky is in confusion". The papyrus says that this fire almost exterminated mankind.

Earthquake, pages 62-65

The reason why the Israelite were more fortunate than the Egyptians probably lies in the kind of material of which their dwellings were constructed. Occupying a marshy district and working on clay, the captives must have lived in huts made of clay and reeds, which are more resilient than brick and stone. In Mexican annals, during a catastrophe accompanied by hurricane and earthquake, only the people who lived in small log cabins remained uninjured. The larger buildings were swept away. They found that those who lived in small houses had escaped, as well as the newly married couples, whose custom it was to live for a few years in cabins in front of those of their fathers-in-law.

Exodus (12:29) states "Forsooth. The children of princes are dashed against the walls .. the children of

princes are cast out in the streets". The population fled. Ipuwer wrote "Men flee .. tents are what they make, like the dwellers of hills". The population of a city destroyed by an earthquake usually spends the nights in the fields.

This happened on the night of the 14th of the month of Aviv. (Exodus 12:6 and 13:4) This is the night of Passover, as the Israelites originally celebrated Passover on the eve of the 14th of Aviv. (Where) the Hebrews counted, and still count, the beginning of the day from sunset, the Egyptians reckoned from sunrise. For the Egyptians it was the 13th day. Here we have the answer to the open question concerning the origin of the superstition which regards the number 13, and especially the 13th day, as unlucky and inauspicious. (There is no) record of this belief found dating from before the Exodus.

The Tide, pages 70-75

The slowing down or stasis of the earth in its rotation would cause a tidal recession of water toward the poles, but the celestial body near by would disturb this poleward recession, drawing the water toward itself. The traditions of many peoples persist that seas were torn apart and their water heaped high and thrown upon the continents.

The traditions of the people of Peru tell that for a period of time the sun was not in the sky, and then the ocean left the shore and with a terrible din broke over the continent. The Choctaw Indians of Oklahoma relate: "The earth was plunged in darkness for a long time". Finally a dark light appeared in the north, "but it was mountain-high waves, rapidly coming nearer". According to the Lapland epic, after the sea-wall fell on the continent, gigantic waves continued to roll and dead bodies were dashed about in the dark waters.

The Hebrew story of the passage of the sea (relates that) the bottom of the sea was uncovered, the waters were driven apart and heaped up like walls in a double tide. The Sepuagint translation of the Bible says that the water stood "as a wall", and the Koran, referring to this event, says "like mountains". In the old rabbinical literature it is said that the water was suspended as if it were "Glass, solid and massive".

The Hurricane, page 67-69

Manuscript Troano and other documents of the Mayas describe a cosmic catastrophe during which the ocean fell on the continent, and a terrible hurricane swept the earth. The hurricane broke up and carried away all towns and all forests. A wild tornado moved through the debris descending from the sky. The end of the world was brought by Hurakan. From this name is derived hurricane, the word we use for a strong wind.

The theme of the cosmic hurricane is reiterated time and again in the Hindu *Vedas* and in the Persian *Avesta*. The 11th tablet of the *Epic of Gilgamesh* says that 6 days and a night the hurricane, deluge, and tempest continued sweeping the land and mankind perished almost altogether. The Maoris narrate that amid a stupendous catastrophe the mighty winds, the fierce squalls, the clouds, dense, dark, fiery, wildly drifting, wildly bursting, rushed on creation, ... and swept away giant forests and lashed the waters into billows whose crests rose high like mountains.

The Polynesians celebrate a god, Taafanua. In Arabic, Typhoon is a whirlwind and Tufan is the Deluge; and the same word occurs in Chinese as Ty-fong. It appears as though the noise of the hurricane was .. not unlike the name Typhon.



Troubled Times



Earth in Upheaval

by Immanuel Velikovsky

The Ivory Islands, pages 4-6

In 1797 the body of a mammoth, with flesh, skin, and hair, was found in northeastern Siberia. The flesh had the appearance of freshly frozen beef; it was edible, and wolves and sled dogs fed on it without harm. The ground must have been frozen ever since the day of their entombment; had it not been frozen, the bodies of the mammoths would have putrefied in a single summer, but they remained unspoiled for some thousands of years. In some mammoths, when discovered, even the eyeballs were still preserved.

(All) this shows that the cold became suddenly extreme .. and knew no relenting afterward. In the stomachs and between the teeth of the mammoths were found plants and grasses that do not grow now in northern Siberia .. (but are) .. now found in southern Siberia. Microscopic examination of the skin showed red blood corpuscles, which was proof not only of a sudden death, but that the death was due to suffocation either by gases or water.

Whales in the Mountains, pages 46-49

Bones of whale have been found 440 feet above sea level, north of Lake Ontario; a skeleton of another whale was discovered in Vermont, more than 500 feet above sea level; and still another in the Montreal-Quebec area, about 600 feet above sea level. Although the Humphrey whale and beluga occasionally enter the mouth of the St. Lawrence, they do not climb hills.

Times and Dates, pages 202-203

Careful investigation by W.A. Johnston of the Niagara River bed disclosed that the present channel was cut by the falls less than 4,000 years ago. And equally careful investigation of the Bear River delta by Hanson showed that the age of this delta was 3,600 years. The study by Claude Jones of the lakes of the Great Basin showed that these lakes, remnants of larger glacial lakes, have existed only about 3,500 years. Gales obtained the same result on Owen Lake in California and also Van Winkle on Abert and Summer lakes in Oregon.

Radiocarbon analysis by Libby also indicates that plants associated with extinct animals (mastodons) in Mexico are probably only 3,500 years old. Similar conclusions concerning the late survival of the Pleistocene fauna were drawn by various field workers in many parts of the American continent. Suess and Rubin found with the help of radiocarbon analysis that in the mountains of the western United States ice advanced only 3000 years ago.

The Florida fossil beds at Vero and Melbourne proved - by the artifacts found there together with human bones and the remains of animals, many of which are extinct - that these fossil beds were deposited between 2,000 and 4,000 years ago. From observations on beaches in numerous places all over the world, Daly concluded that there was a change in the ocean level, which dropped sixteen to twenty feet 3,500 years ago. Kuenen and others confirmed Daly's findings with evidence derived from Europe.

Dropped Ocean Level, pages 181-183

R.A. Daly observed that in a great many places all around the world there is a uniform emergence of the shore line of 18 to 20 feet. In the southwest Pacific, on the islands belonging to the Samoan group but spread over two hundred miles, the same emergence is evident. Nearly halfway around the world, at St. Helena in the South Atlantic, the lava is punctuated by dry sea caves, the floors of which are covered with water-worn pebbles, now dusty because untouched by the surf. The emergence there is also 20 feet. At the Cape of Good Hope caves and beaches also prove recent and sensibly uniform emergence to the extent of about 20 feet.

Marine terraces, indicating similar emergence, are found along the Atlantic coast from New York to the Gulf of Mexico; for at least 1,000 miles along the coast of eastern Australia; along the coasts of Brazil, southwest Africa, and many islands in the Pacific, Atlantic, and Indian Oceans. The emergence is recent as well as of the same order of magnitude, (20 feet). Judging from the condition of beaches, terraces, and caves, the emergence seems to have been simultaneous on every shore.

In (Daly's) opinion the cause lies in the sinking of the level of all seas on the globe. Alternatively, Daly thinks it could have resulted from a deepening of the oceans or from an increase in their areas. Of special interest is the time of the change. Daly estimated the sudden drop of oceanic level to (have occurred) some 3,000 to 4,000 years ago.

Shifting Poles, pages 111, 44, and 46

All other theories of the origin of the Ice Age having failed, there remained an avenue of approach which already early in the discussion was chosen by several geologists: a shift in the terrestrial poles. If for some reason the poles had moved, old polar ice would have moved out of the Arctic and Antarctic circles and into new regions. The glacial cover of the Ice Age could have been the polar icecap of an earlier epoch.

The continent of Antarctica is larger than Europe. It has not a single tree, not a single bush, not a single blade of grass. Very few fungi have been found. Storms of great velocity circle the Antarctic most of the year. E.H. Shackleton, during his expedition to Antarctica in 1907 found fossil wood in the sandstone. Then he discovered 7 seams of coal. The seams are each between 3 and 7 feet thick. Associated with the coal is sandstone containing coniferous wood.

Spitsbergen in the Arctic Ocean is as far north from Oslo in Norway as Oslo is from Naples. Heer identified 136 species of fossil plants from Spitsbergen. Among the plants were pines, firs, spruces, and cypresses, also elms, hazels, and water lilies. At the northernmost tip of Spitsbergen Archipelago, a bed of black and lustrous coal 25 to 30 feet thick was found. (Spitsbergen) is buried in darkness for half the year and is now almost continuously buried under snow and ice. At some time in the remote past corals grew and are still found on the entire fringe of polar North America - in Alaska, Canada, and Greenland. In later times fig palms bloomed within the Arctic Circle.

Sea and Land Changed Places, pages 14, 74, and 180

(Cuvier) found in the gypsum deposits in the suburbs of Paris marine limestone containing over eight hundred species of shells, all of them marine. Under this limestone there is another - fresh water - deposit formed of clay. Much of France was once under sea; then it was land, populated by land reptiles; then it became sea again and was populated by marine animals; then it was land again, inhabited by mammals. And as it was on the site of Paris, so it was in other parts of France, and in other countries of Europe.

The Himalayas, highest mountains in the world, rise like a thousand mile long wall north of India. Many of its peaks tower over 20,000 feet, Mount Everest reaching 29,000 feet. Scientists of the nineteenth century were dismayed to find that, as high as they climbed, the rocks of the massifs yielded skeletons of marine animals, fish that swim in the ocean, and shells of mollusks. This was evidence that the Himalayas had risen from beneath the sea.

In many places of the world the seacoast shows either submerged or raised beaches. The previous surf line is seen on the rock of raised beaches; where the coast became submerged, the earlier water line is found chiseled by the surf in the rock below the present level of the sea. In the case of the Pacific coast of Chile Charles Darwin observed that the beach must have risen 1300 feet only recently - within the period during which upraised shells have remained undecayed on the surface.



Troubled Times



Rotation Stoppage

The Immanuel Velikovsky [Archive](#)

[Quoted by Immanuel Velikovsky in *Worlds in Collision*, 1950].

1. The aborigines of British North Borneo, even today, declare that the sky was originally low, and that six suns perished, and at present the world is illuminated by the seventh sun. [*Worlds in Collision*, p.52]
2. And he said in the sight of Israel. Sun, stand thou still upon Gibeon; and thou, Moon, in the valley of Ajalon. And the sun stood still, and the moon stayed, until the people had avenged themselves upon their enemies. So the sun stood still in the midst of the heaven, and hastened not to go down about a whole day (Joshua 10: 12-13). [*Worlds in Collision*, p.55]
3. The quotation in the Bible from the Book of Jasher is laconic and may give the impression that the phenomenon of the motionless sun and moon was local, seen only in Palestine between the valleys of Ajalon and Gibeon. But the cosmic character of the prodigy is pictured in a thanksgiving prayer ascribed to Joshua: 'Sun and moon stood still in heaven.' [*Worlds in Collision*, p.59]
4. In the Mexican annals it is stated that the world was deprived of light and the sun did not reappear for a fourfold night. [*Worlds in Collision*, p. 62]
5. Sahagun, the Spanish savant who came to America a generation after Columbus and gathered the traditions of the aborigines, wrote that at the time of one cosmic catastrophe the sun rose only a little way over the horizon and remained there without moving; the moon also stood still. [*Worlds in Collision*, p.62]
6. In the manuscripts of Avila and Molina, who collected the traditions of the Indians of the New World, it is related that the sun did not appear for five days, a cosmic collision of stars preceded the cataclysm; people and animals tried to escape to mountain caves. 'Scarcely had they reached there, when the sea, breaking out of bounds following a terrifying shock, began the rise of the pacific coast. But as the sea rose, filling the valleys and the plains around, the mountain of Ancasmarca rose too, like a ship on the waves. During the five days that this cataclysm lasted, the sun did not show its face and the earth remained in darkness.' [*Worlds in Collision*, p.76]
7. According to the Lapland cosmogonic story ...the angry God spoke, 'I shall reverse the world, I shall bid the rivers flow upward; I shall cause the sea to gather itself up into a towering wall which I shall hurl upon your wicked earth-children, and thus destroy them and all life. ...(Jubmel) with one strong upheaval, made the earth-lands all turn over.' [*Worlds in Collision*, p.88]
8. The Finns tell in their Kalevala that the support of the sky gave way and a spark of fire kindled a new sun and a new moon. [*Worlds in Collision*, p.103]



Troubled Times



Upheaval

The Immanuel Velikovsky [Archive](#)

[Quoted by Immanuel Velikovsky in *Worlds in Collision*, 1950].

9. The tradition of the Cashina, the aborigines of western Brazil, is narrated as follows; 'the lightnings flashed and the thunders roared terribly and all were afraid. Then the heaven burst and the fragments fell down and killed everything and everybody. Heaven and earth changed places. Nothing that had life was left upon the earth.' [*Worlds in Collision*, p.104]

10. According to the legends of the New World, the profile of the land changed in a catastrophe, new valleys were formed, mountain ridges were torn apart, new gulfs were cut out, ancient heights were overturned and new ones sprang up. The few survivors of the ruined world were enveloped in darkness, 'the sun in some way did not exist.' [*Worlds in Collision*, p.106]

11. CHINA: At the time of the miracle is said to have happened that the sun during a span of ten days did not set, the forests were ignited, and a multitude of abominable vermin was brought forth. 'In the lifetime of Yao [Yahou] the sun did not set for full ten days and the entire land was flooded.' [*Worlds in Collision*, p.114]



Troubled Times



Rotation Restart

The Immanuel Velikovsky [Archive](#)

[Quoted by Immanuel Velikovsky in *Worlds in Collision*, 1950].

12. Thereupon Yaou [Yahou] commanded Hi and Ho, in reverent accordance with the wide heavens, to calculate and delineate the movements and the appearances of the sun, the moon, the stars, and the zodiacal spaces; and to deliver respectfully the seasons to the people. [*Worlds in Collision*, p.116]

13. Herodotus: 'No reversal of sunrise and sunset takes place in a Sothis period.' [*Worlds in Collision*, p.118]

14. Pomponius Mela, a Latin author of the first century. wrote: 'The Egyptians pride themselves on being the most ancient people in the world. In their authentic annals...one may read that since they have been in existence, the course of the stars has changed direction four times, and the sun has set twice in the part of the sky where it rises today.' [*Worlds in Collision*, p.119]

15. The Magical Papyrus Harris speaks of a cosmic upheaval of fire and water when 'the south becomes north, and the earth turns over.' [*Worlds in Collision*, p.120]

16. In the Papyrus Ipuwer it is similarly stated that 'the land turns round [over] as does a potter's wheel,' and 'Earth turns upside down.' [*Worlds in Collision*, p.121]

17. In the Ermitage Papyrus [Leningrad, 1116b recto] also, reference is made to a catastrophe that turned the 'land upside down; happens that which never (yet) had happened.' It is assumed at that time- in the second millenium-people were not aware of the daily rotation of the earth, and believed that the firmament with its luminaries turned around earth; therefore the expression, 'the earth turned over,' does not refer to the daily rotation of the globe. Nor do these descriptions in the papyri of Leiden and Leningrad leave room for figurative explanation of the sentence, especially if we consider the text of the Papyrus Harris-the turning over of earth is accompanied by the interchange of the south and north poles. [*Worlds in Collision*, p.121]

18. Harakhte is the Egyptian name for the western sun. As there is but one sun in the sky, it is supposed that Harakhte means the sun at its setting. But why should the sun at its setting be regarded as a deity different from the morning sun? The identity of the rising and the setting sun is seen by everyone. The inscriptions do not leave any room for misunderstanding: 'Harakhte, he riseth in the west.' " [*Worlds in Collision*, p.121]

19. The texts found in the pyramids say that the luminary 'ceased to live in the occident, and shines, a new one, in the orient.' After the reversal of direction, whenever it may have occurred, the words 'west' and 'east' were no longer synonyms, and it is necessary to clarify references by adding: 'the west which is at the sun-setting.' It was not mere tautology, as the translator of this text thought. [*Worlds in Collision*, p.120]

20. In the tomb of Senmut, the architect of Queen Hatshepsut, a panel on the ceiling shows the celestial sphere with 'a reversed orientation' or the southern sky. The end of the Middle Kingdom antedated the time of Queen Hatshepsut by several centuries. The astronomical ceiling presenting a reversed orientation

must have been a venerated chart, made obsolete a number of centuries earlier. 'A characteristic feature of the Senmut ceiling is the astronomically objectionable orientation of the souther panel,' The center of this panel is occupied by the Orion-Sirius group, in which Orion appears west of Sirius instead of east. 'The orientating of the souther panel is such that a person in the tomb looking at it has to lift his head and face north, not south.' 'With the reversed orientation of the south panel, Orion, the most conspicuous constellation of the southern sky, appeared to be moving eastward, i.e., in the wrong direction.' [*Worlds in Collision*, p.120]

21. The real meaning of 'the irrational orientation of the southern panel' and the 'reversed position of Orion' appears to be this: the southern panel shows the sky of Egypt as it was before the celestial sphere interchanged north and south, east and west. The northern panel shows the sky of Egypt as it was on some night of the year in the time of Senmut. [*Worlds in Collision*, p.120]

22. Plato wrote in his dialogue, *The Statesman (Politicus)*: 'I mean the change in the rising and the setting of the sun and the other heavenly bodies, how in those times they used to set in the quarter where they now rise, and they used to rise where they now set..' [*Worlds in Collision*, p.122]

23. According to a short fragment of a historical drama by Sophocles (*Atreus*), the sun rises in the east only since its course was reversed. 'Zeus ... changed the course of the sun, causing it to rise in the east and not in the west.'" [*Worlds in Collision*, p.122]



Troubled Times



Crust Shift

The Immanuel Velikovsky [Archive](#)

[Quoted by Immanuel Velikovsky in *Worlds in Collision*, 1950].

24. Seneca knew more than his older contemporary Strabo. In his drama *Thyestes*, he gave a powerful description of what happened when the sun turned backward in the morning sky, which reveals much profound knowledge of natural phenomena. When the sun reversed its course and blotted out the day in mid-Olympus (noon), and the sinking sun beheld Aurora, the people, smitten with fear, asked: 'Have we of all mankind been deemed deserving that heaven, its poles upturned, should overwhelm us' In our time has the last day come?' [*Worlds in Collision*, p.123]

25. Caius Julius Solinus, a Latin author of the third century of the present era, wrote of the people living on the southern borders of Egypt: 'The inhabitants of this country say that they have it from their ancestors that the sun now sets where it formerly rose,' [*Worlds in Collision*, p.124]

26. In the Syrian city Ugarit (Ras Shamra) was found a poem dedicated to the planet-goddess Anat, who 'massacred the population of the Levant,' and who 'exchanged the two dawns and the positions of the stars.' [*Worlds in Collision*, p.125]

27. The reversal of east and west, if combined with the reversal of north and south, would turn the constellations of the north into constellations of the south, and show them in reversed order, as in the chart of the southern sky on the ceiling of Senmut's tomb. The stars of the north would become the stars of the south; this is what seems to be described by the Mexicans as the 'driving away of the four hundred southern stars.' [*Worlds in Collision*, p.120]

28. The Eskimos of Greenland told missionaries that in an ancient time the earth turned over and the people who lived then became antipodes. [*Worlds in Collision*, p.126]

29. In Tractate Sanhedrin of the Talmud it is said: 'Seven days before the deluge, the Holy One changed the primeval order and the sun rose in the west and set in the east. [*Worlds in Collision*, p.126]

30. Hai Gaon, the rabbinical authority who flourished between 939 and 1038, in his Responses refers to cosmic changes in which the sun rose in the west and set in the east. [*Worlds in Collision*, p.126]

31. In *Voluspa* (Poetic Edda) of the Icelanders we read: 'No knowledge she [the sun] had where her home should be, The moon knew not what was his, The stars knew not where their stations were.' Then the gods set order among the heavenly bodies [*Worlds in Collision*, p.130]



Troubled Times



Tipped World

The Immanuel Velikovsky [Archive](#)

[Quoted by Immanuel Velikovsky in *Worlds in Collision*, 1950].

32. The Aztecs related: "There had been no sun in existence for many years ..[The Chiefs] began to peer through the gloom in all directions for the expected sight, and to make bets as to what part of heaven [the sun] should first appear ... but when the sun rose, they were all proved wrong, for not one of them had fixed upon the east." [*Worlds in Collision*, p.131]

33. Similarly the Mayan legend tells that 'it was not known from where the new sun would appear.' 'They looked in al directions, but they were unable to say where the sun would rise. Some thought it might take place in the north and their glances were turned in that direction. Others thought it would be in the south. Actually, their guess included all directions because dawn shone all around. Some, however, fixed their attention of the orient, and maintained that the sun would come from there. It was their opinion that proved to be correct. [*Worlds in Collision*, p.131]

34. On the Andaman Islands the natives are afraid that a natural catastrophe will cause the world to turn over. [*Worlds in Collision*, p.132]

35. In Greenland also the Eskimos fear that the earth will turn over. [*Worlds in Collision*, p.132]

36. "In Menin (Flanders) the peasants say, on seeing a comet: 'The sky is going to fall; the earth is turning over!'" [*Worlds in Collision*, p.132]



Troubled Times



New Calendar

The Immanuel Velikovsky [Archive](#)

[Quoted by Immanuel Velikovsky in *Worlds in Collision*, 1950].

- 37.** The Egyptian papyrus known as Papyrus Anastasi IV contains a complaint about gloom and the absence of solar light; it also say also: 'The winter is come as (instead of) summer, the months are reversed and the hours disordered. [*Worlds in Collision*, p.132]
- 38.** 'The breath of heaven is out of harmony.... The four seasons do not observe their proper times,' we read in the Texts of Taoism." [*Worlds in Collision*, p.132]
- 39.** In the historical memoirs of Se-Ma Ts'ien, as in the annals of the Shu King (already quoted) it is said that Emperor Yahou sent astronomers to the Valley of Obscurity and to the Sombre Residence to observe the new movements of the sun and the moon and the zyzygies or the orbital points of the conjunctions, also to 'investigate and inform the people of the order of the seasons.'" [*Worlds in Collision*, p.133]
- 40.** It is also said that Yahou introduced a calendar reform: he brought the seasons into accord with the observations; he did the same with the months; and he 'corrected the days.' [*Worlds in Collision*, p.120]
- 41.** 'The astronomers and the geologists whose concern is all this ... should judge of the causes which could effect the derangement of the day and could cover the earth with tenebrosity,' wrote a clergyman who spent many years in Mexico and in the libraries of the Old World which store ancient manuscripts of the Mayas and works of early Indian and Spanish authors about them. [*Worlds in Collision*, p.134]
- 42.** The calendar had to be adjusted anew. The astronomical values of the year and the day could not be the same before and after an upheaval in which, as the quoted Papyrus Anastasi IV says, the months were reversed and the 'hours disordered.'" [*Worlds in Collision*, p.135]
- 43.** The fact I hope to establish is that from the fifteenth century to the eighth century before the present era the astronomical year was equal to 360 days; neither before the fifteenth century, nor after the eighth century was the year of this length." [*Worlds in Collision*, p.136]



Troubled Times



New Sky

The Immanuel Velikovsky [Archive](#)

[Quoted by Immanuel Velikovsky in *Worlds in Collision*, 1950].

- 44.** In the so-called Manuscript Quiche it is also narrated that there was 'little light on the surface of the earth .. the faces of the sun and the moon were covered with clouds.'" [*Worlds in Collision*, p.140]
- 45.** In the Ermitage Papyrus in Leningrad (previously mentioned) there are lamentations about a terrible catastrophe, when heaven and earth turned upside down ("I show thee the land upside down: it happed that which never had happened'). After this catastrophe, darkness covered the earth: 'The sun is veiled and shines not in the sight of men. None can live when the sun is veiled by clouds. ..None knoweth that midday is there; the shadow is not discerned .. Not dazzled is the sight when he [the sun] is beheld; he is in the sky like the moon.'" [*Worlds in Collision*, p.140]
- 46.** In the Papyrus Anastasi IV the years of misery are described, and it is said" 'The sun, it hath come to pass that it riseth not.'" [*Worlds in Collision*, p.140]
- 47.** In the Kalevala, the Finnish epos which 'dates back to an enormous antiquity,' the time the sun and moon disappeared from the sky, and dreaded shadows covered it, is described in these words: 'Even birds grew sick and perished, men and maidens, faint and famished, perished in the cold and darkness, from the absence of sunshine.. from the absence of moonlight...But the wise men of the Northland could not know the dawn of morning, for the moon shines not in season nor appears the sun at midday, from their stations in the sky-vault.' [*Worlds in Collision*, p.143]
- 48.** The Greeks as well as the Carians and other peoples on the shores of the Aegean Sea told of a time when the sun was driven off its course and disappeared for an entire day,..." [*Worlds in Collision*, p.153]
- 49.** The disturbance in the movement of the sun was followed by a period as long as a day, when the sun did not appear at all. Ovid continues: 'If we are to believe the report, one whole day went without the sun. But the burning world gave light.'" [*Worlds in Collision*, p.155]
- 50.** Plato recorded the story heard two generations before from Solon, the wise ruler of Athens. '..the story, as it is told, has the fashion of a legend, but the truth of it lies in the occurrence of a shifting of the bodies in the heavens which move around the earth, and a destruction of the things on the earth by a fierce fire, which recurs at long intervals.' [*Worlds in Collision*, p.155-6]
- 51.** "Thyestes and his brother Atreus were .. Argive Tyrants. Living in the eighth century, they must have witnessed the cosmic catastrophes of the days of Isaiah. Greek tradition persists that a cosmic catastrophe occurred in the time of these tyrants: the sun changed its course and the night came before its proper time." [*Worlds in Collision*, p.223]
- 52.** Seneca describes the change of position of each constellation-the Ram, the Bull, the Twins, the Lion, the Virgin, the Scales, the Scorpion, the Goat, and the Wain (the Great Bear) 'And the Wain, which was never bathed in the sea, shall be plunged beneath the all-engulfing waves.'

53. A commentator who wondered about this description of the position of the Great Bear wrote: 'There was no mythological reason why the Wain-otherwise known as the Great Bear-should not be bathed in the Ocean.' But Seneca said precisely this strange thing: the Great Bear-or one of its stars-never set beneath the horizon, and thus the polar star was among its stars during the age that came to an end in the time of the Argive tyrants. Seneca also says explicitly that the poles were torn up in this cataclysm" [*Worlds in Collision*, p.225]

54. In the tale of the southern Ute Indians, the cottontail is the animal that is connected with the disruption of the movement of the sun." ... "There is one instance more in the Indian story of the sun being impeded on its path and the ensuing world conflagration. Before the catastrophe, 'the sun used to go round close to the ground.' the purpose of the attack on the sun was to make 'the sun shine a little longer: the days were too short.' After the catastrophe 'the days became longer.'" [*Worlds in Collision*, p.315]

55. According to Seneca the Great Bear had been the polar constellation. After a cosmic upheaval shifted the sky, a star of the Little Bear became the polar star. Hindu astronomical tablets composed by the Brahmans in the first half of the millennium before the present era shows a uniform deviation from the expected position of the stars at the time the observations were made (the precession of the equinoxes being taken into consideration). Modern scholars wondered at this, in their opinion inexplicable error. In view of the geometrical methods employed by Hindu astronomy and its detailed method of calculation, a mistake in observation equal to even a fraction of a degree would be difficult to account for. In Jaiminiya-Upanisad-Brahmana it is written that the center of the sky, or the point around which the firmament revolves, is the Great Bear. This is the same statement we found in Thyestes of the Seneca. [*Worlds in Collision*, p.317]



Troubled Times



New Day

The Immanuel Velikovsky [Archive](#)

[Quoted by Immanuel Velikovsky in *Worlds in Collision*, 1950].

56. The day on which the shortest shadow is cast at noon is the day of the summer solstice; the longest shadow at noon is cast on the day of the winter solstice. The method of determining the seasons by measuring the length of the shadows was applied in ancient china, as well as in other countries." "We possess the Chinese records of the longest and shortest shadows at noontime. These records are attributed to -1100. 'But the shortest and longest shadows recorded do not really represent the true lengths at present.' The old Chinese charts record the longest day with a duration which does not represent the various geographical latitudes of their observatories,' and therefore the figures are supposed to have been those of Babylonia, borrowed by ancient Chinese, a rather unusual conjecture. [*Worlds in Collision*, p.318]

57. {*Kugler*, SSB,I,226-227}. "The length of the longest day in a year depends on the latitude, or the distance from the pole, and is different at different places. Gnomons or sundials can be built with great precision. The Babylonian astronomical tablets of the eighth century provide exact data, according to which the longest day at Babylon was equal to 14 hours, 24 minutes, whereas the modern determination is 14 hours 10 minutes and 54 seconds." 'the difference between the two figures is too great to be attributable to refraction, which makes the sun still visible over the horizon after it has set. Thus, the greater length of the day corresponds to latitude 34 degrees 57 minutes, and points to a place 2 1/2 degrees further to the north; we stand therefore before a strange riddle [vor einem merkwurdgien Ratsel.]. One tries to decide: either the tablets of System II do not originate from Babylon [though referring to Babylon] or this city actually was situated far [farther] to the north, about 35away from the equator." [*Kugler*, Die babylonische Mondrechnung: Zwei Systeme der Chaldäer über den Lauf des Mondes und der Sonne (1900), p.80]

58. Claudius Ptolemy, who in his *Almagest*, made computations for contemporaneous and ancient Babylon, arrived at two different estimates of the longest day at that city, and consequently of the latitude at which it was located. One of his estimates being practically of the present-day value, the other coinciding with the figure of the ancient Babylonian tables, 14 hours, 24 minutes." [*Worlds in Collision*, p.319] The Arabian medieval scholar Arzachel computed from ancient codices that in more ancient times Babylon was situated at a latitude of 35 degrees 0 minutes from the equator, while in later times it was situated more to the south. Johannes Kepler drew attention to this calculation of Arzachel and to the fact that between ancient and modern Babylon there was thus a difference in latitude."

59. "Thus Ptolemy and likewise Arzachel, computed that in historical times Babylon was situated at latitude 35. Modern scholars arrived at identical results on the basis of ancient Babylonian computations. 'This much, therefore, is certain: our tables [System II, and I also], and the astronomers mentioned as well, point to a place about 35 north latitude. Is it possible that they were mistaken by 2 to 21/2 degrees ? This is scarcely possible.'" {*Kugler*, *ibid.*, p.81.}

60. Some of the classic authors knew that the earth had changed its position and had turned towards the south; not all of them, however, were aware of the real cause of this perturbation. Diogenes Laertius repeated the teaching of Leucippus: 'The earth bent or inclined towards the south because the northern regions grew rigid and inflexible by the snowy and cold weather which ensued thereon.' The same idea is found in Plutarch, who quoted the teaching of Democritus: 'The northern regions were ill temperate, but

the southern were well; whereby the latter becoming fruitful, waxed greater, and by an overweight preponderated and inclined to the whole that way.' Empedocles, quoted by Plutarch, taught that the north was bent from its former position, whereupon the northern regions were elevated and the southern depressed. Anaxagoras taught that the pole received a turn and that the world became inclined toward the south." [*Worlds in Collision*, p.320]



Troubled Times



Carl Sagan's Comments

Quote from Carl Sagan, in his book *Cosmos*, 1980, page 91.

The worst aspect of the Velikovsky affair is not that his hypotheses were wrong or in contradiction to firmly established facts, but that some who called themselves scientists attempted to suppress Velikovsky's work. Science is generated by and devoted to free inquiry: the idea that any hypothesis, no matter how strange, deserves to be considered on its merits. The suppression of uncomfortable ideas may be common in religion and politics, but it is not the path to knowledge; it has no place in the endeavor of science. We do not know in advance who will discover fundamental new insights.



Troubled Times



Supplement

by Immanuel Velikovsky

Earth in Upheaval, the **Supplement**, page 267

In the fields of archaeology, geology, and astronomy the last few years have brought a vast array of facts to corroborate the claims made in *Worlds in Collision* that there were physical upheavals of a global character in historical times; that these catastrophes were caused by extraterrestrial agents; and that the nature of these agents may be identified. What I want to impress upon you is that science today, as in the days of Newton, lies before us as a great uncharted ocean, and we have not yet sailed very far from the coast of ignorance.

Don't be afraid to face facts, and never lose your ability to ask the questions: Why? and How? Be in this like a child. Don't be afraid of ridicule; think of the history of all great discoveries. I quote Alfred North Whitehead: "If you have had your attention directed to the novelties of thought in your own lifetime, you will have observed that almost all really new ideas have a certain aspect of foolishness when they are first produced."

Therefore, dare.

Persist if you see the facts gathering on your side. It may be that even the strongest opposition, that of figures will crumble before the fact. The greatest mathematician who ever walked on these shores, Simon Newcomb, proved in 1903 that a flying machine carrying a pilot is a mathematical impossibility. In the same year of 1903 the Wright brothers, without mathematics, but by a fact, proved him wrong. The truth of today was the heresy of yesterday.



Troubled Times



April, 2003 Viewing

To determine when and where you will be able to see the Planet X complex (corpus, moon swirls, red dust cloud) in the sky during April, 2003, please refer to the following chart. Note the complex will be between the Orion (archer) and Taurus (bull) constellations, in the general area outlined in the [Path](#) diagram. For more precise location, check the [Coordinates](#) page. For what the imaging (CCD camera photos) of this complex in March, 2003, check the [Sighting TEAM](#) pages.

WHERE	MAR 31	APR 7	APR 14	APR 21	APR 28
South Africa: Capetown	12:00	11:30	11:00	10:30	10:00
South Africa: Capetown	22:00	21:30	21:00	20:30	20:00
France: Paris	11:00	10:30	10:00	09:30	09:00
France: Paris	22:30	22:00	21:30	21:00	20:30
Argentina: Buenos Aires	12:00	11:30	11:00	10:30	10:00
Argentina: Buenos Aires	22:00	21:30	21:00	20:30	20:00
Canada: Vancouver	10:30	10:00	09:30	09:00	08:30
Canada: Vancouver	22:00	21:30	21:00	20:30	20:00
Australia: Sydney	11:00	10:30	10:00	09:30	09:00
Australia: Sydney	21:00	20:30	20:00	19:30	19:00
Japan: Osaka	11:00	10:30	10:00	09:30	09:00
Japan: Osaka	21:30	21:00	20:30	20:00	19:30

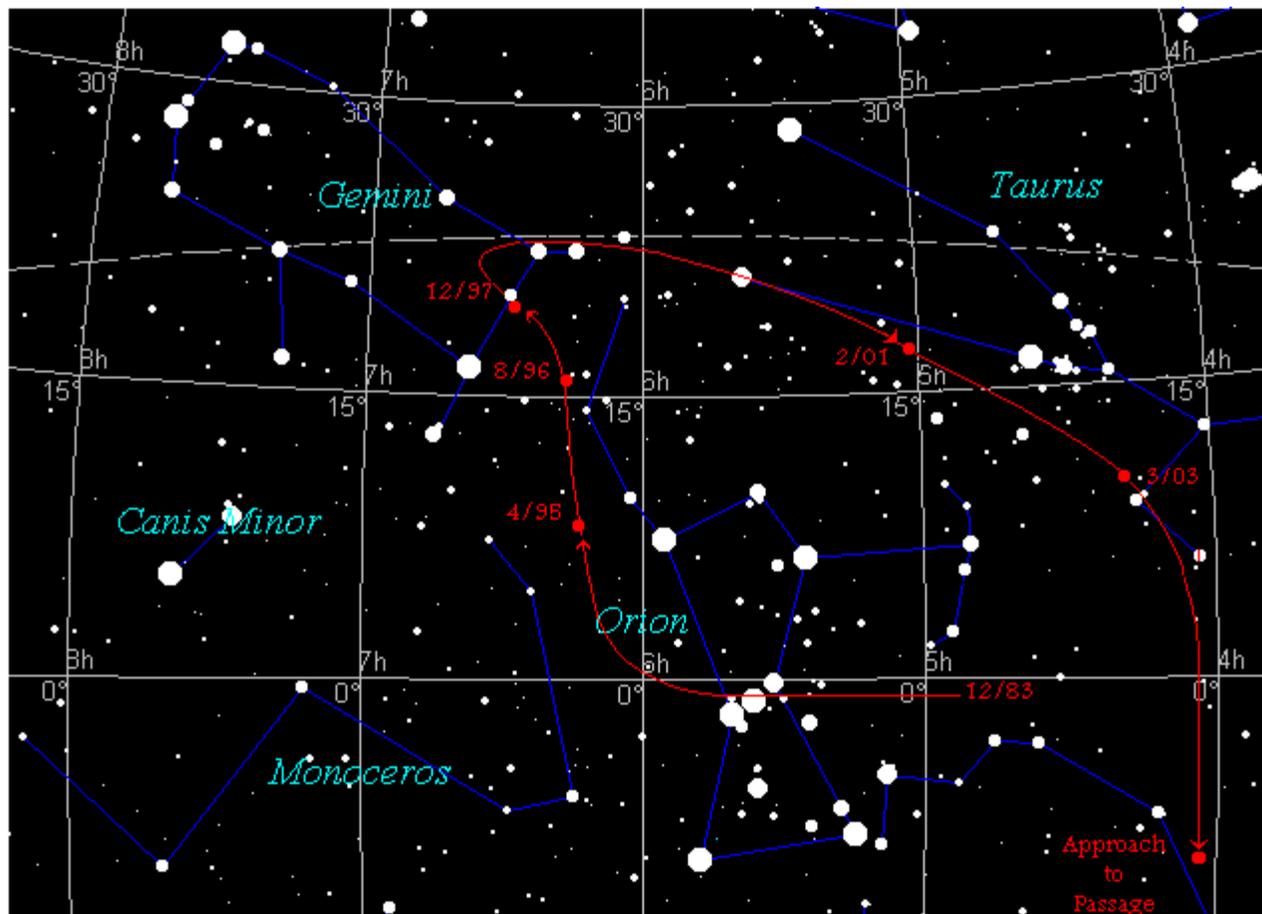
Both **Southern** and **Northern** hemispheres have been included.
 Time is military time, with no daylight savings time adjustments.
 Orion/Taurus **rises** hours after the Sun in the SE.
 Orion/Taurus **sets** hours after the Sun in the SW.



Troubled Times



Path as Viewed from Earth



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Variance

Nancy's diagram curves the line between points and also has large dots at the points, so the path can be slightly confused. In fact, the 12th Planet tends *not* to make all those pretty curves. Also, there are variations here and there that would make the Path chart too complicated, so that a steady progress or rate of travel does not always occur.

You can assume, in selecting a Right Ascension (RA) and Declination (Dec) point, that no more than **.2 RA** degrees nor **.45** declination degrees occurs at any time as a variance from this path. This variance includes a slower rate along the path than would be assumed and a path other than a smoothed or curved path between points.

ZetaTalk



Troubled Times



Coordinates

The coordinates are listed with the latest date at the top of the page. Due to the light from Planet X being primarily in the red spectrum, and the tendency of this light to bend readily, the exact RA and Dec for your location will probably vary slightly from those given depending on your position on the globe. Movements in the RA and Dec also take into account changing factors in the solar system that bend red light. Look *around* the spot slightly.

RA 4.06449 Dec -07.45183 May 15, 2003
RA 4.07645 Dec 00.77814 May 9, 2003
RA 4.09581 Dec 02.98217 May 4, 2003
RA 4.11437 Dec 03.95347 Apr 30, 2003
RA 4.12964 Dec 08.11571 Apr 21, 2003
RA 4.13113 Dec 10.23674 Apr 16, 2003

During this period Planet X is moving rapidly to the outer edge of the solar system, where it encounters the backwash into the Sun that is the Ecliptic, with all the turmoil in subatomic particle flows both into the Sun and repulsed from this crowding. Thus, like a family on vacation, poised at the on-ramp to the freeway where they are already encountering stop-and-go traffic, choking emissions, wind drafts from passing trucks, and the bleating of horns, Planet X decides to take the way less crowded, the back roads, and positions itself for a rapid plunge to a 32 degree angle below the Ecliptic, as has been recorded by the ancients. Having been in a retrograde motion, jumping the sweeping arms of the Sun, it finds by lowering itself below this arm reach that it no longer need skip, and thus its retrograde movement abates. Motion is instead replaced during the final days into a plunge below the Ecliptic.

RA 4.13262 Dec 11.16319 Apr 07, 2003
RA 4.16137 Dec 11.21455 Apr 01, 2003
RA 4.17971 Dec 11.54782 Mar 25, 2003
RA 4.18223 Dec 11.63113 Mar 17, 2003
RA 4.18671 Dec 11.65327 Mar 10, 2003
RA 4.19413 Dec 11.67481 Mar 07, 2003
RA 4.21791 Dec 11.75342 Mar 02, 2003
RA 4.33614 Dec 11.98125 Feb 22, 2003
RA 4.34751 Dec 12.01456 Feb 15, 2003

ZetaTalk (dated Feb 3, 2003)

RA 4.35941 Dec 12.11749 Feb 09, 2003
RA 4.35948 Dec 12.11813 Feb 02, 2003
RA 4.36007 Dec 12.11875 Jan 21, 2003
RA 4.36239 Dec 12.11946 Jan 13, 2003
RA 4.36743 Dec 12.12001 Dec 29, 2002

ZetaTalk (dated Dec 14, 2002)

Going into the analysis of the Nov 15th images, we advised the team to start looking for the tail and the

[Swirl of Moons](#) and debris within. Although coming under much [Ridicule](#) on [Sci.Astro](#) for stating that the moons of Planet X follow in a swirl, a perpetual dance among themselves for dominance in being the closest moon to Planet X, this is precisely what the imaging is now presenting! As Nancy would say, Zetas RIGHT Again! Since Planet X is both heading dead on toward the inner solar system, the swirl will most often be seen around the Red Persona, but as it is, in the [Dec 4, 2002](#) images, moving to the right, the moons can be seen drawn out to the left, trailing. Steve has created a contrast to show the debris he noted were new, but as can be seen in the frames themselves, the moons are not at all as large or bright in the images as [Planet X](#) itself. They are reflecting light, solely, not generating it as Planet X is, and thus will always be the lessor. How many moons, and how large are these, in comparison to Planet X? They rival the size of Earth's moon, and are numerous in the dozens when the smaller moons are included. That so many could have been captured by Planet X is due in part to its rapid passage through the solar system, as a stationary setup, with circular or elliptical orbits rather than a trailing swirl, would have pushed them out from each other far enough to cause some of them to be lost from the gravity snag of Planet X.

ZetaTalk (dated Dec 7, 2002)

RA 4.37531 Dec 12.12103 Dec 18, 2002
RA 4.37757 Dec 12.12323 Dec 6, 2002
RA 4.37992 Dec 12.12499 Nov 20, 2002
RA 4.38667 Dec 12.12537 Nov 15, 2002

ZetaTalk (dated Oct 26, 2002)

RA 4.400057 Dec 12.13215 Nov 6, 2002
RA 4.400546 Dec 12.13745 Oct 25, 2002
RA 4.400986 Dec 12.13942 Oct 3, 2002
RA 4.400347 Dec 12.14128 Sep 15, 2002

ZetaTalk (dated Sep 15, 2002)

In that there is a [Campaign](#) to have amateurs look too early for this inbound brown dwarf, no larger than a one of your distant planets and thus not yet reflecting sunlight, diffuse and without the intense pinpoint of sunlight that stars have at their center, in the astronomical dawn when the skies are hardly dark enough to see even small stars clearly, when it is close to the horizon and not high enough in the night sky to be clearly delimited, we are withholding our coordinates until the time that astronomers [Not](#) on a disinformation campaign of discouragement and ridicule have stated. Coordinates will be provided on mid-September, 2002, as those looking prior to that time will be guided into discouragement, quite deliberately, by NASA chronies.

ZetaTalk (dated Jul 14, 2002)

RA 4.405136 Dec 12.13919 Jul 13, 2002
RA 4.404983 Dec 12.13895 Jun 30, 2002
RA 4.402098 Dec 12.13698 Jun 22, 2002
RA 4.402167 Dec 12.13781 Jun 9, 2002

ZetaTalk (dated May 18, 2002)

RA 4.403982 Dec 12.13783 on May 31, 2002
RA 4.404197 Dec 12.13644 on May 23, 2002
RA 4.406445 Dec 12.13798 on May 18, 2002
RA 4.407176 Dec 12.14003 on May 7, 2002
RA 4.40978 Dec 12.14253 on Apr 26, 2002
RA 4.41342 Dec 12.14457 on Apr 13, 2002

ZetaTalk (dated March 30, 2002)

What might appear to be bobbling of the 12th Planet, inbound, as the RA and Dec may move side to side over time, is in fact an illusion caused by the bending of [Red Light](#), the predominant light coming from this smoldering brown dwarf. Thus, these coordinates give the globe at large our educated guess as to what light particles in the red spectrum will be encountering, between the 12th Planet and Earth, and where they will appear to be coming from as they bend back toward Earth.

RA 4.41768 Dec 12.13219 on Apr 6, 2002
RA 4.41964 Dec 12.14998 on Mar 31, 2002
RA 4.42457 Dec 12.15134 on Mar 21, 2002
RA 4.43102 Dec 12.15477 on Mar 13, 2002
RA 4.43913 Dec 12.15682 on Feb 28, 2002

ZetaTalk (dated February 12, 2002)

RA 4.45209 Dec 12.14012 on Feb 21, 2002
RA 4.45396 Dec 12.13993 on Feb 10, 2002
RA 4.45411 Dec 12.14091 on Feb 3, 2002
RA 4.45513 Dec 12.14773 on Jan 27, 2002

ZetaTalk (dated January 11, 2002)

RA 4.45623 Dec 12.13873 on Jan 17, 2002
RA 4.45631 Dec 12.14997 on Jan 8, 2002
RA 4.45657 Dec 12.15692 on Jan 3, 2002
RA 4.45695 Dec 12.13145 on Dec 25, 2001 (yes, a tick up again)
RA 4.45710 Dec 12.12791 on Dec 16, 2001
RA 4.45702 Dec 12.15983 on Dec 13, 2001 (yes, a tick back and down)

ZetaTalk (dated November 17, 2001)

RA 4.45699 Dec 12.22168 on Dec 8, 2001
RA 4.45719 Dec 12.10971 on Nov 27, 2001
RA 4.45724 Dec 11.98742 on Nov 15, 2001
RA 4.45725 Dec 11.94356 on Oct 31, 2001
RA 4.45727 Dec 11.92167 on Oct 23, 2001 (yes, a tick up)
RA 4.45732 Dec 11.91793 on Oct 12, 2001

ZetaTalk (dated September 18, 2001)

Having assumed a retrograde orbit, the significant motion of the 12th Planet is nevertheless inbound, toward the Sun. From the Earth, however, this appears to be a motion to the side, in a retrograde orbit. At the mid-year point in 2001, several things happen to the 12th Planet during its inbound trek.

- 1. it picks up speed, moving from what was an essential dither between its two foci to an increasing motion toward the Sun.*
- 2. it comes closer to the Sun's sweeping arms, and thus does a stronger jump over these arms when they pass, increasing its retrograde motion.*
- 3. it makes what appears to be a tick back in its path, bumping up and then around, as it passes what we will call an influence that likewise hovers near the midpoint of the two foci.*
- 4. it settles into a period where the primary motion is strongly inbound, rather than retrograde, due to*

the increased speed it has attained. This speed allows the 12th Planet to increasingly ignore the Sun's sweeping arms.

RA 4.45732 Dec 11.91793 on Sep 30, 2001
RA 4.45962 Dec 12.44113 on Sep 20, 2001
RA 4.46002 Dec 12.56542 on Sep 5, 2001
RA 4.46137 Dec 12.74267 on Aug 25, 2001
RA 4.46978 Dec 12.98923 on Aug 15, 2001 (yes, this is a tick back)
RA 4.42916 Dec 13.18956 on Aug 9, 2001 (yes, this is a tick up)
RA 4.44371 Dec 13.17165 on Aug 1, 2001
RA 4.52124 Dec 13.74256 on Jul 28, 2001
RA 4.73456 Dec 13.98234 on Jul 17, 2001
RA 4.95179 Dec 14.33179 on Jul 12, 2001
RA 4.96112 Dec 15.74311 on Jul 3, 2001

ZetaTalk (dated June 17, 2001)

RA 4.97773 Dec 16.34114 on June 27, 2001
RA 4.97895 Dec 16.34279 on June 20, 2001
RA 4.98141 Dec 16.35441 on June 13, 2001
RA 4.99876 Dec 16.36596 on June 6, 2001
RA 4.99912 Dec 16.36590 on May 30, 2001 (yes, this is a tick back and up)

ZetaTalk (dated May 23, 2001)

RA 4.99823 Dec 16.37962 on May 23, 2001
RA 5.00761 Dec 16.39765 on May 19, 2001
RA 5.09342 Dec 16.40278 on May 5, 2001

ZetaTalk (dated May 1, 2001)

RA 5.138421 Dec 16.419789 on April 30, 2001
RA 5.143675 Dec 16.421739 on April 15, 2001

ZetaTalk (dated April 10, 2001)

It was known that at this time, approximately February 1, 2001, the 12th Planet would be visible without question to an observatory. This activity is outside of US control, establishment control, they are braced for it. They cannot stop it, and know this, thus are not trying to do so. But will offer countering explanations for what has been found. This will be a difficult time for amateur astronomers, or astronomers without access to the type of equipment that most observatories have at their disposal. Amateurs cannot yet bring the 12th Planet into focus, so the spot being pointed to is yet dark, for them, or so dark as to not be discernible. Disinformation on just what is being seen by the observatories will start, so once again, amateurs must spend their time sorting out a barrage of conflicting information.

RA 5.151245 Dec 16.55743 on April 1, 2001
RA 5.16549 Dec 16.55847 on March 17, 2001
RA 5.16653 Dec 16.56912 on March 1, 2001
RA 5.16659 Dec 16.57897 on February 22, 2001
RA 5.16784 Dec 16.57943 on February 15, 2001

ZetaTalk (dated early 2001)

The 12th Planet will appear to linger at the point where it turns to assume a retrograde orbit, spending a two year period in this portion of the path alone, anticipated to be at:

RA 4.29741 Dec 9.96621 on March 3, 2003

RA 5.47 Dec 19.54 on September 1, 2000

RA 6.23 Dec 24.12 on May 1, 2000

RA 6.24 Dec 23.45 on January 1, 2000

RA 6.32 Dec 21.57 on January 1, 1999

RA 6.24 Dec 19.16 on December 1, 1997

ZetaTalk (dated 1997)



Troubled Times



Convert

Can somebody tell me what the co-ordinates are in a few different conversions (like hours minutes and seconds) so I am sure I haven't made any mistakes?

The mechanism for doing these unit conversions is as follows.

4.437891 Dec, this is in hours, and we might want to reformulate the decimals into hours-minutes representations.

4h = 4h, no need to do conversion here.

The decimals to minutes:

.437891h = .437891 * 60 minutes = 26.273460 minutes.

We have 4h 26m now.

The minute fractions into seconds:

.273460 minutes * 60 seconds = 16.407600 seconds

We have 4h 26m 16s, rounding to nearest full second.

We can do this in reverse, for exercise.

4h is still 4h, so we can just get the hours part without modifications.

26m converted into hours through $26\text{m} / 60\text{m} = .4333333333\dots$ hours

16s converted into hours through $16 / 3600\text{s} = 0.00444444\dots$ hours.

We sum these together: $4\text{h} + .43333\text{ h} + 0.0044\text{ h} = 4.4377$ hours

We lost some detail because we omitted the 0.4 arcseconds in roundup into full arcseconds. But we are still correct down to 3 decimals, which should be about good enough.

Offered by [Anti](#).



Troubled Times

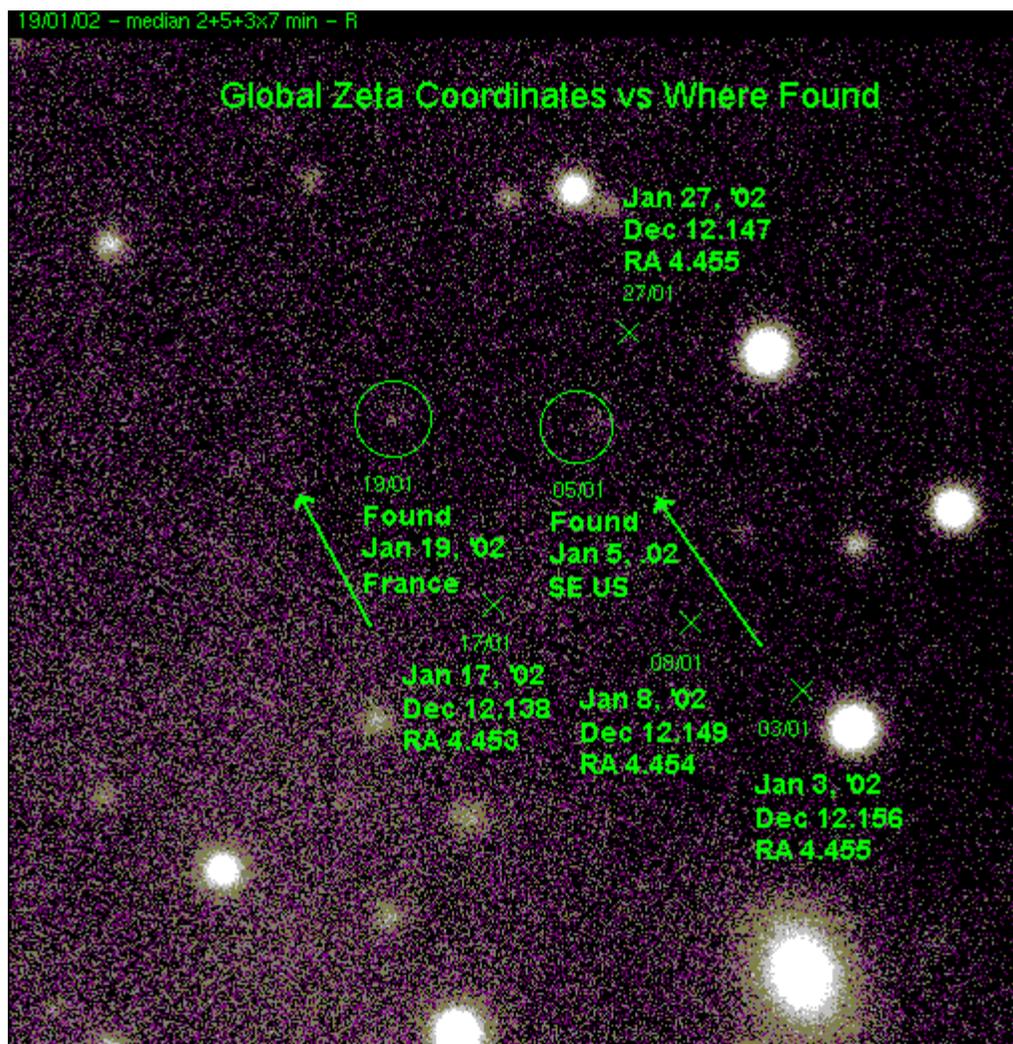


Offset

The Zeta Coordinates given are Global Coordinates for the 12th Planet (Plnaet X), and depending upon:

- whether someone is toward a horizon or overhead, and also
- how far from the Equator the viewer is positioned,

there will be an offset from the Global Coordinates. Below is an image from Pierre, how took an infrared image on Jan 19, 2002, and identified on his image where Planet X was found at Haute-Provence Observatory in France on Jan 19, 2002 compared to the Jan 5, 2002 image taken from the East Coast of the US (presumed to be the SE US), and thense compared to the Global Coordinates given by the Zetas for various dates. There is an offset in both cases, and the offset differs.



Troubled Times



Side of the Eye

ZetaTalk wrote "look *around* the spot", (of the coordinates). Also, looking out the side of your eye (something to do with retina reception) helps. Amazing. Just last night I was reading about improving nighttime vision. Here's a couple lines from a 1961 book called *Living Like Indians*: If you've lost sight of an object in dim light, look a little bit to its side. Often you can see it more clearly than if you look directly where you think it is. This army trick will help develop the rods in your eyes related to nighttime vision.

Offered by [Mike](#).

This is not so much a "trick", it is a fact of how your eyeball is physically constructed. What should be patently obvious is that your vision is not the same in your entire field of view, all you need to do is look out of your eyeballs and notice that you cannot see something clearly at the side, but you can when you look directly at it. The most important thing to remember is that your eyes are not TV cameras and the operation principals are different in meaningful ways. Much of what you attribute to the eye actually occurs in the brain, and in reality, distinguishing between the two is an arbitrary thing driven more by anatomy. The outermost peripheral vision is almost exclusively rods, with just enough cones to notice that there is some color there. The rods are ganged together with the circuitry in the retina which does three things.

1. the aggregate sensitivity is improved because you are adding the response together
2. there is a tremendous loss of detail
3. your optic nerve is smaller than your arm because not all points connect to your brain via a separate channel.

As you get closer to the center the ganging stops and the number of cone cells increases (color sensitive cells). In the most central region, called the fovea, where you have the greatest sensitivity to detail, there are almost no rods at all, only color sensors. At the very center of the fovea, there is a surprising lack of blue cones, so at the very center all you can see is red, yellow, orange, green (which "just happens" to be spectrally matched to the predominate color of the sun).

So the off axis trick means that you are using the ganged rods just off the central axis to see with. They are more sensitive to light in an absolute sense, can only see in B/W and are being ganged. So the bottom line is you can see objects that are dimmer, but you cannot see them with significant detail. Once you experience this, it is weird to move your eye in and out and watch the objects "disappear" and "reappear". If you go way off axis into your peripheral vision, you tend to lose things altogether because of the tremendous loss of detail. The trick does not "develop" over time as your eye is the way it is. What takes some time is to teach your *brain* to concentrate off to the side rather than do what it does 99.9999999% of the rest of your day. If you have never tried to do this before the temptation to move your gaze to the center is overwhelming, and when you yield, the object you are seeking simply disappears. If you want to have the greatest sensitivity, one should avoid bright light essentially all day because only a few minutes of bright sun exposure has a dramatic effect on your night vision, hours later. Of course a much better alternative is a camera, either film or B/W CCD.

Offered by [The Small Kahuna](#).

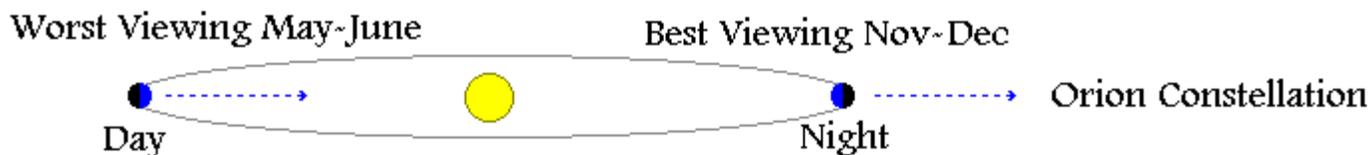


Troubled Times



In the Sun

The inbound Planet X (aka Nibiru, 12th Planet, Marduk, etc.) cannot be viewed from Earth during part of the Earth's orbit around the Sun, as those gazing in that direction must look *past the sun*, during daylight, and light pollution virtually eliminates the ability to even see bright stars. This is termed being "in the sun" by astronomers. Where ZetaTalk has stated that amateurs will be able to see it with their scopes by mid-year 2002, the spot in the sky to be viewed will only be in darkness the hour before dawn at best by very late summer to very early Fall, but by December will be visible for most of the night.



The chart below was garnered from dates, times, and cities plugged into SkyMap, and the [Coordinates](#) spot [Located](#) between the end of Orions bow and a flank of the Taurus bull, and from the [NOAA](#) web site which provides sunrise time by city and date. The times posted assume *no* daylight savings time adjustments. Assume the hour before dawn, at a minimum, to have light pollution affecting something dim and diffuse viewed on the horizon where the Sun will be rising.

For Capetown, South Africa

Date	Start Viewing	End Viewing	Sunrise	Viewing
Jun 15, 2002	6:30 AM	4:30 PM	7:50 AM	(Not Possible)
Jul 15, 2002	4:30 AM	2:30 PM	7:50 AM	Before Dawn
Aug 15, 2002	2:30 AM	12:30 PM	7:26 AM	Before Dawn
Sep 15, 2002	0:30 AM	10:30 AM	6:46 AM	Midnight - Dawn
Dec 15, 2002	6:30 PM	4:30 AM	5:30 AM	All Night

For Vancouver, Canada

Date	Start Viewing	End Viewing	Sunrise	Day/Night
Jun 15, 2002	5:00 AM	5:00 PM	4:11 AM	(Not Possible)
Jul 15, 2002	3:00 AM	3:00 PM	4:27 AM	Limited
Aug 15, 2002	1:00 AM	1:00 PM	5:05 AM	Before Dawn
Sep 15, 2002	11:00 PM	11:00 AM	5:47 AM	Midnight - Dawn
Dec 15, 2002	5:00 PM	5:00 AM	7:51 AM	All Night



Troubled Times



Zetas Explain

It was known that at this time, approximately Feb 1, 2001, the 12th Planet would be visible without question to an observatory. Thus, a number of individuals, known to us and already contactees, were offered this information during discussions they initiated. This is the flurry of activity that Nancy describes as occurring in January, 2001. As most of this activity is outside of US control, establishment control, they are braced for it. Thus, Hoagland is aware, through his contacts, as well as others are aware, and are trying to appear to be on top of the situation by announcements beforehand. They cannot stop it, and know this, thus are not trying to do so. But will offer countering explanations for what has been found.

ZetaTalk™



Troubled Times



Why Stalling?

[This](#) is an example of what the persistent public can expect when looking for the 12th in an observatory where someone has been told to "stall". You must admit, he did his best. How many blocks did he throw in your way? How many times did he point you in the wrong direction? How many times did he try to discourage you by failing to help? Add all this up, and it is a couple dozen, all told, as there was foot dragging you did not even type up here, as your point was made. Now why would an individual *do* this, unless under orders.

In the context of an individual looking for his paycheck to continue, and his boss to consider him a team player, and his changes of promotion or recommendations for other jobs he may have ambitions to get - this behavior is not that unusual. If some lackey were told to keep George from making it to where a female star is to emerge from her dressing room, he would direct George to the wrong hotel, or floor, state that she had already left, and if not prone to violence do everything he could to deflect George in this manner. Is that her? No, a look-alike drawing the crowd away. What car is she to drive off in? The one which is the wrong color, parked in the wrong place, and don't ask me any more questions as I've suddenly gotten busy on the phone.

Not all observatories will be like this, and note you *saw* the 12th, in spite of it all. This is the *right* approach to take. Strength in numbers, and when this type of stalling no longer works, they will come out with an alternative explanation for what you are seeing. Anticipate this, shortly.

ZetaTalk™

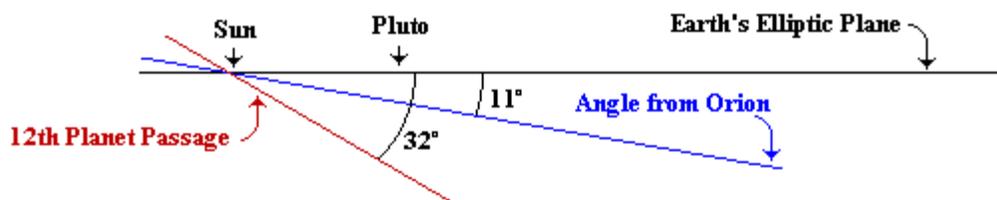


Troubled Times



32 Degree Angle

The closest, most easily recognizable constellation close to the 12th Planet's approach is Orion, high in the winter sky in the Northern hemisphere. During the summer months of June/July Orion is behind the Sun and comes forth just before sunrise in the Eastern horizon as July fades into August. By January, Orion will be high in the southern sky at about 2200 hours. If you stand looking south, search approximately two thirds of the way towards straight up, and wait for Orion and it's highly visible "Belt" to cross the center of the sky. Where the 12th Planet approaches from Orion, it dips below the ecliptic during the years just before passage to an angle of 32 degrees below the ecliptic.

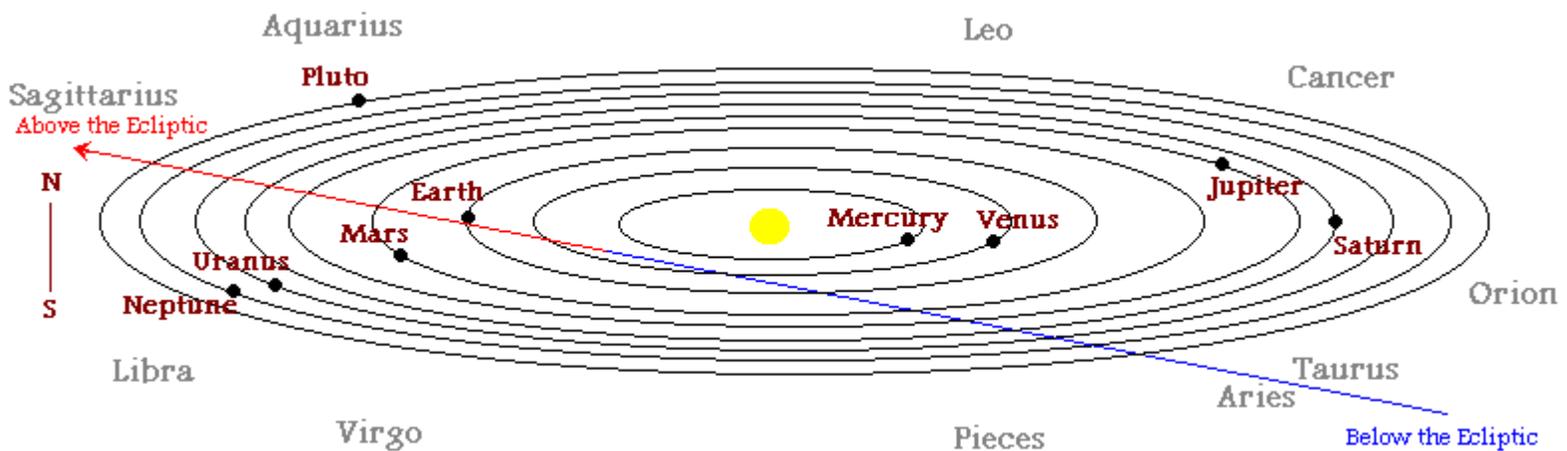


Troubled Times



Sagittarius

It is known that 12th Planet is approaching from Orion, a point Sitchen makes in his book [Genesis Revisited](#). The Book of Job states this, the Giant Pyramids were reportedly positioned to sight toward Orion, and [Planet X](#) was discovered in Orion. However, Sitchen also states that "the most recent determination" is that the 12th Planet will come in from Sagittarius, quoting a single phrase from the book *Reports of the Magicians and Astronomers* by R. Campbell Thompson which states that the 12th Planet "in the Zodiac of Cancer will become Nibiru". Nibiru is perihelion, the closest point to the Sun during passage.



Comets usually do a tight turnaround at perihelion, curving around the Sun, and approach the Sun from a point nearly on the opposite side of the Sun in order to effect this curve. However, the 12th Planet is not a dirty snowball comet, composed of water and less than a mile in diameter. It is a planet 4 times the size of the Earth. Thus rather than making a tight curve around the Sun, it barrels through the Solar System and only makes a turnaround when back out in space, where both the Sun and its second focus are toward its back. Passing between the Sun and the Earth, having assumed a retrograde orbit, the 12th Planet would have its perihelion in Cancer, as viewed from Earth.

Offered by [Nancy](#).

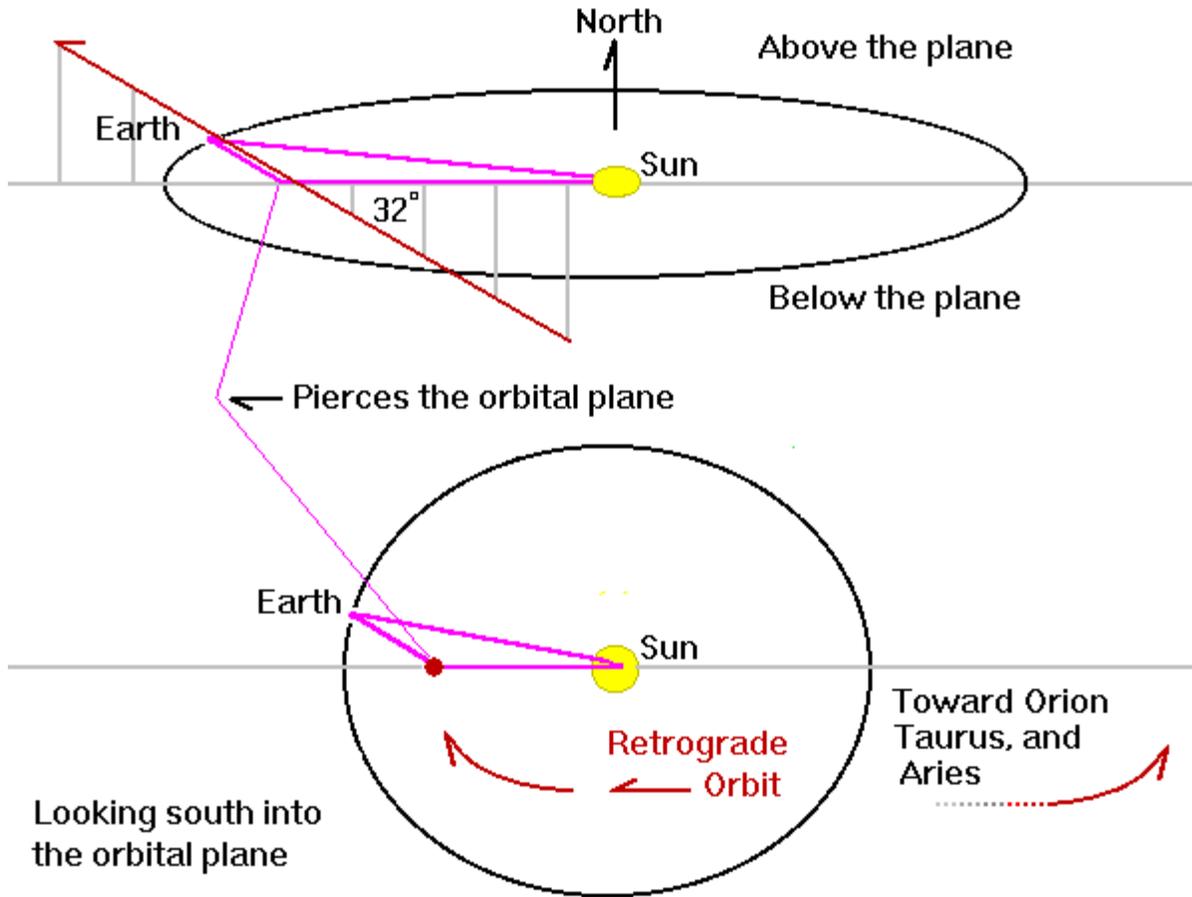


Troubled Times



Point of Passage

The point of passage has been calculated from information on the [Orbit](#) and [Entry Angle](#) given by the Zetas. As the 12th Planet pierces the Earth's orbital plane, it forms a triangle with the Earth and Sun, with the angles given as 139 degrees at the 12th Planet, 23 degrees at the Earth, and 18 degrees at the Sun.



Troubled Times



Redish Glow

The 12th Planet looks like the fading remains of a dying star, and does not have the pinpoint of brightness of a star. Although the 12th Planet at present is a magnitude 2.0, astronomers should include objects up to a magnitude 10 in their image capture. The image capture results should be passed through a red filter, as most equipment is calibrated to locate the pinpoint brightness of stars, rather than a diffuse glow.

The problem is that the normal eye, even when scanning a photo, would miss it as it is a faint blurr, rather than the pin point expected. Like the insect who camouflages itself against a similar background, and is not seen, this giant will be upon mankind before they realize they have been staring at it all along. Infrared works well, but requires equipment in the hands of few. Red filtering, aggressive red filtering, will bring it to the fore more than anything.

When comparing the Magnitude of objects that can be viewed from Earth, our intent in this general-public statement made in 1995, we considered all visible light. The IRAS team went looking for Planet X in the early 1980's with infra-red because they understood that the spectrum was almost exclusively *red*, and thus the imaging equipment used by observatories would falter. Infra-red, of course, is a visible light to some of us, and there is some human equipment, night vision, that is atuned to this. Astronomy equipment, to sell, was designed to locate and image stars and planets reflecting sunlight. Are they not in the business, wishing to stay profitable? Infra-red equipment is in the hands of few, and very expensive, as it is *not* in general demand. It was built for observatories, upon demand, and the price tag reflected this. We, the Zetas, with our equipment, see Planet X from Earth is accordance with your math for a Magnitude 2.0 object. Should your equipment be calibrated to give an almost exclusively red object that same advantage that the predominant light spectrum from starlight gets, you'd see it. This was explained, but ignored in the main. So as Nancy suspects, there is a Zeta Magnitude of 2.0, for those who can see a broader light spectrum and whose equipment is not as limited as the equipment currently utilized by

ZetaTalk^[TM]



Troubled Times



Magnitude

The Zetas have given that the 12th planet is presently of actual magnitude 2 and apparent magnitude 10. I have done some research to determine what this means for those of us who want to spot it in the sky. I found an explanation of star magnitudes. Here are some interesting things I discovered:

Magnitude of Polaris (the North Star)	2.0
Magnitude of Neptune	8.2
Magnitude of Pluto	13.7
Typical limiting magnitude	5.2

This page also confirms that diffuse objects such as galaxies appear to be fainter than their published magnitudes.

So, when looking for the 12th planet we are looking for something that gives off as much light as the North Star, but whose apparent brightness is between Neptune and Pluto. Since the dimmest object that you can typically see is 5.2 (this will vary by location), it will no doubt be helpful to have some kind of optics to magnify the brightness.

Another tidbit I gathered from the above page is that five magnitudes of brightness is equivalent to a factor of about 100 in terms of the amount of light received on the earth. The scale is logarithmic, so, a difference in magnitude of 8 (between the actual and apparent magnitude of the 12th) consists in a factor of nearly 3000. Given the radius of the 12th is 4 times that of the earth (which would make its radius 2.5×10^7 meters. This is just a bit larger than Neptune, practically equal. Since the 12th is 1.8 magnitudes dimmer than Neptune, it stands to reason that the 12th either has a lower albedo, or is currently farther than Neptune, or both. However, it does not seem to follow that its apparent magnitude should be anywhere near 2.0, since this would require an increase in area of 3000.

I have been watching Orion for quite some time now, looking in the indicated region. I do not think the 12th's actual magnitude is much different than its apparent magnitude, as this is not supported either by experiential evidence or the comparable magnitude of any of the other planets (which, too, give off diffuse light). A magnitude of 10 is reasonable for an object the size and distance of the 12th planet. Given this, it is understandable why it has not been spotted yet - it is dimmer than we think. Magnitude 10 is just beyond the limits of my optics (even with red/IR magnification). I would like to know when the 12th will reach, say, magnitude 9, as I think at that time I should have no trouble spotting it, whether it is diffuse or not. (As it is, stars of magnitude 8-9.5 appear diffuse and hazy to me.)

Offered by [Michael](#).

It is important to note that the term apparent magnitude means the brightness of the object if it were seen from earth, or how much total light it appears to emit from our vantage point. Where absolute magnitude (i.e. actual magnitude) is not actually even determined by scientists by measuring the power of a star's luminosity through total energy output and mass, rather than what appears to be the total energy output and mass from earth. All they do is take the star's (or galactic object's) apparent magnitude, and distance. then they mathematically calculate how bright it *would* appear from earth if it were a distance of 10 parsecs away, taking into account whether how much closer or how much farther it is from 10 parsecs now. (Can't remember which it is, could be 15 or 12 parsecs, instead of 10.) Hence, the scientific definition of "*actual* or *absolute*" magnitude is not that at all. They just take the apparent magnitude from earth and multiply the numbers to imagine what it would look like if it were 10 parsecs away. They call this "absolute" magnitude because the distance is theoretically equal for all the objects. considering that 10 parsecs is multiple times farther than the current distance of the 12th planet (32 billion miles). It is important to note that, in astronomer's terms,

the 12th planet's *actual* or *absolute* magnitude is even less than magnitude 11.0! To them, apparent magnitude means 11.0.

The confusion arises because when the zetas say 2.0, they aren't using it in the way that scientists would define apparent magnitude or absolute magnitude. My guess is that they are measuring "2.0" by taking the illumined portions of the 12th planet, and comparing this intensity to an object that would be equal in brightness from earth, IF the 12th planet were not diffuse or more accurately, "irregular" in its emission of light (as the 12th planet is because the red glow only comes from certain portions of the seas, and not the full area of the sphere and therefore its light sources diffuse rapidly) and this is why instruments will register it as 11.0, rather than 2.0. They assume the light source is emanating from the full area of a sphere. Hence, telescopes, designed to measure magnitude by assuming that light is emanating from the full area of a sphere, classify it as magnitude 11.0, and the actual magnitude from the vantage point of earth is 11.0, regardless of whether certain faint, irregular hisps of light occasionally make it to earth with magnitude 2.0 brightness. Since these are irregular or diffuse hisps of 2.0 light, the eye and other telescopic instruments can barely focus on them in the first place, and for all intents and purposes, are not there.

Offered by [Brian](#).



Troubled Times



Brightness

The Zetas have answered a question on how bright the 12th Planet will be as it approaches.

Your hope for an early brightness will not be met, as the 12th is too far away for reflected sunlight up until 6 months before passage. Likewise, it does not grow in size to where it is obvious that is *not* a fading nova at a great distance until it begins to reflect sunlight. Thus, up until these last few months, the excuse that this is a faded nova of sorts will be put forth, and even supported by doctored images. Those few who have been watching the path and know they are being fed lies must support each other covertly, and depending upon the strength of the governments resolve to inform the public to some degree, these individuals may be allowed to present their findings to the public also, in a debate format. However, your best hope of convincing the public in significant numbers will be during the last months, when it is clearly *not* a nova, and clearly coming closer and on the move.

ZetaTalk^[TM]



Troubled Times



Table of Distances

Where a guide, the original [Table of Distances](#) by Robert was not accurate, per the Zetas, as it assumed an exponential increase in speed all the way to the Sun. The replacement table below by J assumes exponential speed to Saturn's orbit, thense a 3 month passage across this orbit. See the [Distance Guide](#) for the math formula used.

Where human math, using our statements as a guide, has attempted to pinpoint the location of Planet X during the months preceding the shift, the distance and speed cannot be computed steadily, as Planet X deals with more than the gravity pull of the Sun and the Repulsion Force invoked as it nears the Sun, during its passage. Where the human math attempts are a reasonable guideline, here is where it must be adjusted for deviation. ... The speed of passage is: at first slow as the gravity particles pulling it toward the Sun are scarcely more than the gravity particles pulling it toward the dark twin; exponentially faster as the gravity particles increase at this rate the closer Planet X gets to the Sun; without impediment when afar from the solar system as represented by the planets orbiting the Sun, alone; increasing in essence at an exponential speed when approaching this solar system complex; decreased dramatically at about the orbit of Mars by the braking action of the Repulsion Force, at last strong enough to counter the inbound plunge toward the Sun; slow to a floating rate so that it floats past the Earth during the week of rotation stoppage, which is the point it is also floating past the Sun, rather than zoom past. ... Where the speed of Planet X is sufficient to move it from one side of Saturn's orbit to the other in 3 short months, it slows while close to the Sun.

ZetaTalk™: [Slowing Influences](#) (dated May 18, 2002)

Distance to Saturn's Orbit

INFLECTION DATA	
DIST.	WKS LEFT
11.71	13
7	9.7
1.23	7.1
0.886	6

COMPUTED WKS LEFT	DATE	PX DISTANCE (from our Sun) BILLION MILES	
13	13-Feb	11.71	
12.5	16-Feb	11.89	
12	20-Feb	11.64	
11.5	23-Feb	11.03	
11	27-Feb	10.15	
10.5	02-Mar	9.04	
10	06-Mar	7.79	
9.5	09-Mar	6.46	
9	13-Mar	5.13	
8.5	16-Mar	3.86	
8.4	17-Mar	3.62	Pluto = 3.67 bil miles
8	20-Mar	2.72	Neptune = 2.79 bil miles
7.5	23-Mar	1.79	
7.4	24-Mar	1.63	Uranus = 1.78 bil miles
7.2	25-Mar	1.35	
7.1	26-Mar	1.23	Red Cross of Px seen in sky
7	27-Mar	1.12	
6.5	30-Mar	0.8	
6	03-Apr	0.89	Saturn = 0.886 bil miles

Distance During Passage:

INFLECTION DATA

Troubled Times: Table of Distances

DIST.	WKS LEFT
1.2	7
0.886	6
-0.08	0
-0.886	-6

COMPUTED WKS LEFT	DATE	PX DISTANCE (from our Sun) BILLION MILES
7.1	26-Mar	1.23 Red Cross of Px seen visibly during day
6.9	27-Mar	1.17
6.7	29-Mar	1.1
6.5	30-Mar	1.04
6.3	31-Mar	0.97
6.1	02-Apr	0.91 Saturn = 0.886 bil miles
5.9	03-Apr	0.86
5.7	05-Apr	0.8
5.5	06-Apr	0.75
5.3	07-Apr	0.7
5.1	09-Apr	0.65
4.9	10-Apr	0.61
4.7	12-Apr	0.56
4.5	13-Apr	0.52 Jupiter = 0.484 bil miles
4.3	14-Apr	0.48
4.1	16-Apr	0.44
3.9	17-Apr	0.41
3.7	19-Apr	0.37
3.5	20-Apr	0.34
3.3	21-Apr	0.31
3.1	23-Apr	0.28
2.9	24-Apr	0.25
2.7	26-Apr	0.22
2.5	27-Apr	0.19
2.3	28-Apr	0.16 Mars = 0.141 bil miles
2.1	30-Apr	0.14
1.9	01-May	0.12
1.7	03-May	0.09
1.5	04-May	0.07
1.3	05-May	0.05
1.1	07-May	0.03
0.9	08-May	0.01
0.7	10-May	-0.01
0.5	11-May	-0.03
0.3	12-May	-0.05
0	15-May	-0.08 Px crosses elliptic
-0.2	16-May	-0.092 closest approach of Px to earth
-0.4	17-May	-0.12 (WITHIN 14 MILLION MILES)
-0.6	19-May	-0.14
-0.8	20-May	-0.15
-1	22-May	-0.17
-1.2	23-May	-0.19
-1.4	24-May	-0.21
-1.6	26-May	-0.23
-1.8	27-May	-0.25
-2	29-May	-0.27
-2.2	30-May	-0.29
-2.4	31-May	-0.31
-2.6	02-Jun	-0.33
-2.8	03-Jun	-0.36
-3	05-Jun	-0.38
-3.2	06-Jun	-0.41
-3.4	07-Jun	-0.43
-3.6	09-Jun	-0.46
-3.8	10-Jun	-0.49
-4	12-Jun	-0.51
-4.2	13-Jun	-0.54
-4.4	14-Jun	-0.58
-4.6	16-Jun	-0.61
-4.8	17-Jun	-0.64
-5	19-Jun	-0.68
-5.2	20-Jun	-0.72
-5.4	21-Jun	-0.76
-5.6	23-Jun	-0.8 12 weeks have passed for Px
-5.8	24-Jun	-0.84 touching Saturn's orbital path twice
-6	26-Jun	-0.89 the other side of saturn's orbit = .886 bil miles



Troubled Times



Variables

The movement of the 12th planet, due to gravitational attraction between the binary stars can be predicted by a hyperbolic exponential function of velocity vs time. To simplify matters we will use standard formulas and transpose the variables to derive an equation suited for our needs. Since the velocity of the 12th planet is increasing exponentially, the equation for population growth can be used. This equation, which can be referenced in any Calculus book, is $Y(\text{final}) = Y(\text{initial}) * e^{[k * t]}$. Y (final) and Y (initial) respectively, are the final and initial totals of population. The letter e is the exponential function, t is time interval and k the rate of which birth increases or decreases. The symbol ^ represents variables that follow are exponents of e.

For our purposes, we will substitute the variables in the population equation with a new set of variables to solve our problem. Since the formula, distance = velocity (rate of speed) * time is similar to **population = rate of birth * time**. We will use this as a base equation. Transposing, **Distance (final) = Distance (initial) * e^{[k * t]}** where (k) is the rate at which gravity accelerates or decelerates the velocity of the 12th planet and (t) represents the interval of time between initial and final distances. The hyperbolic curve we are examining, is the latter part of a bisected hyperbolic cosine curve representing total movement from the Dark One to the Sun. The time interval between two reference points, the Sun and the deflection point from the midpoint in the orbital path of the 12th planet will be used to find the rate of acceleration or (k) rate.

Distance (final) is equal to 18.724 times the distance from the Sun to Pluto divided by 2. This is the distance from the midpoint between the binary stars to the Sun. This is equal to 9.362 Sun/Pluto units. Using what we are given, the 12th planet passes a deflection point at 2.5196 times the distance of Sun to Pluto and passes the Sun some 9.7 weeks later. This point is where repulsion particles emanating from the Sun, apply a sufficient opposing force to the Sun's gravitational attraction, altering the orbit of the 12th planet. The new orbital track is initiated, as a shallow clockwise parabolic curve slightly down and away from the Sun. Distance (initial) is at $(18.724 \text{ S-P units} / 2) - 2.5196 \text{ S-P units}$, the deflection point, which yields 6.8424 S-P units from the midpoint.

The variable (k), the rate of increase in velocity or acceleration is unknown. The variable (t) is equal to the time interval of 9.7 weeks for the 12th planet to move between the deflection point, Distance (initial) and Distance (final), the Sun. Solving for (k), divide both sides of the equation **[Distance(Final) = Distance(initial) * e^{((t) * (k))}]** by Distance(initial) and multiply both sides by the function of LN(natural logarithm base e). This yields **LN[Distance(final) / Distance(initial)] = (k)(t)**. Proceeding, divide both sides by (t) and substitute values in for variables.

Offered by [Robert](#).



Troubled Times



Equation

The equation proceeds as follows:

$$\begin{aligned} \text{LN } [9.362 / 6.8424] / 9.7 &= k \\ \text{LN } [1.368233369] / 9.7 &= k \\ 0.313520396 / 9.7 &= k \\ 0.03232169 &= k \text{ the rate of change in velocity} \end{aligned}$$

Now that the variable (k), the rate of acceleration of the 12th planet is known, we can use the same equation to solve for the distance between the Sun and the 12th planet at any variable time (t). Since we are solving for a distance from the Sun to the 12th planet prior to Sun passage, time (t) takes on a negative factor. So the final equation looks like: **Distance(final) = Distance(initial) * e ^ [(k) * (-t)]**. Substituting known values, Distance(final), the distance from the Sun to the 12th planet is the unknown. Distance(initial) is equal to 9.362 units, because we are solving for a distance prior to the passage in the year 2003. This would be equal to the total distance from the midpoint to the Sun. The decimal 0.03232169 is equal to (k) the acceleration of the 12th planet, acquired from the previous calculation.

The variable time (t) can have a range from 0 to about 47,000 weeks prior to Sun passage. Distance(final) at some designated time (t), will be a percentage of Distance(initial) the full distance between Sun and the mid-point that the 12th planet has traveled towards the Sun. To find Distance(final), multiply the (k) value by a negative (t) value measured in weeks. Look up or calculate the equivalent e value for the decimal, and then multiply it by 9.362. This will give you the distance traveled by the 12th planet from the mid point towards the Sun at a designated time (t). To get the distance from the 12th planet to Earth orbit, subtract [**Earth/Sun distance .025293 S-P units (92.95 million miles) and the total distance traveled by the 12th planet from the mid point at designated time(t) acquired from the above equation**], from 9.362 units, the total distance between the mid point and the Sun. For informational purposes 1 S-P unit is equal to 3.675 billion miles. The distance table will give an approximate distance to the 12th planet and a point where it pierces Earth's orbital path on the near side of the sun.

Offered by [Robert](#).

I'm not a mathematician or anything, but my one friend who works in astrophysics has told me that the equation for this page is wrong. As I said, I'm no math expert, but you might want to look over this and make any appropriate corrections. Here is what he wrote.

*The equation says that the distance of the planet can be described by an exponential function, distance(final)=distance(initial)*e^(k*t), where k is the change in velocity. however, anything in an exponent has to be dimensionless, i.e. no units. Therefore if t is time, the units of k must be inverse time, or frequency. Not acceleration, which is distance per time squared. And the rate of change of velocity, or acceleration, would just be the 2nd derivative of the distance equation. Or, accel = distance(initial)*k^2*e^(k*t).*

Offered by [Andrew](#).



Troubled Times



Orbit

To complete all calculations, it must take into account the Earth's orbital position as it revolves around the Sun when the 12th planet passes it. The unknown distance from the 12th planet's position as it passes the Sun to Earth orbit intercept, is needed to find the time interval the 12th planet takes to move from Sun passage to Earth passage. This time frame will give us a start date for the distance table. Although the mechanics of the outgoing orbit is different than the incoming phase of the orbit, before passage of the Sun, we can still use the exponential function to explain the movement of the 12th planet out of in the inner part of the solar system. Due to the premise, that most of the orbital variables, the repulsion and gravitational forces emanating from the Sun, the planets, and too a lesser degree the Dark One effecting the 12th planet's path as it moves around the backside of the Sun, occur after Earth passage. To solve the equation we will use what information that is given to us. We are told that the 12th planet traverses Saturn's orbital diameter in 3 months and passes the Sun between the orbits of Mercury and Venus. The length of the orbital track on the far side of the Sun to its furthest point in the elliptical orbit is 3.56 S-P units.

To solve for how the 12th planet moves after it passes the Sun, there are several steps necessary. The 12th planet moves from an incoming to an outgoing solar object as it passes the Sun. The (k) rate, representing incoming acceleration in the exponential equation changes a from a positive value when the 12th planet hurtles towards the Sun, to a negative value as the combined forces of gravity from both binary stars erodes the 12th planet's forward momentum. Step one will be to find the incoming transit time of the 12th planet from the orbit of Saturn to the Sun. Using the same formulas derived previously in the text, you can solve for incoming time (t). Distance(final) equals 9.362 S-P units, Distance(initial) equals 9.362 - .241496588 (distance to Saturn) or 9.1205 S-P units and (k) incoming equals .03232169 giving us an incoming transit time of the 12th planet from Saturn to the Sun at 0.808557 weeks.

The equation proceeds as follows:

$$\text{Distance}(\text{final}) = \text{Distance}(\text{initial}) e^{(k) * (t)}$$

$$\text{LN} [\text{Distance}(\text{final}) / \text{Distance}(\text{initial})] = k * t$$

$$\text{LN} [9.362 / 9.1205] / k = t$$

$$\text{LN} [1.0264788] / 0.03232169 = t$$

$$0.02613431 / 0.03232169 = t$$

$$0.808557 \text{ weeks} = t \text{ incoming transit time from Saturn to the Sun.}$$

Step 2 is to find the outgoing transit time(t) from the Sun to Saturn by subtracting the incoming time(t) from the total time of transit of 3 months. Total time (t), the total time to transverse orbit is equal to 3 months or 13 weeks. Subtract incoming time (t) .808557 weeks time interval from Saturn to the Sun, and 12.19144256 weeks is equal to outgoing time(t).

The equation proceeds as follows:

$$\text{Total time} - \text{Incoming time} = \text{Outgoing time}$$

$$13 - 0.808557 = 12.19144256 \text{ weeks outgoing time(t) from the Sun to Saturn's orbit.}$$

Step 3 is to find (k) rate for an outgoing 12th planet, using outgoing time(t), the reference points of the Saturn radii and the farthest point of the elliptical orbit on the far side of the Sun, 3.56 units. Solving for the new (k) rate outgoing, Distance(final) [3.56 units minus Saturn's radius] and Distance(initial) the total distance is respectively [3.56 - 0.241496599] or 3.318503401 and 3.56 S-P units. Now we can solve for the new (k) outgoing. Substituting (t)

outgoing 12.19144256 weeks into the equation, we find (k) is equivalent to -.005761.

The equation proceeds as follows:

$$\text{Distance}(\text{final}) = \text{Distance}(\text{initial}) * e ^ [(k) * (t)]$$

$$\text{LN} [\text{Distance}(\text{final}) / \text{Distance}(\text{initial})] = (k) * (t)$$

$$\text{LN} [\text{Distance}(\text{final}) / \text{Distance}(\text{initial})] / t = k$$

$$\text{LN} [3.318503401 / 3.56] / 12.19144256 = k$$

$$\text{LN} [0.932163877] / 12.19144256 = k$$

$$-0.0702446646 / 12.19144256 = k$$

$$-0.005761 = k \text{ rate for deceleration of the 12th planet outgoing}$$

Offered by [Robert](#).



Troubled Times



Transit Time

Transit time to Earth passage from the Sun is now the key element to find. This new factor to be solved will determine the base date of the table for Sun passage of the 12th planet. To find the position of Earth along its orbital track, I will use another given factor. The 12th planet passes to the left of the Sun about half way between the orbits of Mercury and Venus or approximately 50 million miles. Using trigonometry, we will set up a right triangle at the location where the 12th planet passes the Sun. A line is projected from the 12th planet's location to an intercept point on the Earth's orbital path or the projected passage point, its length unknown. This line traces the 12th planet's orbital path. We will designate this, the first leg of the right triangle formed at the location of the 12th planet. A second line is projected perpendicular to the first leg starting from the same location of the 12th planet to the Sun and ends there. This second leg of the right triangle from the 12th planet to the Sun, is 50 million miles. The hypotenuse leg of the right triangle, connecting the Sun and the Earth orbital intercept point is 92.95 million miles in length. It is the standard distance from the Sun to the Earth. Using the inverse cosine function, on the result of the adjacent leg over the hypotenuse the angle, we can find the angle between the 12th and the Earth at the Sun. This yields an answer equivalent to 57.45 degrees.

The equation proceeds as follows:

$$\begin{aligned} \cos^{-1} [\text{adjacent leg} / \text{hypotenuse}] &= \text{angle} \\ \cos^{-1} [50/92.950] &= \text{angle} \\ \cos^{-1} [.5379236] &= \text{angle} \\ 57.45 \text{ degrees} &= \text{angle} \end{aligned}$$

Lets solve for the opposite leg or the first leg of the right triangle for angle between the 12th planet and the Earth intercept point at location of the Sun. The distance between the 12th planet and the Earth orbit intercept point using the sine function of the angle equals the opposite leg over the hypotenuse, yielding 78.349 million miles.

The equation proceeds as follows:

$$\begin{aligned} \text{opposite leg} / \text{hypotenuse} &= \sin[\text{angle}] \\ \text{opposite leg} &= \sin[\text{angle}] * \text{hypotenuse} \\ \text{opposite leg} &= \sin[57.45] * 92.95 \\ \text{opposite leg} &= .84292 * 92.95 \\ \text{opposite leg or travel distance} &\text{ to Earth for the 12th planet is } 78.349 \text{ million miles.} \end{aligned}$$

All the necessary variables have now been found to solve for Time (t), the time it takes the 12th planet to move between Sun passage and Earth passage. Solving for Time (t), the time it takes the 12th planet to move between Sun passage and Earth passage, Distance(final) is equal to {3.56 units - 0.0213333 S-P units [78.4 million miles]} or 3.5386667 units, Distance(initial) is equal to 3.56 S-P units, and k equals -0.005761. The equation yields a time (t) of 1.0433 weeks after passing the Sun.

The equation proceeds as follows:

$$\begin{aligned} \text{Distance}(\text{final}) &= \text{Distance}(\text{initial}) * e^{[(k) * (t)]} \\ \text{LN} [\text{Distance}(\text{final}) / \text{Distance}(\text{initial})] &= (k) * (t) \\ \text{LN} [\text{Distance}(\text{final}) / \text{Distance}(\text{initial})] / k &= t \\ \text{LN} [3.5386667 / 3.56] / -0.005761 &= t \end{aligned}$$

$$\text{LN [0.9940075]} / -0.005761 = t$$

$$-0.006010527 / -0.005761 = t$$

1.0433 weeks = t the time interval from Sun passage to Earth passage.

So if the 12th planet Earth passage date is May 15, 2003. Then the base date or Sun passage would be May 7, 2003 or 1.0433 weeks prior for the distance table. You can adjust your dates accordingly if a more accurate Earth passage date is predicted.

In conclusion two significant issues should become clearer in your mind. First, visibility of the 12th planet will come too little and too late. Second, the storms prior to Earth passage are going to be far worse and more powerful than the present picture painted in our minds. One only has to look at the weather changes already initiated from an out of phase magnetic alignment produced by movement of the 12th planet on only 3 tenths of 1% from the mid point to our Sun by January of the year 2000. All primary data and some concepts used in the previous text can be referenced in the science section of Zeta Talk under [Comet Orbit](#), [Entry Angle](#) and [Repulsion Force](#). The chart illustrating the orbital passage of the 12th planet through the solar system is located in this TOPIC on the [Sagittarius](#) page. I would like to give thanks for the guidance given in my life from up above. I will always appreciate the warmth and light of the Sun. The breeze that blows on my face. What we take so easily for granted, some worlds may only experience only a few precious moments of it.

Offered by [Robert](#).



Troubled Times



Asteroid Pass

Huge Asteroid Due for a Close Call in 2028

By Kathy Sawyer, *Washington Post* Staff Writer

Thursday, March 12, 1998; page A2

A mile-wide asteroid first detected in December is virtually certain to sweep past Earth within the distance of the moon 30 years from now, and there's a small chance it could strike Earth directly with potentially disastrous effects, astronomers reported yesterday. "The chance of an actual collision is small, but one is not entirely out of the question," said Brian G. Marsden, of the Harvard-Smithsonian Center for Astrophysics in Cambridge, Mass.

By far the higher probability appears to be that, on Thursday, Oct. 26, 2028, about 1:30 p.m. Eastern time, the object will hurtle harmlessly past at a distance of about 30,000 miles from Earth's center (or 26,000 miles from its surface), he said, based on the most recent observations and computations of the "miss distance." This would be the closest approach by a cosmic object this large in modern history. "That evening, the object should be visible with the naked eye," Marsden wrote in a statement issued through the International Astronomical Union's Central Bureau for Astronomical Telegrams, which he operates. "In Europe, where it would be dark by that time, the object should be a splendid sight as it moves from northwest to southeast across the sky over a couple of hours."

Based on its projected track and its large size, the object has been added to the list of "potentially hazardous objects" that are monitored to determine whether they are destined to come dangerously close to Earth over the next several centuries. There are 108 such objects on the list, but astronomers say they have detected only about a tenth of the estimated number of asteroids and comets larger than a kilometer in diameter (0.6 mile) whose orbits could intersect with Earth. The newly detected intruder, known as 1997 XF11, was discovered on Dec. 6 by Jim Scotti, of the Spacewatch program at the University of Arizona, which uses a 77-year-old 36-inch telescope at Kitt Peak.

Follow-up observations by two Japanese amateur astronomers during the next two weeks first alerted scientists to the unusually small minimum distance between the path of 1997 XF11 and Earth. Peter Shelus, using a 30-inch telescope at the McDonald Observatory in Texas, made observations March 3-4 that further refined the object's threatening track. Experts say that an impacting object about a mile in diameter is right on the murky dividing line, in terms of size, between the threat of merely local devastation and the potential for truly global ecological damage, with widespread disruption of civilization. "This is a pretty close approach. This is quite spectacular. That's a dangerous diameter," said Kevin Zahnle of NASA's Ames Research Center in California. "It was sure to happen sooner or later." He noted that the comet that struck Jupiter in 1994, known as Shoemaker-Levy 9, was about a mile in diameter before it split into a train of smaller pieces.

Zahnle calculated the odds that this asteroid would collide with Earth at 1 in 1,000. An object this size would release the energy equivalent of 1 million megatons of TNT at impact, he said. If it landed in an ocean, it could kick up tidal waves that would race across the water and, as they climbed ashore, build as high as 100 feet. If it struck land, it could raise a global cloud of stratospheric dust that would dim the sun over one or both hemispheres for months, producing a global cooling effect. Locally, he added, in addition to a destructive shock wave, the thermal radiation could light fires over an area of 6,000 square miles

around the impact site. "This is unprecedented, if true," said Steven Pravdo of the Jet Propulsion Laboratory in Pasadena, Calif., project manager and researcher for NASA's NEAT (Near-Earth Asteroid Tracking) system.

Scientists were careful to note the uncertainties in the calculations of the asteroid's arc through space, which will be refined over coming years with new observations and also by checking old photographs to see if the object appears in any of them. They may also refine their estimates of the object's size up or down, as they learn more about its composition. Coal black asteroids reflect much less sunlight for their size than stony ones. As it orbits the sun, the object will move out of view to all but the largest telescopes over the next few months but will become more visible again in 2000. And on Halloween 2002, it is expected to sweep within 6 million miles of Earth. Then it will swing far out into space, returning to Earth for a rendezvous of an undetermined nature.

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Troubled Times



Orion

Article <6ekrq2\$4jg@sjx-ixn10.ix.netcom.com>
 From: Nancy <saquo@ix.netcom.com>
 Newsgroups: sci.astro
 Subject: 1997 XF11 & Orion - YES!!!
 Date: Tue, 17 Mar 1998 04:05:30 GMT

In article <6e91id\$k5q@bgtncs03.worldnet.att.net> John Harper writes
 > According to the elements I just plugged into SkyMap,
 > it's mag 20 and is between Orion and Gemini. ...

Here's a word from the Zetas too.

(Begin ZetaTalk(TM))

In keeping with a policy to begin alerting the populace to the coming horrendous cataclysms that will strike the Earth in her near future, due to the passage of what is often called the 12th Planet, in keeping with a term made famous by Sitchen for the rogue planet coming back for a passage in 2003, you will find a reformed government willing to point you in the right direction, so you will NOTICE what you have up until now been directed away from. If this makes you nervous, check out the Troubled Times content, as these folks have been preparing for your panic, and have some answers.

(End ZetaTalk(TM)) ...

Article <jerbidoc-1303981619320001@1c312.zianet.com>
 From: jerbidoc@zianet.com (jerry and judy)
 Newsgroups: sci.astro
 Subject: Re: Asteroid 1997 XF11 Orbital Elements?
 Date: 1998/03/13

Here it is from three sources (I can't vouch for their accuracy)

1997 XF11 Orbital Elements: The following orbital elements are taken from MPC 31283: 1997 XF11
 Epoch 1997 Dec. 18.0. TT = JDT 2450800.5 Williams M 96.67585 (2000.0(P Q n 0. Peri. 102.47343 +0.
 +0. a 1.4417178 Node 214.12698 -0. +0. e 0.4837452 Incl.

1997 XF11 - Daily Ephemeris: The following daily ephemeris is from the orbital elements on MPC 31283:
 Date TT T. A. (2000) Decl. Delta r Elong. Phase V 1998 02 06 06 16.03 +16 26.9 1.159 1.992 136.4 20.0
 19.8 1998 02 07 06 15.39 +16 30.4 1.170 1.995..

Definition Name	a	e	i	Orbit	U	Last Obs.	code	Mag.
1997 XF11	1.44	0.48	4	31283	5	1998 Feb. 4	711	

Article <6ea07b\$82c\$1@sdcc12.ucsd.edu>
 From: ir560@sdcc3.ucsd.edu ()
 Newsgroups: sci.astro
 Subject: 1997 XF11 WON'T hit Earth
 Date: 1998/03/13

MEDIA RELATIONS OFFICE
JET PROPULSION LABORATORY
CALIFORNIA INSTITUTE OF TECHNOLOGY
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
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<http://www.jpl.nasa.gov>

FOR IMMEDIATE RELEASE March 12, 1998
ASTEROID WILL MISS EARTH BY "COMFORTABLE DISTANCE" IN 2028

Asteroid 1997 XF11 will pass well beyond the Moon's distance from Earth in October 2028 with a zero probability of impacting the planet, according to astronomers at NASA's Jet Propulsion Laboratory, Pasadena, CA. The asteroid "is predicted to pass at a rather comfortable distance of about 600,000 miles (about 960,000 kilometers) in 2028," reported Dr. Donald K. Yeomans and Dr. Paul W. Chodas, JPL scientists who specialize in computing the predicted orbits of comets, asteroids, planets and other bodies in the solar system.

Data on the asteroid from March 1990 (well before its discovery in December 1997) was integrated into the orbit calculations by Yeomans and Chodas to arrive at the distance the asteroid will pass Earth. The 1990 observations of the object were found today in the Palomar Planet Crossing Asteroid Survey conducted at Caltech's Palomar Observatory, by JPL's Eleanor Helin and Ken Lawrence and by Brian Roman, formerly of JPL. Even prior to the discovery of the earlier Palomar observations, however, Yeomans and Chodas had determined that the impact probability would be zero. The new calculations further underscore that conclusion, they said. JPL is a division of the California Institute of Technology.



Troubled Times



Look-See

Excerpts from *New Scientist*, 20 March 1998
by Jeff Hecht, Boston

After a day-long drama in which it seemed there was an outside chance that civilisation might end 30 years from now with a catastrophic asteroid impact, astronomers declared the all clear last Thursday. Revised calculations based on data from 1990 show that on 26 October 2028 asteroid 1997 XF11 should miss the Earth by 960,000 kilometres - 2.5 times farther away than the Moon.

1997 XF11 was discovered by Jim Scotti of the University of Arizona in Tucson on 6 December last year. Gareth Williams and Brian Marsden of the Harvard-Smithsonian Center for Astrophysics in Cambridge, Massachusetts, soon added it to their list of "potentially hazardous objects" which might hit the Earth. Initial calculations indicated that 1997 XF11 would miss the Earth by about 800 000 kilometres in 2028. But the inclusion of observations made on 3 and 4 March showed 1997 XF11 skimming just 42,000 kilometres above the Earth's surface - with a small chance that it would hit us.

Marsden announced the bad news in an electronic circular sent out on 11 March, **trying to encourage more observations**. He also asked astronomers to check their archives for any sightings from the previous occasions 1997 XF11 came within viewing distance: in 1990, 1983, 1976, 1971 and 1957. "But we didn't think the chances were that large of finding something," says Dan Green, who works with Williams and Marsden.

So the team was surprised when Eleanor Helin of the Jet Propulsion Laboratory (JPL) in Pasadena promptly unearthed images of the 1990 encounter on photographic plates. While Marsden talked with reporters who had arrived to cover the story on 12 March, Williams recalculated the orbit, and found the asteroid would miss the Earth by 960,000 kilometres. Don Yeomans of JPL has confirmed that result. The impact of an asteroid the size of 1997 XF11, which is 2 kilometres across, would release about half a million megatons of explosive energy. That could devastate global agriculture, warns Scotti.

With sufficient warning, it could be possible to nudge an asteroid away by exploding nuclear weapons a kilometre or so above its surface. Identifying all the potential threats from outer space will require a ten-year, \$50-million programme, says David Morrison of the NASA Ames Research Center in California. That's less than the budgets of the two asteroid disaster movies scheduled to reach the screen this summer - but the money has not yet been forthcoming.



Troubled Times



Planet X

The articles below, detailing a search for a Planet X, or the 10th planet in our solar system, are speaking of the same planet Sitchin calls the 12th Planet. In his book, *The 12th Planet*, Sitchin explains that the ancient Sumerians counted the Sun and the Earth's moon as planets, and thus the Sun, Earth, Moon, Mercury, Venus, Mars, Jupiter, Saturn, Uranus, Neptune, and Pluto added up to 11 planets. Modern astronomy excludes the Sun and the Earth's Moon, counting only 9 planets in our known solar system.

Astronomy

Search for the Tenth Planet

Dec 1981

Astronomers are readying telescopes to probe the outer reaches of our solar system for an elusive planet much larger than Earth. Its existence would explain a 160-year-old mystery. ... The pull exerted by its gravity would account for a wobble in Uranus' orbit that was first detected in 1821 by a French astronomer, Alexis Bouvard. Beyond Pluto, [in the cold, dark regions of space, may lie an undiscovered tenth planet two to five times the size of Earth](#). Astronomers at the U.S. Naval Observatory (USNO) are using a powerful computer to identify the best target zones, and a telescopic search will follow soon after. ... Van Flandern thinks the tenth planet may have between two and five Earth masses and lie 50 to 100 astronomical units from the Sun. (An astronomical unit is the mean distance between Earth and the Sun.) His team also presumes that, like Pluto's, the plane of the undiscovered body's orbit is tilted with respect to that of most other planets, and that its path around the Sun is highly elliptical.

New York Times

June 19, 1982

A pair of American spacecraft may help scientists detect what could be a 10th planet or a giant object billions of miles away, the national Aeronautics and Space Administration said Thursday. Scientists at the space agency's Ames Research Center said the two spacecraft, Pioneer 10 and 11, which are already farther into space than any other man-made object, might [add to knowledge of a mysterious object believed to be beyond the solar system's outermost known planets](#). The space agency said that persistent irregularities in the orbits of Uranus and Neptune "suggest some kind of mystery object is really there" with its distance depending on what it is. If the mystery object is a new planet, it may lie five billion miles beyond the outer orbital ring of known planets, the space agency said. If it is a dark star type of object, it may be 50 billion miles beyond the known planets; if it is a black hole, 100 billion miles. A black hole is a hypothetical body in space, believed to be a collapsed star so condensed that neither light nor matter can escape from its gravitational field.

Newsweek

Does the Sun Have a Dark Companion?

June 28 1982

When scientists noticed that Uranus wasn't following its predicted orbit for example, they didn't question their theories. Instead they blamed the anomalies on an as yet unseen planet and, sure enough, Neptune was discovered in 1846. Now astronomers are using the same strategy to explain quirks in the orbits of Uranus and Neptune. According to John Anderson of the Jet Propulsion Laboratory in Pasadena, Calif., this odd behavior suggests that [the sun has an unseen companion, a dark star gravitationally bound to it](#)

but billions of miles away. ... Other scientists suggest that the most likely cause of the orbital snags is a tenth planet 4 to 7 billion miles beyond Neptune. A companion star would tug the outer planets, not just Uranus and Neptune, says Thomas Van Flandern of the U.S Naval Observatory. And where he admits a tenth planet is possible, but argues that it would have to be so big - a least the size of Uranus - that it should have been discovered by now. To resolve the question, NASA is staying tuned to Pioneer 10 and 11, the planetary probes that are flying through the dim reaches of the solar system on opposite sides of the sun.

Astronomy

Searching for a 10th Planet

Oct 1982

The hunt for new worlds hasn't ended. Both Uranus and Neptune follow irregular paths that observers can explain only by assuming the presence of an unknown body whose gravity tugs at the two planets. Astronomers originally thought Pluto might be the body perturbing its neighbors, but the combined mass of Pluto and its moon, Charon, is too small for such a role. ... While astronomers believe that something is out there, they aren't sure what it is. Three possibilities stand out: First, the object could be a planet - but any world large and close enough to affect the orbits of Uranus and Neptune should already have been spotted. Searchers might have missed the planet, though, if it's unusually dark or has an odd orbit. ...

NASA has been recording velocities for a year now and will continue for as long as necessary. This past spring, it appeared that budget cuts might force the end of the Pioneer project. The space agency now believes that it will have the money to continue mission operations. Next year, the JPL group will begin analyzing the data. By the time the Pioneer experiment shows results, [an Earth-orbiting infrared telescope may have discovered the body](#). ... Together, IRAS and the Pioneers will allow astronomers to mount a comprehensive search for new solar system members. The two deep space probes should detect bodies near enough to disturb their trajectories and the orbits of Uranus and Neptune. IRAS should detect any large body in or near the solar system. Within the next year or two, astronomers may discover not one new world, but several.

New York Times

January 30, 1983

Something out there beyond the farthest reaches of the known solar system [seems to be tugging at Uranus and Neptune](#). Some gravitational force keeps perturbing the two giant planets, causing irregularities in their orbits. The force suggests a presence far away and unseen, a large object that may be the long-sought Planet X. ... The last time a serious search of the skies was made it led to the discovery in 1930 of Pluto, the ninth planet. But the story begins more than a century before that, after the discovery of Uranus in 1781 by the English astronomer and musician William Herschel. Until then, the planetary system seemed to end with Saturn.

As astronomers observed Uranus, noting irregularities in its orbital path, many speculated that they were witnessing the [gravitational pull of an unknown planet](#). So began the first planetary search based on astronomers predictions, which ended in the 1840's with the discovery of Neptune almost simultaneously by English, French, and German astronomers. But Neptune was not massive enough to account entirely for the orbital behavior of Uranus. Indeed, Neptune itself seemed to be affected by a still more remote planet. In the last 19th century, two American astronomers, Willian H. Pickering and Percival Lowell, predicted the size and approximate location of the trans-Neptunian body, which Lowell called Planet X. Years later, Pluto was detected by Clyde W. Tombaugh working at Lowell Observatory in Arizona. Several astronomers, however, suspected it might not be the Planet X of prediction. Subsequent observation proved them right. Pluto was too small to change the orbits of Uranus and Neptune, the combined mass of Pluto and its recently discovered satellite, Charon, is only 1/5 that of Earth's moon.

Recent calculations by the United States Naval Observatory have confirmed the orbital perturbation

exhibited by Uranus and Neptune, which Dr. Thomas C Van Flandern, an astronomer at the observatory, says could be explained by "a single undiscovered planet". He and a colleague, Dr. Richard Harrington, calculate that the 10th planet should be two to five times more massive than Earth and have a highly elliptical orbit that takes it some 5 billion miles beyond that of Pluto - hardly next-door but still within the gravitational influence of the Sun. ...

US News World Report

Planet X - Is It Really Out There?

Sept 10, 1984

Shrouded from the sun's light, mysteriously tugging at the orbits of Uranus and Neptune, is an unseen force that astronomers suspect may be Planet X - a 10th resident of the Earth's celestial neighborhood. Last year, the infrared astronomical satellite (IRAS), circling in a polar orbit 560 miles from the Earth, detected heat from an object about 50 billion miles away that is now the subject of intense speculation. "All I can say is that we don't know what it is yet," says Gerry Neugesbeuer, director of the Palomar Observatory for the California Institute of Technology. Scientists are hopeful that the one-way journeys of the Pioneer 10 and 11 space probes may help to locate the nameless body.



Troubled Times



Dark Star

The symbolism of the little known 'Talisman of Orpheus', is a 3rd Century AD relic which links the crucifixion with Pagan gods and, more importantly, the appearance of Nibiru and its moons. A rare artifact indeed! I have also posted the incredible recent developments in our knowledge of brown dwarfs and light-emitting planets, complete with references for your perusal. Also, I would thoroughly recommend the November edition of *Sky and Telescope Magazine*, which covers several aspects of archeo-astronomy. The article on the Voynich Manuscript is a real knockout, and has several dark star connotations wrapped up in its symbolism. Even the NSA have tried to translate its unfathomable script, with no success. It is a remarkable piece for a mainstream astronomy magazine.

Andy Lloyd

The Dark Star Theory



Troubled Times



1983 Discovery

Washington Post

Mystery Heavenly Body Discovered, a front page story

31-Dec-1983

A heavenly body possibly as large as the giant planet Jupiter and possibly so close to Earth that it would be part of this solar system has been [found in the direction of the constellation Orion](#) by an orbiting telescope aboard the U.S. infrared astronomical satellite. So mysterious is the object that astronomers do not know if it is [a planet, a giant comet, a nearby "protostar" that never got hot enough to become a star](#), a distant galaxy so young that it is still in the process of forming its first stars or a galaxy so shrouded in dust that none of the light cast by its stars ever gets through. "All I can tell you is that we don't know what it is," Dr. Gerry Neugebauer, IRAS chief scientist for California's Jet Propulsion Laboratory and director of the Palomar Observatory for the California Institute of Technology said in an interview.

The most fascinating explanation of this mystery body, which is so cold it casts no light and has never been seen by optical telescopes on Earth or in space, is that it is a giant gaseous planet, as large as Jupiter and as close to Earth as 50 billion miles. While that may seem like a great distance in earthbound terms, it is a stone's throw in cosmological terms, [so close in fact that it would be the nearest heavenly body to Earth beyond the outermost planet Pluto](#). "If it is really that close, it would be a part of our solar system," said Dr. James Houck of Cornell University's Center for Radio Physics and Space Research and a member of the IRAS science team. "If it is that close, I don't know how the world's planetary scientists would even begin to classify it."

[The mystery body was seen twice by the infrared satellite as it scanned the northern sky](#) from last January to November, when the satellite ran out of the supercold helium that allowed its telescope to see the coldest bodies in the heavens. The second observation took place six months after the first and suggested the mystery body had not moved from its spot in the sky near the western edge of the constellation Orion in that time. "This suggests it's not a comet because a comet would not be as large as the one we've observed and a comet would probably have moved," Houck said. "A planet may have moved if it were as close as 50 billion miles but it could still be a more distant planet and not have moved in six months time.

Whatever it is, Houck said, the mystery body is so cold its temperature is no more than 40 degrees above "absolute" zero, which is 459 degrees Fahrenheit below zero. The telescope aboard IRAS is cooled so low and is so sensitive it can "see" objects in the heavens that are only 20 degrees above absolute zero. When IRAS scientists first saw the mystery body and calculated that it could be as close as 50 billion miles, there was some speculation that it might be moving toward Earth. "It's not incoming mail," Cal Tech's Neugebauer said. "I want to douse that idea with as much cold water as I can."



Troubled Times



Infrared Scrutiny

From: NASANews@hq.nasa.gov <NASANews@hq.nasa.gov>

Date: 18. september 1997 23:46

Subject: **Twin Telescopes with Near-Infrared \"Eyes\" Begin All-Sky Survey**

Donald Savage

Headquarters, Washington, DC September 17, 1997

(Phone: 202/358-1547)

Jane Platt

Jet Propulsion Laboratory, Pasadena, CA

(Phone: 818/354-0880)

The first of a pair of new telescopes, funded primarily by NASA, has begun an ambitious three-and-a-half year near-infrared survey of the entire celestial sky, peering through the curtain of interstellar dust in the Milky Way galaxy. ...

The Two-Micron All-Sky Survey (2MASS), based at the University of Massachusetts, Amherst, MA, features two 1.3-meter telescopes, one at a Smithsonian Astrophysical Observatory site atop Mount Hopkins, near Tucson, AZ, and the other at a National Optical Astronomy Observatories site in Cerro Tololo, Chile. ...

2MASS will observe many known [asteroids and possibly some comets](#), and it is uniquely sensitive to [exotic objects like brown dwarfs](#), which lack the mass needed to ignite and become full-fledged stars. ...

The 2MASS survey will measure accurately the positions and infrared brightness of stars and galaxies. Combined with complementary ground-based red shift surveys, the 2MASS extra-galactic data will provide a three-dimensional view of large-scale structures in the local universe. ...

These technologies, funded through the U.S. Department of Defense and NASA, are being adapted for astronomical purposes to increase sensitivity dramatically. It's expected the new survey will be some 25,000 times more sensitive than a precursor survey at the California Institute of Technology, Pasadena, CA, nearly 30 years ago. ...

Data will be processed at JPL's Infrared Processing and Analysis Center at Caltech. Every two nights, the center will process 60 gigabytes of data, [which is more data than processed during the entire Infrared Astronomy Satellite \(IRAS\) mission of 1983](#). ...



Troubled Times



NASA Denials

This history shows more and more evidence of a tenth planet building for over 1/2 a century, all the way up to this statement in 1987.

In 1987, John Anderson at JPL examined the motions of the spacecraft Pioneer 10 and Pioneer 11, to see if any deflection due to unknown gravity forces could be found. None was found -- from this Anderson concluded that a tenth planet most likely exists! JPL had excluded observations of Uranus prior to 1910 in their ephemerides, while Anderson had confidence in the earlier observations as well. Anderson concluded that the tenth planet must have a highly elliptical orbit, carrying it far away to be undetectable now but periodically bringing it close enough to leave its disturbing signature on the paths of the outer planets. He suggests a mass of five Earth masses, an orbital period of about 700-1000 years, and a highly inclined orbit. Its perturbations on the outer planets won't be detected again until 2600. Anderson hoped that the two Voyagers would help to pin down the location of this planet. ...

Now suddenly this Statement, the last paragraph, and a half a century of careful observation are thrown out the window. One has to think about where did the data about voyager come from. One source NASA. It had to be interpreted only by NASA and published by them. No one else had access. Then what, every astronomer then bows down to this manufactured lie. This is supposed to be end of story. I wonder how many astronomers have bought it.

The Voyagers also yielded more accurate masses for the outer planets - when these updated masses were inserted in the numerical integrations of the solar system, the residuals in the positions of the outer planets finally disappeared. It seems like the search for "Planet X" finally has come to an end.

Offered by [Mike](#).



Troubled Times



IRAS Denials

The Infrared Processing and Analysis Center ([IPAC](#)), denies that IRAS ever discovered the 12th.

...Nearly everyone on the IRAS Science Team who looked at the early IRAS data found at least one source that they initially thought could be "the tenth planet". Many of these observations turned out to be IRC+10216, a bright previously known source which is almost exactly in the ecliptic plane (the plane of the planets)...



Troubled Times



Hubble

Popular Science, 1998

A New Prescription for Hubble

by Arthur Fisher

Hubble is about to undergo another service visit, one intended to enhance the \$3 billion telescope's already stellar performance by a factor of 100. ... Why mess with success? ... The new instruments are the Space Telescope Imaging Spectrograph (STIS) and the **Near-Infrared Camera** and Multi-Object Spectrometer (NICMOS). ... Because infrared light is not filtered by the dust that blocks visible light, NICMOS will be able to peer farther back in time—that is, to a greater distance—than the optical and ultraviolet light instruments now functioning on Hubble. Scientists hope the new instrument will help solve some of the conundrums of modern cosmology, such as the origin of galaxies. NICMOS was developed by the University of Arizona with Ball Aerospace and the Rockwell Electro-Optical Center in Anaheim, California.



Troubled Times



Hawaii

Scientists unveil powerful new Telescope in Hawaii

Reuters, June 25, 1999

A powerful new telescope was dedicated in Hawaii Friday amid predictions that it will produce some of the sharpest infrared images ever and allow astronomers to look back 8 billion years in time. The Gemini North, a 8.1-meter telescope atop Mauna Kea on the island of Hawaii, the state's highest point, was hailed by 150 dignitaries and scientists, including Prince Andrew of Britain and National Science Foundation Chief Rita Colwell.



Troubled Times



Model

As reported in the UK, *Astronomers Confirm Planet*

On 25th September 1997 national newspapers carried headlines such as *Cosmic Crash Made the Moon* (**Daily Mail**). A team of scientists from the University of Colorado in Boulder reported the results of modelling experiments which proved that the Earth's moon was created in just one year from the debris of a gigantic inter-planetary collision. Scientists now believe that the Moon was formed from debris after a **Massive Rogue Planet** at least twice the size of Mars clipped the Earth 4.5 billion years ago.

Alan Alford has made the following statement to the press:

This new theory is in exact agreement with the scenario which I put forward in chapter 7 of *Gods of the New Millennium*, and that previously put forward by **Zecharia Sitchin** in *The Twelfth Planet* in 1976. However, let's give credit where it's due. Mr Sitchin and I were simply reporting what the Babylonians said 4,000 years ago. We are thrilled to see the **Babylonian astronomers** being vindicated after all this time! As to the current whereabouts of the **rogue planet**, it is curious, though not surprising, that the latest announcement assumes that it span off into outer space never to return. Science must move one step at a time.

However, the application of Occam's Razor suggests that the rogue planet was caught in a highly elliptical orbit around the Sun, and has directly or indirectly been responsible for cyclical cataclysms on Earth up until fairly recent times. There seems little doubt that this "**rogue planet**" is one and the same as the mysterious "**Planet X**" which the Sumerians called **Nibiru**. The recognition of this as fact will surely not be long in coming, and will revolutionise our understanding of the earth sciences just as plate tectonic theory did earlier this century. As to whether Planet X is inhabited by intelligent life, I continue to believe that this is not the case. However, the prospect of Planet X being linked to the legendary **Flood** cataclysm is exciting, as this would erase the objections to the Giza Sphinx and Pyramids being artifacts of a lost civilisation.

Clearly Planet X is a vital key to the paradigm shift and this latest announcement moves us one step further to the truth of our origins.



Troubled Times



Pope-Scope

Transcript of the April 5th, 1997 interview with late Father Malachi Martin by Art Bell.

Bell: Eh, the Vatican has a very, very great deal of power.

Father Martin: Thats right

Bell: Eh, we talked about it, ..

Father Martin (weaker): We did

Bell: they have, whether they admit it or not, a great deal of political power all around the world.

Father Martin: Uh-uh

Bell: Eh, one of the things that they did fairly recently, was, they muscled and I, I *do* intend to use that word,

Father Martin: Sure..

Bell: eeh.. they muscled their way onto a mountain in Arizona, Mount Graham, ..

Father Martin (softly): Uh-uh

Bell: and they built an observatory on Mount Graham

Father Martin (softly): Uh-uh

Bell: .. in connection with an Arizona University.

Father Martin: Yes

Bell: However, The Vatican has the larger part of the control of this observatory..

Father Martin: Yes

Bell: looking at deep space things.

Father Martin: That's right.

Bell: Now why would they have done that, Father?

Father Martin: Because the mentality, the attitude, mentality amongst those who at the higher levels, highest levels of Vatican administration and geo-politics, know that, erh now, knowledge of what's going on in space, and what's approaching us, could be of great import in the next five years, ten years.

Bell: Carefully and well chosen words, Father, thank you. Eerh, West of the Rockies, you're on the air with Father Malachi Martin.

Why Look For A Killer XKBO, When You Already Know It Is Coming?

[YOWUSA.COM](http://www.yowusa.com), February 9, 2002

Steve Russell and Jacco van der Worp

In our previous article "Is a Killer XKBO Stalking The Earth?" we looked at what is happening in our solar system to search for evidence that supports a claim that a Planet X-class Kupier Belt Object (XKBO) could be headed towards Earth. In this article, we will look not into the heavens above, but at the modern day institutions of man for further evidence. Given that governments are increasing their funding for projects to learn about large objects in space, while simultaneously gutting the budgets of Near Earth Object (NEO) projects, the conclusion is immediate: They know something large is on its way, and they want to consider all their options before it arrives.



Troubled Times

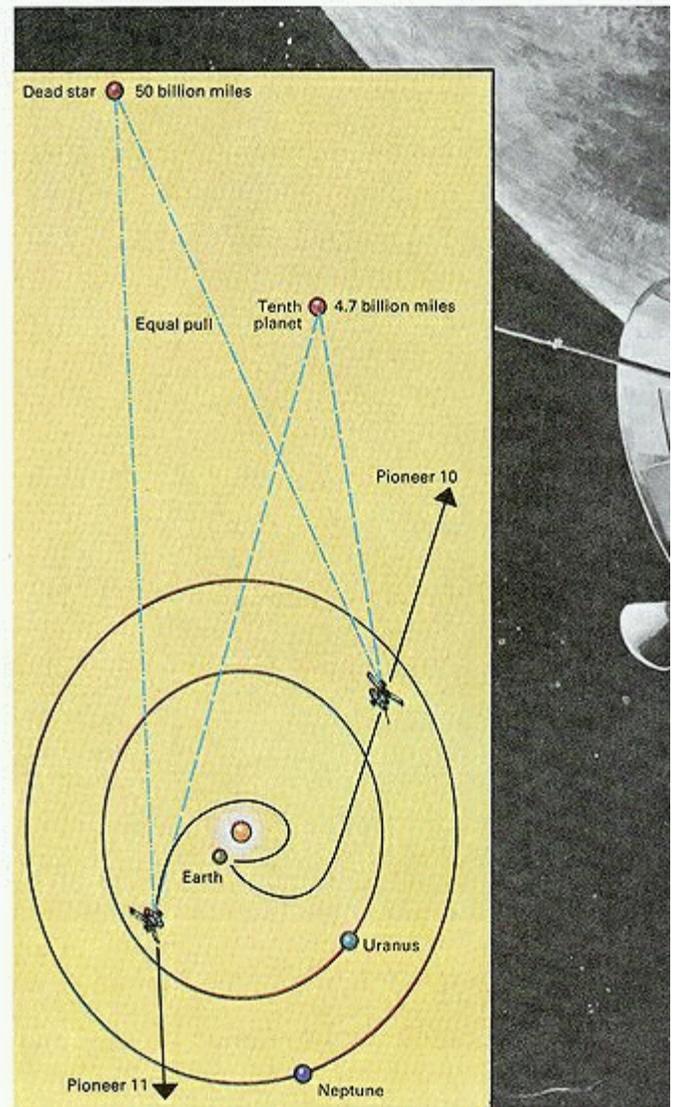


Pioneer Probe

This diagram appeared in the 1987 edition of the *New Science and Invention Encyclopedia* published by H.S. Stuttman, Westport, Connecticut, USA. The article was discussing the purpose of the Pioneer 10 and 11 space probes. Clearly shown is “Nemesis” a popular name for our sun’s binary companion, a dead star. (Binary solar systems are apparently the rule in our galaxy, not the exception.). Why does this diagram clearly shows the approximate location of Planet X (a.k.a. the 10th or 12th Planet)? Planet X is presented as a matter of fact in this respected encyclopedia. Some have suggested the paths of Pioneers 10 and 11 were chosen as to get a triangulated fix on Planet X, a suggestion this chart would support.



2488 | SPACE PROBE



Above: Pioneer 10 became the first craft to pass into interstellar space in 1983. The diagram (inset) shows the path of the two Pioneer probes.

Troubled Times



Traveling

Many of you out there have questions concerning the 12th planet and its orbital distance to the Earth. To begin, we will discuss some of the features of the 12th planet. Its natural form occurs when the planet is floating slowly between our Sun and its dark companion close to the mid point. The 12th planet system is similar in size to Uranus and has a ring system surrounding the planet like Saturn. These series of rings rotate along the equatorial plane, and is composed of mostly red iron oxide dust and assorted small sized meteors. Its moons scattered about the sky, would rise and set at different intervals during the day. This would not be the case when the 12th planet is on the move. Instead, all the moons would rise above the horizon of a rotating 12th planet approximately at the same time, while they are trailing behind the planet. The moons line up in a wobbly row of cascading dim globes, that dance about a gold tinted red sky of perpetual daylight.

There is a phenomena of continuous light and self heating occurring on the 12th planet, which is not unusual in the universe. Light on the 12th planet is produced by the same process occurring in our Sun. It is in the core of the 12th planet that the differences arise. In our Sun, the smaller proportion heavy elements to hydrogen fuel present in the core allows the fusion process to proceed at a rate where the energy produced overwhelms its mass, resulting in a solar mass that lights. On the 12th planet, the fusion process is dampened to a slow burn by a larger proportion of heavy elements to hydrogen fuel. Both being similar to the process of adding or removing control rods in a nuclear reactor to control the rate of reaction. The energy released from the fusion process occurring in the 12th planet, is absorbed by the magma flowing near the core. In its excited state, the magma moves towards the surface and is exposed to the surface environment through immense fissures in the crust. Most of these fissures are located under the oceans, which cover over 80% of the planet's surface. As the matter in the magma moves from an excited down to a normal mode, energy is released in the form of light, the majority of which is near the red end of the spectrum.

The internal heat produced by the 12th planet is a by product of molecular activity set in motion by the fusion reaction in the core. The liquid core of the 12th planet, always trying to find a state of equilibrium, is constantly in motion. The rapid movement of molecules inside the 12th planet is lubricated by subatomic particles. These particles mankind observes as heat. The heat particles flowing under the crust, rises through the land masses and sea floors radiating evenly throughout the planet's surface. Even though the land and water absorb heat at different rates, the constant flow of heat particles from the core of the 12th planet, results in the oceans and all land masses maintaining the same even temperature. These temperature variances near the surface atmosphere are minimal. The flow of wind currents on the 12th planet are different, than here on Earth. On Earth, subatomic heat particles emanating from the Sun are carried to this planet via the solar wind. These heat particles strike the Earth at varying intensities depending on location. Once absorbed by the surface of the planet, heat is radiated at different rates from the land and water, creating currents of air that flow at different rates and directions across the surface of our planet Earth to compensate for pressure inequalities in the atmosphere. On the 12th planet, the even surface heating create atmospheric drafts flowing in an up and down motion. The exterior of the 12th planet warms the surface air. As the warm surface air rises, cool air in the upper atmosphere falls to take its place. A breeze, normal here on Earth, blowing across the surface of the planet, is almost non existent.

Finally, the 12th planet has a permanent diffused appearance due to Two factors: First, the passage of the light through the depths of the oceans, and second, the artificial dispersion of gold isotopes in the atmosphere. These gold isotopes, with qualities of high density and reflectivity, alter the properties of the 12th planet's atmosphere. While floating in a dust like particulate, they reflect and scatter heat and light back to the planet's surface, thus a form of energy conservation. Similar to how cloud cover retards heat loss on Earth from escaping into space. If one could stand on the surface of the 12th planet and peer into the heavens, the vision he would behold, would shimmer with what seems like

an infinite amount of subtle golden tinted red sparkles pasted about the pastel red sky.

Offered by [Brent](#).



Troubled Times



Orbit

Commencing the derivation of the orbital distance from the 12th planet to Earth, one should know that the 12th planet orbits both binary stars continuously every 3,657 years, since their creation eons ago. One of the foci, the Sun in this elliptical orbit, has a set of planets revolving around it. The other foci, the Dark One, is a star orbited by space trash, that has failed to light shortly after the localized big bang in this sector of the universe. The Dark One, a cosmic object of similar size and mass to the Sun, is located 11 degrees below the orbital plane of our solar system. It is approximately 68.81 billion miles away in the direction of the Orion constellation. During the 12th planet's travels through our solar system, it effects all planets differently according to their mass and proximity when it comes through. Some planets like the gas giants, being of equal or larger mass, faired well. Other smaller planets have not done so well, now only appearing as asteroid remnants that move about in the belt between Mars and Jupiter.

To visualize a clear picture of the 12th planet's orbital trajectory around both suns, the path has to be broken down into 6 segments. Three of these segments are a reflection of the other three. The arrival and returning path, if superimposed on each other, would be a mirror image. It is just the direction of the 12th planet towards either of both foci that determines the difference. Examining the 12th planet's orbital path, we will look at the arrival path, which is composed of 1,828.5 years and the first three segments of the orbit. Our starting point will begin with a location at the furthest distance from the far side of the Dark One. The first segment starts the journey, a 4 year trek with the 12th planet being slingshot away from the furthest point on Dark One's far side due to the combined gravitational attraction forces of both binary stars, accelerating it towards the unlit star. As the 12th planet travels through the system of the Dark One, it only encounters occasional space junk in its path. The velocity of the wandering planet reaches a maximum at its closest approach to the Dark One.

Upon passing, segment 1 ends and segment 2 of the orbit lasting 1,820 years begins. The gravitational forces controlling the movement of the 12th planet in the segment 2 has changed. The gravitational pull to the rear from the Dark One overwhelms the forward momentum and the attraction from the Sun, causing the 12th planet's orbital speed within a few years to be reduced to a crawl. The 12th planet covers 99.9% or 34.3709 billion miles of the distance to a half way point, which is 9.362 times the distance between the Sun and Pluto or 34.405 billion miles between the two stars in 215 weeks or 4.14 years. Essentially, it then hovers and Drifts ever so slowly covering a distance of 70 million miles or .019 S-P units in 1,812 years, while being caught in a gravitational tug of war at the mid point between the binary suns. It is here at this virtual gravitational null point in the middle of segment 2, that the 12th planet resume its original planetary form.

Offered by [Brent](#).



Troubled Times



Passage

Approximately 4 years before an Earth passage in the extreme latter half of segment 2, its velocity increases significantly, and forges a path straight and true towards the Sun. Shifting laterally only during encounters with the angular repulsion field that moves the other planets and a repulsion deflection point, which is located away from the Sun about 2.5 times the distance from the Sun to Pluto. The 12th planet once caught in this angular repulsion field, is pushed in the same counterclockwise direction as the other planets as they rotate around the Sun. Even though the 12th planet is moving in the same circular direction as Earth, while maintaining forward momentum towards the Sun, its rate of lateral speed is slower. The result is the net distance crosswise to the orbital path widens between Earth and the 12th planet. Hence, when the 12th planet is observed in the night sky, it gives the appearance of orbital movement in the opposite direction against the back drop of stars or retrograde motion. Once out of the field, the 12th planet snaps back quickly like a stretched rubber band to its original path towards our Sun. At the deflection point, the 12th planet is pushed slightly outwards, clockwisedown and away from the Sun.

On approach to a point in the inner solar system, where the 12th planet is about to pass the Sun, it encounters the strongest repulsion force next to the one locally produced by the Sun. It is penetration through the planetary orbital plane. Upon encountering the orbital plane, the initial entry angle of the 12th planet is 11 degrees from below the orbital plane. The 12th planet altering its orbit for a path of less resistance, increases its angle of attack through the plane by 21 degrees for a total of 32 degrees. This adjustment in the angle the 12th planet uses to pierce the orbital plane, decreases the force of repulsion applied against the forward momentum of the planet. Once the 12th planet has passed through the orbital plane, it returns to its original angle of 11 degrees. Here at the end of segment 2, while moving pass the Sun, the 12th planet makes its closest approach to it. Events are initiated by the gravitational force of the Sun, leading to the hail of meteors and dust assaulting Earth, approximately 3 days prior to Earth passage. The small meteors and dust trailing on the fringes of the 12th planet's trailing gravitational field are pulled towards the Sun. This large field of space trash with its forward momentum intact, takes a much closer approach to the Sun. Free of the gravitational influences of the 12th planet, the solar wind emanating from the Sun overwhelms its own gravitational attraction. Propelling this large field of debris many millions of miles wide, at a high rate of speed towards Earth, 3 days ahead of the actual passage.

Offered by [Brent](#).



Troubled Times



Turn-Around

In segment 3, which has a time period of about 4 years, the orbital path of the 12th planet takes on a different track. The momentum slows quickly after passing our Sun, since both gravitational sources are to its rear. Approximately one week after Sun passage, the 12th planet effects can be minimal to catastrophic on the planet Earth, when its magnetic field is realigned. The wandering planetary system, the 12th planet, composed of its many moons, meteors, space trash and dust trailing behind in its gravitational wake like a broken string of pearls, passes quickly during its swift travels through the solar system. As the 12th planet continues on its orbital path out of the inner solar system, new forces effecting its movement come into play. The repulsion forces flowing from planets coupled with the counter clockwise angular rotation of the repulsion particles emanating from the Sun, that maintains the orbital velocity of the planets in the solar system, pushes the 12th planet's orbit outwards up and away from the central axis of the solar system.

The 12th planet fans out and away from the Sun, then turns clockwise. Forward momentum away from the Sun slowly comes to a halt, as gravity from the Sun alters momentum and shifts the direction of the 12th planet to lateral movement across space. Finally the 12th planet encounters, what is the furthest point from the backside of the Sun. Segment 3 has ended and segment 4 starts which lasts for a period of 4 years. The reverse portion of the orbit has now started with segment 4. The 12th planet turns and moves back towards the Sun accelerated by the combined gravitational forces of our Sun and the Dark One.

Yielding an orbital path that takes on the shape similar to a slightly flattened ice cream cone. As the 12th planet finishes its orbital path around the backside of the Sun, it arrives once again in the inner solar system. Occurring some 8 years later, after the 12th planet has had its previous close encounter with the earth. Though the effects earth experiences in comparison to the earlier passage are minimal, conditions the Earth faces are different this time, due to several reasons. The turmoil and magnetic interference in the core of the Earth caused by the 12th planet are always present, as the wanderer moves around the backside of the Sun. At a minimum the Earth, when the 12th planet is at a maximum distance of 3.56 units away from the Sun, receives the same amount of magnetic cross currents during the time frame of Feb. 2003. On this passage, the second encounter, the crust of the Earth does not realign. The 12th planet passes no closer than 100 million miles, compared to 15 million on the first passage. The second passage of the 12th planet to the surprise of many, will be only a minor disruption in the flow of life.

Offered by [Brent](#).



Troubled Times



Return

As the 12th planet passes the Sun, segment 5 of the orbit begins. In segment 5, the movement of the 12th planet between the Sun and the Dark One is the same as segment 2, but reversed in direction for a total of 1,820 years. The 12th planet momentum slows due to the Sun's gravity for 4 years almost coming to a halt, and drifts again near the midpoint for 1,812 years. Once completing its stay at midpoint, the 12th planet speed increases exponentially towards the Dark One in 4 years. As the 12th planet passes the Dark One, segment 6 which is the opposite of segment 1 begins. The combined gravitational forces of the Dark One and the Sun slow forward momentum and turn the 12th planet clockwise. It is here, in segment 6 where the 12th planet has slowed enough, that the trailing gravitational wake holding the tail together gathers stray meteors, dust, and assorted other space trash, when passing through the debris fields revolving around the Dark One. Replenishing material lost during its orbital encounters with our Sun and Earth. This process continues until the carrying capacity of the tail is maximized, and the 12th planet has left the vicinity of the Dark One. Once the 12th planet reaches the furthest point of the elliptical orbit on the far side of the Dark One, the orbit is complete, and we have returned to the starting point, segment 1.

Visualizing a graphical representation of the 12th planet's movement, starting at the Dark One to the Sun where the Y axis is velocity of the 12th planet and the X axis is the passage of time, it would mimic a hyperbolic cosine curve in the shape of a wide U. A steeply decreasing hyperbolic curve, represents a rapid decrease in velocity as the 12th planet leaves the gravitational influence of the Dark One to its rear. As the Y value velocity approaches 0, the curve flattens until it is parallel to the X axis. This area of the graph would represent the time spent and the velocity of the 12th planet at the mid point. The curve stays its course essentially until the time value along the X axis reaches approximately 4 years before Earth passage. The hyperbolic curve then rapidly ascends steeply, once the 12th planet is firmly in the gravitational grasp of the Sun. The Y value, velocity, increases exponentially until the 12th planet reaches the Sun. The slope of the curve at any value T (time) equals the rate of change in velocity or acceleration. The area under the curve between 2 time intervals is equal to distance traveled by the 12th planet. The boundaries for the Distance traveled is enclosed by the hyperbolic curve at the top, the X axis at the bottom and two perpendicular lines to the X axis which represents the initial and final values of time. It is the hyperbolic function that was used to derive the distance table below.

Offered by [Brent](#).



Troubled Times



Bodes Law

From: denises9@mail.idt.net (Darrell R.Stewart)
Newsgroups: alt.bible.prophecy
Subject: **THE 12th PLANET =>A.K.A. PLANET X <=**
Date: Sun, 02 Mar 1997 13:28:56 GMT

There are numerous indications that a tenth planet is part of our solar system. This information is first derived from ancient Sumerian (Akkadian, Assyrian and Babylonian) texts unearthed in and around present-day Iraq. Such a (now missing) planet was referred to in those ancient texts as "Nibiru" (later to be called "Marduk" in mythological stories by the Babylonians). Therefore, if and when the lucky person finds such a planet and has his or her discovery verified s/he will more than likely have "rediscovered" only one small bit of previously acquired knowledge that has been lost by our species over the past several thousand years.

Another hint of the existence of a missing planet is found in **Bode's law**. This unique mathematical formula predicts that a planet should be orbiting our sun at 2.8 astronomical units distance. This is exactly where our present-day asteroid belt is located. Therefore, it is likely that some kind of calamitous event took place at or near this distance from Sol. However, whatever it was that was originally orbiting our sun at that distance, it was not the missing planet that we are still searching for. The following is a summary of what Zecharia Sitchin proposes in his thought-provoking book *The Twelfth Planet of The Earth Chronicles*.

Possibly, the asteroid belt is composed of remnants of our own present-day Earth and satellites of the missing planet ("X"). The hint by **Bode's law** regarding a Planet X is that the Sumerian "Nibiru" and its orbiting satellites may have collided with a planet called "Tiamat" after the formation of our solar system. During this possible event our planets and satellites would have still been in a very hot and volatile state. After one or more impacts upon Tiamat by Nibiru's satellites the subsequent destruction created a new planet referred to by the Sumerians as "Ki" (known today as Earth) as well as the asteroid belt. Earth's satellite, our Moon, may have been captured within Ki's gravitational field during this "battle of the planets" as depicted in Sumerian texts. Therefore, our Moon may have originally been a satellite of Nibiru. And, consequently, the missing planet (Planet X) may already have a name: Nibiru (Marduk)!

Another indication of Planet X is how several of our recently rediscovered planets came about. Because of the eccentricity of Uranus' orbit many astronomers suspected another planet had to exist beyond it. Their search led to the discovery of Neptune in 1846. But then, they discovered that Neptune also had such irregularities and in 1930 Pluto was discovered. Yet, Pluto was not large enough to cause Neptune to have the irregularities that it has. Therefore, the search for another planet ("X") continues. The possibility of one or more additional planets existing in our solar system is reasonably good.



Troubled Times



Orion

I used a solar system [Simulator](#) As I changed UTC time so I could position the various planets to the top of the screen, I noticed that the ecliptical plane looks highest just over the out stretched hand of Orion. This is a very interesting place in the sky where the ecliptical plane intersects the milky way. This is one of the Stargates that Adrian Gilbert talks about on his website. He says he thinks it may point to the end of an age. Where is the other stargate? You got it, Sagittarius.

Offered by [John](#).



Troubled Times



Asteroids

Varuna Points Way to 10th Solar Planet

Times of India, May 28, 2001

PARIS: A large asteroid, named Varuna after the lord of the cosmos in Hindu mythology, has been spotted in the outer fringes of the Solar System, a discovery which suggests the Sun may have more than nine planets, astronomers say. Varuna was detected last November by Arizona-based astronomers in the Spacewatch Project, a scheme aimed at scouring the asteroid belts to look, in part, for rogue rocks that could be a potential threat to Earth. The spherical object is 900 km in diameter, which makes it only a tad smaller than Charon, the tiny moon that orbits Pluto, the most distant of the Sun's nine known planets. The discovery, by a team led by David Jewitt of the Institute of Astronomy in Honolulu, is reported last week in Nature, the British science weekly.

Until 1992, Pluto and Charon were the only known objects in the Kuiper Belt, an ancient ring of icy bodies believed to have been formed from the outer reaches of material that swirled around the infant Sun billions of years ago. Since then, more than 400 other Kuiper Belt objects have been discovered by powerful telescopes. But astronomers suspect the belt could hold hundreds of thousands of rocks 100 km across, and possibly billions of others 10 kms across. The biggest handicap to identifying them has been the poor reflectivity of these objects. They are so far from the Sun that solar rays are terribly weak, and many of the objects themselves are dark, which means that they reflect very little light to enable astronomers to identify and measure them.

In Varuna's case, the asteroid was easy to spot because it shone brightly, thanks to its reflective surface. In a commentary, US-based astronomers Stephen Tegler and William Romanishin said they were excited by the discovery of Varuna. It could vindicate the US astronomer Clyde Tombaugh, who in 1930 found "Planet X," the long-suspected ninth planet of the Solar System, and named it Pluto, but continued his search of Kuiper Belt in the belief that other planets were still to be discovered, they said. "Their work raises the possibility that Pluto is not the only Planet X, but perhaps one of several," said Tegler and Romanishin. "We can now imagine that bodies even larger and more distant than Pluto will be found."

Other discoveries could come with the launch of a space-based telescope in 2002 to measure the infrared emissions of distant objects, something that is difficult to accurately achieve from the Earth because of the filtering effect of our planet's atmosphere, they said.(AFP)



Troubled Times



Comets

"Far beyond the solar system's nine known planets, a body as massive as Mars may once have been part of our planetary system - and it might still be there;" The lead paragraph in a science-fiction script? The lead paragraph from an article by Zecharia Sitchin about Nibiru? No. It is the lead paragraph in a report in *Science News* of April 7, 2001 headlined "A Comet's Odd Orbit Hints At Hidden Planet." The article reports the conclusions of an international team of astronomers who have studied an unusual comet discovered last year, designated 2000CR/105. It follows a vast elliptical orbit around our Sun, an orbit that takes it way out to some 4.5 billion kilometers from the Sun, and brings it back at its closest to the Sun to the vicinity of Neptune; it is an orbit whose period "takes roughly 3,300 years" (according to *Sky&Telescope News* of April 5, 2001).

"Such an oblong orbit is usually a sign that an object has come under the gravitational influence of a massive body," wrote R. Cowen in *Science News*. Was this the gravitational pull of Neptune? In a study to be published in the *Journal Icarus*, the team of astronomers (led by Brett Gladman of the Observatoire de la d'Azur in Nice, France), after analyzing all the possibilities, does not think so. An alternative solution, they say, is that "the comet's orbit could be the handiwork of an as-yet unseen planet" - as massive as Mars - "that would have to lie some 200 AU from the Sun," in the so-called Kuiper Belt of cometary and other planetary debris. This would also explain "why many members of the Belt have orbits that angle away from the plane in which the nine known planets orbit the Sun."

"Undoubtedly, something massive knocked the hell out of the Belt," Harold F. Levison of the Southwest Research institute in Boulder, Colorado, told the magazine. "The question is whether it is still there now." "Comet's Course Hints at Mystery Planet," was how the journal *Science* headlined the discovery news in its issue of 6 April 2001. The special report, written by the Dutch astronomer Govert Schilling, summed up the findings in the following lead paragraph: "A Supercomet following an unexpectedly far-flung path around the sun suggests that an unidentified planet once lurked in the outermost reaches of the solar system, an international team of astronomers reports. What's more, the mysterious object may still be there." ...

May 2001

ZECHARIA SITCHIN



Troubled Times



Elliptical Orbit

A CNN article by *Associated Press* dated October 23, 1996.

New rebel planet found outside solar system

It's roller-coaster orbit stuns scientists

A new planet that breaks all the rules about how and where planets form has been identified in orbit of a twin star about 70 light years from Earth in a constellation commonly known as the Northern Cross. The new planet has a roller-coaster like orbit that swoops down close to its central star and then swings far out into frigid fringes, following a strange egg-shaped orbit that is unlike that of any other known planet. "We don't understand how it could have formed in such an orbit," said William D. Cochran, head of University of Texas team that discovered the planet at the same time that a group from San Francisco State found it independently.

The researchers presented papers on the new planet Wednesday at a national meeting of the American Astronomical Society's planetary division. The new planet is the latest in a series of bodies found in orbit of stars outside the solar system and is part of a quickening effort by astronomers to find distant worlds. Cochran said the planet orbits the smaller of twin stars in the constellation Cygnus, a prominent stellar grouping known as the Northern Cross. The planet's star is called 16 Cygni B and the larger companion star is 16 Cygni A.

"Of all the stars you might see in the sky, Cygni B is the most similar to our sun," said Cochran. It has the same mass and temperature as the sun, but the nearby twin star of Cygni B creates an entirely different type of environment. Every 250,000 years, Cygni A and B pass within 65 billion miles of each other, a grazing passage by stellar standards. Cochran said the stars are so close, that the gravitational tug of Cygni A may have pulled the new planet into its wildly eccentric orbit.

It is unlikely that life exists on the new planet, said Cochran, because it probably is more like the gaseous planets, such as Jupiter or Saturn, than the rocky planets such as Earth or Mars. The wide-swinging orbit of the planet would also cause extreme fluctuations in temperature, he said. During one part of its 804-day-long year, the planet would pass within 67 million miles of its sun. This would be the planet's summer, said Cochran. Then the planet would swing far out, reaching a point 158 million miles from the star. This would be its winter and it would last more than 500 days, the researcher said. Most planets in the solar system have an almost circular orbit, like that of the Earth, and most theories about how planets form are based on them settling into a circular orbit. The eccentric orbit of the new planet adds a new dimension that astronomers will have to consider in theories about planetary formation, Cochran said.

The University of Texas and San Francisco astronomers found the new planet by studying the movement of Cygni B. They discovered that the star tended to change its speed of motion in a way that could only be explained by the presence of an orbiting companion. Cygni A has no such motion, said Cochran, suggesting it has no planet. By some counts, the new planet is the ninth to be found outside the solar system, although some astronomers say there have been up to 11 found. Cochran said the exact number is controversial because not all of the discoveries have been generally accepted as actual planets.

And there were skeptics even of the Cochran discovery. "It is a really nice piece of work" said David Black of the Lunar and Planetary Institute in Houston. "But I really question whether this is a planet or a brown dwarf." A brown dwarf is a failed star, an object that never collected enough mass to start stellar

burning. Black said it is possible that most of the recently discovered planets are really brown dwarfs.



Troubled Times



New Mini-Planet

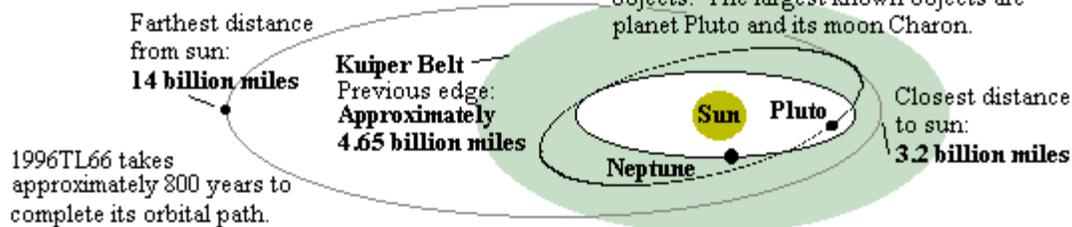
Associated Press article titled **Tiny Planet Discovered Beyond Pluto**, June 5, 1997
Theory Suggest More Objects in Solar System

Astronomers have found an icy miniplanet that orbits the sun well beyond Pluto, providing evidence that the solar system extends much farther than was once thought. ... At its most distant, it wanders three times farther from the sun than Pluto, tracing a looping, oblong path into an astronomical terra incognita.

Extending the Solar System

Astronomers have found a miniplanet names 1996TL66 beyond the orbit of Pluto. The discovery of the 300-mile-across object has extended the known edge of the solar system's Kuiper Belt by at least 9.35 billion miles.

Source: Nature



Troubled Times



Normal

Orbits Of Other Distant Planets Oval - Not Circular

Public Affairs Office, San Francisco State University, January 9, 1999

[Ligeia Polidora](#)

Unlike the nine planets that make circular orbits around our Sun, all nine of the 17 extrasolar planets which are in distant orbits around their host stars travel in oval-shaped paths. This surprising pattern suggests that our heliocentric perspective skews expectations of worlds elsewhere. The circular paths of planets in our solar system may require special conditions for them to acquire and maintain their more stable circular orbits. "For the first time we have enough extrasolar planets out there to do some comparative study. We have the statistical basis for starting to consider how our solar system compares with other planetary systems," said astronomer Geoffrey Marcy, University Distinguished Professor of Science at San Francisco State University. "We are realizing that most of the Jupiter-like planets far from their stars tool around in elliptical orbits, not circular orbits, which are the rule in our solar system." Marcy, a member of the most prolific team of extrasolar planet discoverers, presented this emerging trend in a press conference today at a meeting of the **American Astronomical Society** in Austin, Texas. He is the lead author of a paper describing the conclusions that has been submitted for publication to the *Astrophysical Journal*.

Among the nine planets with elliptical orbits is a new discovery. This planet orbits the star HD168443 in the constellation Serpens, the Snake. It was detected during observations with the world's largest telescope at the W.M. Keck Observatory atop Mauna Kea on the island of Hawaii. The new planet has an orbital period of 58 days and orbits at an average distance of 0.28 Astronomical Units from its star (one A.U. equals the mean distance from the Earth to the Sun). The eccentricity of its orbit - the degree that it deviates from a circular path - is 0.54, about ten times the eccentricity in the orbit of Saturn. The other eight extrasolar planets that orbit farther than 0.2 A.U. from their host stars all have orbital eccentricities greater than 0.1.

Debra Fischer, a post-doctoral researcher at San Francisco State and part of the planet-finding team, said, "With 10 or 20 of these [planets around other] stars you can start looking at what's normal and what's not normal." And elliptical orbits appear to be the norm for planets as massive as Jupiter. As these Jupiter-mass planets careen close to their host stars and swoop back out again, their powerful gravitational attraction might sweep aside any smaller worlds around the same star. Scientists engaged in the Search for Extra-Terrestrial Intelligence (SETI) have begun to ponder the implications of the orbital trend for their endeavor. "This does represent a bit of a wet blanket on the search for intelligence in the galaxy," said Marcy. "The big bullies may wipe clean the terrestrial planets in those planetary systems, rendering them void of any Earth analogues."

However, Marcy pointed out that about five percent of stars in the Galaxy are found to have Jupiter-mass planets within 3 A.U. That leaves 95 percent of stars that may lack such world-wrecking planets; any of those stars could conceivably harbor life-bearing planets. "What we're learning is that 95 percent of Sun-like stars don't have these wildly wacky Jupiters in such close-in orbits, and I would say that's quite good news for the SETI efforts," said Marcy. Researchers seeking other worlds with intelligent life can also take heart in a second trend exhibited by extrasolar planets. Nearly half of those found so far are smaller than or equal to two Jupiter masses, and above four Jupiter masses the number of planets drops off sharply.

There are more smaller planets out there, just as in our solar system. "This mass distribution is pointing toward a plentitude of planets smaller than Saturn and Jupiter," said Marcy.

Theorists still have their work cut out for themselves in explaining how the nine extrasolar Jupiter-like planets developed their eccentric orbits. Four plausible scenarios have been proposed. One posits that when enough large planets orbit a star in close proximity, they generate a gravitational slingshot that projects the planets into elongated orbits. Another idea is that a passing star rips through the heart of a solar system and perturbs planetary orbits. The perpetrator could also be an orbiting companion star. Sixty-four percent of Sun-like stars have a companion star, and HD168443 appears to be part of one such binary pair. (Another recently announced extrasolar planet orbits the solitary star HD210277, so that planet's elliptical orbit demands a different explanation.)

The fourth scenario points to the protoplanetary disk, out of which a planet first takes form from dust and gas. The disk may somehow permanently perturb the planet's orbit. Theorists who could comment further on these various ideas include Fred Adams (University of Michigan), Greg Laughlin (University of California at Berkeley), Doug Lin (University of California at Santa Cruz), Fred Rasio (MIT) and Stu Weidenschilling (Planetary Science Institute in Tucson, Arizona). Research colleagues of Geoffrey Marcy's include Debra Fischer (San Francisco State University), R. Paul Butler (Anglo-Australian Observatory), Steven Vogt (U.C. Santa Cruz), Kevin Apps (University of Sussex, England), and Michael Liu (U.C. Berkeley).



Troubled Times



Wandering

From **MSNBC News**

Marcy speculated that some interaction might even slingshot planets completely out of their solar systems. Scientists believe that such a "rogue planet" already has been spotted.

Question Over Planet Discovery

From the [BBC](#)

A scientist from the world famous Royal Greenwich Observatory says Nasa scientists claiming to have found the first planet seen outside our solar system are jumping the gun. Dr Robin Catchpole believes a lot more work needs to be done before such conclusions are drawn. The new object, in the constellation of Taurus, was found by the Hubble space telescope. Nasa believes it may be a planet two or three times the mass of Jupiter, the largest planet in our solar system. **Alternatively it could be a brown dwarf star, one that was too small to sustain the nuclear reactions in its core that normal stars need to shine.** But although Dr Catchpole admits that the brown dwarf explanation is feasible, he says more work is needed before further conclusions can be drawn. "I really don't think there's any evidence to say that what we are seeing here is a planet", he told BBC World Service, adding that scientists needed to use another instrument to determine what sort of light the object was giving out. A spectrum of the object would tell researchers whether it was hot and luminous like a star or cool and reflective like a planet. **"This one looks far too bright to be reflecting the light of the stars nearby,"** he said.

Although he accepted the discovery had potential, he said: "A lot more work has to be done before it's right to go out and tell everybody you've found a planet." This could be done with the biggest telescope in the world which this week produced its first pictures of space. The new instrument built by eight European nations in northern Chile would be able to gather the light, analyse it and tell us exactly what it is made of. Dr Catchpole believes Nasa's release of the story was symptomatic of an increasing tendency for scientists "to grab the headlines as soon as possible." He said this was driven by the need to get funding for research and searching for life in other worlds was an area where there was a lot of competition. "The big question that everybody wants to know about is, is there life out there? Are there planets out there? So the first person who really gets one is going to make a major discovery."

Free-Floating Planets and Stellar Clusters

[American Scientist](#), Vol 90, Mar-Apr, 2002

For centuries a planet has been defined as an object that orbits a star. This notion was recently upended when several groups of astronomers reported the discovery of planet-sized objects wandering through space on their own, with no parent star in sight. The discovery of these objects within dense stellar clusters has unsettled the astronomical community and raised questions about the nature of planets and how they might form. Jarrod R. Hurley and Michael M. Shara review these recent discoveries and consider how the **dynamic interactions between the stars in a dense stellar cluster may free planets from the gravitational bondage of their parent stars.** Jarrod Hurley is a postdoctoral investigator at the American Museum of Natural History. His research involves studying the evolution of star clusters through computer simulations. His models have helped to explain the formation of blue-straggler stars in the open cluster M67, and he has recently begun to investigate the behavior of planetary systems in star clusters. Michael Shara is curator and chair of the Department of Astrophysics at the American Museum of Natural History.

His research interests include the structure and evolution of novae and supernovae, collisions between stars, and the nature of stellar populations in star clusters and galaxies.



Troubled Times



Migrating

Migrating Planets

Scientific American, Aug 25, 1999

The movement of the planets through space might seem perfect and eternal. But new evidence from the icy edge of the solar system shows that Neptune, Pluto and the other outer worlds used to follow quite different paths. Orbital migration may explain puzzling observations of planets around other stars.



Troubled Times



Brown Dwarf

New Mexico State University, Las Cruces, New Mexico
Astronomers examine brown dwarf's hazy atmosphere
by Karl Hill, December 15, 1998

Brown dwarfs, sometimes known as failed stars, have a reputation for being the dim bulbs of the heavens. That's one reason the first real specimen, a brown dwarf named Gliese 229B, was discovered only three years ago. But Gliese 229B presented a puzzle to New Mexico State University astronomer Mark Marley and his colleagues as they studied the strange new object, because it seemed even darker than expected. "Brown dwarfs are supposed to be dim, but it was turning out to be much, much darker than we would have thought in the optical part of the spectrum," Marley said.

In a classic example of the high-tech detective work today's astronomers use to analyze distant objects, Marley and two colleagues have determined that the brown dwarf suffers from a malady similar to one Los Angeles is famous for - a hazy atmosphere. "The compounds are different, but it's like the red haze you see when you fly into Los Angeles," he said. While L.A.'s smog is caused by sunlight reacting with auto emissions and other particles in the air over the city, the brown dwarf's red haze is thought to be caused by a different sort of chemical reaction. It appears that gases in the brown dwarf's atmosphere, primarily methane, react with light from a nearby star that Gl229B orbits, causing them to form more complicated molecules that clump together to form extremely small drops, Marley said -- drops about one-hundredth the size of those that form clouds in the Earth's atmosphere. The drops tend to block the visible light from the brown dwarf but are transparent in other parts of the spectrum, he said.

Results of the analysis of Gl229B's atmosphere were published in the Dec. 11 issue of *Science*, the weekly journal of the American Association for the Advancement of Science. The article was written by Caitlin Griffith of Northern Arizona University's Department of Physics and Astronomy, Roger Yelle of Boston University's Center for Space Physics, and Marley, a planetary scientist in NMSU's Department of Astronomy. Solving this particular mystery about this particular brown dwarf, Marley said, adds to scientists' understanding of the universe around us. Since Gliese 229B was discovered, by a team of Cal Tech and Johns Hopkins scientists, "there are now dozens of brown dwarfs that have been discovered, and it's important to understand what their spectra can tell us about them," Marley said. "If these guys turn out to be a common part of the universe, we have to get a basic understanding of what's going on in their atmospheres, how hot they are, what they're made of."

Brown dwarfs are too small and cool to be stars and too massive to be planets. Scientists believe they form the same way stars do, but never accumulate enough mass to sustain nuclear fusion at their cores. They seem to share some characteristics with giant planets like Jupiter. Drawing on his research on Jupiter and other planets, Marley has developed computer models that help astronomers examine newly discovered objects such as brown dwarfs and planets orbiting stars beyond our solar system. His collaborators on the latest brown dwarf project have models that complement his. Using data obtained by the Keck Telescope in Hawaii, they found that Gliese 229B fit their models in most respects, but not in the optical part of the spectrum.

The optical part of the spectrum includes light waves that are visible to the human eye, plus a section of the spectrum between visible light and the infrared region that is not visible to the human eye. The brown

dwarf's darkness in this part of the spectrum could not be caused by clouds, the scientists concluded. Its atmosphere is too warm to contain ice clouds like those on Jupiter and too cool to contain silicate clouds like those on low mass stars. Also, in parts of the spectrum where the brown dwarf is brighter, such as the near-infrared part of the spectrum, "the data look like there are no clouds at all -- a perfectly clear atmosphere," Marley said. "So there was this puzzle," he said. "It seemed to be cutting off light in one region (of the spectrum) but in other areas it looked just fine."

While the astronomers are confident they have solved the puzzle of Gliese 229B's atmosphere, by analysis of its spectrum and an understanding of how different particles scatter light, the results don't necessarily apply to other brown dwarfs, Marley said. "Most of the other brown dwarfs that have been discovered are isolated," he said. Gliese 229B is orbiting a nearby star, and ultraviolet light from the star is a factor in the chemical reaction in the brown dwarf's atmosphere. "And this one is still the coldest one so far," he added - another factor in the atmospheric makeup.



Troubled Times



Methane Dwarf

Sky Survey Scientists Discover New Celestial Dwarfs

Sloan Digital Sky Survey, May 31, 1999

Scientists of the Sloan Digital Sky Survey announced today (May 31) that early data from the Survey have revealed a new type of astronomical object, smaller than a star but larger than a planet. Until now, only one such object had ever been detected in the universe. Early this spring, while searching Sky Survey data for unusual objects such as the universe's most distant quasars, graduate student Xiaohui Fan and astronomer Michael Strauss, of Princeton University, found a faint but extremely red dot of light in the night sky. Subsequent spectroscopic observations revealed that the object was not a distant quasar but instead an equally fascinating find - a nearby cool, brown dwarf with properties between those of a planet and a star. Until their discovery, only one of this type of "cool substellar object," known as Gliese 229B, discovered in 1995, had ever been observed. However, unlike Gliese 229B, which is a close companion to a star, the new object was not orbiting a star, but occurred as a free-floating object about 30 light years away in the constellation Ophiuchus.

Then, last week, Sky Survey astronomers Zlatan Tsvetanov and Wei Zheng of The Johns Hopkins University, along with fellow JHU astronomer David Golimowski, confirmed the observation of another ultra-red, free-floating object of comparable mass in the constellation Virgo, with a spectrum so similar that Golimowski, a co-discoverer of Gliese 229B, described it as a clone. "The JHU result shows that the Princeton discovery was not simply beginner's luck but that these objects may be quite common," said astronomer Tom Geballe of the Gemini observatory in Hawaii. "They are still so new to astronomy that they require a new vocabulary. The name 'methane dwarf' has emerged, because of the dramatic presence of bands of methane in their spectra. Methane is characteristic of giant planets, like Jupiter, but it never appears in normal stars - they are much too hot - or even in most brown dwarfs."

Objects whose mass falls between that of stars and planets are extraordinarily elusive. Because they lack sufficient mass to generate the nuclear reactions that make stars shine, they cool down from their formation temperature and become too red and too dim to show up in most searches of the sky. And, unlike planets, which are found in association with stars, these objects may occur as isolated objects in interstellar space. Thus, they are very hard to detect. Astronomers have previously observed objects with masses lower than the minimum required to sustain nuclear reactions, the criterion that makes an object a star. These lower-mass objects are called "brown dwarfs," a name that reflects their temperature: red dwarfs are cooler than white ones, and brown dwarfs are cooler still. The term "methane dwarf" distinguishes the three known very cool brown dwarfs, which all show methane in their spectra, from the population of hotter brown dwarfs that lack this signature.

Astronomers also know that low-mass objects - those with masses smaller than the sun - may be important contributors to the total mass of the Milky Way. But to understand just how much they contribute, astronomers must determine their masses - and how many of them exist. "Just because we haven't seen these free-floaters before doesn't mean they are rare," said University of Chicago astronomy graduate student Constance Rockosi. "But to find them, you need to cover a lot of sky area and at the same time be able to see very faint objects. The Sky Survey covers so much celestial territory that at last we will begin to get a grip on how many there really are." For now, the mass of the methane dwarfs remains unknown. They must be smaller than stars, because they are so cool. However, their dimness depends not only on

their mass but on their age: brown dwarfs cool with age, like embers drawn from a fire. So, although the methane dwarfs are fainter than other brown dwarfs, they may not be less massive-just much older. Astronomers estimate their masses at 10 to 70 times the mass of Jupiter.

Both the Princeton and Johns Hopkins groups discovered the new methane dwarfs while looking for objects so red that they were not even visible with filters sensitive to other wavelengths. Princeton's Strauss described the detective work that led to the confirmation of the object's true identity. "The object we observed was the reddest object we have found thus far in 400 square degrees of observing," Strauss said. "We obtained its optical spectrum with the 3.5-meter telescope at Apache Point Observatory in New Mexico. The spectrum showed strong absorption by water, in the form of steam. We immediately realized it might be an object similar to Gliese 229 B. At the suggestion of Princeton astronomer Gillian Knapp, we called our colleagues Tom Geballe, of the Gemini Observatory, and Sandy Leggett of the Joint Astronomy Centre. By coincidence, they were observing at UKIRT, the United Kingdom Infrared Telescope in Hawaii, which has one of the best near-infrared spectrographs in the world. They obtained infrared spectra and showed that our object was an almost exact twin to Gliese 229 B, with strong bands of water and methane." A few weeks later, Geballe and Leggett received a similar call from the Johns Hopkins group, and, on May 22 obtained the spectrum for the second candidate object. "As anticipated," Golimowski said, "the spectrum revealed absorption features from water vapor and methane. The third known methane dwarf was now confirmed!

Among many new questions, we need to understand why the spectra of these three objects are so amazingly similar. The two new free-floaters are ideal targets for searching for even lower-mass companions or planets." Fan said Sky Survey collaborators are pleased at the objects' detection so early in the life of their project. "Even the engineering test data from the Sky Survey are proving very productive for science," he said. The wide-field capability of the Sky Survey telescope and camera are only part of the technology necessary to advance the discovery rate of new classes of astronomical objects. "The capability for precision five-color photometry is just as important," said Knapp. "The work of Princeton software experts such as Robert Lupton and Zeljko Ivezic was crucial." When the Sky Survey begins routine operations, on each clear moonless night a powerful digital camera will generate 200 gigabytes of data containing millions of objects. Most of the objects are more or less ordinary stars; the interesting, one-in-(literally)-a-million objects must be carefully filtered out from the vast quantities of Sky Survey data. Thus, another crucial contribution to finding such rare objects as methane dwarfs so early in the Survey is the extraordinary capability of the Sky Survey's image-processing software, which enables scientists to zoom in on unusual classes of objects with high reliability.

The Sloan Digital Sky Survey (SDSS) is a joint project of The University of Chicago, Fermilab, the Institute for Advanced Study, the Japan Participation Group, The Johns Hopkins University, the Max-Planck-Institute for Astronomy, Princeton University, the United States Naval Observatory, and the University of Washington. Apache Point Observatory, site of the SDSS, is operated by the Astrophysical Research Consortium. Funding for the project has been provided by the Alfred P. Sloan Foundation, the SDSS member institutions, the National Aeronautics and Space Administration, the National Science Foundation, the U.S. Department of Energy and the Ministry of Education of Japan.



Troubled Times



Common

Counting Brown Dwarfs

Earth Changes TV, August 25, 2000

Astronomers using NASA's Hubble Space Telescope have taken attendance in a class of brown dwarfs and found indications that these odd and elusive objects also tend to be loners. The Hubble census - the most complete to date - provides new and compelling evidence that stars and planets form in different ways. "Because the brown dwarfs bridge the gap between stars and planets, their properties reveal new and unique insights into how stars and planets form," said Joan Najita of the National Optical Astronomy Observatory in Tucson, AZ. The approximate size of a brown dwarf compared to Jupiter and the Sun. Although brown dwarfs are similar in size to Jupiter, they are much more dense and produce their own light whereas Jupiter shines with reflected light from the Sun.

Considered an astronomical oddity only a few years ago, brown dwarfs are intriguing objects that, unlike stars, are too low in mass to burn hydrogen, but are more massive than planets. At 15 to 80 times the mass of Jupiter, the light that they emit is so faint it's hard to tell how many of them are scattered throughout the galaxy, and how they're formed. The Hubble census finds that, like stars, there are more low-mass brown dwarfs than high-mass ones, and this trend continues down to low, nearly "planetary" masses. "In this respect, the isolated, or free-floating, brown dwarfs found by Hubble appear to represent the low-mass counterparts of the more massive stars. This suggests that stars and free-floating brown dwarfs form in the same way," added Najita.

However, the Hubble finding also offers the strongest evidence so far that free-floating brown dwarfs are far different than the recently discovered planets that orbit nearby stars. Najita's team found brown dwarfs more often alone than in orbit around other stars. "This suggests that the extra-solar planets and, by extension, the planets in our own solar system, formed very differently from how the Sun and other stars formed," Najita noted. Only a few years ago, it was commonly believed that brown dwarfs were rare, perhaps because the star-forming process "stops working" at lower masses. "Nature does not discriminate between stars that can shine by fusion and lower-mass objects that are unable to do so," said Najita. "In fact, the universe easily makes brown dwarfs of all masses, from the most massive to the least."

The study also found that brown dwarfs are unlikely to contribute significantly to the mysterious, unseen "dark matter" that dominates the mass of our galaxy and the universe. Although Hubble found that brown dwarfs are abundant, it turns out that they are not common enough to explain the dark matter. Najita and her colleagues conclude that brown dwarfs probably contribute less than 0.1 percent of the mass of our Milky Way's halo. The inventory was carried out using Hubble's infrared vision to measure the brightness and temperature of stars in the cluster IC 348, located in the constellation Perseus. Because the cluster is young, the brown dwarfs in the cluster are intrinsically brighter, which made it easy to detect about 30 brown dwarfs. A critical step in the observation was picking out the brown dwarfs from the clutter of background stars. To tackle this problem, Najita and colleagues developed a new technique using Hubble's NICMOS camera. The procedure measures the strength of an infrared water-absorption band in the atmospheres of stars. The strength of the band is a sensitive measure of each star's temperature. "The ability to measure the temperature of each star solved several problems simultaneously," Najita said. "In addition to helping us distinguish the cluster brown dwarfs from the background stars, we were also able to measure the masses of the brown dwarfs without having to assume their age. This greatly improved our

mass estimates." Najita's study with fellow National Optical Astronomy Observatory researcher Glenn Tiede and John Carr of the Naval Research Laboratory, Washington, DC, will appear in the October issue of the *Astrophysical Journal*.



Troubled Times



Nearby

[A Neighbor of our Solar System Discovered](#)

Institute For Astronomy news release, November 26, 2000

The nearest stars to us provide vantage points to study the different stellar populations in the Milky Way. They are brighter than similar stars located at larger distances, so they can be observed in fine detail. Considerable efforts are devoted to finding the stars that populate our own backyard. The most recent example is reported here. It is an object with a mass lower than a tenth of a solar mass, located at a distance of only 13 light years. An international team of astrophysicists, working in France, Spain and the United States of America, have discovered one of our closest neighbors using the infrared survey DENIS in the European Southern Observatory, and the Keck I telescope on Mauna Kea, on the Big Island of Hawaii. The discoverers have baptized this new celestial body with the prosaic name DENIS-P J104814.7-395606.1, according to the rules of the International Astronomical Union.

Xavier Delfosse, a French astronomer who was at the time working at the Institute of Astrophysics of the Canary Islands (Spain), and works now at the Observatoire de Grenoble (France), and Thierry Forveille, who works at the Canada-France-Hawaii Telescope Corporation, found this object last spring while they analyzed DENIS images. They identified a very red and relatively bright object. DENIS has found many red objects (including some of the very first brown dwarfs), but this one was unusually bright. It could be a very low-mass dwarf very close to us, or it could be a distant red giant. It was necessary to eliminate the possibility of a red giant. Thus, they contacted Eduardo Martin, a Spanish astronomer who now works at the Institute for Astronomy of the University of Hawaii.

Delfosse, Forveille and Martin have collaborated over the past four years in studying the nature of brown dwarf candidates found in the DENIS survey. Together with other collaborators they have proposed and developed a new classification scheme for ultracool dwarfs (L-type). Back in 1993, Martin was one of the inventors of a spectroscopic test to distinguish between very low-mass stars and brown dwarfs. The so-called "Lithium test" has been applied ever since to confirm or refute the credibility of many brown dwarf candidates. On the night of 30 May 2000, Martin pointed the world's largest optical telescope, the 10-m Keck I of the W. M. Keck Observatory, at the Mauna Kea Observatories, to the DENIS candidate. He obtained a high-resolution spectrogram, which shows the presence of a strong cesium absorption line, as well as titanium and vanadium oxide bands. The signature of lithium, however, is not present in the spectrum of the object. The Keck data demonstrated that this object must be a very nearby dwarf (cesium is not detected in giants), with a temperature of about 2200 K and a mass between 90 and 60 Jupiters. The lack of lithium implies that the mass must be larger than 60 Jupiter masses, but does not rule out that it could be a massive brown dwarf (the frontier between stars and brown dwarfs is at 75 Jupiter masses).

A very nearby dwarf should have an apparent motion with respect to the background of more distant stars. Jean Guibert and Francoise Crifo, at the Observatory of Paris, searched for DENIS-P J104814.7-395606.1 in old photographic plates, which have been scanned by the MAMA machine. They found it in images obtained in the last 30 years. It has moved considerably between 1986 and 1999 (see above image). The large proper motion (1.5 arcsec per year) confirms that this is one of our nearest neighbors. The astronomers estimate a distance of about 13 light-years. This distance is still uncertain because it is based on comparisons with objects of the same spectral type. DENIS-P J104814.7-395606.1 ranks between our 12th and 40th nearest neighbor. How could a star so close to us remain undiscovered until today? Despite

of its proximity it is faint because of its low-mass and cool temperature (for example, it is 10,000 times too faint to see with the naked eye). These faint stars and brown dwarfs have so far escaped from the attention of astronomers, particularly in the southern hemisphere, which has been observed less systematically than the northern hemisphere. DENIS allows to identify them easily and will soon provide a census of very low-mass stars and brown dwarfs in the solar neighborhood. DENIS-P J104814.7-395606.1 becomes the brightest example of its spectral class, and it is therefore a benchmark for future studies of very low-mass stars and brown dwarfs.



Troubled Times



Definitions

Mysterious Object Might be First Extrasolar Planet Photographed

Space.COM, Jun 3, 2002

The coolest, faintest and possibly the smallest "substellar object" ever photographed was announced yesterday, but researchers don't know exactly what they have found. Observations so far do not allow for a precise determination of the object's distance, which is needed to calculate its mass. If it 1,150 light-years away, as suspected, then it is likely less than 8 million years old and lives amid a cluster of similarly young stars known as the **Sigma Orionis** system, and its mass would be about that of Jupiter. **The object would qualify - by some definitions - as a planet.** No planet outside our solar system has ever been photographed. Other Jupiter-mass planets have been found around other stars, but they were detected by an indirect method that notes a gravitational wobble induced in the host star.

If the newly spotted object, called S Ori 70, is in fact a planet, it would be a strange one, sitting 36,000 times farther away from any its nearest stellar neighbor than Jupiter is from our Sun. There is an unresolved debate among experts as to whether an object so far from a star can be called a planet or not. And no one is sure how it might have formed or how it could end up in such a location. Some models suggest that gaseous objects like Jupiter might form via the gravitational collapse of a cloud of material, similar to how a star forms. But if such an object forms alone in space, and not around a star, can it be called a planet? **Regardless, researchers say there is a 20 percent chance the object is closer to us, and thus it would be older, more massive, intrinsically dimmer and classified as a brown dwarf star.**

Brown dwarfs are typically many times heavier than Jupiter, but they are not massive enough to trigger the thermonuclear fusion that powers a real star. Brown dwarfs have been found orbiting stars, and other free-floating brown dwarfs have also been detected in recent months. Astronomers who had learned of the finding but had not seen the actual data were unwilling to comment on the results. But one astronomer did tell SPACE.com that if the object is in fact in the Sigma Orionis cluster, then because of its youth it would be brightly emitting infrared radiation as it contracts and cools down. It is possible, the source said, to photograph in the infrared a Jupiter-mass object in this cluster. Victor J. Bejar and Rafael Rebolo, of the Instituto de Astrofísica de Canarias, Tenerife, Spain, both participated in the discovery of S Ori 70. They responded jointly to a SPACE.com e-mail query and said that if the object turns out to be of planetary mass, they would call it an "isolated planetary mass object." Other researchers have suggested the name "free-floating planet."

Regardless of the outcome, the discovery shows the potential for imaging planets in young star systems. "Definitely, very young 'Jupiters' can be directly imaged with current, very large telescopes," Bejar and Rebolo said. "The detection of such objects is an indication that Jupiter-like objects could be populating the space between stars," the researchers said. "They would be extremely faint [when they are older] and therefore they could have been missed in all sky surveys." Researchers say they might be able to solve their puzzle by pointing the Hubble Space Telescope at S Ori 70, but a request for observing time was denied. ... Though Hubble's new Advanced Camera for Survey's will spend some time next year attempting the task around another star, the effort is considered a longshot. It involves blocking the light from a bright star to provide an opportunity to see a much dimmer planetary companion. If Hubble does not succeed, most researchers have said, such an image might have to wait a decade or so until a future space telescope is launched.



Troubled Times



Binary System

Excerpts from an article posted on the usenets:

UF Astronomers Part of Team to Spot Possible Two-Star Solar System

April 20, 1998, Writer: Steve Orlando, sfo@ufl.edu

In a discovery they say could shed new light on the genesis of our solar system, astronomers with the University of Florida and Harvard University have found a star surrounded by a disk of dust that may be forming planets. "It's very exciting. We don't see planets directly in this system, but there is indirect evidence of a planet," said Charles Telesco, the astronomy professor leading the four-member UF team. He said a wake-like void that appears in the disk is typical of what would be left by a moving celestial body. ...

Known as HR 4796A, the star is about 220 light years from Earth and about 47 billion miles from its companion star, HR 4796B. It is in the constellation Centaurus, visible primarily from the Southern hemisphere. Astronomers estimate HR 4796A could represent what Earth's solar system looked like in its infancy, Telesco said. The sun is about 5 billion years old, and the earth is about 4.5 billion years old. The HR 4796 pair, by comparison, is estimated to be about 10 million years old, which Telesco said puts the dust disk precisely in the proper planet-building time frame. "What we may be looking at is a solar system like our solar system but at a much earlier stage," Telesco said.

If the entire dust disk has formed planets or is forming them, the solar system would be considerably larger than our own. Measuring from Pluto, the planet farthest from the sun, our system is about 80 astronomical units across. The HR 4796 disk is more than three times that size - some 250 astronomical units. An astronomical unit is the distance from the earth to the sun - about 93 million miles. However, Telesco said, planets may be forming only near the inside edge of the disk, an area roughly the size of our solar system. ...



Troubled Times



Comets

A Mystery Revolves Around the Sun

MSNBC, Oct 7, 2000

... Two teams of researchers have proposed the existence of an unseen planet or a failed star circling the sun at a distance of more than 2 trillion miles, far beyond the orbits of the nine known planets. The theory, which seeks to explain patterns in comets' paths, has been put forward in research accepted for publication in two separate journals. For some time, astronomers have noticed that the directional patterns of these comets are not completely random. And after years of study, some researchers are reporting that the patterns hint at something big out there perturbing the cometary paths. ...

No telescope has yet detected this object. But on the basis of its gravitational effect, John B. Murray, a planetary scientist at Britain's Open University, speculates that the object could be a planet larger than Jupiter, the biggest of the solar system's known planets. Murray puts the object's orbit at 32,000 AU, or 2.98 trillion miles from the sun. His proposal appears in the Oct. 11 issue of the *Monthly Notices of the Royal Astronomical Society*. Meanwhile, researchers at the University of Louisiana at Lafayette say the object could be a planet or brown dwarf — that is, a dark, failed star — roughly three times the size of Jupiter and orbiting at 25,000 AU. The researchers, led by physicist John Matese, say their paper is to be published by the journal *Icarus*. ...

Another question: Why hasn't such an object been seen? Murray says that even a Jupiter-scale planet could not be observed at the immense distances involved. Matese and his colleagues say that their hypothetical brown dwarf wouldn't have been detected even by the Infrared Astronomical Satellite, which surveyed the heavens in 1983 — but that the yet-to-be-launched Space Infrared Telescope Facility just might be able to pick it up.



Troubled Times



Life Bearing

Many Life-Bearing Planets Could Exist In Interstellar Space

Robert Tindol, CalTech, June 30, 1999

Long ago in a solar system not at all far away, there could have existed about five to 10 Earth-like planets in Jupiter-crossing orbits. These planets today could harbor life somewhere in interstellar space, according to a planetary scientist at the California Institute of Technology. In the July 1 issue of the journal *Nature*, Caltech professor Dave Stevenson says in a new study that such objects could be life-sustaining due especially to the molecular hydrogen they accreted when the solar system formed long ago. Called "interstellar planets" because they would exist between the stars but no longer in orbit around an original parent star, they have never been directly observed or proved to even exist. But based on what scientists know about the way matter should fall together in forming a solar system, such Earth-like planets could definitely have been formed.

Over a period of several million years, one of two things happened to these planets: either they slammed into Jupiter and made it even bigger, or else they came so close to Jupiter that they were catapulted by gravity completely out of the solar system, never to return. Because these bodies formed when the solar system was permeated with hydrogen gas, they retained a dense atmosphere of hydrogen, allowing them to have surfaces with temperatures not too different from Earth, and possibly water oceans. Stevenson writes that in the absence of sunlight, the natural radioactivity inside an Earth-like planet would only be sufficient to raise the radiating temperature of the body to 30 degrees above absolute zero (that's about minus 400 Fahrenheit). But the expected dense hydrogen atmosphere would prevent the surface from radiating effectively - just like the greenhouse effect on Earth, but more so.

As a result, the surface could have a similar temperature to the current Earth surface, allowing water oceans and a surface pressure similar to that at the bottom of Earth's oceans. For this to happen, the interstellar planet would probably need to be at least half Earth's mass. Therefore, the energy source would be much the same as that which drives geothermal energy and plate tectonics on Earth. It is not known whether geothermal heat alone is sufficient to allow life to originate, and the amount of energy is small compared to sunlight, suggesting that the amount of biological activity would also be small. But the existence of life in such an environment would be of great interest even if the mass of living matter were small.

The heat energy, and especially variations in temperature, could potentially allow life to get going, Stevenson says. "I'm not saying that these objects have life, but everyone agrees that life requires disequilibrium," he says. "So there has to be a way to get free energy, because that's what drives biochemical processes. "These objects could have weather, variations in clouds, oceans ... even lightning." If life exists on such objects, an open question is how complex it could be, Stevenson says. "I don't think anyone knows what is required to drive biological evolution from simple to very complex systems." These interstellar wanderers could also have arisen as a natural outcome of the formation of stars, and not just during the formation of the system we live in. In either case, such planets cannot be seen with present technology because they are so dark and cold-at least from Earth's vantage point.

Although these bodies may have warm surfaces, they would appear to us as very weak emitters of long-wavelength infrared radiation, much below current detection limits. The best bet for even demonstrating

that interstellar planets exist is to have some programmed search for occultations, he says. In other words, the object might pass occasionally in the direct line of sight between Earth and a star, and if instruments were watching, the light of the star might dim or even flicker out for a time. Programs like this are already advocated for the purpose of looking for planets in orbit around other stars. But looking for interstellar planets would be even harder. "All I'm saying is that, among the places you might want to consider for sustainable life, you might eventually want to look at these objects. They could be the most common location for life in the universe."



Troubled Times



New Planets

Here is a list of news reports I've collected on Planets and the like over the last 2 years. See for yourself if there is a common theme here or where these reports might be heading.

Offered by [Jon](#).

[December 17, 1997](#)

British scientists unearth new worlds

British scientists have used new cameras to find what they say is conclusive evidence of planets circling four of the stars closest to our solar system.

Wayne Holland, one of a team of scientists at Edinburgh's Royal Observatory, was quoted in The Observer as saying: "It's planets, I've no doubt." ...

[January 12, 1998](#)

NASA points to Beta Pictoris planet

A bulge in the image of dust from the star Beta Pictoris 18 light years away could indicate the presence of a planet orbiting it, claims Nasa scientist Sally Heap. ...

[January 28, 1998](#)

A Giant Planet - or a Dwarf?

Astronomers in the United States believe they have caught the first glimpse of a planet in another star system.

Using the Hubble space telescope, astronomers in the United States say they have photographed a body circling Proxima Centauri which, at 4.2 light years away, is the closest star to the Earth's sun.

...

[May 28, 1998](#)

'Planet' spotted in deep space

The Hubble telescope has given astronomers their first look at what is possibly a planet outside our solar system. Our science correspondent David Whitehouse reports. The new object, designated TMR-1C, has been found in a star forming region in the constellation of Taurus. ...

[May 28, 1998](#)

Hubble Takes First Image of a Possible Planet Around Another Star and Finds a Runaway World

NASA's Hubble Space Telescope has given astronomers their first direct look at what is possibly a planet outside our solar system - one apparently that has been ejected into deep space by its parent stars. ...

[June 25, 1998](#)

Another planet has been found circling a star. The new planet is a little less than twice the mass of Jupiter, the largest planet in our solar system.

It was found by a team of American astronomers at San Francisco State University undertaking a survey of 400 nearby stars to see if any of them have planets around them. ...

[September 24, 1998](#)

New planets' star roll

Two new worlds circling two nearby stars have been discovered. Our science editor Dr David Whitehouse explains. ...

[January 10, 1999](#)

New planets discovered; The newly-found planets are like Jupiter

Astronomers in the United States have discovered two new planets outside the Earth's solar system. It is only recently that astronomers have begun to find "extra-solar" planets, but they say they expect to find many more in the coming months. ...

[July 29 1999](#)

Extrasolar Giant Planet in Earth-like Orbit Discovery from a Long-term Project at La Silla

A new extrasolar planet has been found at the ESO La Silla Observatory as a companion to iota Horologii (iota Hor). This 5.4-mag solar-type star is located at a distance of 56 light-years and is just visible to the unaided eye in the southern constellation Horologium (The Pendulum Clock). ...

[July 30, 1999](#)

Planet discovered orbiting Sun-like star. ...

[August 18, 1999](#)

Astronomers may have discovered a Jupiter-sized planet that orbits two stars, the first time this has been seen. ...

[September 28, 1999](#)

Scientists have discovered a new object orbiting the Sun after a spaceprobe was mysteriously knocked off course.

Researchers have yet to identify the object, but they are confident it exists because of the way it appears to have deflected the tiny Pioneer 10 craft, which is hurtling out towards the stars. ...

[October 7, 1999](#)

A British astronomer may have discovered a new and bizarre planet orbiting the Sun 1,000 times further away than the most distant known planet. ...

[October 7, 1999](#)

Possible 10th and 11th planet-like objects orbiting the Sun

After studying 13 comets whose orbits seem to have been affected by a massive object far beyond Pluto, a British scientist announced today that there may be a previously unknown and very large

planet orbiting the Sun. ...

October 7, 1999

Intrigued by the fact that long-period comets observed from Earth seem to follow orbits that are not randomly oriented in space, a scientist at the Open University in the UK is arguing that these comets could be influenced by the gravity of a large undiscovered object in orbit around the Sun. ...



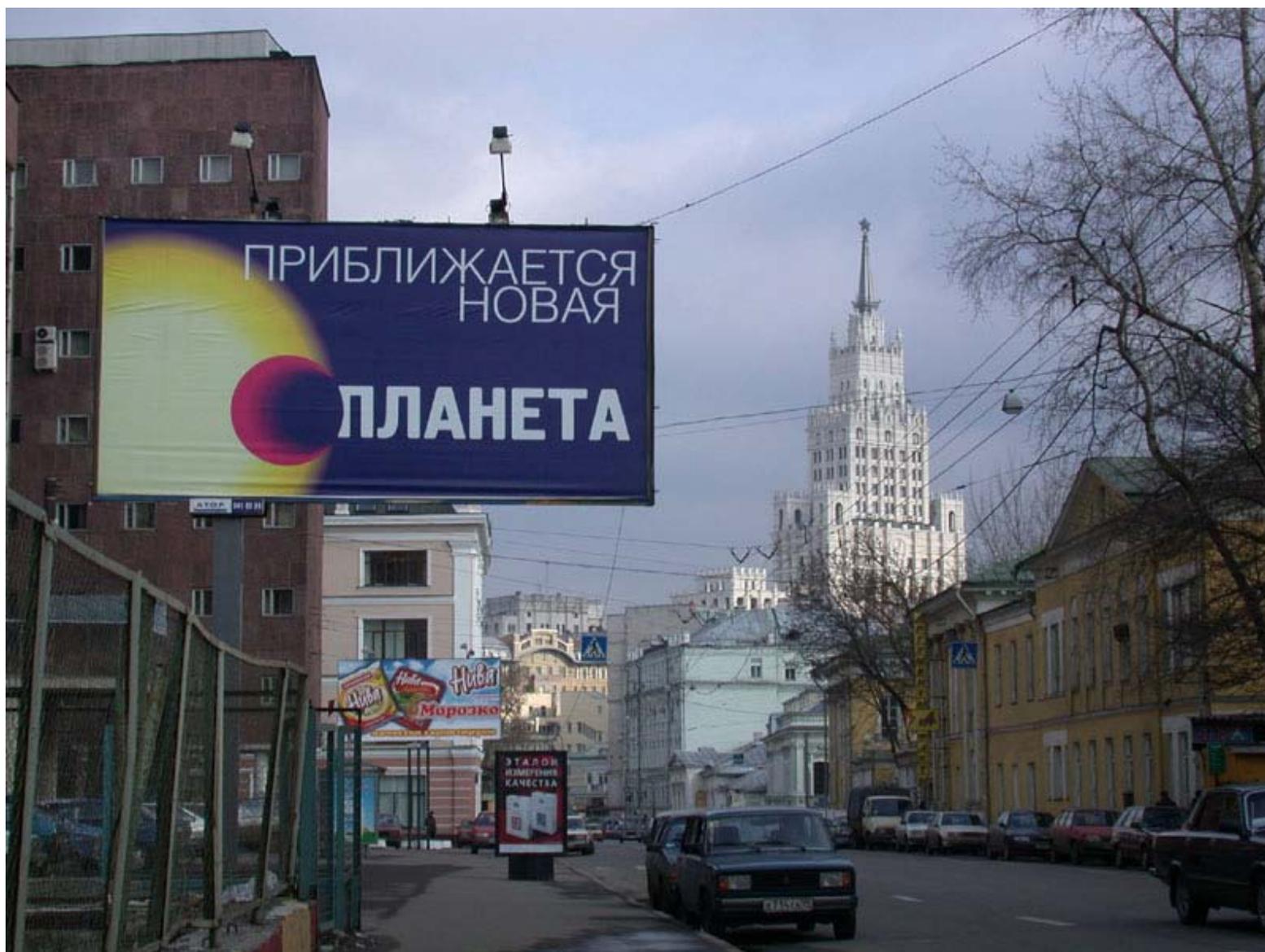
Troubled Times



Russian Billboards

There are few big boards in Moscow with this image on it. The title is "New planet is approaching" Of course it can be the first part of multi-step advertising campaign, but why they chosen this idea? These boards exhibits already from October, 2001.

Michael



Troubled Times



UN Site

Children's Charter Foundation

A UN Body, Apr 12, 2002

Charter convergence – the merging of local environmental charters with global administration at the United Nations levels is only a matter of time. The decisive factor will be the ability of eco-regional peoples to take on the responsibility for reducing risks, costs, and resources use. This web page is a story about the importance of local and global earth charters for present and future generations.

Constitutional Corner Power Presentation

"A mother's body is the only solid foundation for a local constitution. The planetary mother earth body is the only solid basis for a global political economy. A planetary charter is a body of experience designed for father earth submission of the mother species and of mother earth itself. This is not appropriate behaviour for the male species. I came out of my mother: who in turn was born of the earth, itself borne of a solar system which was born out of a galaxy which emerged out of chaos cosmos and its many civilizing dimensions. The underground water beneath my home in Hull flows towards the Chaudière falls. Then on down the Ottawa River system past Oka, then towards the Saint Lawrence onto the Atlantic ocean where the trade winds blow. Planets are seeded with cosmic wind water from outer space. My property and trees are sheltered by the sky above it. All water elements are interactive. The water from my property reaches all the way to the Milky Way in more practical ways than we care to imagine. Why does the Minister of Justice fail to reply to my letters about protecting 31, rue Hadley and all other properties in Hull under the principles of biospheric law? Where is common law these days? Who does justice serve? How can we fly to the moon and colonize Mars without a local, eco-regional system, and biospheric constitution? The answer will be the first step on towards Mars. **All planets in this solar system have unwritten charters. It is these charters that will dictate to the planet earth how to conduct itself more courteously as the twelve planet Nibiru approaches our solar system.**"

Written by CCF staff



Troubled Times



Genesis Revisited

by Zecharia Sitchin

Excerpts, page 71

Sumerian instructions for its observation, fully discussed in *The 12th Planet*, indicate that relative to the ecliptic it arrived from the southeast, from *under* the ecliptic; formed an arc above the ecliptic; then plunged back below the ecliptic in its journey back to where it had come from.

Excerpts, page 319

In spite of official denials, a disclosure did leak out at the end of the year [1983]. It came in the form of an exclusive interview of the key IRAS scientists by Thomas O'Toole of the science service of the *Washington Post*. The story, generally ignored - suppressed, perhaps - was carried by several dailies. ... The opening paragraphs of the exclusive story began thus:

WASHINGTON - A heavenly body possibly as large as the giant planet Jupiter and possibly so close to Earth that it would be part of this solar system has been found in the direction of the constellation Orion by an orbiting telescope called the Infra-red Astronomical Observatory (IRAS).

Excerpts, page 327

By concluding that the inclination of Planet X might be as high as 30 degrees, modern astronomers corroborated Sumerian astronomical data. So does the most recent determination that the planet is orbiting toward us from the southeast, the direction of the constellation Centaurus. Nowadays we see there the constellation Libra; but in Babylonian/biblical times that was the place of Sagittarius.

Excerpts, page 328

In this regard it is pertinent to quote the biblical verses from the Book of Job that describe the appearance of the Celestial Lord and its return to its distant abode:

Alone He stretches out the heavens and treads upon the farthest Deep.
He arrives at the Great Bear, Orion and Sirius and the constellations of the south. ...
He smiles his face upon Taurus and Aries;
From Taurus to Sagittarius He shall go.

It is not just an arrival from the southeast (and the return thereto) but also a description of a retrograde orbit.



Troubled Times



Planet X

The Case of the Lurking Planet

"Far beyond the solar system's nine known planets, a body as massive as Mars may once have been part of our planetary system - and it might still be there;" The lead paragraph in a science-fiction script? The lead paragraph from an article by Zecharia Sitchin about Nibiru? No. It is the lead paragraph in a report in *Science News* of April 7, 2001 headlined **A Comet's Odd Orbit Hints At Hidden Planet**. The article reports the conclusions of an international team of astronomers who have studied an unusual comet discovered last year, designated 2000 CR/105. It follows a vast elliptical orbit around our Sun an orbit that takes it way out to some 4.5 billion kilometers from the Sun, and brings it back at its closest to the Sun to the vicinity of Neptune; it is an orbit whose period "takes roughly 3,300 years" (according to *Sky&Telescope News* of April 5, 2001). "Such an oblong orbit is usually a sign that an object has come under the gravitational influence of a massive body," wrote R. Cowen in *Science News*.

Was this the gravitational pull of Neptune? In a study to be published in the *Journal Icarus*, the team of astronomers (led by Brett Gladman of the Observatoire de la d'Azur in Nice, France), after analyzing all the possibilities, does not think so. An alternative solution, they say, is that "the comet's orbit could be the handiwork of an as-yet unseen planet" as massive as Mars - "that would have to lie some 200 AU from the Sun," in the so-called Kuiper Belt of cometary and other planetary debris. This would also explain "why many members of the Belt have orbits that angle away from the plane in which the nine known planets orbit the Sun." "Undoubtedly, something massive knocked the hell out of the Belt," Harold F. Levison of the Southwest Research institute in Boulder, Colorado, told the magazine. "The question is whether it is still there now." **Comet's Course Hints at Mystery Planet**, was how the journal *Science* headlined the discovery news in its issue of 6 April 2001. The special report, written by the Dutch astronomer Govert Schilling, summed up the findings in the following lead paragraph: "A Supercomet following an unexpectedly far-flung path around the sun suggests that an unidentified planet once lurked in the outermost reaches of the solar system, an international team of astronomers reports. What's more, the mysterious object may still be there."

Now, As the Sumerians Said

Readers of my books may well join me now in saying: So what else is new? Ever since the publication of my first book (*The 12th Planet*) in 1976 I have asserted that Sumerian and other ancient Near Eastern texts and depictions showed familiarity with a complete Solar System that included, beside the Sun and the Moon, ten (not nine) planets - the tenth planet (or twelfth member of the Solar System) having a vast elliptical orbit that lasts 3,600 years. Its Sumerian name was Nibiru. I have-suggested that Sumerian/Akkadian texts such as *Enuma Elish* (also called the *Babylonian Epic of Creation*) were not mythological tales, but records of sophisticated advanced knowledge. Establishment scientists and scholars (see a previous article, *The Case of the Misplaced Teapot*, as an example) resist such an inevitable conclusion because it requires the acceptance of the ancient claim that Earth had been visited by Extraterrestrials, the ANUNNAKI ("Those Who From Heaven to Earth Came") of Sumerian lore.

According to the ancient texts as interpreted by me, Nibiru was a planet ejected from some

other planetary system in outer space that was captured into our Solar System as it passed near Neptune. It became involved in a collision with a pre-existing planet where the debris of the Asteroid Belt are now. As a result of that collision, some 4 billion years ago, the Earth and the Moon came to be where they are now. And, what do you know? In an article titled **Neptune Attacks!** In the April 2001 issue of the magazine *New Scientist*, Ivan Semeniak wrote thus: "There is new evidence that a sudden barrage of deadly debris crashed against the Earth and the Moon 3.9 billion years ago. What triggered this onslaught? Something in the structure of the Solar System must have changed." The "something," I am more certain than ever, was Nibiru.

May 2001

ZECHARIA SITCHIN



Troubled Times



Alford

Gods of the New Millennium, pp 232-234

In 1987, NASA made an official announcement to recognize the possible existence of Planet X. The American journal *Newsweek* reported that: -NASA held a press conference at its Ames Research Center in California last week to make a rather strange announcement: An eccentric 10th planet may - or may not - be orbiting the Sun. John Anderson, a NASA research scientist who was the principal speaker, has hunch Planet X is out there, though nowhere near the other nine. If he is right, two of the most intriguing puzzles of space science might be solved: what caused mysterious irregularities in the orbits of Uranus and Neptune during the nineteenth century? And what killed off the dinosaurs 26 million years ago? Alan Alford wrote:

As the 1980 drew to a close, two things happened. First, the scientific journals began to witness a Planet X debunking campaign and, secondly, NASA began to put more and more resources into expensive space-based telescopes.

The debunking campaign was led by scientists such as K. Crosswell, M. Littman, E. Standish Junior and. Their arguments ranged from the illogical to the bizarre.

Crosswell claimed the planet could not exist to the lack of anomalous effect on the Pioneer and Voyager craft, ignoring the likely possibility that Planet X was below the ecliptic and close to its furthestmost aphelion position.

Littman attempted to ignore all astrometric observations prior to 1910, in order to eliminate the anomalies, despite the lack of any basis that these earlier records were incorrect.

Standish made minor adjustments to the data, thereby reducing the discrepancies that indicated a tenth planet - but, by his own admission, the anomalies were only reduced, not totally eliminated.

Finally, Hughes attempted to disprove Planet X via a complex argument that when Solar System was born, there could not have been enough material for a further planet. Clearly, he had not been reading the Enuma Elish, which described Marduk/Planet X as originating from outside the Solar System.

All of these criticisms focused solely on the mathematical anomalies and ignored the other evidence which supported the existence of Planet X. In his 1993 update, Tom Van Flandern stressed that Planet X was still the only explanation for the strange origin of the Neptune satellite system and the unusual features of Pluto and Charon. He also put forward important new evidence on deviations in several cometary orbits. Van Flandern emphasized that the perturbations in both the cometary and planetary orbits became progressively greater the further one went out into the Solar System, strongly suggesting a single body possible twice as far from the Sun as Pluto.

While the astronomers were hunting for Planet X, the American government began to pump unprecedented funds into the hugely expensive Hubble telescope. This spacebased telescope

was finally launched on April 20th 1990 only to be found defective. In November 1993, its vision was corrected by a giant contact lens, fitted in space at a cost of \$700 million.

Meanwhile the European Space Agency was building its Infrared Space Observatory, which it successfully launched in November 1995. Unlike, Hubble, which is an optical telescope, the ESAs telescope is designed to detect infrared radiation. It can thus peek into the darkest depths of space with a reputed ability to spot the heat from a snowman at a distance of 60 miles.

If that seems sophisticated, then what would we make of the latest plans from NASA? In December 1995 Nature magazine reported a NASA plan to launch a telescope into deep space possible as far as Jupiter. NASA attempted to justify such an extreme location by citing a need to reduce image degradation from atmospheric disturbance. Officially, this project is designed to detect large planets in neighboring star systems. However, moving a telescope from Earth to Jupiter will make such marginal difference relative to 42 light years of space-distance (around one six thousandth of one per cent difference to be precise) that we must all scratch our heads and wonder why NASA wish to spend \$ 1,000 million dollars or more in this way. On the other hand, if the search is not for planets 42 light years away, but for a distant planet within our own Solar System, then the plan begins to make sense.



Troubled Times



The Flood

Excerpts from *Passing Time on Planet X*

Alan Alford regards the origin of the gods as a crucial issue, which needs to be resolved as a matter of priority before presenting his physical evidence of their activities on Earth. He uses this chapter to corroborate the Sumerian claims that the gods came from a planet called Nibiru, which they and later civilisations depicted as a winged disc. Amazingly, the Sumerian descriptions of that planet match precisely the specification of "Planet X" (the Tenth Planet), which is currently being sought by astronomers in the depths of our own Solar System. Why has Planet X not been seen in recent times? Alford draws together the views of modern and ancient astronomy, which both suggest a **highly elliptical, comet-like orbit**, which takes Planet X into the depths of space, well beyond the orbit of Pluto.

...The most dramatic part of this chapter deals with **the legendary** flood, which Alan Alford claims was a genuine historical event. He provides overwhelming evidence that this catastrophe **occurred 13,000 years ago** and explains how Nibiru/Planet X could have caused the Flood as a result of a rare alignment of planets which forced it into an unusual orbital pass between the Earth and Venus. Alford states:

The failure to recognise the Flood cataclysm... lies in the failure of scientists to find any plausible cause of the devastation which we have just examined. However, the deciphering of the Enuma Elish and the evidence concerning Nibiru/Planet X, do now offer a possible cause for the Flood.



Troubled Times



Cambridge Conference

Natural Catastrophes During Bronze Age Civilisations:

Archaeological, Geological, Astronomical and Cultural Perspectives

11-13 July 1997, Cambridge, UK.

The SIS Cambridge Conference will bring together historians, archaeologists, geologists, climatologists and astronomers in order to discuss whether the 'giant comet' hypothesis brought forward by astronomers such as Victor Clube, Bill Napier, Sir Fred Hoyle, David Asher, Mark Bailey, Duncan Steel et al. can be substantiated by the archaeological, climatological and historical records. Details at <http://www.knowledge.co.uk/xxx/cat/sis/cambconf.htm>

Archaeology and Geology

Ever since Claude Schaeffer published his book *Stratigraphie Comparee et Chronologie L'Asie Occidentale* in 1948, there has been continuous scientific debate about the nature and extent of the destructions of Bronze Age civilisations. Schaeffer claimed that the repeated collapses of Bronze Age cultures were not caused by action of man but instead by seismic activity. During the last decade, eminent archaeologists and geologists have substantiated his claim and have linked destruction layers in Aegean and Near Eastern sites with natural disasters rather than with military conquests. The interpretation, however, which maintains that destruction layers or the mass abandonment of settlements were caused by seismic or climatic catastrophes, has been disputed due to the ambiguity of the stratigraphical record. The need for an accurate methodology of verifying the actual cause, extent and synchronicity of Bronze Age collapses is therefore essential.

Astronomy

Research in the field of astronomical neo-catastrophism and impact cratering has quickened its pace since the early 1980s. An increasing number of astronomers have suggested that a series of cosmic disasters punctuated the Earth in prehistoric times. These scholars claim that a more 'active' and threatening sky might have caused major cultural changes of Bronze Age civilisations, belief systems and religious rituals. Can the astronomical evidence brought forward by these astronomers be substantiated by historical, archaeological and climatological evidence?

Culture and History

In light of new astronomical and archaeological theories and the emergence of scientific neo-catastrophism, it seems necessary to re-assess the origins and cultural implications of apocalyptic religions and catastrophe traditions in ancient mythologies and rituals. In particular, the significant cultural and religious changes at the beginning of the Bronze Age and those which occurred after its final collapse will be re-evaluated.

Programme

Friday, 11th July 1997

from **15.30** Tea available

18.45 Dinner in the Dining Hall

19.45 Welcome Address: Prof Trevor Palmer (Nottingham Trent University and SIS Chairman)

Keynote Address: Robert Matthews, FRAS (Science Correspondent, The Sunday Telegraph)

Saturday, 12th July

8.00 - 8.45 Breakfast

Morning Session: Astronomy

9.00 - 9.35 Prof Mark Bailey (Armagh Observatory):

Sources and opulations of Near-Earth Objects:

Recent Findings and Historical Implications

9.35 - 9.45 Discussion

9.45 - 10.20 Dr Bill Napier (Armagh Observatory):

Cometary Catastrophes, Cosmic Dust and Ecological Disasters in Historical Times

10.20 - 10.30 Discussion

10.30 - 11.00 Tea/coffee break

11.00 - 11.35 Dr Duncan Steel (Spaceguard Australia):

Before the Stones:

Stonehenge I as a Cometary Catastrophe Predictor?

11.35 - 11.45 Discussion

11.45 - 12.20 Prof Gerrit Verschuur (Memphis University):

Our Place in Space: The Implications of Impact Catastrophes on Human Thought and Behaviour

12.20 - 12.45 Discussion

12.45 - 13.45 Buffet lunch in the Dining Hall

Afternoon Session: Archaeology, Geology & Climatology

14.00 - 14.35 Dr Marie-Agnes Courty (Institut Natinal Agronomique Paris-Grignon):

Abrupt Climate Change around 2200 BC:

Stratigraphic and Geochemical evidence from the Middle East

14.35 - 14.45 Discussion

14.45 - 15.20 Prof Mike Baillie (Queen's University Belfast):

Tree-Ring Evidence for Environmental Disasters during the Bronze Age:

Causes and Effects

15.20 - 15.30 Discussion

15.30 - 16.00 Tea/coffee break

16.00 - 16.35 Dr Benny J Peiser (Liverpool John Moores University):

Comparative Stratigraphy of Bronze Age Destruction Layers around the World:

Archaeological Evidence and Methodological Problems

16.35 - 16.45 Discussion

16.45 - 17.20 Dr Bruce Masse (University of Hawaii):

Earth, Air, Fire and Water:

The Archaeology of Bronze Age Cosmic Catastrophes

17.20 - 17.30 Discussion

17.30 - 18.05 Dr Bas van Geel (University of Amsterdam):

The Impact of Abrupt Climate Change around 2650 BP in NW-Europe:

Evidence for Climatic Teleconnections and a tentative Explanation

18.05 - 18.15 Discussion

18.15 - 19.00 Poster Presentations & Discussion

18.15 - 19.00 Film (by Amos Nur and Chris MacAskill):

The Walls Came Tumbling Down:

Earthquakes in the Holy Land

19.00 Evening Dinner

Sunday, 13th July

8.00 - 8.45 Breakfast

Morning Session History & Culture

9.00 - 9.35 Dr Victor Clube (Oxford University):

Predestination and the Problem of Historical Catastrophism

9.35 - 9.45 Discussion

9.45 - 10.20 Prof Bill Mullen (Bard College):

The Agenda of the Milesian School:

The Post-Catastrophic Paradigm Shift in Ancient Greece

10.20 - 10.30 Discussion

10.30 - 11.00 Tea/coffee break

11.00 - 11.35 Prof David Pankenier (Lehigh University):

Heaven-sent: Understanding Disaster in Chinese Mythology and Tradition

11.35 - 11.45 Discussion

11.45 - 12.20 Prof Gunnar Heinsohn (University of Bremen):

The Catastrophic Emergence of Civilisation:

The Coming of the Bronze Age Cultures

12.20 - 12.45 Discussion

12.45 - 13.45 Lunch

Afternoon Session *Archaeology & History*

13.45 - 14.20 Prof Amos Nur (Stanford University):

The Collapse of Ancient Societies by Great Earthquakes

14.20 - 14.30 Discussion

14.30 - 15.05 Dr Euan MacKie (Hunterian Museum, Glasgow University):

The End of the Upper Palaeolithic in the Dordogne and the 'Vitrified Forts' in Scotland

15.05 - 15.15 Discussion

15.15 - 15.50 Prof Irving Wolfe (University of Montreal):

The 'Kultursturz' at the Bronze Age - Iron Age Boundary

15.50 - 16.00 Discussion

16.00 - 16.10 Benny J Peiser: Closing Address

16.10 Tea/coffee & farewell



Troubled Times



Mammoth

From: B.J.PEISER@liverpool-john-moores.ac.uk
To: cambridge-conference@liverpool-john-moores.ac.uk
Subject: MAMMOTH EXTINCTION AROUND 2000 BC?
Date: 18. junij 1997 12:13

Extinction of the Mammoth Around 2000 BC?

It is generally believed that the sudden extinction of the Mammoth (and some 40 other species) coincided with a major climate catastrophe at the Pleistocene/Holocene boundary (also called the Younger Dryas boundary) at around 10,000 BP. Russian scholars, however, claim to have discovered evidence for a "mammoth refugium" during the Holocene up until ~2000 BC. If these findings are fairly correct, the final blow to the mammoth might have come from the abrupt climate change at the start of the Subboreal boundary around 2300 BC.

Benny J Peiser

S.L. Vartanyan, K.A. Arslanov, T.V. Tertychnaya, S.B. Chernov:

Radiocarbon Dating Evidence for Mammoths on Wrangel Island, Artic-Ocean, Until 2000-BC.

In *Radiocarbon*, 1995, Vol 37, No. 1, pp 1-6

Radiocarbon dating results of mammoth tusks, teeth and bones collected on Wrangel Island between 1989 and 1991 reveal a unique mammoth refugium during the Holocene. We used an improved chemical procedure to obtain and purify collagen from bone. Benzene synthesized from the samples was measured using a liquid scintillation counter. The validity of our data has been confirmed by the results of our measurements on two international control sample series (IAEA and TIRI) and by parallel measurements of Wrangel Island mammoth remains at other laboratories.



Troubled Times



Garuda

From: Bob Kobres <bkobres@uga.cc.uga.edu>
To: cambridge-conference@liverpool-john-moores.ac.uk
Subject: What part of the sky is most apt to fall?
Date: 9. junij 1997 0:19

The link between the spinning cross and birds is evident on artifacts from many cultures. Perhaps the association of the Sanskrit term "svastika" with this symbol can be linked to the Astika Pava in the *Mahabharata* which relates the birth of a cosmic bird par excellence - Garuda. This fabulous winged deity had a radiance like the Sun, could change shapes at will, and destroyed other gods and kings by casting down fire and stirring up storms of reddish dust which darkened the Sun, Moon and stars. Clearly Garuda was symbolic of an Earth approaching comet.

The bird-comet connection is even more obvious in the Janva-Khanda Nirmana Parva of the *Mahabharata* which describes a fierce fowl with but one wing, one eye, and one leg, hovering in the night sky. As this bird "screams" and "vomits blood".

All the quarter of the earth, being overwhelmed by showers of dust, look inauspicious. Fierce clouds, portentous of danger, drop bloody showers during the night. Rahu of fierce deeds is also, O monarch, afflicting the constellation Kirttika. Rough winds, portending fierce danger, are constantly blowing.

The mention of Rahu, the demon of eclipse, which originally had four arms and a tail that was severed by Vishu to become Ketu (comet) is interesting in that the demon is here darkening Kirttika (the Pleiades) in the month of Kirttika (later half of October, through mid November), for the tale goes on to relate that:

... in the course of the same month both the Moon and the Sun have undergone eclipses on the thirteenth days from the day of the first lunation. The Sun and the Moon therefore, by undergoing eclipses on unusual days, will cause a great slaughter of the creatures of the earth. Meteors, effulgent like Indra's thunder-bolt, fall with loud hisses ... People, for meeting together, coming out of their houses with lighted brands, have still to encounter a thick gloom all around ... From the mountains of Kailasa and Mandara and Himavat thousands of explosion are heard and thousands of summits are tumbling down. ... Fierce winds charged with pointed pebbles are blowing, crushing mighty trees. In villages and towns trees, ordinary and sacred, are falling down, crushed by mighty winds and struck by lighting.

This is, without doubt, a mythological record on an intense meteor storm from the still active Taurid stream which presently peaks around the first of November and appears to radiate from near the Pleiades star cluster. The un-airworthy bird associated with this meteor bombardment could have been comet Encke which until recently was thought to be the sole source for the Taurid meteors. However, the discovery of other large contributors which are now dark but were once active comets rules out a positive identification.

Bob Kobres

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Troubled Times



Catastrophes in the Bible

From: B.J.PEISER@liverpool-john-moores.ac.uk
To: cambridge-conference@liverpool-john-moores.ac.uk
Date: 23. junij 1997 17:23
Subject: Natural Catastrophes in the Bible

Natural Disasters Recorded in the Bible: Fact of Fiction?

I have come across yet another, more speculative paper on legendary heroes, sudden environmental events and natural disasters in the Bible which might be of interest to the archaeo-astronomers, geologists and historians among list members.

Benny J Peiser

A. Benmenahem: Cross-Dating of Biblical History via singular Astronomical and Geophysical Events over the Ancient Near-East.

In: *Quarterly Journal of the Royal Astronomical Society*, 1992
Vol.33, No.3, pp.175-190

Biblical allusions to eclipses, solar activity cycles, comet apparitions, super-nova explosions, bolide impacts, paroxysmal eruptions and major earthquakes, during 2000-300 BC, are examined in the light of recent historical catalogues. It is shown that spectacular environmental phenomena, that sampled the remote past periodically and semi-periodically, have occurred over the heavens, seas and terrains of the Near East and indeed impacted the minds of prophets, kings and scribes of the lands of the Bible. Thus evidence is produced to show that the prophets Joel, Zachariah, Habakkuk, Isaiah and Amos witnessed certain comets, eclipses and earthquakes. So did King David, Judge Deborah, Joshua and Abraham. The surmised dates of these events assist us in setting bounds for the life-span of biblical celebrities and for some of the acts in which they participated. Epigraphical and archaeological evidence are in accord with our findings. It is made clear that although the Bible did not favour secular science, it contains echoes of singular environmental events, the dating of which can be harnessed to establish some order in biblical chronology.



Troubled Times



Volcanic Disasters

From: B.J.PEISER@liverpool-john-moores.ac.uk
To: cambridge-conference@liverpool-john-moores.ac.uk
Date: 26. junij 1997 17:26
Subject: Global Effects of the Thera Eruption

Are Volcanic Disasters Overrated?

Acidity signals found in Greenland ice cores and corresponding narrow tree rings have been linked to major climate catastrophes and social upheavals before, during and after the Bronze Age. One of the most thoroughly researched volcanic explosions detected in both Greenland ice cores and European tree rings occurred around 1628BC and is linked to the eruption of Thera in the Aegean. This natural disaster is of particular interest because it is associated with the collapse of the Minoan civilisation on Crete (and to the Atlantis myth by many scholars). Whilst the link between the actual eruption and the demise of the Minoans is still highly controversial (despite the discovery of a massive tsunamis layer and due to chronological problems), it is unquestionable that the Thera event had a catastrophic effect on a local and (tsunami related) regional level. But what are the ecological and social effects of volcanic eruptions of similar magnitude on a global level? This questions has now been raised by Dr Pyle of Cambridge University. According to his calculations, similar eruptions occur on a much more frequent scale but have much less global effects as currently believed.

Benny J Peiser

D M Pyle: "[The global impact of the Minoan eruption of Santorini, Greece.](#)"

In: Environmental Geology, 1997, Vol.30, No.1-2, pp.59-61

The Minoan eruption of Santorini was a large-magnitude natural event. However, in terms of scale it ranks smaller in erupted volume and eruptive intensity than the historical eruption of Tambora in 1815 AD, and smaller in sulphur emission and, by inference, climatic effects than both the Tambora and Mt. Pinatubo, 1991, eruptions. Eruption statistics for the past 2000 years indicate that Minoan-size eruptions typically occur at a rate of several per thousand years. Eruptions resulting in a Minoan-scale injection of sulphur to the stratosphere occur far more frequently - at a rate of one or two per century. Inferences of massive sociological, religious and political impacts from such eruptions owe more to mythology than reality.



Troubled Times



Climate Changes

From: B.J.PEISER@liverpool-john-moores.ac.uk
To: cambridge-conference@liverpool-john-moores.ac.uk
Date: 30. junij 1997 18:31
Subject: **Abrupt climate changes from ?30,000 to 15,000 BP**
from: Bob Kobres <bkobres@uga.cc.uga.edu>

From: <http://www.acs.ohio-state.edu/units/research/archive/guliya.htm>

Researchers Date Chinese Ice Core to 500,000 Years

COLUMBUS, Ohio -- A team of scientists has reconstructed a detailed climate record for the last 130,000 years from a thousand-foot-long ice core they drilled into a glacier on the Tibetan Plateau in 1992. Analyses suggest that the record in the core actually may go back more than 500,000 years.

The ice core draws a vivid picture of a climate that changed frequently and dramatically in that region throughout the last glacial sequence --an interval that reached back 110,000 years through the last glacial period and into the warm stage, the Eemian, that preceded it. Their report was carried in this week's issue of the journal *Science*.

Ellen Mosley-Thompson, professor of geography at Ohio State University, said that the extreme age of the ice at the bottom of the core isn't the most important discovery coming from the analysis. "A record of this length from the sub-tropics is truly unprecedented," Mosley-Thompson said. "It's good that we've got very old ice at the bottom but the age of the ice is almost secondary to the amount of detail the core provides."

With support from the National Science Foundation, the National Geographic Society, Ohio State and the Chinese National Science Foundation, an international expedition retrieved the core five years ago from the Guliya Ice Cap, a 77-square-mile glacier sitting 22,014 feet high in the Kunlun Shan Mountains of western China. Although Guliya is in the sub-tropics the ice is very cold, making it a valuable reservoir of ancient climate records.

The team, headed by Lonnie Thompson, professor of geological sciences at Ohio State, used mechanical and then thermal drills to remove a 1,012-foot (308.6-meters) core from the ice cap. The core, which reached through the ice to bedrock, was split and divided between Chinese and American researchers.

Ohio State researchers cut their half of the core into 34,800 individual samples that were then tested for oxygen isotope ratios, dust, pollen, and nitrate, chloride and sulfate ions. Each of these give clues to the climate in the area when the ice was originally formed. After five years of analysis, the researchers discovered the following:

- The detailed record dates back 130,000 years making it the oldest recovered from a tropical or sub-tropical ice cap. Ice at the bottom of the core may be even older. Before now, a core Thompson drilled from the Dundee ice cap in China was the oldest with an age of 40,000 years.

- The record also shows that during the last glacial sequence, there were three or four periods called interstadials when the temperature warmed to more like those today. These warm events occurred when methane, a greenhouse gas, was more abundant in the Earth's atmosphere.

These warmer interstadials, along with carbon dioxide and methane increases, were first identified in cores taken from polar ice caps but they appeared as only modest changes. The changes in the Guliya core are quite substantial.

- And within parts of the core representing 15,000 to 33,000 years ago, researchers found evidence of about 100 "abrupt climate changes" as inferred from the oxygen isotope record. During this time, the oscillations occurred about every two centuries.

To gauge temperature changes, the researchers measure the ratio of oxygen-18 to oxygen-16 in the ice. A reduction in the proportion of oxygen 18 molecules generally indicates a drop in atmospheric temperature as well.

"The isotope ratio changes seemed to indicate a temperature shift of up to 30 degrees C," explained Keith Henderson, a graduate fellow at the Byrd Polar Research Center. "But we know that would be ludicrous. We need to come up with a much better explanation for these data."

Thompson and his colleagues have spent 20 years seeking out stable ice sheets from the tropics and subtropics, and retrieving the climate records they hold. Polar ice caps such as those in Greenland and the Antarctic are so large that they can control their own weather. But the much smaller non-polar ice caps respond more directly to changes in their climate, making them excellent research tools for studying past climate variations of shorter duration.

"The tropics and subtropics cover half of the Earth's surface and house more than 75 percent of the human population," Thompson said. Changes in this region can have profound impacts.

For years, researchers have assumed that the climate in the tropics and sub-tropics has been fairly stable, Mosley-Thompson said. But the new core from Guliya, along with their other low-latitude ice core records, suggests that the tropics and sub-tropics may have experienced considerable climate variability during the last 100,000 years.

Along with Thompson, Mosley-Thompson and Henderson, the research team included John Bolzan, senior research associate; M.E. Davis, P.-N. Lin and J. Cole-Dai, all research associates from Ohio State's Byrd Polar Research Center; T. Yao from the Lanzhou Institute of Glaciology and Geocryology, Lanzhou, China; J. Beer, Swiss Federal Institute for Environmental Science and Technology, Dubendorf, Switzerland; and H.-A. Synal, Paul Scherrer Institute, Zurich, Switzerland.

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Troubled Times



Urban Collapse

From: B.J.PEISER@liverpool-john-moores.ac.uk
To: cambridge-conference@liverpool-john-moores.ac.uk
Date: 04. julij 1997 14:41
Subject: Taurid Demons & Civilization Collapse

Taurid Demons, Climate Change & the Collapse of Mankind's First Urban Civilizations

"Davis (1996) has reminded us of Clube and Napier's impact theory, and asked 'Where is the archaeological and geological evidence for the role of their 'Taurid Demons' in human history? The abrupt climate change at 2200 BC, regardless of an improbable impact explanation, situates hemispheric social collapse in a global, but ultimately cosmic, context." [Harvey Weiss: Late Third Millennium Abrupt Climate Change and Social Collapse in West Asia and Egypt. In: H Dalfes, G Kukla, H Weiss (eds.) Third Millennium BC Climate Change and Old World Collapse. Heidelberg/Berlin: Springer Verlag 1997, p. 719/20]

During the last two decades, researchers have discovered compelling evidence for abrupt climate change and civilization collapse in addition to [sea level changes, catastrophic inundations and widespread seismic activity in many areas of the world at around 2200/2300 BC](#). Climatological proxy data together with sudden changes in lacustrine, fluvial and aeolian deposits have been detected in the archaeological, geological and climatological records. The most comprehensive survey of this particular climate disaster which coincided with (and most likely caused) the collapse of mankind's first urban civilizations can be found in the above mentioned volume on "*Third Millennium BC Climate Change and Old World Collapse*." [Although there is still considerable disagreement about the "absolute" date of this catastrophe, a growing number of scholars agree that we are indeed dealing with an abrupt natural disaster with devastating effects on civilizations in West Asia, Europe and North Africa, but which was perhaps a global event.](#)

When, between 1980 and 1988, the **Society for Interdisciplinary Studies (SIS)** published Moe Mandelkehr's pioneering research papers on archaeological, geological and climatological evidence for global climate and social catastrophes at around 2300 BC, Moe had gathered more than 350 references to back up his hypothesis with scientific data.

Now, almost 20 years later, 40 researchers from around the world have compiled the a.m. volume on the same event(s), [analyzing and summarizing some 1700 references on abrupt climate change and social collapse around 4200/4300 BP](#).

In his concluding paper, Prof Harvey Weiss (Yale University) sums up this new picture of "Old World Collapse" which is slowly evolving from recent research findings. I have attached extracts from his paper since it sheds light on the current thinking of one of America's leading Bronze Age specialists.

Benny J Peiser

P.S. Dr Marie-Agnes Courty, the French geologists and soil expert, who has analyzed the geological

and geochemical evidence for the Mesopotamian 3rd Millennium system collapse (see SCIENCE 261:995-1003), will present new research findings regarding this event at Fitzwilliam College next Saturday, 12th July.

Extracts from: Harvey Weiss (1997), **Late Third Millennium Abrupt Climate Change and Social Collapse in West Asia and Egypt**. In: Dalfes, Kukla, Weiss (eds.) **Third Millennium BC Climate Change and Old World Collapse**. Heidelberg/Berlin: Springer Verlag 1997, pp. 718-720]

"Within the past five years new tools and new data for archaeologists, climatologists, and historians have brought us to the edge of a new era in the study of global and hemispheric climate change and its cultural impacts. The climate of the Holocene, previously assumed static, now displays a surprising dynamism, which has affected the agricultural bases of pre-industrial societies. The list of Holocene climate alterations and their socio-economic effects has rapidly become too complex for brief summary. Any list would need to include, however, the tenth to fourteenth century Medieval Warm Epoch (Hughes and Diaz 1994) that promoted viticulture in England, cereal agriculture in Iceland (Street-Perrot 1994), the collapse of Norse Greenland settlement (McGovern 1990) and the demise of Anasazi agriculture in the Southwest (Fish and Fish 1994).

Still earlier, in the Andes, the late 6th century Moche civilization suffered a 30 year drought followed by severe El-Nino flooding; the Moche capital was destroyed, field and irrigation systems swept away, and widespread famine ensued (Shimada et al. 1991). **Between 1000 and 1100 AD the Tiwanaku empire collapsed with the deterioration of its regional agricultural systems. Chronic drought, now documented in the Quelccaya ice cap, was too severe and long-lasting for the Tiwanaku agroengineers. And now the first hard data for the role of climate change in the 750- 1000 AD Maya collapse: prolonged drought beginning at ca. 800 AD, a two hundred year period identified as the driest episode of the past 8000 years.**

The subject of this volume, 2200 BC abrupt climate change, brings the study of Holocene climate dynamics to the Old World and forces reconsideration of Old World climate - culture dynamics within ancient civilizations. One month prior to our publication (Weiss et al. 1993) of the Tell Leilan abrupt climate change study, Sirocko et al. (1993) had identified within the marine sediment record a century scale dust flux event and aridification, ca. 3500 BC. over North Africa and Arabia. The ramifications of this event for Mesopotamian and Egyptian state formation remain to be determined with archaeological studies that can document the event and its social effects "on the ground." The Tell Leilan abrupt climate change study differed from the Sirocko study in that it was "on the ground" both climatically and archaeologically, and had almost half a century of background data, hypotheses, and argumentation within the literatures of Mesopotamian, Palestinian and Egyptian archaeology, as well as the archaeology of the Aegean, central and eastern Europe, the Ukraine and Russia. Hence the challenge of that study and the challenge which subsequent data collection and synthesis presents for traditional epigraphers (sic) historiography of this period, and especially the collapse of Akkad. Traditional third millennium historiography (e.g., Yoffee, 1995; Michalowski, 1993) remains isolated from synchronous developments in adjacent regions and the realities of dynamic soils and landscapes, the economics of imperialized agro-production, and abrupt climate change.

The challenges ahead, however, for archaeologists, geoarchaeologists, and climatologists are impressive. As the contributions to this volume make clear, the [quantification] of that which has been identified in various archaeological and natural records is a necessary first step towards the resolution of still conflicting data sets, the full description of the 2200 BC abrupt climate change, and its eventual explanation. Outstanding quantitative issues are the chronology of the beginning of the abrupt climate change as well as for its problematic terminus, geoclimatic processes of wind turbulence, dust deposition, glass shard/tephra/ deposition, aridification, and river flow, across the range of Old World environments during this time frame.

Hundreds of years after the event, a cuneiform collection of "prodigies," omen predictions of the collapse of Akkad, preserved the record that "[many stars were falling from the sky](#)" (Bjorkman 1973:106). Closer to the event, perhaps as early as 2100 BC, the author of the *Curse of Akkad* alluded to 'flaming potsherds raining from the sky' (Attinger 1984). Davis (1996) has reminded us of Clube and Napier's impact theory, and asked "Where is the archaeological and geological evidence for the role of their 'Taurid Demons' in human history?" [The abrupt climate change at 2200 BC, regardless of an improbable impact explanation, situates hemispheric and social collapse in a global, but ultimately cosmic, context.](#)"



Troubled Times



Ireland Tree Rings

From: B.J.PEISER@liverpool-john-moores.ac.uk
To: cambridge-conference@liverpool-john-moores.ac.uk
Date: 7. julij 1997 11:48
Subject: Tree Rings, Volcanoes & the Bishop of Armagh

More on the ~2300 BC Abrupt Climate Change: Tree Rings, Hekla 4 & the Irish Annals

from: Prof Mike Baillie <m.baillie@queens-belfast.ac.uk>

Detail from Baillie, M.G.L. (1995) "*Dendrochronology and the Chronology of the Irish Bronze Age*"

paper in "*Ireland in the Bronze Age*". Ed

Waddell, J. and Shee-Twohig, E, Stationery Office, Dublin, 30-37.

2345 BC.

The earliest of the four (extreme tree-ring events) takes place at a time which must be very close to the beginning of the Bronze Age in Ireland. This is the so-called Hekla 4 volcanic eruption. It shows up as an extremely narrow band of rings, beginning in 2354 BC and reaching lowest growth - the narrowest rings - at 2345 BC. It is apparent that trees in Lancashire also show reduced growth at the same time, reinforcing the view that this is a widespread event. While the event was very apparent in the ring width patterns, it was a surprise to discover a highly unusual growth defect in one of the sample from the Motorway complex (trees which grew in the fenlands just to the south of Lough Neagh). The sample shows a change in the character of growth, from normal ring porous to diffuse porous - an anomaly which lasts for about a decade and which could be consistent with the tree being inundated. So, there is clear evidence for an environmental event affecting oak growth generally and trees near Lough Neagh specifically. However, the evidence in this case is not limited to the oaks themselves.

Tephrochronology involves the identification and dating of microscopic volcanic glass shards and their use as marker horizons in ancient deposits. Recent work has indicated that Hekla 4 tephra, which can be specifically identified to that Icelandic volcano on chemical grounds, is found in numerous Irish peat bogs at 2310 +/- 20 Cal BC. The dating exercise used a series of high-precision radiocarbon measurements on stratified peats across the Hekla 4 layer and it is likely that the date given above is correct in absolute terms to within a half century. So the implication may well be that the narrow growth rings and associated tree-ring effects after 2354 BC are directly due to the environmental effects of Hekla 4. Now that raises interesting questions. Because the radiocarbon dates associated with this event would be almost indistinguishable from radiocarbon dates for the earliest section of the Beaker period, it becomes possible to ask if the Hekla 4 event was in any way related to the arrival of the first metal users in Ireland? It is also known that pine pollen disappears from pollen spectra in the north of Ireland just a few centimetres above this event in most pollen diagrams. Is it possible that the demise of pine is linked to the arrival of those same metal-using people? We may be beginning to see the start of the Bronze Age in some sort of wider context, involving a

package of

- (a) environmental events,
- (b) the arrival of at least a new technology and
- (c) the disappearance of a species (pine) which had been present in Ireland for millennia

This sort of package is suggestive that humans were almost certainly involved in the demise of pine trees in Ireland. However, irrespective of the pine issue, it is clear that some interesting things took place in the 24th century BC. The evidence is indelible and is not going to go away. I would suggest that this is a classic "marker date" i.e. a date which will show up on a regular basis in studies of various kinds.

It has to be noted that Warner sees the 2354 BC to 2345 BC event as very close to one of only four major disasters recorded in the Anno Mundi section of the Irish Annals. One of these references bears the date AM 2820 (which Warner interprets as "2380 BC") and says '[Nine thousand ... died in one week. Ireland was thirty years waste](#)' (i.e. to 2350 "BC"). A coincidence perhaps? In fact, although Warner draws attention to the human aspect of catastrophe in the Annals, it transpires that things are even more curious. The Annals go on to say that in "about AM 2859 and after" (i.e. "2341 BC" and after) "lakes erupted". Of course we know that these ancient annals have no basis in fact - or do they? Incredibly, there is an even more bizarre coincidence.

While we are talking about inundation of oaks at the south of Lough Neagh (in Co Armagh) in the period 2354 BC to 2345 BC (dated by totally independent dendrochronology), an earlier scholar with Armagh connections, namely Bishop Ussher, worked out the date of the biblical Flood to be 2349 BC (see King James Bible)! There are several things which could be said about these coincidences, two of which seem appropriate. The first is a question; did the scholars who worked up the Anno Mundi section of the Irish Annals in fact use the same Biblical sources as Ussher to derive their chronology? Indeed, is it possible that the various scholars came into direct contact somewhere in Donegal? If they did, then the prehistoric section of the Annals are probably as compromised as critics suggest. The second point is merely amusing; maybe [all those aged farmers who said the bog oaks were "all washed down in The Flood" weren't so completely wrong after all.](#)

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Troubled Times



Cosmic Dust

From: B.J.PEISER@liverpool-john-moores.ac.uk
To: cambridge-conference@liverpool-john-moores.ac.uk
Date: 14. julij 1997 15:17
Subject: Astronomical Theory Offers New Explanation For Ice Age

Cosmic Dust Loading & Ice Ages

20 years after British astronomers such as Fred Hoyle, N Wickramasinghe, Victor Clube and Bill Napier first suggested that periodic ice ages might have been triggered by periodic dustloadings by cosmic debris and cometary microparticles, two American researchers are now convinced to have found hard evidence for such an astronomical explanation. While the advocates of coherent catastrophism think that intersections of the Earth with periodic cometary streams are the main reasons for the cyclical nature of ice ages, the American scholars believe that a periodic change of the location of Earth's orbit as such would inevitably lead to higher accretion of cosmic dust and debris. If, however, massive cosmic dust loads are able to trigger extreme and long lasting ice ages on Earth, much smaller dust loads might also be responsible for short-term climatic downturns which are detectable in the ice core and tree ring records of the Holocene period.

Benny J Peiser

from: Ron Baalke <BAALKE@kelvin.jpl.nasa.gov>
University of California at Berkeley

Astronomical theory offers new explanation for ice age By Jeffery Kahn, LBNL

Berkeley, 7/11/97 -- Recent ice ages -- ten periods of glaciation in the past million years -- are caused by changes in the tilt of the Earth's orbit, according to research published in today's (July 11) issue of Science magazine. The new analysis also presents strong evidence that another long prevailing theory does not account for these ice ages.

Researchers Richard A. Muller of the Ernest Orlando Lawrence Berkeley National Laboratory (Berkeley Lab) and the University of California at Berkeley, and Gordon J. MacDonald of the International Institute for Applied Systems Analysis, Austria, are co-authors of the Science article. Muller and MacDonald report that cyclical changes in the location of the Earth's orbit cause differing quantities of extraterrestrial debris to come into the Earth's atmosphere. This, in turn, results in variations of climate on the planet.

Said MacDonald,

As the Earth moves up and down in the plane of the solar system, it runs into various amounts of debris, dust and meteoroids. Our work was an outgrowth of investigations of larger impacts, such as the comet or asteroid that killed the dinosaurs. However, meteoroids and dust are much smaller and more spread-out over time.

Muller, a professor of physics at UC Berkeley, notes that this new research has important implications for the understanding of the present climate, and for predictions of future climate.

As far as we know, none of the present climate models include the effects of dust and

meteors. And yet our data suggests that such accretion played the dominant role in the climate for the last million years. If we wish to make accurate predictions, we must understand the role played by such material.

Despite the current relatively warm climate on Earth, regular recurring epochs of glaciation have dominated the planet for the past million years. Ten times, glaciers have advanced and then retreated with the duration of retreat (and corresponding warmth) frequently lasting not more than 10,000 years. The Earth has been in a warm period for about 10,000 years now.

In the paper in Science, the researchers compared the geological record to the climatic cycles that would result from their theory and to that of the competing theory, first published in 1912 by Serbian scientist Milutin Milankovitch. Using a geological fingerprinting technique, Muller and MacDonald found that the climatic changes recorded in the rocks matched their theory but not that of Milankovitch. Milankovitch said the ice ages are caused by variations in sunlight hitting the continents. In his theory, the ice ages are linked to "eccentricity," a very gradual, cyclic change in the shape of the Earth's egg-shaped orbit around the sun that completes a cycle roughly every 100,000 years. Eccentricity changes the Earth's average annual distance from the sun and slightly alters the amount of sunlight hitting the Earth.

To visualize the different astronomical cycle that Muller and MacDonald have found to match that of the climatic record, imagine a flat plane with the sun in the center and nine planets circling close to the plane. In fact, all the planets orbit the sun close to such a fixed orbital plane. The Earth's orbit slowly tilts out of this plane and then returns. As Muller first calculated in 1993, the cycle of tilt repeats every 100,000 years. In their Science paper, Muller and MacDonald examine the geological record of the past million years to see which of the two 100,000-year cycles (eccentricity or tilt) matched the data. They applied a technique called spectral analysis to ocean sediments taken from eight locations around the world, examining the oxygen-18 composition. This isotope is generally accepted to reflect the percentage of the Earth's water frozen in ice.

Muller and MacDonald's analysis yields "spectral fingerprints" which can be compared to the predictions of the two theories. Their analysis shows a clear pattern: The fingerprints of the ice ages show a single dominant feature, a peak with a period of 100,000 years. This precisely matches their theory. The fingerprints do not match the expected trio of peaks predicted by the Milankovitch theory. Said Muller,

The mechanism proposed by Milankovitch could be adjusted to explain the cycles of glaciation that occurred prior to one million years ago. However, for the past million years the glacial record is an excellent match to the cycle of tilt.

Berkeley Lab conducts unclassified scientific research for the US Department of Energy. It is located in Berkeley, California and is managed by the University of California.



Troubled Times



NEO News

From: B.J.PEISER@livjm.ac.uk <B.J.PEISER@livjm.ac.uk>
To: cambridge-conference@livjm.ac.uk <cambridge-conference@livjm.ac.uk>
Date: 16. oktober 1997 9:44
Subject: NEO News (10/15/97)
From: David Morrison <dmorrison@mail.arc.nasa.gov>

NEO News (10/15/97)

More on 19th Century Catastrophism

Duncan Steel writes that last week's issue of New Scientist carried a letter from him pointing out Lord Byron's suggestion in 1822 of the possibility (indeed, necessity) of diverting any comet found to be on a collision course with the Earth: "[Who knows whether, when a comet shall approach this globe to destroy it](#), as it often has been and will be destroyed, men will not tear rocks from their foundations by means of steam, and hurl mountains, as the giants are said to have done, against the flaming mass? - And then we shall have traditions of Titans again, and of wars with Heaven." This is on page 185 in "Journal of the Conversations of Lord Byron: Noted during a Residence with his Lordship at Pisa, In the Years 1821 and 1822" by "Thomas Medwin, Esq., of the 24th Light Dragoons," printed for Henry Colburn, New Burlington Street, London, in 1824 (but with several later editions, usually labelled "Medwin's 'Conversations of Lord Byron'", in which the pagination would be different).

Steel continues: As a matter of fact the idea of cometary impacts was a recurrent theme in Byron's published writing, reflecting his belief that there had been many impact catastrophes in which previous inhabitants of the Earth had been wiped out. Byron viewed homo sapiens as being perhaps only temporarily in the ascendent (unless we manage to develop a defense system such as that he suggests in the quote above). Indeed on the page cited above he is also quoted as asking: "We are presently in the infancy of science. Do you imagine that, in former stages of this planet, wiser creatures than ourselves did not exist?"

The [El Paso Bollide](#) of October 9

A bright bollide was widely seen in West Texas on October 9. A news report at <http://www.msnbc.com/local/ktsm/9198.asp> suggests the El Paso authorities identified an impact site about an acre in size some 27 miles east of El Paso and 20 miles north of a border patrol checkpoint. Sonic booms and shaking of buildings were reported over thousands of square miles. There has been a lot of web traffic on this report, and several people have suggested that the object may have had an energy of hundreds of kilotons, a diameter of tens of meters, and may have done substantial damage. Irate questions were asked why the military did not detect this incoming object and provide warning.

If fact, this appears to be an example, all too familiar, of exaggerated media reporting being further amplified on the web. As a result, a very bright but otherwise innocuous fireball is turned in to a major impact event.

An observer at McDonald Observatory is reported to have estimated the magnitude of the object at about 1/100 the brightness of the Sun. Recalling that the [Wesern Pacific bollide of 1](#)

February 1994 was "as bright as the Sun" and had an estimated energy of roughly 100 kilotons, I suggested that the Texas bollide might have an energy nearer 1 kiloton and hence a pre-impact diameter of a meter or two. Victor Noto now sends a report of preliminary findings from a Los Alamos National Labs New Release: "The object's infrasonic signature was equivalent to the explosive yield of about 500 tons of TNT," ReVelle said. "That means the object was somewhere around one half to three-quarters of a meter in diameter." Meanwhile, later media reports suggest that the "impact site" was an unrelated brushfire.

A meter-size object with an energy of a kiloton strikes the Earth's atmosphere every day or two. While it is possible that this fireball produced a meteorite, more likely it did not. In any case the hazard of such impacts is extremely small. We need to keep a perspective on such events and resist the temptation to exaggerate them for the media.

David Morrison



Troubled Times



Skeptical Inquirer

From: B.J.PEISER@liverpool-john-moores.ac.uk
To: cambridge-conference@liverpool-john-moores.ac.uk
Date: 17. julij 1997 13:27
Subject: Re: IS THE SKY FALLING?

Is the Sky Falling?

In the following extracts from the recently published article *Is the Sky Falling?*, [see *Skeptical Inquirer*, May/June 1997], David Morrison describes the skeptical position among American astrophysicists regarding historical catastrophism and the problem of detecting the rate and extent of past impact events as well as assessing the current and future impact hazards.

I believe that the debate between advocates of what David calls the "standard paradigm" of neo-catastrophism and those who support the alternative paradigm of "coherent catastrophism" is far too important to be ignored or simply left to astronomical speculations. Quite the opposite, these contrasting theories are in need of rigorous testing and thorough research in order to shed further light on our cosmic environment. The implications of this 'cosmic' debate for all fields of social and intellectual discourse are far-reaching. I therefore hope that David's healthy skepticism will help to stimulate (rather than block) further debate and research so that we can eventually "sort out who is right and who is wrong." It goes without saying that it is vital for human civilization not just to understand our cosmic environment much better but also to intervene and take action in order to be prepared in case of any future cosmic threat.

Benny J Peiser

I wish to thank the [David Morrison](#), The Skeptical Inquirer and their publisher, the Committee for the Scientific Investigation of Claims of the Paranormal (CSICOP), for their permission to circulate extracts of David's paper on this network. For further information, please contact David Morrison <dmorrison@mail.arc.nasa.gov> or:

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Extracts from: [Is the Sky Falling?](#)
Skeptical Inquirer, May/June 1997
By David Morrison

As the millennium approaches, the media are playing up asteroid and comet impacts. Ten popular-level books were published in 1995 and 1996 dealing with the dangers of cosmic impacts, and now we are seeing a spate of television and movie productions, both factual and

fictional, that describe the impact threat. It is easy to dismiss all this as media hype and millennial madness, but it would be a mistake to do so. While some books and films may be motivated by a desire to milk public credulity for a quick buck, most are serious efforts to inform the public about a real danger that is recognized by the scientific community. [...] There is a considerable divergence among scientists in how such issues are framed and discussed, and an even wider disparity on the way these issues are presented to the public.

Let us begin with what I call the "standard paradigm" - that of random impacts on Earth by small comets and asteroids. This is the consensus view of most scientists, and it is reflected in two **NASA** reports to the US Congress, the Spaceguard Survey Report of 1992 and the follow-up report in 1995 inspired by public interest in the collision of **Shoemaker-Levy 9** with Jupiter. As the principal author of the Spaceguard Survey Report and a member of the follow-up working group (chaired by **Gene Shoemaker**), I identify with this consensus position.

The standard paradigm uses the cratering history of the Moon and other evidence to deduce the average historical rate of impacts on Earth by objects of different sizes or impact energies. It then assesses the destructive potential of impacts of different energies on Earth today in terms of probable casualties, noting in particular the existence of a threshold at about one million megatons of energy (corresponding to a two-kilometer asteroid) at which the global climate is severely affected and everyone is at risk, independent of proximity to the impact. One conclusion of such studies is that the statistical risk is greatest for impacts near the global threshold, amounting to an average risk of death for each individual on Earth of nearly one in a million per year, comparable to the risk of other more frequent (but less catastrophic) events such as earthquakes, severe storms, and volcanic eruptions. It is also noted that, unlike other natural disasters, impacts can be avoided entirely by deflecting an incoming object, if several years warning time is available.

Although most people agree that the greatest risk is posed by objects two kilometers or larger in diameter, others focus their attention on smaller impactors, especially those in the 200- to 500-meter range. When impacts of this size occur in the ocean, they produce tsunamis capable of inundating large stretches of coastline. Although the average risk for inhabitants of the planet is less from tsunamis than from the global catastrophes caused by larger impacts, the risk for persons living on shorelines may be greater. This fact, together with the higher frequency of smaller impacts, leads some to argue that we need a defense system against any object larger than 200 meters diameter.

A major divergence of opinion concerns what our response to the impact threat should be. Most of the scientists involved in such assessments conclude that there is a significant risk and that governments should take some action (especially in searching for potential impactors), but that it is premature to build any defense systems in the absence of a specific identified threat. Others, the best known being **Edward Teller** (the father of the H-bomb), argue strongly for a more aggressive approach to asteroid defense. They would initiate experiments, eventually to include nuclear explosives, designed to learn more about how to deflect or destroy asteroids and comets. Some even advocate construction of a standing nuclear defense system to deal with the smaller impactors, for which the warning time might be short. But at least, they assert, we should start now to develop the technology for such a system.

These arguments concerning the magnitude of the threat and the most appropriate response make good TV and newspaper copy. They can lead to serious analyses of the various threats that we face on Earth and of the role of governments in dealing with potential disasters, both natural and human. All fit within the standard paradigm. But there is another viewpoint, held by a handful of British neo-catastrophists, that challenges this position.

The British Neo-Catastrophist School

The alternative viewpoint is advocated in its extreme form by astronomers Victor Clube and Bill Napier, who interpret historical records as indicating that Earth has been subject to extreme battering from space within the past few millennia. In their popular books **The Cosmic Serpent** and **The Cosmic Winter**, they take the position that the emergence of astrology in the western Mediterranean, the association of gods with planets in many ancient cultures, the widespread fear of comets and belief in angels, and many other aspects of our cultural and religious history are a reflection of massive bombardment of the planet a few thousand years ago. They further conclude that more recent historical events, including the collapse of the Roman Empire, the Dark Ages, and even the English Civil War, are related to climate changes induced by exceptional deposition of cosmic dust in Earth's atmosphere. Although their historical analysis is suspiciously similar to that of **Immanuel Velikovsky**, Clube and Napier adamantly reject the association, arguing that unlike Velikovsky they root their explanations in sound physical and astronomical principles.

Supporting **Clube and Napier** are British astronomers Duncan Steel and Mark Bailey, who have concluded that the solar system is currently experiencing the aftermath of the break-up of a giant comet some millennia in the past. Our planet still intersects debris from this comet in what they call the Taurid complex of dust, small comets, and asteroids. They term this theory coherent catastrophism. **Steel and Bailey** estimate that the present lull in impacts will end in about a thousand years, when our orbit again crosses the denser parts of the Taurid complex, at which time the impact risk will rise by at least a factor of a hundred. All of these neo-catastrophists argue that urgent action is required to prevent the collapse of civilization under the next cosmic onslaught.

Most of us find these neo-catastrophist arguments difficult to swallow. Putting aside the issue of the Velikovskian interpretation of history and legend, the impact rate is still constrained by the cratering history of the Moon, which reflects the long-term average. If there are huge "spikes" in the frequency of impacts, produced by the break-up of giant comets, they must be compensated by much lower flux rates between peaks. Yet Clube, Steel, and their colleagues simultaneously assert that the consensus group underestimates the current impact rate, and that a big spike is coming. You can't have it both ways. If they are correct that almost all impacts occur during the spikes, then the present danger must be very low, and we have centuries to prepare to deal with the next peak. But they don't see it that way, and neither do the authors of several of the recent books.

Impact Science and Pseudoscience

While I believe that the British neo-catastrophists are wrong about the threat to Earth, their work is science, not pseudoscience. They are making their case to other scientists, and time will sort out who is right and who is wrong. They do, however, sometimes attract the attention of fringe elements. For example, the Society for Interdisciplinary Studies (**SIS**), a British group that espouses a skeptical philosophy but includes many defenders of Velikovskian ideas, is sponsoring a conference that features Clube and focuses on evidence for cosmic catastrophes in the ancient world.

Every week I receive two or three inquiries from the public asking if some story they have read or heard about an imminent world-shattering impact is correct. These stories are not confined to the supermarket tabloids but have apparently attracted a following on the World Wide Web. Some people ask about a comet called Wormwood, with obvious reference to the apocalyptic vision in Revelation 8:10-11, when "the third angel sounded, and there fell a great star from heaven, burning as it were a lamp. ... And the name of the star is called **Wormwood**."

Then there is Comet **Hale-Bopp**. In November 1996 the press gave general coverage to a wild claim that this comet was accompanied by a spaceship and was headed toward an impact with Earth. (See Alan Hale, "Hale-Bopp Comet Madness," *SI*, March/April 1997.) The story

apparently started when an amateur astronomer photographed the comet near a moderately bright star. In a curious logical progression he assumed the star was a spacecraft, that the spacecraft was at the same distance as the comet, and that the over-exposed stellar image represented the angular diameter of the craft, which would make it comparable in size to the giant planet Saturn. Others embellished the story by concluding that the spacecraft was traveling in the same orbit with the comet and that the trajectory was about to shift toward Earth. The mystery to me is why this fantasy was given serious media attention, even on a slow news day. I fear that we may see more of this sort of thing as the public becomes more aware of the threat of impacts. [..]

On the positive side, the impact issue is proving to be an excellent vehicle for communicating some interesting aspects of contemporary science to the public. The topic, bringing together astronomy, environmental threats, and dinosaurs, is a natural. It focuses on the way historical science works (how can we figure out what really made the dinosaurs go extinct?), on the fragility of the environment (how can one small impact have global consequences?), on the nature of evolution (why were the mammals who succeeded the dinosaurs so different from them?), and on the nature of probability (if big impacts take place only once every million years, why worry now?). There is great potential here to teach good science as well as stimulate a useful public policy debate. Let's hope these lofty goals are achieved in practice.



Troubled Times



Andean Civilization

From: B.J.PEISER@liverpool-john-moores.ac.uk

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Date: 18. julij 1997 13:17

Subject: **Abrupt Climate Change: the Emergence & Collapse of an Andean Civilization**

Climate Variation and the Rise and Fall of an Andean Civilization M. W. Binford, A.L. Kolata, M. Brenner, J. M. Janusek, M. T. Seddon, M. Abbott, J. H. Curtis. In: **Quaternary Research**, 1997, Vol.47, No.2, pp.235-248

Paleolimnological and archaeological records that span 3500 years from Lake Titicaca and the surrounding Bolivian-Peruvian altiplano demonstrate that [the emergence of agriculture \(ca. 1500 BC\) and the collapse of the Tiwanaku civilization \(ca. AD 1100\) coincided with periods of abrupt, profound climate change](#). The timing and magnitude of climate changes are inferred from stratigraphic evidence of lake-level variation recorded in C-14-dated lake-sediment cores. Paleolake levels provide estimates of drainage basin water balance. Archaeological evidence establishes spatial and temporal patterns of agricultural field use and abandonment. Prior to 1500 BC, aridity in the altiplano precluded intensive agriculture. During a wetter period from 1500 BC to AD 1100, the Tiwanaku civilization and its immediate predecessors developed specialized agricultural methods that stimulated population growth and sustained large human settlements. A prolonged drier period (ca. AD 1100-1400) caused declining agricultural production, field abandonment, and cultural collapse.



Troubled Times



Astrophysics

From: B.J.Peiser@livjm.ac.uk
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Subject: New Publications

Wave of New Publications Indicates Scientific Revolution is Under Way

You can be certain to be in the midst of a scientific revolution once you realize that it is no longer possible to keep up with the stream of new publications on the new paradigm - or when rash scholars start to dream about a "unified model". This exactly is now the case with the theory of cosmic catastrophism and the problem of assessing the according impact hazard.

Four of the earliest contributors to this major intellectual revolution and the main representatives of the British School of Neo-Catastrophism, who usually advance in tandems, have now joined forces and have published the main findings of more than 20 years of astronomical and neo-catastrophist research as a quartet. Whilst this intellectual transformation is currently sweeping through research centers in Britain and the USA, it is no longer restricted to the British or American academic world. What is more, even historical catastrophism seems to have become part of the standard paradigm, as can be seen by Dr Izokh's research on the catastrophe at the Pleistocene-Holocene boundary. The attached papers, many of which come from the current issue of the *Annals of the New York Academy of Sciences* (Vol.822, 1997), document a wide variety of research topics and will certainly cater for the diverse interest of list members.

Benny J Peiser

P.S. Fred Hoyle and Chandra Wickramasinghe have also published a new book: *Life on Mars?* (London, 1997).

S.V.M. Clube, F. Hoyle, W.M. Napier & N.C.Wickramasinghe: *Giant Comets, Evolution and Civilization*. In: **Astrophysics and Space Science**, 1996, Vol.245, No.1, pp.43-60

Giant comets thrown into short-period, Earth-crossing orbits are a major source of mass flux into the inner planetary system. Their disintegration products may give rise to climatic cycles, ice epochs, periodic mass extinctions and other global disturbances. Comets greater than or similar to 100 kilometers in diameter, in chaotic orbits beyond Jupiter, probably constitute a more substantial current hazard than stray asteroids.

E.P Izokh: Australo-Asian tektites and a global disaster of about 10,000 years BP, caused by collision of the Earth with a comet (in Russian). In: **Geologiya I Geofizika**, 1997, Vol.38, No.3, pp.628-660

About 10,000 years ago, at the **Pleistocene-Holocene** border, some important events occurred: the glaciation stopped abruptly; the sea level elevated, and quick (for 20-50 years) climatic and ecological changes took place, leading to the extinction of the so-called mammoth fauna and exerting a direct effect on the mankind's evolution and appearance of civilizations. These and other disastrous events providing a distinct boundary between the Pleistocene and the

Holocene received no relevant explanation in the Quaternary geology until now.

It is shown in the paper that the disaster under study was caused by the collision of the Earth with an eruptive comet, brought various volcanic tektite glasses from a remote planetary body. This extra-terrestrial source of tektites is proven by the well-known but not adopted paradox of tektite age, i.e. a difference in hundreds of thousands and millions of years between the radiogenic age of tektites (time of formation) and time of their fall onto the Earth. The volcanic nature of tektites is supported (by analogy with volcanic bombs, lavas, tufflavas, and extrusive formations taking into account extraterrestrial conditions) by their long and many-stage formation, by ordered trends of composition variability inherent only in magmatic differentiation, etc. Relying on a diversity of forms, structure, and composition of **tektites**, we made an attempt to reconstruct various types of volcanic eruptions. Most likely, the place of volcanic activity was a small or light planetary body of the type of Io, Callisto, Triton, etc. with ice crust, acid upper and relatively basic lower mantle, with small gravitation, without atmosphere, etc., situated somewhere on the periphery of the Solar System.

It is supposed that a very powerful explosion ejected into space some part of a stone-ice volcanic construction, i.e. eruptive comet, according to S. K. Ysekhsvyatsky. The comet hypothesis permits explanation of main features of distribution of tektites over the Earth's surface, various forms of their connection with impact craters as well as many other features of tektites. The common Earth impact hypothesis for tektite origin is not able to explain all these facts; it is deeply perplexed and is severely criticized in this paper. The '**mammoth**' disaster is comparable with the so-called 'dinosaur' catastrophe at the Cretaceous-Paleogene border, which also was accompanied with impact craters and fall of tektites. An analogy is traced with the collision of the Shoemaker-Levi comet with the Jupiter. Thus, a special class of eruptive comets, cosmic bodies the most dangerous for the Earth, which are beyond attention of investigators, is discussed for the first time.

D. K. Yeomans: *Comet and Asteroid Ephemerides for Spacecraft Encounters*. In: **Celestial Mechanics & Dynamical Astronomy**, 1997, Vol.66, No.1, pp.1-12

To a significant degree, the success of spacecraft missions to comets and asteroids depends upon the accuracy of the target body ephemerides. In turn, accurate ephemerides depend upon the quality of the astrometric data set used in determining the object's orbit and the accuracy with which the target body's motion can be modelled. Using error analyses studies of the target bodies for the NEAR, Muses-C, Clementine 2, Stardust, and Rosetta missions, conclusions are drawn as to how to minimize target body position uncertainties at the times of encounter. In general, these uncertainties will be minimized when the object has a good number of optical observations spread over several orbital periods. If a target body lacks a lengthy data interval, its ephemeris uncertainties can be dramatically reduced with the use of radar Doppler and delay data taken when the body is relatively close to the Earth. The combination of radar and optical angle data taken at close Earth distances just before a spacecraft encounter can result in surprisingly small target body ephemeris uncertainties.



Troubled Times



Thera Catastrophe

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New Papers On Bronze Age Catastrophes

(1) M. B. Cita & B. Rimoldi: Geological and geophysical evidence for a Holocene tsunami deposit in the eastern Mediterranean deep-sea record.

(2) P. C. Buckland, A. J. Dugmore & K. J. Edwards: Bronze Age myths? Volcanic activity and human response in the Mediterranean and North Atlantic regions.

M. B. Cita & B. Rimoldi: **Geological and geophysical evidence for a Holocene tsunami** deposit in the eastern Mediterranean deep-sea record. *Journal of Geodynamics*, 1997, Vol.24, No.1-4, pp.293-304

Extended geological and geophysical exploration of basinal settings in different areas of the eastern Mediterranean demonstrate the existence of a Holocene mud layer several metres in thickness (up to more than 20 m) and typically showing a graded basal part. The event producing this peculiar deposit is correlated with the gigantic 'Bronze Age' or Minoan eruption of the Santorini volcano (3500 years BP), which resulted in caldera collapse and supposedly produced a strong seismic sea-wave, that is a tsunami. Order of magnitude calculations demonstrate that the wave speed was sufficient to induce erosion and liquefaction of the soft unconsolidated sediments draping the deep-sea floor. The event is recorded in over 50 deep-sea cores recovered in the last 20 years which contain the fine grained 'Homogenite' layer starting with a fining-upwards sandy base and having a thickness of more than 24 m in the Sirte Abyssal Plain area. Several depositional models related to setting and source areas and based on thickness, composition, carbonate content and sedimentary structures of the deposits have been proposed.

P. C. Buckland, A. J. Dugmore & K. J. Edwards: Bronze Age myths?
Volcanic activity and human response in the Mediterranean and North Atlantic regions.
In: *Antiquity* 273 (1997), pp. 88-105

A first rule of statistics is that the existence of a correlation does not itself prove a causal connection. This is the heart of the recurrent question in later European prehistory whether in the Mediterranean or in the Atlantic northwest about volcanic eruptions, their impact on climate, and then of the climatic impact on human populations. The burial under tephra of the Late Bronze Age settlement of Santorini is proof of a particular catastrophe: but is there the evidence to prove wider European calamity?

A search for precision beyond that currently available is a frequent aspect of archaeological interpretation. Tensions exist as a result of the need to resolve events on a human time-scale using techniques often incapable of producing such accuracy or precision. Dendrochronology, ice-core analysis and tephrochronology, where data-resolution can be constrained either by

annual to sub-annual banding or precise isochrones, can make important contributions to tackling the persistent chronological problems in archaeology. In these interdisciplinary transfers there is always the danger that the necessary caution about the ways in which the data are used may be lost. This problem is particularly acute when the events being studied are real, or imagined catastrophes (cf. White & Humphreys 1994).

Catastrophes be they the destruction of Bronze Age Thera, the modern island of Santorini in the Aegean, or the apparent collapse of Middle Bronze Age settlement in upland Britain are headline news; of such things myths and reputations are born and enter the literature as if proven fact. This paper examines some of the available evidence for these two Bronze Age 'catastrophes', the one real and in need of a calendar date, the other hypothesized on archaeological grounds and dated by a tenuous link through tree rings to an Icelandic volcano. Since Marinatos (1939) connected a major eruption on Santorini, which destroyed the extensive Late Bronze Age town at Akrotiri, with the end of Minoan Crete, the date of this eruption has generated more discussion and controversy than perhaps any other cataclysmic event in prehistory. [Initial archaeological considerations favoured a date close to c. 1500 BC \(Renfrew 1990a\)](#), whilst later, [calibrated radiocarbon dates tended towards the 17th century BC \(Kuniholm 1990\)](#).

In 1977, Hammer noted a correlation between acidity, measured by electrical conductivity in the Crête ice core from central Greenland, and the timing of volcanic events on a world scale. It was further suggested that one particular acidity peak lay sufficiently close to the archaeological evidence for the date of the eruption to be that generated by Santorini (Hammer et al. 1980). [By the counting of annual layers of ice accumulation in the core, this provided a date of 1390±50 BC. On the additional evidence of the Dye 3 core from southern Greenland, this was subsequently revised to 1645±7 BC \(Hammer et al. 1987\)](#).

LaMarche & Hirschboeck (1984), working on tree rings from the American Southwest, had noted 'frost rings' (lines of severely retarded growth) which they associated with unseasonally cold conditions and correlated with major eruptions; on this basis, [they suggested a date of 16281626 BC for the Santorini eruption](#). This was taken up by researchers at the Queen's University Palaeoecology Centre in Belfast, who sought volcanic impact in the extended oak chronology from Ireland. Baillie & Munro (1988) located a particularly narrow series of rings beginning in 1628 BC; influenced by Lamb's (1970) discussion of the impact of volcanoes on climate, they equated these with a stratospheric dust veil from Santorini. Despite several cautionary comments from both archaeologists (Manning 1988; Warren 1988) and geologists (Pyle 1989; 1990), [the 1628 BC date, or one close to it, continues to be accepted](#) (e.g. Michael & Betancourt 1988), without questioning why the effects of the Santorini eruption should be especially recognizable in the ice-core and tree-ring sequences.

Large-scale explosive volcanic activity is common on a global scale (Zielinski et al. 1996), and so before accepting the possibility that the Santorini eruption can be recognized by unusual perturbations in the regional records of ice-cores or tree-rings, the case for its distinctive character must be proved. Despite the lack of critical assessment of these basic assumptions, Renfrew (1990b), in his summing up to the Third International Congress on Santorini in 1988, went so far as to suggest that, by the time of the next Congress, the date of the eruption would be unequivocally known to within one year. If the Aegean and Anatolian tree ring sequences (cf. Kuniholm 1995; Kuniholm et al. 1996) can be tied in from trees lying directly in the paths of the fall-out cloud, this may well be the case. The correlations from California to Greenland, Ireland and the Aegean, however, rely upon suppositions which find questionable support in the basic scientific evidence.

Troubled Times



William Comyns Beaumont

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William Comyns Beaumont (1873 - 1956)
Britain's Most Eccentric and Least Known Cosmic Heretic

By Benny J Peiser
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It is generally believed that the American scholar and founding father of meteoritic studies, H.H. Ninninger, was the first 20th century scientist to have associated mass extinctions with cosmic impact catastrophes. In his paper "*Cataclysm and Evolution*" (*Popular Astronomy* 50/1942, pp. 270-272), Ninninger reviewed the new research on Apollo asteroids and the handful of the known (and relatively small) meteorite craters. He added one and one together and hypothesises that

"[...] it is not at all improbable that the Earth bears many scars of far greater dimensions than the largest known meteorite craters. [...] If the dimensions of the lunar craters are to be taken as any indication of the sizes of the bodies that the Earth has encountered, then there must have occurred great changes in the shore-lines, the elevation and depression of extensive areas, [...] Violent climatic changes would have resulted, locally at least, from the heat of the impacts and from changes in the content of the atmosphere. Many general changes might have resulted from a possible shifting of the poles, in the cases of the largest impacts. These changes would have necessitated faunal and floral readjustments. Species would have disappeared and new ones would have developed to take their places. Changes in geographical range would have brought about new adaptations, and we should expect, in general, just those breaks in the series that are actually found in the rocks".

That was back in 1942. It took almost 40 years, when, in 1980, Luis Alvarez and his colleagues arrived on the stage of mankind's global debating club, before the scientific community was ready to engage in a general discussion about Ninninger's original suggestion. Harvey Ninninger, however, was not the first 20th century catastrophist to speculate about impact triggered mass extinctions. As early as 1925, one of Britain's leading scientific publishing houses (Chapman & Hall) released a rather inconspicuous book ("*The Riddle of the Earth*") by William Comyns Beaumont, an English super-eccentric, in which he anticipated most of the current neo-catastrophist paradigm:

"Geologists all agree that the termination of the later Tertiary Age

witnessed one of these startling and revolutionary changes on the face of the earth, and I submit that the occasion of such a change and of all the sudden geological ages was due to the fall of enormous bodies of meteors, or, perhaps, to the earth's appulsion with a great solid body falling through space, and that such a body or collection of bodies came from the direction of the present north-east, fell mainly upon a certain position of the Northern Hemisphere, occasioned vast earthquakes, and deposited not only certain mountain ranges but also volcanoes, causing among other matters the sinking of someland and the uprising of others." (Beaumont/Way 1925, 90)

The book, which was, as far as I am aware, never reviewed in any scientific journal or newspaper, fell out of the press still-born. Without any feedback from the scientific community, Beaumont turned to even more eccentric theories. In his next book, "*The Mysterious Comet: Or the Origin, Building up, and Destruction of Worlds, by means of Cometary Contacts*" (Rider & Co), published in London in 1932, Beaumont - almost prophetically - summed up his conclusions of more than 20 years of cometary research:

"The science of meteorism is of utmost importance to the world. It is in fact the only philosophical science of real importance because modern astronomy largely reduces itself to mathematical calculations as to the relative distance of celestial bodies, and these seem to have little practical value to anyone. It uses geology where geology is useful and discovers its weak spots as it does vulcanism and seismology. It explains much of the past which archaeologists and biologists cannot do, and reveals a great deal of the future. [...] Meteorism will teach us the origin and evolutions of planets. Meteor impact explains the existence of mountain ranges not internal 'crinklins,' the existence of volcanoes, earthquakes, the land surfaces, the seas, and the very air we breathe. Nothing else does. Meteorism explains the creation of species, of great saurians, reptiles, mammals, fish, birds, and insects, as well as the origin of the human species. It may astonish my reader if I assert that species are still brought periodically by meteor agency into our world, and that also plagues and pestilences come from a similar source. But I will produce the evidence to such effect./ In spite of the vast importance of the subject meteorism is scarcely recognised as yet as a science. No encouragement is given to the student to prosecute a subject which if it did no more for humanity would doubtless save many thousands of lives by the mere establishment of principles of meteorism."

70 years ago, nobody took such heretic ideas seriously. Charles Lyell and Charles Darwin's theory of gradualist uniformitarianism was still the scientific dogma of the day. Without any response, Beaumont's interest turned to even more occult ideas such as historical catastrophism and revised ancient history.

I have recently published a brief paper on Beaumont's ideas on historical catastrophism and their influence on Immanuel Velikovsky's similar speculations (see attached text below). Some day, the fantastic, bizarre and almost forgotten history of 19th and 20th century catastrophism, in its scientific, religious and occult forms, will need to be written. It is quite a story.

Benny J Peiser



Troubled Times



Beaumont & Velikovsky

from: Chronology & Catastrophism Review. *Journal of the Society for Interdisciplinary Studies* 1996:2

William Comyns Beaumont (1873 - 1956)

Britain's Most Eccentric and Least Known Cosmic Heretic

By Benny J Peiser

Did Immanuel Velikovsky knowingly present ideas someone else had developed many years earlier? While this question seems bizarre even to his most ardent opponents, it was recently raised in a paper by Robert Stephanos (Stephanos 1994). Hardly anybody has ever questioned the originality of Velikovsky's flawed ideas of planetary catastrophes in historical times. While some critics have underlined that Velikovsky was mean with his acknowledgements of earlier catastrophists (Michell 1984, 142), and others have stressed that the claims of Velikovsky's originality were spurious because earlier authors had written about cometary catastrophes (Bauer 1984, 215ff.), many still believe that Velikovsky was the first proponent of planetary catastrophism in this century.

The reader of Alfred de Grazia's book *Cosmic Heretics* (de Grazia 1984) will therefore be surprised to learn that the first modern catastrophist was in fact a British super-eccentric, William Comyns Beaumont, who is hardly known today but was a top-ranking English editor. Some of his ideas seem quite mad - e.g. the idea that the Egyptian dynasties up to the 13th century B.C. ruled in South Wales and that Jerusalem was originally located in Edinburgh (de Grazia 1984, 138). In view of this, readers may regard the relative obscurity of this bizarre catastrophist as rather fitting. Yet one's surprise turns into sheer amazement when we read that William Beaumont - with the exception of his matchless biblical exegesis - had developed almost identical ideas to those of Velikovsky and some of his ideas were published 25 years before *Worlds in Collision* appeared in print. In fact, **Beaumont had published no less than three lengthy books on colliding planets, cometary catastrophes (which he associated with the Exodus catastrophes), and revised chronologies - all of them published before Velikovsky entered the cosmic arena (Beaumont 1925, 1932, 1946).** De Grazia lists Beaumont's main ideas as follows (de Grazia 138/39):

1. The geology of the world's surface is largely catastrophic.
2. The catastrophe was caused by a cometary collision.
3. All geological formations were shifted as a result.
4. Cosmic lightning played a major role.
5. Hydrocarbons were present in cometary tails.
6. Ancient chronology was several hundred years too old.
7. The Ancient calendars had to be revised because of the catastrophe.
8. Many species were extinguished catastrophically.
9. Religion was born in cometary worship and tied to phallic forms because of the shape of comets.
10. Fear of cometary collisions is inherited by mankind.
11. Vermin were deposited by comets which also provoked plagues.
12. Deities from Egypt, Greece, Meso-America, and elsewhere were identified with planets.
13. Pyramids were both astronomical observatories and "air-raid shelters" for nobility and kings.
14. Planet Saturn, as a comet caused the Noachian Deluge.
15. The Atlantis date (ca. 9500 B.C.) given by Plato had to be shortened.
16. Extensive legendary evidence pictures the "hairy," "bearded," "blazing stars" that were comets.

17. Stonehenge, Avebury Circle and similar monuments were astronomical instruments.
18. Central American legends (and cultures) were contemporaneous with those of the Old World.
19. The intercalary "five evil days" were cursed because they coincided with a world disaster and the ending of an age.
20. The serpent, dragon, winged-globe, caduceus, and other ancient symbols are traceable to cometary catastrophes.
21. Religious festival are dated by cometary catastrophes.
22. Cometary conflagrations are the origin of coal deposits.
23. The ancients had a true 360 day year.
24. The planet Venus underwent great changes in color, diameter, figure, and orbit in the time of Ogyges.
25. Quetzalcoatl (Coculkan-Hurakan) commemorated the cometary dragon for the Meso-Americans.

[Beaumont's theses are almost identical to those of Velikovsky.](#) Yet Beaumont developed and published them as early as the 1920s and 1930s. Could this extraordinary similarity have been a freak accident? If this correspondence was not a fluke, how could it be explained? "Could Velikovsky have read and forgotten Beaumont's books?", de Grazia (1984, 139) asked. De Grazia tried to reconcile the evidence with the fact that Beaumont's style and method were entirely different from Velikovsky's.

De Grazia pointed out that "too many of Beaumont's conclusions are the same to explain them as sheer coincidence". He therefore speculated as to how this parallelism could possibly be accounted for: "I guess that either in the 1920s or 1930s, when Velikovsky was in Palestine, the books [by Beaumont], published in England and dealing with matters of interest to the Near East, made an appearance in the bookstores and were seen by Velikovsky" (De Grazia 1984, 140).

According to de Grazia, Beaumont's early books were not held by Columbia University Libraries and only Beaumont's third book, "*The Riddle of Prehistoric Britain*" (published in 1946), appeared in the Columbia University library catalogues, and "By that time '*Worlds in Collision*' had been written" (De Grazia 1984, 140).

However, according to de Grazia, "a note exists in his [Velikovsky's] archive, mentioning having read Beaumont's 1932 book; the note dismisses the work. Yet Velikovsky expresses his wonder whether Beaumont had gotten his (V's) ideas by telepathy" (de Grazia 1984, 140). [But how could Beaumont have borrowed Velikovsky's ideas as early as 1925 or 1932 \(let alone by means of telepathy\) when - according to Velikovsky's own account - *Worlds in Collision* was only conceived in 1940?](#) De Grazia was suspicious: "Could there have been a 'Bridie Murphy Effect' which might explain Velikovsky's rather irrational accusations against Beaumont?" (de Grazia 1984, 140). Had Velikovsky simply 'forgotten' that he had already come across Beaumont's books (or ideas) in the 1920s or 1930s?

In hindsight, de Grazia was much too quick to rule out direct influence. He failed to check whether Beaumont's books were stored in the Public Library on 42nd Street, the other big library which Velikovsky had frequently used during the 1940s. It holds all of Beaumont's early books, so they were readily available to Velikovsky during his ten years of research.

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Troubled Times



Clementine

Cambridge-Conference Digest, 1 November 1997

Partial text from *Time Magazine*, October 27, 1997:

Dreadful Sorry, Clementine: Washington brushes off the asteroid threat

Leon Jaroff

During the 3 or 4 billion years that it has existed on Earth, life has been devastated, and on occasion nearly wiped out, by the explosive impact of giant asteroids or comets. Now terrestrial life has finally evolved to the point where it is intelligent and capable enough to defend itself against such threats from space - if it has the will to do so.

That is why some scientists are so distressed by President Clinton's line-item veto last week of the \$30 million that Congress had allocated for the Clementine II project next year. [Clementine is a spacecraft that was to be launched in 1999 to approach an asteroid named Toutatis and send a camera-equipped rocket barreling into it.](#) ... Reasons for the veto, an Administration spokesman explained, included concern that the project might violate the Antiballistic Missile Treaty, that it was a thinly-disguised supplement to other Pentagon projects and more logically belonged in the NASA budget. Another - but unspoken - reason, say scientists familiar with the budget debate, is the "giggle factor", the tendency of many in government to scoff at the danger posed by asteroids. ...

In an attempt to assess the danger, a few dedicated astronomers have been scanning the skies, borrowing time on large telescopes, building their own detectors out of off-the-shelf parts and barely scraping by on the \$1 million or so NASA contributes annually to the total effort. Their goal is to identify and determine the orbits of the still undiscovered near Earth asteroids. That would enable them to predict, sometimes many years in advance, the possibility of a disastrous encounter. Those predictions and knowledge gained from missions like Clementine would give Earth's defenders time to mount the appropriate defense, using missiles to deflect or destroy a threatening intruder.

With a bit more funding and access to the Air Force's satellite tracking telescopes, say astronomers, they could find and track the most threatening asteroids within a decade. The cost to taxpayers, they estimate, would be a few million dollars more a year. If you think of it as an insurance policy for the entire planet, it's a small price to pay.



Troubled Times



Popocatepetl

Cambridge-Conference Digest, 23 October 1997

from: *New Scientist*, 25 October 1997, p. 27

Mammoth Graveyard

A violent eruption of the Popocatepetl volcano in central Mexico 12,500 years ago trapped a herd of mammoths. While digging a cistern at the base of a mountain near Popocatepetl last year, construction workers found the skeletons in a layer of ash 1.3 metres deep. Claus Siebe of the National Autonomous University of Mexico says the eruption engulfed areas to the north with a thick layer of ash. Rain washed the ash down the mountains in a thick slurry that Siebe says "has the consistency of wet concrete". This week, Siebe told the Geological Society of America in Salt Lake City that the slurry must have spread over the plains where the mammoths were grazing. At least seven died in an area of just 28 square metres.



Troubled Times



Shaky End

From: B.J.PEISER@livjm.ac.uk <B.J.PEISER@livjm.ac.uk>
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Date: 19. december 1997 17:37

How the Ancient World Came to a Shaky End

From: *New Scientist*, 20 December 1997, p. 6

A five-year "earthquake storm" brought down the ancient cities of Mycenae, Troy and Knossos, a geologist announced this week. [The fall of a host of civilisations in the Eastern Mediterranean at the end of the Bronze Age has often been blamed on seafaring warriors who ransacked the region around 1200 BC.](#) But Amos Nur of Stanford University in California found that skeletons of people buried in collapsed buildings had turned up in excavations at about a dozen sites.

Suspecting earthquake damage, Nur compared the locations of 47 ancient cities that were destroyed with maps of earthquake epicentres from the past 80 years. [Almost all the cities were in areas that today suffer the most intense seismic shaking, suggesting that violent quakes could have been to blame.](#) A complicated junction of tectonic plates, with Africa diving under Europe and some microplates caught in between, has created a maze of faults that Nur believes causes periods of intense earthquake storms roughly every 400 years. "During those storms, all the faults get activated," says Nur.

In the middle of this century there was a thirty-year earthquake storm along the North Anatolian Fault in northern Turkey, with magnitudes often reaching between 7.0 and 7.5 on the Richter Scale. Nur told the American Geophysical Union meeting that such storms were common, with examples in the 8th and 15th centuries. The Romans recorded a cluster in the 4th century. Nur suspects that earthquake storms might be typical for complicated fault patterns elsewhere, such as the western Caribbean. If so, quake storms may have destroyed civilisations in the Americas. ["We are looking now at the possibility that the Mayas collapsed because of earthquakes."](#) Lou Bergeron



Troubled Times



Sea-Floor Dust

From: B.J.PEISER@livjm.ac.uk <B.J.PEISER@livjm.ac.uk>
To: cambridge-conference@livjm.ac.uk <cambridge-conference@livjm.ac.uk>
Date: 22. januar 1998 11:12
Subject: CC-DIGEST, 22/01/98

New Evidence for Global Climate Disaster in 3rd Millennium BC

From: Harvey Weiss <harvey.weiss@yale.edu>

From: *Science*, Volume 279, Number 5349, 16 January 1998, pp.325-326

Sea-Floor Dust Shows Drought Felled Akkadian Empire

Richard A. Kerr

When civilizations collapse, the blame is often laid on the culture itself--leaders who overreached, armies that faltered, farmers who degraded the land. Such were the conventional explanations for the end of the world's first empire, forged by the Akkadians by 2300 B.C. Their reign stretched 1300 kilometers from the Persian Gulf in present-day Iraq to the headwaters of the Euphrates River in Turkey. They were the first to subsume independent societies into a single state, but the Akkadian empire splintered a century later, not to be reunited in such grandeur for 1000 years.

In 1993, however, archaeologist Harvey Weiss of Yale University proposed that the Akkadians were not to blame for their fate. Instead, he argued that they were brought low by a wide-ranging, centuries-long drought (*Science*, 20 August 1993, p. 985) that toppled other civilizations too, including those of early Greece, the pyramid builders in Egypt, and the Indus Valley in Pakistan. Many archaeologists were skeptical because the timing of these collapses was imprecise, and purely social and political explanations seemed to suffice. But now Weiss's theory, at least as applied to the Akkadians, is getting new support from a completely independent source: an accurately dated, continuous climate record from the Gulf of Oman, 1800 kilometers from the heart of the Akkadian empire.

At the annual fall meeting last month of the American Geophysical Union here, paleoceanographers Heidi Cullen and Peter deMenocal of Lamont-Doherty Earth Observatory in Palisades, New York, and their colleagues reported that a sediment core retrieved from the bottom of the gulf matches Weiss's version of events: The worst dry spell of the past 10,000 years began just as the Akkadians' northern stronghold of Tell Leilan was being abandoned, and the drought lasted a devastating 300 years. The new results illustrate, says Weiss, that climate change "is emerging as a new and powerful causal agent" in the evolution of civilization.

Some archaeologists aren't willing to accept that the same drought changed history across the Old World, however. That argument "just doesn't float," says archaeologist Carl Lamberg-Karlovsky of Harvard University. But he and others agree that the new marine record lends support to the climate-culture connection that Weiss identified at the ruined city of Tell Leilan in the northern part of Mesopotamia, a region that includes parts of present-day Syria, Iraq, and Turkey. Weiss began excavations there, on the Habur Plains of northeast Syria, in 1978.

Tell Leilan was a major city covering 200 acres by the middle of the third millennium B.C., and its people thrived on the harvests of the plains' fertile fields. But, unlike the farmers of Sumer in southern Mesopotamia, who used irrigation from the Euphrates and Tigris rivers to ensure bountiful harvests, the farmers of Tell Leilan depended on plentiful rainfall to water their fields. Less than a century after the people of Akkad in central Mesopotamia extended their reach into the north, those rains began to fail, says Weiss.

When Weiss and Marie-Agnes Courty, a soil scientist and archaeologist at the National Center for Scientific Research in Paris, dug through the accumulated debris of Tell Leilan, they encountered an interval devoid of signs of human activity, containing only the clay of deteriorating bricks. The abandonment began about 2200 B.C., as determined by carbon-14 dating of cereal grains. Soil samples from that time showed abundant fine, windblown dust and few signs of earthworm activity or the once-abundant rainfall. All this suggested that the people of Tell Leilan, and, presumably, its environs, retreated in the face of a suddenly dry and windy environment, triggering the collapse of the Akkadian empire's northern provinces. Only after the signs of dryness abated, about 300 years later, was Tell Leilan reoccupied.

Weiss went further, however, proposing that refugees from the drought went south, where irrigation helped protect crops. Drove of immigrants would have further strained a sociopolitical system already stressed by the same drought, he says, until the whole system collapsed under the strain. And he noted that the pyramid-building Old Kingdom of Egypt, the towns of Palestine, and the cities of the Indus Valley went into precipitous declines at about the same time and apparently also suffered unstable climates.

It's a neat story, but critics questioned whether the drying really was catastrophic enough to bring down all of Mesopotamian civilization, where irrigation would have helped farmers cope with the drought. And they were even more skeptical that such a drought could have felled other cultures across the Old World. To test these ideas, deMenocal and Cullen decided to see just how big and bad the drought really was. They analyzed sediment from the Gulf of Oman, reasoning that if all of Mesopotamia had become a dust bowl, the hot northwest summer wind called the Shamal would have blown that dust down the Tigris and Euphrates valley, over the Persian Gulf, and finally into the Gulf of Oman, 2200 kilometers from Tell Leilan.

Cullen and deMenocal looked for this far-traveled dust in a 2-meter sediment core spanning the past 14,000 years, which was retrieved from the Gulf of Oman by paleoceanographer Frank Sirocko of the University of Kiel in Germany. In samples taken every 2 centimeters along the core, they measured the amounts of dolomite, quartz, and calcite--minerals that today dominate the dust blown from Mesopotamia by the Shamal. [They found that wind-blown dust levels in the Gulf of Oman were high during the last ice age until about 11,000 years ago, then settled down to levels more typical of today. But in the sample from 2000 B.C. plus or minus 100 years, as dated by carbon-14, the abundance of dust minerals jumped to two to six times above background, reaching levels not found at any other time in the past 10,000 years.](#)

The extreme dustiness--which suggests a wide-ranging area of dryness--persisted through the next sample 140 years later but faded away by the third sample, indicating a duration of a few hundred years. The team also tracked isotopes of strontium and neodymium, which occur in different ratios in dust from different regions. They confirmed that during the dust pulse, the proportion of minerals with a composition similar to that of the soils of Mesopotamia and Arabia increased.

Given the uncertainties of carbon dating, the marine dust pulse and the abandonment of Tell

Leilan could still have been several centuries apart. But Cullen and deMenocal found in the core another time marker that makes a somewhat tighter connection. Less than about 140 years before the dust pulse is a layer containing volcanic ash. And Weiss had already reported that a centimeter-thick ash layer lies just beneath the onset of aridity and abandonment at Tell Leilan. The strikingly similar elemental compositions of the two ashes imply that they stem from the same volcanic event. If so, then Tell Leilan was abandoned just after the start of a climatic change of considerable magnitude, geographical extent, and duration. "There's something going on, a shift of atmospheric circulation patterns over a fairly large region," says Cullen.

Some archaeologists agree that this climate shift did change history outside northern Mesopotamia. "Most people who work in this range of time don't pay much attention to climate," says archaeologist Frank Hole of Yale; "rather, it's political and social events [that matter]. ... But I think the evidence is overwhelming that we've got something going on here." While conceding that climate and culture interact, a number of archaeologists still think that Weiss is pushing the connection too far. Drought may well have driven people from farmland dependent on rainfall, like that around Tell Leilan, says Lamberg-Karlovsky, but Weiss "generalizes from his northern Mesopotamia scenario to a global problem. That's utterly wrong. ... Archaeologists fall in love with their archaeological sites, and they generalize [unjustifiably] to a larger perspective."

Even in Mesopotamia, "you do not have by any means a universal collapse of cultural complexity," says Lamberg-Karlovsky. For example, at 2100 B.C., in the midst of the drying, the highly literate Ur III culture centered in far southern Mesopotamia was at its peak, he says, as was the Indus River civilization to the east, which thrived for another 200 years. Weiss counters that cuneiform records show that Ur III did in fact collapse 50 years later, apparently under the weight of a swelling immigrant population and crop failures. That timing still fails to impress Lamberg-Karlovsky, who concludes that Weiss is "getting little support for the global aspect of it."

Such support may yet come from climate records being retrieved from around the world. [In an enticing look at the postglacial climate of North America, Walter Dean of the U.S. Geological Survey in Denver found three sharp peaks in the amount of dust that settled to the bottom of Elk Lake in Minnesota. Dust peaked at about 5800, 3800, and 2100 B.C., plus or minus 200 years, according to the counting of annual layers in the lake sediment. During the 2100 B.C. dust pulse, which lasted about a century, the lake received three times more dust each year than it did during the infamous Dust Bowl period in the U.S. in the 1930s. But the archaeological record doesn't reveal how this drought affected early North Americans, who at that time maintained no major population centers.](#)

In another sign that the Mesopotamian drought was global, [Lonnie G. Thompson of Ohio State University and his colleagues found a dust spike preserved in a Peruvian mountain glacier that marks "a major drought" in the Amazon Basin about 2200 B.C., give or take 200 years. It is by far the largest such event of the past 17,000 years. But it doesn't seem to have had entirely negative effects; indeed, it roughly coincides with a shift in population centers from coastal areas of Peru, where the ocean provided subsistence, to higher regions, where agriculture became important. As more such records accumulate in the rapidly accelerating study of recent climate, archaeologists will have a better idea of just how much history can be laid at the feet of climate change.](#)



Troubled Times



Climate Change

From: Benny J Peiser <B.J.PEISER@livjm.ac.uk>
To: cambridge-conference@livjm.ac.uk <cambridge-conference@livjm.ac.uk>
Date: 30. januar 1998 16:47
Subject: CC DIGEST, 29/01/98

New Evidence for Major Punctuation of Global Climate at the Pleistocene / Holocene Boundary

From: Clark Whelton <whel@worldnet.att.net>
The *New York Times Science Section*, January 27, 1998
If Climate Changes, It May Change Quickly.
William K. Stevens

"...A growing accumulation of geological evidence is making it ever clearer that in the past the climate has undergone drastic changes in temperature and rainfall patterns in the space of a human lifetime, in a decade or in even less time."

"....In uncovering one of the latest pieces of evidence of abrupt climate change, American scientists led by Dr. Jeffrey P. Severinghaus of the University of Rhode Island examined climatic clues taken from corings of ancient ice in Greenland. "

The Severinghaus team determined that when the world began its final ascent out of the last ice age more than 11,000 years ago, temperatures in Greenland initially spiked upward by about 9 to 18 degrees F. -- at least a third, and perhaps more, of the total recovery to today's warmth -- in, at most, mere decades and probably less than a single decade. They also found that the impact of the sudden warming had been felt at least throughout the Northern Hemisphere. "That amount of heating, coming so quickly, is astounding," said Dr. Richard Alley of Pennsylvania State University, a member of the study team. Another recent study, by Dr. Peter deMenocal, a paleoclimatologist at Lamont-Doherty, examined clues in Atlantic Ocean sediments off sub-tropical North Africa. He discovered that **every 1,500 years or so since the end of the ice age, ocean temperatures there have fluctuated wildly and abruptly.** "In a cold phase, they fell by 5 to 15 degrees, and seasonal rains on the continent were severely curtailed -- all within no more than 50 to 100 years, and possibly less (the sediment analysis is not fine enough to tell). Then, in another 1,500 years, the picture reversed just as abruptly, causing flooding rains and creating widespread lakes in what is now the Sahara.

"The transitions are sharp," Dr. deMenocal said. "Climate changes we thought should take thousands of years to happen occur within a generation or two," at most. The changes may have wreaked havoc on nascent civilizations in Africa and the Middle East. "It was certainly something that would have rocked somebody's world," Dr. deMenocal said.



Troubled Times



Tektites

From: Benny J Peiser <B.J.PEISER@livjm.ac.uk>
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Date: 30. januar 1998 16:47
Subject: CC DIGEST, 29/01/98

[E. P. Izokh: Australo-Asian tektites and a global disaster of about 10,000 years BP, caused by collision of the Earth with a comet.](#)

Geologiya I Geofizika, 1997, Vol.38, No.3, pp.628-660 [in Russian]

Russian Academy of Science, Siberian Division, Joint Institute of Geological Geophysics & Mineralogy, Novosibirsk 630090, Russia

About 10,000 years ago, at the Pleistocene-Holocene border, some important events occurred: the glaciation stopped abruptly; the sea level elevated, and quick (for 20-50 years) climatic and ecological changes took place, leading to the extinction of the so-called mammoth fauna and exerting a direct effect on the mankind's evolution and appearance of civilizations. These and other disastrous events providing a distinct boundary between the Pleistocene and the Holocene received no relevant explanation in the Quaternary geology until now.

It is shown in the paper that the disaster under study was caused by the collision of the Earth with an eruptive comet, brought various volcanic tektite glasses from a remote planetary body. This extra-terrestrial source of tektites is proven by the well-known but not adopted paradox of tektite age, i.e. a difference in hundreds of thousands and millions of years between the radiogenic age of tektites (time of formation) and time of their fall onto the Earth. The volcanic nature of tektites is supported (by analogy with volcanic bombs, lavas, tufflavas, and extrusive formations taking into account extraterrestrial conditions) by their long and many-stage formation, by ordered trends of composition variability inherent only in magmatic differentiation, etc. Relying on a diversity of forms, structure, and composition of tektites, we made an attempt to reconstruct various types of volcanic eruptions. Most likely, the place of volcanic activity was a small or light planetary body of the type of Io, Callisto, Triton, etc. with ice crust, acid upper and relatively basic lower mantle, with small gravitation, without atmosphere, etc., situated somewhere on the periphery of the Solar System. It is supposed that a very powerful explosion ejected into space some part of a stone-ice volcanic construction, i.e. eruptive comet, according to S. K. Ysekhsvyatsky.

The comet hypothesis permits explanation of main features of distribution of tektites over the Earth's surface, various forms of their connection with impact craters as well as many other features of tektites. The common Earth impact hypothesis for tektite origin is not able to explain all these facts; it is deeply perplexed and is severely criticized in this paper. [The <<mammoth disaster is comparable with the so-called <<dinosaur catastrophe at the Cretaceous-Paleogene border, which also was accompanied with impact craters and fall of tektites.](#) An analogy is traced with the collision of the Shoemaker-Levi comet with the Jupiter. Thus, a special class of eruptive comets, cosmic bodies themost dangerous for the Earth, which are beyond attention of investigators, is discussed for the first time.



Troubled Times



Global Disaster

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Subject: CC DIGEST, 6 February 1998

CAMBRIDGE-CONFERENCE DIGEST, 6 February 1998

New Evidence for Global Natural Disaster at ~8200 BP

From: *SPACER.COM* <<http://www.spacer.com>>

Abrupt Cold Events Cause Rapid Change

San Francisco, Calif - February 2, 1998 - [About 8,200 years ago, the world climate suddenly got colder and stayed that way for a few hundred years before temperatures returned to normal](#), according to a team of paleoclimatologists. "This event, which we are calling the 8K event, was short compared to other, more distant events," says Anna Maria Agustsdottir, graduate student in geosciences, Penn State. "We see it in the Greenland ice cores as one of the biggest dips during the Holocene." The Holocene is the geologic period beginning about 10,000 years ago at the end of the last glaciation and continuing up to today. Unlike other events, the 8K takes place in what for geologists is the very recent past.

"Temperatures abruptly decreased about 11 degrees Fahrenheit during the 8K event," said Agustsdottir at the fall meeting of the **American Geophysical Union** in San Francisco in late December. The change in climate during this period can be seen not only in the temperature record from the Greenland ice cores, but also in ice accumulation, in the indicators of forest fires and in the amounts of methane found in the atmosphere. "Methane is not just an indicator of local climate change," says Agustsdottir. "But it indicates a global change in climate." The researchers, who include Agustsdottir; Richard Alley, professor of geosciences, Penn State; and Peter J. Fawcett of the University of New Mexico, note that [during the 8K, Greenland became cold, dry and windy, Canada became cold and the North Atlantic Basin cold and fresh. Asia and Africa also showed colder, dryer climate while South America and North America were wetter. "This event appears to be very similar to, if some what shorter than, the Younger Dryas event that occurred about 12,000 years ago," says Agustsdottir. "We are trying to find the underlying cause for these sudden temperature drops."](#)

The researchers believe that these events occur when the ocean conveyor system shuts down. This system is a series of currents that normally move warm water from the equatorial zone to the north. This water cools as it moves northward and the colder, saltier water sinks and flows back toward the equator to replace water moving north. Temperature, water density and salinity control ocean currents. When the ocean conveyor shuts down, deep, cold water formation stops in the north and the cyclical flow of water halts, cooling Europe and its surroundings. "We do not know what shuts down the conveyor, but one possibility is an increase in fresh water in the North Atlantic that would decrease salinity and prevent the water from sinking," says Agustsdottir.

Using a climate simulation model called GENESIS, the researchers are trying to model events

leading up to the 8K event to simulate an ocean conveyor shut down and temperature decline. The Penn State researchers have used this method on the Younger Dryas event with some success. Using conditions similar to today's oceans, the model response to a conveyor shutdown does not match data from the 8K event," says Agustsdottir. "However, shutdown from an ocean with a more vigorous conveyor does match observations. [This indicates that things were different in the early Holocene.](#)" [She considers the mechanism behind these sudden cold spells important because the climate changes are so rapid.](#) While we cannot predict the future, we can learn from events in the past and see how they occurred. "If change is gradual, animals, plants and humans can adapt to the new environment," Agustsdottir says. "If change is abrupt, crops fail, rains do not come or come too frequently and people do not have time to adjust." Copyright 1998, Spacer.Com



Troubled Times



Greenland Ice

From: Benny J Peiser <B.J.PEISER@livjm.ac.uk>
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Date: 25. marec 1998 01:57
Subject: CC DIGEST 24/03/98

Third Millennium BC Ctastrophe and Civilization Collapse

From: Bob Kobres <bkobres@uga.edu>
Discover Magazine - March 1998
Empires in the Dust, by Karen Wright

Some 4,000 years ago, a number of mighty Bronze Age cultures crumbled. Were they done in by political strife and societal unrest? Or by a change in the climate? ...

I've got some figures I can show you. figures always help," says paleoclimatologist Peter de Menocal, swiveling his chair from reporter to computer in his office at Columbia University's Lamont-Doherty Earth Observatory, just north of New York City. On the monitor, de Menocal pulls up a graph derived from the research project known as GISP2 (for Greenland Ice Sheet Project 2). GISP2 scientists, he explains, use chemical signals in ice cores to reconstruct past climates. There are two kinds of naturally occurring oxygen atoms, heavy and light, and they accumulate in ice sheets in predictable ratios that vary with prevailing temperatures. In a cool climate, for example, heavy oxygen isotopes are less easily evaporated out of the ocean and transported as snow or rain to northern landmasses like Greenland. In a warm climate, however, more heavy oxygen isotopes will be evaporated, and more deposited in the Greenland ice sheets.

By tracking oxygen-isotope ratios within the ice cores, [the GISP2 graph reflects temperatures over Greenland for the past 15,000 years](#). Near the bottom of the graph, a black line squiggle wildly until 11,700 years ago, when the last ice age ended and the current warm era, the Holocene, began. The line then climbs steadily for a few thousand years, wavering only modestly, until 7,000 years before the present. From then until now, global temperatures appear relatively stable - "then until now" comprising, of course, the entire span of human civilization. ...



Troubled Times



Jewish Exodus

From: Benny J Peiser <B.J.PEISER@livjm.ac.uk>
To: cambridge-conference@livjm.ac.uk <cambridge-conference@livjm.ac.uk>
Date: 25. marec 1998 11:29
Subject: Re: CC DEBATE 25/03/98

Stone from the Sky: Meteorites or Hail

From: Simon Mansfield <simon@spacer.com> wrote:

Rob McNaught <RMN@AAOCBN3.AAO.GOV.AU> wrote:

"And it came to pass, as they fled from before Israel, and were going down to Beth-horon, that the Lord cast down great stones from heaven upon them unto Azekah, and they died. [More died with hailstones than they whom the children of Israel slew with the sword.](#)"

I have no idea what the conventional explanation for this is, but there is presumably the explanation that the cause WAS hailstones. Death by hail is common worldwide and every few decades some hundreds die in large hailstorms. There are many more stock deaths, often thousands at a time. Hail up to grapefruit size is not uncommon.

I would recommend John Lewis' book "Rain of Iron and Ice" pp. 176-182 for an excellent list of "Property Damage, Injuries and Deaths caused by meteorite falls." It is a detailed list that would make a good discussion point for this conference. I would be interested in any confirmation or further input on Lewis' list.

Regards, Simon

First Stones, then Hailstones

From: Ed Grondine" <epgrondine@hotmail.com>

Rob -

I am certainly aware of the dangers of hail. Once when I was driving across the northern plains I was caught in a hailstorm; by a stroke of incredibly good luck one the only overpass for miles around appeared ahead; I pulled under it, and thus my car escaped major damage. So after I first read others' suggestions that the Joshua event was an impact event, I briefly considered both that the stones mentioned were indeed hailstones; and I also considered whether the hailstones were an addition by a later scribe trying to explain the first sentence in the passage. In the end it seems more likely that what happened is that the disintegration of a large meteoroid of the Sikhote Alin class released a large amount of kinetic energy into the atmosphere ("stones"); this heated air came into contact with particles at the super cold temperature of space, producing hail ("hailstones").

Also, while Joshua does not contain "fire from the sky" it does contain atmospheric dust from an event of the Sikhote Alin / Tunguska class. Joshua 10:13: ["And the sun stood still \(the dust obscured sunlight\), and the moon stayed \(the dust reflected sunlight\), until the people had avenged themselves upon their enemies."](#) Besides the explicit detail in Joshua, you must remember that the Achaeans, the source for the

Tantalus myth, were contemporaneous with the events. If it had been hail, most likely Tantalus's hell would have involved hail instead of a stone.

But this is only interpretation, and as you rightly point out because of language difficulties even the location of more records might not be able to resolve the problem. In the end, the only thing hope for a definite solution is a search for meteorites in the Beth Horon area.

E.P. Grondine



Troubled Times



Volcanic Eruptions

4000 BP Climate Upheaval

Doug Keenan <doug.keenan@informath.org>

At the Cambridge conference of 1997 and at the NATO conference of 1994, the main question was this: was there a major climatic upheaval four millennia ago, and if so, what was the cause? The conferences, and several papers in the scientific literature, have led to much discussion. The general view seems to be that something happened--though it has been unclear what. The most popularly-suggested cause has been a comet.

Below is the abstract of a paper that I presented at the 1999 meeting of the IUGG (the main international conference for Earth scientists). I believe that the paper effectively answers the main question posed above. The case for a climatic upheaval now appears conclusive--and the upheaval was likely the largest climatic event since the ice ages. There is, however, only inconclusive/questionable evidence for a comet being the cause; rather, the upheaval appears to have been triggered by a colossal volcanic eruption.

The work also strongly supports proposals from Barbara Bell (Harvard), Harvey Weiss (Yale), and others, for a major climatic influence on civilisations. In each of the world's three regions of civilisation, the influence of the upheaval appears to have been dramatic:

- In the Ancient Near East, drought led to the collapse of the earliest civilisations--including the millennium-old Kingdom of Egypt.
- In the Indus Valley, the upheaval coincided with the transition of the civilisation to its depopulated Post Urban phase.
- In ancient China, the upheaval induced flooding, and the organisation to deal with this likely led to the founding of the first Chinese dynasty.

The upheaval was thus probably the biggest natural event to happen to humanity since the ice ages.

The Three-Century Climatic Upheaval of C. 2000 BC, and Regional Radiocarbon Disparities

Douglas J. Keenan (*The Limehouse Cut*, London E14 6N, U.K.)

Several researchers have previously identified a severe climatic upheaval in tropical North Africa that began just over 4000 years ago and lasted for about three centuries. The upheaval is known to have occurred shortly after a volcanic eruption, and companion work proposes that this eruption was colossal. Here, we suggest how the eruption acted as a trigger for the upheaval: by forcing changes in ocean circulation; although the initial (atmospheric) forcing lasted only a few years, the ocean required three centuries to regain equilibrium. The suggested triggering mechanism is supported by palaeoceanographic, palaeoecological, and archaeo-historical data and by related experiments with a (coupled general-circulation) climate model. We argue that the changes in ocean circulation forced changes in sea-surface temperatures that led to a weakening of the south-west North African monsoon.

The upheaval has been proposed to have also encompassed south-western Asia. We argue that it

encompassed most of the Northern Hemisphere: we present a variety of palaeoecological and palaeoceanographic evidence and describe the principal underlying climatology. In some areas the upheaval was the most severe since the ice ages.

The full scope of the upheaval has previously been missed in part because radiocarbon dates from some areas are centuries too early: palaeoclimatic events in different areas thus appeared asynchronous. (The erroneous radiocarbon dates also misled searches seeking ice-core and tree-ring evidence of the eruption.) The cause of the radiocarbon-dating disparities is identified as a regional deficiency in ^{14}C , and we locate the region's source of ^{14}C -deficient carbon.

The paper is available from <http://www.informath.org/>

Following are some brief technical remarks.

The initial (atmospheric) forcing was a cooling over the Labrador Sea and a warming over the Norwegian Sea. Such cooling/warming is caused by the intensification of the polar vortex that is induced by volcanogenic aerosols. The cooling/warming in the Labrador/Norwegian Sea increased/decreased deepwater production there. This, in turn, forced an extremely high phase of the North Atlantic Oscillation. The high NAO explains why, for example, some areas of Europe were cool/dry while others were warm/wet and still others experienced little change. Once disequilibrated, the oceans took centuries to recover: so did the climate.

The mechanism underlying the radiocarbon dating errors has been largely developed by others. Briefly, it is as follows. During the last ice age, the Black Sea was actually a freshwater lake. As the ice age ended, this freshwater flowed out of the Black Sea into the Mediterranean, which greatly altered Mediterranean circulation. In particular, Mediterranean subsurface waters stagnated for at least six millennia. During the stagnation, ^{14}C in subsurface waters radioactively decayed and was not replenished. Later, as the Mediterranean circulation was restored - a process that took more millennia - the ^{14}C -deficient subsurface waters circulated back to the surface. The ^{14}C -deficient carbon was then degassed to the atmosphere: similar processes have been observed today off Ecuador, in the Arabian Sea, and possibly in the Weddell Sea. Thus many radiocarbon dates from samples that grew in or downwind from the Mediterranean are some centuries too old.

Cheers, Doug Keenan



Troubled Times



No Impact

The following was posted on the Cambridge Conference Network (24 September 1999).

No Evidence for Climate-Perturbing Cosmic Impact Around 4000 BC

Doug Keenan <doug.keenan@virgin.net>

There is very strong evidence for a climatic upheaval c. 4000 BP. The big question is "what caused the upheaval?" Many seem to believe that the cause was a cosmic impact. I would prefer to not consider the cause right now. Instead, I would like to consider a smaller, related, question: is there evidence specifically for a climate-perturbing cosmic impact c. 4000 BP? (Please note that this is different from asking if a cosmic impact can explain the available palaeodata.) What follows reviews the evidence that I have seen presented.

- The soil analysis of Courty [1998]. Courty reports the absence of the materials usually associated with a cosmic impact: this is evidence against such an impact. (M.A. Courty [private comm.] has agreed that a possible explanation for her data--which shows intense burn - is an eruption whose ejecta contained oil/gas; no other credible explanation has been suggested, as far as I know.) Note too that Courty took samples from a different context than Weiss et al. [1993]; so it is not certain that Courty and Weiss et al. are analysing the same soil. Indeed, Courty claims that her soil pre-dates Akkad, whereas Weiss et al. are clear that theirs is from Akkad's terminus; as I understand it, however, the (relative) date from Courty is unconfirmed by an archaeologist--so it could conceivably be in error.
- Seismic disturbances in part of the Ancient Near East. The ANE has four tectonic plate boundaries within it (and many volcanoes); the Anatolian microplate would seem to be particularly susceptible to disturbance. Earthquakes can thus easily occur in the ANE, without cosmic impact.
- Widespread (global?) seismic disturbances. Peiser [1998] presents seven or eight palaeo-seismic events, in addition to those from the ANE. His reference numbers are used here.

[079] The date is tentatively c. 2900 BC, by thermoluminescence (in Utah).

[157] (i) Dates made in the 1960s--thus ranging over many centuries; the event was not an earthquake, but a gradual uplift (on E coast of N America). (ii) Date accuracy not reported; the event was a gradual subsidence (Veracruz, Gulf of Mexico). As Peiser notes, these two events appear to be due to a gradual differential warping (of the N American plate).

[162] The date is ~3400 (14C) BP, and almost certainly after 1900 BC.

[182] Large and at about the right time (in Fiji).

[185] The date is almost certainly before 3750 BC.

[213] The date is almost certainly after 1650 BC.

[302] The date is roughly 2900 BC; the event was not an earthquake, but a gradual emergence.

(Note - refs 079 and 157 were unavailable to me; I have depended on Peiser.) The above events do not constitute evidence for a cosmic impact c. 4000 BP.

- The apparent synchrony of (i) earthquakes in the ANE and (ii) the onset of the climatic upheaval. As I understand it, no one has proposed how a cosmic impact could force the observed climatic anomalies. If, however, the ANE earthquakes were coeval with a sufficiently-large eruption, then

the climatic anomalies are plausibly explainable [Keenan, 1999]. (This does not mean that an eruption-with-earthquakes is the only plausible explanation, merely that the evidence is not specifically for a cosmic impact.)

- Ancient texts. I propose that an ancient text be considered as evidence for a cosmic impact only if either (i) it is supported by scientific data or (ii) it gives some details that ancient people would be unlikely to guess at. So far, no ancient texts have been cited that meet this criterion.
- Craters reported by Schultz & Lianza [1992]. This is essentially certain evidence specifically for a cosmic impact. The date is very roughly 5000 years ago (work is ongoing to make this more accurate--P. H. Schultz, private comm., 1999-09-13). The energy release was ~350 Mtons TNT (roughly 20 times Tunguska) and the local soil is less, but the craters are <10 m deep, since the impact angle was <15 deg from the horizontal. The meteorite was ~150 m in diameter: the implied volume is minuscule (only 1% of what Mt. St. Helens erupted in 1980). This and the impact angle imply that virtually all debris would have been placed on the ground or in the troposphere--from where it would be quickly washed out. Hence effects on the global climate would have been negligible. It is not plausible that the impact, which was in Argentina, would have caused earthquakes in the ANE.

This obviously does not mean that there wasn't a climate-perturbing cosmic impact c. 4000 BP. I believe, though, that there is no evidence available specifically for such an event.

Cheers, Doug Keenan

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Troubled Times



Noah's Arc

Evidence of the Great Flood Support Noah's Ark Saga

The Times, 27 September 1999

Compelling evidence that there was a Great Flood, as told in the Old Testament story of Noah's Ark, has been found far below the waters of the Black Sea by an American expedition. Underwater surveyors, led by Robert Ballard, the renowned oceanographer who found the Titanic and other sunken ships of the 20th century, have discovered an ancient coastline at a depth of 450ft. "I am not sure whether it is Noah's flood or not Noah's flood, but I do buy that there was a flood," said David Mindell, one of the surveyors. The Ballard team was working from a theory about the biblical flood of antiquity propounded by two marine geologists from Columbia University in New York, William Ryan and Walter Pittman, in their new book, *Noah's Flood*. As Dr Ballard explained; "During the last great Ice Age glaciers advanced across the surface of the world. That lowered the sea level 400ft. Then, 12,000 years ago at the end of the Ice Age, the glaciers began to retreat."

With its lower sea level, the eastern Mediterranean was cut off from the Black Sea so that when the oceans started to rise, the Black Sea did not. Dr Ballard continued: "Around 7,600 years ago, guess what happens? The Mediterranean breaks through a natural dam at the Bosphorus and catastrophically floods the land surface. People living there are 400ft below sea level and in trouble. They are facing a flood equal to 10,000 Niagara Falls." This flood was on a far greater scale than the one described in Genesis, which is said to have lasted for 40 days and 40 nights, covering every living thing on Earth beneath 24ft of water other than Noah, his family and his pairs of animals carried to safety on the ark.

In the new theory, it is believed that each day for two years ten cubic miles of ocean water cut through the widening Bosphorus channel as it flowed into what was then a fresh water lake, raising the level by six inches a day. The incoming salt water, more dense than the fresh water it displaced, plunged to the bottom of the lake bed, transforming it into a sea where the depths support no life. This area of inert darkness is known as an abyss that is anoxic, meaning that the trapped water could not circulate and has lost its oxygen, according to an account in yesterday's *Washington Post*. "Such conditions exist nowhere else in the world," Dr Ballard told the newspaper.

The theory supposes that in this dead zone wooden ships will be preserved intact, possibly still with their Bronze Age sails, and just waiting for Dr Ballard and his team. "I want to find the story of Jason and the Argonauts and their quest for the Golden Fleece," he said. But this search for ancient mariners may have to wait until next year when Dr Ballard wants to employ the US Government's remotely operated undersea exploration vehicle. The explorers are convinced that there may be many ships on the bottom because the Black Sea served as a commercial waterway from Ancient Greece to Byzantium and the Ottoman Empire. But the waters were known to be hazardous, according to Roman historians.

For his expedition, Dr Ballard has attracted marine archaeologists who had viewed him sceptically as a treasure hunter but he has not enriched himself by taking artefacts from the Titanic nor his other great finds, the liners *Lusitania* and *Andrea Doria*, and the German battleship *Bismarck* and the American aircraft carrier *Yorktown*. Dr Ballard has participated in 120 deep-sea expeditions. This summer he found two Phoenician vessels more than 3,000 years old.



Troubled Times



10th Planet

Possible 10th and 11th Planet-Like Objects Orbiting the Sun

ExploreZone, 7 October 1999

After studying 13 comets whose orbits seem to have been affected by a massive object far beyond Pluto, a British scientist announced today that there may be a previously unknown and very large planet orbiting the Sun. Separately, three astrophysicists are set to propose that a brown dwarf lurks in the outer reaches of our solar system. Brown dwarfs are near-stars that never gathered enough fuel to become true stars; they can be many times more massive than Jupiter. If either object is confirmed to exist, researchers will have a whole new batch of theories to create about how comets are formed, how they evolve, and how some are set on devastating paths toward Earth.

The two studies combined also open the possibility that a host of unfound planet-like objects may one day be added to our current nine-item list. **John J. Matese**, a physics professor at the University of Louisiana, writes of the possible brown dwarf, based on a study of 82 comet trajectories, in an upcoming issue of the journal *Icarus*. Matese told explorezone.com that it's "very plausible" that there are several unknown planets and/or brown dwarfs orbiting the Sun. "We suggest that this (brown) dwarf may only be the most likely to be detected during this epoch," Matese said, adding the cautionary note that "the existence of the object we discuss is not certain." The brown dwarf would not likely have formed from the disk of gas and dust out of which the other planets were born, Matese and his colleagues say.

The possible 10th planet

Writing in the Oct. 11 issue of the *Monthly Notices of the Royal Astronomical Society*, Open University professor **John Murray** says he observed 13 long-period comets - objects that orbit the Sun but also travel to the far reaches of the solar system - whose trajectories follow a similar arc. Murray suggests the common path is the result of a gravitational deflection caused by a planet-like object at least as massive as Jupiter. Interestingly, Murray told explorezone.com that his research had been done in 1996, rejected by two science journals, and only recently been accepted for publication. "It was finally accepted by the *Monthly Notices of the Royal Astronomical Society* in May this year, but was still not really taken very seriously until a few days ago, when (Matese's team) announced that they have come to a very similar conclusion."

Murray describes his planet-like object as a lone wanderer that has been captured into an orbit around the Sun after a journey through space. Its orbit, he says, is in the opposite direction as the nine known planets (a motion called retrograde). He says the object orbits the Sun 32,000 times farther away than Earth (some 3,000,000,000,000 miles from the Sun) where it would be extremely faint and slow moving, and so could have escaped detection by present and previous searches for distant planets. He estimates the object takes 6 million years to orbit the Sun. ...

Possible brown dwarf

If Murray's proposed object were several times more massive than Jupiter, it could possibly be a brown dwarf, a massive star-like object that fell just short of the required mass and energy to stimulate stellar processes. Still, brown dwarfs are huge, and Murray argues that if the object that seems to be deflecting comets were a brown dwarf, it is more likely it would have been detected already. Matese, the University of Louisiana professor who proposes there is a brown dwarf out

there, did similar research on comets from the Oort cloud. Matese calls the possible brown dwarf a companion to the Sun. He estimates its mass at three times that of Jupiter and puts it at 25,000 AU from the Sun (roughly in the middle of the range of Murray's estimate.)

In the analysis of highly accurate orbits of 82 Oort cloud comets, Matese and his colleagues detected a pattern connecting the orientation and shape of a comet's orbit path. They suggest that this can best be explained if there is an object approximately 3 times as massive as Jupiter orbiting in the vicinity of Oort cloud comets. Matese says he can't predict the object's exact location, but says it is potentially observable by radio telescopes and next-generation infrared telescopes. He told explorezone.com that it is possible that his brown dwarf and Murray's possible planet are in fact the same object, but that he had not yet studied Murray's results thoroughly. At an Oct. 11 meeting of the **American Astronomical Society** in Italy, Matese and his colleagues will explain that if the brown dwarf is confirmed to exist it will "play a major role in our understanding of how comets get into the Oort cloud and how they return. Comets from the Oort cloud are important contributors to the impact history of the Earth and are often claimed to be the cause of mass extinctions like the one in which the dinosaurs, and many other species, disappeared from the fossil record 65 million years ago."

What's next?

Before either object might be added to any lists, it would have to be observed directly. "It needs to be confirmed by pictures taken with the largest telescopes on Earth," Murray said of his possible planet. "The problem is that it will be very faint (about 10 million times fainter than the faintest star visible to the naked eye) and will move very slowly, so two photographs taken about six months apart would be best to show the movement, though most of the movement would be due to the Earth moving in its orbit. There is also a big area to search, as there is a good bit of uncertainty in its predicted position."



Troubled Times



Star Wars

Congressional Record, June - 4, 1996

DEFEND AMERICA ACT OF 1996 - MOTION TO PROCEED

(Senate - June 04, 1996)

[Page: S5716]

In short, our actions, if we go for and vote for the Dole star wars bill, should not be considered in a vacuum. Intended or not, implementation of the Dole star wars bill would have a far-reaching, chilling effect on the future of arms control.

Often forgotten in the debate on the national missile defense is the question of whether technology is sufficiently mature enough to **mandate the year 2003 as the deployment date**. The record of missile interceptor testing to date and in the foreseeable future is one of more failure than success. In the rush to deploy a prototype system using highly advanced and sophisticated technology by the year 2003, we will be forsaking, Mr. President, the-fly-before-you-buy principle that has served us well in recent years.

Not only will we be limiting the testing and evaluation of the system in a push to field a system at an earlier and unnecessary date, **we will be locking ourselves into certain technologies which may become obsolete by the year 2003**.

[Page: S5717]

America 's Editors Oppose New Star Wars Plans

One of the most wasteful items (in the House defense budget) is the **\$4 billion earmarked to construct a missile defense system by 2003**. This dubious 'Son of Star Wars' could wind up costing as much as \$54 billion before it finally could be deployed: 'Fort Pork Gets Reinforced,' the Miami Herald, Miami, FL, May 20, 1996.

Quote from *Democratic Reform News*

This **system normally sells for sixty billion, but we're going to let you have it for five** because we like you. ... The bill would order work to start on an anti-missile system (much less grandiose than the trillion-dollar Star Wars "invisible shield" President Reagan favored) that could theoretically shoot down an intercontinental missile or two launched at our territory by a small rogue country like Libya, North Korea, Iran, Iraq, or for that matter Denmark (hey, you never know) **by the year 2003**.



Troubled Times



Missile Defense

S. 1635 The Defend America Act of 1996 Law

S. 1635 sets a clear policy to deploy by the end of the year **2003**, a National Missile Defense (NMD) system to provide a highly effective defense of the United States against the most probable source of ballistic missile threats in the post Cold War world limited, unauthorized or accidental ballistic missile attacks.

The legislation does not establish a specific architecture for such a NMD system, but in order to meet the **2003 deployment date**, the bill requires the Secretary of Defense to develop for deployment an affordable and operationally effective NMD system.

Section 3. National Missile Defense Policy

Establishes U.S. missile defense policy in two areas: Deployment by the end of **2003** of an NMD system capable of providing a highly effective defense of United States territory against limited, unauthorized, or accidental ballistic missile attacks, and which will be augmented to a layered defense as larger and more sophisticated threats emerge.



Troubled Times



Asteroid Defense

Gods of The New Millennium by Alan Alford, p 590

Should we live in fear or in hope of our returning gods? The actions of the American government seem to indicate a perceived threat. In 1996, The Pentagon announced a plan, sponsored by the US Air Force, to save the world by deploying missiles which would intercept "asteroids" in deep space. **Politicians have indicated their intent to pass legislation which would force America to deploy this missile defense system, code named - Clementine 2 - by AD 2003. Why the sudden haste?** Is it part of the same hidden agenda that is attempting to place incredibly sensitive telescopes into deep space?



Troubled Times



NASA Q&A

From the NASA Q&A web site:

Is there an **asteroid that will hit the Earth in the year 2003?**

There are no known asteroids which will come that close to the Earth...however, there are many small bodies in the solar system whose orbits we have not determined yet and which remain to be discovered in the next 6 years. Hopefully among them there are none that will impact the earth...but we really do not know for certain.

Why haven't we seen any aurorae in Minnesota lately?

Because the Sun is at it's minimum of activity so there haven't been many sunspot 'storms' to eject particles into space to later produce the aurorae on Earth. In the next year things should start picking up again as we get a bit farther into **the next cycle which will peak around the year 2003.**



Troubled Times



Deep Impact

Lychos [Technology News](#)

It's not the end of the world but the beginning of a new space exploration expedition. A proposed NASA mission, codenamed Deep Impact, **aims to smash a 500 kilogram copper projectile into a speeding comet.** Deep Impact is one of five proposals under consideration by the space agency. **The winner will be launched in 2003.** The copper ball will be launched from a space craft and smashed into the P/Tempel comet to see what the comet is made of.



Troubled Times

2003



Mars Passby

Subject: MTO Questions and Answers

Date: Wed, 8 Apr 1998 00:07:01 -0700 (PDT)

From: listmgr@quest.arc.nasa.gov

To: answers-mars@quest.arc.nasa.gov

QUESTION: When the orbits of Mars and the Earth bring them in close proximity of each other, what effect can this have in regards to the asteroid belt between our planets, and the effects of the gravitational pulls on our Earth's geological aspects such as it's platelets, causing earthquakes, tidal waves and possible increased volcanic activity? I once heard a person who had acquaintances in scientific fields that speculated (perhaps there is actual research that has been done that you know of, I'm hoping) that such near Mars "passbys" have caused such aforementioned activity on our planet, causing Atlantis to disappear into the ocean, and Pompey to be destroyed by it's sudden volcanic eruption, and have moved the ancients to give Mars the title "The War Planet", because of it's concurring violent effects on our planet when in close proximity. I have learned that the next Mars "passby" is due August 28, in the year 2003, and it's distance from the Earth at that point is calculated to be .373 AU. Could you present that to me in the measurement of miles, and what effects, if any, you would anticipate from this occurrence.

ANSWER from Bruce Jakosky on March 24, 1998: The orbits of Earth and Mars (and all the rest of the planets) are well separated from each other. If two planets came close together, they would be able to perturb the orbit of the other or possibly even collide. This happened during the early history of the solar system, when there were many more planet-like objects. Now, however, after around 4.5 billion years of orbiting the Sun, the only remaining objects are spaced pretty far apart. Thus, Earth and Mars never approach each other at a close enough distance for one to have any significant effect on the other. You are right in that Earth and Mars will get as close as about 0.4 astronomical units from each other, but this is still pretty far apart. The Earth is about 93,000,000 miles from the Sun, and this is 1.0 astronomical unit. Thus, Mars can get as close as about 35,000,000 miles to the Earth; this is not close enough to have any effect.

However, the planets can affect each other a little bit, despite the large distances. Gravitational tugs from Jupiter and the other planets can cause the polar axis of the Earth or Mars to shift a little bit. The shift is very small on the Earth, no more than about 1.5 degrees, but this is still large enough to trigger the ice ages. The shifts are well understood, however, and there is no reason to think that any changes in the Earth's polar tilt or in the climate will happen suddenly or any time soon.



Troubled Times



Launch Manifest

From: NASAnews@hq.nasa.gov
Date: Wed, 25 Jun 1997 14:53:10 -0400 (EDT)
Subj: NASA Launch Manifest is Released
Msg#: 187

Debra J. Rahn
Headquarters, Washington, DC June 25, 1997
(Phone: 202/358-1639)

Kyle Herring
Johnson Space Center, Houston, TX
(Phone: 281/483-5111)

NOTE TO EDITORS: N97-45
NASA LAUNCH MANIFEST IS RELEASED

Copies of the NASA Mixed Fleet, Payload Flight Assignments, June 1997 edition, are available from the NASA news centers or on the Internet at URL: <http://www.osf.hq.nasa.gov/manifest/>

This manifest summarizes the missions planned by NASA for the Space Shuttle and Expendable Launch Vehicles (ELVs) as of June 1997. **Space Shuttle and ELV missions are shown through calendar year 2003. Space Shuttle missions for calendar years 2002-2003 are under review** pending the resolution of details in the assembly sequence of the International Space Station.



Troubled Times



Space Station

The Space Station Project

Ground breaking for the **Space Station Exhibit is planned for the year 2002 with the Dedication Ceremony scheduled for 2003**. As the Space Station becomes a reality this section will be updated.

To address "this unprecedented cost growth," President George W. Bush is calling in his New Budget plan for **completing the US core of the station in 2003, three years earlier than planned.**"

The president is urging **NASA to complete its portion of the space station in 2003, three years early**, and to drop some of the components planned. Space shuttles would fly six times a year, instead of seven or eight.

15 Nations Sign Pact To Launch 'City In Space'

International Station Will Replace The Aging Mir

CNN, January 30, 1998

Senior officials from the United States, Russia and 13 other nations have signed an agreement to cooperate in building an international space station. It also adds Sweden and Switzerland, and includes 11 members of the European Space Agency. All the nations will cooperate in designing, developing, operating and using the station. "We will change the course of human history," NASA Administrator Daniel Goldin told a department gathering that included Sen. John Glenn, D-Ohio, a space pioneer.

The station, billed as the most ambitious space program in history, will replace the world's only orbital laboratory, Russia's aging Mir station, which has been in service since 1986. Goldin said the project entails nothing less than a "city in space." It is the largest international civil science and technology project ever undertaken. Goldin's Russian counterpart, Yuri Koptev, said the cooperative venture means an end to the era of rivalry and "senseless competition" in the space field.

First conceived a decade ago, work already has begun on building the station. Its first module, U.S.-funded and Russian-built, is being transported from Moscow to Baikonur cosmodrome in Kazakhstan, where it will be launched June 30. **Over the next five years**, more than 100 components of the station will be assembled. It will support a crew of up to seven people and include five pressurized laboratories. Other countries taking part in the project are Canada, Japan, Belgium, Denmark, France, Germany, Italy, Netherlands, Norway, Spain and the United Kingdom. The Associated Press contributed to this report.



Troubled Times

2003



Mars Express

European Space Agency, Press Information Note No 22-98

Paris, France 19 June 1998

Hurry along please, for the Mars Express

Any scientists wanting to send instruments to the surface of the planet Mars have until 3 July to offer a small lander that might be carried aboard the European Space Agency mission Mars Express. The selection of a lander, if any, will then be the last stage in defining the scientific payload of Mars Express, which is intended to go into orbit around the Red Planet at the end of 2003. The choice of instruments for the orbiting spacecraft was recently ratified by ESA's Science Programme Committee. This month ESA is inviting tenders to build the spacecraft from three industrial competitors, Alenia/Aerospaziale, Dornier and Matra-Marconi, who have already studied the mission. The project must be fully defined in time for the Science Programme Committee to finally confirm Mars Express.

Why the hurry? The deadline is set in the form of a favourable launch opportunity just five years from now. The positions of Earth and Mars in their orbits at that time will mean that a spacecraft can reach Mars more quickly, carrying a greater weight of instruments, than from any other launch date in the next decade. **A decision to proceed taken towards the end of 1998 would leave less than five years to create, test and launch a complex spacecraft and meet that deadline.** Most judgements about Mars Express and its instruments have therefore to be made in advance if the engineers and scientists are to **make sure that everything is ready for lift-off in June 2003.**

For more details visit the [Mars Express](#) web site

European Space Agency, Press Release No. 47-98

Paris, France 5 November 1998

Mars Express wins unanimous support

All fourteen national delegations in the European Space Agency's Science Programme Committee have backed the project to send a spacecraft to Mars in 2003. Support for Mars Express, as this exciting mission is called, is qualified by concern about the long-term budget of ESA's science programme. At its meeting in Paris on 2 and 3 November, the Science Programme Committee made its approval of the implementation of Mars Express conditional on sufficient funding for the science programme and no impact on previously approved projects. ... **Development of the spacecraft will now proceed swiftly, to meet the deadline of an exceptionally favourable launch window early in June 2003.** Mars Express will go into orbit around Mars at Christmas 2003.



Troubled Times



Return Flight

JPL Universe, November 13, 1998

New Mars plan targets sample return

Under a new plan drafted by NASA and its French, Italian and European counterparts, the consortium of spacefaring nations will begin development of affordable spacecraft and innovative new technologies to obtain in-situ measurements and samples of Martian material in preparation for human exploration of the planet. The plan calls for construction of a fleet of affordable launch vehicles, orbiters, landers, rovers and Mars ascent vehicles designed to wage **an all-out effort to begin returning samples of the Martian regolith as early as April 2008.** ...

Work on the architectural redesign began in June. Eight "tiger teams" of experts from the international scientific community, led by Elachi and Dr. Frank Jordan, manager of JPL's Mars Program Planning and Architecture Office, were formed to address issues of spacecraft design, innovative technologies and science goals for **missions beginning in 2003**, as well as for achieving the overall goals of the long-range Mars Surveyor Program. Recommendations were presented to NASA Administrator Daniel Goldin on Sept. 24 and, subsequently, approved for implementation. ...

NASA will begin the series of sample-return mission in 2003, with launch of a lander and a rover that will spend several months searching for and collecting rock and soil samples, said Dr. Daniel McCleese, chief scientist and manager of the Office of Strategy and Science Programs for JPL's Mars Exploration Directorate. The roving vehicle will return the sample to a new, low-cost, low-mass Mars ascent vehicle.

...



Troubled Times

2003



Air to Breathe

Landmark experiment produces oxygen for human use from Martian atmosphere

News Services, *University of Arizona*, February 18, 1999

Professor K.R. Sridhar and his 20-member team at The University of Arizona Aerospace and Mechanical Engineering (AME) Department are building an Oxygen Generating Subsystem (OGS). **In January 2002, it will suck in Martian atmospheric gases - predominately carbon dioxide - and process them to produce pure oxygen.** "This is a landmark experiment," Sridhar says. "It is the first time in human history that we will produce a consumable of use to humans from extraterrestrial resources." It will be the space exploration equivalent of standing on the brink of the Industrial Revolution, but with a gigantic resource base - all the materials found on planets, their satellites, and asteroids in the solar system.

The oxygen could be used as propellant in rocket motors or for life support for humans on Mars. Since this is a demonstration experiment, the oxygen will not be put to immediate use on the Mars Surveyor 2001 lander. But Sridhar hopes to have **an experiment aboard the Mars Surveyor 2003 mission that will produce both fuel and oxygen from Martian resources.** In that case, the oxygen and fuel would be used to launch a small rocket from the surface of Mars or to power a drill that would take core samples of the Martian surface. The OGS will fly to Mars aboard Mars Surveyor 2001, which is scheduled to land on the Red Planet on Jan. 22, 2002. Once on Mars, it will use solid oxide electrolysis to produce oxygen. The technology is based on an electrochemical cell that works as a solid state filter for oxygen. The electrolyte used in the OGS will transfer only oxygen ions across its crystal structure. ...

Producing resources in situ has many advantages, Sridhar explains. **"By using extraterrestrial resources, you lower the launch mass from Earth** and thereby reduce the cost. You also reduce the overall risk of a mission because **you can produce safety caches of valuable consumables that will be available to humans at the destination.**" But, he adds, perhaps the most significant aspect of in situ resource utilization is that it is the enabling technology that will make possible permanent settlements on other planets and their satellites.



Troubled Times



Propellant

Surveyor Mission Overview

The **2003 missions** will send to Mars an updated rover, code named Athena, to begin the search for samples which the 2005 mission will return to Earth. There will also be some demonstration **experiments** for **InSitu Propellant Production (ISPP)**, a requirement for the eventual **manned missions**.



Troubled Times



Space Escape

The last page of the May 1999 issue of Smart Money lists [Space Adventures](#) as selling suborbital **space travel reservations beginning in late 2002/early 2003**: Reservations are \$6,000. Ticket cost is \$90,000. I'm sure big money has reserved May 2003.

Offered by [Charles](#).

Millionaires Take Tim at Mars

First Mission Could Test Artificial-Gravity System in 2003

MSNBC, August 31, 2001

Several dot-com millionaires have formed a foundation to bankroll space shots aimed at putting humans on Mars, a founding member tells *MSNBC.com*. Internet entrepreneur Elon Musk says the first mission should get off the ground as early as 2003. That mission could involve putting mice in Earth orbit to test an artificial-gravity system.



Troubled Times

2003


 European

[ESA Science News](#)

Close encounter with Mars, Europe is going to Mars

June 11, 1999

The European Space Agency's Mars Express mission has won unanimous approval. It will be **the first mission Europe has sent to the red planet**. The Agency's Science Programme Committee (SPC) approved Mars Express after ESA's Council, meeting at ministerial level in Brussels on 11 and 12 May, had agreed the level of the science budget for the next 4 years, just enough to make the mission affordable. "Mars Express is a mission of opportunity and we felt we just had to jump in and do it. We are convinced it will produce first-rate science", says Hans Balsiger, SPC chairman.

As well as being a first for Europe in Mars exploration, Mars Express will pioneer new, cheaper ways of doing space science missions. "With a total cost of just 150 million euros, Mars Express will be the cheapest Mars mission ever undertaken", says Roger Bonnet, ESA's Director of Science. **Mars Express will be launched in June 2003**. When it arrives at the red planet six months later, it will begin to search for water and life. Seven instruments, provided by space research institutes throughout Europe, will make observations from the main spacecraft as it orbits the planet. Just before the spacecraft arrives, it will release a small lander, provided by research institutes in the UK, that will journey on to the surface to look for signs of life. The lander is called Beagle 2 after the ship in which Charles Darwin sailed round the world in search of evidence supporting his theory of evolution. But just as Darwin had to raise the money for his trip, so **the search is on for public and private finance** for Beagle 2. "Beagle 2 is an extremely important element of the mission", says Bonnet.

Europe's space scientists have envisaged a mission to Mars for over fifteen years. But limited funding has prevented previous proposals from going ahead. The positioning of the planets in 2003, however, offers a particularly favourable passage to the red planet - an opportunity not to be missed. Mars Express will be joined by an international flotilla of spacecraft that will also be using this opportunity to work together on scientific questions and pave the way for future exploration.

ESA is now able to afford Mars Express because it will be built more quickly and cheaply than any other comparable mission. It will be the first of the Agency's new flexible missions, based on maximum reuse of technology off-the-shelf and from other missions (the Rosetta cometary mission in this case). Mars Express will explore the extent to which innovative working practices, now made possible by the maturity of Europe's space industry, can cut mission costs and the time from concept to launch: a new kind of relationship with industrial partners is starting. "We are adopting a new approach to management by delegating to Matra Marconi Space (the prime contractor) responsibility for the whole project. This means we can reduce the ESA's management costs" says Bonnet.

Despite the knock-down price, however, the future of Mars Express has hung in the balance because of the steady erosion of ESA's space science budget since 1995. Last November, the SPC said the mission could go ahead only if it could be afforded without affecting missions already approved, especially the FIRST infra-red observatory and the Planck mission to measure the cosmic microwave background. On 19/20 May, the SPC, which has the ultimate decision over the Agency's science missions, agreed that the level of resources allowed was just sufficient to allow Mars Express to go ahead. "To do such an ambitious

mission for so little money is a challenge and we have decided to meet", says Balsiger.

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Troubled Times

2003



Human Exploration

Mars Surveyor Program 2003 Lander Mission - NASA

Commerce Business Daily Issue, June 4, 1999 PSA#2360

NASA/Goddard Space Flight Center

The National Aeronautics and Space Administration's (NASA's) **Human Exploration and Development of Space (HEDS) Enterprise solicits proposals for investigations to be carried to the surface of Mars by the MSP 2003 Lander Mission**. These investigations will require instrumentation to be developed and placed on a fixed lander platform in order to address scientific investigations of the radiation environment; soil, dust, and environmental interactions; and fundamental biology. Instruments will also be solicited to demonstrate in-situ resource utilization technologies. These investigations will be carried out in addition to the primary Space Science Enterprise mission objectives for Mars sample return. NASA also announces an opportunity to propose definition studies for the mission opportunities in 2005. These opportunities include lander investigations similar to the 2003 opportunity, micromissions, and a dedicated HEDS lander mission. These definition studies should address potential flight experiments for HEDS ...



Troubled Times



Postponed

News Service, Cornell University, July 15, 1998

Astronomer confirms Cornell's new role in 2001 Mars lander mission

ITHACA, N.Y. -- Cornell University's astronomy department is working in a newly defined role on NASA's Mars Surveyor lander mission scheduled for launch in April 2001. Although the Cornell-led Athena Rover vehicle program will not be included in the mission as previously planned, "we will be doing a pretty good job of recovery" by continuing to provide most of the science for the 2001 lander, says astronomy professor Steven Squyres, the lead researcher on the project to explore and analyze part of the Martian surface.

Squyres confirms that because of revised budgets and time pressures **NASA has postponed the Athena Rover segment of the Surveyor Mars mission from 2001, and has tentatively rescheduled it for the 2003 Mars Surveyor launch.** The highly complex package consists of a suite of experiments on board a roving vehicle. In 2005, another Mars Surveyor mission has the goal of returning to Earth with Martian rock samples collected by Athena. "Of course, it's a little disappointing," says Squyres about the postponement of the Athena Rover program. "But having a somewhat delayed program that is realistic is better than having an on-schedule program that isn't going to work." ...

The 2001 investigations will still provide valuable geology and geochemistry data, says Squyres, although the research into biological aspects will be more limited than it will be for the 2003 mission.



Troubled Times



Setbacks

NASA Chief: Future Mars Mission in Doubt

CNN, December 8, 1999

The presumed failure of the Mars Polar Lander mission means that two Mars spacecraft have been lost in three months, a stunning blow prompting NASA to examine its entire Mars program and possibly delay future flights, space agency chief Dan Goldin said. The last realistic opportunity to contact the lander came and went Tuesday with no response. The spacecraft has not been in radio contact with Earth since its descent into the atmosphere of Mars on Friday.

NASA [Moves Ahead](#) on Plans for Mars 2003 Mission

December 9, 1999

While aftershocks from the back-to-back losses of the Mars Climate Orbiter and Mars Polar Lander are reverberating throughout NASA, managers for future Mars missions are continuing to plan and build the spacecraft that are next in line to rocket to Mars. One of the major objectives of the missions planned for launch in 2001, 2003 and 2005 is to begin scouting for eventual human missions to the planet. **Now NASA has provisionally selected four instrument packages to do much of this advance work from the 2003 Mars lander.** The experiments, which will fill a \$32-million payload aboard the spacecraft, will attempt to study radiation dangers on Mars, search for signs of life, examine dust devils and possible electrical storms and demonstrate that breathable air and rocket fuel can be produced from the planet's carbon dioxide atmosphere.



Troubled Times

2003



Enhanced Telecom

NASA Budget Request Includes New Projects in Mars Program

By Mark Whalen, *JPL Universe*, February 5, 1999

NASA's requested budget for fiscal year 2000 includes funding for two new program elements in the Mars Surveyor Program. As part of the agency's request for five new initiatives in its Space Science Enterprise, NASA Administrator Daniel Goldin on Feb. 1 announced funding for the development of the Mars Network, which would provide a comprehensive network for increased communications capability at Mars, as well as Mars Micromissions, to provide low-cost capability for delivering small payloads to Mars, including telecommunications elements of the Mars Network.

One of the first micromissions is slated to be the **Mars Airplane, a fly-over mission scheduled for either 2003 or 2005**. The vehicle would provide reconnaissance of sites of possible interest for future scientific exploration, including sample collection sites. "The responsibilities of the various NASA centers' work on the Mars Airplane are still to be determined," noted Glenn Cunningham, deputy director of the Mars Exploration Directorate at JPL.

Planning for a Mars communications infrastructure has been in the works at JPL since last fall, following the conclusion of a redesign of Mars architecture strategy led by JPL Space and Earth Sciences Program Director Dr. Charles Elachi. Five teams of experts from the international scientific community helped form the new strategy; a team led by Dr. Chad Edwards, manager of the Telecommunications and Mission Operations Directorate (TMOD) Program Office, studied systems for communications, navigation and information transfer to and from Mars. "**Current technology allows only a few hours or less each day for communications between a Mars lander and Earth, which would prove constraining for the operations of sample-return missions planned for 2003 and 2005**. The amount of data and imagery that could be brought back to Earth is also severely limited, Edwards added. **Enhanced telecommunications capability at Mars could include the development of a constellation of low-cost microsatellites, the first of which would be developed for a 2003 mission**. These would provide much more frequent contact and data return as well as navigation determination, much like the Global Positioning System (GPS) satellites do on Earth. The microsatellites would "piggyback" on a commercial Ariane V launch vehicle for a ride into Earth orbit before heading for Mars.

Satellite Dish in Place for 2003 Mars Mission

ABC, August, 2001

A satellite dish that will be used to communicate with a space mission to Mars in 2003 has been lifted into place at a ground station in Western Australia. The dish, belonging to the European Space Agency, has been lifted into position at New Norcia, 150 kilometres north of Perth. The agency says the dish is the largest of its kind in the state, weighing 100 tonnes and measuring 35 metres wide. It has been designed to be highly accurate, even in extreme conditions of 50 degree Celcius temperatures and 45 kilometre per hour winds.



Troubled Times



Crystal Laser

Crystal Cultivator

Russian-born physicist Natalia Zaitseva has an emerald-green thumb. Using her fast-growth method, a tiny seed crystal is planted in a 6-foot rotating tank of potassium dihydrogen phosphate solution. In just six weeks it matures into a gargantuan, 500-pound pyramid-shaped crystal. Raw crystals of that size traditionally take up to two years to grow. Zaitseva first developed her technique in Russia, but is now using it to help engineers build the world's largest laser at the US\$1.2 million National Ignition Facility at Lawrence Livermore National Laboratory in Northern California.

The laser, made up of 192 beams, will be housed in a complex the length of two football fields and will be used to simulate the blast of a small-scale fusion bomb and create a pebble-sized sun as hot as the real thing. But completion of the project by its scheduled 2003 launch date would be impossible without Zaitseva's fast-growth method. Scientists will need more than 100 of her crystals, cut into 700 flawless slices - some measuring over a foot wide and a half-inch thick - to change the focus, direction, and wavelength of the laser beam.



Troubled Times



SOHO Sunscan

Scientists lose contact with SOHO solar spacecraft

Infobeat Story

U.S. and European scientists have lost contact with the SOHO spacecraft, which has been circling and studying the sun for the past two years, the European Space Agency said Friday. ESA said ground controllers lost contact with the Solar and Heliospheric Observatory at 1.16 a.m. Thursday and have been unable to re-establish contact since that time. The satellite, a joint project of ESA and the NASA, is programmed to automatically reorient itself towards the sun when an anomaly occurs but has so far failed to do so. ESA and NASA recently decided to **extend SOHO's mission to 2003** so it could observe dark sunspots on the sun's surface, which are expected to peak around the year 2000.



Troubled Times



Solar Cycle

The solar maximum was some time ago, I remember clearly, expected to reach its peak in its so called solar cycle (which is a lie) in [2000](#). Now read this from NASA. It supports the 2003 pole shift topic perfectly.

[Explanation](#), September 23, 1998:

*As the Sun heads South, crossing the celestial equator today at 1:37 a.m. Eastern Time, Autumn begins for Earth's Northern Hemisphere. **This Autumnal Equinox finds an increasingly active Sun steadily approaching a solar cycle maximum expected around the year 2003.** The solar activity cycle is driven by a periodic winding up of the Sun's internal magnetic field. This colorized picture is a mosaic of recent ultraviolet images from the orbiting TRACE satellite sensitive to light emitted by highly charged iron atoms. Growing in number, the intricate structures visible are the Sun's hot active regions with temperatures over a million degrees Fahrenheit and their associated magnetic loops.*

This was later returned to a solar maximum in the year 2000.

Solar Cycle [Update](#)

NASA Science News, October 14, 1999

Updated predictions from NASA scientists place the **solar maximum in mid-2000**. As activity on the Sun begins to increase toward this broad maximum, we can expect more auroral displays, radio disruptions and power fluctuations.

Offered by [Michel](#).



Troubled Times



Interferometers

Space Technology 3

Space Technology 3, **scheduled to launch in 2003**, will test technologies and flying concepts that will benefit NASA's Origins Program, which seeks answers to the origins of our universe by studying distant stars and their planets. By sending interferometers into space, NASA's goal is to **image extremely distant stars**, and ultimately even find and image planets like Earth around other stars!



Troubled Times



Europa

Life May Exist On Planets In [Deep Space](#)

Discovery News Brief, July 1, 1999

Life-sustaining conditions may exist on planet-like bodies in deep, interstellar space, according to a California Institute of Technology scientist. ... Lissauer points out that **NASA is currently planning a year 2003 mission to Europa**, one of Jupiter's moons, which is very dark, but that has an ocean thought to be composed of H₂O. "Like Stevenson's model, life-sustaining water could exist below Europa's surface," says Lissauer.



Troubled Times



Sea Launch

Hughes goes for four more ocean-platform launches

[CNN Interactive](#), June 16, 1999

Hughes Space and Communications has put in four more orders with an international venture for satellite launches from a floating platform in the equatorial Pacific Ocean, it was announced Wednesday. Sea Launch Co., a partnership between Boeing Commercial Space Co. and companies in Norway, Russian and Ukraine, already had agreements for 10 launch contracts from Hughes and five others with Loral Co. "This is a large boost in confidence from our largest customer - Hughes," said Sea Launch spokesman Terrance Scott. "It also expands our launch manifest to 2003."



Troubled Times



GIFTS Mission

Teaming Opportunity for Geostationary Imaging Development - NASA

Commerce Business Daily Issue, July 1, 1999 PSA#2379

NASA/Langley Research Center

The LaRC is currently conducting a study and preparing a proposal for a **Geostationary Imaging Fourier Transform Spectrometer (GIFTS) mission to be operational in early 2003**. The study, sponsored by NASA's New Millennium Program (NMP), was awarded as a result of a NASA Research Announcement, NRA-98-OES-12, for New Millennium program measurement concepts. The LaRC is seeking team members to participate with NASA LaRC in developing the proposal and implementing a mission to validate the GIFTS measurement concept and associated technologies. The NASA NMP is managed by the Jet Propulsion Laboratory (JPL) to identify, flight validate, and infuse key advanced technologies and capabilities needed to enable 21st century NASA space and earth science missions. The Program focuses on technology validation in a systems and subsystems approach to retire risk for the first use of such technology in a science mission. The GIFTS measurement concept will improve observation of all three basic atmospheric state variables (temperature, moisture, and wind velocity) thereby allowing much higher spatial, vertical, and temporal resolutions than is currently achievable ...



Troubled Times



ESA Rendezvous

EUROPEAN SPACE AGENCY

Project Supported by D/OPS

ROSETTA: ESA's Rendezvous Mission with a Comet

ROSETTA represents ESA's Horizon 2000 cornerstone mission No. 3 Mission Overview

The ROSETTA mission is a **cometary mission which will be launched in the year 2003** by Ariane 5. After a long cruise phase, the satellite will rendezvous with comet Wirtanen and orbit it, while taking scientific measurements. A Surface Science Package (SSP) will be landed on the comet surface to take in-situ measurements. During the cruise phase, the satellite will be given gravity assist manoeuvres once by Mars and twice by the Earth. The satellite will also take measurements in fly-bys of two asteroids.



Troubled Times

2003



War with Mexico

Weinberger suggests a war with Mexico in 2003. The jacket of his book *The Next War* states:

The Next War does not purport to predict the future. Rather, it aims to lay bare the dangers that America, and the world may soon face due to declining U.S. military readiness in the face of escalating world instability.

He didn't "predict" it, he says, he just used it as an example of what might happen, but Caspar Weinberger's scenario of a war with Mexico in the year 2003 rings true.

A powerful leader blames Mexico's problems on the "Gringo"
Unrest spreads throughout Mexico
Millions head north across the border
Drug gangs engage in terrorism in the U.S.
U.S. forced to invade Mexico to topple the regime.



Troubled Times



Disasters

Russia Sets Out to Tackle '2003 Problem'

by Andrei Shukshin, *Reuters*, Sept 13, 2000

Russia's Parliamentary leaders and President Vladimir Putin agreed Wednesday to embark on a three-year crash course to thwart what they said was an anticipated chain of disasters due to hit the country in 2003. "(These are) issues of extraordinary importance, strategic issues which may degenerate into a serious threat for the existence, I want to stress this, for the existence of Russia," former Prime Minister Yevgeny Primakov told reporters. Some experts have singled out 2003 as the year when three problems - a big debt bill, eroding infrastructure and an aging population - could combine to throw Russia into turmoil.

Primakov, leader of the center-left OVR parliamentary faction, was one of several top members of the State Duma lower house of parliament to meet Putin in the Kremlin. In addition to the "2003 problem," the agenda included next year's budget and media freedom and ownership. Both sides agreed urgent measures had to be taken to avert the looming disaster. Problems of Russia's crumbling industrial base were highlighted last month when a nuclear-powered submarine sank with the loss of all 118 crew on board and a daylong fire gutted Moscow's Ostankino television tower, a national symbol. Putin said at the time the fire was proof of the dangerous condition of the Russian infrastructure. A power shortage last weekend also forced officials to shut down nuclear reactors, including those at a giant, top-secret fuel reprocessing plant whose boss said that only staff discipline prevented a major crisis.

Pro-Kremlin Party Brought Up The 2003 Problem

Boris Gryzlov, leader of the pro-Kremlin Unity faction which was the first to raise the issue, said Russia would also have to deal in 2003 with a colossal \$17 billion foreign debt payout and a massive population shrinkage. Gryzlov said the problems had already been discussed with cabinet ministers and the parliamentarians had agreed with Putin to set up a commission to tackle the issue head-on. "The question was discussed at length and the president approved our initiative and said he would dispatch representatives of his administration to the working group," Gryzlov said after the Kremlin meeting. He said the commission could start work as early as Monday and suggested the government could alleviate the crisis by using budget windfalls, such as extra revenue from higher oil prices, on paying off straight away debts maturing in 2003.

Some observers said the 2003 deadline was rather artificial and might serve political purposes. Dmitry Pinsker, Kremlin-watcher for the liberal weekly *Itogi*, said Kremlin spin doctors planned to make a fuss over the initiatives, in part to answer critics who charged them with inaction during the Kursk submarine disaster last month. Economic analysts say Russia's financial and infrastructure problems are real, but picking a date is somewhat arbitrary. "A lot here is artificial," Oleg Vyugin, a former first deputy finance minister and now executive vice president at Troika Dialog investment bank, told Reuters. Russia is due to pay slightly more than \$16 billion in debt payments that year, compared with \$11.3 billion due in 2001, he said. But there was still plenty of room for restructuring. "Everyone knows that the infrastructure is deteriorating, but that does not mean that this will all happen in 2003. The television tower burned up this year," he said. Al Breach, an analyst with Goldman Sachs, said investors would applaud reform talk, however artificial the deadline. "For these guys to be thinking three years ahead is pretty good," he said.



Troubled Times

2003



20 Billion Stash

Excerpts from 27-Jun-1997 13:10 EDT article
by John Diamond, *Associated Press* Writer

WASHINGTON (AP) -- The Pentagon denied a lawmaker's charge Friday that it had stashed away a \$20 billion secret fund for future weapons purchases.

Rep. Norm Dicks, D-Wash., a senior member of the House Appropriations defense subcommittee, produced a summary sheet showing a Pentagon "modernization reserve" fund totaling \$20 billion and set aside for use from 2000 to 2003.

"This account is highly unusual, unlike any other contained in prior budget submissions to Congress," said Dicks, who has served for 20 years on the defense spending panel. He said it "proves that the Pentagon was deceiving Congress about the availability of out-year funding in its budget."

Senior Pentagon officials, however, had briefed lawmakers and reporters about the modernization fund earlier this year when President Clinton sent his defense budget proposal to Capitol Hill. The fund was described in a separate chart detailing how anticipated savings from military base closings would be put toward new weapons.

"We didn't have any secret fund," said Susan Hansen, a Pentagon spokeswoman. "It's public knowledge. The money has now been passed to the services to include in their budget submissions."

Dicks said he was particularly incensed because senior defense officials had testified that they had no spare money in their long-term budgets to buy more B-2 bombers. Boeing Co., the largest private employer in Dicks' home state, is a major subcontractor on the B-2.

The House last week narrowly approved adding \$331 million to the defense budget to keep the B-2 program alive. President Clinton wants to stop the program at 21 bombers that are already in service or in the final stages of construction. The additional money would keep open the option of buying up to nine more.

Pentagon officials argued strenuously against the proposal, saying that the \$9 billion to \$12 billion the bombers will cost - \$27 billion if upkeep, repairs and operations are counted - would force deep cuts in other weapons programs.



Troubled Times



PDD 63

The White House, Office of the Press Secretary (Annapolis, Maryland)

For Immediate Release, May 22, 1998, Fact Sheet

Protecting America's Critical Infrastructures: PPD 63

This Presidential Directive builds on the recommendations of the President's Commission on Critical Infrastructure Protection. In October 1997, the Commission issued its report calling for a national effort to assure the security of the United States' increasingly vulnerable and interconnected infrastructures, such as telecommunications, banking and finance, energy, transportation, and essential government services.

Presidential Decision Directive 63 is the culmination of an intense, interagency effort to evaluate those recommendations and produce a workable and innovative framework for critical infrastructure protection.

The President's policy:

Sets a goal of a reliable, interconnected, and secure information system infrastructure **by the year 2003**, and significantly increased security to government systems by the year 2000, by:

Immediately establishing a national center to warn of and respond to attacks. Ensuring the capability **to protect critical infrastructures from intentional acts by 2003**.

Addresses the cyber and physical infrastructure vulnerabilities of the Federal government by requiring each department and agency to work to reduce its exposure to new threats;

Requires the Federal government to serve as a model to the rest of the country for how infrastructure protection is to be attained;

Seeks the voluntary participation of private industry to meet common goals for protecting our critical systems through public-private partnerships;

Protects privacy rights and seeks to utilize market forces. It is meant to strengthen and protect the nation's economic power, not to stifle it.

Seeks full participation and input from the Congress.

PDD-63 sets up a new structure to deal with this important challenge: a National Coordinator whose scope will include not only critical infrastructures but also foreign terrorism and threats of domestic mass destruction (including biological weapons) because attacks on the US may not come labeled in neat jurisdictional boxes;

The National Infrastructure Protection Center (NIPC) at the FBI which will fuse representatives from FBI, DOD, USSS, Energy, Transportation, the Intelligence Community, and the private sector in an unprecedented attempt at information sharing among agencies in collaboration with the private sector. The NIPC will also provide the principal means of facilitating and coordinating the Federal Government's response to an incident, mitigating attacks, investigating threats and monitoring reconstitution efforts;

Information Sharing and Analysis Centers (ISACs) are encouraged to be set up by the private sector in cooperation with the Federal government and modeled on the Centers for Disease Control and Prevention;

A National Infrastructure Assurance Council drawn from private sector leaders and state/local officials to provide guidance to the policy formulation of a National Plan;

The Critical Infrastructure Assurance Office will provide support to the National Coordinator's work with government agencies and the private sector in developing a national plan. The office will also help coordinate a national education and awareness program, and legislative and public affairs.

For more detailed information on this Presidential Decision Directive, contact the Critical Infrastructure Assurance Office (703) 696-9395 for copies of the White Paper on Critical Infrastructure Protection.



Troubled Times



DoD Records

Department of Defense Records Management Task Force Semi - Annual Report
January to June 1995

The mission of the Department of Defense (DoD) Records Management Task Force (RMTF) is to develop plans and draft policy to implement six strategic improvement initiatives proposed by the DoD RM Business Process Reengineering (BPR) effort completed in July 1994 and approved by the Assistant Secretary of Defense [ASD (C3I)]. These initiatives must be implemented, with emphasis on electronic records, **to reach the goal of a single Department process for managing information as records for the year 2003.**

DoD Managing Information as Records: Strategic Plan - 2003
July 28, 1995

The overall mission of records management is found in this document. The strategic plan is the Department's information management planning vehicle which provides a broad brush perspective on purpose, vision, goals and functions which supports this mission. Special attention is directed to opportunities technology offers.

One foresight in understanding this mission has been expressed by: "the right information will be available to decision makers in the right format at the right time." This report proffers two simplified modern precepts. The first precept is that a record consists of information, regardless of medium, detailing the transaction of business. The second precept is that all Government employees are decision makers.

DoD projects all unclassified information will be supported in a distributed electronic environment in the near future, all of which must be attended to by a standard records management process and system by the year 2003. The need for resources to be applied in areas of policy guidance, software acquisitions, and oversight of the implementation in support of the Department's records management mission is emphasized.

This report is intended for a wide audience, DoD employees, American Armed Forces Servicemen and Servicewomen, and the general public.



Troubled Times



Base Closings

Base Closings

Reuters, May 11, 1999

Defense Secretary William Cohen and the Pentagon Joint Chiefs of Staff Tuesday urged the Senate Armed Services Committee to approve two new rounds of U.S. military base closings beginning in 2001. In separate letters to Republican Sen. John Warner of Virginia, the committee's chairman, Cohen and the nation's top military officers said more domestic bases must be closed to save money for military operations and new arms purchases. The panel is expected to vote as early as this week on a proposal to pave the way for **two rounds of base closings in 2001 and 2003** when it marks up the fiscal year 2000 military spending authorization bill.



Troubled Times



Navy Plans

Lieutenant General Jeffrey W. Oster
(USMC Deputy Chief of Staff Programs and Resources)
26 February 1997

Before the Subcommittees on Military Procurement and Research and Development of the House National Security Committee on Navy Shipbuilding Overview

Mr. Chairman, distinguished members of the Subcommittee, thank you for this opportunity to discuss the Department of the Navy's shipbuilding programs and the fiscal year 1998 budget request. It is an honor and a pleasure to appear before you.

Shipbuilding Plan Overview

The cornerstone of our **shipbuilding plan for the Future Years Defense Program in fiscal years 1998 through 2003 is full funding of all of the ships in the plan**, including all of our submarines and the tenth and final NIMITZ class aircraft carrier, the CVN 77. Key factors used in developing our plans for the future are the number of ships now in the fleet - approximately 354 ships and submarines - and their average age.



Troubled Times



Start II

The White House

Current as of: September 6, 1996

Created January 26, 1996

BACKGROUND INFORMATION: START II RATIFICATION SUMMARY

START II will increase stability at significantly lower levels of nuclear weapons. Overall strategic nuclear forces will be reduced by an additional 5,000 warheads beyond the 9,000 warheads being reduced under START I. The Treaty will set equal ceilings on the number of strategic nuclear weapons that can be deployed by either side.

By the year 2003, each side must have reduced its total deployed strategic nuclear warheads to 3,000-3,500. Of those, none may be on MIRVed ICBMs. Thus, all MIRVed ICBMs must be eliminated from each side's deployed forces; only ICBMs carrying a single-warhead will be allowed.

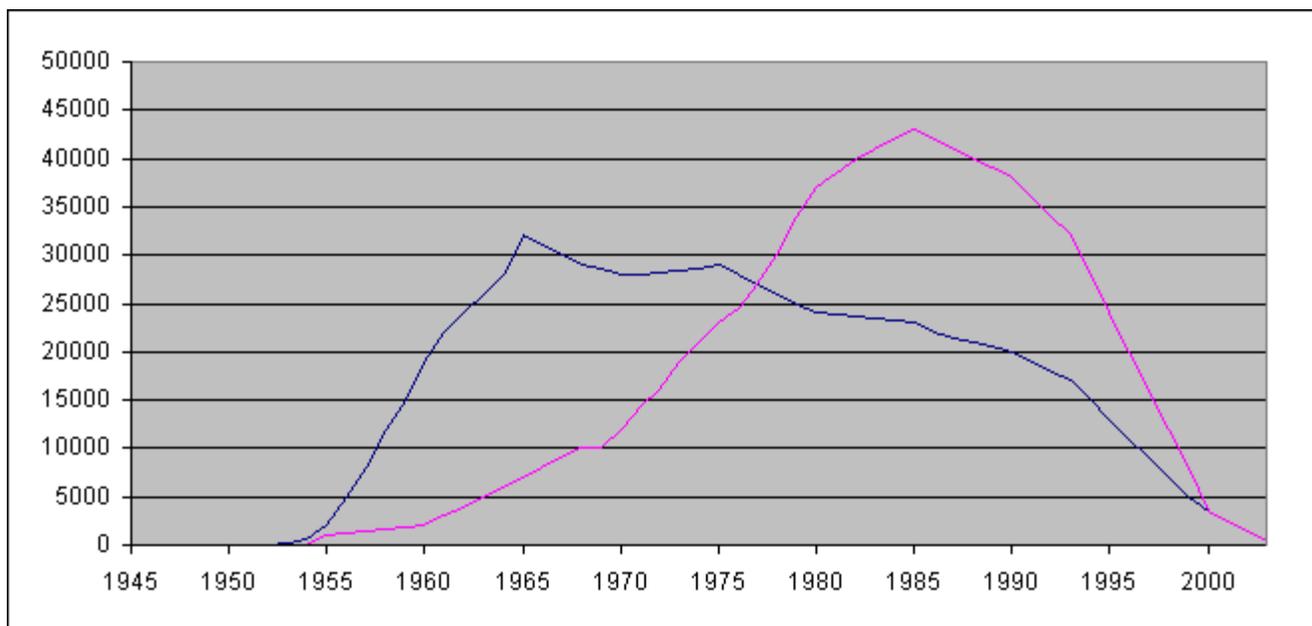


Troubled Times



Nuclear Weapons

From [Nonproliferation](#) data site.



US - blue

Russia - purple

	US	Russia
1945	1	
1946	3	1
1947	5	2
1948	7	3
1949	9	4
1950	10	5
1951	40	15
1952	80	35
1953	200	65
1954	600	85
1955	2000	1000
1956	5000	1200
1957	8000	1400
1958	12000	1600
1959	15000	1800

1960	19000	2000
1961	22000	3000
1962	24000	4000
1963	26000	5000
1964	28000	6000
1965	32000	7000
1966	31000	8000
1967	30000	9000
1968	29000	10000
1969	28500	10000
1970	28000	12000
1971	28050	14500
1972	28100	16000
1973	28300	19000
1974	28600	21000
1975	29000	23000
1976	28000	24500
1977	27000	27000
1978	26000	30000
1979	25000	34000
1980	24000	37000
1981	23900	38500
1982	23700	40000
1983	23500	41000
1984	23200	42000
1985	23000	43000
1986	22000	42000
1987	21500	41000
1988	21000	40000
1989	20500	39000
1990	20000	38000
1991	19000	36000
1992	18000	34000
1993	17000	32000
1994	15000	28000
1995	13000	24000
1996	11000	20000
1997	9000	16000
1998	7000	12000
1999	5000	8000

2000	3500	3500
2001	2500	2500
2002	1500	1500
2003	500	500



Troubled Times



Russian Subs

Nuclear Age Peace Foundation

1187 Coast Village Road, Box 123
Santa Barbara, CA 93108-2794

A former nuclear safety inspector in the defense ministry, Alexandr Nikitin raised public alarms over nuclear waste left in the Arctic by submarine accidents and haphazard disposal of spent reactor cores. "If other countries ignore this, Russia will not be the only country to suffer," he said. When one of the retired nuclear submarines begins to leak "everything will go down to the sea and it will be impossible to decontaminate the ocean. It will spread throughout the international fishing areas." His [Report](#) warns, "Without international cooperation and financing, a grave situation could arise which can be pictured as a Chernobyl in slow motion." ...

As a consequence of his attempt to help solving Russia's environmental problems, [Nikitin](#) is facing trial for high treason and disclosure of state secrets. Nikitin was arrested, jailed for 10 months and confined to St. Petersburg for the past two years. Since then, he says, the secret service has stepped up its KGB-style harassment: repeatedly slashing the tires of his car, demanding film from his wife's camera (who had taken photos of the aggressors), keeping him awake at night with continuous prank phone calls, threatening his lawyers with violence, and more. Within the next few weeks, Nikitin is likely to be tried in secret by a judge and two laymen, who will be chosen by Russia's FSB - the KGB's successor.

At this time, just over 130 nuclear powered submarines have been taken out of service and are laid up. Eighty-eight of them belong to the Northern Fleet; fifty-two still carry nuclear fuel in the reactors. Fifteen reactor compartments have been removed from the hulls and have been prepared for storage. In all probability, **around 150 nuclear submarines will be taken out of service with the Russian Navy by the year 2003.** Inactive Northern Fleet submarines are laid up at Gremikha, Severodvinsk, Vidyaevo (Olenya Bay, Sayda Bay and the Nerpa yards), Polyarny (Shkval), Sevmorput, Gadzhievo (Ara and Ura Bays) and Zapadnaya Litsa. The dismantling of first and second generation submarines has commenced, whilst the dismantling of third generation vessels is still in the planning stage.



Troubled Times



Nuclear Wastes

[CNN](#), March 16, 1999

The federal government could be compelled to start storing the nation's nuclear waste in Nevada far sooner than it is now prepared to do. The White House wants to focus money and effort on constructing a permanent disposal site, and thinks the thousands of tons of spent nuclear rods should remain at their respective power plants until a repository starts collecting waste in 2010. **But a new bill introduced by Senate Republicans would require storing the nation's nuclear waste at the Nevada Test Range by 2003, seven years before the White House wants to act.**



Troubled Times

2003



Monitoring

Energy Dept. Admits Laser Flaws

Associated Press, September 4, 1999

Energy Secretary Bill Richardson is ordering an overhaul of an ambitious \$1.2 billion program to build the world's largest laser after finding hundreds of millions of dollars in cost overruns. Richardson said he was erroneously assured as recently as June that the project at the Lawrence Livermore National Laboratory in California was on target and within budget. The massive laser, which will be housed in a facility as large as a football field and include 192 beams once completed, is a key part of a program to monitor and maintain America's nuclear warheads without actually testing them. Energy Department officials said management discovered recently may cause the project's cost to soar as much as \$350 million above the originally projected \$1.2 billion and **delay the scheduled 2003 completion date by at least two years.**

Richardson's announcement Friday came a week after an embarrassing disclosure about the former project director's academic credentials. Edward Campbell resigned the post after it became known that for years he had implied he held a doctorate in electrical engineering when he had never completed his dissertation at Princeton University. Campbell remains an employee at Livermore. Department officials said his resignation was not related directly to the cost overruns. Officials at the Lawrence Livermore National Laboratory, run by the University of California, did not immediately return telephone calls. Sharply critical of the university's handling of the laser construction, Richardson said he has ordered \$2 million of the university's \$5.6 million good-performance fee withheld because of the laser project problems.

Additional money may be held back after a more thorough investigation, he said. The university "must assume a stronger role in oversight of research and development projects" such as the laser, Richardson said. He was particularly miffed about long delays in notifying him about management and cost problems surrounding the project, formally called the National Ignition Facility. "As late as early June, ... I was informed that NIF was on cost and on schedule," Richardson said. He said he has directed an independent panel of experts to investigate what happened and recommend how to get the project back on course. Most cost overruns stem from underestimating the difficulty of assembling the high-precision optical components of the 192-beam laser system, said a senior Energy Department official who spoke on condition of anonymity. Richardson directed that a new contractor be found to carry out the final assembly and integration of the facility. The weapons lab retains overall responsibility for the finished product.

Last March, Bruce Tarter, director of the Livermore lab, assured lawmakers at a congressional budget hearing that the project was progressing without problems and said half the 192 beams would be available by 2002. **The project would be completed in 2003,** he said. "I am pleased to report that NIF construction is on budget and on schedule," Tarter testified. He asked for \$248.1 million in construction funds for the fiscal year starting Oct. 1. He said 87 percent of the \$1.2 billion total cost would be committed by the end of 2000. Since its inception in 1997, the program has been the object of seven scientific and four management reviews, the latest last spring. "Clearly we have had a major project management surprise," Richardson said.



Troubled Times



ABM System

Published in: *The Washington Post*, December 17, 1995, page C2

Off to a Bad START II

In Both the U.S. and Russia, Hopes for the Strategic Arms Pact Are Fading

By Rodney W. Jones and Yuri K. Nazarkin

Dr. Rodney W. Jones, now president of Policy Architects International, served on the U.S. START delegation. Ambassador Yuri Nazarkin headed the Soviet delegations to the START I talks and participated in the preparation of START II. Both are senior advisers to the Moscow-based START II Program of the Carnegie Endowment for International Peace.

AFTER MONTHS of delay, the Senate Foreign Relations Committee moved last week to bring the START II treaty up for a vote on the Senate floor. **The pact would reduce U.S. and Russian strategic nuclear weapons to 70 percent of Cold War levels** and also eliminate land-based multiple-warhead missiles, the most threatening of Russia's weapons. Unfortunately, while a favorable Senate vote on the treaty is virtually assured, ratification of the pact by Russia has become increasingly uncertain in recent months. As Russians go to the polls today, many will be voting for politicians who question whether START II is still in Russia's best interest.

The prime cause of Russian second thoughts, according to parliamentarians and defense experts in Moscow, is the **Republican-led effort that began this summer to mandate the deployment of a multi-site strategic anti-ballistic missile, or ABM, system by the year 2003**. This system was called for originally in the Senate version of the defense authorization bill and endorsed last week by a House-Senate conference committee. Yet it would violate the 1972 ABM Treaty, which for more than two decades has helped curtail a costly buildup of defensive nuclear weapons and countervailing offensive weapons.



Troubled Times



SAFTA

Jim Quinn, Pittsburgh's top talk-show host, Interviews John Whitley,
Editor of *The New World Order Intelligence Update*, on the "New World Order".

Quinn:

"... Yeah, right! And I'm telling you again that the Chinese have absolutely no intention of doing that and, as you've pointed out on this show, they've struck a number of alliances, one of them with the former Soviet Union, with the express purpose of the defeat of this country"

Quinn:

" ... Well, you know, the **Bilderberger meeting**, now this is supposed to be this meeting of all these people who have concocted the New World Order theory. And the reason I played that for you, John, is because I find it interesting that NBC News would use a term - "New World Order" - when it hasn't been defined for the American people. That doesn't sound like something a news agency would do unless they'd been directed to do it ..."

Whitley:

"... Uh huh. Well, you know what's even more interesting is that when the Davos meeting occurred in February ..."

Quinn:

Which meeting?

Whitley:

"Davos. It's been called "the graduate school of the elite", and it takes place always at the same small city in Switzerland - Davos, a very beautiful place. You can only get there if you're a grandee of international finance, if you're the head of an international corporation doing more than a billion dollars a year globally, you pay \$28,000 a year to go, or you're a key figure in a Western agency or government that's important to the topics under discussion. So, to cut a long story short, one of the wire services - and I was looking for it before the program - announced that this meeting was taking place, a [he laughs] - I swear they use this phrase - "**at the annual meeting of the illuminati ...**"

"... And, of course, you've got the Asian Union, the European Union, and coming into existence now, first announced at Davos, privately, is the American Union. Now we did publicly announce this one week after Davos finished, from our own sources. We went on the Internet and in our own Newsletter and we said that **it was agreed that there would be a fast-tracking of NAFTA, the North American Free Trade Agreement, plus SAFTA, the South American Free Trade Agreement, for a full union by the year 2003, ...**"



Troubled Times



Land Mines

ABC News, March 1, 1999

While pledging support for cleaning up the mines, President Clinton objects to the treaty because of tensions along the border between North and South Korea, where land mines are used in vast quantities. **Clinton has set a deadline to stop using land mines outside of the Korean peninsula by 2003.**

CNN, February 25, 1999

"We will have destroyed all our anti-personnel landmines by the end of the year 2000 whereas the **treaty sets a limit for 2003,**" Berlaud told reporters.



Troubled Times

2003



Biological Weapons

As noted by [Sightings](#), *Army To Destroy 1269 Tons Of Its Own VX Nerve Agent ... In 2003*.

Army Plans To Open Chemical Weapons Depot For Briefing (from AP)

NEWPORT, Indiana (AP) - Some 1,269 tons of an oily nerve agent so lethal a few ounces could kill millions sits in steel containers among the corn and soybean fields of western Indiana while the Army works on a plan to destroy it. Officials planned to open the Indiana site to the media today for the first time in four years so reporters could attend a briefing on the military's progress and photograph the one-ton cylinders of VX nerve agent. **The military doesn't expect to destroy any of the 1,269 tons of the lethal chemical weapon in Indiana until the fall of 2003**, because the Army must still finish a required report on how the process may affect the environment. At the same time, the Army is preparing to search for companies capable of building a disposal facility at the Newport Chemical Depot 32 miles north of Terre Haute.

“Were preparing the package to go out for proposals for companies to bid on the facility, and were working with a team comprised of state and federal regulators to write the permit applications required under environmental laws”; said Mickey Morales, a spokeswoman for the Army in Aberdeen, Md. where deadly Mustard agent is stored. VX is 10 times as lethal as the nerve gas Sarin used in a deadly attack in a Tokyo subway that killed 12 and injured 5,000 in 1995. The agent can be inhaled or absorbed in the skin and causes death by paralysis. VX, which has the appearance and consistency of mineral oil was developed in 1952 and produced in western Indiana during the 1960's as a Cold War deterrent. It has never been used in combat but is listed in the Guinness Book of Records as the deadliest substance known.



Troubled Times



Medicare

Medicare: your money? ... or your life!

A great debate currently rages over the Medicare Program. There is no question but that **the plan will go bankrupt by 2003**. And the one year increased survival that President Clinton brags about, up from 2002, is based on building **an increased mortality rate** into the projection tables! Obviously, federal health care planners know that whatever happens, future health care in the U.S. is NOT going to stay as good as it has been up to now!

Budget Deficit Facts

Entitlement's have grown rapidly. Entitlement programs combined with the government's interest payments comprised 24 percent of our budget in 1963, in 1993 they compromised 56 percent, and if present trends continue, **they will comprise 69 percent by the year 2003**.

These projected tax rates do not show that our children are going to be tax unmercifully; they show something worse - that our projected spending is unsustainable and that **our children are being given a country that will be unable to avoid bankruptcy**.



Troubled Times



Social Security

The Social Security Squeeze, June 30, 1995, *San Francisco Examiner*

The U.S. Social Security program, formally known as Old Age Supplemental and Disability Income (OASDI), and the Medicare program, formally known as Hospital Insurance (HI), is in crisis, like a car careening off the edge of a cliff. "Crisis? What crisis?" say the Democrats. "Maybe if we drive off the cliff a little slower," suggest the Republicans. Without major changes, Medicare will be bankrupt before the end of the decade, and Social Security will be bankrupt within a few decades.

Many people have suggested raising the eligibility age for Social Security and Medicare benefits. The argument is that health and life expectancy have increased since the programs' founding. Some U.S. Senators have proposed raising the eligibility age from the current 65 to 70. In fact, **the eligibility age is already scheduled to go up to 67 gradually from the year 2003** to the year 2025. This minor tinkering will delay the collapse of the government-run pyramid scheme, but will not affect the underlying forces pushing the programs to bankruptcy.



Troubled Times



Balanced Budget

Entitlements & Handouts: A Nation of Addicts

Imagine yourself a half million dollars in debt. You don't have the option of declaring bankruptcy. What do you do? ... At this rate, **by the year 2003, three-quarters of all federal spending will be "mandatory"** - can't cut it. Yet we'll be much deeper in debt. So guess what's going to happen to the other one-quarter.

Howard Phillips Interview on the nationally syndicated *Ollie North Show* on the **Common Sense Radio Network** on September 27, 1996

... But here's going to be the trigger, Ollie. We're headed for an economic collapse of historic proportions. Last year, we paid \$345 billion dollars in interest on a \$5 trillion dollar debt.

Neither party is prepared to even roll back spending, even freeze spending, let alone to slash it. **They talk about balancing the budget in the year 2003 and they balance it by stealing money every year from the Social Security trust fund and raising revenues, increasing the amount.** The dollar has been propped up because it is the reserve currency of the world. Central banks all over the world treat the dollar as if it were almost gold. Drug dealers in Columbia, black marketeers in Moscow, have dollars under their pillow because they like bucks better than they like rubles or pesos.

But when the Euro (dollar) comes on line, if the central banks drop the dollar, all of those extra dollars the Fed has printed are coming home. We're going to have a massive hyper-inflationary depression and the very legitimacy of our political systems is going to be at risk. There's going to be big change, and people are going to be looking for something new.



Troubled Times



NOx Compliance

An Evaluation of the Proposed 37-State Seasonal NOx Control Program - Compliances Costs and Issues

Prepared for: **The Center for Energy and Economic Development**

Midwest Ozone Group National Mining Association

Prepared by: Thomas A. Hewson Jr., John B. Stamberg

Energy Ventures Analysis

1901 North Moore Street, Suite 1200

Arlington, Virginia 22209

703-276-8900

Abstract

The Ozone Transport Assessment Group (OTAG) and the U. S. Environmental Protection Agency (EPA) are considering a proposal to set very strict NOx emission limits on all major stationary sources in a 37-state region. The aim of this proposal is to improve air quality levels entering into eastern ozone non-attainment areas by reducing stationary source NOx emissions in the 37-state areas. Such reductions would be an additional two million tons per year below the requirements of the 1990 Clean Air Act, Title IV.

Under the proposal, stationary sources could meet either a) a 75% reduction from 1990 NOx levels or b) 0.15 lbs NOx/MMBtu during the May 1-September 30 "ozone season" beginning in 2003.

Hybrid Electric Vehicle Program

[CARB Mandate](#) (In Relation to HEVs)

03/29/96 - CARB Votes to Delay ZEV Requirement, Sacramento - **As expected, the California Air Resources Board (CARB) voted to delay its zero-emission vehicle (ZEV) requirements until the year 2003.**



Troubled Times



Alaska Coffers

In our local paper, *Daily News-Miner*, August 31, 1999, they are running a six part story concerning Alaska's permanent fund program and whether the fund should be used to run government. To make a long story short, Alaska gives all its residents a dividend each year as a share of the oil wealth from the Alaskan oil pipeline. The article is called *Yes or no: Which is best for Alaska?* (front page). On September 14th, we go into vote whether the state can use some of this money (and lower our dividends) to pay for government. A few small parts of the story talk about Alaska's budget: *A NO vote would send lawmakers back to the committee rooms to try and fill the state's \$1 billion budget hole and Until lawmakers find a solution, they will draw down the Constitutional Budget Reserve to plug the hole. That practice will come to an abrupt halt in about 2003, when the account empties.*

Offered by [Clipper](#).



Troubled Times



Deregulation

Featured Topic: **By the Year 2003...**

In the fast-approaching era of deregulation, the electric utility industry will no longer be a vertically integrated industry as it is today. Agreement among industry analysts is almost universal that the most likely scenario to develop depicts three distinct business types: a generation business, a transmission business, and a distribution business. The players left within the industry will participate in one or more of these three business types.

Every utility that exists in today's regulated, monopolistic environment has a choice to make. The choice is about the market in which it wants to be a player, as well as which marketing strategy it wants to implement to be successful in its chosen market. And the need to make that choice is immediate. If anything, change is coming at us much faster than anyone believed it would even as recently as 18 months ago. **The pieces to this puzzle will be firmly in place well before the year 2003.**



Troubled Times

2003



Fuel Cells

Of the nation's 1,000 or so rural electric cooperatives to enter into a fuel cell distribution agreement, **Flint Energies** expects to begin selling residential systems in 2001, at a price of about \$8,500. **But, like others involved in the industry, Flint predicts that price will drop to less than \$4,000 by 2003.**



Troubled Times



IRIS

Astro-F (IRIS; Infrared Imaging Surveyor)

The Infrared Imaging Surveyor (IRIS) is the second infrared astronomy mission of the Institute of Space and Astronautical Science (ISAS). **IRIS is dedicated to infrared sky survey with much better sensitivity than that of IRAS, and is expected to add significant information on many important astrophysical problems** (e.g., evolution of galaxies, formation of stars and planets, and **brown dwarfs** and their relation to dark matter).

IRIS has a 70 cm telescope cooled to 6 K with super-fluid liquid helium and Stirling-cycle coolers. Two focal-plane instruments are installed. One is the Far-Infrared Surveyor (FIS) which will survey the entire sky in the wavelength range from 50 to 200 micron with angular resolutions of 30 - 50 arcsec. The other focal-plane instrument is the Infrared Camera (IRC). It employs large-format detector arrays and will take deep images of selected sky regions in the near and mid infrared range. The field of view of the IRC is 10 arcmin and the spatial resolution is approximately 2 arcsec.

IRIS was officially given a new start as the ISAS's 21st science mission "ASTRO-F" in April 1997. **It is scheduled to be launched in February, 2003** by the ISAS M-V rocket into a sun-synchronous polar orbit at an altitude of 750 km.



Troubled Times

2003

Japan Finances

Reforming Japan's Public Finance Structure **By the Year 2003**
Prime Minister Calls for Cooperation in Implementing "Five Principles"

On March 25 [1997] Japanese Prime Minister Ryutaro Hashimoto, acting in his capacity as Liberal Democratic Party President, attended a combined meeting of the Party's General Council, Policy Deliberation Commission, Sectional Meeting Chairmen, Research Commission Chairmen, Special Committee Chairmen, and Administrative Reform Promotion Headquarters Members. There, the Prime Minister set forth "Five Principles" for restructuring the public finance system, appealing for support from the Party. The Five Principles are guidelines which had already been acknowledged by the government and three ruling-coalition parties at a Public Finance Structural Reform Meeting. Among other decisions, **an immediate target date of the year 2003 was set for achieving structural reform.** The prime minister spoke strongly of the necessity of carrying out public finance structure reform. While **acknowledging that "these reforms will bring some hardship;** without the understanding of the Japanese people, we will not be able to carry them forward," he stressed that "reform is absolutely necessary, and so **we cannot waver in our grappling with reform issues, or put off acting until another time out of fear of a degree of pain that will probably ensue.**"



Troubled Times



Yangtze Dam

Li Peng touts Three Gorges Dam amid China floods

Reuters, September 03, 1998

Li Peng, China's leading proponent of the massive Three Gorges Dam project along the Yangtze river, said that the dam was necessary for flood control, a state-run news agency reported Wednesday. **The project would play "a major role in reducing floods on the Yangtze by the year 2003,"** parliamentary chief **Li reportedly told a group of hydrologists.** The statements marked the dam's first public defense by Li, widely seen as the project's founder, since China's worst floods in nearly half a decade spread destruction along the Yangtze river valley this summer. Critics of the project doubt the government's flood prevention claims, saying the scheme posed significant environmental dangers.



Troubled Times

2003



Framework Program

The 5. framework programme of the European Commission was foreseen in the period from 2000-2005. Now, the calls for proposals are limited to the period from 2000-2002. The INCO program of the 4. framework of European Commission research is collaboration with third countries, for instance Latin America. The funds for this program are meant for joint research of European science teams. The guide lines are negotiated by the European parliament with the European Commission. The four framework projects are funded in the period 1994-1998 with altogether 12.3 billion Euro (about 11.2 billion US \$). Topics reach from non-nuclear energy, nuclear fission and fusion to communication biotechnology, industry and environment research. The budget of the 5. framework (1999-2002) is 14.9 billion Euro (approximately the annual budget of NASA). The program is thought to support additional research activities in Europe, and facilitate international collaboration.



Troubled Times



Nuclear Plants

Germany's Trittin Wants Speedy Nuclear Shutdown

Fox News, August 21, 1999

German Environment Minister Juergen Trittin wants to **shut six nuclear power plants by 2003**, the news magazine Spiegel said on Saturday. The remaining 13 nuclear reactors would be phased out by 2025, Spiegel said, citing internal documents from the Environment Ministry. The ministry declined to comment on the report. German Chancellor Gerhard Schroeder's red-green coalition has pledged to phase out nuclear power, but the pace at which the shutdown takes place has driven a wedge between Schroeder's Social Democrats and their ecologist Greens junior coalition partners. Trittin, one of three Greens in the cabinet, is in charge of the shutdown and he wants a speedy end to nuclear power.

The big utilities, which include RWE AG, VEBA AG, Viag AG and Energie Baden-Wuerttemberg, have threatened to sue for damages if they lose any money because of the shutdown. Economics Minister Werner Mueller, who was formerly a senior executive in the nuclear industry, has come up with a plan to limit the operating life of nuclear plants to 35 years. **Under the Mueller plan, the first German nuclear plant would go offline in 2003.** Spiegel said the Environment Ministry's calculations showed that nuclear plant operators recouped their investments within 15 to 20 years. The 25-year timeframe will allow the utilities to cover any losses from shutting down the plants, Spiegel reported. Nuclear power generates about one third of the country's electricity.



Troubled Times



Search and Rescue

FOR IMMEDIATE RELEASE

9/14/95

CONTACT: Patricia Viets

(301) 457-5005

U.S. Signs International Agreement for Search and Rescue

This agreement underscores our commitment to our mission of saving lives and property," said D. James Baker, Under Secretary of Commerce for Oceans and Atmosphere and administrator of the National Oceanic and Atmospheric Administration (NOAA), a Commerce Department agency. Baker signed the agreement on behalf of the United States. **The agreement provides for continued operation of the program through the year 2003**, with automatic five-year extensions



Troubled Times



Firearms Registration

Canadian Registration of Firearms

By the year **2003**, every legal firearm in Canada will be registered or recorded. That means every firearm in the possession of an individual or an organization, including museums, government departments and police, must be part of the national firearms registry



Troubled Times



Hoagland

The only question left now is what to do about it. We believe that the secrecy and manipulation on the part of NASA around these and other such plans stems from a couple of mistaken beliefs. First, we suspect that the insiders are convinced that they have time, maybe even until 2012 when the Mayan calendar runs out, to make their getaway. For a variety of reasons we shall make clear in the coming weeks, we think that **if a global catastrophe is in the making it will be on a much shorter time frame than that, as early as 2003** (excluding any "designer comets" ala OMGTKS). The other core problem is that "they" seem to be convinced that nothing can stop the coming disruption. We believe that this assumption too is in error, despite what NASA/JPL may have deciphered either from Earth based discoveries (like the recently uncovered "Tomb of Osiris") or from input by "outside agencies." In the coming weeks we will make clear just why they are wrong, and what can be done about it. Stay tuned.

The Enterprise Mission

P. O. Box 1130
Placitas NM 87043



Troubled Times



Mayan Calendar

Last summer I watched a Montel Williams show rerun with a noted California psychic Sylvia Brown as the guest. It was taped last January. In the midst of giving predictions for 1997, she mentioned that 2000 AD actually took place six years ago (1991?). Therefore:

Gregorian Mayan

1991	2000
1992	2001
1993	2002
1994	2003
1995	2004
1996	2005
1997	2006 (now)
1998	2007
1999	2008
2000	2009
2001	2010
2002	2011
2003	2012 AD

In sum, 2003 AD (Gregorian calendar) translates into the Mayan calendar's 2012 AD. Remember that the Mayan calendar ends Dec 21(?), 2012, completing a cycle (or supposedly signaling a catastrophic end of the world as we know it).

Offered by [Di](#).



Troubled Times



Bakun Analysis

If you know about Mayans, the year 0 is -3122. For most of the people this is -3114, but with the Jesus birth problem, I think this -3122. For the value of the "Baktun", this is 144000, "Katun" 7200, "Tun" 360, "Uinal" 20 and "Kin" 1. If you use 13.0.0.0 (Mayan great cycle), that means: 13 * 144000 (first number in the sequence is Baktun) you obtain: 1 872 000 days for the great cycle, but this a Mayan days count. If you convert this number for our number of days in a year: 1 872 000 / 365,2421896698 you get 5125.36... years. So -3122 + 5125.36... equal to 2003. Moreover, if you convert with 364.58333333333333 days, this number of days obtain by 9 450 000 / 25920 (I don't know the term in english, but in french this "Précession des Équinoxes", the great cycle of earth around the Poles) you get 5134 years: -3122 + 5134 = 2012. 2012 is the end of the Mayan calendar in most of the books...

Offered by [Svarun](#).

Mayan Sequences	# of days	Equal to	Années à utilisées:		360.000000000	Ancient Base	
Baktun	144000	400 Tun			364.583333333	Precessionnal Calculation	
Katun	7200	20 Tun			365.242189669	Today	
Tun	360	1 year			360	Mayan	
Uinal	20	1 month					
kin	1	1 day					
Enter a Date:		Mayan year 0:	-3122				
1-	13	1,872,000.00					
2-	0	0.00					
3-	0	0.00					
4-	0	0.00		Prévision:	2003/05/14	2012/08/17	
5-	0	0.00					
	Total of days:	1,872,000.00					
	Total of years:	5200	Ancient years	Année Finale:	2078		2012/01/01
		5134.62857142858	Precessionnals years		2012.628571	229.1666667	2012/08/17
		5125.366271874	normal years		2003.366272	133.7779423	2003/01/01
		5200	Mayans years		2078		2003/05/14
Enter number of days	2,268,000,000	Transformation Days/Tzolkin			Nb. De précessions	240	
	15,750.00	Baktun			d'équinoxes dans ce		
	315,000.00	Katun			nombre de jours:		
	6,300,000.00	Tun			(9 450 000 jours)		
	113,400,000.00	Uinal					
	2,268,000,000.00	kin					



Troubled Times

2003



Great Pyramid Dateline

Another book I dusted off is called *The Great Pyramid Decoded* by Peter Lemesurier (1989), ISBN is 1-85230-088-4 and is published by Element Books Limited, Longmead, Shaftesbury, Dorset. Its a stunning book, which gives about as accurate an account of the Pyramids of Giza as you could imagine, with hundreds of engineering diagrams and perhaps thousands of measurements. Its very, very detailed and thoroughly researched but as well as that the author is a very open minded and educated man whose own belief concurs with the views of Erik von Daniken and Edgar Cayce as well as many Mayan and Krishna texts.

He has focused upon many aspects such as certain stones cut with 'laser precision' to 1000th of an inch accuracy, that the Main Pyramid is exactly aligned to the earth's four cardinal points, that the main unit of measurement used by the designer is exactly 10 millionths of the Earth's mean Polar radius, and that the pyramid's designed base-square has sides measuring 365.242, 365.256, and 365.259 of these same units which represent the Earth's Solar Tropical, sidereal and anomalistic orbits. The most interesting thing in the Book I found though, was a very spooky and chillingly accurate series of datelines which seem to chart the progress of certain aspects of human existence. **The main thing is that everything seems to 'drop off the scale' so to speak around the year 2004 (though he states there is a +/- 3 year error allowance)**

The 'Achievements of Civilization Line' drops at 1911, recovers before dropping again at 1939, recovers but drops again but less dramatically in 1967 then a bit more at 1980 and then **plummets at 2004**. The 'Progress of materialist Humanity' Line stays fairly flat, just bobbing up and down a little all century **until it hits 2004 and totally drops down off the scale** in an instant! I'm still unsure as to how he determined which line represents what or how he arrived at the calendar but I confess to only having a fleeting look at the text up to now, I'll study it further in the coming months.

Offered by [Paul](#).



Troubled Times



Russian Rumors

To: pt50@pearl.mhtc.net
From: [censored]
Date: Tue, 19 May 98 15:45:58 +0400

Dear Pat,

Concerning your question on "2003", unfortunately, I have a little to add. I heard about possible cataclysms and even "the End of the World" at around **2003** about several years ago from Russian "yellow" mass-media. As I recall, it quoted some astrology-like or even occult-like sources. There were also some scientific-oriented comments that the year **2003 is right after the peak of solar activity, which is predicted to be extremely large**. I don't remember details, but I just remember the date "about 2003".

Poka!



Troubled Times



Ghostwolf Prophecy

On 4 Oct 1997 00:49:00 -0700, in alt.fan.art-bell [Peter Petrisko](#) wrote:

Originally broadcast 7/30/97, rebroadcast 10/4/97. These prophecies / predictions were put forth by Robert Ghostwolf. I post them so others can follow / watch for these prophecies, NOT because I personally believe or accept them.

THIS WINTER (97 / 98)

- a very cold winter (record setting low temps)
- lots of power failures

WITHIN THE NEXT 4 SEASONS (YEARS)

- major crop failures (due to crops blooming / maturing too early)
- new diseases / viruses (old ones that are no longer cured by treatment(s) that have worked in the past, tho this is already happening.)
- much more open UFO / ET appearances
- US gov't intelligence organizations(s) move to the Phx. area (from D.C.)

AFTER **2003**

- **magnetic pole SHIFT**
- followed by 3 to **3 1/2 days of darkness**

Posted on Art Bell's Show following a June, 1998 appearance:

GW: Ok. The water will become more valuable than gold, so find a deep-water source." You're going to have to find water that comes from deep rocks. You're going to have to find water that comes from granite, because all the surface water will be tainted. That's why they say, "Go find deep-rock water." Water, as we know right now, is one of the moving elements in all real estate development throughout the U.S. We are running out of water. The farms are running out of water. The seas are running out of water. The West Coast will have more volcanic activity, through the year 2002, and several months of near-darkness, so we'll go into, very much like, the Alaskan winters. And, these prophecies that I'm speaking about ... I'd like to go into a point of clarity. **We're talking about what will happen between now and 2003.**



Troubled Times



Prelude

Our watches will not freeze as the planet slows. The assumption is that atomic time will continue to be adjusted to be accurate to the earth's rotation so the navigational charts, etc., will continue to work. This is currently done with leap seconds. Occasionally a second is added or subtracted to make the 24 hour atomic time sync with the measured rotation of the earth, to make the sun-to-sun crossing equal 24 hours. What we expect is the government will stop reporting when these leap seconds occur. When the time comes to avoid panic they will not be able to afford to tell the whole truth so it will be hidden. Probably when they start to get too numerous. At this point we need to have proven time keeping clocks, whose accuracy we are sure of, so that we can measure the slowing. It takes a year or two of accurate comparison to atomic time measurements to understand how inaccurate one's personal clocks are at measuring time.

As the planet slows down more and more seconds will need to be added to the atomic time for it to sync with rotation. This should become a measurable slowing of atomic time as compared to our personal clock times. What we expect to see when slowing of the planet's rotation starts is that our personal clocks and watches will have the appearance of running faster and faster as the atomic clocks are adjusted to be slower and slower. I think we will best see this slowing show up as an apparent speeding up of our battery operated LED digital clocks.

Offered by [Mike](#).



Troubled Times



Seconds/Day

I have used [USNO](#) and [National Research Council Canada](#) clocks for comparison to my computer clock and to each other.

```
April 23 8 am - USNO and CAN are even with my computer clock.
April 24 8 am - USNO and CAN are 4 seconds behind computer clock.
April 25 8 am - USNO and CAN are 9 seconds behind computer clock.
April 26 8 AM - USNO and CAN are 11 seconds behind computer clock.
April 27 8 AM - USNO and CAN are 12 seconds behind computer clock.
April 28 8 AM - USNO 19 seconds behind computer clock,
                CAN Clock 17 seconds behind computer clock.
April 29 8 AM - USNO clock 22 seconds behind computer clock,
                CAN clock 19 seconds behind computer clock.
April 30 8 AM - USNO clock 28 seconds behind computer clock,
                CAN clock 24 seconds behind computer clock.
May 1 8 AM - USNO clock 34 seconds behind computer clock,
                CAN clock 30 seconds behind computer clock.
May 2 8 AM - USNO clock 40 seconds behind computer clock,
                CAN clock 35 seconds behind computer clock.
May 3 8 AM - USNO clock 46 seconds behind computer clock,
                CAN clock 40 seconds behind computer clock.
May 4 8 AM - USNO clock 48 seconds behind computer clock,
                CAN clock 42 seconds behind computer clock.
```

Offered by [J. William Dell](#).

My computer clock has gained 11 seconds over USNO time since April 21. I'm basically just watching for any super big jumps now as it has been steadily gaining almost a second a day.

Offered by [Steve](#).



Troubled Times



Gone Too Far

Approximately three months ago I decided to check your statements regarding atomic clocks being slowed down to fool the masses. I purchased a cheap quartz manual clock at the local store (\$10) and set the time on it to match the atomic clock in Boulder, CO. I then used three different brand cell phones connected to different providers (ATT, Sprint, etc...) and set their time to match my cheap quartz clock. The cell phones options to auto-update time were not set up to this point and therefore, never changed once set. I checked the accuracy of all the clocks by leaving this option off at first and verifying they all stayed within a couple of seconds of each other over a one month period. However, after setting the auto-update option to "ON" on the cell phones, all hell broke loose so to speak. All the cell phones regularly update the time every morning and sometimes two or three times per day. The phones each seem to have their own quirks; one will suddenly change to military time and then back an hour later.

During the time period a couple of weeks ago when you stated the Navy had stopped playing games and reversed the clocks, I too noticed my four test clocks suddenly were all in sync for about a two week period (roughly April 5 to April 18). Before and after that, up to this date, the clocks are increasingly off in the direction you indicate per a planet slow-down (manual clock ahead of the cell phone clocks). Strangely, the clocks have been varying less over the last couple of weeks and then more at times. They are definitely off. Just not consistently increasing. At the extreme point approximately one month ago, the clocks registered a minute and a half difference from the manual clock. That is too much difference to be accounted for. The clocks are currently 12 seconds difference from the manual clock. Resetting all clocks was done one week ago (May 3).

I can testify that something or somebody is fooling with the clocks big time.

Offered by [Kent](#).

Where in the past my computer clock has been gaining time compared to Atomic clocks, May 9 reading shows USNO/CAN *gaining* time against my clock (9-10 seconds worth) compared to 2-5 seconds per 24 hours *loss* in past readings. Seconds shown per clock is time behind my computer clock at daily observation.

```

May 6
  2 - 54 sec
  4 - 54 sec
May 7
  1 - 58 sec
  2 - 58 sec
  3 - 58 sec
  4 - 58 sec
  Watched clocks loss 4 seconds to computer clock

May 8
  1 - 64 sec
  2 - 64 sec
  3 - 64 sec
  4 - 64 sec
  Watched clocks loss 6 seconds to computer clock

May 9
  1 - 55 sec
  2 - 54 sec
  3 - 55 sec
  4 - 54 sec
  Watched clocks gain 9 to 10 seconds to computer clock
    
```

Internet Clocks used:

USNO

Clock 1 [http://www.time.gov/?](http://www.time.gov/)

Clock 2 <http://tycho.usno.navy.mil/cgi-bin/timer.pl>

National Research Council Canada

Clock 3 http://time5.nrc.ca/webclock_e.shtml

Clock 4 <http://time5.nrc.ca/cesiumtop.shtml>

Offered by [JWilliam](#).



Troubled Times



Old Data

I have contacted the source of the old datas, the observatory of the University of Bordeaux. My contact there affirms the 2003 datas have been loaded on their web site in 1995 and he's waiting for the 2004-2007 datas which are to be loaded soon.

Offered by [H.](#)



Troubled Times



Lost Minutes

The figures I use are old tables giving sun and moon risings. These are old documents I loaded from the net at that time. I compare them with official figures given on French newspapers, etc. The old figures are without shifts [changes by the Navy] for this period. A simple comparison between both sources seems to show a 9-minute shift. As I am concerned, I believe these [recent] time shifts [changes by the Navy] are not real but differences due to human actions to hide evidence [of slowing]. The old tables (assumed to be true and shift-free) I use for my comparisons are following.

Offered by [H.](#)



Troubled Times



Moon Phases

Warning: the figures below are for Bordeaux so please add time shift between France and the States. Translation example:

Lune Fevrier 2003 = Moon February 2003.

The city of Bordeaux is latitude 44° 50' 7" N, longitude 0° 31' 39" W, Greenwich. To read the data table on Moon rising, secured from the web site for Bordeaux, translation example:

Date	Rise	Passage	Set
Samedi 1	8h 49m 40s	13h 24m 30s	18h 5m 55s

Offered by [H.](#)

Heures de lever et coucher de la LUNE en temps légal à BORDEAUX
 (latitude 44° 50' 7" N, longitude 0° 31' 39" W Greenwich)
 heure été : Dimanche 30 Mars 2003
 heure hiver : Dimanche 26 Octobre 2003

	Lever	Passage	Coucher
Samedi 1	8h 49m 40s	13h 24m 30s	18h 5m 55s
Dimanche 2	9h 21m 39s	14h 14m 35s	19h 15m 45s
Lundi 3	9h 47m 38s	15h 0m 57s	20h 23m 35s
Mardi 4	10h 9m 41s	15h 44m 18s	21h 29m 2s
Mercredi 5	10h 29m 23s	16h 25m 36s	22h 32m 34s
Jeudi 6	10h 48m 4s	17h 5m 53s	23h 35m 2s
Vendredi 7	11h 6m 51s	17h 46m 13s	-- -- --
Samedi 8	11h 26m 53s	18h 27m 37s	0h 37m 23s
Dimanche 9	11h 49m 28s	19h 11m 1s	1h 40m 24s
Lundi 10	12h 16m 11s	19h 57m 17s	2h 44m 27s
Mardi 11	12h 49m 3s	20h 46m 56s	3h 49m 7s
Mercredi 12	13h 30m 18s	21h 40m 0s	4h 52m 54s
Jeudi 13	14h 21m 53s	22h 35m 44s	5h 53m 11s
Vendredi 14	15h 24m 14s	23h 32m 45s	6h 47m 6s
Samedi 15	16h 35m 28s	-- -- --	7h 32m 57s
Dimanche 16	17h 52m 6s	0h 29m 25s	8h 10m 54s
Lundi 17	19h 10m 47s	1h 24m 31s	8h 42m 25s
Mardi 18	20h 29m 33s	2h 17m 36s	9h 9m 30s
Mercredi 19	21h 47m 49s	3h 8m 57s	9h 33m 59s
Jeudi 20	23h 5m 51s	3h 59m 23s	9h 57m 36s
Vendredi 21	-- -- --	4h 49m 56s	10h 21m 58s
Samedi 22	0h 24m 2s	5h 41m 39s	10h 48m 49s
Dimanche 23	1h 42m 4s	6h 35m 19s	11h 20m 6s
Lundi 24	2h 58m 23s	7h 31m 11s	11h 58m 2s
Mardi 25	4h 10m 2s	8h 28m 45s	12h 44m 34s
Mercredi 26	5h 13m 30s	9h 26m 46s	13h 40m 22s
Jeudi 27	6h 6m 29s	10h 23m 33s	14h 43m 58s
Vendredi 28	6h 49m 0s	11h 17m 38s	15h 52m 6s



Troubled Times



Sun Rise/Set

Warning: the figures below are for Bordeaux so please add time shift between France and the States. Translation example:

Soleil Fevrier 2003 = Sun February 2003

The city of Bordeaux is latitude 44° 50' 7" N, longitude 0° 31' 39" W, Greenwich. To read the data table on Sun rise/set, secured from the web site for Bordeaux, translation example:

Date	Rise	Passage	Set
Samedi 1	8h 23m 32s	13h 15m 39s	18h 8m 22s

Offered by [H.](#)

Heures de lever et coucher du SOLEIL en temps légal à BORDEAUX
 (latitude 44° 50' 7" N, longitude 0° 31' 39" W Greenwich)
 heure été : Dimanche 30 Mars 2003
 heure hiver : Dimanche 26 Octobre 2003

	Lever	Passage	Coucher
Samedi 1	8h 23m 32s	13h 15m 39s	18h 8m 22s
Dimanche 2	8h 22m 22s	13h 15m 47s	18h 9m 48s
Lundi 3	8h 21m 11s	13h 15m 54s	18h 11m 13s
Mardi 4	8h 19m 58s	13h 16m 0s	18h 12m 39s
Mercredi 5	8h 18m 43s	13h 16m 5s	18h 14m 5s
Jeudi 6	8h 17m 27s	13h 16m 10s	18h 15m 31s
Vendredi 7	8h 16m 9s	13h 16m 13s	18h 16m 57s
Samedi 8	8h 14m 49s	13h 16m 16s	18h 18m 23s
Dimanche 9	8h 13m 28s	13h 16m 18s	18h 19m 49s
Lundi 10	8h 12m 6s	13h 16m 20s	18h 21m 15s
Mardi 11	8h 10m 42s	13h 16m 20s	18h 22m 40s
Mercredi 12	8h 9m 16s	13h 16m 20s	18h 24m 6s
Jeudi 13	8h 7m 49s	13h 16m 19s	18h 25m 31s
Vendredi 14	8h 6m 21s	13h 16m 18s	18h 26m 56s
Samedi 15	8h 4m 52s	13h 16m 15s	18h 28m 21s
Dimanche 16	8h 3m 21s	13h 16m 12s	18h 29m 46s
Lundi 17	8h 1m 49s	13h 16m 8s	18h 31m 11s
Mardi 18	8h 0m 16s	13h 16m 4s	18h 32m 35s
Mercredi 19	7h 58m 41s	13h 15m 58s	18h 33m 59s
Jeudi 20	7h 57m 6s	13h 15m 52s	18h 35m 23s
Vendredi 21	7h 55m 30s	13h 15m 46s	18h 36m 47s
Samedi 22	7h 53m 52s	13h 15m 39s	18h 38m 10s
Dimanche 23	7h 52m 14s	13h 15m 31s	18h 39m 33s
Lundi 24	7h 50m 34s	13h 15m 22s	18h 40m 56s
Mardi 25	7h 48m 54s	13h 15m 13s	18h 42m 18s
Mercredi 26	7h 47m 13s	13h 15m 4s	18h 43m 41s
Jeudi 27	7h 45m 31s	13h 14m 54s	18h 45m 3s
Vendredi 28	7h 43m 48s	13h 14m 43s	18h 46m 24s



Troubled Times



Star Position

I continue to examine real moon phases and star movement shifts with great interest and am giving you my results. For the moment, I notice + or - 10° shift between expected star positions, corresponding to 24 minutes ($180^\circ = 12$ hours). But this figure is not totally sure because I have no real tool for mesures. You can use the North Star as fix point and a visual hypothetic line rising from it and directed to the North Pole. Then stay at the same place and look at a big star position compared with the line position. With software, you may see where the star is expected to be at the time of your observation and compare the both. Then 1° shift is equal to 2.4 minutes. I think it's a good and easy way to measure time shift with stars.

Offered by [H.](#)



Troubled Times



Clock Comparisons

As clocks are concerned, I note an increasing shift between standard and radio guided [atomic, changed automatically by the Navy] clocks. My method is simple. I set 3 normal digital clocks equal to a radio guided [atomic, changed automatically by the Navy] clock. Few days later, the 3 standard clocks stay at the same hour/min/sec time but are not in synch with the radio guided one. For now, we loose almost 1 second per day, which is relatively important, I think.

Offered by [H.](#)



Troubled Times



Sprint

As noted during the [Mar 22, 2003](#) Live ZetaTalk IRC Session:

SIGNS of the TIMES #2: Slowing Rotation CONFIRMED

I started a few weeks ago my observations to try and determine if we were gaining time as alleged. Results: Comparing a high precision, multi jewel, 8 day, manual clock designed for Russian nuclear submarines against a radio 'sync' battery clock that adjusts to the governments atomic clock(s), we are absolutely gaining time daily, it is easy to measure and observe. A close friend whom works for a very large environmental consultant company, has reluctantly stated this week that they can no longer keep their flow meters in sync with the atomic clock as required, they are perplexed. My home telephone voicemail clock which is maintained by my local phone company (Sprint) and which I signed up for a few years ago is now off 10 full minutes. And also, the nearby competing phone company's (Cinn. Bell) internal phone voicemail clock is off by 7 minutes, per my discussion with one of their System Analyst.

SIGNS of the TIMES #3: Slowing Rotation COVERUP

From a British website news page: "Never set your watch again! Does anyone really know what time it is? Well, the U.S. Government wants to, so they created the National Institute of Standards and Technology, a component of the U.S. Department of Commerce. The Time and Frequency Division, located in Boulder, Colorado, maintains the F-1 Fountain Atomic Clock, the nation's standard of time. This clock neither gains nor loses a second over a one million year period. This clock is used to create an international time scale, which NIST distributes through its radio stations.



Troubled Times



Measurable

When daylight savings time ended on the 26 Oct 97, while changing my clocks, I suddenly realized, that my digital clocks are now running about 1 minute faster over a 6 month period of time as compared to 4-5 years ago. One of my watches I have had almost 10 years. For the first 5 years it was about 20 to 30 sec fast each six months now it's 1 min 33 sec fast over the last six months. But then my second watch is showing the same extra additional approximately 1 min fast. I began to question could a battery operated digital quartz watch run faster with time (which I doubt), was this a battery worn out phenomena (didn't happen in the past years) or was I beginning to measure the gradual slowing of the planet. I began to think back for the last few years, - remembered each year the majority of my clocks were running fast.

I then realized that if the slow down of the earth is causing this extra 1 minute then we have the capability of tracking and measuring earth rotation speed. If my 1 minute is somewhat accurate then the time loss is now big enough to start measuring. Thinking the government may try to hide this I began to think of how we could do our own crude but effective measurements. The following is a possibility - tell me what you think.

Summary: We would use the best clocks and watches that we all have available to each of us now. We would keep track of comparing standard time to our individual clock time over the next 3-6 months to establish a base line. Continue to take measurements at approximate 3-6 month intervals for now and shorter intervals as we get closer to PS. Collect and average then publish the results in TT at periodic times. The first time to publish would be 6 months to a year from now.

Offered by [Mike](#).



Troubled Times



Recorded

From: Andrew Yee <ayee@nova.astro.utoronto.ca>

Newsgroups: sci.astro

Date: 14. november 1997 5:48

Subject: *The Earth's mysterious inner core is turning independently, but more slowly than previously thought (Forwarded)*

Office of News and Information, University of Washington

FOR IMMEDIATE RELEASE

From: David Brand, dbrand@u.washington.edu

(206) 543-2580

DATE: Nov. 13, 1997

The Earth's mysterious inner core is turning independently, but more slowly than previously thought. The proposition that the Earth's little understood inner core is a frozen yet white hot globe of curiously laid out iron crystals, spinning independently of the rest of the planet, has been given a boost by a University of Washington researcher. But Kenneth Creager, an associate professor of geophysics, has also found that the inner core, which has a diameter three-quarters that of the moon, is not as agile as thought. Its rotation rate, relative to the Earth's two outer layers, the crust and the mantle, is four to 12 times slower than previously estimated. Creager's latest findings on the behavior and structure of the most hidden and enigmatic part of the planet are being published in tomorrow's (Nov. 14) edition of *Science*.

The new data, he says, is "clear confirmation" that the inner core is rotating at a faster rate than the rest of the planet. "But we have only a snapshot in time and cannot say how fast the inner core was spinning millions or even hundreds of years ago," Creager says. The inner core's independent rotation is thought to be caused by a process called convection in the molten iron outer core that surrounds the inner core and that produces the Earth's magnetic field. This process is driven in part by the energy transferred as the entire core loses heat to the mantle.

Last year Xiaodong Song and Paul Richards of Lamont-Doherty Earth Observatory in Palisades, N.Y., analyzed travel times of waves generated from South Atlantic earthquakes and recorded over a period of 30 years by a seismographic station in Alaska. [They found that the time it takes these waves to pass through the Earth, including the inner core, gradually decreased by three-tenths of a second between the 1960s and the 1990s.](#) The complex explanation for this, says Creager, is that the solid inner core is anisotropic: its iron crystals are aligned in such a way that they produce a grain like that of wood. Seismic waves flow swiftly with the grain, but slowly against the grain.

Waves traveling roughly parallel to the polar axis on which the Earth spins move about 3 percent faster than those traveling perpendicular to the axis. The fastest direction, however, seems to be tilted about 10 degrees from the spin axis. Song and Richards reasoned that if the inner core rotates faster than the mantle by 1 degree a year, the waves traveling from the South Atlantic to Alaska were more closely aligned with the grain of the inner core during the 1990s than during the 1960s, opening up a faster travel pathway.

The Lamont-Doherty researchers assumed that the alignment of the crystals is the same throughout the inner core. In contrast, Creager, studied waves generated by three earthquakes in the South Atlantic in

1991 and recorded by an array of seismometers in Alaska. This allowed him to take a snapshot of the inner core and produce a detailed map showing a substantial change in speed as the waves traveled across a region of only 300 miles.

Because of this "dramatic" change in speed over such a short distance, says Creager, the inner core does not have to rotate very far to cause a three-tenths of a second change in travel time. He estimates that the inner core is rotating with respect to the mantle at a rate that is four times slower than that calculated by the Lamont-Doherty team. At the current pace of rotation, Creager theorizes, it would take more than 1,000 years for the inner core to make one complete revolution with respect to the mantle and crust. By comparison, Song and Richards estimated that the inner core has made more than a quarter of a complete revolution just since the beginning of this century.

"Though we do not know what causes the iron crystals to align," says Creager, "new clues are being revealed every year." For example, he cites the recent discovery that crystals in the western hemisphere of the inner core appear to be aligned in a different fashion from those in the eastern hemisphere, and that the formations change over a region as small as a few hundred miles. This may be caused by convection within the inner core. "The key observation is that something deep within the Earth is changing on the scale of human lifetimes," says Creager. That, he notes, "is something new to seismologists."

Creager can be reached at (206) 685-2803, or kcc@geophys.washington.edu
Andrew Yee, ayee@nova.astro.utoronto.ca



Troubled Times



Past Adjustments

They say we should get an additional second every 500 days. This year, we get 2. As you can see, this is not unprecedented but it hasn't happened since 1972 and the previous leap second was added at that point in 1968.

1961 Jan 1st	= JD 2437300.5 TAI-UTC	= 1.4228180 S + (MJD - 37300.) X 0.001296 S
1961 Aug 1st	= JD 2437512.5 TAI-UTC	= 1.3728180 S + (MJD - 37300.) X 0.001296 S
1962 Jan 1st	= JD 2437665.5 TAI-UTC	= 1.8458580 S + (MJD - 37665.) X 0.0011232S
1963 Nov 1st	= JD 2438334.5 TAI-UTC	= 1.9458580 S + (MJD - 37665.) X 0.0011232S
1964 Jan 1st	= JD 2438395.5 TAI-UTC	= 3.2401300 S + (MJD - 38761.) X 0.001296 S
1964 Apr 1st	= JD 2438486.5 TAI-UTC	= 3.3401300 S + (MJD - 38761.) X 0.001296 S
1964 Sep 1st	= JD 2438639.5 TAI-UTC	= 3.4401300 S + (MJD - 38761.) X 0.001296 S
1965 Jan 1st	= JD 2438761.5 TAI-UTC	= 3.5401300 S + (MJD - 38761.) X 0.001296 S
1965 Mar 1st	= JD 2438820.5 TAI-UTC	= 3.6401300 S + (MJD - 38761.) X 0.001296 S
1965 Jul 1st	= JD 2438942.5 TAI-UTC	= 3.7401300 S + (MJD - 38761.) X 0.001296 S
1965 Sep 1st	= JD 2439004.5 TAI-UTC	= 3.8401300 S + (MJD - 38761.) X 0.001296 S
1966 Jan 1st	= JD 2439126.5 TAI-UTC	= 4.3131700 S + (MJD - 39126.) X 0.002592 S
1968 Feb 1st	= JD 2439887.5 TAI-UTC	= 4.2131700 S + (MJD - 39126.) X 0.002592 S
1972 Jan 1st	= JD 2441317.5 TAI-UTC	= 10.0 S + (MJD - 41317.) X 0.0 S
1972 Jul 1st	= JD 2441499.5 TAI-UTC	= 11.0 S + (MJD - 41317.) X 0.0 S
1973 Jan 1st	= JD 2441683.5 TAI-UTC	= 12.0 S + (MJD - 41317.) X 0.0 S
1974 Jan 1st	= JD 2442048.5 TAI-UTC	= 13.0 S + (MJD - 41317.) X 0.0 S
1975 Jan 1st	= JD 2442413.5 TAI-UTC	= 14.0 S + (MJD - 41317.) X 0.0 S
1976 Jan 1st	= JD 2442778.5 TAI-UTC	= 15.0 S + (MJD - 41317.) X 0.0 S
1977 Jan 1st	= JD 2443144..5 TAI-UTC	= 16.0 S + (MJD - 41317.) X 0.0 S
1978 Jan 1st	= JD 2443509.5 TAI-UTC	= 17.0 S + (MJD - 41317.) X 0.0 S
1979 Jan 1st	= JD 2443874.5 TAI-UTC	= 18.0 S + (MJD - 41317.) X 0.0 S
1980 Jan 1st	= JD 2444239.5 TAI-UTC	= 19.0 S + (MJD - 41317.) X 0.0 S
1980 Jul 1st	= JD 2444786.5 TAI-UTC	= 20.0 S + (MJD - 41317.) X 0.0 S
1982 Jul 1st	= JD 2445151.5 TAI-UTC	= 21.0 S + (MJD - 41317.) X 0.0 S
1983 Jul 1st	= JD 2445516.5 TAI-UTC	= 22.0 S + (MJD - 41317.) X 0.0 S
1985 Jul 1st	= JD 2446247.5 TAI-UTC	= 23.0 S + (MJD - 41317.) X 0.0 S
1988 Jan 1st	= JD 2447161.5 TAI-UTC	= 24.0 S + (MJD - 41317.) X 0.0 S
1990 Jan 1st	= JD 2447892.5 TAI-UTC	= 25.0 S + (MJD - 41317.) X 0.0 S
1991 Jan 1st	= JD 2448257.5 TAI-UTC	= 26.0 S + (MJD - 41317.) X 0.0 S
1992 Jul 1st	= JD 2448804.5 TAI-UTC	= 27.0 S + (MJD - 41317.) X 0.0 S
1993 Jul 1st	= JD 2449169.5 TAI-UTC	= 28.0 S + (MJD - 41317.) X 0.0 S
1994 Jul 1st	= JD 2449534.5 TAI-UTC	= 29.0 S + (MJD - 41317.) X 0.0 S
1996 Jan 1st	= JD 2450083.5 TAI-UTC	= 30.0 S + (MJD - 41317.) X 0.0 S
1997 Jul 1st	= JD 2450630.5 TAI-UTC	= 31.0 S + (MJD - 41317.) X 0.0 S

Offered by [John](#).



Troubled Times



Leap Seconds

I don't believe they will continue to report it when they have to start adding more than 10 per year just to keep the clocks straight with the slower rotation.

Offered by [Eric](#).

Sorry, but "they" will have to report it since all the Global Positional Systems, and every observatory in the world are tied into the system. "They" in this instance being the International Earth Rotation Service and its US sub-bureau the National Earth Orientation Service. It's not like the dumb old scientists wouldn't notice! By the way, if you did add ten seconds per year, in 60 years you'd have added 600 seconds which is - let's see - ten minutes.

Offered by [George E.](#)

They will notice. They are not remotely dumb. They just will stop reporting it to the general public. Only those who need to know will get the info. But unless the Navy does something about their geopositional satellites, they will fail on August 1999. The Navy has already stated this and told people they need to find another way. Perhaps they'll get new satellites into operation by then.

Offered by [Eric](#).

Another [Diagram](#) with other different leap times. How fun. Maybe they just like to sketch a new one each year.

Offered by [Jonas](#).



Troubled Times



1972

U.S. Naval Observatory Public Affairs Office, August 17, 1998
U. S. Naval Observatory to Add Leap Second to Clocks

In 1972, by international agreement, it was decided to let atomic clocks run independently of the Earth, keep two separate times, and coordinate the two. In order to keep the difference between Earth time and atomic time within nine tenths of a second as the two times get out of sync, leap seconds are added to the atomic time scale. The International Earth Rotation Service (for which the U. S. Naval Observatory provides the Rapid Service) is the organization that monitors the difference between the two time scales and calls for leap seconds to be inserted when necessary. Since 1972, leap seconds have been added at intervals varying from six months to two-and-one-half years -- this leap second is eighteen months since the last one. Leap seconds are added because the Earth's rotation is tending to slow down. If the Earth were to speed up, a leap second would be removed.

[Leap Second](#) on UTC on June 30, 1997

On 30 June 1997, the last minute of the day will last 61 seconds. Why?

The Coordinated Universal Time (UTC, replacing GMT) is the reference time scale derived from The Temps Atomique International (TAI) calculated by the Bureau International des Poids et Mesures (BIPM) using a worldwide network of atomic clocks. UTC differs from TAI by an integer number of seconds; it is the basis of all activities in the world. UT1 is the time scale based on the observation of the Earth's rotation. It is now derived from Very Long Baseline Interferometry (VLBI). The various irregular fluctuations progressively detected in the rotation rate of the Earth lead in 1972 to the replacement of UT1 as the reference time scale. However, it was desired by the scientific community to maintain the difference UT1-UTC smaller than 0.9 second to ensure agreement between the physical and astronomical time scales.

Since the adoption of this system in 1972, firstly due to the initial choice of the value of the second (1/86400 mean solar day of the year 1900) and secondly to the general slowing down of the Earth's rotation, it has been necessary to add 20 s to UTC. The next additional second will be introduced on 1 July 1997. The decision to introduce a leap second in UTC is the responsibility of the International Earth Rotation Service (IERS). According to international agreements, first preference is given to the opportunities at the end of December and June, and second preference to those at the end of March and September. Since the system was introduced in 1972, only dates in June and December have been used.



Troubled Times



Dropping

Dear Colleague,

It has been proposed to change the definition of **Coordinated Universal Time** (UTC) regarding the insertion of leap-seconds, possibly even eliminating their use. Leap seconds are introduced so as to keep UTC synchronized (within 0.9 s) to the time scale determined from the Earth's rotation.

Should no new leap seconds be inserted, solar time will diverge from atomic time at the rate of about 2 seconds every 3 years, and after about a century $|UT1-UTC|$ would exceed 1 minute. Although no fundamental problems are anticipated, it is very likely that Y2K-like problems may result in software that assumes $UT1=UTC$, or $|UT1-UTC|$ some value, or whose input/output records use a field size that can only accommodate $|UT1-UTC|$ values up to one second.

To gather information, an **URSI Commission J Working Group** was formed, consisting of Don Backer, Wim. N. Brouw, Barry Clark, Irwin Shapiro, Ir. E. Van Lil, and myself.

We would like to ask you to consult with the members of your institute who currently deal with UT1-UTC, and give us a considered response to the following two questions:

- A. If the appropriate international bodies decide to eliminate the insertion of new leap seconds, would you foresee any practical problems for your institution/instrument/observations?
- B. Would you be in favor of such a proposal?
- C. Is there anyone else you would recommend we contact? (feel free to forward this email directly)

I would appreciate your assistance, and a response by January 15 [2,000] to dnm@orion.usno.navy.mil.

I am attaching a list of institutions and persons contacted, except for 931 institutions whose emails were obtained from the AAS. I would like to apologize to anyone contacted twice, but also appreciate it if you would forward this email to anyone we have missed. Also, if you are an URSI Commission J national chair, we would appreciate your forwarding this email to your complete membership and in particular to the directors of observatories.

Sincerely,
Demetrios Matsakis, **Director, Time Service Department**, U. S. Naval Observatory
Nov 16, 1999



Troubled Times



Navy

This is a report on the response to a survey to go off the rotation of the earth as the time standard for UTC.

About half the responses that were received were opposed to any change, while one-fourth were in favor of a change, and one-fourth indifferent.

Offered by [Mike](#).

Dear Respondee,

Thank you for having responded to, or somehow been connected with, our questionnaire concerning the effects of a redefinition of UTC. If you are interested in pursuing this issue, we welcome you to join our listserv "chat group", <http://clockdev.usno.navy.mil/archives/leapsecs.html>.

Demetrios Matsakis

Report of the URSI Commission J Working Group on the Leap Second

Date: July 2, 2000

Abstract and Conclusions

An e-mail survey to find possible adverse effects of a redefinition of UTC has identified some possibly expensive or unsolvable problems involving software rewriting or checking, which are listed below. Although it was not possible to quantify the financial scale of resolving the software problems, the largest expenses appear to be for satellite systems, of which one estimate of several hundred thousand dollars was supplied. The quantity and quality of the responses opposed to a change indicate that those who favor any change must be prepared to make a very convincing argument to people and groups who initially will disagree with them.

To further discuss this issue and inform the community of any developments, an archived electronic listserv has been set up. Anyone wishing to join can do so using <http://clockdev.usno.navy.mil/archives/leapsecs.html>.

Introduction

UTC (Coordinated Universal Time), which the public commonly confuses with Greenwich Mean Time, is computed by occasionally adding leap seconds to International Atomic Time (TAI). Since 1972, these leap seconds have been added on December 31 or June 30, at the rate of about one every 18 months, and serve to keep atomic time in step with the Earth's rotation. Although it is recommended that users use only TAI or UTC, as their needs indicate, many major navigation systems have used times offset from TAI by fixed amounts. The most important of these is GPS, which is offset by 19 seconds from TAI.

A segment of the international timing community has proposed a revision of the definition of UTC to avoid the discontinuities due to intermittent leap seconds. A discussion of the motivations for a change and of possible solutions has been published by McCarthy and Klepczynski in the Innovations Section of the November, 1999 issue of GPS World. The authors consider the most significant reason for a change to be keeping spread-spectrum communication systems and satellite navigation systems compatible with each other and with civil times. Another reason is the emerging need in the financial community to keep all computer time-stamps synchronized.

In order to survey the effects of any action, an URSI Commission J Working Group (WG) was formed, whose purpose was to prepare this report and propose further actions.

Methodology

A questionnaire (Appendix I) was distributed as widely as seemed appropriate (Appendix II). The goal of the questionnaire was to find and categorize those operations that would be adversely affected should a change in UTC's computation be made. The questionnaire focused on the possibility of simply inserting no new leap seconds, although alternative solutions were also solicited. Over 200 responses were received, and no effort was made to separate the responses of URSI members from those of nonmembers.

The principal object of the questionnaire was to find what systems would be adversely affected should a change be made in leap second procedures rather than to convince users of the need for a change or to take a vote. However, so many queries on these matters were received that a "standard reply" (Appendix III) was developed and distributed as appropriate. In the spirit of full disclosure, the number of responses in each category is given, but we caution that this was by no means an unbiased sampling of all who would be affected by the change. All responses were counted only once, with preference to the most practical grounds for objection. About half the responses that were received were opposed to any change, while one-fourth were in favor of a change, and one-fourth indifferent.

I. Responses Opposed to Changes in the Status Quo

A. The expense of rewriting software.

Five responses suggested that contractors would have to be hired to scrutinize and adapt large amounts of code for operational satellite systems. Efforts were made to contact these responders for specific dollar amounts, and one off-the-cuff estimate of "several \$100,000" was received. The impact on such systems would be lessened if any decision to redefine UTC were announced several years in advance.

Twenty-six others indicated that software would be a serious problem - a very few of these were from people who did not seem to understand the proposal. There were 9 responses involving telescope control; one of these, from the Keck Observatory, provided a rough estimate of a few programmer-months. Others pointed out the problems computing eclipses and occultations, for telescope pointing by amateurs, or with code they had themselves written for professional-level projects such as speckle interferometry. One observatory indicated its station clock can not accommodate a large UT1-UTC correction.

Fourteen more indicated that software issues would be a problem, but that they are probably solvable. Some of these actually indicated support for the change.

B. Inherent inability to rewrite software to allow for $|UT1-UTC|$ exceeding .9 seconds.

Ten responses involved navigational software. Taking the example of a software product of the US Naval Observatory (USNO), pilots and sailors are given the option to input UT1-UTC. However, it is expected that many users would not understand this and enter 0, leading to noticeable errors within a decade. These are similar to the telescope-control problems covered above, except that one could not and should not expect the general public to ever understand these issues. Problems amateur astronomers might have are also included here, and were brought up by many responders in other contexts.

One of the problems anticipated is that UT1-UTC could be applied with the wrong sign, just as the leap second is occasionally applied with the wrong sign. An example of "buffer overflow" problem would happen in NIST's WWV, WWVH and WWVB transmissions, which do not allow enough space for $|UT1-UTC|$ to exceed .9 sec. Any users of these broadcasts who might need this information and who are unaware of the problem, decoding in hardware, or relying on old software would be adversely affected. Under the best of future circumstances only the sub-second (tenths) digit would be available, requiring the user to keep track of the digits to the left of the decimal point.

Not tabulated is an informal comment seriously made to the Working Group's Chairman, by a respected and competent scientist from a non-western nation, that astrologers would be adversely affected.

C. Philosophical Objections

Eight thought this would confuse or antagonize the public, religious authorities, or even scientists - in essence because solar time is "true time". (In contrast, one responder in favor of a change thought this would help educate the public to the fact that Earth rotation is not "true" time).

Three pointed out that legal complications might occur in countries where laws are specified in terms of solar time, or GMT (which has not existed for thirty years). Although one of these responders feared governments would not follow the scientist's lead, we find it difficult to believe that governments would, on their own, choose to add leap seconds. Others thought that any legal system flexible enough to handle daylight savings time and the past abandonment of GMT in favor of UTC would easily accommodate a seamless change in UTC's computation, especially if no other time standard were available. Some of the history of legal issues concerning past changes in time definition can be found in the book "Greenwich Time and Longitude" by Derek Howse.

Three thought we should not adopt a system which will fail in the long run, even if that is a very distant time in the future. (It could be pointed out that all current time systems will eventually fail. Well before 2050 we could be routinely adding more than one leap second per year, and when we reach the point where a day is 48 hours long we would have to add a leap second every second. Even the Gregorian calendar will eventually need revision because in a few million years the Earth will rotate less than 365 times per year, and leap days will not be necessary.)

Two thought this would deprive the timing community of free publicity when leap seconds are inserted.

Thirty-eight expressed opposition, but gave no specific reason. Eleven of those also indicated that a problem would exist with their system, but did not specify it. Some of these pointed out that TAI was readily available, or indicated that they had seen no justification for a change. (We had intentionally provided no justification in the initial questionnaire, but two responders replied that they still believed there was not enough reason to change even after having read "standard response".)

Four were against it because they thought problems would happen if some systems did not use the new system, and because they thought one would have to separate analyses based upon whether data were recorded with the current system or the old system. (We believe these to be based upon a misunderstanding of the "no new leap seconds" proposal, but entirely possible if the more drastic measure of re-defining SI, the International Second, were adopted.)

II. Alternative Suggestions

Five suggested that it would be better to redefine the second to be longer, add 1 second every 18 months forever, change on leap years or century-ends, or change when the number exceeded a fixed amount. These possibilities are also discussed in the GPS World Article.

A suggestion was received to add enough "negative leap seconds" to bring UTC in line with GPS. However, a different responder pointed out that many of NASA's programs assume UT1-UTC always grows and that problems would happen with any change that would sometimes lead to a "negative leap second". (According to Dennis McCarthy of the USNO, this is possible even with the current system, but unlikely).

It was also pointed out that rubidium atomic fountains or optical standards could lead to a redefinition of the second using an element other than cesium. If so, it could be redefined using a scale factor of sufficient magnitude to avoid the short-term need for leap seconds (As noted in the GPS World article, such a change would alter the values of those physical quantities that depend upon time.)

One suggested that a redefined UTC should have a new name.

III. Responses in favor of changing the current leap second procedures

Forty-eight responses in favor were received, several from people who experienced minor problems now in handling leap seconds, such as confusion due to GPS time being currently 13 seconds offset from UTC and computer errors at the time of the leap seconds. Along with responses based upon reasons already covered in the GPS World Article, there were also three from the highly undersampled group of computer

programmers, which pointed out the growing need to synchronize diverse computers to one second accuracy and the difficulties of doing so in an when dates of future leap seconds were unpredictable. Many of the responses indicated that periodic addition of leap seconds on a scheduled basis would also be acceptable. One of the responders, who was opposed to a change, suggested that leap seconds were not a problem because computer users could program an automatic extraction of the needed information from some publicly available source; however it must be pointed out that no one can guarantee that a given file, whether it be for leap seconds or for daily values of UT1-UTC (see part IV, below), will remain forever available in a given format or given IP address.

Four responses were from people who indicated that the convenience in not having to update files every 18 months outweighed the expense and problems rewriting software. One of these suggested the use of sufficient negative leap seconds to bring UTC in line with TAI, and several noted that UT1-users easily incorporate the offsets due to time zones and daylight time.

IV. Other Responses

Forty-seven responders checked the "indifferent" option. Most indicated that there would be no problems with their system, or that the problems were small enough that they were indifferent to a change.

Seven other responders indicated that the change would be okay if they could somehow reliably obtain UT1-UTC. (The USNO, as a sub-bureau of the IERS, freely provides this information on its web site, <http://www.maia.usno.navy.mil>, and via weekly emailings. Other organizations also provide this information.) Some responses tabulated here were phrased in the negative because the responders were apparently unaware that the information was available. One responder was concerned that the GPS system itself would be degraded for this reason, however this is not the case because GPS currently uses UT1-UTC values derived from USNO products.

Appendix I. Questionnaire

It is being proposed to change the definition of Coordinated Universal Time (UTC) regarding the insertion of leap seconds, possibly even eliminating their use. Leap seconds are introduced so as to keep UTC synchronized (within 0.9 s) to the time scale determined from the Earth's rotation.

Should no new leap seconds be inserted, solar time will diverge from atomic time at the rate of about 2 seconds every 3 years, and after about a century $|UT1-UTC|$ would exceed 1 minute. Although no fundamental problems are anticipated, it is very likely that Y2K-like problems may result in software that assumes $UT1=UTC$, or $|UT1-UTC| < \text{some value}$, or whose input/output records use a field size that can only accommodate $|UT1-UTC|$ values up to one second.

To gather information, an URSI Commission J Working Group was formed, consisting of Don Backer, Wim. N. Brouw, Barry Clark, Irwin Shapiro, Ir. E. Van Lil, with Demetrios Matsakis being the chair.

We would like to ask you to consult with the members of your institute who currently deal with UT1-UTC, and give us a considered response to the following two questions:

A. If the appropriate international bodies decide to eliminate the insertion of new leap seconds, would you foresee any practical problems for your institution/instrument/observations?

no ____

* yes ____

* possibly ____

(* please explain any known or possible problems)

B. Would you be in favor of such a proposal?

yes ____

no ____

indifferent

have better idea ____

(feel free to comment)

C. Is there anyone else you would recommend we contact?
(feel free to forward this email directly)

I would appreciate your assistance, and a response by January 15 to
dnm@orion.usno.navy.mil.

I am attaching a list of institutions and persons contacted, except for 931 institutions whose emails were obtained from the AAS. I would like to apologize to anyone contacted twice, but also appreciate it if you would forward this email to anyone we have missed. Also, if you are an URSI Commission J national chair, we would appreciate your forwarding this email to your complete membership and in particular to the directors of observatories.

Sincerely,

Demetrios Matsakis

Dr. Demetrios N. Matsakis Director, Time Service Department
(202) 762-1587 DSN 762-1587 U. S. Naval Observatory
FAX (202) 762-1511 3450 Massachusetts Avenue NW
dnm@orion.usno.navy.mil Washington DC, USA 20392-5420

Appendix II. Distribution List

Efforts were made to conduct an international survey, and responses were received from Europe, Japan, China, Australia, Canada, Russia, Saudi Arabia, Brazil, and other countries. The majority of the responses, however, were from the U.S. Commercial interests, such as satellite companies, were highly undersampled. The questionnaire asked people to forward it to others, and we know the following were contacted:

1. 128 prominent scientists, who were mostly URSI Commission J members and official representatives of institutions associated with URSI.
2. 27 URSI Commission J national chairs.
3. 931 Institutions extracted from a database kept by the American Astronomical Society, including many from outside the United States. Several hundred of those email addresses proved invalid.
4. All on the USNO Series 7 mailing list.
5. All on the "Gazette" mailing list of the International Earth Rotation Service (IERS). This would be expected to include most scientific groups that are directly involved with UT1.
6. One responder who worked in SETI indicated he had forwarded it to SETI circles.
7. The Internet Engineering Task Force's mail exploder.
8. One responder, who was against any change, indicated he had forwarded the questionnaire extensively around Jet Propulsion Labs (JPL).

Appendix III. "Standard Reply" to queries concerning the questionnaire

Thank you for your response, which will be tabulated. Unix-technology willing, we also plan to send a copy of our report all responders.

Many people have asked me why there is a move to rethink the leap seconds, with solutions such as (but not limited to) adding no new leap seconds. I unfortunately edited out some of the reasons from early drafts of the questionnaire, because I was afraid that people would not read a long email. Since then, I have developed the following "standard reply":

- 1.) Many high-tech navigation systems, particularly those using spread-spectrum techniques, can't handle leap seconds very well. GLONASS, the Russian equivalent to GPS, goes off-line for leap second adjustments. Also, problems can occur in interfacing between systems that handle leap seconds differently. There is also the practical problem of inserting a second every year and half - people often do it the wrong way.

The response one person sent me is below, and it concerns Network Time Protocol (NTP), which uses the internet to transfer time.

If leap seconds went away, the NTP community would worship the ground you walk on. Leap secs introduce a manual discontinuity in the NTP time scale. It takes a while to propagate leap secs through the hierarchy. Leap seconds are a tremendous headache in the NTP world because they cannot be predicted. One must set a flag to indicate that one is coming. I think it is a very true statement that all GPS users would vote against continuing leap seconds, not just NTP users. Many telecommunications circuits use GPS or atomic clocks to keep cellular phones in operation, and leap seconds are a nuisance to them as well.

2.) I also received many comments about the effects on society when UT1 diverges. Note that we are talking about a minute in the next century. Society routinely handles a one-hour switch with every daily savings time, and a half-hour offset if they live at the edge of a time zone. By the time leap seconds add up to an hour, the world will be very different. If we have settled the solar system, a whole new scheme will probably have evolved. Even if we have not changed our system, society has enough slop in its timekeeping that people will slowly shift without even knowing it. More people will start showing up to work at 9:00 AM, and less at 8:30 AM, etc.

3) The "Innovations" section in November's GPS World is on this subject, and discusses other possibilities aside from "no new leap seconds". These are inserting larger discontinuities less frequently, inserting integer leap seconds at predefined times, simply using TAI, and redefining the length of the second.

4) It should be pointed out that UT1-UTC is readily available on the web. The USNO, as a subbureau of the International Rotation Service, makes this information available via a weekly mailing and from a web page at <http://www.maia.usno.navy.mil>, and other organizations also provide this service.

5) My final comment is not to worry about any "surprise" decisions - before/if the international bodies all decide to do this, it will be fully debated and publicized. My role, here, is simply to gather information.



Troubled Times



Lunar Month

An average month is now not as long as it used to be. If the earth is slowing down, and the moon stays at the same rate as always, it would go around the earth faster causing the months to be shorter. More proof that the earth is slowing. Here is some interesting information forwarded to me.

Offered by [Clipper](#).

Lunar month now 29.5 days long?

U.S. Naval Observatory
Astronomical Applications Department
Sun and Moon Data for One Day
The following information is provided for Las Vegas, Clark County, Nevada
(longitude W115.2, latitude N36.2)

Friday
1 January 1999 Pacific Standard Time

SUN
Begin civil twilight 6:23 a.m.
Sunrise 6:52 a.m.
Sun transit 11:44 a.m.
Sunset 4:37 p.m.
End civil twilight 5:05 p.m.

MOON
Moonrise 3:41 p.m. on preceding day
Moonset 6:12 a.m.
Moonrise 4:39 p.m.
Moon transit 11:55 p.m.
Moonset 7:11 a.m. on following day

Full Moon on 1 January 1999 at 6:51 p.m. Pacific Standard Time.

U.S. Naval Observatory
Astronomical Applications Department
Sun and Moon Data for One Day
The following information is provided for Las Vegas, Clark County, Nevada
(longitude W115.2, latitude N36.2):

Sunday
31 January 1999 Pacific Standard Time

SUN
Begin civil twilight 6:16 a.m.
Sunrise 6:43 a.m.

Sun transit 11:54 a.m.
Sunset 5:06 p.m.
End civil twilight 5:33 p.m.

MOON

Moonrise 4:25 p.m. on preceding day
Moonset 6:39 a.m.
Moonrise 5:27 p.m.
Moon transit 12:28 a.m. on following day
Moonset 7:22 a.m. on following day

Full Moon on 31 January 1999 at 8:08 a.m. Pacific Standard Time.

U.S. Naval Observatory

Astronomical Applications Department

Sun and Moon Data for One Day

The following information is provided for Las Vegas, Clark County, Nevada
(longitude W115.2, latitude N36.2):

Sunday

28 February 1999 Pacific Standard Time

SUN

Begin civil twilight 5:47 a.m.

Sunrise 6:13 a.m.

Sun transit 11:53 a.m.

Sunset 5:34 p.m.

End civil twilight 6:00 p.m.

MOON

Moonrise 3:14 p.m. on preceding day

Moonset 5:17 a.m.

Moonrise 4:15 p.m.

Moon transit 11:09 p.m.

Moonset 5:56 a.m. on following day

Phase of the Moon on 28 February: waxing gibbous with 98% of the Moon's visible disk illuminated. Not sure where this info may be applied but trust your judgement.

Thanks, Frank

Courtesy, U.S. Naval Observatory

http://aa.usno.navy.mil/data/docs/RS_OneDay.html



Troubled Times



Shorter

Okay, correct me if I'm wrong, please.

1. The earth continues to circle the sun at the same rate.
2. The moon continues to circle the earth at the same rate.
3. However because the rotation of the earth is slowing (hypothesis; magnetic pull of twelfth is influencing our sphere) while the moon is keeping the same cycle, that causes the lunar months to be shorter.

Offered by [Louanne](#).

Think about this, *if* the Earth's rotation slows down, then the Lunar month gets shorter. Not longer because the moon's orbit is not slowing down. Our orbit around the sun is not slowing, just the rotation.

Offered by [Bruce](#).



Troubled Times



Navy Stats

The US Navy sets the clocks of the world, syncing computers worldwide in the wee hours of the mornings so that a gradual slowing is disguised. All sing the same tune! But the Moon is not dialing up the US Navy clock in the middle of the night, to sync, so it stands as a *true* indicator of the rate of slowing as we approach 2003. Per my 1991 book, *The Solar System, a Practical Guide*, “the time between successive full moons, known as the synodic moon, is 29.53 days long”. But per the statistics reported by none other than the US Navy, the yearly average is more or less than this amount. In 1999 it was 29.53916 and in 2000 it was 29.55375.

Jan 2, 1999	2:49 AM	
Jan 31, 1999	4:06 PM	(29 days 12 hr 55 min)
Mar 2, 1999	6:58 AM	(29 days 14 hr 52 min)
Mar 31, 1999	10:49 PM	(29 days 15 hr 51 min)
Apr 30, 1999	2:55 PM	(29 days 14 hr 6 min)
May 30, 1999	6:40 AM	(29 days 14 hr 45 min)
Jun 28, 1999	9:37 PM	(29 days 14 hr 57 min)
Jul 28, 1999	11:25 AM	(29 days 13 hr 48 min)
Aug 26, 1999	11:49 PM	(29 days 12 hr 24 min)
Sep 25, 1999	10:51 AM	(29 days 11 hr 3 min)
Oct 24, 1999	9:02 PM	(29 days 10 hr 11 min)
Nov 23, 1999	7:04 AM	(29 days 10 hr 2 min)
Dec 22, 1999	5:31 PM	(29 days 10 hr 27 min)

1999 Average 29 days 12.94 hr/mo = 29.53916

Jan 21, 2000	4:40 AM	(29 days 11 hr 9 min)
Feb 19, 2000	4:27 PM	(29 days 11 hr 47 min)
Mar 20, 2000	4:41 AM	(29 days 12 hr 14 min)
Apr 18, 2000	5:41 PM	(29 days 13 hr 0 min)
May 18, 2000	7:34 AM	(29 days 13 hr 53 min)
Jun 16, 2000	10:27 PM	(29 days 14 hr 53 min)
Jul 16, 2000	1:55 PM	(29 days 15 hr 28 min)
Aug 15, 2000	5:13 AM	(29 days 15 hr 18 min)
Sep 13, 2000	7:37 PM	(29 days 14 hr 24 min)
Oct 13, 2000	8:53 AM	(29 days 13 hr 16 min)
Nov 11, 2000	9:15 PM	(29 days 12 hr 22 min)
Dec 11, 2000	9:03 AM	(29 days 11 hr 48 min)

2000 Average 29 days 13.29 hr/mo = 29.55375

Offered by [Nancy](#).



Troubled Times

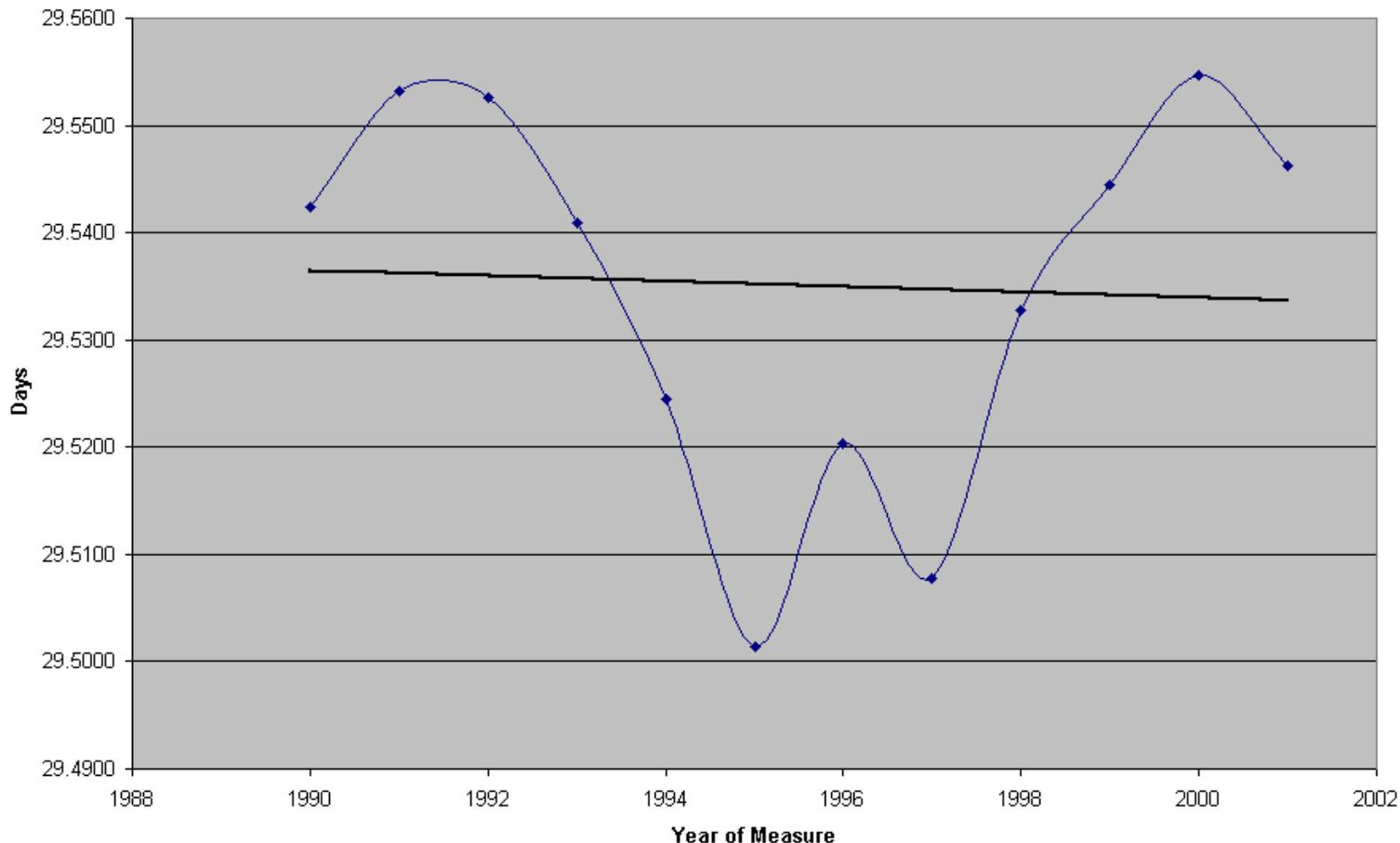


Full Moons

I used the [Navy Data](#) and put the full moon date and time in a spread sheet for the years from 1990 to 2001. I used the first full moon of each year and counted up the number of full moons during the year. Subtracted the January current year from January full moon date-time next year to get number of days-fractions then divided by number of full moons for the year to get an average. The calculations took into account leap years by adding an extra day as needed. I don't see a slowing down trend when taking into account all the years 1990 to 2001. In fact the trend is a bit toward shorter time. The black line is the trend line determined from all the data points. It is a feature of Excel to be able to have it calculate a trend line. Apparently it is normal for the moon to speed up and slow down over a 10 or so year period of time.

Offered by [Mike](#).

Average Days Between Full Moons For Each Year



Troubled Times

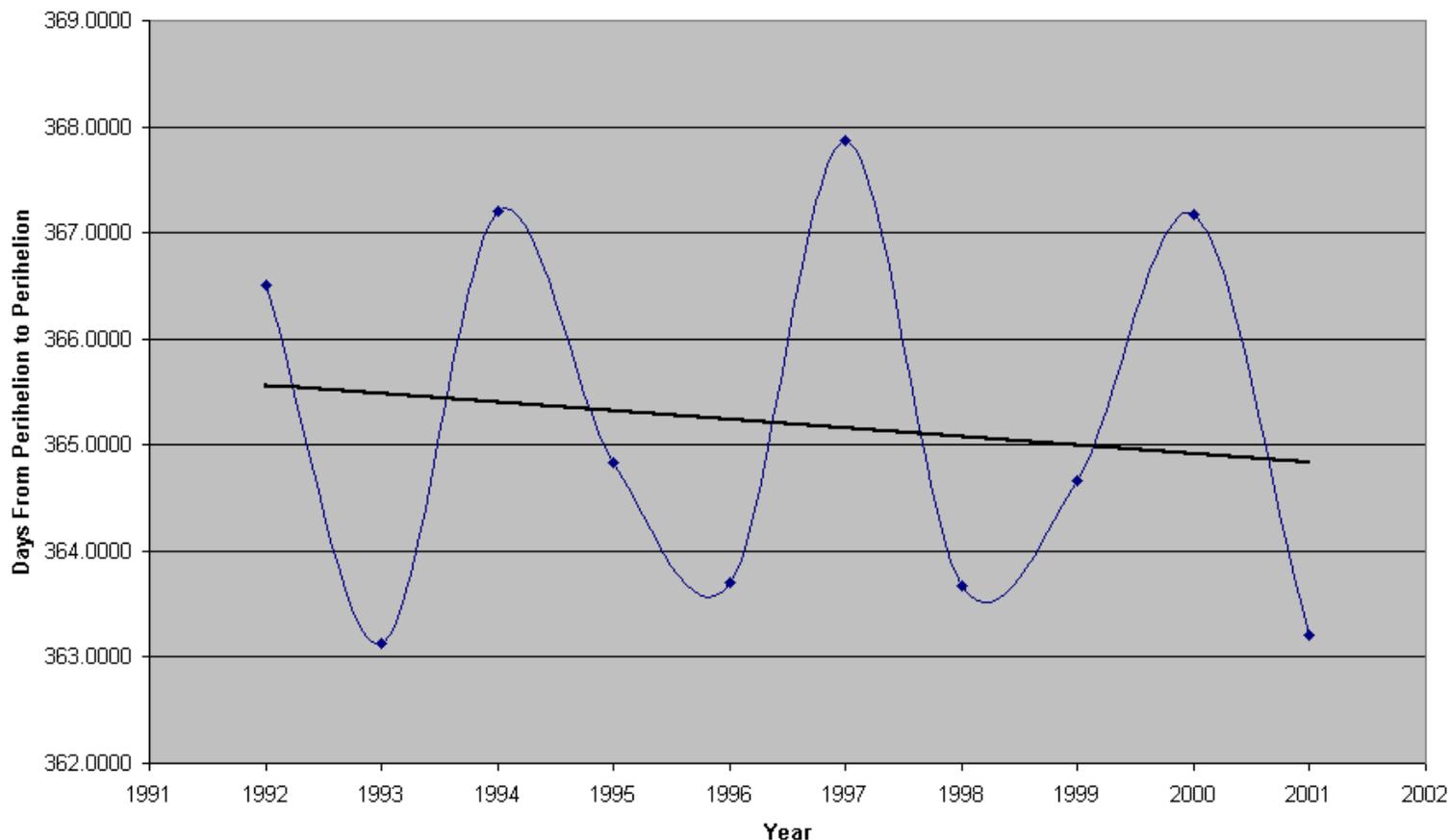


Earth Orbit

I then thought about finding some data on the earth's rotation around the sun and plotting it to see if it would show the same result. I found the [Navy Data](#) on this, and plotted the time between Perihelion date and time each year. Perihelion is the point of closest approach to the sun as was reported only to the nearest hour. This point of closest approach to my understanding is due to the resulting gravitational forces of all planets, asteroids and stars. Each planet has a different year so some times there is more pull or less pull depending on whether the planets are fighting against each other. As far as I can tell two actions are taking place speed up and slow down of earth in its orbit around the sun due to the sum of all planets position. The other effect would be the movement of the actual closest approach point (Perihelion) due to the same forces. This would be a sooner or later time in the orbit depending on the direction of the forces.

Offered by [Mike](#).

Length of time Between Perihelion to Perihelion as the earth rotates around the Sun for each given year



Troubled Times



Equinox

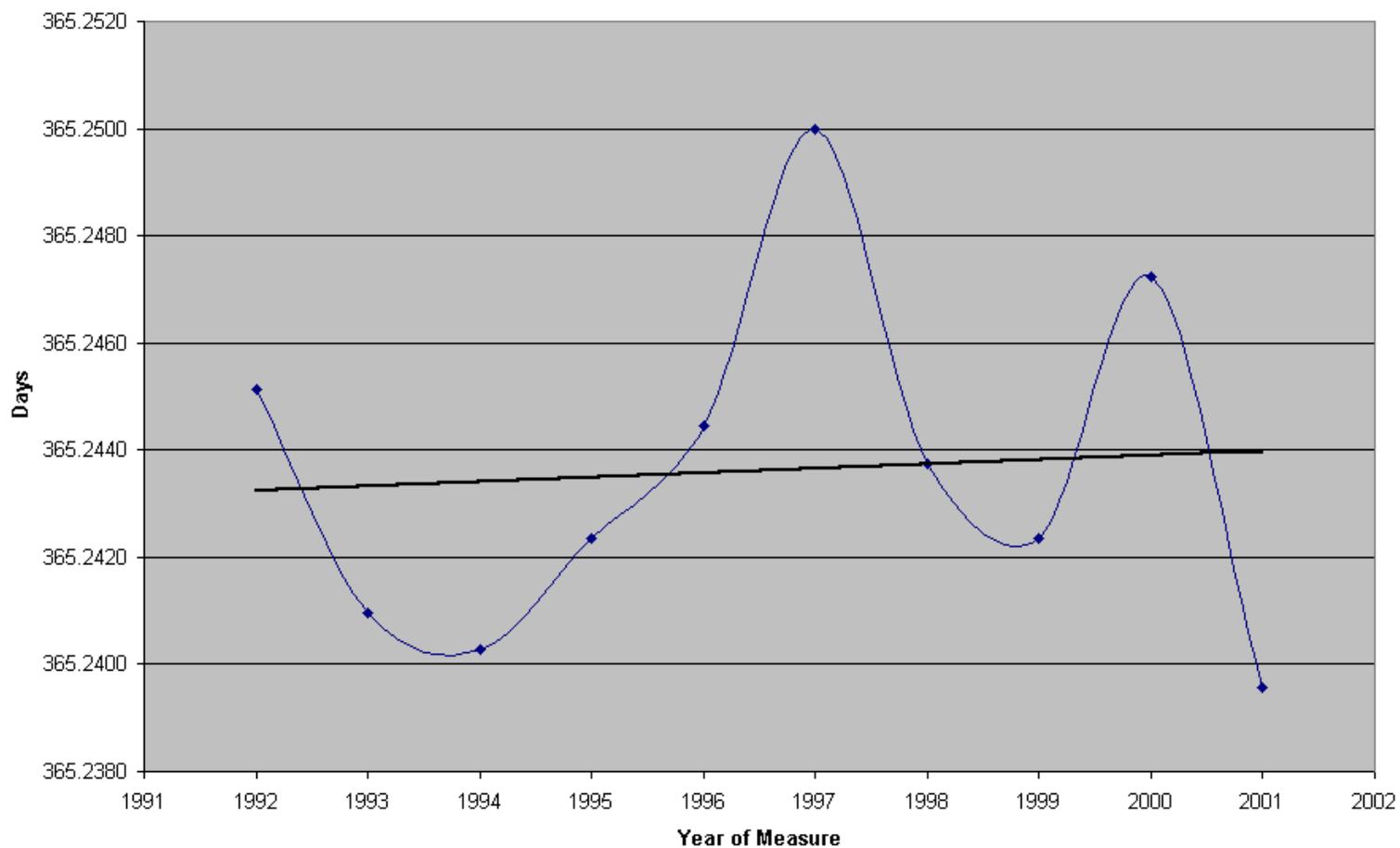
I also plotted the time between Equinoxes of each year. Bottom Line: Nothing is showing anything very definite as far as I can tell. One thing I don't know is - how often is the date on the aa.usno.navy.mil site in these tables updated to reflect actual measurements (if it ever really is) rather than predictions.

Perihelion occurs typically on January 2-4 for each year. Equinox will occur at the same UT time for everyone on the planet. Equinox occurs 1/4 of a rotation later in March 20-21 and was reported to the nearest minute. Some people (about half) will be in the dark and some will be in the light at the time. The sun will only cross through the ecliptic twice a year, March and September of each year. It is daylight on the side earth that is facing the sun at the time of the crossing. Equinox date/time stamp does refer back to Greenwich Longitude which is a standard "place" so to speak, however, it could be dark or light on that side of the planet at the exact time of the Equinox. It is random. The facing or crossing over concept is called "Transit" in the terminology of Astronomy. For example a person standing on earth *at a particular point* has a transit of the sun at or around noon time (local time). This concept should not be confused with the sun crossing the equator which could be *at any point* on the equator each time it happens. A different name (equinox) was given to this condition of sun crossing the equator of earth to distinguish it from other concepts.

Jupiter has a year of 11.9 earth years and is probably the biggest influence. Other planets have different yearly cycles. If we assume each strong influence has it's own frequency. If we then take a bunch of different frequencies and add them up we get a kinky (pardon the non-technical term) type result that is hard to explain or easily understand. So to me without doing a mathematical analysis of a multi-body problem I can not say there is any problems with what I see. The chart below is the result of addition of multi-sine waves for many influences causing the kinky wave. Also the two are measured 4 months apart and have different influences in that time.

Offered by [Mike](#).

Days Between Equinoxes For Each Given Year



Troubled Times



Aberation

Due to the (relative) imprecision of clocks, we all rely on the Navy to tell us what time it is!

The Naval observatory is charged, and has been, with the responsibility of keeping accurate time records for the purpose of Naval Navigation. For a ship to accurately know where it is (pre GPS) it has to know what time it is, accurately. Almost all digital clocks use the power grid for their frequency standard, a few use crystals. The power grid is known for some small variation, which motors and light bulbs could care less about. Individual crystals can vary considerably, and still be within their frequency tolerance. Battery operation is not an answer either, they can vary in output when first taken out of the package. And again, with digital clocks, watches, etc., one is speaking of consumer commodities, meaning accurate enough for daily life, but far from lab standards.

Usenet Quote

All computer clocks will be somewhat inaccurate. They are controlled by a crystal oscillator - which is not only temperature sensitive, but the resonant frequency of the crystal also will change over time. This change in resonant frequency can be in either direction.

Bill Nelson

If one goes to the Navy web site one can get the [Exact Moment](#) displayed, according to time zone, and instructions on how network servers can dial in daily to sync up with the Navy clocks. So theoretically, if the earth were slowing in rotation due to increased core swirling as Planet X approaches, and this did *not* change perihelion (based on orbit time) but *did* change equinox and full moon time (based on rotation time), what changes in the info they give out would need to be made, to disguise this?

1. Leaps seconds would be inserted into daily time syncing, so the worlds network computers all gave the same message. Humm .. must be my darn watch again!
2. As the slowing Earth takes more hours to position to face a full moon, the database will get out of sync with what the public is observing unless hours are added to the data. Since the public is more likely to look to the *future* for information, and scrutiny going into 2003 could be anticipated, these changes were done early so to avoid scrutiny of the manipulation. Thus the Equinox and Full Moon Navy stats being out of sync with the Perihelion Navy stats. Humm .. the orbit stays the same but the seasons and months are shorter.

It seems the days/hours between Full Moons not only moves about within a year but over years also. This is related to a longer or shorter orbit for the Earth, I gather. There are regular peaks of long orbit (perihelion) years in 1994, 1997, and 2000. Thus, the increase in time between full moons I noted from 1998 to 2000 was just the normal variable. If the days between perihelion are longer, then it would stand that equinox and full moon days for the year would likewise be longer. How do you have a longer perihelion year but the days between equinox or full moon over that year get shorter? But note the Equinox chart goes bloopy around the 1994 time frame. Why? Now the full moon days likewise should grow longer and shorter along with the perihelion days for the year, but this likewise goes bloopy not only around 1994 but 1997, big time! Why? They should be in sync, long or short, together.

The time of full Moon depends on when the Sun, Earth, and Moon all line up. Due to Kepler's second law, both the Earth and the Moon will speed up and slow down during various part of their orbits because their orbits are not circular. Thus the times between full Moons will vary depending on time of sidereal year (due to the Earth) and on time of sidereal month (due to the Moon).

David Tholen

Offered by [Nancy](#).



Troubled Times



Not Present

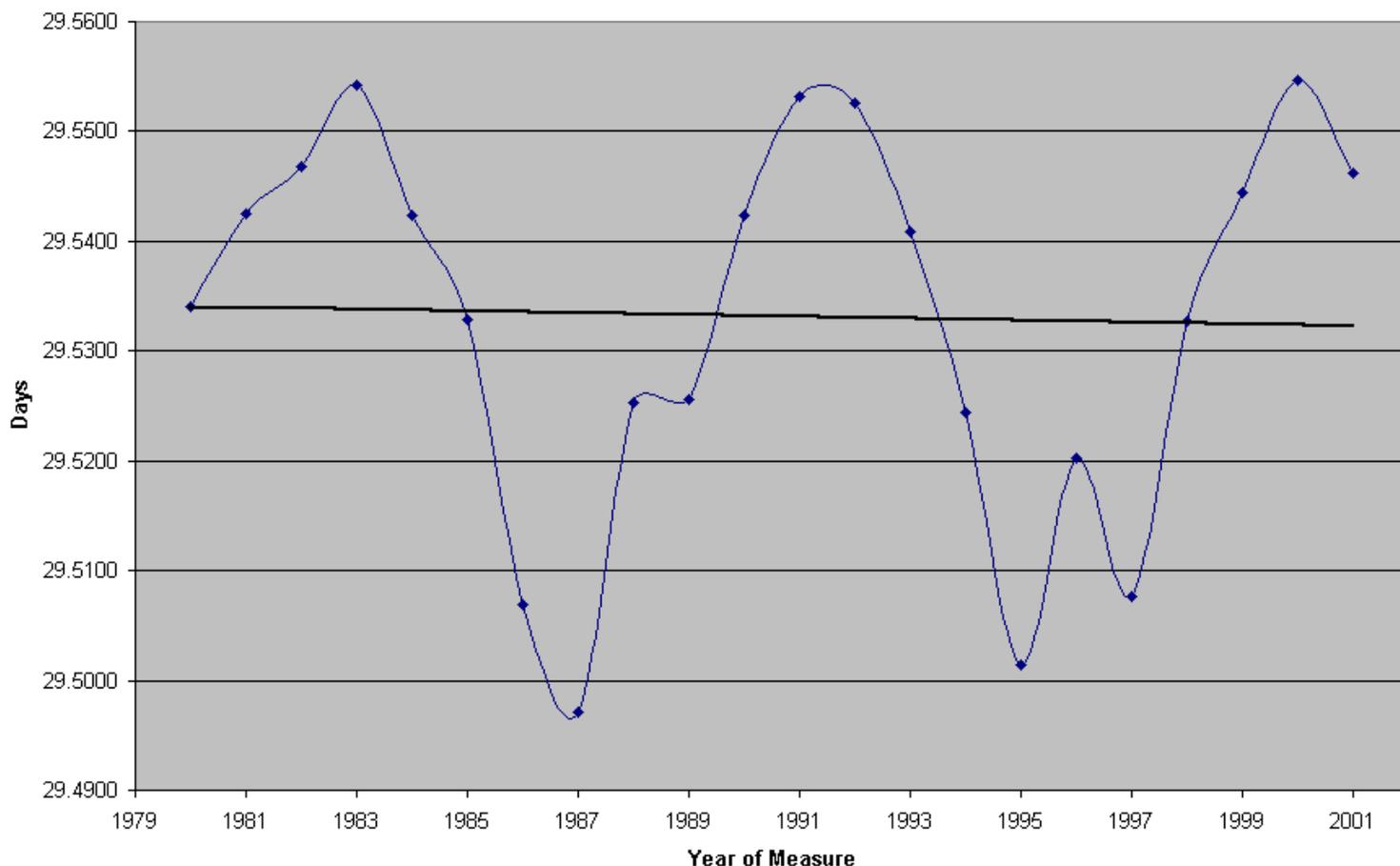
Just look at that Perihelion graph! It's very regular, there is even a slope to the left and right in process. I'll bet if you did this same exercise for 1980 to 1990 you'd find regular waves all around!

Offered by [Nancy](#).

The major point here is: The Perihelion and Equinoxes curves are measuring two very different conditions with different criteria therefore the different results are to be expected. If found the data for 1980 to 1990 for Full Moons and plotted it.

Offered by [Mike](#).

Average Days Between Full Moons for Each Year



Note the charts for the Full Moons in the decade of the [1990s](#) show a dramatic short full moon month trend, the full moon coming *early*. But in the chart for two decades it shows this same trend but less so as it is absorbing the trend from the 1990's. My guess is that the 1980's alone would have no such short month trend. This puts the analysis of the Navy data, above, in sync with what [Frank](#) stated, that the stats had been manipulated so that the full moon was coming *early*, per the stats, so the fact that it was coming *later* as we approached 2003 would not be so noticeable!

Offered by [Nancy](#).



Troubled Times



Formula

The Navy publishes an [Astronomical Almanac](#).

The publications listed below are prepared jointly by the Astronomical Applications Department, U.S. Naval Observatory, and Her Majesty's Nautical Almanac Office. These almanacs are published annually, with each edition containing the data for one year. In general, the content will be of interest only to those with specific training in astronomy or celestial navigation, although Astronomical Phenomena does contain information useful to calendar makers, such as the dates of phases of the Moon and religious holidays.

This is interesting, the [Formula](#) changed.

*Astronomical Almanac 2001
Updates and Corrections*

Page B6, The equation of the equinoxes and the paragraph following should read:

equation of equinoxes = $1/15(Dy \cos e + 0."002\ 64 \sin W + 0."000\ 063 \sin 2W)$

and Dy is the total nutation in longitude, e is the mean obliquity of the ecliptic and W is the mean longitude of the ascending node of the Moon. The equation of the equinoxes is tabulated on pages B8-B15 at 0^hUT for each day and should be interpolated to the required time if full precision is required.

MAJOR PLANETS, Section E

Page E88, Heading for the last column under Coefficient of the Potential:

for $10^8 J_4$ read $10^6 J_4$

SATELLITES OF THE PLANETS, Section F

Page F2, the entry in the last column of the table for Neptune VIII Proteus:

for 0.5232 read 28.25

STARS AND STELLAR SYSTEMS, Section H

Page H61, the entry in the last column of the table for 1228+126 (3C 274)

for 17.90 read 71.90

Offered by [Mike](#).



Troubled Times



Equinox Trend

The published date and time (nearest Minute) for March Equinoxes from 1990 to present time is [Tabulated](#) at a Navy site. For dates earlier than 1990 I used the data from another site. Note: If one compares the dates and times between the two sites from 1990-2001 one will find only one minute of difference for one of the reported years. Not enough to change the shape of the following curves. Because of the amount of variation in data points from year to year, a large number of points was needed to get a good average and see the current trends.

The trend for the last 52 years (1950-2001) is shown as a +1.12 sec/year slope.

The trend for the last 42 years (1960-2001) is shown as a +0.92 sec/year slope.

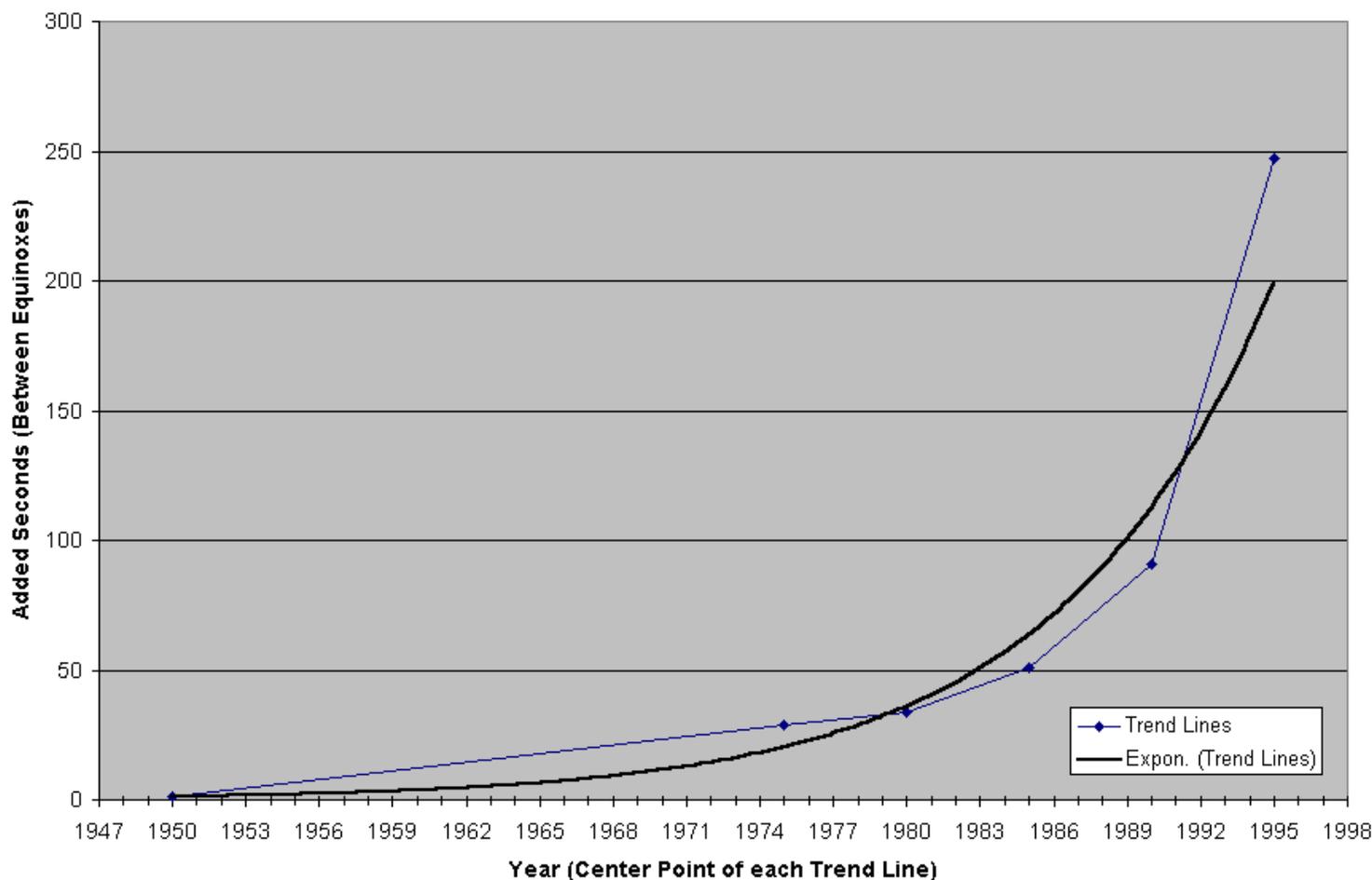
The trend for the last 32 years (1970-2001) is shown as a +3.43 sec/year slope.

The trend for the last 22 years (1980-2001) is shown as a +7.99 sec/year slope.

The trend for the last 12 years (1990-2001) is shown as a +31.2 sec/year slope.

If one now takes the left half of each trend line and strings them together for the appropriate number of years that they would apply to then one gets a definite trend. This curve changed to seconds (of change) from year to year then gives the chart below. The times are trending to become longer between Equinoxes.

First Half of Each Trend Line Strung Together



This could obviously mean a slowing yearly rotation of the earth around the sun. Could this in any way indicate a slowing daily rotation of earth? Not, directly. If atomic time is not being tampered with then I think our results mean slowing of yearly rotation around the sun. If Atomic time is being adjusted slower with undocumented added leap seconds to match a slowing daily earth's rotation, and if the earths

yearly rotation around the sun were a constant, then we should see less daily turns of the earth to get back to the same Equinox condition in the earth's orbit and thus an apparent speed up of the earth's yearly rotation. We are seeing the opposite of this. I think it is doubtful that the daily rotation is speeding up and the atomic clocks are speeding up. This would be in the wrong direction. Thus, I think the most likely conclusion is the earth's yearly rotation around the sun is slowing down faster than the earth's daily rotation or the atomic clocks are being adjusted to match the slow down. 31 sec/year slow down trend over the last 12 years is a significant amount. Earlier than 42 years ago it trended to only about 1 sec/year.

Assumptions for these graphs:

1. That the times reported for Equinoxes during 1950 to 2001 is close to observable facts and not just a formula reporting an estimation that never gets checked with observation.
2. That numbers beyond present time are suspect, and defiantly from an estimation program, thus not worth plotting or looking at.

The best way to measure earth's slowing is by daily accurate telescope measurements of some fixed object in the sky or by long wave radio interferometer of distance radio sources and several receivers on earth that measure the changing nodes with angle. What we need is to have a way to get access the results of this kind of data. The above analysis was interesting but did not get us direct data on earth's daily rotational slowing. One could say if the yearly rotation of earth is slowing why not the daily? But, this is a stretch, without hard facts.

Offered by [Mike](#).



Troubled Times



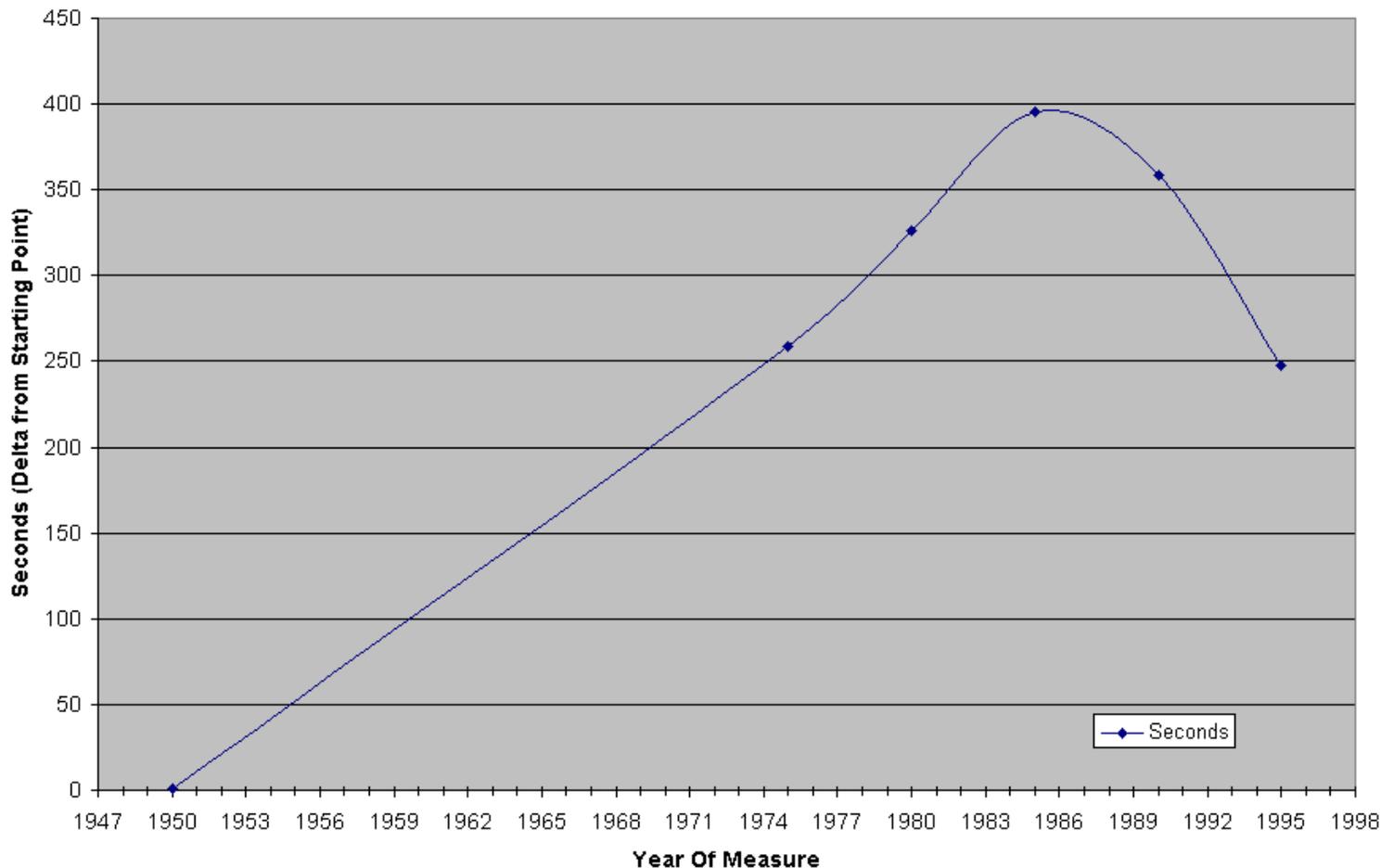
Full Moon Trend

The published date and time (nearest Minute) for Full moons from 1950 to present time (2001) is tabulated by the [Navy](#). Because of the amount of variation in data points from year to year, a large number of points was needed to get a good average and see the current trends.

- The trend for the last 52 years (1950-2001) is shown as a 10.3 sec/year slope.
- The trend for the last 42 years (1960-2001) is shown as a 13.6 sec/year slope.
- The trend for the last 32 years (1970-2001) is shown as a 13.8 sec/year slope.
- The trend for the last 22 years (1980-2001) is shown as a -7.4 sec/year slope.
- The trend for the last 12 years (1990-2001) is shown as a -22.3 sec/year slope.

If one now takes the left half of each trend line and strings them together for the appropriate number of years (that they would apply to) then one gets an overall trend chart. This curve changed to seconds (of change) from year to year then gives the chart below.

Average Trend line Changes In Seconds Between Full Moons For Each Year From 1950



We observed the moon to start to speed up after 1985 (makes for shorter moon months), what does this mean? Assume for now the reported date-time is accurate Atomic time and this is clicking at a constant rate. Assume for now no hidden leap seconds. For a full moon the moon is measured in relation to the sun and the earth's rotation around the sun. The earth and moon has to lie along the same radial line from the sun to get a full moon. The daily rotation of the earth would then be factored out of the equation. In fact full moons could occur any time of the day. So the bottom line would be either the moon is going around the earth faster or the earth is going around the sun slower. Since we found evidence in studying Equinox data that the earth's yearly rotation around the sun is slowing then this becomes the

more likely logical conclusion.

Now if one assumes the atomic clocks are being adjusted slower (added undocumented leap sec) to match a slowing daily rotation of earth then what do we get? One would expect fewer turns of the planet between full moons. This would record as shorter times between full moons, and look like a speed up of the moons rotation around the earth. This is exactly what we are seeing in the data since about 1985. 10 years later in 1995 the moons orbital rotation is about 150 sec faster for every 29.5 days. This would be an equivalent of about 30 min/year. This is a significant amount of time if Atomic Time was adjusted for. I think we would have noticed this. So I don't think this is the total answer. Are there any other conditions that could explain the moon's apparent speed up? What if gravity between the sun and the earth is weaker due to the approach of the 12th. This would be a kind of conservation of gravity type effect. More objects to pull on, results in slightly less pull for any one object. If gravity were weaker then the earth would move to a slightly larger diameters orbit. The larger orbit could take longer to get fully around one turn. Thus resulting in the measured slowing effect. Now if earth and moon is further away from the sun then the moon being in close proximity can move in closer to the earth's now stronger pull. Moving in closer allows the moon to go faster around the earth. This paragraph is just potential speculation on my part. The actual truth of what we are seeing in this data is not totally known to me at this time. It could even be a combination of the above. Additional factor are even possible.

Note: Someone is going to ask why not plot past 1995 up to 2001. The answer is not enough data points to make a good trend. 12 years is about a minimum with such widely varying data. Even that is pushing it. There are naturally long time cycles in this data. The main point with all this is there is something going on. More exact data is needed and it is worth looking at now to determine exactly what is happening. This is the challenge I give to the scientific community.

Offered by [Mike](#).



Troubled Times



Prior Shift

*Your claim that "starting the beginning of the 20th century the Earth is systematically slowing its rotation" is false. The Earth has always been slowing down. Don't be fooled by that diagram which shows a U-shaped curve coming down to the zero line and starting up again at the beginning of the 20th century. That curve does not show acceleration, it shows the accumulated difference between ET and UT. In 700 BC the difference was about 5.5 hours, the day was about 40 milliseconds shorter than today, and on average the length of the day has since been increasing by 1.7 milliseconds per century. Nothing to worry about either. During the last decades each day was on average about two milliseconds longer than 86400s. In 1.5 years this sums up to $1.5 * 365 * 0.002s = 1$ second. This is why a leap second had to be inserted on average every 1.5 years. On the other hand, it is clearly seen that during the last five years the LOD has become shorter and is now around the nominal 86400s. This is why currently no leap seconds are needed. The last leap second was introduced at the end of 1998, and it has been announced that no leap second will be introduced at the end of 2001. In other words, the Earth has been noticeably speeding up during the last 5 years and is currently back to nominal.*

Thomas Schmidt

I absolutely agree with you that Earth did not start slowing beginning the 20th century. It is correct to say that the known data show the Earth is slowing for more the twenty centuries. However it is hard to believe that we have enough data to say "always been slowing down" nor "nothing to worry about". I just want to say that when I look on the data showing long-term changes in the rotation of the Earth they do not make me confident about our past and future. The length of day (LOD) for the period 700 B.C. to A.D. 1980 taking from the classical paper "*Long-term changes in the rotation of the Earth: 700 B.C. to A.D. 1980*" by F.R. Stephenson and L.V. Morrison in *Phil. Trans. R. Soc. Lond. A* 313, 47-70, 1984. It seems that the slowing of the Earth was not always the same. According to the authors, the long-term changes before and after A.D. 950 were very different. From 700 B.C. to A. D. 950 the change in l.o.d. was +2.4 ms/century, and the slope was expected on the basis of tidal friction model. But after A.D 950 it is 1.4 ms/century and it indicates the non-tidal changes.

Authors do not suggest a sudden change at this epoch, but the contribution of non-tidal component is very significant. I know that by saying what I am about to say I call for troubles but I will say it any way. I speculate that those non-tidal effects at the epoch after A.D. 950 produced by approaching Planet X. If we believe that Planet X was close to the Earth at about 1600 B.C. then in 900 years, at 700 B.C., when all known to people astronomical observation began, the Planet X was about half way to another star. It was very far to influence the Earth rotation. At about A.D 200 the Planet X returns to the vicinity of this other star and starts its journey to our Sun again. At epoch after A.D. 950, and after A.D.1100, when the Planet X is in middle way to Earth, the effects of the planet may be appreciated and can reach maximum at 2003.

Astronomical data shown in the Stephenson and Morrison figure are not going very far in the past to show the LOD. changes at around 1600 B.C. when we would of expect large changes due to approaching Planet X. Only historical records about the complete stop of the Earth rotation happened at about this time were discussed by Zecharia Sitchin in his book *The Lost Realm*, Bear & Co, Santa Fe, NM, 1990, p. 154. A strong scientific evidence for a strong global environmental disruption in 1628 B.C. is given in paper of H. Grudd, K.R. Briffa, B.E. Gunnarson, and H.W. Linderholm " Swedish tree rings provide new evidence in support of a major, widespread environmental disruption in 1628 BC", *Geophysical Research Letters*, 27 (18), 2957-2960, 2000.

Offered by [Jacob](#).



Troubled Times



Atomic Clocks

My idea was to use two clocks, your wrist watch and an "atomic clock". You can nowadays buy an "atomic clock" for \$50 almost everywhere. These clocks are not really atomic, but they receive a signal from atomic clocks, and automatically set themselves. Most are accurate to half second. Since atomic clocks are, if they are, corrected behind the scenes, the "atomic clock" you bought will be "updated" too, while your wrist watch goes it's own tempo. The difference between both clocks will grow over the years, I guess, and this is what you should measure.

Offered by [Kiko](#).

Atomic clocks are rather unwieldy and fragile. They work by electrifying a vapor like strontium, cesium, or krypton; then sensing instruments detect the vibrations given off by the vapor, these vibrations are counted and the count is converted into time units like seconds and hours. Atomic clocks are very stable time references because the vibrations are produced at the atomic level and do not change because the properties of the atoms do not change.

Offered by [Steve](#).



Troubled Times



Reset

I always wondered why the [Navy](#) claimed they had to set back the atomic clocks here on earth to correct them for the "time dilation". I read somewhere that they did let a jetplane fly the UTC clock counterwise around the world from place to place. And that was why they had to take Special Relativity in consideration. To compensate for the rotational velocity attached to the stationary clocks one would have thought that they did need to adjust the clocks by withdraw some lapsed time but they always added time to the stationary clocks. (So much for Special Relativity consideration).

To me looks like they made their UTC clock to run to slower from the beginning and to match the eventually match the UT1 rotational celestial scale after 2000, too bad the data just showed such a short short time scale. I would have been curious to see it since the 50's.

Offered by [Jonas](#).



Troubled Times



Sighting Stars

What we need is some current and some historical measurement from any one of the [Techniques](#) of measuring the daily rotational speed of earth.

Offered by [Mike](#).

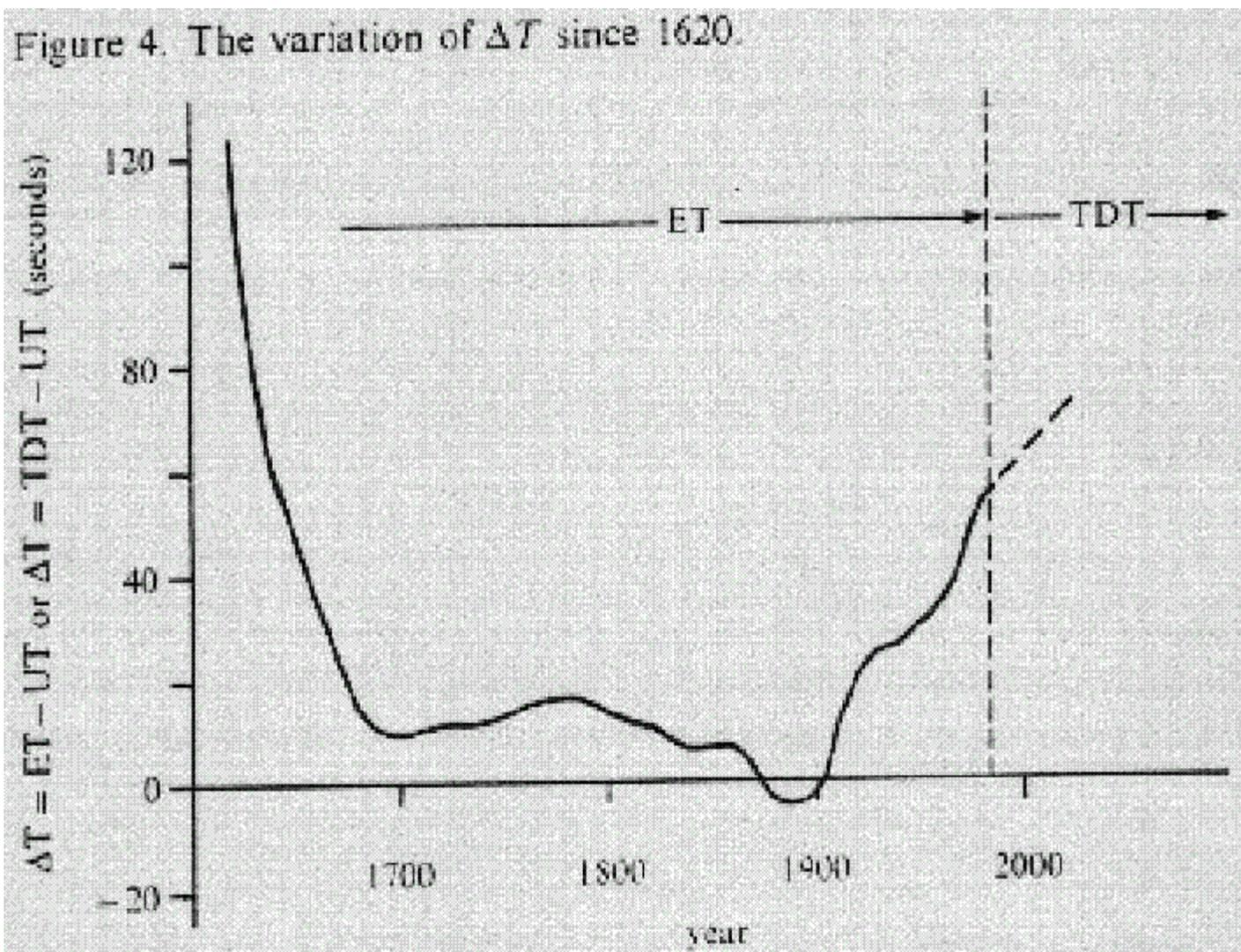


Troubled Times



Earth Rotation Service

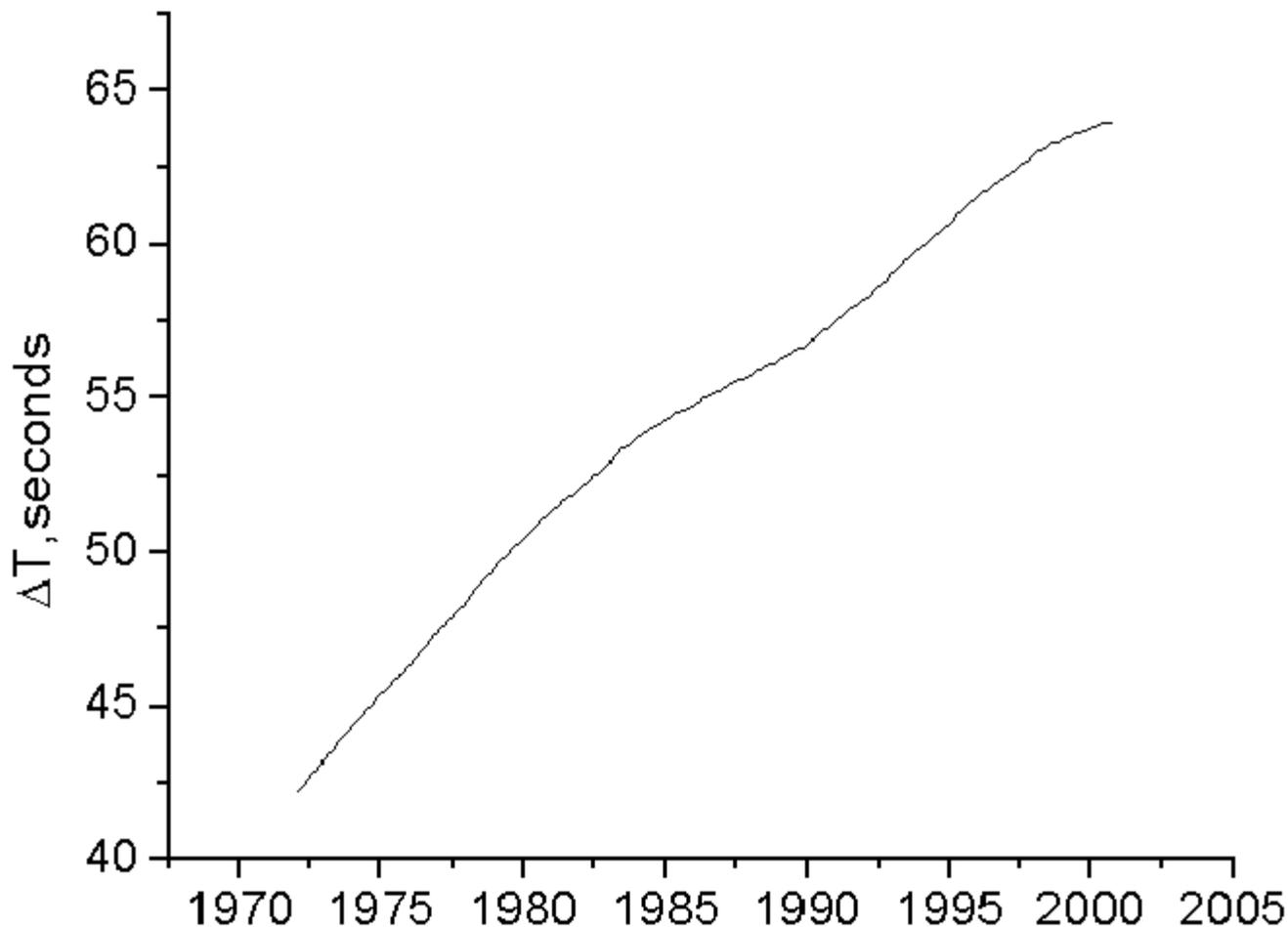
I believe that professional astronomers know very well about the recent slowing of the rotation of the Earth about its polar axis. I am not an astronomer and I have only book in my home on the subject: *Practical Astronomy with your Calculator* by Peter Duffett-Smith, Cambridge University Press, Cambridge, 1988. I was very surprised to find in this book a chapter 16 describing the phenomenon of the recent slowing of the Earth rotation in great details. The change of the Earth rotation of in this book was calculated from the motion of the Moon for old data (since 1620) or from the time measured by atomic clock (since 1984). For some unknown reasons the Earth rotation measured by the Moon clock was accelerating from the year 1620 to the year 1680. Then the Earth rotation was quite stable for more then two centuries. Suddenly, since the year 1900 the Earth rotation began slowing quite rapidly, and it is continuing slowing. In January 1986 the difference between ET (ephemeris time) or TDT (terrestrial dynamic time) and UT (universal time) was 54.87 seconds, UT being behind TDT; that is $TDT - UT = \Delta T = 54.87$ seconds.



I found that International [Earth Rotation Service](http://www.earthrotation.org/) gives a table showing the Earth slowing data (Delta T) from January 1972 to January 2001 (monthly). In January 1, 2001 the slowing was 64.0908 seconds. The International Earth Rotation

Service also updates these data weekly. Thus I was able to incorporate in this plot the slowing data including June 1 of 2001. The data shown in the Figure coincide exactly with the correspondent portion of the Figure 4 from the Peter Duffett-Smith's book. The very recent data from the International Earth Rotation Service show numbers which allow calculating Delta T for June 13, June 14, and June 20 of 2001:

June 13, 2001, Delta T = 64.208477 seconds
 June 14, 2001, Delta T = 64.208550 seconds
 June 20, 2001, Delta T = 64.209395 seconds



So, the change of Earth slowing during one day was 0.000073 second or 73 microseconds at that time; the change during one week was 0.000918 second or 918 microseconds. This very small daily change is very hard to measure with common time devices. I have learned from the International Earth Rotation Service web page that their data are based on very accurate measurements of the Earth rotation using data from Very Long Baseline Interferometry (VLBI), Satellite Laser Ranging (SLR), Global Positioning System (GPS) satellites, and Lunar Laser Ranging (LLR). Data are supplied by many organizations including U.S. Naval Observatory, Paris Observatory, Institute of Applied Astronomy, St. Petersburg, and many other. [Astronomical](#) times are fully defined.

Offered by [Jacob](#).



Troubled Times



Global Warming

Rodrigo is a colleague of mine (same floor at work, almost next office) and I immediately went to see him after I read this. I did not know he had done such research before in CNES (French NASA). I asked Rodrigo to give me a copy of a new paper he wrote, which is not yet published. So I cannot quote it directly. What he concludes is that over the studied time scale (~50 years only, which is still too few, but accurate measurements are only recent he says) the atmospheric angular momentum fluctuations (due to Global Warming he says) can explain 15% of the length of the day (LOD) variability, on a quasi biennial and triennial-quadrennial time scale. Which I find few. And that there is a six year period in LOD variability which cannot be explained this way and which is "probably" due to mantle-core exchanges of angular momentum.

Offered by [Veronique](#).

Days Just Drag

[New Scientist](#), July 3, 1999

Global Warming is slowing the Earth down. A study of changes in wind patterns linked to global warming over the past 50 years suggests they are slowing the planet's daily spin by around half a millisecond every century. These effects open up a new way of tracking the progress of global warming without the uncertainties in simple temperature measurements.

Ocean currents associated with El Niño are already known to make equatorial winds blow faster and boost the angular momentum of the atmosphere. Momentum must be conserved, so the atmosphere steals momentum from the Earth's rotation, making it spin more slowly. Satellite observations showed that last year's El Niño made days drag on by an extra 0.4 milliseconds (This Week, 4 April 1998, p 21).

Climate experts have suspected that steady global warming might have a similar effect. Computer models of the effects of warming point to the appearance of jets of fast-moving wind between the troposphere and stratosphere, roughly 12 kilometres above the Earth's surface. These would also boost the angular momentum of the atmosphere, triggering a compensating slowing down in the Earth.

Now Rodrigo Abarca del Rio of the French space agency's Toulouse Space Centre has looked for direct evidence of this. Over the past 50 years, the Earth's average temperature has been increasing by around 0.79 °C per century.

Using wind data for the same period from the US National Centers for Atmospheric Research and Environmental Prediction, Abarca del Rio calculated the angular momentum of the atmosphere. He found it had increased in step with the temperature rise (*Annales Geophysicae*, vol 17, p 806). "There has also been a net loss in angular momentum by the solid Earth," he says. "The data suggest that global warming has caused a slowdown of the Earth at a rate of 0.56 milliseconds a century."

This implies that global warming is responsible for almost one-third of the slowing down in the Earth's spin scientists have measured. It also suggests that the length of the day could provide a means of monitoring global warming in future. Every 0.1 °C increase should produce a slowdown of 0.07 milliseconds, which is easy to measure.

However, Abarca del Rio says too many other complex effects influence the Earth's spin, such as movement of molten rock beneath its surface. Instead, he suggests using records on atmospheric angular momentum, which have been kept since the mid-1970s. "Records of surface air temperature have been the main measure of global warming," says Abarca del Rio. "Measurements of atmospheric angular momentum may be an easier and more reliable way."

Masaki Satoh, a climate modeller at Saitama Institute of Technology in Japan, agrees that the results could provide a new and better way to monitor global warming. "Atmospheric angular momentum is increased by the El Niño event, so it is reasonable that it should also increase with global warming."



Troubled Times



Satellites

I think if the planet slows then the satellites would tend to keep going due to angular momentum. We would find their position drifting toward the east. We would need to do some calculations to determine how much slowing would be detected by how much displacement. On second thought these things have jets that could be used to correct for this slowing. If this were done then one of two things can be expected in the long run:

1. not enough height to sustain orbit or they run out of correction fuel and
2. begin to drift east

I think all satellites could be affected. TV satellites antennas would from time to time need to be adjusted as these drift off. Something to be aware of and keep an eye on.

I just got wind of this today from a friend who read it in a boating magazine. According to the government, on August 21, 1999 ALL of the GPS satellites will be switched off for at least 6 minutes or more as they are reset and tested. Something about being designed for a "20 year cycle" and they need to be reprogrammed for Y2K compliance. Sounds fishy to me.

Mike

I know the GPS's have an accurate clock that supposedly is not kept up to date by use of Leap seconds as the commercial Atomic time is.

Offered by [Mike](#).

U.S. NAVAL OBSERVATORY
WASHINGTON, D.C. 20392-5420

August 11, 1999

No. 65

TIME SERVICE ANNOUNCEMENT SERIES 14

NO UTC TIME STEP

1. The International Earth Rotation Service (IERS) has announced that there will not be a time step occurring at the end of December, 1999.
2. The difference between UTC and International Atomic Time (TAI) will remain:

TAI-UTC= +32s until further notice.

DENNIS D. McCARTHY
Director
Directorate of Time



Troubled Times



Clocks

The clocks to use would be our **quartz digital battery operated clocks** and watches that can be read to the nearest sec.

I don't recommend **utility powered clocks**. They are too easy to get shut off by blowing a fuse or power outage. Also, electrical AC powered clocks are subjected to automatic adjustment for leap seconds. When leap sec are determined the AC frequency is adjusted to keep the clocks accurate. In other words power companies will skip a cycle of AC voltage for every leap sec.

I do not recommend using clocks or watches which are likely to experience a **radical change in average temperature** from one period to the next. In other words if you ware a wrist watch the same amount and store it in the same house using the same heat or cooling as the past then uniformity exists. If you move to a new climate or stop wearing the watch then that would need to be recorded, just in case it affects the reading.

I don't recommend using **clocks that need the battery changed** less than once every year.

Offered by [Mike](#).



Troubled Times



Time

What to use as standard time: This is where I get fuzzy, and could use some help. I don't know what's available to who or whether one standard can be used for all of us. Do we each use our own standard, using the same one constantly as much as we can through out the 5+ years? There is the standard time used for IRC chats, but by the time you down load the page to read it, seconds have past. Do we down load one of the program utilities that keeps the PC in sync with this time? Not everyone will have the expertise or willingness to do this.

Time Standard used for IRC chats:

<http://tycho.usno.navy.mil/>

Utilities are available to assist

Do we set your time using the local time? For some areas in the US this is using the **local area code then dialing 853 1212**, gets a recording of the current time. Whatever, you decide to use as a reference use this through out the 6 years if possible. I have found a difference of 10-20 sec difference between the two times.

Offered by [Mike](#).



Troubled Times



Method

Details of how it might work: Set your best digital battery operated clocks, watches as close to the min:sec of standard time. Set the hour to the local time. Once your time is set compare it to your chosen time reference standard and write down the offset as so many minutes and so many seconds fast or slow. Some people like to set there clocks ahead by a given amount and as long as this is recorded accurately as compared to a standard time this will still work. The final result could be written like the following and sent to me or a volunteer to enter into a spread sheet. The first 3-6 months would establish a base line for each clock and needs to be accurately done. At the time change into and out of daylight savings time could be one of the times to take the following measurements, information and send them to me or hopefully another volunteer.

Example:

Date measurements made: 26 Oct 97
 Clock name Time offset Time offset
 Before setting after setting
 Casio black watch 2 min 29 sec fast 2 sec slow
 Casio gold watch 1 min 33 sec fast 1 sec slow
 Watch name: the following is the same for both watches
 Temperature notes: average over the period
 Batteries changed: no
 Time Standard used: phoned time at 853 1212

Instructions: Make notes for each clock of any radical temperature or batteries changes or other factors that may affect the time measurements during the period. Make a note of what time standard you used. This would be entered into a spread sheet to accumulate the average slow down rate for each period of time. The first measurement would be taken by just taking the above measurements leaving blank the "time offset before setting". This first reading will go to set up a base line. The participants would be reminded a week before the 3 to 6 months (depending on what we decide) period to take there time measurements. This could over time give us hard evidence of the approaching PS if we do this I recommend as much participation as we can get. I would expect to see an exponential curve of the slowing of time becoming more apparent as we approach may 2003.

Interesting definitions and data:

Universal Time (UT): . . . the time which gives the exact rotational orientation of the Earth . . . determined by the U.S. Naval Observatory.
http://www.its.bldrdoc.gov/fs-1037/dir-039/_5712.htm

Coordinated Universal Time (UTC) can be considered equivalent to Greenwich Mean Time (GMT) (when fractions of a second are not important).

Summary:

1. we need to decide whether this is worth our doing.
2. If yes, then do I do it or do we have a volunteer?
3. If yes, is there anything we can improve on or need changing before we start?
4. What time frame to use for measurements? 3 months or 6 months or only at time change and half way between.

5. What time standard to use to set our clocks to?
6. We need a start date.

My current thoughts are to make the measurements at the time change and half way between or approximately every 3 months. The spread sheet would keep track of unequal measurement periods (variable number of days) by rectifying it back to time slippage/day. My current thoughts on a time standard is to use what each is comfortable with, and just record what was used.

Offered by [Mike](#).



Troubled Times



Battery Life

There are lots of watches these days that use lithium batteries. They last about 7-10 years while running the watch. My current understanding is these have a relatively long shelf life. I think one could still use them for up to about 30 years with a diminished watch run life time. One can adapt one or more Nicad to run any electrical watch. Just won't be able to close the back, so the watch becomes less portable. If a Nicad is left on the shelf uncharged it can be kept indefinitely. This is my current understanding. After one runs out of watch batteries one could shift to Nicad. The Nickel-Metal-Hydride is a newer battery that is credited with less of a discharge memory problem. However, my current understanding is it's internal discharge rate is possibly 10 times higher than Nicad. I would stay away from Nickel-Metal-Hydride unless I am missing something on this.

Mechanical watches are not very common now. They were in constant use but they would need cleaning and adjustment at regular intervals. Otherwise, they become useless and stop running. I consider regular cleaning and adjustment to be beyond the capabilities of the majority of people. Adapting batteries to get the same voltage to keep watches running I believe to be within the capabilities of many. Thus, I have tended toward LCD type watches, with no mechanical moving parts.

Offered by [Mike](#).



Troubled Times



IERS

I get the [IERS](#) statements like clockwork every thursday. However, they simply tell us when the gov't adds or subtracts a second from the atomic clock times so that things come out evenly. Unfortunately, unless we look at the data for long periods of time we won't know the difference, and there is some real doubt as to whether it is being reported accurately. I suggest setting your watches on atomic time from the clock connections, and putting about 10 of them in a safe and coming back six months later. Take the average of all your lithium battery watches (throw out any that are really off), and compare it to vcurrent atomic clock time then. If the difference is more that 10 seconds, we have a problem.

The satellite-geodesy programs used in the [IERS](#) give access to the time variations of the Earth's gravity field, reflecting the evolution of the Earth's shape, as well as the redistribution of masses in the planet. They have also detected changes in the location of the centre of mass of the Earth relative to the crust. This makes it possible to investigate global phenomena such as mass redistributions in the atmosphere, oceans and solid Earth. Universal time and polar motion are available daily with an accuracy of 0.5 mas and celestial pole motion are available every five to seven days at the same level of accuracy - this estimation of accuray includes both short term and long term noise. Sub-daily variations in Universal time and polar motion are also measured on a campaign basis.

Offered by [Eric](#)

There is a big problem with locking several watches away and taking an average from them. For one thing, a watch crystal's frequency is affected by temperature and a carefully calibrated watch takes into account the body heat of the wearer. So, if you have several watches at room temperature they will all be biased in one direction thus skewing the average. If you really want to know what is going on with time corrections try finding a non-government entity with an atomic clock to see what they have observed. Some broadcasters use atomic clocks as frequency standards, also check with universities and astronomers.

Offered by [Steve](#).



Troubled Times



NEOS hasn't been updated since July. They aren't letting us know how the earth's rotation is going since that date. Verry interesting.

Offered by [John](#).

Certain guidelines define when leap seconds will occur:

- $|\text{UTC}-\text{UT1}| > 0.7$ seconds,
- after 23:59:59 on "June 30 or December 31" only

Offered by [Pat](#).



Troubled Times



Superfluid SQUID

Superfluid Quantum Gyroscope:
Detection of the Earth's Rotation using a Superfluid SQUID
Dr. Keith Schwab, Condensed Matter Physics, Caltech

Abstract: We have demonstrated a device which is the superfluid analog of the superconducting rf SQUID. Because of the macroscopic quantization of circulation in superfluid 4He , such a device will couple to rotation and can be used as a detector of absolute rotation. This new type of gyroscope technology is demonstrated to have the sensitivity to resolve the Earth's rotation to a level of 0.5% in a measurement time of 1 hour. Possible applications and future developments will be discussed.



Troubled Times



El Nino Excuse

Study says El Nino slows Earth's rotation

Reuters, Wednesday May 27 6:51 AM EDT

If you have noticed the days are getting a little longer, you are right - and it's not just the change of season - scientists said Tuesday. Researchers gathered in Boston for a meeting of the American Geophysical Union blamed El Nino and its effects on the atmosphere for slowing the Earth's rotation by almost a thousandth of a second. "The energy is going from the Earth into the atmosphere. The Earth is slowing down," NASA's Goddard Space Flight Center scientist Dr. John Gipson told reporters. He estimated that at its peak in July 1997, El Nino slowed the Earth's rotation by 800 microseconds. Throughout the El Nino period, which is expected to taper off later this summer or in the fall, the Earth's rotation has slowed by an average of 300 to 400 microseconds, Gipson said. "My guess is that following the current El Nino, we're going to through one of those periods where the Earth speeds up and makes the days shorter" in a La Nina episode, Gipson said.

This is not the first time an El Nino has made the days longer. The 1982-83 El Nino also slowed the Earth's rotation, but not by such a large amount, the scientists said. During an El Nino, the ocean temperature is raised in the eastern Pacific and reduced in the western Pacific. The phenomenon, which has been blamed for floods in Ecuador, droughts in Indonesia and ice storms in Quebec and the U.S. northeast, changes the ocean currents and the intensity and direction of atmospheric winds. This large scale shift in winds and currents changes the length of day by an amount measurable by sophisticated space-based methods. La Nina is the opposite phenomenon with the water temperature in the western Pacific rising, while the eastern Pacific gets colder. It too affects the Earth's rotation causing it to speed up, but "only about three-quarters as much" as El Nino slowed it down, Gipson said.

Dr. Jean Dickey of NASA's Jet Propulsion Laboratory said that while the average person would probably not be affected by such a small shift in the Earth's rotation, "it plays a very important role in inter-planetary navigation." She called it a "critical factor in the success of the Pathfinder mission to Mars." University of Texas at Austin Professor Byron Tapley added the speed of the Earth's rotation was also key to the functioning of the Global Positioning System (GPS) used by ships, planes and the military.



Troubled Times



Slowing Rotation

An article in the **December 13, 1984** *Washington Post* report that the Earth had experienced a sudden unexpected slowdown in rotation. Later, on **July 15, 1988**, an article in the *Wall Street Journal* stated "Why earth should have slowed .. isn't wholly understood," and further reported that scientists at the US Naval Observatory and at the Jet Propulsion Lab found that the "earth, like an unbalanced washing machine," has developed "wobbles as it spins." Still later in **July, 1990**, *Omni Magazine* reported that between January 24 to February 3, 1990, the Earth's rotation suddenly and unexpectedly slowed down again. US Naval Observatory scientists reported that the slowdown was more abrupt than usual. On **August 9, 1991**, the *New York Times* speculated as to the causes of the slowdown in the following article.

New York Times
August 9, 1991

As the world turns, its rotational speed is slowing down by an average of 1.4 milliseconds each century. But now scientists have determined that the deceleration is occurring somewhat fitfully. The slowing causes the Moon's orbit to expand slightly and a day on Earth to grow ever so much longer. Scientists analyzing new, more precise measurements have determined that winds and ocean currents, ice melting and turbulence in the Earth's liquid metallic core are causing detectable variations in the rotation on time scales of days, months or decades. Besides the long-recognized tidal forces from the gravitational action of the Moon, Sun and other astronomical bodies, the forces generated by atmospheric motion have the most significant effect on the slowing down or speeding up of the spinning Earth.

Recent studies, for example, have established a correlation between these variations and the large-scale redistribution of atmospheric mass associated with El Nino, the periodic phenomenon of strong winds and ocean currents in the southern Pacific basin. The growing appreciation of the important role of atmospheric forces on Earth's rotation is described in the issue of the journal *Science* being published Friday. The report was written by Dr. Raymond Hide, a geophysicist at Oxford University in England, and Dr. Jean O. Dickey, a geodesist at the Jet Propulsion Laboratory here. "Ninety percent of these variations are caused by changes in wind," Dr. Dickey said in an interview. "If the atmosphere is speeding up, Earth is slowing down." Some of the short term fluctuations can change the length of a day by as much as five milliseconds. Not that this should disrupt anyone's biological clock, but the fluctuations can affect navigational computations for space craft traveling far out in the solar system.

On a more fundamental level, geophysicists are keenly interested in learning how to use Earth's erratic motions as a key to interpreting the dynamics of its deep interior. They suspect that perturbations in the circulation of the hot fluid metallic core contributes to the rotational changes. Some of these disturbances may be caused by the rough topography, like inverse mountains, where the liquid core meets the solid structure, or mantle, of Earth's depths. "The roughness at the core-mantle boundary," Dr. Dickey said, "causes most of the variations that occur over periods of decades." In their report, Dr. Hide and Dr. Dickey concluded that the irregular rotational variations are the result of "fluctuating fluid flow in the underlying hydrosphere and atmosphere, and non-periodic mass distribution associated with earthquakes, the melting of ice" and also convection forces within Earth and the movement of crustal plates near the surface.

The analysis was based on years of precise measurements of Earth's motions. These were achieved by

observing shifts of distant celestial objects in relation to Earth and by bouncing laser signals off artificial satellites and off quartz reflectors left on the Moon by Apollo astronauts. The scientists said that such measurements are 10 to 20 times more accurate now than they were 10 years ago.



Troubled Times



Core of the Earth

Excerpts from article appearing in July 18, '96 *San Francisco Chronicle*
Inner Core Of the Earth Spins Faster

"We didn't think this was something we could ever hope to measure," said Paul Richards of Columbia University's Lamont-Doherty Earth Observatory, co-author of the paper that was published yesterday in the journal *Nature*. By tracking the arrival times of waves from 38 earthquakes that rumbled through the Earth between 1967 and 1995, the researchers created what amounts to a sonogram of the inner Earth, similar to medical sonograms used to see inside the human body. Because the speed of waves varies according to the properties of the material it traverses, the scientists were able to create an image of the core. ...

Richards and colleague Xiaodong Song discovered that the moon-size core of the Earth spins slightly faster than the Earth's crust. ... Confirming these results, a paper soon to be published by University of California at Berkeley geophysicists Raymond Jeanloz and colleagues at Harvard got almost exactly the same results using different methods. ...

Song said he was "truly surprised" by the finding, because it contradicts the conventional geophysical mind-set about the inner dynamics of the planet. "We have tended to see the internal structure of the Earth as static," he said. ...

Just as the rotating Earth churns up hurricanes and storms in the atmosphere, currents of iron create similar weather patterns underneath. ... Several theories could explain the core's rapid spin. The solid iron crustal core could be getting spun around like a giant electric motor by the magnetic forces created by the molten iron that surrounds it.



Troubled Times



Magnetic Dispersal

The Art Bell show on November 29, 1995 was interrupted by reports of a shift in magnetic north. One caller from Volcano, California reported a 17 degree shift, and Juneau, Alaska reported a 7 degree shift. The anomaly seemed to be limited to the west coast, with California, Arizona, Oregon, Washington, and Alaska reporting a shift. A report from Alaska stated the Northern Lights had been more impressive than any in memory, over the past few days, and a report from Australia stated that homing pigeons which rely on the magnetic field for their sense of direction had seemed confused for the past 6 weeks. In the days following the Art Bell show, military and airport personnel also reported the phenomena. The shift veered toward the east when recorded on the West Coast, and toward the west, when recorded on the East Coast!

Sunspots can reportedly cause such magnetic deviation, but were not in evidence at this time, per USGS representative John Quinn whose comments were posted on the Usenets, stating:

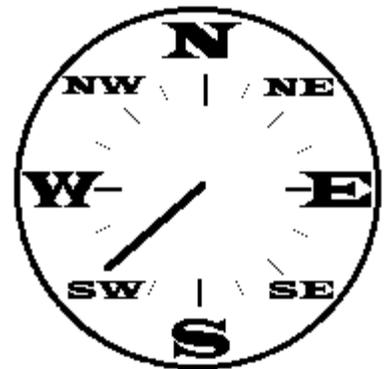
The only time that magnetic declination anomalies on the order of 5 to 15 degrees have taken place is during severe magnetic storms. One example is the March 1989 magnetic storm in which the auroral oval moved from its usual location along Alaska and Canada to Mexico. ... Storms of this magnitude are rare, particularly now because we are in a solar quiet time. There were no magnetic storms of consequence during the 48 hours covering 28 and 29 November.

The USGS representative reported a *lack* of magnetic deviation, however, stating:

I have looked at the Daily magnetic observatory records for the 28th and 29th of November. These records show no unusual magnetic activity of the kind reported on the Art Bell show. I have looked at the Tuscon Arizona, Fresno California, Sitka Alaska, Honolulu Hawaii, Fredricksburg Maryland, and several other observatory records. In general the fluctuations were less than 10 arcminutes.

However, a report posted on the **I_UFO** boards on December 6, 1995 by Patrick Frye of the University of Georgia states that the recent occurrence is unusual, but that local magnetic deviations have been in evidence for several years, in Georgia. He reports:

When I was in the **Army** and training to be a navigator/surveillance system operator we were given charts that list the magnetic declination from true north. ... It can be pretty great in some areas, up to 10 degrees give or take if I remember correctly. There are several reasons for this. One is the magnetic north is moving because of the fluid nature of the earth, but the key here is that it does not move that much over time. The other reason for the charts is because true north (grid north) and magnetic north are not located at the same place. ... It is all pretty straight forward.



What the **FAA** announcement says to me is that it is changing rapidly. I was under the impression (from my training) that this change was small and incremental, and that maps and charts only had to be changed/updated every few years. Nothing I learned talked about changes of several degrees or more happening in a few days, over night, or even in a month.

Another point that may come into play on a local level is local magnetic anomalies. This probably isn't the case with the **FAA** report. While videotaping a lawyers conference on Real Estate Law, they were talking

about how, on the east side of Atlanta, GA when the land was surveyed, they used a compass and typical surveying equipment. Now, as land is sold and resurveyed they are finding gross mistakes as in some people don't own anything, others own twice or more what they thought, and lines that were supposed to be parallel, cross. Of course now they are using sophisticated equipment and such and they found that the original surveys were not carelessly done but that there are major magnetic anomalies in the area giving totally false headings. All was worked out for the landowners, but it was a mess for awhile.

It only affected, or at least they have only discovered it, in a relatively small area east of Atlanta, and it was discovered about 10 to 15 years ago when Atlanta entered into its boom time. That area, Gwinette Co. and Dekalb Co. were fast growing and subdivisions were blooming everywhere, thus a lot of surveying to lay it all out. This area of GA is on a major granite shelf, Stone Mt., GA is just one obvious manifestation of this, and it is within a dozen miles of the area I'm talking about



Troubled Times



Magnetic Decay

Date: Mon, 10 Nov 1997 15:06:01 GMT

From: Larry Newitt <newitt@geolab.nrcan.gc.ca>

Subject: re: decay of the earth's magnetic field

I am not familiar with the article by Barnes in the **SIS Review**, but the decrease in the earth's magnetic field to which he referred is well-known. That is not to say that the strength of the magnetic field is decreasing by the same amount everywhere. Measurements of the magnetic field strength are routinely made at different places on the earth show, and show different rates of decrease; in fact, some places show an increase. However, mathematical analyses of the observations, which are routinely done every few years, show an overall decrease in what is called the "dipole moment" of the magnetic field. (See for example, C.E. Barton, **Journal of Geomagnetism and Geoelectricity**, v 49, 123-148, 1997.) This decrease is approximately linear, not exponential. If it were to continue, the dipole moment would become zero in about 1250 years, but Barton points out that the dipole appears to be recovering from an historic high that occurred about 2000 years ago, so there is no reason to believe that the decrease will continue indefinitely.

Regards, [Larry Newitt](#)



Troubled Times



GPS Satellites

A web search will show a USGS site that maps over time the changes in the physical location of the magnetic north pole. It has been wandering all over the place for a good while now. That is the primary reason the US military put the GPS (Global Positioning System) satellites into orbit several years ago. The magnetic declination on their maps could not be trusted and they could not create and distribute new maps fast enough, and should a shift occur during a conflict it would be disastrous. So now, the almost constant movement of the magnetic poles does not impact the military's ability to know where everything is.

Offered by [Ron](#).



Troubled Times



Fluxgate

An [Alaska Site](#) has a presentation of up to date data regarding earth's magnetic field, plotted out on a graph from readings taken from the fluxgate magnetometer, built by the University of Alaska. We can in fact follow abnormalities in the earth's magnetic field, and track the day(s) when they occurred. This relates to the approach of Nibiru / 12th Planet / Planet X, as the planet closes in for passage it causes more and more magnetic abnormalities/disturbances and this will be reflected in the data.

Offered by [Michel](#).



Troubled Times



Field Failure

Is Earth's Magnetic Field Failing?

New Scientist, August 22, 2001

If you can't journey to the centre of the Earth, why not bring the churning heart of the planet to your lab? It's scary stuff, but Adrian Cho thinks it might tell us why we're still alive. Take 14 tonnes of highly explosive metal, melt in a large vessel and stir vigorously. Stand well back. Intrepid researchers at the University of Maryland plan to try out this recipe, and, needless to say, the fire marshal is already having sleepless nights. But it will be well worth the trouble if they solve the long-standing puzzle of how the Earth produces its magnetic field. It might even be a matter of life or death. The Earth's field is one of nature's great gifts, shielding us from lethal cosmic radiation and possibly stopping our atmosphere being stripped away by the ravages of the solar wind. If our magnetic field were to switch off entirely, the Earth could become as sterile as Mars. Our protective shield is unlikely to fail permanently, but a temporary shutdown may be imminent. It could happen within as little as 2000 years. Measurements of the Earth's field show that it is getting weaker, and suggest that we are heading for a field reversal, in which the north and south magnetic poles will swap. When the reversal is in full swing, there will be a time when the field sinks almost to zero before cranking up again. This unprotected period might only last for a few years, or it could go on for thousands. To know for sure, we'll need a very precise model of the Earth's core.

The core is a ball of iron 6960 kilometres across, at a temperature of more than 5000 °C. The outer 2260 kilometres are liquid, the inner part is squeezed solid. Convection roils the outer portion of the core, as cooler, denser fluid sinks under the pull of gravity, while hotter, less dense liquid rises to take its place. So how could this swirling molten metal create a magnetic field? Magnetism, electricity and motion are like a three-for-two special offer: if you have two of them, the third one comes free. In a bicycle light dynamo, for example, a magnet and the spinning rear wheel of your bike generate electricity. In the Earth's core, researchers believe that the magnetism of a "seed field" from, say, a nearby star, works with the motion of the churning metal to generate electric currents. The electricity in turn feeds the magnetic field. Given the right conditions for this "magnetic dynamo", the seed field will stretch, twist and grow as the molten metal moves. Eventually, the field will become strong enough to influence the motion of the fluid, effectively controlling its own growth. Once at this point, the magnetic dynamo can produce a stable, self-sustaining field.

However, this is still a matter of faith among physicists—they can write the equations that describe the motion of a conductor and the evolution of a magnetic field, but they can't explain exactly how it reaches a steady state. That's mainly because the fluid flow inside the Earth is turbulent, teeming with whorls and eddies. "We don't have enough computer memory and power to resolve the really small eddies," says Gary Glatzmaier, a computational physicist at the University of California in Santa Cruz. And so models must rely on simplifications and approximations. What they need is something real they can use to refine their computer models—a turbulent core they can play with. Several research groups are now building them. To capture the effects of turbulence, they have to make devices that allow liquid metal to flow freely. Researchers in Cadarache, France, have built a small device that will be filled with 330 litres of molten metal, and another team at the University of Wisconsin, Madison, will soon rev up a spherical mock-up of the Earth's core 1 metre in diameter.

But Daniel Lathrop, Daniel Sisan and Woodrow Shew at the University of Maryland have by far the most

ambitious plan. For the moment they are working with a pair of small devices, but they are drawing up plans for a ball 3 metres across that will contain 14 tonnes of sodium. It will be heated to more than 110 °C to melt the metal, and propellers will churn the liquid to simulate the effect of convection in the core. The entire ball will spin seven times a second to mimic the Earth's rotation. If you know your chemistry, alarm bells should be ringing by now. Sodium may be a wonderful conductor of electricity, but it is also rather reactive. Chemists keep the metal in oil to avoid contact with air or water-otherwise it can burn or even explode. When just 100 kilograms of sodium exploded at the French nuclear research centre in Cadarache in 1994, a worker was killed. To ensure safety in Maryland, the entire device will sit inside a big metal box. "That makes the fire marshal and the safety officer feel a whole lot better," says laboratory technician Donald Martin.

Despite the risk, the sphere really does need to be as big as possible. Size matters because the magnetic fields need space to stretch, twist and grow. Field lines confined to a small space tend to resist this sort of deformation. Researchers in Riga, Latvia, and in Karlsruhe, Germany, have generated magnetic fields in somewhat smaller vessels, but only by forcing sodium to flow along helical paths. This doesn't mimic the more complicated workings of the Earth's core, says Agris Gailitis at the University of Latvia. "It is really low turbulence", he says. In the Earth, as in any free-flowing dynamo, the fluid will be highly turbulent. So the only way to get anywhere close to mimicking the Earth's core is to have a huge volume of madly churning molten metal. The faster it goes, and the bigger the volume of the fluid, the more the field will twist, stretch and grow towards a steady state. So far, no one has yet managed to persuade such a freely churning fluid to generate a magnetic field. But a sphere 3 metres across might do the trick.

Theorist David Sweet, working with Lathrop and his colleagues at the University of Maryland and the Los Alamos National Laboratory, has shown how this giant ball of sodium should produce a self-sustaining magnetic field (Physics of Plasmas, vol 8, p 1944). They studied how churning liquid metal responds to a magnetic "seed" pulse that kick-starts a self-sustaining field. At a low flow speed, the field inside the liquid decays as soon as the pulse is turned off. But the rate of this decay decreases as the flow increases. Eventually, it won't decay at all. When the experimenters subject their giant ball of churning sodium to brief blasts of a magnetic seed field, the dynamo should spring to life. But it won't be steady straight away-the dynamo starts up like a sputtering old lawnmower, says Sweet. His calculations show that the field comes on full blast, drops to zero, and then returns to full blast later. These bursts are common to all turbulent magnetic dynamos, Sweet says, and are the signs that Lathrop and his colleagues will look for to see if they've created one. As the flow speed increases further, the field will eventually stop bursting.

The researchers will also try to observe "saturation", when the flowing fluid does not just produce a magnetic field, but the field in turn controls the flow of the fluid-this is what allows the field to sustain itself. Getting this right will require careful stirring, warns Cary Forest, a physicist at the University of Wisconsin in Madison. The flow has to have a particular character in order to generate a self-sustaining field. "If the flow is not right you're not going to get a dynamo," he says. Get the flow wrong and you could end up simulating the core of the wrong planet. Earth and Venus are similar in size and basic composition, yet Earth has a field while Venus doesn't. No one knows why, but flow might be the key. They may not know the precise recipe for successful flow, but theorists believe there are two essential ingredients. The first appears to be differential rotation, which will stretch any stray magnetic field lines around and around the axis-like a kid stretching a wad of chewing gum round and round his finger. The second ingredient is flow parallel to the spin axis, creating loops of magnetic field bulging out of the tightly spiralling lines-imagine the kid pulling a single strand of the wound-up gum towards the end of his finger. As the fluid continues to rotate, these loops of magnetic field can twist off, the two ends joining to form independent field lines.

Lathrop believes the required flow probably arises out of the interplay between turbulence and steady rotation. "The rotation tends to organise the turbulence," he says. Unlike the Earth, Venus's crust hasn't split into tectonic plates. This reduces the effectiveness of the planet's convection cooling system and suppresses any turbulence. Venus may also rotate too slowly to calm and organise any turbulence that does arise. Whichever is lacking, something in the flow seems to stop Venus's core generating a field.

Only by building mock-ups of the Earth's core will we find out what's really going on. Meanwhile, there's another, more urgent question that needs addressing. If Lathrop's experiment does produce bursts of magnetic field, rather than a steady field, does that mean we are lucky enough to be living in the middle of a burst of the Earth's dynamo? Could it be about to cut out? That's a worry, because the Earth's field deflects high-energy particles crashing in from space. These cosmic rays can cause cancer and other diseases. The field also deflects the solar wind, the torrent of ionised gas streaming from the Sun. This ill wind may have blown away most of Mars's atmosphere when the Red Planet lost its magnetic field roughly 4 billion years ago (New Scientist, 10 February, p4). The Earth's dynamo appears to be operating beyond the bursty turn-on transition, Glaztmaier says. If he's right, the field won't cut out entirely—at least, not until the planet has cooled for a few billion years, slowing the convection. But without a more thorough understanding of the role of turbulence in generating the field, it's hard to be entirely sure. ...



Troubled Times



Dramatic

Sun's Rays to Roast Earth as Poles Flip

[The Observer](#), Nov 10, 2002

Earth's magnetic field - the force that protects us from deadly radiation bursts from outer space - is weakening dramatically. Scientists have discovered that its strength has dropped precipitously over the past two centuries and could disappear over the next 1,000 years. The effects could be catastrophic. Powerful radiation bursts, which normally never touch the atmosphere, would heat up its upper layers, triggering climatic disruption. Navigation and communication satellites, Earth's eyes and ears, would be destroyed and migrating animals left unable to navigate. 'Earth's magnetic field has disappeared many times before - as a prelude to our magnetic poles flipping over, when north becomes south and vice versa,' said Dr Alan Thomson of the British Geological Survey in Edinburgh. ...

For more than 100 years, scientists have noted the strength of Earth's magnetic field has been declining, but have disagreed about interpretations. Some said its drop was a precursor to reversal, others argued it merely indicated some temporary variation in field strength has been occurring. But now Gauthier Hulot of the Paris Geophysical Institute has discovered Earth's magnetic field seems to be disappearing most alarmingly near the poles, a clear sign that a flip may soon take place. Using satellite measurements of field variations over the past 20 years, Hulot plotted the currents of molten iron that generate Earth's magnetism deep underground and spotted huge whorls near the poles. Hulot believes these vortices rotate in a direction that reinforces a reverse magnetic field, and as they grow and proliferate these eddies will weaken the dominant field: the first steps toward a new polarity, he says. And as Scientific American reports this week, this interpretation has now been backed up by computer simulation studies.



Troubled Times



Magnetic Confusion

British Geological Society

BBC, April 17, 1999

Edinburgh Airport is repainting its runway strip markings after changes in the Earth's magnetic field rendered them inaccurate. The markings no longer tally with aircraft navigation systems because of a fractional shift in bearings. The British Geological Survey said after the change, magnetic north in the Scottish capital is around 5.5 degrees west of true geographic north. Geophysicist Dr Toby Clark said: "The precise thing to say is that this not because the runways have moved or changed direction in any way. "When the runways were built in the 1940s, aircraft would be coming down to land and their compasses would be showing a bearing of - rounded to the nearest 10 degrees - a bearing of zero, seven zero degrees. "But **in the 50 years since the runways were built, the Earth's magnetic field has changed direction** and now when they are coming in to land the magnetic compass, rounded to the nearest 10 degrees, will be showing zero, six zero degrees."

Dr Clark said the **movement in the Earth's magnetic field has been measured in the UK for 150 years**. The shift is due to changes in the flow of the Earth's molten iron core, where the Earth's magnetic field is generated. "From a navigational point of view these changes do have to be taken into account," said Dr Clark. Scientists have found the Earth's magnetic field has changed by between 20 and 25 degrees over the last 300 years. In geological history, the Earth's magnetic poles have completely swapped over many times. Dr Clark stressed that the use of magnetic headings on runways was mainly historical and aircraft positioning systems had rendered them more or less obsolete. However, the magnetic shift can still have an impact on some people, particularly map makers, hill walkers and those using small boats. Every airport has to change its markings on occasion to take account of the fractional magnetic changes. Edinburgh's main runway is being shut down for 10 nights during the repainting operation with flights transferred to the secondary runway. An airport spokesman said the only adverse impact might be a temporary increase in aircraft noise, for which he apologised.



Troubled Times



Bee Hive Behavior

Excerpts from a *USA Today* article, June 21, 1996 by Rae Tyson

A honey of a winter routs bee population

A lethal blend of harsh winter weather and vampire-like mites has devastated the nation's honeybee population. .. Some beekeepers lost up to 80% of their colonies during the winter. ... Experts say there may well be some declines in production - and increases in food prices - because certain crops will be under-pollinated. .. Bees are susceptible to cold weather for reasons of personal hygiene. During the hibernating months of winter, bees, wanting to keep hives clean, take flight every few weeks to defecate. When weather is particularly cold .. "they just don't get out for their cleansing flights" and end up contracting fatal dysentery.

Some states report dramatic losses - Florida 25% loss, Illinois 30%-40% loss, Iowa 43% loss, Louisiana 5%-10% loss, Main 80%, Michigan 60% loss, New York 60%-70% loss, South Dakota 30%-60% loss, Tennessee 50% loss, Washington 50% loss, Wisconsin 67% loss.

However, the Earth's magnetic diffusion may be causing some of this trouble, per *The MILLENNIUM Matters* newsletter report on July 10, 1996. Writer David Yarrow states:

My own encounters with bees convinced me they detect, react, and navigate magnetic flux. The idea of a 'beeline' contains the notion of a compass bearing. I've seen bees deflected from their straight flight lines by magnetic fields from ballast transformers in fluorescent light fixtures. You can bet abnormal bee-havior - including population drops - indicates disturbed magnetic flux. Earth's magnetic field is indeed undergoing rapid changes in intensity, polarity, frequency, phase, and topography. Actually, the bee population crash isn't sudden. Bee mites have been a serious and growing threat to bees for more than a decade. But like HIV in AIDS, bee mites are an "opportunistic infection" are only a symptom - not a cause. Collapsing bee colonies indicate changing geomagnetism [and] a peek into a dark mystery.



Troubled Times



Confused Pigeons

Homing Pigeons Vanish En Route

Associated Press, October 8, 1998

Some 2,500 homing pigeons disappeared during two long-distance races on the same day, a nearly unheard-of loss in the little-known sport of pigeon racing. About 1,800 pigeons vanished out of 2,000 competing in a 200-mile race from northern Virginia to Allentown on Monday. The same day, 700 out of 800 birds never returned to their lofts in a separate 150-mile race from western Pennsylvania to Philadelphia. The birds remained unaccounted for Tuesday night. Ordinarily, the swift-flying birds should have been back in their lofts in a matter of hours. "I've never seen anything like this," says Earl Hottle of Allentown, who has been racing pigeons for 37 years. "Nobody can explain it."

Pigeon racing has thrived for centuries among a devoted group of several hundred breeders in the mid-Atlantic states. Each weekend in spring and fall, thousands of pigeons are trucked up to 600 miles away and released. Relying on their homing instinct and incredible stamina, the pigeons fly directly to their lofts. The ones with the fastest times are the winners. **In any race, a small percentage of the birds do not return home - but a 90 percent loss rate is unusual.** "We've heard of this in other areas," says Jim Effting, who had only three of 37 birds return in the race from Virginia. "But we've never had it happen around here."

Racing veterans have few ideas about what caused the birds to lose their way - or otherwise disappear. There were no weather problems during either race, sun spot activity was low and no comets, meteor showers or planet alignments occurred. The skies were clear of satellite interference. "The chances that 2,000 hawks would get 2,000 pigeons are pretty unlikely," says racer Dennis Gaugler. "The birds would scatter when attacked." "The truth is that nobody knows what happened," says another racer, Robert Costagliola, "and probably never will."



Troubled Times



Satellite Malfunction

Satellite Failure Mars Tracking Of Hurricane Mitch

Reuters, October 28, 1998

The National Hurricane Center Tuesday lost its prime means of monitoring Hurricane Mitch, forcing the U.S. government to use another satellite to track the ferocious storm as it threatened Central America, officials said. **The National Oceanic and Atmospheric Administration (NOAA), the U.S. government agency that operates the GOES-8 satellite that watches Atlantic hurricanes, was uncertain why it tilted away from Earth.** Nor did the agency know when it might return to service.

The \$220 million GOES-8, made by Space Systems/Loral, a Palo Alto, California subsidiary of Loral Space & Communications Ltd, monitors Earth's atmosphere over the Atlantic and Caribbean and is usually pointed at the center of the planet. But it suddenly tilted away from its usual position at about 3 a.m. EST (0800 GMT).



Troubled Times



Hot Rocks

Research Team Says "Recent" Warming Trend Is Global [Space Daily](#), Apr 21, 2002

A team of Michigan and Canadian researchers has found that over the past half-century, the rocks of Earth's continental crust have warmed significantly, similar to the warming of the oceans, atmosphere and ice reported by other investigators last year. Showing that the continents have warmed along with the other principal components of Earth's climate system indicates that the warming of our planet has been truly global, the researchers say. "Our findings remove any last doubt that this is anything other than a global phenomenon," says Henry Pollack, U-M professor of geological sciences, who collaborated on the work with U-M assistant research scientist Shaopeng Huang, U-M graduate student Jason Smerdon, and Hugo Beltrami of St. Francis Xavier University in Nova Scotia. The researchers report their work in the April 15 issue of *Geophysical Research Letters*, a leading geology journal. "Until recently, the story of global warming has been built up primarily on the basis of temperature measurements at the surface of the land and oceans," says Pollack. "These measurements have been painstakingly acquired and put together, and there has been enough information to reconstruct a temperature history for the Earth's surface for the past 140 years. But it's all based on surface measurements."

That approach was augmented about a year ago when another group of researchers determined how much heat had been gained during the last half of the 20th century throughout the atmosphere, the depths of the oceans, and the cryosphere (the portion of Earth's surface where water is in solid form such as sea ice, snow cover, glaciers, ice caps and permafrost). However, their analysis left out one major component of the climate system: continental rock, which covers almost 30 percent of the planet's surface. **Now, Pollack, Beltrami and colleagues have completed the picture by determining how much the continental rock has warmed in recent centuries. The scientists based their analysis on temperature readings taken by lowering sensitive thermometers into holes drilled from Earth's surface into rock formations on six continents (Africa, Asia, Europe, North America, South America, and Australia). These readings can reveal how temperatures have changed in the past, because the heat that surface rocks absorb from the atmosphere travels slowly downward into subsurface rocks, leaving a distinct signature in the rocks. Signals from short-term daily or seasonal variations penetrate only a few meters, and Earth quickly "forgets" them, but temperature changes that take place over hundreds of years are preserved in deeper rock.**

The researchers' calculations, based on data from 616 bore holes, found evidence of an increase in the heat content of the continents over the past 500 years, with more than half of that heat gain occurring during the 20th century and nearly one-third of it since 1950. "The magnitude of the warming we estimate is very similar to that which has come from the studies of the ocean, atmosphere and ice," says Pollack. "We believe it makes a persuasive case that the warming has been truly global."



Troubled Times



Ocean Warming

CBS, June 17, 1997

On Tuesday, June 17, 1997 CBS news reported that Pacific Ocean water temperatures are at their highest recorded levels ever. They were not specific about which regions of the Pacific, though the graphic showed the area off of San Diego. They predicted unusual weather patterns this winter, which they attributed to El Nino.

Press Release No 36-98

European Space Agency Satellites Provide New Insight into Rising Sea Levels

Antarctica is not shrinking, the European Space Agency ESA reveals today. This result of the ERS (European Remote Sensing) satellites is reported 16 October 1998 by an international team of scientists in the leading American magazine, *Science*. But the same investigation provides evidence that one part of West Antarctica may be rapidly losing its ice to the ocean. The team of British, Dutch and American scientists, led by Professor Duncan Wingham at University College London, based their findings on ERS data collected over five years. The data reveal that most of the ice stored in Antarctica is very stable. The icy continent now looks an unlikely source of rising global sea level this century, making thermal expansion of the ocean due to global warming, and the shrinking of mountain glaciers, more likely causes.

Prof. Wingham's team used ERS's radar altimeter instruments to determine if the thickness of the Antarctic Ice Sheet changed over the five-year period from 1992 to 1996. Transmitting over 4,000,000 radar pulses to the surface of the ice, and measuring the time taken for the echoes to return to the satellite, the average change of the height of 63 of the Ice Sheet was measured with an accuracy of 0.5 cm per year. The ice sheet has changed on average by less than 1 cm per year. Using previous measurements of changes in snowfall over the ice sheet, the team concluded that the interior of the Antarctic Ice Sheet had contributed only 1.7 cm to sea level rise this century. Sea level has risen 18 cm over the past 100 years.



Troubled Times



Bottom Up

A couple of weeks ago I asked this list [tt-watch] about further information about the earth heating from the inside out. The response led me to believe that most were as in the dark, as I was, about corroborating information. Then, today's Awakening posting showed up at my cyber doorstep with a very interesting article tucked away on page 5 about the warming of the Sea of Japan. Not necessarily a "smoking gun" but very compelling nonetheless. Rather than capsulize it, I thought I'd share a few things that caught my attention.

1. It mentions *deep* sea warming a couple of times. This is the first time that I've ever seen, in print, a reference to the warming of the depths (re:core)of the ocean. The article goes on to suggest that it would be no surprise if the phenomenon continues.
2. The reason given for the warming is that a "bitter winter wind" funnels through a mountain range each year cooling the sea (by creating an unusual downward vertical current that cools the lower depths) in far eastern Russia, thus implying that the surface temperatures have been warmer in the vicinity giving rise to warmer winds. Now, I reserve the right to be wrong, but I was under the impression that northern and eastern Russia (Siberia, etc.) were experiencing the coldest winter on record. I imagine that those "bitter winter winds" were as cold as they had ever been! It seems to me that the "explanation" then, is wrong.
3. Another interesting item was the temperature increase figures given in regard to both global warming (in general) and the Sea of Japan. It states that records show that the earth has already "warmed 0.6 degrees celsius in the past 100 yrs." And yet, according to a researcher, the Sea of Japan's temps have risen 1.5 - 3 degrees over the last 50 yrs! That is a staggering difference and seems to fly in the face of conventional warming wisdom!
4. This is also the first article, that I have seen, which actually confirmed what is known on these lists. It said "this may be behind the recent increase in droughts and floods worldwide". The increases are acknowledged! Don't know what your reactions will be, but a couple of nagging questions were well on their way to being answered for me today.

Offered by [Kevin](#).

As you may know there are many vents deep under water that are of volcanic origin. The spew superheated water and thus create their own ecosystems, some which have been photographed. Does you post possibly have something to do with this?

Offered by [Stephen](#).

I was aware of the volcanic vents. But am not aware of any written source confirming increased vent activity. That's what I was referring to, sources that verify increased activity of that nature as well as anything confirming core heating in general.

Offered by [Kevin](#).

I can't find anything further regarding earth warming from the inside out either; only what [National Geographic](#) has to offer. There is voluminous material available on oceanographic research in areas ranging from A to Z, but I don't think The Establishment has any intention of releasing anything pertinent to the fact that the approaching planet has already begun it's sinister work from below. Even, as it is so obvious to "inquiring minds", the usual commentary offered to the public as to the cause of the great ice sheet melt is attributed to warming ocean currents, solar radiation, shifting winds, etc, etc. - no mention of the softening interiors of the great ice caps, or the permafrost in polar regions. Good luck!

Offered by [Mike](#).



Troubled Times



Early 2002

Rising air temperatures, possibly the consequence of global warming, are melting the ice from above. (That's been the standard line.) Now, a British researcher has concluded that warmer water is also rising from the depths to attack the ice from below. His name is professor Peter Wadhams of the Scott Polar Research Institute in Cambridge.

Offered by [Mike](#).

Arctic Ice Melting from Below
[BBC News Online](#), Mar 27, 2002

Scientists believe they have identified a mechanism which can explain the thinning of the Arctic sea ice. They say the thinning, which in summer reaches more than 40% in some areas, has two causes. Rising air temperatures, possibly the consequence of global warming, are melting the ice from above. And warmer water is also rising from the depths to attack the ice from below. Professor Peter Wadhams, of the Scott Polar Research Institute in Cambridge, UK, said in 2000 that he had established the degree of thinning using measurements from submarines in 1976 and 1996. He said these showed that in that time a large area of the sea ice, stretching from the North Pole to the Fram Strait between Svalbard and Greenland, had thinned by 43% during the Arctic summer. US data from the other side of the Arctic, between the Pole and the Bering Strait, found a similar thinning over the same period.

The reported melting has been questioned by some scientists who believe the ice is still there, concentrated in areas where the submarines have not looked for it. But Professor Wadhams says the thinning he has detected, from 16ft (4.8m) 20 years ago to 9ft (2.7m) today, is scientifically explicable. He told BBC News Online: "People say global warming can't be raising air temperatures enough to melt the ice, because the Arctic winter temperature is around -30C anyway, and a one-degree warming would be irrelevant. But it's the summer temperatures that matter. Arctic summers are getting longer, so there is longer for the warmer air to melt the snow and affect the ice beneath. The other mechanism is the warming of one or two degrees in the water under the ice - enough to increase the bottom melting quite considerably. There is a cold water layer immediately beneath the ice. But that's changing its stability and salinity, because of changes in the distribution of Siberian river water in the Arctic. Over a large area that cold water is becoming more saline and denser, which means it's letting more heat rise through it."



Troubled Times



Antartica Melt

Associated Press, 4/17/98 - 9:36 PM EDT

Section of Antarctic Ice Shelf Breaks Off

A massive chunk of ice shelf on the Antarctic Peninsula broke away earlier this year and scientists on Friday blamed global warming. Satellite images of the Larsen B ice shelf, which reaches toward South America, show the section broke away between Feb. 26 and March 23, toward the end of the Antarctic summer, according to the U.S. National Snow and Ice Data Center in Boulder, Colo. The icebergs produced by the crumbled shelf pose no particular threat, since there are no major shipping lanes in that area and Antarctic cruise ships or those resupplying bases all have radar to detect icebergs.

The collapse of the 75-square-mile chunk of ice shelf is consistent with "what we see from the effects of increased greenhouse gases, which cause warming," said Bill Budd, a meteorology professor at Australia's Antarctic Cooperative Research Center. "And it's the warming in the ocean that is most important for the reduction in the ice shelves," he said. "It is the melting from underneath that can be much more effective than warming of the air."

The British Antarctic Survey has predicted the entire Larsen Ice Shelf, which covers more than 4,000 square miles, is nearing its limit of stability. In January 1995, the Larsen A ice shelf to the north broke away in a 48 mile-by-23 mile mass, 600 feet thick. Over the past 50 years, the Antarctic Peninsula has warmed about 4.5 degrees. Research by Budd and his colleagues indicates global warming will melt most of the ice shelves, which border about 44 percent of Antarctica and cover 580,000 square miles. Budd's computer climate models predict significant degradation of the ice shelves beginning in the 21st century and their near-total loss within 500 years.

NOAA 98-69

For Immediate Release: 10/15/98

New Iceberg Breaks Off Ronne Ice Shelf in Antarctica

An iceberg larger than the state of Delaware has broken off the Ronne Ice Shelf in Antarctica, the National Ice Center reported today. The iceberg, named A-38, is 92 x 29.9 miles and covers an area roughly 2750.8 square miles. It broke off the second largest ice shelf in Antarctica, located in the southern Weddell Sea.

Large Iceberg Breaks Free from Antarctica

CNN.com, September 29, 2000

An iceberg 10 times the size of Manhattan Island has broken free from Antarctica's Ross Ice Shelf, The National Ice Center reported Friday. Iceberg B-20, as it is identified by the ice center, was discovered Wednesday by satellite monitoring. The exact date the 345-square-mile berg broke off the ice shelf could not be determined because of cloudiness in the area but it is thought to have been between Sept. 20 and 26. The 30-mile-long, 11.5-mile-wide iceberg is in the Ross Sea, south of the Pacific Ocean. The Ross Ice Shelf, on the part of Antarctica closest to Australia and New Zealand, is one of two massive ice fields on the continent that have been the site of increased "calving" of huge icebergs. While Iceberg B-20 is large, it is dwarfed by others that have separated from the Ross and Ronne Ice Shelves in recent years. Many scientists have speculated that the increase in the separation of ice from the Antarctic continent is caused

by human-induced global warming, but few claim firm scientific evidence to support that. Whatever the cause, the introduction of land-based ice from Antarctica into ocean waters could have some impact on sea levels. Marine safety experts warn that an increase in icebergs off Antarctica, in the North Atlantic and along cold-water shorelines like Alaska's Prince William Sound could raise the risk of ships colliding with icebergs. None of the Antarctic icebergs are currently in the path of heavily used shipping lanes.



Troubled Times



Rapid Disintegration

Antarctic Ice Shelves Breaking Up

April 7, 1999

Two ice shelves on the Antarctic Peninsula known as the Larsen B and Wilkins are in "full retreat" and have lost nearly 3,000 square kilometers of their total area in the last year, say scientists in Colorado and the United Kingdom. Researchers at the University of Colorado at Boulder's National Snow and Ice Data Center and the British Antarctic Survey attribute the retreats to a regional warming trend. The trend has caused the annual melt season to increase by 12 days to a total of 20 days over the last 20 years, they said. Satellite photos monitored by NSIDC show that the Larsen B ice shelf has continued to crumble after an initial small retreat in spring 1998. In a series of events that began in November 1998, an additional 1,714 square kilometers of shelf area caved away, said Research Associate Ted Scambos of CU-Boulder's NSIDC.

On the opposite side of the peninsula, the Wilkins Ice Shelf retreated nearly 1,100 square kilometers in early March of last year, said Scambos. Scientists looking at weather satellite imagery at that time suspected a breakup was underway and had their suspicions confirmed by radar satellite images. "The radar images showed a large area of completely shattered ice, indicating an ice front 35 kilometers back from its previous extent," said Scambos. "The sudden appearance of thousands of small icebergs suggests that the shelves are essentially broken up in place and then flushed out by storms or currents afterward." The British Antarctic Survey scientists had predicted one of these retreats, using computer models to demonstrate that the Larsen B was nearing its stability limit. With the small breakup observed last spring, the shelf had already retreated too far to continue to be supported by adjacent islands and shorelines.

Scientists at both institutes expected the two shelves to fail soon, but the current disintegration is occurring at an even faster rate than earlier breakups gave reason to anticipate. "We have evidence that the shelves in this area have been in retreat for 50 years, but those losses amounted to only about 7,000 square kilometers," said David Vaughan, a researcher with the Ice and Climate Division of the British Antarctic Survey. "To have retreats totaling 3,000 square kilometers in a single year is clearly an escalation. Within a few years, much of the Wilkins ice shelf will likely be gone." Ice shelves are floating plates of ice that are still attached to continents and which form when large glaciers flow toward the ocean in polar areas. Where they are supported by islands and sheltering coastline, they can become stable, long-term features, said Scambos.

Surface features on the Larsen B indicate that it has existed for at least 400 years. But as climate inches toward an average summertime temperature just above 0 degrees C - the melting point of water - the Larsen and Wilkins ice shelves have begun to disintegrate. The Larsen B ice shelf is currently about 7,000 square kilometers - about the size of Delaware. The Wilkins ice shelf is nearly twice that large, Scambos said. The British researchers, who have monitored the peninsula's climate warming for decades, report an increase in mean annual temperature of about 2.5 degrees C or roughly 4.5 degrees F since the 1940's. Both groups concur that ice shelf breakup is a direct result of local climate warming. According to Scambos, the recent warming trend has led to greater amounts of ponding melt on the shelf, weakening it. "Melt water at the surface acts to increase the extent of fracturing in the ice," he said. "The weight of the water essentially forces the cracks open, so a relatively small amount of climate warming can destroy a large, centuries-old ice shelf."



Troubled Times



Arctic Ice

Dramatic Thinning of Arctic Ice Found

[CNN](#), Nov 17, 1999

Scientists analyzing decades of data from Arctic Sea ice recently reported a significant reduction in the thickness of the ice during the last decade. The scientists found a decrease in sea ice all across the Arctic Ocean and that corresponds to previously reported evidence that the Arctic climate is warming, according to Dr. D. Andrew Rothrock of the University of Washington and colleagues. A report on the data will be published in the December 1 issue of *Geophysical Research Letters*.

Arctic Ice Thinning Threat to Rising Sea Levels

[ITN](#), Nov 18, 1999

American scientists examining the ice which flows in the Arctic Ocean have come up with a worrying statistic. They say that in the last thirty years, the ice has become 40 percent thinner, and they suspect global warming is to blame. One British expert has told ITN's Science Editor Lawrence McGinty that ice measurements taken by British Nuclear Submarines confirm the American findings. Scientists have known for some time that the sea ice covering much of the Arctic is getting thinner.

But these new results show the rate of thinning is much, much greater than they thought: in the four decades since measurements began in 1958, the depth of sea ice has been reduced by 40 percent. The measurements were made with sonar equipment on American nuclear submarines on Cold War patrol under the Arctic ice. The threat to the Arctic is significant -parts of the Arctic ice sheet are thinning by four inches a year. Large areas off Canada have thinned by three feet and zones around the North Pole are up to five feet thinner. And two other areas have lost up to six feet in depth since 1958.

Warmer Weather Melts Ice at North Pole

[Associated Press](#), August 20, 2000

For the first time in 50 million years, visitors to the North Pole can see something extraordinary: water. The thick ice that covers the Arctic Ocean at the North Pole has melted, leaving a mile-wide (1.6-kilometer-wide) stretch of water at the top of the world, *The New York Times* reported Saturday. Two recent visitors to the pole told the Times about the unexpected sight. "I don't know if anybody in history ever got to 90 degrees north to be greeted by water, not ice," said Malcolm C. McKenna, a paleontologist at the American Museum of Natural History. The water could be the result of global warming, although there is a debate among experts about the cause. Some believe it could simply be a natural occurrence rather than the result of a "greenhouse effect" caused by manmade pollution and increased concentrations of carbon dioxide in the atmosphere. Scientists have said that the last time the North Pole had this much water was 50 million years ago. For oceanographer James C. McCarthy, who visited the pole earlier this month on a tourist cruise, the disappearing ice was a cause for concern. Passengers aboard the cruise were shocked to find water when there has long been only ice.



Troubled Times



Melting Poles

About two or three weeks ago I mentioned a story in "The Independent" (from London) reporting that the Arctic ice cap has melted by some 40% to 50%. I remarked that it was unfortunate The Independent didn't mention a time frame. Well, here's a time frame mentioned in *The Seattle Times* of July 15: "The Arctic ice field has shrunk by 40 to 50 percent the last few decades and lost 10 percent of its thickness, studies show." The story also contains evidence of a warming climate in Alaska, including this:

Gunter Weller, director of the Center for Global Change and Arctic System Research at the University of Alaska in Fairbanks, said mean temperatures in the state have increased 5 degrees in the summer and 10 degrees in the winter over the last 30 years.

Also:

In many areas of interior Alaska, the permafrost has warmed to within 1 degree of freezing.

Offered by [Mike](#).



Troubled Times



Record Loss

Record Ice Loss in Arctic

BBC, Dec 9, 2002

Melting was so severe on the Greenland ice sheet in June that field researcher Konrad Steffen wondered just how he would get off the continent. "We had come in with a fixed-wing aircraft landing on skis," said the University of Colorado climatologist. "If that snow is melting then you cannot leave. As it was, we had to charter a helicopter." Greenland's unusual summer slush was part of a record-breaking year of northern polar ice loss, reported by Dr Steffen and other scientists this weekend at the American Geophysical Union (AGU) conference in San Francisco. According to scientists, surface melt on Greenland was the highest in recorded history - and extended to elevations previously untouched by melt - while the amount of Arctic sea ice also reached a record low. ... Greenland glacier and sea ice melt, combined with disappearing permafrost, the northern expansion of vegetation, and increased fresh water run-off present a "compelling case that something is going on," said Larry Hinzman, of the University of Alaska, Fairbanks. Measurements of the Greenland ice sheet taken from passive microwave satellite sensors show 685,000 square kilometres of melt, an area more than double that of 1992. ... In total, the arctic warming is an unprecedented trend, according to Dr Hinzman. "We're experiencing the most rapid increase in temperature in recorded history," he said.



Troubled Times



Ocean Conveyor

Environmental News Network (ENN)

December 9, 1997

A complex of globally interconnected ocean currents, collectively known as the Conveyor, governs our climate by transporting heat and moisture around the planet. But the Conveyor is delicately balanced and vulnerable, and it has shut down or changed direction many times in Earth's history, Professor Broecker reports. Each time the Conveyor has shifted gears, it has caused significant global temperature changes within decades, as well as large-scale wind shifts, dramatic fluctuations in atmospheric dust levels, glacial advances or retreats and other drastic changes over many regions of the Earth, he said.

The Conveyor "is the Achilles heel of the climate system," Professor Broecker wrote in *Science*. "The record ... indicates that this current has not run steadily, but jumped from one mode of operation to another. The changes in climate associated with these jumps have now been shown to be large, abrupt and global." Professor Broecker also offered a new theory: Scientists generally agree that periodic changes in Earth's orbit and the amount of solar radiation it receives have paced fundamental climate changes on the planet over millions of years. But the global climatic flip-flops may have been set in motion by sudden switches in the operation of the Conveyor, he said.

In recent years, evidence has mounted that the Earth frequently has experienced rapid, large-scale climate changes. Greenland ice cores have shown that during the last ice age Earth's climate switched back and forth every few thousand years between periods of intense and moderate cold, with the transitions occurring on a timescale of a few decades to as little as a few years. Each interval of intense cold was matched by the launching of great armadas of icebergs in the North Atlantic, seen in ocean sediment cores, and a great influx of dust into Earth's atmosphere, indicating a pronounced change in wind and storm patterns. Wetlands in tropical areas and mountain glaciers in Chile and New Zealand expanded and shrank in synchrony with the North Atlantic changes.



Troubled Times



Tsunamis

U.S. Government Suddenly Preparing for Tsunamis

By Melody Mehta, *TMG Prophecy*, June 21, 2000

Watching CNBC late last night (20th June) I noticed a small, not very urgently presented piece about tsunamis. The pretense of the presentation was that scientists have now discovered another fault-line, this time off the east coast of the United States. Remember a few weeks ago the announcement that scientists had found a fault off the west coast of the US and the tsunamis that were predicted if there is ever a quake along it? Well, now, ever so coincidentally, just a few weeks later we have one off the east coast as well. So, we were told, huge tidal waves are, in fact, a distinct possibility for both the east and west coasts.

To make matters just a little more interesting, they also slipped in a scientist saying that they are expecting the fault-line off the west coast to 'go' in the undefined 'near future'. Apparently, such is the urgency, that *signs* are being erected along both coasts to direct people in the advent of a tsunami emergency. An urgent tsunami evacuation plan is already underway. CNBC was kind enough to show the signs, and also the buoys that have now been placed along both east and west US coasts to alert the government of an impending tidal wave, presumably so the population can be evacuated.

NOTE: John Maynard of TMG followed up on this CNBC broadcast. He found that the major portion of the populations *east & west* were isolated on these announcements. The announcement about the West coast was primarily played on the west coast, and the same occurrence for the east coast. Although the announcements were nationwide, they were both played down on purpose respectively. But what if the fault-lines are indeed a mere pretense? They certainly seem to be acting, these government people, with uncharacteristic speed over all this. I believe that the US government is expecting, rather than predicting, large and massively destructive tsunamis on both coasts in the very near future, and if they know to expect it, then they know exactly what will cause it.



Troubled Times



Coral Kills

Global Warming Blamed for Caribbean Coral Kill

By Hillary Mayell, *National Geographic News*. May 5, 2000

Global warming has been blamed for the extermination of the coral reefs of central Belize—an event described by scientists as the first mass coral kill in the Caribbean in at least 3,000 years. A coral bleaching event that took place in 1998 has all but wiped out the reefs of the central part of the Central American country, marine scientists say. The bleaching event was reported two years ago, but bleaching doesn't automatically kill coral, and reefs usually recover from such an event. What surprised the scientists is the catastrophic mortality rate in Belize. "The coral kill in the central barrier reefs of Belize covers at least 375 square kilometers (145 square miles), probably more," says Richard Aronson, a marine ecologist with the Dauphin Sea Island Sea Lab and lead author of a report in the May 4 issue of the journal *Nature*. "The fossil record shows that this is the first mass coral kill in the Caribbean in at least 3,000 years."

Coral reefs are made up of large colonies of tiny animals known as coral polyps and the skeletons they leave behind after they die. They maintain a symbiotic relationship with zooxanthellae, microscopic, one-celled algae that live within the thin layer of live coral tissue. Zooxanthellae convert sunlight into fuel for their coral hosts, facilitating the formation of the coral skeleton that makes up a reef, and also providing corals with their rich colors. If water temperatures rise even one degree Celsius (about two degrees Fahrenheit) above the maximum temperature that corals are used to, they become stressed. When stress levels get too high, corals expel their zooxanthellae. The loss of color that results is referred to as bleaching. If the water temperature doesn't stay too high for too long and the reef is not stressed in other ways, corals that have been bleached can and usually do recover. Bleaching events that occurred prior to the 1980s were generally attributed to localized phenomena such as major storms or resulted from the hand of man—overfishing, destructive fishing, or an influx of increased nutrients, sediments, or pollution. That pattern has been changing over the past 20 years. "All of the bleaching events in the 1980s and 1990s occurred during El Niño conditions," says Aronson.

The El Niño weather phenomenon occurs approximately every two to seven years and brings significant weather changes—drought in some areas, increased rainfall in others, and unusually warm ocean temperatures along both sides of the equator in the central and eastern Pacific Ocean. Temperatures automatically rise in El Niño years, says Aronson, and global warming is bumping this upward curve even more. The highest sea temperatures ever recorded occurred during the 1997-1998 El Niño, causing a worldwide bleaching event. "In 1982-83 there was a huge wipeout in the eastern Pacific, and we had somewhat lesser events occur in 1987 and 1995," says Aronson. "The bleaching events are happening with increasing intensity and frequency." "The intensity of the 1998 event was augmented by worldwide global warming," says Aronson. "As we move into the future, we will see more of El Niño and global warming conspiring to cause these massive kills."

"The importance of coral reefs to people can't be overestimated—this has become a real human issue, not just a scientific one," he adds. Coral reefs are meccas of biodiversity, home to one-quarter of all marine plants and animals. They act as nurseries for many commercial fisheries. Reef ecosystems are the primary protein source for much of the world's population. They provide tourism dollars and protect against beach erosion, storm surges, and hurricanes. "If people think that global warming is something that will affect us in the future, they need to think again, because it's here now," says Aronson. "This should be a real wake-

up call that we need to do something about greenhouse gas emissions now." The National Geographic Society, National Science Foundation, and the Smithsonian Institution provided support for the Belize coral project.



Troubled Times



Seaweed Invasions

West Coast of U.S. Faces Deadly Giant [Cloned Algae](#)

Reuters, July 6, 2000

It looks like a soft carpet of vibrant green, rippling in the ocean's currents. But biologists call it an alien invader, a killer that strangles native sea plants, plays havoc with fish populations and causes ecological devastation in coastal communities. Having defeated the control efforts of France, Spain, Monaco and Italy to spread throughout the north Mediterranean, the *Caulerpa taxifolia* alga has been spotted for the first time in California waters - prompting a red alert among environmentalists and oceanographers watching for new threats to the region's delicate ecology. "In terms of potential damage, this species is a very, very serious problem," Robert Hoffman of the National Marine Fisheries Service said on Thursday. "It moves in and displaces anything that is normally found along the ocean bottom and becomes the one single species that dominates the habitat." Marine biologists identified the first North American sample of the species several weeks ago in eelgrass beds in a coastal lagoon about 20 miles (32 km) north of San Diego. Scientists say the lagoon infestation is an isolated case and stress there is no indication so far that the algae have spread into open ocean along the coast. But many marine biologists fear it is only a matter of time before the hardy water plants - originally engineered to look pretty in home aquariums - take hold in coastal waters, where they could imperil the eelgrass and kelp beds that form the basis of the region's marine ecosystem. "Once it gets out of control, it is really out of control," Hoffman said. "That's why we are moving as fast as we can."

Seaweed Smothers Marine Life Along Florida Coast

By Hillary Mayell, *ENN News*, June 11, 2000

It looks lovely, a meadow of undulating green plants anchored to the seafloor extending for miles. But the seaweed *Caulerpa verticillata* has become the oceanic equivalent of the blob that ate Chicago, spreading inexorably into new habitat off the coast of southern Florida and squelching the coral reef ecosystem that has flourished there for millions of years. The mat of *Caulerpa* is nearly 6 miles long and as much as a half-mile wide in waters 30 to 100 feet deep. The *Caulerpa* generates its own toxins, which makes it unpalatable to the herbivorous fish of the reef ecosystem. Plants and animals of the reef ecosystem that can't move eventually die. Larger fish such as grouper move in, searching for another food source. What once was a productive fishery and an ecosystem steeped in biodiversity is fast becoming an ever-expanding monoculture of waving seagrass. *Caulerpa* isn't your typical invasive species that is introduced to a new environment, becomes established and quickly begins to outcompete native species. *Caulerpa* has existed in the shallow waters off the coast of Florida for eons, growing in the nutrient-rich shallow waters of mangroves. Then, around five years ago, scientists began to spot patches of *Caulerpa* growing on an offshore reef in water about 95 feet deep. Since then the patches have grown to become an almost continuous mat of seaweed covering tens of acres extending from Palm Beach to Jupiter Inlet. And there's no end in sight. The seaweed has no natural enemy and thrives in the nutrient-rich environment. What changed the ecosystem from a low-nutrient environment that supports a high biodiversity ecosystem such as coral reefs to a monoculture is the hand of man, says Brian LaPointe, a marine ecologist born and raised along the Florida coast.



Troubled Times



Rising Seas

Rising Sea Levels

ENN, Dec 2, 1999

Florida's coastal forests are dying. Caught between rising sea levels and the development of inland areas for agriculture, silviculture and condominiums, the cabbage palms and other species occupying the coastal strand are being squeezed out of existence. Several years ago Florida residents noticed that cabbage palms - Florida's state tree - were dying along the state's Gulf Coast. This information landed on the desk of Dr. Francis Putz, a University of Florida professor of botany and forestry with an interest in the changes that global events bring to forests. His research showed that a rise in sea level is killing all the trees in Florida's coastal forests. "We're talking about forests that start out with 30 or 40 canopy tree species," he says. "By the time the cabbage palms die, the forest has lost all the other species, plus it's lost the ability to regenerate." Sea levels have risen and fallen in the historical past, and coastal forests worldwide have moved with them. But inland agriculture, forestry and development have squeezed Florida's coastal forests into a narrow ribbon, with no place to move.

Putz's research showed that a rise in sea level is killing all the trees in Florida's coastal forests. "With inland areas under management, natural processes are prevented from occurring," Putz says. "In the past, the species that live on the coast could move up and down as the coast moved." Now the state's coastal areas are trapped between development and agriculture, and the rising water. "Globally, the rate of sea level rise is around 1.5 millimeters per year," Putz says. This rise in sea level began about 16,000 years ago, after the last glacial maximum. What concerns Putz and other scientists is that global warming - caused in part by the burning of fossil fuels and in part by widespread logging in the tropical forests he usually studies - is increasing the rate of sea level rise worldwide. "The primary cause of sea level rise is water expansion," Putz says. "It doesn't expand very much, but we have a lot of water on this blue planet, and increasing global temperatures will cause water expansion. You also get melting of polar ice caps, and they contribute together."

... For the foreseeable future, Putz says, scientists expect global temperatures to continue to rise, regardless of efforts to reduce the rate of deforestation and the production of greenhouse gases. Putz says that increasing sea level rise will have a dramatic and continuing effect on coastal conservation issues. "The rate of sea level rise may increase even more in the future," he says. "Globally, this means disaster. A huge proportion of the world's population lives within a few decimeters of sea level. For places like Bangladesh and the island nations of the Pacific, the consequences of this are astronomical."



Troubled Times



Vanishing Islands

The Case of the [Vanishing Islands](#)

National Geographic, Eye in the Sky, April 28, 2000

Marsh grass and fiddler crab holes fill some of the front yards. Other yards have become mud flats, and hip boots may be required to navigate Main Street during twice-monthly high tides. Nevertheless, some 450 hardy souls stubbornly cling to a way of life on Maryland's Smith Island. Residents of this remote speck of land in the Chesapeake Bay, first inhabited by English colonists in the 17th century, still speak a brogue that they trace back to Elizabethan times. But the island seems about to join others that already have sunk beneath the waves - a microcosm, say scientists, of the effects of rising sea levels around the world. "The people of Smith Island are out of time," said Florida International University's Stephen P. Leatherman, who has extensively studied coastal erosion. "I wish it were otherwise, but I don't see any answer for them. Many will hold out for as long as they can, but the next time a really big hurricane comes through, I think that'll be it. Their heritage is slipping away under the sea." Debate continues over the cause of rising sea levels, especially concerning the effects of fossil fuel-burning, which theoretically promotes global warming by increasing the amount of greenhouse gasses in the atmosphere.

But whatever the reason, the unmistakable fact is that the sea is gobbling up dry land at an alarming rate in many parts of the world. Entire nations, including the low-lying Maldives in the Indian Ocean and Vanuatu in the southwest Pacific, face extinction. If current trends continue, the major coastal cities of the world also could be at risk. "What's going on in the Chesapeake Bay is going on worldwide," said Duncan M. Fitzgerald, a Boston University geologist. "I don't think people understand that an increase in the rate of rise of sea level is going to have a devastating, cataclysmic effect." Nowhere is the phenomenon more striking than in the Chesapeake Bay - a 193-mile (311-kilometer) inlet of the Atlantic Ocean that lies along the shores of Maryland and Virginia.

"Our best estimate at present is that perhaps an area the size of Washington, D.C. is being lost in the Chesapeake Bay every century now," said Michael S. Kearney of the University of Maryland. "The water is probably rising somewhere between 30 and 40 centimeters per century, a little more than a foot and a half. Considering that I looked at long-term trends for the last thousand years, it's a six-fold increase. That's a big deal." Kearney's studies of historical records, along with such indicators as pollens found in sediment samples, show that islands in the bay were slowly eroding from the colonial period until around 1850, when the rate of land loss took a sudden and dramatic upturn. The 1850s period is generally recognized as the beginning of the industrial revolution, with its massive use of coal and oil to power manufacturing plants. "A lot of islands that had been lived on for several centuries were abandoned in the period between 1920 and 1940," said Kearney. "All of a sudden these communities disappeared, a lot of them lost altogether, the famous example being Sharps Island."

Around the beginning of the 19th century, Sharps Island was a roughly 600-acre (240-hectare) farming and fishing community at the mouth of Maryland's Choptank River. At one time it boasted schools, a post office and a popular resort hotel, where vacationers from Baltimore and other locations would arrive by boat to while away the lazy summer days. But between 1850 and 1900, the island lost 80 percent of its land mass, and by 1960 it had been reduced to a shoal. Today it is entirely underwater, marked only by a partly submerged lighthouse. "A lot of history has been lost," said Kearney. "Some of these islands were plantations. We tried to find an old graveyard that was marked on survey maps of James Island as late as

the 1930s. Apparently it's gone in the drink." Other islands that either have been deserted or have disappeared altogether are Poplar, Barren, Hambleton, Royston, Cows, Punch, Herring, Powell, Swan, and Turtle Egg. Scientists attribute these losses to a combination of factors, including global warming-possibly accelerated by human activity. Another well-documented cause is the withdrawal of groundwater for agricultural and other uses, resulting in the land essentially falling in on itself. Additional sinking could be caused by the sheer volume of sediments being dumped into the bay by runoff from farmland and housing developments throughout the watershed. This load may be weighing down the earth's mantle, allowing more water to come in.

One potentially good result from all this loss of dry land is the creation of salt marshes, which not only provide vital habitat for wildlife but also help filter out some of the fertilizers and other toxins from the runoff. The north end of Smith Island, once farmland, is now a marshy refuge. However, scientists fear that the rate of sea-level rise now is so great that the newly formed marshes themselves will be quickly overwhelmed. Kearney said his data indicate that within 10 to 20 years, if present trends continue, "we could lose about 70 percent of all coastal marshes in the Chesapeake Bay."

***Eye in the Sky* is a weekly series that brings you the story behind the headlines using satellite imagery, remote sensing, aerial photography, and maps. This feature is developed by *National Geographic News* with the sponsorship of the National Imagery and Mapping Agency (NIMA) and Earth-Info.**



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Coastlines

U.S. Agencies Make Plans to Manage Rising Sea Level

ABC, July 17, 2001

As U.N. negotiations resume to try and curb the warming of the planet, some Americans are already preparing for a corresponding rise in sea level that is projected to submerge significant portions of the U.S. coastline. Many beach communities along the Eastern and Gulf coasts have begun to build up their beaches to protect them from the creeping rise of the ocean's tide. Scientists say it is one projected effect of the melting of icecaps and glaciers that is caused by global warming. Global warming is caused by pollutants that trap the sun's heat in the Earth's atmosphere, heating the planet above normal levels.

East Coast at Risk

Earlier this year, the Intergovernmental Panel on Climate Change, the United Nation's scientific body on global warming, said sea level is likely to rise by at least 4 inches or perhaps as much as 3 feet by the year 2100 if current trends in climate change continue. In the past century, sea level has risen 4 to 8 inches, according to the Environmental Protection Agency. The projected long-term rise in water levels may be a century away, but it could have near-term effects in the form of sudden weather systems. Studies have predicted that climate change will make weather systems more unpredictable, with more flooding, hurricanes and drought. An EPA map of New Jersey shows areas at risk from a rise in sea level. The red areas are will be affected first, researchers say.(www.epa.gov) "People wonder who is going to get hit first [by a rise in sea level]," says Jim Titus, director of the Sea Level Rise project at the EPA. "The United States gets hit first."

Louisiana, Florida, North Carolina and Maryland are the U.S. states that will first see significant damage as seawater floods coastal areas, says Titus. But every state between Maine and Texas has regions that will be flooded if the oceans rise, according to EPA projections (see map to left). North Carolina and Maryland in particular, he says, are likely to see the most damage to developed dry land. The areas at risk in Florida and Louisiana are mostly wetlands, home to many threatened species of animals and plants that are already stressed by human activities. Scientists also say that small island nations across the globe as well as countries close to sea level, like Bangladesh, Thailand and Egypt, have much to lose from even a small rise in ocean levels. Many of those nations have been aggressive in their support for measures to curb emissions that are causing the warming of the Earth's atmosphere.

Threat Not Taken Seriously

"Up until now it hasn't really been taken seriously, by anybody but the global climate scientists," says Ken Smith, president of Coastal Advocate, Inc., a firm that lobbies the government on behalf of coastal property owners in New Jersey. "The advantage we have with rising sea levels is it's not a tsunami, it's not a tidal wave. We have some time to prepare for it." In his lifetime, Smith says he's seen the level of the ocean go up on the New Jersey shore, where he has lived since for decades since he was a child.

Rising sea level won't be as much of a problem on the West Coast, scientists say, because the land along the Pacific Ocean is often quite steep and not as susceptible to rising water levels. Titus says seaside communities have three choices when they confront the rise of the sea. They can build sea walls and dikes to keep the water out, which is how the Netherlands keeps much of its land dry. Another option building up the land along the sea, which would be a costly, and perhaps, futile endeavor, many scientists say. The

last option, says Titus, is for people to migrate inland. Curbing global warming is the real solution, of course, many scientists say. But even if international governments are able to agree on ways to decrease pollution, many climate scientists say the effects of any decrease might not be seen for decades. But the fact that people are starting to do anything at all, says Titus, is a good sign. "There's a positive take," he says. "People are very slowly starting to deal with the problem."



Troubled Times



Out of Balance

Pacific [Out of Balance](#)

BBC, June, 1999

The sea level and temperature of the entire Pacific is "out of balance" according to new sea-surface height measurements made by the US-French Topex/Poseidon satellite. "This will certainly influence global climate and weather for the coming summer and into next fall," says oceanographer Dr William Patzert, at Nasa's Jet Propulsion Laboratory. The satellite image shows a large area of abnormally cool water along the west coast of North America and down into the equatorial Pacific. This is the third consecutive year that such large imbalances have persisted in that ocean. Dr Patzert says, "Our data certainly show that the unusual oceanic-climatic conditions that gave rise to El Niño and La Niña are not returning to a normal state. Our planet's climate system continues to exhibit rather wild behavior."

Unusually cool water is revealed by areas of lower sea level (shown in blue and purple) and extends from the Gulf of Alaska along the North American coast. There it merges with the remnants of the recent La Niña cooling event in the Pacific. The northwest Pacific continues to be warmer than normal, though the variations from normal are not as great as in recent months.



Troubled Times



Melting Glaciers

Study sees Glacier National Park losing its glaciers by 2070

MSNBC Staff and Wire Reports

Boston, May 27, 1998 —The more than 50 glaciers in Glacier National Park in Montana will be gone in the next 50 to 70 years, according to researchers. Those glaciers and others around the world are melting faster than scientists had previously thought, the researchers added. “The Glaciers are receding and they’re becoming thinner, and you can see this,” geologist Mark Meier told peers Tuesday at a meeting of the American Geophysical Union. Meier placed the blame squarely on global warming. While the scientific consensus is that Earth is getting warmer, there’s more debate about whether humans are contributing to that via greenhouse gases or whether the trend is simply part of a natural cycle.

Other Signs Around Earth

Meier and his research team at the University of Colorado at Boulder looked at characteristics of glaciers worldwide during the last 100 years, then compared the measurements to today’s ice caps. Apart from Glacier National Park, they found that other mid-latitude glaciers had receded and become thinner over the last century:

1. In Africa, Mount Kenya’s largest glacier has lost 92 percent of its mass.
2. In Russia, the glaciers in the Caucasus Mountains have shrunk by half.
3. Along the China-Russian border, the Tien Shan Mountain range has lost 22 percent of its ice over the last 40 years.



Troubled Times



Permafrost

Europe's Big Melt Underway

Far News, January 16, 2000

Researchers have discovered that Europe's permafrost, the frozen bedrock on which the Alps rest, is melting. Underground ice temperatures rose by more than a degree in the '90s, threatening widespread devastation within the next two decades. Foundations of cable car stations face collapse; mountain slopes, held together by frozen soil, are likely to be swept down valleys; and rock faces will disintegrate. Already several recent Alpine disasters, including the avalanches that killed more than 50 people at the Austrian resort of Galtur last year, are being blamed on the melting of permafrost, scientists say.

"It is now clear that rises in atmospheric temperatures are producing significant changes in permafrost levels," said geologist Charles Harris of Cardiff University. "Global warming is changing the nature of weather systems and this is having disproportionate effects on temperatures underground." Atmospheric temperatures round the world rose about 0.2 degrees Celsius last decade, producing a spate of observations about the effects of warming, including signs that Europe's glaciers are shrinking. But now engineers and geologists have discovered a new, alarming effect: air temperature increases are being magnified fivefold underground. A test bore hole, dug in Murtel in southern Switzerland, has revealed that frozen sub-surface soils warmed by 1.2 degrees since 1990. We are getting earlier falls of snow which provide blankets of insulation that keep the soil warm," said Harris. "Summers are also warmer and are heating up the ground more."

To try to predict the worst effects, scientists backed by European Union funds have launched a program, Permafrost and Climate in Europe (Pace), to provide a continent-wide survey of threatened permafrost, which is concentrated in Scandinavia, the Alps, the Pyrenees and the Sierra Nevada in Spain. A series of bore holes is being drilled in these areas, and scientists are developing techniques for predicting the effects of permafrost loss on slopes and valleys. A key, and unexpected, instrument in this work will be the centrifuge. "When you spin things round and round very quickly, you create very powerful gravitational fields, and when you place objects in these fields the effects of gravity are speeded up," said another Pace researcher, civil engineer Michael Davies of Dundee University. "We are now building model valleys, and will put them in centrifuges to study what happens when soil is warmed up and the permafrost, which holds the ground together, is destroyed. We will simulate landslides and avalanches." The aim is to find out how to spot early signs of the imminent collapse of buildings and valleys, he said. "Racks and strains, the first evidence that cable stations and other buildings are under threat, may be easy to spot. This gives engineers an opportunity to put things right."

On the other hand, the recent wave of avalanches in the Alps suggests it will be a trickier job to spot valley walls and rock faces that are about to crumble and disintegrate. There is no doubt that there is a real danger to human life, thanks to permafrost warming," said Harris. "We want to minimize the destruction."



Troubled Times



Baked Alaska

[Baked Alaska](#)

By Anne L. Herman, *Sierra Magazine*, May/June 2000

In Alaska, it's hard not to take global warming personally. For Alaskan Natives, with their intimate connection to land and sea, it determines whether there will be seal or caribou to feed the family, plants for food and medicine, or even solid ground to support the ancestral home. "The sea ice is thinning," says Art Ivanoff, an Inupiat from Unalakleet in west-central Alaska. "People can't harvest the traditional animals and fish. People don't want to go on the ice because it's too dangerous." According to recent NASA satellite data, sea ice off western and northern Alaska has decreased almost 10 percent in the past three decades. Retreating ice in the Bering Sea now threatens the health of one of the world's richest marine environments - what Carl Jack of the Rural Alaska Community Action Program calls the "ring of life at the ice's edge," which has sustained people and animals for centuries. The sea's eastern section, roughly the size of California, is home to seals, whales, polar bears, walrus, and millions of migratory birds. But the area is changing rapidly. "There's less and less subsistence food," says Yup'ik Andrew George. "We couldn't harvest enough fish to feed our village last year."

Climate change, warns Larry Mercurieff, the Aleut coordinator of the Bering Sea Coalition, "could be the single most important factor in changing rural people since 'the great deaths' " of the 19th century, when measles and other exotic diseases killed up to 70 percent of Native peoples in some areas. Temperatures in the Alaska Arctic have risen more than 4 degrees in the past 30 years, twice as much as in the rest of the world. At this rate, a century from now arctic temperatures could be almost 15 degrees warmer. (If temperatures were to fall 15 degrees, we'd be in another ice age.) Even at the current rate, the consequences of arctic warming will likely include melting permafrost, destruction of the boreal forest - and mounting disaster for those adapted to ice and frost. In the far north, for example, polar bears prowl the pack ice of the Chukchi and Beaufort seas searching for ringed seals, which account for more than 90 percent of their diet. Seals depend on the pack ice for resting and raising their pups, while polar bears patrol it to hunt the seals. According to U.S. Fish and Wildlife Service biologist Scott Schliebe, half of Alaska's Beaufort Sea polar bears also den on the ice--which recent studies show is thinning in many places from an average of eight feet to only four. Scientists calculate that the pack ice could melt completely in the next two centuries. University of Washington climatologist Richard Moritz says the process could take as little as 50 years.

Global warming also threatens enormous changes to Alaska's landmass. Permafrost underlies more than 80 percent of the state, but it's now starting to thaw. Many areas are 4 to 7 degrees warmer than they were 50 to 100 years ago; some sections of permafrost south of the Brooks Range are within 4 degrees of thawing completely. By trapping what little rain falls, permafrost nourishes a variety of plant life. Without it, much of the Arctic would be lifeless desert. "There is an intimate connection between permafrost and arctic ecosystems," says Vladimir Romanovsky of the University of Alaska at Fairbanks Geophysical Institute. If the permafrost continues to melt, he says, the boreal forests that grow over it could be replaced by dry steppe. The boreal forest that covers nearly a third of Alaska is already drier and thus more at risk. In the past eight years, says Glenn Juday of the university's Forest Sciences Department, spruce bark beetle infestations have claimed over 2 million acres of once-healthy forest, the greatest recorded incidence of insect destruction in North America. Worse yet, dead trees leave these areas highly vulnerable to catastrophic wildfires.

Melting permafrost could also dry up the tundra, Romanovsky says, which would force caribou and musk ox, living links to the last ice age, to forage for less-nutritious vegetation. And thawed permafrost releases additional carbon dioxide into the atmosphere, accelerating global warming. Permafrost also serves as the foundation for most rural Alaskan homes. Already the villagers of Shishmaref and Kivalina are contemplating the difficult decision to move from their ancestral lands, which have been nearly destroyed by melting permafrost and Bering Sea wind erosion. If dramatic action is not taken soon, many scientists fear, the effects of global warming may be irreversible. "We might be looking at a future without polar bears if we don't do something now," says Margie Gibson of the conservation group Arctic Network. An Arctic without sea ice could mean the loss not just of polar bears but also of the life-sustaining riches at its edge. And that could spell the end of the ancient way of life for many of Alaska's Native people.



Troubled Times



Canadians

Effects of global warming clear in Canada arctic

By David Ljunggren, *Reuters*, April 19, 2000

He may be only a hunter in Canada's remote Arctic, but Steven Kooneeliusie certainly knows as much about the practical effects of global warming as any environmental scientist. He and the other Inuit whose job it is to brave snow and ice to find caribou, seal and other animals say the signs of a gradual increase in temperature are everywhere. "When I went hunting years ago I used to wear a full-length caribou skin coat, but now I just wear a light parka. It is so hot these days my snowmobile often overheats," Kooneeliusie said in the small town of Pangnirtung, some 1,500 miles (2,450 km) north of Ottawa nearly on the Arctic Circle. "We're seeing animals here we've never seen before, and last year I spotted a swan. The sun is very hot, too hot. For the first time ever people are actually getting sunburned." While arguments rage about whether global warming is primarily caused by pollution, the effects on the ground are all too real in the Arctic. One of the best places to observe them is the new territory of Nunavut, home to 27,000 people dotted across 750,000 square miles (2 million square km). "The effect that global warming is causing in Nunavut today is being felt by a lot of people, especially those who travel outside of communities, both hunters and campers," Sustainable Development Minister Peter Kilabuk said.

Kilabuk, based in the Nunavut capital Iqaluit, grew up in Pangnirtung and has seen for himself the changes in the fjord that the town sits on. "I know when I was probably 8 or 10 the ice wouldn't go out until July, sometimes not until the second week of July. But over the last few years we've seen the ice go out as early as May," he said. "To us the effects are real. Climate change is here and it's a real cause for concern." Among those cursing global warming were four hunters trying to haul their snowmobiles up a frozen waterfall in Auyuittuq National Park, which lies between Pangnirtung and the remote northern settlement of Broughton Island. "Normally there is enough ice here for just two people to be enough. But this year the ice is just awful," complained one man as he strained on a rope. Auyuittuq - "The land that never melts" - is famed for its enormous glaciers, but locals say even they are melting. "The glaciers have receded over the last 10 years and the ice is much worse," hunter Solomon Nakoolak said.

U.S. government researchers say average global temperatures over the last 25 years alone have been increasing at a rate equivalent to 2 degrees Celsius (4 Fahrenheit) a century. Studies show the Arctic sea ice has also thinned over the last 30 years or so to six feet (1.8 meters) from 10 feet (3.1 meters) and has shrunk by around 6 percent since 1975. This month, scientists from the United States and Europe said more than 60 percent of the Arctic ozone layer some 11 miles (18 km) above the Earth had vanished over the winter due to record cold and continued pollution - one of the most substantial ozone losses at this altitude ever recorded. As the Arctic gradually heats up, precipitation increases and helps push the tree line ever further to the north.

"People are already observing species which don't belong here such as grizzly bears, which have been moving north. We see a lot more wolverines further north than we used to," said Francois Rainville at Environment Canada's office in Iqaluit. "There are insects and birds which have not been seen here before. There is an impact. People are seeing change," he said. Last year one Iqaluit woman reported seeing a robin. Shrinking ice packs also mean polar bears have less time to stay out on the floes in winter looking for seals and other food sources to help them through the lean summer period. More and more sightings are being reported across Arctic Canada of hungry bears foraging for food in towns. "Last year, for the

firsttime in a long while, we had polar bears here. A mother and a cub surprised some picnickers just outside town," Kooneliusie said. "We did all we could to scare them off but they ignored us because they were so hungry. We had to shoot them." Some fear that as the ground heats up airport runways and buildings could crack, a phenomenon already seen in Siberia. Rainville and other experts prefer not to debate the causes of global warming, saying it makes more sense to focus on dealing with the aftermath.



Troubled Times



Thinning Glaciers

NASA Researchers Document Shrinking of Greenland's Glaciers

Release: 99-33, March 4, 1999

Greenland's southeastern glaciers are rapidly thinning and their lower elevations may be particularly sensitive to potential climate changes, a NASA study suggests. "The results of this study are important in that they could represent the first indication of an increase in the speed of outlet glaciers," said Bill Krabill, principal investigator at NASA Goddard Space Flight Center's Wallops Flight Facility, Wallops Island, VA. An outlet glacier acts as a major ice drainage region for an ice sheet. "The excess volume of ice transported by these glaciers has had a negligible effect on global sea level thus far, but if it accelerates or becomes more widespread, it would begin to have a detectable impact on sea level," Krabill said.

In the March 5 issue of *Science*, researchers report the glacial thinning is too large to have resulted from increased ice-surface melting or decreased snowfall. The researchers believe the thinning, as much as 30 feet over five years in some locations, is the result of increasing discharge speeds of glaciers flowing into the Atlantic Ocean. Krabill said surface-melt water might be seeping to the bottom of glaciers. Such seepage may be reducing the friction between the ice and the rock below it, enabling the glaciers to slide with less friction across the bedrock and thus allow more ice to slip off into the ocean, according to Krabill. "The results of this study are significant because they provide the first evidence of widespread thinning of low-elevation parts of one of the great polar ice sheets. The results also suggest that the thinning outlet glaciers must be flowing faster than necessary to remove the annual accumulation of snow within their basins," said Krabill. "Why they are behaving like this is a mystery," said Krabill.



Troubled Times



Arctic Vegetation

I just ran across this [BBC Story](#) from May 30, 2001. According to scientists, the amount of greenery in northern Alaska has *doubled* in the past 50 years. The study-area was in a location where human and natural disturbances are minimal. Researchers therefore attribute much of the increase to *the recent change in climate*. Studies of ancient peat deposits suggest that the same thing happened 8,000 years ago! (Or in other words, two pole shifts ago.) I also came across this [BBC Story](#). Between the 1960s and 1990s, sonar data from submarines in the Arctic have revealed a 40% decrease in "draught" - a term for the difference between the surface of the ocean and the bottom of the icepack. The data was analyzed by British and American researchers.

Offered by [Mike](#).



Troubled Times



Great Lakes

High and dry on the Great Lakes

Washington Post, April 3, 2000

The fastest decline in water levels in the Great Lakes in nearly a century and a half is creating havoc for shoreline property owners and marina operators in eight states and two Canadian provinces, and is forcing cargo ships to lighten their loads to avoid running aground. Since the summer of 1997, the middle Great Lakes (Michigan, Huron and Erie) and Lake St. Clair, which connects Huron and Erie, have each fallen 3 1/2 feet and are continuing to recede at a pace that could soon hit all-time low water levels, scientists predict. The five Great Lakes, which do not include Lake St. Clair, are the largest fresh surface-water system in the world. Lakes Huron and Michigan are 13 inches below levels recorded a year ago, and Lake Erie has dropped 11 inches. Controlled by mechanical gates, the waters on lakes Superior and Ontario have, respectively, stayed the same and risen four inches. What the U.S. Army Corps of Engineers calls an 'astounding' lack of snowpack runoff this year in the Lake Superior basin, the headwaters for the Great Lakes, has disrupted the lakes' seasonal replenishment cycle, driving water levels last month in lakes Michigan and Huron down 18 inches from long-term March averages.

Normally, a lake's water level rises in the summer as melted snow flows down the watershed system. The level declines in the winter when snow piles up and freezes in the tributaries, impeding the flow. However, high-altitude aerial surveys conducted last month by the National Oceanic and Atmospheric Administration show almost all of Lake Superior's shoreline in Michigan, Wisconsin and Minnesota to be snow-free, suggesting that water levels in Lake Michigan and the other Great Lakes fed by Lake Superior will be a foot lower than last year when midsummer measurements are taken. Exacerbating the situation have been lower-than-average rainfall and increased evaporation of surface water during unusually mild winters in the midwestern states. "All of this has thrown a whammy at the replenishment system at large," said Roger L. Gauthier, supervising hydrologist at the Corps of Engineers' district office in Detroit. "It could be the most radical three-year decline ever." What makes the current falloff seem so dramatic, Gauthier said, is the contrast between near-record high water levels only three years ago and near-record lows this year. "The Great Lakes are 3,500 years old in their present form, and they have fluctuated dramatically countless numbers of times," Gauthier said. "The problem here is that it is happening so quickly and it is going from one extreme to the other."

The most obvious effects of the change here and elsewhere in the Great Lakes are much wider beaches, forlorn-looking boat docks and launching ramps that stop short of the water's edge, new islands popping up out of the receding water faster than they can be named and even the occasional appearance of a 19th century wooden pier that nobody knew was there until the water level dropped. There have also been serious financial consequences, expected to run into the hundreds of millions of dollars. John Rudisell, harbor master in Michigan City, Ind., said he expects to lose 250 of the harbor's 925 boat slips this year, a potential loss of \$525,000 when associated services are taken into account. The city, which hosts a major regatta for deep-draft sailboats each June, is having the Corps of Engineers dredge the outer harbor, where water depths have dropped to as low as four feet in places. Scott Stevenson, harbor manager for the Chicago Park District, which manages marinas berthing 5,000 boats, said that some boat ramps will have to be extended and that the channel leading to one harbor will have to be dredged about three feet deeper because of the lowered water level. In northern Michigan, two ferry services that operate between Cheboygan and Bois Blanc Island in Lake Huron have been forced to shut down because the water depth

in the island's harbor entrance is less than four feet. Pleasure boaters throughout the Great Lakes have seen their launching ramps, docks and piers rendered useless by the receding waters and are clamoring for permits that will allow them to deepen their harbors and get sailing or motoring again. Last year, applications for dredging in the middle Great Lakes increased by 30 percent. So far this year they have increased by nearly 40 percent over the same period last year, said Robert Deroche, project manager at the Corps of Engineers' Detroit District headquarters. Last year, there were more than 1,000 dredging projects along Michigan's coastlines alone, more than twice the number in the previous year.



Troubled Times



Disappearing Lakes

Lakes that are reported to be disappearing: Lake Chad in Africa, Lake Kleifarvatn in Iceland, and Dojran Lake on the border of Macedonia and Greece. The cause of the dry-up is listed as severe drought. Also, numerous lakes in China are disappearing. In one province: Hebei, which once had 1,052 lakes, is listed today as only having 83. The cause is listed as falling water tables. As a result, springs dry up, streams cease to flow, rivers run dry, and lakes disappear. The survey was released in Beijing in August and reported by the [Earth Policy Institute](#).

Offered by [Mike](#).

There have been a lot of studies of falling water tables, and there has been no need to resort to extraterrestrial explanations to understand why water levels are falling. In the case of the [Ogallala](#) aquifer, for example, the explanation is excessive crop irrigation. You can also look at the case of the Aral Sea in central Asia and Owens and Mono Lakes in California. Owens Lake was dried up because its water source was diverted to Los Angeles; Mono Lake almost suffered the same fate but was saved by environmentalists.

Offered by [Geoff](#).



Troubled Times



Worldwatch Institute

Melting of Earth's [Ice Cover](#) Reaches New High

by Lisa Mastny, *Worldwatch Institute*, Mar. 6, 2000

The Earth's ice cover is melting in more places and at higher rates than at any time since record keeping began. Reports from around the world compiled by the Worldwatch Institute (see attached data table) show that global ice melting accelerated during the 1990s-which was also the warmest decade on record. Scientists suspect that the enhanced melting is among the first observable signs of human-induced global warming, caused by the unprecedented release of carbon dioxide and other greenhouse gases over the past century. Glaciers and other ice features are particularly sensitive to temperature shifts. The Earth's ice cover acts as a protective mirror, reflecting a large share of the sun's heat back into space and keeping the planet cool. Loss of the ice would not only affect the global climate, but would also raise sea levels and spark regional flooding, damaging property and endangering lives. Large-scale melting would also threaten key water supplies as well as alter the habitats of many of the world's plant and animal species.

Some of the most dramatic reports come from the polar regions, which are warming faster than the planet as a whole and have lost large amounts of ice in recent decades. The Arctic sea ice, covering an area roughly the size of the United States, shrunk by an estimated 6 percent between 1978 and 1996, losing an average of 34,300 square kilometers-an area larger than the Netherlands-each year. The Arctic sea ice has also thinned dramatically since the 1960s and 70s. Between this period and the mid-1990s, the average thickness dropped from 3.1 meters to 1.8 meters-a decline of nearly 40 percent in less than 30 years. The Arctic's Greenland Ice Sheet-the largest mass of land-based ice outside of Antarctica, with 8 percent of the world's ice-has thinned more than a meter per year on average since 1993 along parts of its southern and eastern edges.

The massive Antarctic ice cover, which averages 2.3 kilometers in thickness and represents some 91 percent of Earth's ice, is also melting. So far, most of the loss has occurred along the edges of the Antarctic Peninsula, on the ice shelves that form when the land-based ice sheets flow into the ocean and begin to float. Within the past decade, three ice shelves have fully disintegrated: the Wordie, the Larsen A, and the Prince Gustav. Two more, the Larsen B and the Wilkins, are in full retreat and are expected to break up soon, having lost more than one-seventh of their combined 21,000 square kilometers since late 1998-a loss the size of Rhode Island. Icebergs as big as Delaware have also broken off Antarctica in recent years, posing threats to open-water shipping. Antarctica's vast land ice is also melting, although there is disagreement over how quickly. One study estimates that the Western Antarctic Ice Sheet (WAIS), the smaller of the continent's two ice sheets, has retreated at an average rate of 122 meters a year for the past 7,500 years-and is in no imminent danger of collapse. But other studies suggest that the sheet may break more abruptly if melting accelerates. They point to signs of past collapse, as well as to fast-moving ice streams within the sheet that could speed ice melt, as evidence of potential instability. Outside the poles, most ice melt has occurred in mountain and subpolar glaciers, which have responded much more rapidly to temperature changes. As a whole, the world's glaciers are now shrinking faster than they are growing, and losses in 1997-98 were "extreme," according to the World Glacier Monitoring Service. Scientists predict that up to a quarter of global mountain glacier mass could disappear by 2050, and up to one-half by 2100-leaving large patches only in Alaska, Patagonia, and the Himalayas. Within the next 35 years, the Himalayan glacial area alone is expected to shrink by one-fifth, to 100,000 square kilometers.

The disappearance of Earth's ice cover would significantly alter the global climate-though the net effects remain unknown. Ice, particularly polar ice, reflects large amounts of solar energy back into space, and helps keep the planet cool. When ice melts, however, this exposes land and water surfaces that retain heat-leading to even more melt and creating a feedback loop that accelerates the overall warming process. But excessive ice melt in the Arctic could also have a cooling effect in parts of Europe and the eastern United States, as the influx of fresh water into the North Atlantic may disrupt ocean circulation patterns that enable the warm Gulf Stream to flow north. As mountain glaciers shrink, large regions that rely on glacial runoff for water supply could experience severe shortages. The Quelccaya Ice Cap, the traditional water source for Lima, Peru, is now retreating by some 30 meters a year-up from only 3 meters a year before 1990-posing a threat to the city's 10 million residents. And in northern India, a region already facing severe water scarcity, an estimated 500 million people depend on the tributaries of the glacier-fed Indus and Ganges rivers for irrigation and drinking water. But as the Himalayas melt, these rivers are expected to initially swell and then fall to dangerously low levels, particularly in summer. (In 1999, the Indus reached record high levels because of glacial melt.) Rapid glacial melting can also cause serious flood damage, particularly in heavily populated regions such as the Himalayas. In Nepal, a glacial lake burst in 1985, sending a 15-meter wall of water rushing 90 kilometers down the mountains, drowning people and destroying houses. A second lake near the country's Imja Glacier has now grown to 50 hectares, and is predicted to burst within the next five years, with similar consequences.

Large-scale ice melt would also raise sea levels and flood coastal areas, currently home to about half the world's people. Over the past century, melting in ice caps and mountain glaciers has contributed on average about one-fifth of the estimated 10-25 centimeter (4-10 inch) global sea level rise-with the rest caused by thermal expansion of the ocean as the Earth warmed. But ice melt's share in sea level rise is increasing, and will accelerate if the larger ice sheets crumble. Antarctica alone is home to 70 percent of the planet's fresh water, and collapse of the WAIS, an ice mass the size of Mexico, would raise sea levels by an estimated 6 meters-while melting of both Antarctic ice sheets would raise them nearly 70 meters. (Loss of the Arctic sea ice or of the floating Antarctic ice shelves would have no effect on sea level because these already displace water.) Wildlife is already suffering as a result of global ice melt-particularly at the poles, where marine mammals, seabirds, and other creatures depend on food found at the ice edge. In northern Canada, reports of hunger and weight loss among polar bears have been correlated with changes in the ice cover. And in Antarctica, loss of the sea ice, together with rising air temperatures and increased precipitation, is altering the habitats as well as feeding and breeding patterns of penguins and seals.



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Global Melt

Selected Examples of Ice Melt Around the World

Arctic Sea Ice, Arctic Ocean

Has shrunk by 6 percent since 1978, with a 14 percent loss of thicker, year-round ice. Has thinned by 40 percent in less than 30 years.

Greenland Ice Sheet, Greenland

Has thinned by more than a meter a year on its southern and eastern edges since 1993.

Columbia Glacier, Alaska, United States

Has retreated nearly 13 kilometers since 1982. In 1999, retreat rate increased from 25 meters per day to 35 meters per day.

Glacier National Park, Rocky Mtns., United States

Since 1850, the number of glaciers has dropped from 150 to fewer than 50. Remaining glaciers could disappear completely in 30 years.

Antarctic Sea Ice, Southern Ocean

Ice to the west of the Antarctic Peninsula decreased by some 20 percent between 1973 and 1993, and continues to decline.

Pine Island Glacier, West Antarctica

Grounding line (where glacier hits ocean and floats) retreated 1.2 kilometers a year between 1992 and 1996. Ice thinned at a rate of 3.5 meters per year.

Larsen B Ice Shelf, Antarctic Peninsula

Calved a 200 km² iceberg in early 1998. Lost an additional 1,714 km² during the 1998-1999 season, and 300 km² so far during the 1999-2000 season.

Tasman Glacier, New Zealand

Terminus has retreated 3 kilometers since 1971, and main front has retreated 1.5 kilometers since 1982. Has thinned by up to 200 meters on average since the 1971-82 period. Icebergs began to break off in 1991, accelerating the collapse.

Meren, Carstenz, and Northwall Firn Glaciers, Irian Jaya, Indonesia

Rate of retreat increased to 45 meters a year in 1995, up from only 30 meters a year in 1936. Glacial area shrank by some 84 percent between 1936 and 1995. Meren Glacier is now close to disappearing altogether.

Dokriani Bamak Glacier, Himalayas, India

Retreated by 20 meters in 1998, compared with an average retreat of 16.5 meters over the previous 5 years.

Duosuogang Peak, Ulan Ula Mtns., China

Glaciers have shrunk by some 60 percent since the early 1970s.

Tien Shan Mountains, Central Asia

Twenty-two percent of glacial ice volume has disappeared in the past 40 years.

Caucasus Mountains, Russia

Glacial volume has declined by 50 percent in the past century.

Alps, Western Europe

Glacial area has shrunk by 35 to 40 percent and volume has declined by more than 50 percent since 1850. Glaciers could be reduced to only a small fraction of their present mass within decades.

Mt. Kenya, Kenya

Largest glacier has lost 92 percent of its mass since the late 1800s.

Speka Glacier, Uganda

Retreated by more than 150 meters between 1977 and 1990, compared with only 35-45 meters between 1958 and 1977.

Upsala Glacier, Argentina

Has retreated 60 meters a year on average over the last 60 years, and rate is accelerating.

Quelccaya Glacier, Andes, Peru

Rate of retreat increased to 30 meters a year in the 1990s, up from only 3 meters a year between the 1970s and 1990.



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Weather Forecasts

FEMA and NOAA Join Forces to Warn of the Impact of Climate Change

Updated: April 18, 2000

FEMA Director James Lee Witt and D. James Baker, the administrator of the National Oceanic and Atmospheric Administration, released the latest bad news about global climate change at an Earth Week news conference held in New Orleans on April 18. According to the latest data, the U.S. experienced the warmest January to March period in the past 106 years of record-keeping by NOAA's National Climatic Data Center. The latest data also show that June 1999 to March 2000 was the warmest for that period on record. The increase in climate temperatures could mean more disastrous weather for this country, according to Baker. "Ignoring climate change and the most recent warming patterns could be costly to the nation. Small changes in global temperatures can lead to more extreme weather events including, droughts, floods and hurricanes," he said. "We will continue to provide the best possible data and forecasts to the policy makers to help them as they deal with these difficult issues."

FEMA's director added his own warning for the nation. "There is no doubt that the human and financial costs of weather related disasters have been increasing in recent years," said Witt. "It is time to increase our efforts in applying prevention strategies to reduce the impacts of the changes in weather climates." FEMA data shows that damage from more frequent and severe weather calamities and other natural phenomena during the past decade required 460 major disasters to be declared, nearly double the 237 declarations for the previous ten-year period and more than any other decade on record. Financially, comparing a three-year period of 1989 through 1991, and 1997 through 1999, the federal costs of severe weather disasters rose a dramatic 337 percent in the latter part of the decade.

With the increased knowledge that the weather continues to become more intense, NOAA and FEMA are working closely together to mitigate the impacts of these seasonal storms. NOAA will continue to coordinate the work of federal, international, and private scientists to bring to the table current data, outlooks and forecasts. FEMA will continue to place an emphasis on disaster prevention with the desire to cut the economic and emotional costs of disasters. Scientists widely believe that long-term climate changes such as global greenhouse warming could have major impacts on human health, the environment, the economy, and society - affecting everything from transportation to water management and agriculture to international trade and development. According to the latest seasonal forecast for most of the U.S., the rest of the spring and summer will bring warmer than normal temperatures; and some Midwest and Great Plains states will continue to experience drier than normal conditions. For more information, check out NOAA's Web Site or NOAA's National Climatic Data Center Web site.



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US Wildfires

Dry Spring Feeds [Fire Worries](#) Across U.S

By Sue Schwendener, *Reuters*, May 6, 2000

As dry weather tightened its grip on the central United States, experts warned of the dangers of wildfires in parched wilderness areas, grasslands and even along roadsides and in residential areas. Already nearly 1,200 square miles have been scorched by fires across the country, an area about one-third larger than usual at this time of year, according to the National Fire Information Center in Boise, Idaho. And early May is normally just the beginning of the fire season, experts said. While blazes in Michigan, Florida and Arizona have been contained for the moment, new wildfires erupted this week in Minnesota and Indiana. ... In northwestern Wisconsin, forestry experts cautioned there was the threat of a wildfire on 50,000 acres (20,240 hectares) of National Forest lands where trees were also blown down in last July's windstorms. ... The outlook was ominous across the country. Very high to extreme fire dangers were seen in Arizona, New Mexico, Utah, Oklahoma, Texas, Michigan, Minnesota, and Wisconsin, said Lorraine Buck of the National Fire Information Center. Florida has reported eleven large fires and hundreds of smaller fires through the end of April.

Record-setting U.S. Wildfire Season

CNN News, August 19, 2000

This year's record-setting U.S. wildfire season crossed another threshold when the U.S. Forest Service on Saturday urged retired firefighters to join some 19,000 civilian and military personnel battling scores of fires throughout the Western United States. Overall, the National Interagency Fire Center in Boise, Idaho, reported 92 major fires burning in the country on nearly 1.1 million acres. So far this year, fires have burned 5.22 million acres, the worst fire season in at least a half-century.



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Russia

Russia Lacks Funds to Contain Rampant [Forest Fires](#)

From Steve Harrigan, *CNN News*, July 7, 1999

A record heat wave has fueled more than 1,000 forest fires in the region around Moscow, with just one helicopter to track them down. "Every day, there's 30 new fires. That's every single day, and again and again," said pilot Albert Ignatiev. The flames are not always easy to spot because many fires are several feet underground, invisibly gnawing away at peat bogs. To fight the blazes, firefighters must douse everything in the area. With poor equipment, no roads and no money for gasoline, the biggest struggle for firefighters is merely reaching the scene. Besides the shortage of funds, Russia's Forest Service blames a careless public for letting fires spread. "It's either a cigarette butt or a campfire. They just don't get it, that you can't start fires in the forest," said the Forest Service's Igor Minakov. Some 70 miles (113 km) south of Moscow, villagers are preparing to flee the advancing flames. "I stand by my window and watch everything burn," one resident said. "My grandson and I are ready if we have to run for it." A change in weather may be their only hope. "The only thing that's going to stop this fire is rain. It hasn't rained for two months," said firefighter Vladimir Popov. So far there have been no casualties, according to the Emergency Situations Ministry. But at the very least, it will be years before anything can grow on a large swath of Russian cropland.



Troubled Times



Balkans

Wildfires Spread Across the Balkans

By Veselin Zhelev, *Associated Press*, August 24, 2000

Bulgaria sent soldiers Thursday to put out dozens of wildfires triggered by a heat wave that set off blazes across the Balkans from Croatia to Greece. Bulgaria's government said fires broke out in 69 areas in the past 24 hours, and 26 still burned. Authorities said seven people have died in Bulgaria since the wildfires began three months ago, fueled by temperatures that topped 104 degrees on some days and winds sweeping the area in August. Bulgaria's government has said it would seek international financial aid to offset wildfire losses that have exceeded \$19 million. The fires have destroyed almost 9,000 acres of forest and farmland. In the worst-hit area near Chirpan, 110 miles southeast of the capital, Sofia, 2,223 acres of forest burned for a sixth day, and local authorities declared a state of emergency.

In Croatia, fires burned in 11 areas. Some 535 wildfires have destroyed nearly 50,300 acres of forests and underbrush this year, said Petar Jurjevic of the Croatian forest inspection agency. Residents of Metkovic, a town of 12,000 that is 30 miles from Dubrovnik, were alerted to prepare for a possible evacuation as fires advance. More than 400 firefighters, assisted by planes and helicopters, battled a blaze that has consumed about 7,400 acres of grass, underbrush and forest near Promina, in the coastal region of Dalmatia. On the northern Adriatic, fires threatened a shipyard near the port of Rijeka. In Greece, hundreds of firefighters assisted by aircraft and helicopters tried to stamp out about 30 fires on the mainland and on the Aegean Sea islands of Naxos and Chios. Authorities declared a state of emergency in the southern province of Arcadia, site of 10 blazes. Fires in Greece have destroyed 312,711 acres of forest and scrub. ... Elsewhere in Serbia, Yugoslav army troops and helicopters helped firefighters and villagers battle a 3-day-old blaze engulfing forests and peaks of Stara Mountain near the central Serbian city of Nis.



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Iceballs

Italian Man Felled by Ice Ball

Discovery Earth Alert, Jan. 26, 2000

Mysterious falling ice balls claimed their first casualty when a man in the Italian city of Ancona suffered head injuries after being struck on Tuesday. The victim was hospitalized after getting hit by a chunk of ice weighing more than 1 1/2 pounds. Spain has also reported numerous similar incidents throughout the country over the past two weeks, including one 9-pound block falling on a car in the city of Seville. Officials in Italy said there were four separate incidents on Tuesday. Although the onset of the falling ice balls coincided with a spate of cold weather, experts could not explain the phenomenon. Italy's bout with the ice formations began last weekend when an 11-pound ball cascaded into the courtyard of a convent in the city of Padua.



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Dying Trees

Mysterious Disease Kills Australian Trees

Discovery Earth Alert, August 2, 2000

Forests near the harbor of Sydney, Australia, have been stricken by an unknown illness that has killed up to 70 percent of the city's lofty angophora trees, Sydney's "quintessential" tree. The tree, *Angophora costata*, distinguished by its smooth salmon-colored bark, is suffering from a widespread and unknown form of dieback. The disease has denuded the city's forests and left only skeletal remains of the trees, which often grow to 100 feet. Brenda Madden, North Sydney Council's bushcare officer, reported that whatever the illness is, it is attacking the root systems, preventing nutrients and water from being absorbed. The council is so concerned about the rate the disease is spreading that they are beginning a program of injections to bolster the immunity of the angophoras. Many residents with waterfront homes have tried to have the trees removed in order to improve their views. Nutrient runoff from the hillside gardens may also be stressing the trees and making them more susceptible to the disease. Dr. Brett Summerell, Royal Botanic Gardens plant pathologist, reported that a preliminary analysis of soil samples taken from the bases of diseased trees had failed to provide an explanation. "We want to do a proper survey for any pathogens," Dr. Summerell said. "There's certainly something that seems to be affecting just the angophoras. It's really quite bizarre the way they're all dying both young trees and mature trees. There's no other species that seems to be affected."

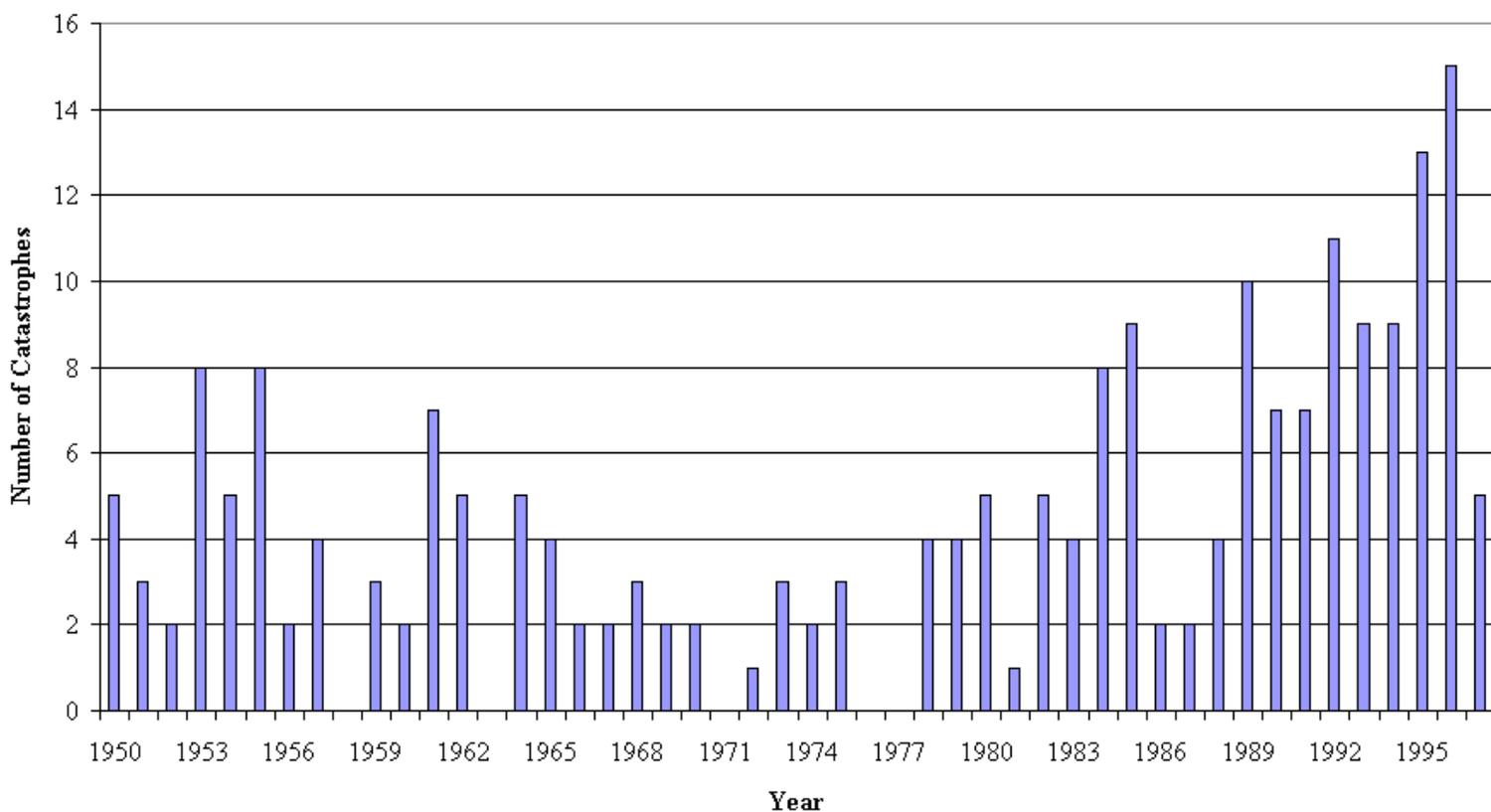


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Catastrophes

**Annual Number of Catastrophes Causing >\$100 Million
(1997 USD) in Losses**



Source: S. Changnon

Extreme Weather Sourcebook 2001



Troubled Times



European Booms

Mystery Booms Startle People in Northern Italy

UFO Roundup, April 6, 2000

On Thursday, March 23, 2000, at 10:15 p.m., a merchant in Val di Mara, a town in La Spezia province in Italy "saw a strange glow in the sky and then observed a luminous body heading towards Earth." The object "had a small white tail, and it was accompanied by two loud explosions." "A short while earlier, two young lovers saw a faint trail in the sky" near Val di Mara "and heard a very loud explosion." According to Italy's Centro Italiano di Studi Ufologici (CISU), mystery booms were heard that evening in Lecco, a city on Lago (Lake) Como 80 kilometers (50 miles) north of Milano (Milan); in Trezzo sull'Adda, near Milano; in the city of Firenze (Florence) and in several villages in the provinces of Bologna and Savona. Italian astronomers said it "was 'probably' a meteoric phenomenon."

Loud blast spreads panic in packed Seville Easter procession

Associated Press, April 21, 2000

Up to 30 people were treated for shock and light injuries when an explosion-like sound spread panic as hundreds of thousands of people gathered in this southern Spanish city to watch the daily Easter religious processions Friday. By midmorning it was still not clear what caused the loud sound which occurred shortly after 6 a.m. (0400 gmt). Police initially suspected a water pipe had burst but the local water company later denied this. Apparently fearing it may have been a bomb, the sound sent many people running wildly to escape, causing many to fall and be trampled, the private Cadena SER radio reported. Only three people were kept in hospital for treatment. Police estimated there were up to 500,000 people on the street of Seville at the time to watch the annual Good Friday religious processions in which large-sized statues of Christ or the Virgin Mary are taken through the streets on ornate floats.

A sonic boom is reported to have hit Scotland in November, 2001. Experts claimed the sonic boom was caused by a meteor entering the Earth's atmosphere at several times the speed of sound.

Offered by [Spud](#).



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Ohio Booms

[Neighborhood](#) Rattled By Explosion

By Lori Monsewicz, *Repository*, April 29, 2000

The glow of a late-night TV screen faded fast just after midnight Wednesday when a loud blast and an orange glow momentarily filled the Fourth Street end of De Mario Court NW. "I thought it was a bomb," said Chester H. Welsch, who had been watching television with his sister, brother and a nephew at 2538 Fourth St. NW when the single boom occurred at 1:05 a.m. "A big orange flash come down there and knocked all the windows out." On Friday afternoon, neighbors still didn't know the source of the noise, and neither did police, who took reports from 2538 and 2542 Fourth St. NW. Residents there said electric company employees called by police came out and checked a nearby transformer located on a utility pole at the intersection, but detected no trouble. The homes sustained no outages. Tom Lukowski, Canton district manager for the American Electric Power Co., said Friday that he could find no reports of any problems in the 2500 block of Fourth Street NW from Tuesday through Thursday. "I don't know who's reporting what, but we can't confirm anything at this point," he said.

Still neighbors are at a loss trying to figure out what caused the blast that shook their homes and damaged belongings inside. Two windows in each house on either side of De Mario at Fourth Street were shattered. Wall hangings on 2538 fell to the floor and broke. Chrissy Bailey, who lives across De Mario at 2542 Fourth St., said everything fell off her fireplace. "It was loud; it was really loud. I'm not sure how to explain (what the sound was like)," she said, adding that she, too, had been watching television when she heard it. "The whole house shook." Bailey said that everyone on the block ran up to her house to see what happened. "It lit up the whole alley like it was daytime for a second," said her brother-in-law, Chris Rogers. Rogers, Bailey and Welsch said the neighborhood is normally quiet. The playground and parking lot for Clarendon Elementary School lies across the street. Although the next-door neighbors said they could not guess what could have caused the sound, which produced no visible damaged in the littered De Mario Court, Bailey ruled out a backfire by a passing car. "There weren't any cars around," she said, "but there are a lot of teen-agers in this neighborhood, so I don't know." Then, she shook her head and discounted the theory. "That was too loud. It had to be something else."



Troubled Times



California

Blue Flash Accompanies So Cal Mystery Boom

By Scott Vanhorne, *Victorville Daily Press*, August 23, 2000

Sheriff's dispatchers fielded five calls reporting the sound of an explosion early Tuesday morning [Aug 22], but nobody has been able to explain what caused the loud noise. "It sounded like a truck crashing into my house," Richard Corless said. "It was kind of weird." Corless, who lives on Chickasaw Road, said he heard two loud explosions, one about 12:40 a.m. and another at 2:40 p.m. One of the blasts was accompanied by a blue flash of light, he said. Mary Zinser, who also lives on Chickasaw Road, described the sound as a "muffled explosion." "It was enough to wake me and my husband up out of a sound sleep," she said. The two got up to investigate, but they couldn't determine what caused the sound. San Bernardino County Sheriff's Department spokeswoman Jennie Risley said dispatchers received five calls about an "explosion" in an area near Tomahawk Road and Tigertrail Road shortly after 3 a.m. Deputies went to the area but were unable to locate evidence of an explosion, she said. "(One caller) thought a helicopter had crashed," Risley said. "That's how loud it was." One caller speculated the sound may have come from a large plane landing at Southern California Logistics Airport, but operations supervisor Greg Heldreth said there were no planes landing that early in the morning. Some thought the sound may have been caused by an electric transformer exploding, but Southern California Edison spokeswoman Beverly Powell said that was impossible. Edison employees did investigate some sparks coming from a transformer on Choco Road near Oneida Road, but that occurred about 1 a.m. and was caused by a bird landing on top of a transformer. "That's the only report we received in Apple Valley," Powell said. "It couldn't have been an explosion."



Troubled Times



Delaware

Sonic Boom is Super Mystery

By Brian K. Ford, *Newszap* (Delaware), January 16, 1999

So what was it? No one is quite sure what caused the sonic boom that shook the Kent County area on Jan. 8. An aircraft of an unknown origin shot through the sky at supersonic speeds, causing walls to shake and windows to rattle. Numerous phone calls flooded local police offices demanding answers. According to First Lt. Dave Westover, spokesman for the Dover Air Force Base, "Nearby air stations and bases have been contacted in regards to the aircraft, where it came from and why it was flying so low, but no one wants to take responsibility for the aircraft." The State News has received several calls from citizens who are still concerned about the incident. Some people believe that there may be a connection between the U.S. Navy's Blue Angels aerial demonstration team who visited the Dover Air Force Base a day earlier and the boom. "We're not sure what it was, but it wasn't one of our C-5s," said Airman First Class C. Todd Lopez of 436th Airlift Wing Public Affairs. "The Blue Angels left on the same day they arrived, between 3:30 and 5 p.m." The noise happened around 6:45 p.m. "There are only two places I believe that aircraft could have come from, the Paxuent Naval Air Station in Maryland or the D.C. National Guard at Andrews Air Force Base, said Tom Mcknight, department chair of Airway Science at Delaware State University. "They are the only two places that I know of that house aircraft capable of breaking the sound barrier. Normally, they do this over water or high altitudes. I don't think the military wants to say much about the issue." Lt. Westover said there were other possibilities as well. "There are several military installations, such as Langley Air Force Base and Atlantic City Air National Guard Station in New Jersey, in the area that routinely fly throughout the region. We are still looking into the matter," Lt. Westover said.



Troubled Times



Nebraska

Boom's Source A Mystery

Holt County Independent (Nebraska), August 19, 1999

A meteoroid, a sonic boom from a jet traveling across north central Nebraska to the Lincoln area, or...? Officials from across the state are trying to determine the source of a large boom about noon Friday. In O'Neill, the boom was actually two large booms that sounded somewhat like an artillery battery being fired. Some people said they thought a piece of nearby machinery had exploded or that a vehicle had crashed. In some areas the boom was accompanied by ground shaking and even a few broken windows. Ken Reiser of Butte said immediately after he heard the noise he heard a jet in the distance and assumed it had caused a sonic boom. A sonic boom from the speed of a plane would be created as the plane pushed the air ahead of it out of the way and air rushing in behind the plane. Under that theory a plane flying across the state would create a boom as it moved but the mystery noise was heard at the same time in both Lincoln and north central Nebraska. Officials at Offutt Air Force Base near Omaha also say it is doubtful that an aircraft was to blame. An Offutt spokesman said base officials checked with the Federal Aviation Administration in Lincoln, Omaha and Minneapolis.

All of those offices said they knew of no military craft flying in the area capable of making the noise. Officials also checked with Edwards Air Force Base in California on the chance that one of its aircraft with supersonic capabilities had flown overhead. There were meteor showers over Nebraska last week and it is possible that a fragment from a meteor, which would become a meteoroid as it enters the earth's atmosphere and a meteorite if it hits the earth, could have caused the boom. Martin Gaskell, UNL professor of physics and astronomy, said a meteoroid large enough to break the atmosphere could create a sonic boom before it hit the earth. If the meteoroid were large enough, he said, it could be heard from Lincoln to north central Nebraska. As of Monday afternoon, however, there were no reports of meteorites discovered in Nebraska in the area where the boom was heard and no reports of any damage



Troubled Times



Earth Hum

Per the Discovery Channel on Sept. 9 1999, the Earth is emitting a hum. Japanese researchers have been studying a mysterious hum emitted by planet Earth as its geological and atmospheric events combine to produce a frenetic symphony. Naoki Suda and Kaqunari Nawa dredged out the sounds from a mass of seismic data, according to a report in *New Scientist*, and say that sound is a mix of 50 notes ranging between two octaves. The pitches are between 2 and 7 MHz - about sixteen octaves below middle C. They said that the individual notes sound pleasant enough, but combined they are like an endless banging on a trash can. The researchers say that it is impossible for anyone to hear them with the naked ear, and the sounds are so subtle that a single magnitude 5.5 quake anywhere on the planet would blot them out. The hum is a natural tone that the Earth makes whenever some seismic or weather event sets it ringing.

Offered by [Brian](#).



Troubled Times



Meteor Impact

Press statement by **Niels Bohr Institute, Geophysical Dept**
971215 20.00UT

A big meteor impact has probably occurred in Southern Greenland at 61 25N, 44 26W on Tuesday, December 9th app. 08.11UTC (05.11am local time). The position is on the ice cap app. 50 kilometers NE of Narsarsuaq Airport. ... The flashes observed in conjunction with the meteorite were so bright as to turn night into daylight at a distance of 100 kilometers and can be compared to the light of a nuclear explosion in the atmosphere. However, we stress that there is no reason to believe other than natural causes. ... The event can in size probably be compared to the Kap York meteorite, that in prehistoric time fell in Melville Bay, Sassivik south of Thule. Findings from the meteorite consist of a number of iron meteorites totalling 50 tons. One of these iron fragments can be seen in Copenhagen outside the Geological Museum.

Meteorite suspected in fatal Colombian house fire

Reuters, 10:06 AM ET 12/16/97

A meteorite may have triggered a fire that killed four small children in central Colombia, local media reports said Tuesday. ... Bogota's El Espectador newspaper quoted witnesses, including the children's father and local firefighters, as saying "fireballs" had been spotted raining down from the sky in the impoverished area of Huila province where the children died in the house fire on Sunday evening. ... But he said a hole, measuring about 10 inches in diameter, was discovered in the zinc roof of the house, along with traces of a sulphur-like substance that was being studied in a local laboratory. The hole in the roof had been punched from the outside, Rojas said, adding that everything seemed to indicate the children were the unwitting victims of a meteorite.



Troubled Times



Explosions

Strange Blaze Near England, Arkansas, Puzzles Police

Arkansas Democrat Gazette, March 11, 2000

A mysterious fire scorched 40 acres early Friday morning before emergency workers controlled it, central Arkansas officials said. The Pulaski County Emergency Management Department responded to the fire just before midnight a few miles south of England when a call alerted officials to a possible plane crash, Emergency Management Director Kathy Botsford said. No evidence of a plane crash was found. The fire burned parts of Pulaski, Lonoke and Jefferson counties. Most of the damage was sustained on land in Jefferson County, which is in charge of the investigation, according to Lt. Eugene Butler of that county's sheriff's office. Only one house sits near the 150-foot-wide, mile-long area that burned, but no damage was reported to that building. A pipeline explosion was also suggested as a cause of the fire, but Botsford said that the contents of the pipes running rough the area are nonflammable and the company that owns the pipes said no leaks had been detected.

Several people in the area reported seeing a shooting star between 9 and 10 p.m., but Botsford was skeptical of the meteorite theory. "I just doubt that possibility at this point," Botsford said. "We're just not really sure what started the fire." Butler said he had reports of a "mushroom-type ball of fire," in the area before the fire, but he said he couldn't say how it started. "Right now we're just trying to find the origin of the fire," Butler said. Pulaski County sheriff's office spokesman John Rehrauer said he saw something in the sky while driving in Little Rock - 25 miles northwest of England - about 8 p.m. "I was driving down the freeway and it caught my eye," Rehrauer said. "I said to my wife, 'That was a bright shooting star.'" Meteorologist Mike Thompson at the National Weather Service said no meteor shower was expected Thursday night, but that didn't exclude either a meteorite a meteor that reaches the earth or debris from outer space starting the blaze.

Statement by Al Collier, Arkansas Eye-witness

Report dated March 14, 2000

On Thursday evening about 11:45 p.m. I was listening to the police radios. (Note: nothing here is being discussed or released that has not already been released to the press.) There was a report of a possible plane crash on the county lines near England, Arkansas. (see map). The early reports were of a fire so hot the firemen could not get the trucks close enough to fight the fire. There was discussion about how 'sparkly' the flames were and the odd colors of the flames. One Sheriff's deputy reported the fire was so intense his paint was trying to peel on his car. The flames and heat were so intense that no one could enter the area to search for a possible plane crash. The Little Rock police helicopter was asked to do an aerial search for any plane crash. There was none.

On Monday evening March 13, 2000 my wife and I drove to the site. There were reports on the local talk radio station that the area was blocked to road travel by the military. These reports were false. We spoke with one man who lives about 4 miles east of the burn site. He told us of a spot where " a meteor" had buried itself. We found the area where there was some burned tracked, plus heavy equipment tire prints leading back to and area where a 'borough' was visible leading to an area that appeared to have been dug out with back hoes. The borough was about 6 to 10 feet wide and about 150 yards long. It was too dark to take any photos.

On Tuesday March 14, 2000, I drove back to the area. I was denied admission to the area where the borough was. The farmer was working on the land to level out the field and was not allowing anyone on the site. About one and a half miles to the west of this location was the main burn site. It is an area of approximately one half mile wide by one to one and half miles long. I drove until the road became impossible to travel. The burn area was a mix of small circular patterns. There were many small 'craters' that looked more like something had been pulled out of the ground rather than put in the ground. The ground around these craters was white and crusted. As I touched the dirt, it crumbled like old pottery. Most of the burned area went less than 3 feet up the trees. Even blades of grass were burned from the bottom up and did not travel more than half way. There were areas where several blades were burned and yet others next to them were not touched. There was no smell of anything burned, although there was a smell of something I remembered from High School Chemistry class. I believe it was sulfur.

I spoke with the owner of the land. He informed me that the Forestry Commission and the Fire Marshall had determined the trees were burned to a depth of 2". They knew of no natural occurring substance that could cause such heat. There was also no know way to burn the trees as severe as they were at the bottom and not burn the tops. There have been reports of the military being on location those are false. Not one local ever saw any military person. There have been a report that after the fireball was seen Little Rock Air Force Base scrambled planes, this is also false, I was listening to the control tower all the time and there was no such event. The timing of the evening has varied reports. A fireball was reported visible in Little Rock about 8 p.m. There was a report by a local that his house shook at between 9:30 and 10 p.m. The fire was reported at about 11:30 p.m.



Troubled Times



Meteor Showers

Meteor shower stalls traffic near Sacramento

Associated Press, 3/9/98 -- 5:30 AM

The sun had just set, and then the sky filled with flaming objects falling to the ground. Traffic slowed to a halt on Interstate 80 in Northern California and police were flooded with worried calls about a possible plane crash. Not to worry - it was a 200-mile swath of meteors Sunday night. "It was just getting dark and everybody was facing that direction just as the sun was coming down," Coast Guard Lt. Alan Tubbs said. "It was the king of all meteor showers." The U.S. Coast Guard contacted Griffith Observatory in Los Angeles, which confirmed the meteor shower that stretched from Sacramento to Monterey.



Troubled Times



Fireballs

More Fireballs Seen in the West

By Martha Bellisle, *Associated Press* Writer

February 15, 1998; 12:08 p.m. EST

The phone lines to Denver's Museum of Natural History have been buzzing since a fireball streaked across the Colorado sky last month. That flash of light, caught on a homeowner's security camera, was not an isolated incident; it was followed by at least four more fireball sightings, said Jack Murphy of the museum's geology department. He hopes to find pieces of the celestial objects for the museum's collection. As new reports of sightings keep coming in, scientists are debating the meteorites' origin and the meaning of the increased activity. There is more at stake, they say, than where a piece of rock fell to the ground. ...

When a fireball fell into the Earth's atmosphere on Jan. 11, a Front Range resident's home security camera documented the bright light and shadows along with the sonic boom caused by the apparent meteorite, Revelle said. Scientists will use the time between the flash and boom -- 132 seconds - to help determine where the meteorite touched down, assuming it didn't burn out before landing. Then, at about noon on Jan. 27, a commercial airline pilot flying over Wyoming spotted "a ball of flame trailing smoke." "He reported he did get some turbulence from the object," Jim Patton, operations supervisor for the Federal Aviation Administration's flight service center in Casper told the Rawlins, Wyo., *Daily Times*. "He saw the debris and felt the shock wave from it." Residents in Breckenridge, Colo., also reported seeing that daytime fireball. Murphy said they believe the space rock was heading south to north and landed just north of Hanna, Wyo.

That night, another fireball broke into the Earth's atmosphere. Scientists believe that meteorite came down in southern Colorado or northern New Mexico, Murphy said. People in Breckenridge spotted that fireball, too. "That one was seen traveling east to west," Murphy said. "It has been a long time since we've seen one moving like that." Another meteorite was seen and heard at sunrise in eastern Colorado on Jan. 30. And Murphy is investigating a report that came in earlier this month.



Troubled Times



Green Fireballs

Green Fireballs Dazzle Viewers in Ireland

[UFO Roundup](#), Volume 4 Number 14, April 5 , 1999

Editor: Joseph Trainor

Mysterious green fireballs were seen twice over Ireland the night of Saturday, March 6, 1999. That night, at 11:30 p.m., Edel Chadwick "was driving across the bog (ostensibly a road--Edel) between Borrisokane, County Tipperary, and Cloghan, County Offaly," about 135 kilometers (81 miles) southwest of Dublin, the national capital. "Anyone who knows this road knows that it is unrelieved flat bog," Chadwick reported, "I saw what I perceived to be a meteorological phenomenon. It was a very clear dry night, cold. I saw what looked like a very large shooting star, comet-type thing, about ten times larger than the (Hale-Bopp) comet that was visible last year. It moved through the sky extremely quickly but not from a very big distance. It was a very vivid green. It hovered for a second or two and vanished."

Forty minutes earlier, at 10:50 p.m., David Moore of Astronomy Ireland, editor of Astronomy and Space magazine, was making telescope observations on Djouce Mountain (727 meters or 2,385 feet) in County Wicklow, about 160 kilometers (100 miles) east of Cloghan when he spotted a similar green fireball. "There was a brilliant fireball on Saturday night, March 6," Moore informed Dave Walsh, editor of Blather, the Irish online newsletter of Paranormal Provocateurism. "I saw the ground light up myself from Djouce Mountain when we were using my telescope. It happened to the north." Noting the time discrepancy, Walsh wrote, "Has someone made a mistake, or were there 'two' large fireballs over Ireland that night?"

From the Green Fireballs pages, the list includes **Green Meteors**, **Green Orbs**, **Green UFOs**, and the **Green Fireball Phenomena**:

- Green Fireball Over Honolulu Jan. 19, 1999
- Green Fireball over New Hampshire Jan. 10, 1999
- Green Fireballs, Booms, UFOs Jan. 8-10 1999 - UFO roundup
- Dec. 17, 1998 Green Fireball South Carolina
- Australian Defense, Australian UFOs & Green Fireball encounter
- Green Fireball over California - Video & Timeline
- Green Fireball over New York City
- Green Fireball Sightings
- Green UFO / Fireball over San Diego County Sept. 1998
- History of Green Fireballs

Green Fireballs "Not To Be Confused With" Green Flare Meteors - Leonid Sightings

- Green Fireball Attributed to Leonids 1997,
But Sightings in Area include many UFOs Too
- Green Flare Meteors Sighted in Missouri Leonid Meteor Shower 1998



Troubled Times



Increasing

Some interesting conversation from another group.

Offered by [Clipper](#).

Reports tonight of a fireball have been broadcast in a special bulletin as dozens of calls are entertained at local news desks. Tonight (Sunday, December 6, 1998) sometime after 21:00 Eastern time reports of a glowing fireball that streaked across the Georgia sky were reported to local Atlanta news agencies. **FOX** network interrupted a broadcast of *The X Files* (go figure) to report the anomalous fireball.

The fireball, quoted as being like "a meteor, only 100 times brighter than any I have ever seen" by an eyewitness, was reported to be a flaming ball with a fiery tail, accompanied by an audible noise as it traversed the night sky. Reports of the fireball have come in from Jonesboro GA to Rome GA as the fireball traveled east to west. Local news broadcasters seek insight from employees of **Fernbank Science Center** in order to explain the source of the streaking light.

Did this fireball happen Sunday night? I saw one Sunday night in the eastern sky. I thought the thing was really close to the ground. It was huge. I live in Indiana and was heading south. I've been seeing a lot of these lately. I saw one for the first time over the summer. Then one a couple of weeks ago and then the one Sunday night. I have never seen these before. Bigger and brighter than any shooting star I have seen before. The one Sunday night was really neat to see, it seemed to be going straight down at a slight angle and that part scared me a little, especially after all these asteroid/comet impact stuff going around.

Yes, around 17:00 eastern time (or there about, I think). It was briefly covered on television and radio but I could not find anything in the paper regarding this. I suppose the *Journal* thought it a non-event.

A friend who saw it described it as about the size of the moon and looking like a spacecraft. It upset her so much that she had to locate the moon in the sky to make sure it was still up there.



Troubled Times



DoD Confirmation

From DoD Surveillance Satellites

The following press announcement was released on 22 April by the USAir Force Technical Applications Centre (AFTAC) Office of Public Affairs. The release relates to satellite observations of recent impact events detected in the atmosphere by optical and infrared sensors aboard DoD satellites.

DOD 98-001 (April 22, 1998)

Fireball Detection

On 9 December 1997, sensors aboard DOD satellites detected the impact of a meteoroid at 08:15:55 UTC roughly midway between Nuuk and Qaqortoq, Greenland. The object broke into at least 4 pieces. One piece detonated at an altitude of about 46 km at 62.9 degrees North Latitude, 50.9 degrees West Longitude. The remaining 3 pieces detonated in close proximity to one another at altitudes between 28 km, at 62.9 degrees North Latitude, 50.1 degrees West Longitude and 25 km at 62.9 degrees North Latitude, 50.0 degrees West Longitude.

Fireball Detection

On 11 January 1998, sensors aboard DOD satellites detected the impact of a meteoroid at 07:11:13 UTC roughly midway between Denver and Grand Junction, Colorado. The object was detected at 39.4 degrees North Latitude, 106.4 degrees West Longitude.



Troubled Times



Titan Rocket

US Missile Warning Satellite in [Wrong Orbit](#)

BBC Online Network, April 12, 1999

A US missile warning satellite launched by the troubled Titan rocket programme is in the wrong orbit, according to the US Air Force. The \$250m Defence Support Programme satellite went up without a hitch from Cape Canaveral on Friday on board the unmanned Titan 4B rocket.

Titan-Launched Satellite in Wrong Orbit

MSNBC, April 11, 1999

A \$250 million missile-warning satellite ended up in the wrong orbit following its launch aboard an Air Force Titan rocket, military officials said Saturday night. The Defense Support Program satellite was lifted into orbit Friday for the Defense Department. It was the first Titan IV flight since a spectacular \$1 billion launch explosion in August. The rocket performed as planned and the mishap apparently occurred several hours later, said Patsy Bomhoff, a spokeswoman at Schriever Air Force Base in Colorado Springs, Colo. "We don't know what went wrong when," she said. "They're working around the clock and trying to work every angle possible to salvage this satellite." The highly sensitive 2½-ton infrared telescope is designed to detect missile and rocket launches as well as nuclear detonations. It was intended for a 22,300-mile-high orbit. Bomhoff said the satellite separated properly from its upper-stage motor seven hours after Friday afternoon's liftoff. Controllers discovered later in the night, however, that the satellite was in a highly elliptical orbit, she said. Bomhoff said she did not have any additional information, such as the specifics of the orbit.

Investigation

The Air Force Space Command is convening an investigating board of officers to look into the mishap. The satellite was to have joined other Defense Support Program craft in orbit and begun operating in three to six months. Air Force officials declined before Friday's launch to say how many working DSP satellites are in orbit, but stressed they were providing worldwide coverage. DSP satellites were instrumental in tracking Scud missiles during the 1991 Persian Gulf war. The next DSP satellite isn't due to be launched until December. TRW built the satellite. Boeing provided the upper-stage motor. The satellite's errant orbit is the latest setback for a launch of the 2 million-pound Titan, America's most powerful unmanned rocket.

Expensive Disaster

The Titan rocket program was put on hold when a Titan 4A exploded soon after liftoff last Aug. 12, in one of history's most expensive space disasters. The combined cost of the rocket and its top secret spy satellite cargo was put at more than \$1 billion. Investigators determined the Titan went out of control and blew up because of a short circuit caused by frayed wiring in the rocket's first stage. The Titan 4B used for Friday's launch was an improved version of the rocket that exploded and would have survived the same electrical glitch, said Col. Jeffery Norton, a director of launch programs for the U.S. Air Force. Nevertheless, the Air Force and Lockheed Martin Corp., which builds the rocket, repeatedly checked its wiring for problems and spent about \$30 million on corrective measures. Florida Today's Space Online quoted the Air Force as saying the estimated cost of the launch vehicle was \$432 million.

Another Comeback on Hold

Meanwhile, the Boeing Co. rescheduled the launch of a Delta 3 rocket, another launch program that experienced a huge setback last August. The Delta is now due to blast off from Cape Canaveral on April 21, with a 69-minute launch window opening at 9:02 p.m. ET. The \$230 million mission to loft an Orion 3 telecommunications satellite into orbit is similar to the one that went awry last year and ended in an explosion destroying the rocket and the PanAmSat Galaxy 10 satellite it was carrying. Engineers blamed last August's problem on a control system that overreacted to normal vibrations during the liftoff. A change in the system's operating rules should take care of the problem, Boeing officials say. The Orion 3 launch was originally scheduled Monday, but it had to be scrubbed twice due to unfavorable weather Monday and a string of 11th-hour glitches Tuesday. The Orion 3 satellite was built by Hughes Space and Communications Co. for Loral Space and Communications Ltd. Orion 3 is scheduled to provide television, Internet and other communications links for the Asia-Pacific region, covering an area from India to Hawaii.



Troubled Times



Athena 2

Newly Launched Satellite Disappears

Associated Press, April 27, 1999

A civilian satellite that can take the kind of detailed photos that previously only spy satellites could produce disappeared shortly after it was launched Tuesday. An Athena 2 rocket carrying the Ikonos 1 satellite roared off a Vandenberg Air Force Base launch pad at 11:22 a.m. PT (2:22 p.m. ET), bound for an orbit 400 miles high. **Communications with the spacecraft ended about eight minutes after liftoff, as planned, but it failed to re-establish contact as expected later in the flight.** Officials could not say whether it remained in orbit. Space Imaging, the Denver company that planned to operate the satellite, has already built a spare Ikonos. "Although our business plan will be delayed, we are confident that with the launch of Ikonos 2 we will achieve our goals," John Copple, Space Imaging's chief executive officer, said in a news release. Ikonos 1, named after the Greek word for "image," has a camera capable of resolving objects one meter square - about 3 feet by 3 feet. That means the satellite would be able to distinguish between a car and truck, according to Space Imaging.

Until now, only military satellites have been able to photograph Earth in such detail. Some experts said they worried that images from Ikonos 1 could be used by terrorists or enemy governments to plan attacks or spot mobilizing troops. The federal government approved the satellite in 1994. Space Imaging, a privately held company, said it expected its clients to use the images for urban planning, environmental monitoring, mapping, assessing the scope of natural disasters, oil and gas exploration, monitoring farmland and planning communication networks. John Pike, an authority on space reconnaissance with the private Federation of American Scientists in Washington, D.C., pointed out that the government will not allow images of some places to be sold. "The dilemma that you've got, though, is how do you make sure that Serbia doesn't know where American troops are while making sure that American news media is able to cover the war," Pike said. "And we're obviously going to have a hard time drawing that line." The satellite was built by Lockheed Martin Commercial Space Systems. Raytheon built the communications, image processing and other elements of the system. Eastman Kodak built the digital camera system.



Troubled Times



Launches on Hold

US Space [Rocket Grounded](#)

BBC Online Network, May 6, 1999

All United States rockets capable of launching large satellites are grounded as an investigation begins into a series of launch failures. The latest launch to misfire was a Delta III carrying a communications satellite. It was an unprecedented sixth failure in nine months.



Troubled Times



Solar Flares

The August 1972 event was a major solar flare, one of the best-observed flares in history. Very intense flares of this type occur typically once in every solar cycle (a similar event occurred in 1989). It was almost certainly accompanied by a coronal mass ejection similar to those now frequently observed by SOHO. However, coronal mass ejections had not yet been discovered in 1972, mainly because the equipment necessary to observe them (space-based coronagraphs) had not been sufficiently well-developed at the time. (Well, HAO's Mark III coronagraph can see CMEs from the Mauna Loa observatory in Hawaii, but orbiting spacecraft saw them first.)

This event was of more than usual importance because it was in a suitable location on the Sun to cause severe geomagnetic effects - as was the 1989 event. Interestingly, it occurred between manned flights to the Moon in April and December 1972 (Apollo 16 and Apollo 17); had it occurred during either of these flights, the dose of [Energetic Particles](#) and radiation might have been lethal for the astronauts. Today, NASA takes solar weather forecasts into account when planning manned space missions. For a list of some of the greatest geomagnetic storms in recorded history, please check the *IPS Page* and remember that "recorded history" only goes back to the early 20th century!

Offered by [Pat](#).



Troubled Times



Connections

Is There Any Linkage Between Recent Natural Disasters?

[CNN](#) Sept 23, 1999

When a wave of natural disasters strikes around the world, it's only natural for people to wonder if there is some sort of link between the huge forces of nature. Was Hurricane Floyd, which roared out of the Atlantic last week, in any way related to the typhoon which battered Hong Kong the same week - the worst typhoon to hit that city in 16 years? And could the deadly earthquake in Turkey have pulled the seismic trigger which led to the quake in Taiwan? Some answers to those questions and others can be found at the Lamont-Doherty Earth Observatory, operated by Columbia University, where specialists track what happens beneath the earth's surface and above it. "We know of connections between earthquakes when they are close to each other, namely within tens of miles, said Kurt Jacob, a seismologist at the observatory. "But when they are essentially a whole world apart, then that connection cannot be established on any scientific basis."

Jacob pointed out there was an unusual cluster of earthquakes at the turn of the last century and again in the early 1960s. The 60s quakes rattled Alaska and Chile, which suffered the largest quake ever recorded at magnitude 9.5. That temblor sent a tidal wave across the Pacific to Japan. No El Nino = more hurricanes. And what of 1999? "From a purely seismological earthquake standpoint (it was) a normal year. Magnitude 7 earthquakes, we can expect easily about a dozen of them a year," said Jacob. "So why are we then concerned? Well, what happened in this case is that some of those magnitude 7 earthquakes occurred in high population centers and that's the real difference. The number of earthquakes is pretty much as expected, nothing unusual so far." What about what's happening above the earth's surface?

One theory is that the fluttering of a butterfly's wings in China can alter air patterns which in turn could determine whether it rains in New York State. At the observatory, climatologist Mark Cane sees some connections. "One of the things that has been studied a lot is the impact of the El Nino events on hurricanes. So, in an El Nino phase, you get fewer hurricanes in the Atlantic," said Cane. "We are not in an El Nino phase - we are in the opposite phase - and so we should get more hurricanes, that is what is predicted and it seems to be, so far in this hurricane season, what is happening." For an American century that began with a hurricane which killed more than 8,000 people in Galveston, Texas in 1900 - to the dust bowl of the 1930s, when the soil was swept off the land, and people, desperate for work, were driven from their homes - to the "storm of the century," the Blizzard of '93 which killed 270 people on the East Coast in 1993 - and the great floods of that same year in the Midwest, which killed 48 people and caused \$20 billion in damage - there has always been a difference between bad-weather years and disastrous years.

Searching for patterns "I think it will be one of the superstar years for the century in a lot of ways," said Cane. "What we see that's really different lately is we keep setting records for the warmest-year-ever for the globe, and we have various kinds of catastrophes or extreme events that certainly stand out." It is human nature to want to discover connections, some sense behind the apparent random blows from disasters. Albert Einstein said, "God does not play dice"... meaning there is a predictable pattern in everything. Scientists are still searching for those patterns and connections behind the destruction. When they cannot find them, all they can say is - "things happen."



Troubled Times



Gravity Field

Earth's Middle Getting Fatter?

[BBC](#), August, 2002

The changes are very, very slight. Scientists have known for some time that the Earth is not a perfect sphere. It is shaped a little like a pumpkin - wider at the middle and narrower at the poles. It is a difference of more than 20 kilometres. But now new research published in the journal *Science* suggests our planet is getting even wider - if only by the odd millimetre. The scientists behind the report, Christopher Cox and Benjamin Chao, base their findings on space-based observations from past 25 years.

Since the early 1980s, satellite laser-ranging studies that have been used to work out the planet's gravity field have demonstrated how the Earth has lost a bit of its pumpkin look - it has actually become slightly more spherical. This has been put down to a rebound effect in the mantle - a thick layer of nearly molten rock between the Earth's crust and its core - following the loss of the heavy mass of ice at the poles after the last Ice Age. But Cox and Chao say their work suggests this trend reversed abruptly about four years ago. They are doubtful that phenomena such as further glacial melting or atmospheric changes can explain the rapid turnabout.

Instead, they suggest two possibilities. One is that changes in ocean circulation have shifted a larger mass of water towards equatorial regions; the other is that there has been a shift in mass at the boundary between the Earth's fluid outer core and the mantle. Further studies will be required to work out what is really happening. Cox says any increase in the Earth's girth is of the order of millimetres and may even be imperceptible given the rather technical way these things are monitored. "It depends on where the effect is, because it is measured in terms of a change in the shape of the gravity field," he says. "If it is in the ocean, it may be a few millimetres, but if it is in the core there could be no apparent change in the actual shape of the Earth."



Troubled Times



Core-Mantle Boundary

Two Scientists Have Detected A Large-Scale Redistribution Of Mass Within The Earth System, Beginning in 1998!

Hutton Commentaries, September 2002

The Hutton Commentaries (THC) has been saying from the beginning that a shift in the poles of Earth's rotational axis can only be caused by a significant shift of mass somewhere within our planet. Now, two scientists studying data on Earth's gravity field have found evidence of just such a mass shift that began in 1998. This is the year in which Cayce readings 3976-15 and 378-16 said that a forty-year-long period, from 1958-1998, marking the beginning of predicted Earth changes would come to an end. Then, in 1998 and beyond there would be "the changes wrought in the upheavals and the shifting of the poles." We present evidence here that the "upheavals" may have begun in the inner Earth between 1998 and 2002, where the liquid outer core meets the overlying plastic mantle. This is the core-mantle boundary, or CMB. Upheavals along the CMB may have been detected by means of precision satellite-ranging measurements conducted since 1979. Interpretations of the voluminous measurements between 1979 and 2002 have been published by two scientists, Christopher Cox and Benjamin Chao, in the August 2 issue of Science magazine (p. 832). Here follows their reasoning and their conclusions.



Troubled Times



Radical Shift

Reuters 24-JUL-97 By Michael Miller

A 90-degree shift of the Earth's early continents - in which the North and South Poles wound up at the equator -- may have played a major role in the evolutionary "big bang" that speeded up the development of life, scientists said. A report to be published on Friday in the journal *Science* said the "big bang," a sudden spurt in the evolutionary process, began about 530 million years ago and proceeded at a rate 20 times faster than anything that has happened since.

What caused that spurt has long been a mystery perplexing scientists; now experts at the **California Institute of Technology** (Caltech) say they may have part of the answer. Caltech geologists Joseph Kirschvink and David Evans and Robert Ripperdan of the **Oak Ridge National Laboratories** in Tennessee said the relatively sudden diversification of life forms took place at the same time as Earth's then-super continents took a 90-degree turn, shifting the polar masses to the equator and putting equatorial points at the poles.

Both events occurred during the so-called Cambrian period when a major reorganization of the Earth's crust took place. They said in *Science* that all the data "indicate that rapid continental drift occurred during the same time interval as the Cambrian evolutionary diversification and, therefore, the two events may be related." Kirschvink said, "Life diversified like crazy about a half a billion years ago, and about 15 million years later life's diversity had stabilised at much higher levels. What actually happened is one of the outstanding mysteries of the biosphere." He added that the geophysical evidence collected from rocks deposited before, during and after the evolutionary speedup, "demonstrate that all of the major continents experienced a burst of motion during the same interval of time."

Evans told *Reuters* the study indicated that in order to change their positions so radically, the super continents - which broke up about 150 million years ago to form today's continents - would have travelled several feet (metres) per year over a 10 million to 15 million year period. The phenomenon is known as "true polar wander," in which the entire solid part of the planet moves together. Typical continental migration rates today, which are caused by heat convection in the Earth's crust, are only a few inches (centimetres) a year, Evans said. Kirschvink said the climatic changes, in which life forms existing in cold temperatures were thrust into warmer regions, and vice versa, forced their diversification as they adapted to their new environments. It also produced a survival of the fittest pattern of evolution in which certain groups died off and others became stronger through survival.

Of particular significance to the scientists was the once super continent of Gondwanaland, probably made up of what is now Australia, Antarctica, India, Africa, South America and perhaps parts of East Asia. Studies of rocks found in Australia and dating back to the Cambrian period "demonstrate that Australia rotated counter- clockwise during this time. Other parts of the Gondwanaland super continent must have been involved in this ... rotation," the report in *Science* said.



Troubled Times



Pole Shifts

As reported by *Future Fate: Scientific Evidence supporting a Pole Shift*

From **Richard Noone's book** 5/5/2000

In December of 1985 the discovery of volcanic ash twenty feet underground in the Nile delta was found to be identical to the ash from **an enormous eruption approximately 3,500 years ago on the Greek island of Santorini**. This discovery proves that the effects of the eruption (22,000 times greater than the effect of the atomic bomb dropped on Hiroshima) reached as far as Egypt and supports a theory (presented in chapters two and eight of Noone's book) linking the eruption to the seemingly miraculous events associated with the biblical Exodus of the Israelites from Egypt.

From **Wire Reports: Researchers Find Evidence of Polar Waffling**

Earth's magnetic poles change location slightly from decade to decade, but so slowly that navigation is unaffected, and compass-toting Boy Scout troops are not lost in the pines. But under certain circumstances the planet's magnetic field can become so deranged that it **moves as much as 6 degrees per day**, wobbling around for a week or so before stabilizing, scientists report in the April 20 issue of Nature.

Such drastic changes are beyond the limits of conventional geological opinion. But R.S. Coe of the University of California at Santa Cruz and colleagues from the University of Montpellier in France contend they took place 16.2 million years ago, during one of Earth's occasional field reversals in which **magnetic north becomes south, and vice versa**. No one knows why, just as no one understands exactly what produces the field in the first place. But the reversals are permanently documented in the rock record from volcanic activity.

Ten years ago, after examining lava flows at Steens Mountain, Ore., researchers found evidence the field had shifted as much as 3 degrees per day. That was an unthinkable large amount for most experts, who dismissed the findings. Undeterred, two members of the team set out to study another flow a mile away, which is the subject of the new report. Not only did they discern a field change twice as large, but they "make a convincing case" that their original results were not an artifact, writes University of Washington geologist Ronald T. Merrill in a companion article.



Troubled Times



Magnetic Reversals

Geophysics: Geomagnetic Reversals and the Earth's Mantle

Science Week, December 10, 1999

The earliest demonstration that the geomagnetic field of the Earth changed polarity in the past was provided by P. David and R. Brunhes, who in 1904-1906 described the magnetic properties of young lava flows in the Massif Central region of France. They found that clays baked by the lava flows had the same direction of remanent magnetization as the lavas, and that when the magnetization direction in the lava was opposite to that of the present-day field, the same was the case in the baked clay. They interpreted the opposite polarities as evidence that the geomagnetic field can reverse its polarity. M. Matuyama (1929) was the first to associate the polarity of remanent magnetization in lavas with their age as determined stratigraphically. Matuyama reported finding young Quaternary lavas with magnetization directions close to the present-day field direction, whereas the directions of older Quaternary and Pleistocene lavas were clustered about an antipodal direction. He also found that one of three samples of Miocene basalt was magnetized oppositely to the other two. Matuyama's interpretation was that geomagnetic polarity had changed several times during the Late Tertiary time-frame.

Although generally accepted today, the idea that Earth's geomagnetic polarity could change was controversial in the early part of this century, and for many years skeptics sought alternative interpretations of the data. Alternative explanations, however, have not been successful, and the phenomenon is now considered real and is studied as a special branch of geophysics. Geomagnetic polarity reversal is an inversion of the geomagnetic dipole. It is a global event, experienced simultaneously all over the Earth, and such reversals, apart from their intrinsic interest, provide a convenient means of stratigraphic correlations and stratigraphic dating. The paleomagnetic record indicates that the dipolar part of the Earth's magnetic field, which is the dominant structure of the geomagnetic field outside the core, has reversed its polarity several hundred times during the past 160 million years. The reversal durations (i.e., the periods during which the reversals are accomplished) are relatively short (typically 1000 to 6000 years), compared with the constant polarity intervals between reversals. Another feature of the reversal period is that the intensity of the magnetic field apparently decreases significantly during this time-frame.

Unlike the nearly constant periods of the solar magnetic cycle, geomagnetic polarity intervals evidently vary from a few tens of thousands of years to "superchrons" of the order of tens of millions of years. The duration of a superchron is roughly the timescale required for significant changes in the thermal structure of the Earth's mantle to occur as a result of subduction of tectonic plates and mantle convection, and this observation and some noted correlations between plate tectonics, geomagnetic field intensity, and reversal frequency have led to speculations that structural changes in the mantle may be influencing convection and magnetic field generation in the fluid outer core (the "geodynamo"). In particular, it has been suggested that changes in both the total heat flow and the pattern of heat flux over the core-mantle boundary may affect the geodynamo.



Troubled Times



Steens Mountain

The Steens Mountain Conundrum,
from [Science Frontiers](#) #80, Mar-Apr 1992.
Copyright 1997 William R. Corliss

The layered lava flows of Steens Mountain, in southeastern Oregon, have preserved video-like records of the earth's magnetic field as it switched from one polarity to another about 15.5 million years ago. The scientific "instruments" here are the cooling lava flows. As they solidify from the outside in, a process taking about 2 weeks for a 2 meter-thick flow, **the lava is magnetized in the direction of the field prevailing at the moment of solidification.** We would thus have a 2-week continuous record of the behavior of the earth's field. Ordinarily, we would not expect to see very much change in 2 weeks; even a reversing field is thought to take thousands of years to complete its flip-flop. However, at Steens Mountain, when the field reversed 15.5 million years ago, the lava flows suggest that the field's axis was rotating 3-8° per day - incredibly fast according to current thinking, in fact a thousand times faster than expected.

The conundrum (one might call it a scientific impasse) arises because the flowing electrically conducting fluids that supposedly constitute the earth's dynamo would have to flow at speeds of several kilometers/hour. No one has ever contemplated molten rock moving at such speeds in the core!

Could it be that the prevailing dynamo theory is incorrect?

To make matters more interesting, it now seems that **the paths taken by the reversing poles follow similar routes with each flip-flop. One preferred path is a band about 60° wide running north-south through the Americas; the other path is 180° away cutting through east Asia and just west of Australia.** The implication is that some unknown structure in the core somehow guides the reversing poles.

Almost Inconceivable Changes in the Geomagnetic Field,
from **Science Frontiers** #101 Sep-Oct 1995.
Copyright 1997 William R. Corliss

A decade ago, a trio of geophysicists published a group of papers based on their measurements of the remnant magnetism of the 16-million-year-old layered lava flows at Steens Mountain, Oregon. (SF#45) At that time, they claimed that these finely bedded lava flows testified that, during a field reversal, the earth's field swung around at the astonishing rate of 3° per day! This rate is about one thousand times the current rate of polar drift. Mainstream geophysicists could not believe the 3°/day figure because it implied incredibly rapid changes in the flow of those molten materials within the earth that supposedly generate the geomagnetic field. The Steens Mountain data were "tableted"; that is, dismissed.

The three researchers, though, continued their labors at Steens Mountain and have now offered additional, even more impressive data. They now find that **the geomagnetic field probably shifted as much as 6° in a single day.** Their work has been carried forward so professionally and meticulously that other scientists are finding their conclusions harder and harder to dismiss. Instead, the search is on for explanations of the rapid field changes. Three possibilities have been advanced -- all of them unpalatable to geophysicists:

- The Steens Mountain rocks are not faithful recorders of the main geomagnetic field. Should this be

actually so, the whole field of paleomagnetism, including plate tectonics, is undermined, for it depends upon similar measurements.

- The earth's molten core can change rapidly, at least in some regions, in response to forces still unrecognized. This, of course, is not really a satisfying "explanation."
- The dynamo theory of the origin of the geomagnetic field is incorrect.

Coe, R.S., et al; *New Evidence for Extraordinarily Rapid Change of the Geomagnetic Field during a Reversal*, **Nature**, 374:687, 1995. Merrill, Ronald T.; *Principle of Least Astonishment*, *Nature*, 374:674, 1995. Appenzeller, Tim; *A Conundrum at Steens Mountain*, **Science**, 255:31, 1992. Lewin, Roger; *Earth's Field Flips Flipping Fast*, **New Scientist**, p. 26, January 25, 1992.



Troubled Times



Atlantic Excursions

New Insight Into Earth's Magnetic Quirks

Royal Astronomical Society Press Notice

Ref. PN 99/08, March 29, 1999

... Certain rocks preserve a record of the state of Earth's magnetism at the time they formed. From studying and dating them, geophysicists have known for some time that Earth's magnetic poles have often flipped completely in the remote past. The last such reversal took place 700 thousand years ago. But there is also evidence for more frequent episodes when the magnetic poles have moved a large distance - 45 degrees or more away from the geographical pole - then returned. These events, known as 'excursions', are rather like failed attempts at reversal. When they occur, the strength of the magnetic field falls dramatically as well, by a factor of 5 or 10.

Professor Gubbins has drawn on recent experimental results, particularly those from a research group in Utrecht headed by Dr Cor Langereis, which clearly identify six relatively recent magnetic excursions as true global phenomena. All the excursions lasted roughly the same length of time - about 5,000 years. Furthermore, preliminary results from the recent Ocean Drilling Program Leg 172 have revealed more than twenty excursions recorded in sediments of the North Atlantic in the same time period. While these events have not been correlated world-wide, the sediments indicate very clearly that excursions are quite frequent events. Professor Gubbins noted that there are about ten excursions between each full reversal. Every 20 - 50 thousand years, the Earth's magnetic field collapses in a failed attempt to reverse, but then re-establishes itself quickly over a timescale of just a couple of thousand years. ...



Troubled Times



Methuselah Trees

Living [Methuselah Trees](#) Record Event

Nova Transcripts, via PBS

One summer it was so cold that it left you scarred for life. The few cells that grew that year were damaged when the water inside froze up, expanded and burst the cell walls. Tree rings were examined under a microscope. The jagged black line clearly showed cell death in the year 1627 B.C. What could have caused temperatures in that year to fall so dramatically? Could tree rings be a record of some cataclysmic event in another part of the world?



Troubled Times



Greenland

Climate Can Change Quickly

Associated Press, Oct 28, 1999

In a study that may sound a warning about global warming, researchers have found evidence that the world's climate can change suddenly, almost like a thermostat that clicks from cold to hot. A new technique for analyzing gases trapped in Greenland glaciers shows that an ice age that gripped the Earth for thousands of years **ended abruptly some 15,000 years ago when the average air temperatures soared.** "There was a 16-degree abrupt warming at the end of the last ice age," said Jeffrey P. Severinghaus of the Scripps Institution of Oceanography, lead author of a study to be published Friday in the journal *Science*. "It happened within just a couple of decades. The old idea was that the temperature would change over a thousand years. But we found it was much faster."

Severinghaus said the rapid rise in air temperature in Greenland may have been touched off by a surge in warm currents in the Atlantic Ocean that brought a melting trend to the vast ice sheet that covered the northern hemisphere. It still took hundreds of years for the ice to recede, but the start of the great thaw was much more sudden than scientists had once thought. This suggests, Severinghaus said, that the Earth's climate is "tippy" - prone to be stable for long periods, but then suddenly change when the conditions are right. ...



Troubled Times



SeaMounts

New England SeaMounts Once Near Surface

From *Science Frontiers* #1, September 1977, by 1997 William R. Corliss

Reference: Heirtzler, J.R., et al; **A Visit to the New England Seamounts**, *American Scientist*, 65:466, 1977; **Guyots pose several enigmas, Carolina Bays, Mima Mounds.**

Exploration of the New England Seamount chain by the research submarine Alvin confirmed that some of these peaks, now all a kilometer or more below the surface, were once at or above the surface of the ocean.

This undersea mountain chain contains more than 30 major peaks and stretches 1,600 miles southeast from the New England coast. Deep-sea dredging has previously brought up Eocene limestone of shallow-water origin from the submerged mountain tops, but the Alvin explorations resulted in the first eye-witness accounts of dead coral (which grows only near the surface) and rock samples containing strands of dead algae that grows only within 100 meters of the surface. The New England Seamounts have therefore either subsided on the order of a kilometer since Eocene times or sealevel has altered drastically.

The Alvin dives also discovered a series of very striking and perplexing buttes obviously the results of erosion (see drawing on cover). The buttes are apparently composed of volcanic rock and are only a few meters high. Some unexplained, extremely vesicular (holefilled) rocks seen on the sea floor during the dives seem to be identical to samples occasionally dredged up and formerly classified as cinders jettisoned from old steamships. The underwater surveys suggested that these "cinders" have a natural (still mysterious) origin.



Troubled Times



Mammoths

From: Jim I. Mead[SMTP:Jim.I.Mead@NAU.EDU]

Sent: 14 November 1997 16:13

To: michael@unicall.be

Dear Michael,

You apparently sent a message regarding mammoths to Mike Jacobs, who forwarded it to me. I will see if I can help.

1. Is it so that mammoths almost disappeared about 10.000 years ago? That the mammoths massively moved around that time towards other regions, from north africa to northern europe & asia?

Yes, it appears from the youngest accurate radiocarbon dates place the extinction of the mammoth at about 11,000 years ago. This certainly seems to be the case in North America. Andrey Sher in Russia seems to have very good evidence that mammoths (pygmy) may have persisted on an island between Alaska and Siberia until about 4,000 years ago. Mammoths are just a type of elephant and evolved in Africa and immigrated to other regions at various times. There are some great books in English and German about mammoths.

2. Is it so that mammoths were frozen in the Siberian ices about 7.000 years ago?

I don't know about accurate ages of 7,000 years, but there are a number of mammoths dating much earlier. I have worked on only one mammoth - it radiocarbon dated to about 23,000 years old.

3. Is it so that the few remaining mammoths disappeared about 3.500 years ago ? Do we know how the number of mammoths changed between 10.000 years ago and 4.000 years ago ?

It appears that most died out about 11,000 years ago, but as I mentioned above there appears (?) to be a relict population living until about 4,000 or maybe 3,000 years ago in an Arctic island.

4. Does science have an explanation for these changes? Sudden storms? Sudden climate changes?

Well, like any subject, there are a number of opinions out there. Paul Martin would say that mammoths died out because of over hunting by humans. This may be possible or probable in some areas of the world. I feel that it was a rapid change in climate, which changed the environment, and may have gotten too warm for them. Not sure. Lots more to learn and find out.

You may want to get hold of people at The Mammoth Site, Hot Springs, South Dakota. Let me know if you have more questions.

Sincerely yours,
Jim I. Mead

Chair, Department of Geology
Director, Quaternary Studies Program



Troubled Times



Devil's Lake

Evidence for Ancient Catastrophe Found At Devils Lake, Wisconsin

Far Shores News, August 1, 2000

A small boulder, sitting high atop the cliffs at Devils Lake State Park, is unlike any other boulder on the planet according to professional geologist Paul Herr. Herr and his guides conduct nature tours at Devils Lake under the title "Devils Lake Nature Safaris." Herr often explores the park during his free-time. He recently discovered something astonishing on the East Bluff at Devils Lake - evidence for an ancient catastrophe. Scientists, according to Herr, have determined that the quartzite hills near Baraboo, Wisconsin were islands in a tropical ocean 450 million years ago. At Devils Lake you can see scars left by hurricane waves that once pummeled these islands, such as grooves cut into the quartzite by boulders rolling back-and-forth in the surf.

Herr discovered a small, reddish, quartzite boulder, about the size of basketball, that was crushed like a "nut" when a larger boulder slammed on top of it. The shattered pieces are still sitting there, though now they are encased in sandstone. Quartzite is the hardest, common, rock-type in the world. According to Herr, it took a violent impact to smash the quartzite boulder. Herr theorizes that one, giant wave lifted huge quartzite boulders and slammed them down on the hard quartzite beach. This wave created such a thick pile of debris that subsequent waves couldn't get to the shattered boulder at the bottom. Herr thinks that it must have been one, giant wave because a second wave, of the same magnitude, would have scattered the shattered pieces - but they are not scattered. Herr thinks a tsunami, or a giant wave created by a meteor impact, could explain the shattered boulder. Herr showed this boulder to a group of visiting international scientists. One of them stated, "We expected dairy cattle in Southern Wisconsin, not stunning, world-class geology."



Troubled Times



Climate Changes

New evidence for 4000 BP Natural Disaster & Civilization Collapse

Geology, 2000, Vol.28, No.4, pp.379-382

The Akkadian empire ruled Mesopotamia from the headwaters of the Tigris-Euphrates Rivers to the Persian Gulf during the late third millennium B.C. Archeological evidence has shown that this highly developed civilization collapsed abruptly near 4170 +/- 150 calendar yr B.P., perhaps related to a shift to more arid conditions. Detailed paleoclimate records to test this assertion from Mesopotamia are rare, but changes in regional aridity are preserved in adjacent ocean basins. We document Holocene changes in regional aridity using mineralogic and geochemical analyses of a marine sediment core from the Gulf of Oman, which is directly downwind of Mesopotamian dust source areas and archeological sites.

Our results document a very abrupt increase in eolian dust and Mesopotamian aridity, accelerator mass spectrometer radiocarbon dated to 4025 +/- 125 calendar yr B.P., which persisted for similar to 300 yr. Radiogenic (Nd and Sr) isotope analyses confirm that the observed increase in mineral dust was derived from Mesopotamian source areas. Geochemical correlation of volcanic ash shards between the archeological site and marine sediment record establishes a direct temporal link between Mesopotamian aridification and social collapse, implicating a sudden shift to more arid conditions as a key factor contributing to the collapse of the Akkadian empire.



Troubled Times



Tsunami Signatures

From *Geo Science*, **Tsunami Along the South Coast of NSW**

The first event probably occurred concomitantly with the rise of Holocene sea-level near modern levels around 7000 BP. ...

The impact of these tsunami upon the coastal landscape has been profound. Several signatures provide estimates of the magnitude of run-up of these events. The height to which chaotic mixes of sediment and imbricated boulder stacks have been deposited and the height of headlands that have had a smear of clay, sand and shell plastered across them give general estimates of the run-up height. The elevation of eroded landscape features on headlands gives information about the depth and velocity of flow. The presence of sand laminae and splayed sand units within deltaic sediments permit the landward limit of tsunami impact to be determined.

This geomorphic evidence indicates that the largest tsunami waves swept sediment across the continental shelf and obtained flow depths of 15-20 m at the coastline with velocities in excess of 10 meters per second. Along cliffs, and especially at Jervis Bay, waves reached elevations of 40-100 m with evidence of flow depths in excess of 15 m. Preliminary evidence on the Shoalhaven delta indicates that waves penetrated 10 km inland for at least one event. This geomorphic evidence suggests that the New South Wales south coast is subject to tsunami waves an order of magnitude greater than that indicated by historic tide gauge records.

Recent work indicates that the southeast coast of Australia may not be the only coast to be affected by catastrophic tsunami. The geomorphic signatures of such events have been found on Lord Howe Island in the mid-Tasman Sea, along the north Queensland coast and along the northwest coast of Western Australia. At the latter location, there is good evidence that a recent wave swept more than 30 km inland, in the process topping 60 m high hills more than 2 km from the coast. Finally bedrock sculpturing features have been identified on the islands of Hawaii and along the east coast of Scotland. The latter location is within the zone affected by the tsunami generated by a large submarine landslide near Storegga, Norway also 7,000 years ago.



Troubled Times



Theories

Chaos from Above- Did Asteroids and Comets Turn the Tides of Civilization?

By Mike Baillie, *Discovering Archeology*, July/August 1999

The heart of humanity seems at times to have lost its cadence, the rhythmic beat of history collapsing into impotent chaos. Wars raged. Pestilence spread. Famine reigned. Death came early and hard. Dynasties died, and civilization flickered. Such a time came in the sixth century A.D. The Dark Ages settled heavily over Europe. Rome had been beaten back from its empire. Art and science stagnated. Even the sun turned its back. "We marvel to see no shadows of our bodies at noon, to feel the mighty vigor of the sun's heat wasted into feebleness," Italian historian Flavius Cassiodorus wrote at the time. "We have summer without heat. The crops have been chilled by north winds, (and) the rain is denied." In China, "the stars were lost from view for three months." The sun dimmed, the rain failed, and snow fell in the summertime. Famine spread, and the emperor abandoned his capital amid political and economic disasters. Then came pestilence. The Justinian plague, named for a Byzantine emperor, apparently began in central Asia, spread into Egypt, and then swept across Europe. Hundreds of thousands died. The world had gone to hell in a hurry, if the historical accounts can be believed. But with neither evidence of global disaster nor a viable cause, the records were widely doubted by historians.



Troubled Times



Tree Rings

New evidence, however, supports the tales of ancient scribes and identifies brief but brutal times of worldwide ecological catastrophe. The evidence is in tree rings, which clearly show several years of cold weather that stunted growth beginning in A.D. 536 and especially after A.D. 540-541. The rings show similar events that began in 1628 B.C. and 1159 B.C., and rare written documents of those times seem also to describe cataclysmic social collapse. What weapon does nature wield that is powerful enough to alter the course of civilizations within a few years? The most likely explanation, the best fit with the evidence, is that described by both Chinese and Europeans as dragons in the sky: Pieces of comets (or perhaps of asteroids) crashed into Earth, spewing a veil of dust that encircled the world and dimmed the sun. A much larger and rarer bolide (an exploding meteoric fireball) is assumed to have ended the reign of the dinosaurs some 65 million years ago. A smaller and more common one exploded over the Tunguska River in the Siberian wilderness 91 years ago with 2,000 times the power of the bomb that devastated Hiroshima in 1945. And just five years ago, astronomers watched the fragmented comet Shoemaker-Levy 9 plow spectacularly into Jupiter.

I believe the association between the tree-ring data and historical documents and folktales is real: Earth faced catastrophic environmental dislocation at or around 1628 B.C., 1159 B.C., and A.D. 540 (and probably in 2354 B.C. and 208 B.C., as well) because of near-miss comets, either through dust-loading of the atmosphere as Earth passed through the comet's dusty tail or through direct bombardment by cometary fragments. (They must have been near misses, because if we had been hit by a full-blown comet in the past 10,000 years or so, we wouldn't be here today.) This hypothesis is not proven, but the circumstantial evidence is overwhelming. The strongest evidence comes from tree rings and the science of dendrochronology. Tree rings record the age of a tree, with a distinct ring of growth produced each year. The width of each ring depends on growing conditions, so each year's growth in a particular area leaves a unique signature (a reflection of fat, moderate, or lean growing conditions) in the tree-ring record.

By calibrating the rings through progressively older trees from a specific region, archaeologists can build millennia-long chronologies that allow them to date ancient wooden artifacts. (See *Discovering Archaeology*, May/June, page 45.) The pattern of tree rings in an artifact can be matched to the regional chronology to determine the year in which the tree died. A less-well-known consequence of these chronologies is that we can now identify periods in which trees grew very little or not at all. This is indicated by clusters of extremely narrow rings, which suggest extremely cold growing seasons. A band of these narrow rings occurred after A.D. 540 and lasted about six years in parts of Europe, Asia, and North America. Similar ring patterns are found around 1159 B.C. and 1628 B.C. These dates may coincide with the collapse of Bronze Age civilizations across Eurasia. They may also be recalled in the biblical book of Exodus and contemporary records from China.

The first inkling that tree rings might record catastrophic events came in the mid-1980s from dendrochronologist Val LaMarche and volcanologist Kathy Hirschboeck. In the extremely long-lived bristlecone pines of the western United States, they noted a frost-damage ring at 1627 B.C. and suggested it might reflect the massive eruption of the Santorini volcano in the Aegean Sea. Similar frost rings followed the eruptions of Krakatoa in Indonesia (1883) and Katmai in Alaska (1912). After a major volcanic eruption, Earth is veiled by a layer of fine debris circulating in the stratosphere. This layer reflects sunlight away from Earth, causing the surface to cool. As a result of their suggestion, I searched the ring patterns derived from oak logs that had been preserved in the peat bogs of Ireland. I found that

many trees exhibited the worst growth - the narrowest rings - of their lifetimes starting in 1628 B.C. Only a few other such events were seen in the rings, but two others were at 1159 B.C. and A.D. 540. Those years are close to dates for acid-rich layers (attributed to volcanic eruptions) that had been identified in ice cores taken in Greenland. We seemed to be onto something.



Troubled Times



Volcanoes

Then astronomer Kevin Pang of the California Institute of Technology (Caltech) noted that 1628 B.C. and 1159 B.C. roughly mark the beginning and end of the Shang Dynasty of Bronze Age China. Both ends of the dynasty featured, according to ancient Chinese texts, environmental disasters - dimming of the sun and summer frosts that caused crop failures and famine. Pang notes also the Chinese concept of "mandate of heaven," wherein a dynasty reigned only as long as it protected the well-being of its people. This notion might have originated in the coincidence of dynastic change and climatic disaster. The Caltech team also noted similar descriptions from A.D. 536-545 that describe climatic disruptions that led to catastrophic famines and great loss of life. Much was going on in the world around these three dates. The four centuries of the Greek Dark Ages, which began after the Mycenaean era of mainland Greece collapsed amid great social upheaval, are thought to have begun in the twelfth century B.C. This period also saw the end of the once-mighty Hittite civilization of Anatolia in the Near East and of Bronze Age Israel.

The situation in Egypt is more ambiguous. Egypt's prosperous New Kingdom grew out of a century or so of warfare and upheaval known as the Second Intermediate Period, which itself followed the end of the Middle Kingdom. The New Kingdom has been dated from 1550 B.C. to 1070 B.C. While that is 70 years later than our two dates (1628 B.C. and 1159 B.C.), the time span is almost exactly the same. Some scholars have questioned traditional Egyptian dating, and it seems possible the timing of the New Kingdom, some 3,500 years ago, might be a little off. Then the volcano hypothesis began to dim. Volcanologists noted that volcanoes normally would not be powerful enough to collapse dynasties - the dust and acid, even if sufficient to dim sunlight, washes out of the atmosphere within a few years. And a review of the ice-core evidence from Greenland failed completely to confirm an exceptional volcanic eruption at A.D. 540.

It appears now that something far more damaging than volcanoes may have been at work here, especially after seeing unassailable proof that comets can hit planets: the extraordinary spectacle of comet Shoemaker-Levy 9 crashing into Jupiter in 1994. Comets appear in Chinese records of events at the beginning and end of the Shang dynasty. Were the catastrophic environmental downturns at 1628 B.C., 1159 B.C., and A.D. 540 caused by encounters with comets? Archaeologists and astrophysicists do not necessarily read each other's work, and it mostly escaped notice that three British cometary astrophysicists - Mark Bailey, Victor Clube, and Bill Napier - had published a highly relevant paper in 1990. They wrote that Earth had been at increased risk of bombardment by cometary debris in the period A.D. 400-600. They based their conclusion on the increased number of great meteor showers during that period.



Troubled Times



Bolide Impact

It's hard to overestimate the devastation that could result from a serious bolide impact on Earth. The impact of fragments measuring between one and several hundred meters across can cause fiery, multimegaton explosions that destroy natural and cultural features across huge areas through fire blasts, earthquakes, and tidal waves (if the debris arrives over the sea). The danger in A.D. 400-600, concluded Bailey and colleagues, was of Earth running into a "cosmic swarm" of objects the size of the one that exploded over Tunguska, Siberia, in 1908. Some astronomers believe we can expect Tunguska-type impacts every 50 years on average, while an impact with explosive power in the 1,000- to 10,000-megaton range - a super Tunguska event - is likely in any 5,000-year period. Such impacts could trigger enormous global ecological catastrophe. Impacts between those two extremes might be expected often enough to account for these calamities. Direct evidence, however, is scanty. Associating craters to specific events is problematic at best; the Tunguska event left no significant crater at all, since the bolide exploded a few kilometers above the surface. Impacts in or over the ocean would not leave physical evidence.

We turned, then, to the written record and oral traditions. Comets were extraordinary objects that seemed rarely to escape written notice. Zachariah of Mitylene noted about A.D. 540 that - a great and terrible comet appeared in the sky at evening time for 100 days." Chinese texts about the same time say: "Dragons fought in the pond of the K'uh o. They went westward. ... In the places they passed, all the trees were broken." Similar descriptions are common throughout the Old World. Sixth-century events generally are well-dated. But with more ancient documents and traditions, dating usually is ambivalent at best. This is why similarly spaced events in the second millennium B.C. are so interesting. What are the chances of similarly spaced events in both Hebrew and Chinese histories, both with cometary associations, arising by chance? There is, I feel, a strong case for the contention that we do not inhabit a benign planet. This planet is bombarded relatively often. If this story is correct, we have been bombarded at least three times - and probably five times - since the birth of civilization some 5,000 years ago. And each time, the world was changed.

Mike Baillie is a leading dendrochronologist and Professor of Palaeoecology at Queen's University, Belfast, Northern Ireland. His book, *Exodus to Arthur*, describes in detail his theory of comet encounters and turning points of civilization.



Troubled Times



UN Conference

Excerpts from an article posted on July 8, 1996 by *Reuter*, in London.

Freak storms wreak havoc as experts issue warning

Freak weather conditions have claimed hundreds of lives and caused chaos across the world in recent days as scientists warned governments that "greenhouse gases" and global warming may distort climates. In Geneva, United Nations officials and scientists at a conference of some 150 signatory countries to the U.N.'s Climate Change Convention appealed Monday to industrial powers to reduce the carbon dioxide they pump into the atmosphere. They urged a tightening of targets for slashing greenhouse gas emissions blamed for potentially disastrous global warming. "We will be successful if we get agreement on further commitments that might be made in the process of controlling climate change," conference president Chen Chimutengwende, Zimbabwe's Environment Minister, told reporters. As if to reinforce their message, many regions reported severe disruption from freak weather conditions as they spoke.

Southern China mopped up after some of the worst floods in a century which killed at least 345 in six provinces. Farmers replanted crops, troops buttressed river embankments and officials tried to estimate the scale of damage, while the country remained on high alert for more torrential storms.

In South Africa, freezing temperatures killed at least 17 people - from exposure or suffocation - and snow trapped hundreds more during the weekend as the country shivered with its coldest weather in decades, police said Monday. Some parts of the country recorded their heaviest snowfalls in 60 years. The Eastern Cape experienced its coldest winter since 1981, state radio said.

Record low temperatures, exceptionally high winds and heavy rains hit several parts of France, the weather bureau said. Unseasonable heavy snowfalls blanketed parts of the French Alps and Pyrenees Monday, forcing a cutback in part of the Tour de France bicycle race to avoid snowbound roads. "We get this type of weather only every five or 10 years. In July, you almost never get snow below 3,000 yards. This time, we had snowfalls as low as 1,800 yards," a weather bureau spokesman said.



Troubled Times



Weather Watch

This Weather Watch indicates recent activity only, since 1995. Data is summarized by year, with more detail and a cumulative extreme weather map available on the year's individual page. The trends can therefore be seen if one year and then the next is examined, in turn. This Weather Watch only reports activity that can be considered truly unusual. Typical weather, no matter how extreme, is not listed here. This is to show the recent trends, without clutter. Weather Watch stopped at the end of 1999, when the trend had become obvious.

- During [1995](#) the millennium trends of weather extremes began in earnest, with more severe drought, rain, snow and cold. **Antarctica's** Larsen ice shelf disintegrated. More hurricanes were *named* than ever before. It was the hottest year on record, following the hottest decade, with over 500 dying in a **Chicago** heat wave. Record snowstorms were recorded from **Scandinavia** to Buffalo, NY. **Australia's** Big Dry broke records while the deserts in the **Sudan** continued to encroach, while many areas worldwide such as **New Jersey** were experiencing drought for the first time. Deluges, such as the one washing away 10,000 head of cattle in **China's** Guangxi province, occurred.
- During [1996](#) world records on all fronts were broken. There were more *major* hurricanes than ever before recorded. Heat records were broken across the **US**. **China's** Qinghai province was devastated by the century's worst blizzard, while the **US East Coast** was also buried in record snowfalls, the wettest year on record. Drought continued to be experienced for the first time in many places worldwide, such as **Slovenia**. Record breaking deluges occurred, such as the 17 inch rainfall in **Chicago** and deluges causing horrendous flooding over many provinces in **China**.
- During [1997](#) a pattern of large areas being affected by severe weather, happening simultaneously in many parts of the world emerged. Deluges continued, with the **US West Coast** and **North Dakota** battered by record flooding in the spring, while **Europe** suffered extreme cold. **Antarctica** continued to melt at a dramatic rate. Crop shortages caused by the erratic weather had become a trend. Simultaneous drought in **Alaska's** interior and record snowfall in **Santiago, Chile** occurred during early summer, while farmers in Romania were struck dead by sudden hail and lightning storms.

During mid-summer, the **Nordic** countries and **US Midwest** and **Argentina** all experienced unusual and extreme heat waves, and record breaking flooding occurred in central Europe while both **Bangladesh** and China's **Quandong Province** struggled with severe floods, for the Quandong Province the second to strike within the same summer. By fall, the strongest **El Nino** in memory was causing simultaneous torrential rainfall in **Somalia** and **Brazil** and intractable drought in **Indonesia**. Year end found 1997 the hottest on record, with the most rain forests destroyed ever due to drought induced fire.

- During [1998](#) severe weather tightened its grip, becoming the norm, battering nearby locales in different ways. Example: on the same day on the East Coast of the US, the **Northeast** was being deluged, high winds tore through **North Carolina**, and half of **Florida** was on fire. Ice storms in **Quebec** caused the province to borrow power for the first time ever, and bitter cold swept many parts of the world such as **Mexico**, breaking records, while **England** sweltered in record heat. **El Nino** continued into 1998, the strongest ever recorded, with record breaking flooding in **Peru** and **San Francisco**. This El Nino was then followed by the strongest **La Nina** ever.

Fires raged out of control in the jungles of **Indonesia**, the **Amazon** and **Florida**. Crop failures began to total, a devastation. **Kenya** rain was 500% above normal. A record number of 1008 tornadoes tore through the US,

Mechanicville, New York and **Alabama** experiencing a level 5 on two different occasions, the strongest tornado possible, the hail in **Louisiana** 1/2 foot across. During July, **Korea, China,** and **Slovakia** experienced record breaking deluges, almost simultaneously. Where 1997 had been the hottest year on record, 1998 broke that record.

- During [1999](#), the hurricane season ran late and southern hemisphere cyclones came early. Hurricanes lined up, one behind the other, and marched across the **Atlantic**. The entire globe seemed under attack at the same time, with Hurricane Dennis threatening **South Carolina**, Tropical Storm Cindy ravaging **West Africa**, Tropical Storm Wendy striking **Hong Kong**, and Hurricane Greg assaulting the west coast of **Mexico** almost simultaneously. The unprecedented west-east Hurricane Floyd, a Category 5, came late in the season. Super-Cyclone 05B devastated **India** in November, and an unprecedented Hurricane Lothar battered **Europe** in December.

The entire globe likewise seemed to be battling floods and mudslides, with flooding along the **Caspian Sea** in July, in **New York City** and **South Carolina** and Russia's **North Caucasus** in August, in **Uganda** and India's **Manipur** and **Somalia** and **Bulgaria** and **South Korea** and **Ghana** and **Spain** and **Honduras** in September, in Mexico's **Tabasco** and the **Congo** and **Nepal** and India's **West Bengal** and **South Africa** and **Cambodia** in October, in **Ethiopia** and **Greece** and **Peru** and **Italy** and **Vietnam** and **Columbia** and **Brazil** and **New Zealand** in November, and in **Thailand** and **Yemeni** and **Bosnia** and **Venezuela** and **Indonesia** and **Nigeria** and the **Philippines** in December.

An entrenched drought on the **East Coast** of the US threatened to be the worst in memory, with seven states issuing drought advisories and 3/4 of all streams and rivers registering record or near record lows. More than 18 wildfires swept across **Idaho, Montana, Nevada, Utah, Washington,** and **California**. At the same time, the **Manitoba** region of Canada had wildfires out of control, and 2,000 brush fires burned out of control across **Brazil**. **Israel** had 7 months of drought with the **Sea of Galilee** at its lowest level in at least a century. Heat waves broke records in **Europe** and **North Africa**, and the warming trend created melting in the **Arctic** as well as the **Antarctic**.



Troubled Times



1995

- The *Earth Chronicles* reported that during February, 1995 nearly 400 square miles of the **Larsen Ice Shelf** in Antarctica disintegrated within 50 days.
- The 1995 hurricanes season is a record for the Atlantic, with the most named storms since the **National Hurricane Center** started assigning names in 1953. The previous record was in 1933, when 21 storms were recorded.
- **Typhoon Oscar**, also in 1995, was the most powerful to threaten Japan since World War II.
- 1995 is officially the hottest year on record, in the hottest 5 year period on record, following the hottest decade on record. The *New York Times* reported on January 4, 1996 that both the **British Meteorological Office** and the **NASA Goddard Institute** reported this trend.
- Across the United States there were record highs during the 1995 summer, with high temperatures lingering longer than usual. The *Earth Chronicles* reported that 566 died in **Chicago**, clogging the mortuaries in the worst heat wave in memory, and livestock perished.
- An early 1995 winter appeared in **Mongolia** which was swept by a severe snowstorm.
- **Denver** experienced a freak late-summer snowstorm in 1995.
- The *San Francisco Chronical* reported on November 18, 1995 that the worst November blizzard in memory clobbered **Scandinavia**.
- The **National Weather Service** reported on December 12, 1995 that **Buffalo**, New York received a record 37.9 inches of snow in a 24 hour period, beating the previous record of 25.3 inches set in 1982.
- Droughts are being experienced world wide. The **National Geographic Society** reports that **Australia** has experienced a 4 year Big Dry that began in Queensland and has broken all records.
- Droughts are occurring in areas not previously experiencing them, such as the state of **New Jersey** in 1995.
- A deluge in China's **Guangxi** region during a 1995 dry season washed away 10,000 head of livestock.

The Weather Watch extreme weather map at the end of 1995 looked like this:



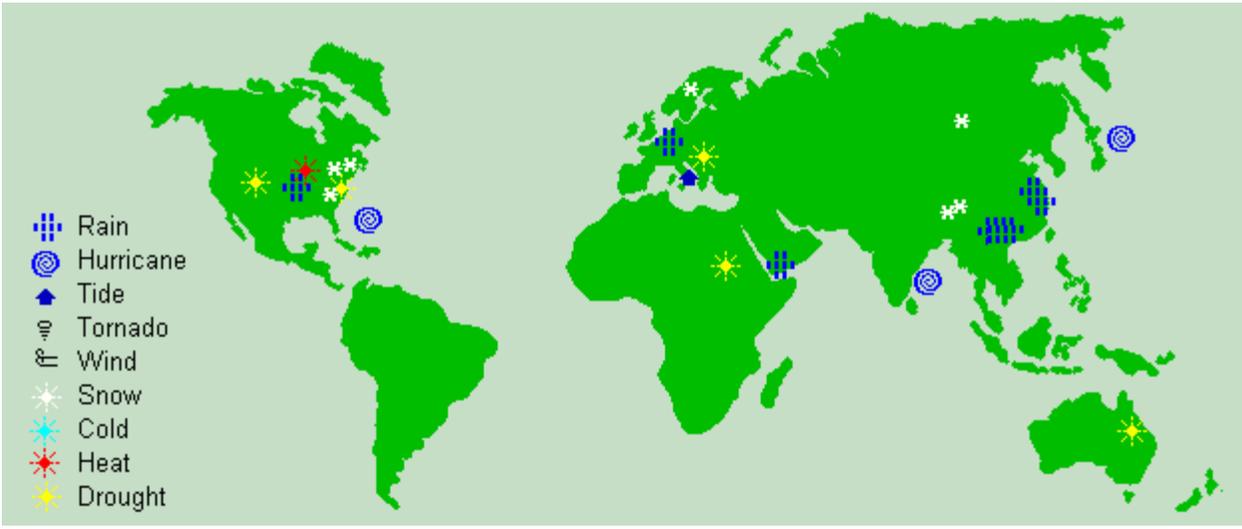
Troubled Times



1996

- The great snowfall of 1996 in the US was notable more for its swath across the eastern half of the **United States** than for any particular record, although *The New York Times* reported on January 9, 1996 that records fell as the flakes fell, as several records for 24-hour snowfalls were broken.
- In January, 1996 a brutal cold snap covered the central US from coast to coast with the *New York Times* reporting on February 2, 1996 that below zero temperatures breaking centuries old records were registered in many areas.
- Earthweek in the *San Francisco Chronicle* reported on March 2, 1996 that China's **Qinghai** province was experiencing the worst blizzard this century and that thousands are suffering from frostbite and snowblindness.
- The *New York Times* reported on May 21, 1996 that several states from **Colorado** to the Northeast states have recorded their highest May readings ever.
- Drought is being experienced in non-desert areas, with the southwest US experiencing a return to the Dust Bowl days and northeast **Slovenia** receiving no rain at all during May, 1996, normally a wet month.
- *Reuter* in **Beijing** reported on July 7, 1996 that more than one million Chinese in one province alone were guarding against some of the worst floods in over a century where the floods hit the provinces of Hubei, Guizhou, Zhejiang, Anhui and Jiangxi, causing more than \$2.0 billion of damage.
- The *Drudge Report* stated on July 17, 1996 that 17 inches of rain fell in a 24-hour period in **Chicago**, the heaviest rainfall in Chicago-area history, and the **The National Weather Service** reported the rainfall of 17 inches in Aurora, Illinois to be the second-highest amount ever during a day in the United States since such records have been kept.
- The *Geneva Situation Report No. 7* reported on July 23, 1996 that **Yemen**, in Arabia, had flooding with 338 deaths.
- The *Associated Press* reported on November 7, 1996 that **India's** southeast coast was hit by back-to-back cyclones during a three-week period, with more forecasted.
- The 1996 hurricane season had 6 major hurricanes, unprecedented in any past record.
- Reports from Moscow stated that Moscow and the **North Urals** had higher temperatures during the first few days of December than recorded in over 117 years.
- Simultaneously the *Associated Press* reported on December 14, 1996 that northeast **Russia** experienced such severe ice storms, never before experienced, that 6,000 reindeer died of starvation.
- *NASA's Global Hydrology and Climate Center* reported on December 11, 1996 that space-based measurements recorded 1996 as the coldest on record for the Earth's lowest stratosphere, from 9 to 14 miles above the Earth, since these measurement were begun in 1979.
- The *Washington Post* reported on January 28, 1997 that 1996 was considered the wettest year on record for Oregon, Idaho, Massachusetts, Pennsylvania, and West Virginia.
- The *Millennium Matters* reported on February 21, 1997 that a **US Department of Agriculture Press Release** stated that the strange and inclement weather had reduced the non-citrus fruit crops. The 1996 apple production was 9% below 1994, grape production down 6% from 1994, peach production down 10% from 1995, pear production down 18% from 1995.
- The *Associated Press* reported on May 6, 1997 that **Venice** experienced 80 high water marks during November and December, 1996, a record for the century.

The Weather Watch extreme weather map at the end of 1996 looked like this:



Troubled Times

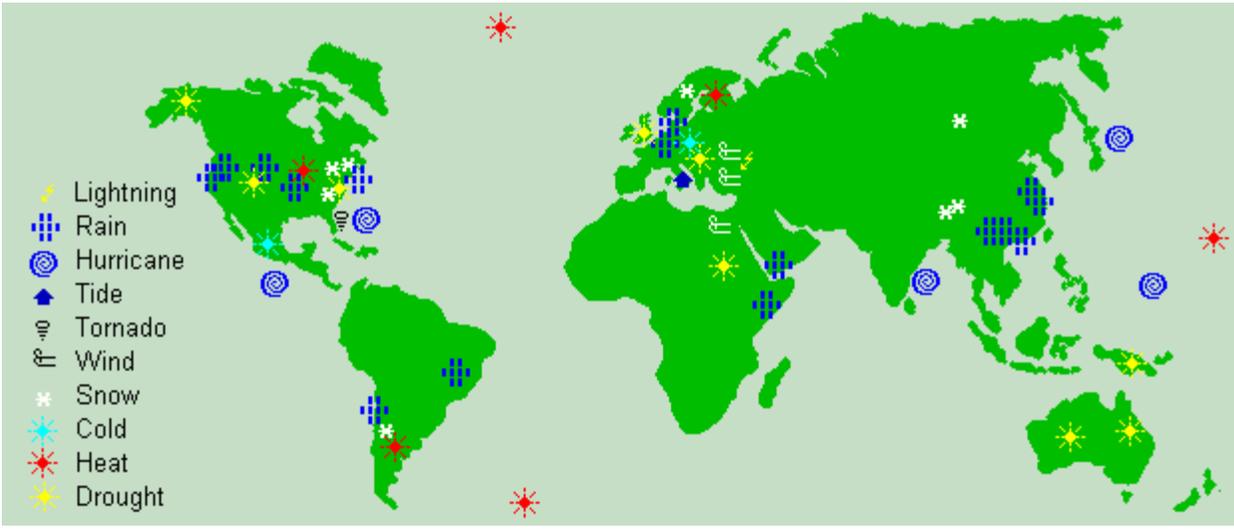


1997

- Atypical mid-winter thaws were experienced across the US, with **Washington DC** reaching 75 degrees on January 3, 1997.
- The *Associated Press* reported on January 3, 1997 that repeated storms deluging **California**, Oregon, and Washington on the West Coast of the US and the western states of Idaho and Nevada, had created the worst flooding in California's history.
- *Reuters* reported on January 4, 1997 that more than 150 people died across **Europe** in the coldest weather in 30 years.
- The *Associated Press* reported on February 6 in an article titled *Antartica Ice Breakup* that deep holes and cracks several miles long are visible in the **Antartic Peninsula** ice shelf. Lakes have formed from the melt, some larger than football fields.
- The *Associated Press* reported in March that record winds up to 123 mph roared through the **Czech Republic**.
- The *New York Times* reported on April 19, 1997 that England and Wales have experienced the driest 24 month period since record keeping began 230 years ago, with no end in sight.
- During April, The *Associated Press* and *NCB News* reported that the **Red River** in North Dakota reached record levels, cresting at 39.5 feet as a record 13 blizzards and more than 100 inches of snow melted on the flat planes.
- *Earth Week* reported on April 19, 1997 that the honeybee population in **Bosnia**, which had come out of hibernation, was devastated by an unseasonable cold spell, and that the sudden spring frost destroyed up to 100% of the vineyards in southern France.
- The *Associated Press* reported on April 17, 1997 that a recent analysis published in the journal *Nature* indicates that spring arrives 8 days earlier in the **Arctic** than it did a decade ago, a conclusion based on several climatology indicators.
- A exceptionally severe sandstorm engulfed much of Egypt on May 2, 1997. Per the *Associated Press*, Sherif Hamad, head of the **Egyptian Meteorological Service**, stated "we've never experienced such a powerful one".
- The *Miami Herald* reported that on May 13, 1997 a freak tornado slashed through **Miami**, uprooting trees and shattering the glass fronts of several buildings.
- The *Associated Press* reported on May 16, 1997 that intense rainfall, which the **UN Department of Humanitarian Affairs** stated happens only once every 500 years, caused flooding in southern China's Guangdong province.
- Violent hailstorms killed 4 farmers and lightning killed 3 in eastern **Romania**, according to the *Associated Press* on June 22, 1997 while scores of others were injured. The storm was unusual in that it was sudden, so that there was no time to seek shelter. In the Ukraine and neighboring Belarus, the high winds uprooted centuries-old trees and "snapped them like matchsticks", the **Belarus Emergency Situation Ministry** spokesperson Alexander Zuyev stating "It is hard to remember such a disaster".
- The *Kalamazoo Gazette* reported on June 23 that the **Michigan** shoreline was melting under the influence of severe wind and rain. Susan Brown of Grand Rapids peered into a 90 foot wide gorge that opened up suddenly after torrential rains, a pace not experienced in memory by the local residents.
- *Reuters* reported on June 24, 1997 that travelers were blocked by 18 feet of snow near Santiago, Chile, while torrential rains created flooding. The extreme weather was linked to El Nino.
- *Reuters* reported on June 29 that british explore Robert Swan, a **Special Envoy to the Director General of UNESCO**, was planning tours to show people how Antartica is melting, as he is now able to sail around islands in Antartica formerly blocked by ice.
- The interior of **Alaska** experience a record setting drought going into July 4, 1997, per the local Fairbanks newspaper, while **Argentina** experienced 86 degrees in the middle of their winter.
- Officials are referring to the flooding in central Europe as the worst in centuries, saying there is no record of any

- on this scale, per the *Associated Press* on July 26, 1997, with record high water breaking dikes on the **Oder** river threatening **Germany, Poland** and the **Czech Republic**.
- The *Associated Press* in **Helsinki, Finland** reported on August 10, 1997 that the Nordic countries experienced the summer to be the hottest on record, with some parts of Finland notching a record 39 heat wave days per the **Finnish Meteorological Institute**.
 - The **U.S. Climate Analysis Center** reported on August 14, 1997 that British birds are now laying their eggs more than a week earlier than normal. Humphrey Crick and his colleagues at **Britain's National Center for Ornithology** in Thetford came to this conclusion after studying the records of 1,000 volunteer bird-watchers that go back to 1975.
 - The *Independent* in London reported on August 26, 1997 that polar bear populations are threatened in the **Arctic** due to loss of sea ice and the collapse of ice caves that expose or crush and kill the cubs.
 - The *Fresno Bee* reported on September 5, 1997 that the **1997-98 El Nino** was the strongest ever recorded with ocean temperatures at 9-12 degrees F greater than normal, and achieved this record temperature in half of the time taken by the previous record holder in 1982-83.
 - The *New York Times* reported on September 9, 1997 that on the night of August 20-21, 1997, an unprecedented nine inches of rain fell in **New Jersey** within three hours.
 - The *Schroeder/Bassett DOE* report stated on September 22, 1997 that **Hurricane Linda** achieved a status as the strongest hurricane ever recorded in the **Eastern Pacific**, exceeding even the highest Category 5 with winds up to 220 mph.
 - **Paris** authorities issued a smog alert on September 30, 1997, for the first time as weak winds and unseasonably warm weather led to a dangerous buildup of nitrogen dioxide.
 - *Agence France-Presse* (Perth) reported on October 7, 1997 that Australia is experiencing the worst bushfires in memory rage in remote northwest. The **West Australian Bushfires Board** reported that brushfires were raging out of control. Some of the fires had been burning for weeks in an area the size of Britain.
 - The *Associated Press* reported on October 21, 1997 that **Kenya's** coast received almost 18 inches of rain in a 2 day period, where Mombasa normally averages 6.8 inches for a 3 month period. Heavy flooding also occurred in eastern **Ethiopia**.
 - *Reuters* reported on October 22, 1997 that southern **Brazil** experienced torrential rainfall and flooding blamed on El Nino. 9,000 cattle were swept away. Brazil's rainy season normally peaks during January to March.
 - *Reuters* reported on October 27 that smog from fires in the rain forests of **Indonesia** have triggered alarms in **Singapore, Malaysia, Brunei**, and as far away as the **Philippines** and **Thailand**. U.N. climate experts in Geneva said Friday stated that the dry spell in Indonesia could continue for three months, far beyond the normal start of the monsoon due to the El Nino. Normally the monsoons start in September.
 - The *Associated Press* stated on November 27 that the **Hadley Center for Climate Prediction and Research**, part of Britain's **Meteorological Office**, predicted that 1997 will prove to be the hottest year on record, with records dating back to 1860.
 - *Reuters* reported on December 14, 1997 that historic snowfalls fell on **Mexico** as far south as Guadalajara.
 - On December 17, 1997 the *Associated Press* reported that **Guam** recorded the highest winds ever recorded, 236 mph, during Typhoon Paka.
 - The London based **World Wide Fund for Nature** reported on December 20, 1997 that more tropical forests were destroyed during 1997 than any other time in recorded history.
 - The **Met Office** in London estimated that globally 1997 was the warmest year on record, per a *Reuters* reported on December 30, 1997.

The Weather Watch extreme weather map at the end of 1997 looked like this:.



Troubled Times



1998

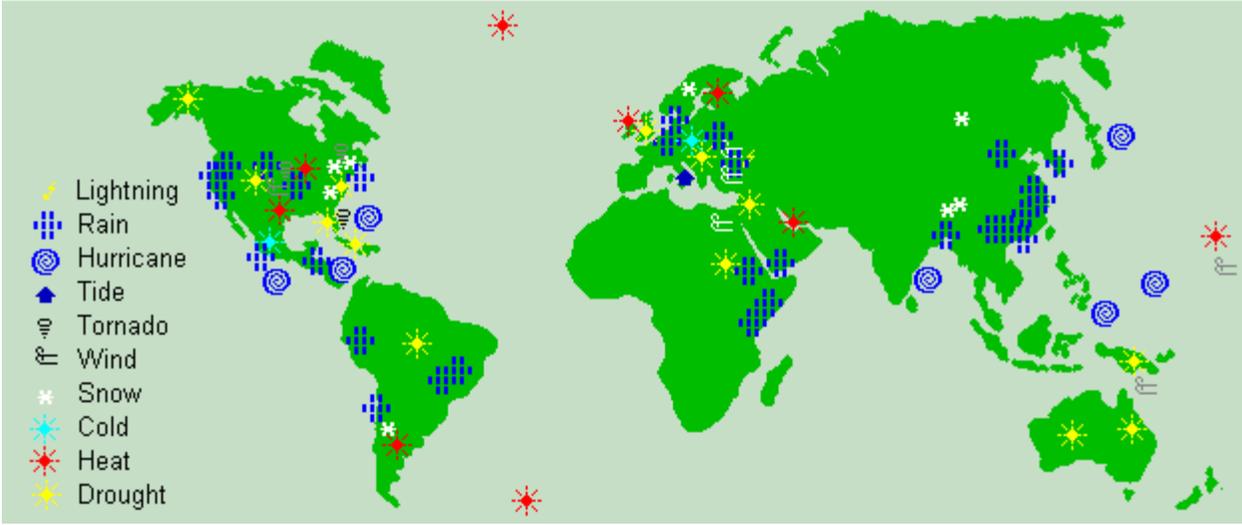
- *Reuters* reported on January 8, 1998 that the blackout in **Quebec** caused by a massive ice-storm forced **Hydro-Quebec** to summon help from utilities outside the province for the first time in its history, as more than 1/3 of the 7.3 million residents lost power.
- The *Associated Press* reported on January 18, 1998 that Meteorologists have recorded rainfalls at 500 percent above normal in **Kenya**.
- *CNN* reported on January 29, 1998 that President Alberto Fujimori stated the flooding in **Peru** is far worse than the El Nino-induced floods of 1983, the previous record breaker.
- *Reuters* reported on February 13, that the **Meteorological Office** reported the highest February temperature recorded in **Britain** during this century.
- The *Associated Press* reported on February 20, 1998 that **San Francisco** also broke a 120-year-old record for the most rain in February as El Nino dumped rain, washing houses down soaked hillsides and flooding highways.
- The *Associated Press* reported on March 7th that hail a half-foot in diameter fell during continuous lightning and thunder in **Louisiana**.
- *Reuters* reported on March 9 that The first two months of 1998 were the warmest and wettest on record for the lower 48 U.S. states, based on 104 years of weather data, the **National Oceanic and Atmospheric Administration** said Monday. The national average temperature during the January-February period was 37.5 degrees Fahrenheit, compared with a normal 32.1 degrees. Precipitation averaged 6.01 inches during the period, almost two inches above normal.
- *Reuters* reported on March 13th that intense fires in the **Amazon** never before seen, per Roraima Governor Neudo Campos, have raged out of control, following one of the most prolonged droughts ever in Brazil's northernmost territory.
- *Associated Press* reported on March 30th that the 620-mile trip along the **Pan American Highway** from Lima to Tumbes near the Ecuadorean border now takes 4 days, compared to the day and a half it formerly took, due to floods and landslides in more than 30 places due to El Nino.
- On April 22, 1998, *MSNBC* reported that the **U.S. Ice Data Center** and the **British Antarctic Survey** have predicted that the entire **Larsen B Ice Shelf**, which covers more than 4,000 square miles, is nearing its limit of stability. A 75 square mile piece of Antarctica's ice shelf recently broke off.
- On May 27, *Associated Press* reported that a jumbo jet struck clear air turbulence south of **New Guinea**, tossing passengers out of their seats. This was similar to another incident in December where a United jet struck clear air turbulence enroute to **Hawaii**, killing a passenger. The pilots reported absolutely no warning.
- *Reuters* reported on June 7 a level 5 tornado (the worst possible) tore through **Mechanicsville, NY**, reminiscent of the movie *Twister*.
- Vice President Al Gore stated that the first five months of 1998 have been the warmest on record, per *MSNBC* on June 8, 1998. The *New York Times* stated that the temperature jump was "rather spectacular" and "to see every month breaking the record is rather significant." For the five months as a whole, the average global surface temperature was 1.76 degrees above a benchmark average of 61.7 degrees set between the years 1961 and 1990.
- **Florida** was ravaged by record wildfires consuming over a million acres across the state. The *Washington Post* reported on July 3 that a 125 mile stretch of interstate highway 95 was closed, the flames leaping over highways. 4,500 fire fighters from 38 states arrived to help fight the blaze.
- *CNN* reported on June 29 that the 1997-1998 **El Nino** had been the strongest ever recorded.
- A front page article in the July 1st *Washington Post* reported that a record number of 1,008 tornados had occurred during 1998.
- *Reuters* reported on July 8 that the first six months of 1998 were the warmest first half of a year globally since records began, per Dr. Phil Jones of the **University of East Anglia's Climatic Research Unit** in Britain. The

- warmest full year so far was in 1997, when temperatures were 0.43 degree Celsius higher than the long-run average. By comparison, the global average temperature in 1877/78, when there was a powerful **El Nino**, was 0.5 degree below today's average.
- *Reuters* reported on July 9 that a more intense **La Nina** is developing, more quickly, than ever before, per Dr. Lars Olsson, acting director of WMO's **World Climate Program**.
 - On July 13 the *Associated Press* reported that the spring quarter was the worst on record for property damage claims, per the **Property Claims Services** unit of **Insurance Services Office**.
 - *New Millennium* reported on July 17 that record triple-digit temperatures occurred across the south and west in the US. The **Salt River Project** utility in **Arizona** reported breaking records for almost a week. Temperatures at **Winslow**, elevation 4,850, was 105, breaking the previous record of 102.
 - *Reuters* reported on July 21 that Fidel Castro announced to **Cuba's National Assembly** that the current drought was the worst in the century, possibly the worst in previous centuries.
 - *CNN* reported on July 22 that water levels on the **Yangtzerose** to 1.25 meters above danger levels in the **Wuhan Province**, with the heaviest deluge since records began.
 - On July 23, the Sabinov district of eastern **Slovakia** experienced flash floods that caused local streams to rise about 6 1/2 yards in a matter of hours, per the *Associated Press*.
 - On August 1, the *Associated Press* reported that the **Chiri Mountains** in **South Korea** received more than 5 1/2 inches of rain in an hour.
 - The *Washington Post* reported on August 9 that July was the hottest month the world has seen since reliable record-keeping began more than a century ago, per a newly completed analysis by the **National Oceanic and Atmospheric Association**.
 - *Reuters* reported on August 10, 1998 that a massive crest of water swept through **Hubei** toward the provincial capital of **Wuhan** in **China**. The Xinhua news agency said the crest had pushed water levels at Honghu up to 113.6 feet (34.63 meters), far past the previous record of 102.3 feet (31.17 meters) set in 1954. "These are the worst floods this river has ever had," said an official in Qiqihaer city, referring to the Nen river near the border with **Mongolia**.
 - The *Associated Press* reported on September 4, 1998 that the **Sudanese** radio issued a flood alert Friday for citizens living along the **Nile**, saying the upper reaches of the river had risen to unprecedented levels, saying, "Water volumes in the upper parts of the river branches, particularly the Blue Nile, have reached levels that exceeded all previously recorded levels."
 - The *Associated Press* reported on September 5, 1998 that Manama, **Bahrain** experienced its hottest summer month this century, with mean August highs of 106 F. The previous mean high record was 103 set in August 1962 and August 1996.
 - The *Times Foreign News* reported on September 10, 1998 that **Bangladesh** battled yesterday to save **Dhaka**, the capital, from being submerged by floodwaters after two months of unremitting rain - the longest natural disaster in a country ceaselessly battered by calamities. Two-thirds of the nation is under water.
 - On September 15, 1998, *Reuters* reported that 849 corpses had been washed away in a sea of mud from floods in **Mexico** in the deadliest natural disaster to date, worse than previous hurricane and earthquake deaths. In **Motozintla** up to two feet of rain was received in just a few days.
 - On September 23, 1998, *USA Today* reported that a record number of 55 tornadoes had touched down in **Minnesota**. The old record was 47 in '93 and '97, per the **National Weather Service**.
 - The **National Oceanic and Atmospheric Administration** reported that September was the hottest September on record, per the *Associated Press* on October 14, 1998. The average worldwide temperature for the month was 59.98 degrees Fahrenheit, 1.08 degree above the 1880-1997 global average of 58.9 degrees.
 - On October 12, 1998, the *Associated Press* reported that forest fires in **Israel** were the largest series of fires in the country's history.
 - Brasilia, **Brazil**, received rain three times heavier than usual, per the *Associated Press* on October 14, 1998.
 - By October 15, 1998, typhoons had gone through the alphabet, with typhoon **Zeb**, starting over with typhoon **Alex**.
 - Hurricane Mitch in October, 1998 reportedly dropped two meters of rain in some areas, swelling every river in **Honduras** and northwestern **Nicaragua** to ten times their normal size and washing out the bridges.
 - The previous record breaking El Nino is going to continue, per *CNN* on October 27, 1998, continuing to battle with La Nina for dominance in the tropical Pacific Oceans.
 - *Associated Press* reported on October 28, 1998 that **Berlin** has received more rain in 24 hours than is normal for

the entire month of October.

- **British Experts** say 1998 is the warmest year on record so far, per *Reuters* on October 28, 1998, with the first six months of 1998 the warmest first half of a year globally since records began. The global average temperature in 1877/78, when there was a powerful El Nino, was 0.5 degree below today's average.
- The *Associated Press* reported on November 7, 1998 that record floods and landslides in the **Ukraine** caused **Emergency Situations Minister Valery Kalchenko** to state "There has never been such a disaster in Ukraine before."
- A new winter storm warning system patterned after hurricane and tornado alerts may become the nationwide standard, per the *Associated Press* on November 9, 1998. The system was devised by a **National Weather Service** meteorologist in **Cheyenne**, Wyoming.
- *MSNBC* reported on November 11, 1998 that gusts up to 95 mph, unprecedented gusts in some areas such as **Wisconsin**, accompanied a snowstorm across the midwest, toppling semi-trailers.
- 1998 was the most destructive hurricane season on record, but worse might be on the way, per *MSNBC* on November 25, 1998. **Colorado State University** professor **William Gray**, a scientist who's been issuing hurricane forecasts for 15 years, noted that more hurricanes were reported from 1995 to 1998 than in any other four-year period of hurricane activity this century.
- The *Associated Press* reported on November 27, 1998 that violent weather cost the world a record \$89 billion during 1998, more money than was lost from weather-related disasters in all of the 1980s, per the **Worldwatch Institute** and **Munich Re**, the world's largest reinsurer.
- The *Associated Press* stated on November 29, 1998 that the last four years have been the most active ever for hurricanes in the **Atlantic** basin. With the gradual fading of the latest cycle of the El Nino phenomenon, which tends to suppress Atlantic hurricanes, 1998 saw nine hurricanes and five tropical storms. In September, there were four hurricanes at once - **Georges, Ivan, Jeanne, and Karl**.
- The *Arkansas Nashville News* reported on December 3, 1998 that apple trees and tomatoes are still bearing fruit and vegetable gardens are still producing, a first in the memory of all. The *Georgia Alpharetta News* reported on December 7, 1998 that the spring blooming plant azaleas are blooming, along with dandelions and morning glories, confusing unseasonable warmth with spring.
- The journal *Nature* reported on December 9, 1998 that **Dian J. Gaffen** and NOAA colleague **Rebecca J. Ross** reported humidity on the increase during heat waves, boosting the temperature past the apparent temperature threshold. They cited a 67 % increase since 1949 in the number of days that exceeded the threshold for daily average apparent temperature, a 78 % increase in nighttime temperatures being above the threshold, and a 88 % increase in the number of heat waves where the threshold level was exceeded for at least three days.
- The *New York Times* reported on December 18, 1998 that the surface temperature during 1998 was the highest since measurements began in the mid 19th century, per the **World Meteorological Organization**, an agency of the **United Nations**. Seven of the 10 warmest years on record have occurred since 1990. New monthly high-temperature records were set in each of the 18 consecutive months ending in October 1998.
- The *Associated Press* reported that the 1998 **Atlantic** hurricane season was one of the deadliest on record, with 14 named storms - Alex, Bonnie, Charley, Daniel, Earl, Frances, Georges, Hermine, Ivan, Jeanne, Karl, Lisa, Mitch, and Nicole.
- On May 28, 1999 the *Associated Press* reported that the earth registered a record annual average temperature of 14.57 degrees Celsius (58.23 degrees Fahrenheit) in 1998, with a cost from storm damage up a staggering 53 percent to \$92 billion for 1998, and 300 million people were driven from their homes by storms and flooding.
- *Discovery News* reported on June 25, 1999 that natural disasters in 1998 were the worst ever recorded, according to a report issued in Geneva on Thursday by the **International Federation of the Red Cross and Red Crescent Societies**. Hurricane Mitch was responsible for at least 10,000 fatalities in the **Caribbean and Central America**. El Nino caused numerous fires, droughts and floods, and claimed 21,000 lives.

Below is the Weather Watch extreme weather map as 1998 progressed.



Troubled Times



1999

- The *Associated Press* reported on March 9, 1999 that **Seattle** suffered 90 days of rain in the four months leading up to March, “a record for soggy gloom in a region usually boastful about its wet climate.”
- *Discovery Communications* reported on March 16, 1999 that floods sweeping through villages in **Ecuador** were caused by an unusually wet season, with rainfall 50% above normal, per the country's **Institute of Meteorology and Hydrology**.
- The *Kuensel*, the newspaper of Bhutan in the Himalayas, reported on March 29, 1999 that 30,000 acres of forest have been destroyed in **Bhutan** by wildfires, caused by an unusually dry season.
- A severe drought in **China**, where 19 million residents lack drinking water and more than 21.5 million acres (8.7 million hectares) of farmland are parched, is following some of the worst flooding on record, per *Discovery Communications* reported on March 31, 1999.
- On April 2, 1999, the **Great Plains** in the US experienced a blizzard with thunder, lightning, and hail, and dropping up to 18 inches of snow just a week after temperatures had soared into the 70's, per *Discovery Communications*.
- *Associated Press* noted on April 13, 1999 that **Florida** was again experiencing brush fires, with 1,400 acres recently destroyed and fire near the Okefenokee Swamp.
- Hail the size of cantaloupes dropped on **Sydney** on April 14, 1999, per the *Associated Press*. 20,000 homes and 60,000 cars were damaged. Some homes had interior damage when hail smashed through roof tiles and ceiling plaster. Lightning sparked 25 electrical fires, and 15,000 homes lost power during the storms, which came without warning.
- *Associated Press* reported on April 18, 1999 that drought has become widespread in the Sunbelt, with wildlife drinking from chlorinated swimming pools and retirees watering their cacti. 1,650 wildfires have burned more than 35,000 acres in **Florida**, 4,000 acres in **Tennessee** and **North Carolina**, and 78,000 acres in **Nebraska** in that states second largest wildfire.
- *MSNBC* reported on May 4, 1999 that the tornadoes, almost a mile wide, that tore through **Oklahoma** and Kansas on May 3, 1999 were of historic proportions, per Joseph Golden, senior meteorologist at the **National Oceanic and Atmospheric Administration**, due to the number, size, and ferocity - all of which occurred at once. 76 tornadoes were recorded.
- *NBC* reported on May 4, 1999 that the **US** is experiencing 5 times more major weather disasters a year than in the early 1980's.
- The *Media Advisory* reported on May 10, 1999 that disasters are costing the **US** an average of \$1 billion per week since 1989, per a study by the **National Science Foundation**.
- *USA Today* reported on May 11, 1999 that the fastest wind speed ever recorded, 318 mph, was recorded during a tornado May 3 in the suburbs of **Oklahoma City**.
- *NBC* reported on May 14, 1999 that a record snowfall of 1,124 inches, almost 94 feet, occurred on **Mount Baker** in Washington.
- *Earth Changes TV* reported on May 17, 1999 an all-time record number of tornadoes in January in the US - 169 - and that **Chicago** had more snow in a single day - 18 inches - than ever before, and that the lower 48 states in the US had the warmest winter ever.
- On May 4, 1999, *NBC News* reported that **Mount Baker** in Washington state recorded a record snowfall in a single season - 1,124 inches or almost 94 feet since November 1, 1998. If the snow had not compacted, it would cover a 10-story building.
- An all-time record number of tornadoes - 169 in January - were recorded in the United States, per *NBC News* on May 4, 1999.
- *NBC News* reported on May 4, 1999 that on January 4, 1999, **Chicago** received more snow on a single day than

- ever before, an all-time record for the city - at 18 inches.
- **Alaska** received its longest and most widespread cold wave during the winter of 1998-99, per *NBC News* on May 4, 1999.
 - *Associated Press* reported on May 18, 1999 that Independence, **Iowa**, experienced a record 10 feet above flood stated on the Wapsipinicon River, where only the tops of street signs remained visible.
 - On May 19, 1999, the *Associated Press* reported that disasters cost the **United States** more than \$500 billion in the past 20 years, and rising, a record cost.
 - **Tel Aviv, Israel** experienced the highest temperature recorded during a day at 113 degrees Fahrenheit in the shade at the Allenby Bridge leading from the West Bank to Jordan, per *Earth Alert* on May 25, 1999. Schools were instructed to cancel field trips.
 - *ABC News* reported on May 26, 1999 that flooding near the hundred-year high occurred simultaneously in **Germany, Switzerland, and Austria** occurred.
 - The **American Institute of Physics** reported on May 26, 1999 that since 1861 the average global temperature rose 0.57 C and the warmest years of the century have all occurred in the 1990's - 1990, 1995, and 1997.
 - On June 2, 1999 the *Associated Press* reported simultaneous fires burning in the Southeast and Southwest United States, in **Florida, Georgia, Arizona, Utah, Nevada, and California**.
 - New highs up and down the **East Coast** of the United States were reported on June 8, 1999 by the *Associated Press*, with record breaking humid heat across several states. Schools closed and brownouts occurred.
 - The *BBC* reported on June 14, 1999 that two **South Pacific** islands had disappeared beneath the waves as climate change raised the sea levels to new heights.
 - *Weer News* quoted meteorologist **Szilard Aigner** of **Hungary** on June 20, 1999 reporting that a single day's rainfall equalled the usual amount over a month.
 - *Discovery News* reported on June 21, 1999 that torrential rainfall in China's eastern province of **Zhejiang** forced the power station on the **Qiangtang** river to suspect operations and halted shipping on the river.
 - *Associated Press* reported on June 22, 1999 that the annual rainfall in **West Texas** had already doubled that of the year before, and is carrying off top soil and crops.
 - *Discovery News* reported on June 29, 1999 that baseball sized hail fell in **Nebraska** and **Kansas**, shattering windows and battering cars.
 - *Discovery News* reported on July 1, 1999 that record rains were recorded in **Kathmandu** during nine days of the worst storms to pound the city in 30 years. Meteorologists reported that a record four inches of rain fell during one 24-hour period. The city of **Siddharthanagar** in west **Nepal** received a record nine inches of rain during a 24-hour period on June 13, 1999.
 - Rainfall in **Japan** turned deadly, per *Discovery News* on June 30, 1999, 6,000 people were evacuated from their homes in **Kobe**, 1,600 homes were destroyed as 12 inches of rain fell on Nagasaki in days, 106 landslides occurred on the island of **Kyushu** which received 24 inches of rain during the storm. In **Hiroshima** 854 landslides and almost 8,000 flooded homes occurred, with roads cutting off access to 100 locations.
 - *Weer News* reported on July 3, 1999 that Forest fires raged on the outskirts of Moscow and in several other regions as the death toll from Russia's biggest heatwave of the century rose to more than 140. In the **Moscow** region, some 126 fires engulfed 145 hectares (362 acres) of forest and bush while 200 hectares (500 acres) were burning near **Saint Petersburg**, the ministry of emergency situations said.
 - On July 7, 1999, the *Heat Is Online* site reported that most of earth's glaciers are retreating at accelerating rates. The biggest glacier in the **Peruvian Andes** 20 years ago was retreating by 14 feet a year, but today is retreating by 99 feet a year. Surface waters of the eastern **Pacific** have also warmed, by 2 degrees in the last 20 years, independent of El Nino events.

The *Associated Press* reported on July 7, 1999 that the mercury hit record highs of 100 at **Newark, N.J.**, and **Harrisburg, Pa.**, 101 in **New York City**, 102 in **Raleigh-Durham, N.C.**, and 103 at **Washington's Reagan National Airport**.

- *Discovery Online* reported on July 9, 1999 that hailstones the size of small eggs pounded **Moscow** during a violent storm.
- Flash Floods hit **Las Vegas** in the worst flooding in 15 years, triggered by an unexpected storm which dumped four to six inches of rain an hour on the city, per *Discovery Online* on July 9, 1999. The floodwaters swamped the floors of buildings, including the Las Vegas Convention Center. Las Vegas usually receives only 4.1 inches (104 mm) of rainfall annually.

- *Reuters* reported on July 9, 1999 that a heat wave was gripping much of Eastern Europe and was well into its second month, spawning forest fires and parching crops. Officials in the **Ukraine** reported that the temperatures were the highest since records began in 1882, and these high readings prevailed for 35 days.
- *Discovery Online* reported on August 2, 1999 that **Beijing** was experiencing the city's worst heat wave of the century. Temperatures reached 108 degrees Fahrenheit.
- On August 3, 1999 the *Associated Press* reported that **Mount Baker** in the state of Washington had a record snowfall of 95 feet last winter, setting a seasonal snowfall record for the United States and the world, per the National Climatic Data Center. The previous record was set at Mount Rainier, Washington., in the winter of 1971-1972.
- The **Sudan** experienced the seasonal rains a month earlier than usual, according to *Discovery Online* on August 4, 1999, with flash flooding already experienced in **Khartoum** and the **Nile** spilling its banks.
- *Discovery Online* reported on August 5, 1999 that **Cambodia** has received 30 percent more rainfall than normal.
- On the other side of the world, the drought affecting the eastern half of the US has created crop shortages from **Virginia** to **New England**, with some states experiencing the driest 12-month period ever recorded, per *Discovery Online* on August 5, 1999.
- *CNN* reported on August 5, 1999 that **New York City** suffered its hottest July on record.
- On August 6, 1999 *CNN* also reported that the drought affecting the northeast US is now the worst on record for farmers in some northeast states, and one of the worst in other parts of the country. President Clinton stated at a news conference, "In **Maryland, Delaware, New Jersey** and **Rhode Island**, this is the worst drought for farmers ever recorded."
- **Sweden** was fighting forest fires south of **Stockholm**, during an unusually hot and dry summer, according to *Discovery Online* on August 6, 1999.
- *Discovery Online* reported that 80 wildfires ignited by lightning were burning in the state of **Nevada** and east of **Reno** on August 6, 1999.
- On August 7, 1999 the *USGS* reported that the drought affecting the east coast of the US had moved inland to the states of **Indiana** and **Ohio**, under the effects of a heat wave and low precipitation.
- While many parts of **Iran** are suffering from a near-record drought, flash floods tore through the capital of **Azerbaijan**, per *Discovery Online* on August 10, 1999.
- On August 13, 1999 *Discovery Online* reported that two weeks of torrential rains in Africa's southern **Chad** have destroyed 5,000 homes, displaced 130,000 residents, inundated 400,000 acres (162,000 hectares) of farmland, and drowned 1,257 head of livestock. The rains are expected to continue throughout August.
- Incessant torrential rains in the **Sudan** caused flooding that left 50,000 homeless, destroyed more than 10,000 homes, and drowned 1,000 head of livestock, per *Discovery Online* on August 16, 1999. Many Sudanese states along the **Nile** have been affected by the floods.
- *Discovery Online* reported on August 16, 1999 that more than 100 people were killed and 120,000 others left stranded when flash floods triggered by pounding rains battered **Hunan Province** in central **China**. Officials said that the torrential rain destroyed at least 30,000 homes. About 44,000 people were relocated to shelters over the weekend. China has experienced devastating flooding throughout the monsoon season this year and 5.5 million people have been left homeless by the disasters.
- On August 16, 1999 *Discovery Online* reported that 13 campers were swept away when the **Kurokura River** in Japan's Kanagawa Prefecture burst its banks. Recent violent downpours have swelled numerous rivers in the **Tokyo, Kanagawa** and **Saitama** prefectures causing similar accidents.
- Southern **Brazil** experienced one of the worst cold waves in recent history, per *Discovery Online* on August 17, 1999, with temperatures in several communities of the southern state of **Rio Grande do Sul** dropped to 14 degrees Fahrenheit and the region experienced snowfall for the first time since 1994.
- The *Associated Press* reported on August 17, 1999 that while much of the nation has been suffering through unusually hot weather, the **Puget Sound** area has been having its coolest summer since 1956, the **National Weather Service** reported.
- China's **Shanxi** province has been struck by a severe drought for the third year in a row, says its state media. Nearly 4 million acres of crops have been affected, with a half million acres destroyed per *Discovery Online* on August 19, 1999. More than 3 million people and 460,000 livestock animals are experiencing a shortage of drinking water, the **Xinhua News Agency** reports.
- *NBC News* reported on Sept 16, 1999 that Hurricane Floyd evacuations became the largest peacetime evacuation in history.

- *NBC News* reported on Sept 17, 1999 that the average number of hurricanes per year has increased from 5 to 7 and storms have become larger and more powerful. The enormously powerful Hurricane Floyd, the size of Texas and one of the biggest storms to hit the US coastline, is 4 times as large as Andrew which devastated Florida in 1992.
- *Weather.COM* reported on Sept 17, 1999 that Hurricane Floyd dropped record amounts of rain from **North Carolina** to **Massachusetts**, and that Hurricane Gert was the 4th Category 4 hurricane of the season.
- NASA and JPL reported on Sept 22, 1999 that unusually hot and cold oceans have created the corridors for more storms. Satellites showed tropical storms Harvey in the **Gulf of Mexico** and Hillary in the Pacific, along with Hurricane Gert near **Bermuda**, as they spun over the ocean on September 20.
- Cyclone 05B, which devastated the Indian province of **Orissa**, is being termed a supercyclone, with winds up to 250 km/h, one of the strongest for the region within the century and causing the worst flooding in the region for the century, per *News World* on Nov 2, 1999. Discovery News reported on Nov 8, 1999 that Cyclone 05B caused more than 275,000 homes to be blown away, leaving 1.5 million people homeless.
- The *Weather Channel* reported on Nov 16, 1999 that Hurricane Lenny's west to east path through the **Caribbean** and late date in the season were unprecedented. Hurricane Lenny was termed a Category 4 hurricane, packing winds of 110 mph, per *Discovery News* on Nov 18, 1999.
- A rare snowfall blanketed **Spain**, blocking dozens of mountain passes, per *Discovery News* on Nov 23, 1999.
- Flooding in the **Congo** is now being considered the flood of the century, per *Discovery News* on Dec 1, 1999. Seasonal rains began earlier than usual.
- **Kuwait** experienced a 35-year low, per *Discovery News* on Dec 2, 1999, with temperatures threatening to drop below zero. Kuwait's winter temperatures usually average 64 degrees Fahrenheit.
- The *BBC* reported on Dec 8, 1999 that 1999 will be the warmest year ever recorded in the **UK**.
- *Space.COM* reported on Dec 2, 1999 that satellite data shows the **Arctic** icecap is dramatically shrinking.
- **Fairbanks** set a record on Dec 22, 1999 with a temperature of 46 degrees Fahrenheit, some 40 degrees above normal.
- *CNN* reported on Dec 17, 1999 that the polar wind appears to have shifted its course.
- *CNN* reported on Dec 28, 1999 that a second wave of storms swept through Europe with high winds, affecting **Germany, Switzerland, Spain, Belgium** and **France** and causing flooding in many rivers such as the **Seine**. Dubbed Hurricane Lothar, the storm was considered unprecedented.

Below is the Weather Watch extreme weather map as 1999 progressed.



Troubled Times



Up-Tick

July 1998's *National Geographic* reports:

Annual disasters are \$50 billion per year now versus \$25 billion 10 years ago. Inflation only accounts for \$10 billion of the \$25 billion increase. ... "I can show you charts that indicate the costs of natural disasters are going up almost exponentially" says Chris Tucker, senior scientific adviser for **Emergency Preparedness Canada**.

The *Washington Post* reported on July 2, 1998 that:

In 1984, the number of storms with hail at least three-quarters of an inch in size was 2,749 at the **National Weather Service**. In 1996, there were 9,636 reports.

From 1991 to 1996, the number of severe thunderstorms reported grew from 6,504 to 9,175.



Troubled Times



Warming Trend

Earth warmest in 1,000 years?

Researchers cite evidence for records in 1998 and entire '90s.

MSNBC Staff and Wire Reports, March 4, 1999

The federal government has already declared 1998 the warmest year since temperature recordings began 120 years ago, but several researchers say other evidence "strongly suggests" 1998 was the warmest of the last 1,000 years. Using tree rings, ice cores and other indicators, the scientists also dubbed the 1990s the warmest decade of the millennium.

University of Massachusetts press release on the new climate study

NBC's Robert Hager reports on brutal winter weather slamming New England. Their study, published in the upcoming journal *Geophysical Research Letters*, adds to a growing body of evidence that the global climate has been getting steadily warmer especially the last half of the 20th century. "Temperatures in the latter half of the 20th century were unprecedented," Raymond Bradley of the University of Massachusetts said in a statement describing the research.

Proxy Indicators Used

Because human climate records only go back a few hundred years, and do not cover the whole globe, the team at the University of Massachusetts and the University of Arizona looked at measurements other scientists have made of tree rings, ice cores and other "proxy indicators" that record climate variations.

An MSNBC special section: Climate Change

They heavily relied on three sets of 1,000-year-long tree-ring records from North America, as well as tree rings from northern Scandinavia, northern Russia, Tasmania, Argentina, Morocco and France. The ice cores they studied came from Greenland and the Andes mountains in South America. "The cooling trend of over 900 years (before 1000 AD) was dramatically reversed in less than a century. The abruptness of the recent warming is key, and it is a potential cause for concern."

Michael Mann

University of Massachusetts researcher "As you go back farther in time, the data become sketchier," Michael Mann of the University of Massachusetts said. "One can't quite pin things down as well, but our results do reveal that significant changes have occurred, and temperatures in the latter 20th century have been exceptionally warm compared to the preceding 900 years."

Cold Trend Earlier

He said the records were not perfect, but complete enough to show "startling revelations." "If temperatures change slowly, society and the environment have time to adjust," he said. "The slow, moderate, long-term cooling trend that we found (in the 900 years prior to 1000 AD) makes the abrupt warming of the late 20th-century even more dramatic. "The cooling trend of over 900 years was dramatically reversed in less than a century. The abruptness of the recent warming is key, and it is a potential cause for concern." In January NASA and the National Oceanic and Atmospheric Administration said they had established that 1998 was the warmest year on record. But their finding was based on records only going back 120 years. The American Geophysical Union, which

publishes Geophysical Research Letters, has called for continued efforts to curb human-made carbon emissions to stop global warming.



Troubled Times



Simultaneous

During the latter half of 1999, simultaneous extreme weather problems were noted.

Simultaneous Flooding

On August 23, 1999 northern Iran had been hit by several disastrous floods along the Caspian Sea since July. Rain drenched New York City, flooding major highways and subways on August 27, 1999, closing subway lines due to danger of flooding. On August 27, 1999, hurricane Dennis threatened South Carolina. Flooding in Russia's North Caucasus region left 796 homes under water in the Russian Republic of Adyge on August 30, 1999.

On Sept 2, 1999 heavy rains in Uganda killed many by triggering landslides. Landslides killed many in India's far eastern state of Manipur on Sept 2, 1999. Tropical Storm Wendy moved across the South China Sea towards Hong Kong on Sept 3, 1999. Rain fell nonstop for 30 hours in Mogadishu, the capitol of Somalia, bringing public transportation to a stop on Sept 7, 1999. Eastern Bulgaria had 3 days of incessant rain, causing floods which destroyed 7 bridges and created a state of emergency in Pomorie on the Black Sea coast on Sept 7, 1999. Rains caused drowning deaths in South Korea as up to 14 inches of rain were dumped on Seoul on Sept 13, 1999. Torrential rains in Ghana left 9,000 people homeless as 2,000 homes were flooded, and burst 3 dams on Sept 14, 1999. Hail and rain pounded Spain on Sept 15, 1999. Rainfall in Central America caused 3,400 families to leave their homes in Mexico City and 10,000 people to evacuate Veracruz on Sept 20, 1999. On Sept 21, 1999 torrential rains flooded 14,800 acres of farmland in Oaxaca. Honduras evacuated 100,000 people from the northern coast because of heavy rains that had caused flooding, destroying 9 bridges on Sept 24, 1999. India's eastern state of West Bengal was pounded by torrential rains on Sept 27, 1999, paralyzing Calcutta and isolating 100,000 residents.

The Usumacinta, Carrizal and Samaria rivers in the state of Tabasco overflowed their banks in renewed flooding and rainfall along the flood-ravaged southern Gulf of Mexico on Oct 21, 1999. 40,000 people were left homeless in 30 communities in the Congo due to unusually heavy rainfall on Oct 25, 1999. Heavy rain caused landslides in Nepal on Oct 25, 1999. South Africa was hit by floods as 4 inches of rain fell within 10 hours on Oct 27, 1999. Heavy storms left hundreds homeless in Cambodia on Oct 26, 1999. An emergency release of water from the Penoles Dam caused new floods in the flood ravaged state of Tabasco on Oct 26, 1999.

Southeastern Ethiopia experienced 10 days of pounding rains that burst the banks of the Wabe Shebelle River and inundated more than 10,000 acres of crops, leaving 79,000 homeless on Nov 1, 1999. Flooding had also occurred in the area the month before. On Nov 9, 1999 floods swept southern Greece. Heavy rains caused mudslides 500 miles north of Lima, Peru on Nov 9, 1999. Northern Italy was swept by floods and high tides on Nov 8, 1999 with a tide 46 inches above average in Venice. Vietnam experienced the worst flooding in 100 years on Nov 8, 1999. A week of cloudbursts dumped 3 feet of water on the country. The floodwaters were 5 feet deep along coastal Highway 1, and 500,000 homes were flooded. Incessant rains in Columbia over several weeks left 355,000 homeless on Nov 4, 1999. On Nov 18, 1999 an entire 328 foot hillside slid into the Rio Negro river in Brazil's port of Manaus after days of heavy rain. 3 days of torrential rains in New Zealand's south island caused evacuation in Alexandra and Roxburgh along the Clutha River on Nov 19, 1999.

Vietnam experienced renewed flooding on Dec 6, 1999, where 100,000 had to be evacuated. The worsening Vietnam floods have resulted in a million people being made homeless. The rains dumped nearly 6 feet of water in some areas of the country. Flood evacuations in Thailand occurred as storms lashed the country, forcing many

residents to flee in boats on Dec 7, 1999. On Dec 7, 1999 350 homes were destroyed on Yemeni Island by torrential rains. On Dec 17, 1999 the Bosnian capitol of Sarajevo was at a standstill due to snowfall and flooding rivers which destroyed bridges and homes. On Dec 20, 1999 thousands were dead in Venezuela floods, the worst natural disaster in a century. On Dec 17, 1999 pounding rains in southern Italy resulted in floods and mudslides. Torrential rains flooded Jakarta, Indonesia on Dec 16, 1999, causing the Bangalon River to burst its banks. On Dec 23, 1999 mudslides and flooding in South Africa left 1,000 homeless. On Dec 27, 1999 flooding in Lade Chad in Nigeria left 25,000 homeless, the worst flooding in 30 years. On Dec 28, 1999 incessant rains caused flooding in the Philippine island of Mindanao, leveling 3 bridges.

Simultaneous Storms

On August 27, 1999 hurricane Dennis threatened South Carolina. Tropical Storm Cindy ravaged West Africa on August 31, 1999. Tropical Storm Wendy moved across the South China Sea towards Hong Kong on Sept 3, 1999. Hurricane Greg lashed the west coast of Mexico and Tropical Storm Dennis moved ashore into North Carolina on Sept 7, 1999. Wenzhou, on the eastern coast of China, experienced its worst storm of the century when Tropical Storm Wendy passed through the coastal city on Sept 8, 1999. Hurricane Floyd, a Category 4 hurricane threatening to become a Category 5, was closely followed by Tropical Storm Gert on Sept 13, 1999. Tropical Storm York, the strongest storm in 16 years, battered Hong Kong on Sept 16, 1999. Hurricane Floyd had grown to a Category 5 hurricane by Sept 18, 1999. Typhoon York dropped nearly 7 inches of rain within 24 hours on Guangzhou in China, stranding 10,000 residents with flooding on Sept 20, 1999. Typhoon Bart aimed toward Taiwan and Japan on Sept 21, 1999 while Tropical Depression Ann moved through the East China Sea. Tropical Storm Cam slammed into Hong Kong on Sept 27, 1999, the second storm to lash Hong Kong in 2 weeks. On Sept 27, 1999 Typhoon Bart slammed western Japan, flooding homes up to their rooftops.

Tropical Storm Dan headed for the Luzon Straits in the Phillipines on Oct 4, 1999. On Nov 16, 1999 Hurricane Lenny's path through the Caribbean and late date in the season were unprecedented. A ferocious winter storm swept vast areas of Europe and England on Dec 6, 1999, moving through Denmark, Germany, Sweden and Poland with winds reaching 112 mph, the most damaging storm to hit Denmark in a century. Tides rose 16 feet above normal levels in the North Sea. Cyclones John and Ilse were announced on Dec 13, 1999, an early start of the cyclone season in the southern hemisphere which normally begins around January 1st. On Dec 28, 1999 a second wave of storms swept through Europe with high winds, affecting Germany, Switzerland, Spain, Belgium and France and causing flooding in many rivers such as the Seine. Dubbed Hurricane Lothar, the storm was considered unprecedented.

Simultaneous Drought

An entrenched drought on the East Coast of the US threatened to be the worst in memory if it continued past August 31, 1999. Seven states had issued drought advisories. Three-quarters of all streams and rivers had registered record or near record lows. More than 18 wildfires swept across 6 western US states - Idaho, Montana, Nevada, Utah, Washington, and California - scorching more than 200,000 acres of land on August 31, 1999. On Sept 1, 1999 the Manitoba region of Canada had wildfires out of control in blazes burning over 15,000 acres. 2,000 brush fires burned out of control across Brazil, more than half of a 10,000 acre rainforest sanctuary destroyed on Sept 1, 1999. The fires were fueled by an ongoing drought. Freak snow and rain in Chili ended the countries worst drought in a century on Sept 9, 1999, bringing the annual rainfall to above average for the year. Dust storms caused collisions on Oregon highways in Washington State on Sept 28, 1999, putting visibility at near zero near Portland. On Oct 11, 1999 Israel received its first rainfall in 7 months of drought. The Sea of Galilee had fallen to its lowest level in at least a century due to lack of rain. On October 29, 1999 Kuwait was hit by a freak hailstorm, rare in this desert nation which has not had significant rainfall in nearly a year. On Nov 22, 1999 Israel was experiencing its worst drought in nearly a century.



Troubled Times



Climate Shift

[CNN](#) on Hurricanes, July 19, 2001

Weather researchers think the evidence is now clear: A major shift in the climate has taken place that has brought about an increase in major hurricanes. The period of heightened activity could last for decades, and unleash a catastrophic storm on the United States, according to meteorologists. Since the climate shift began six years ago, when the Atlantic Ocean began looking like a hurricane freeway, the number of hurricanes that have formed in the Atlantic basin has doubled, said scientists at the U.S. Hurricane Research Division. The number of major hurricanes, which produce winds in excess of 110 miles an hour, has also increased during the period by 250 percent, they said. The increased activity will continue for the next ten to 40 years, which could mean trouble for the United States.

Since the climate shift began six years ago, when the Atlantic Ocean began looking like a hurricane freeway, the number of hurricanes that have formed in the Atlantic basin has doubled, said scientists at the U.S. Hurricane Research Division. The number of major hurricanes, which produce winds in excess of 110 miles an hour, has also increased during the period by 250 percent, they said. The increased activity will continue for the next ten to 40 years, which could mean trouble for the United States. "Most seasons we are going to get a hurricane hit the U.S. and probably more than half the time we will have a major hurricane hitting the U.S. as well," said hurricane meteorologist Chris Landsea.

Already hurricanes have increased in number and intensity. Since 1995, the Caribbean has been pounded by deadly storms like Mitch, Lenny, Marilyn, Luis and Georges. Spared the brunt of the storms, the United States has simply been lucky so far, the scientists warned. "With the increased number, if it starts pounding the U.S., as we feel like it is going to happen, there's bound to be a major city impacted and we could be talking about a real disaster of epic proportions on our hands," said hurricane meteorologist Stanly Goldenberg. A hurricane causing \$50 billion in damage and hundreds to thousands of deaths is quite possible in the next ten or 20 years, according to Landsea. "I think at this point the U.S. is so developed and there's so many people along the coast that just about anywhere is a major disaster ready to happen."

Scientists say the Earth's climate goes through cycles, but they don't know why. Right now, Atlantic water temperatures are slightly warmer than usual, by just half a degree Fahrenheit. And in general, there is less wind shear. The current conditions resemble those in 1900 when Galveston, Texas, was nearly obliterated; And the time between the 1920s and 1960s when hurricanes repeatedly slammed into Florida and the disastrous Yankee Clipper hit New York. The period from 1965 to 1995 saw opposite conditions, cooler water and more wind shear, neither of which fosters hurricane development. Times have changed. From Florida to New England, everywhere along the East Coast is now at increased risk of a major hurricane, the scientists said.



Troubled Times



Hurricane

Experts Expect Stormy Hurricane Season

Sun Sentinel, Apr 3, 2002

Because the tropical Atlantic has fallen into a new era of intense hurricane activity, the upcoming season should be active, last well into October and pose a serious threat to the United States, government scientists warned on Tuesday. While they did not predict an exact number of hurricanes, researchers for the National Oceanic and Atmospheric Administration say the climatic ingredients are in place for intense hurricane development. But their greater concern is there could be three or more major hurricanes, with winds greater than 110 mph, or about double the normal number of intense storms. While major hurricanes account for only 20 percent of the landfalls, they cause about 80 percent of the damage. "There are these incredible robust signals," said Stanley Goldberg, a NOAA research meteorologist, at the National Hurricane Conference in Orlando. ... Goldberg said [the seven years since 1995 have seen the most intense hurricane activity in history, including 94 named storms, 58 hurricanes and 27 major hurricanes.](#) ... "All of the sudden, in 1995 things changed," Goldberg said.



Troubled Times



During 2001

Climatic Catastrophes Strike as US freezes, Australia Fries

Dec 28, 2001

Countries around the world were trying to cope with climatic catastrophe, as a big freeze chilled Europe and North America, Brazil recovered from torrential rains, bushfires blazed in an Australian heatwave and Saudis prayed for rain to slake an ongoing drought. North America was plunged into the throes of an intense cold front that buried Buffalo, New York in almost one metre (three feet) of snow and saw temperatures slide well below freezing. In Europe, the chill has claimed hundreds of lives. A winter coldsnap in Poland has claimed 178 lives since October, according to local police, a figure well above the 112 killed by the cold last year. Authorities in Bulgaria declared a state of emergency in the northeast of the country after the worst snowfalls in 30 years, where three more people died in the intense cold, according to the civil defense department. And in Russia, no stranger to bitter cold, Moscow authorities said three people had died in sub-zero temperatures, bringing to 250 the number to perish in the city's icy chill this winter.

But in the southern hemisphere, bush fires raged around Sydney as Australia sweltered in a heat wave, with temperatures set to soar over the weekend to 40 degrees Celsius (104 degrees Fahrenheit). Authorities were bracing for a tough time battling the flames Sunday, when forecasters are predicting low humidity, temperatures of 39 degrees Celsius and fresh to strong northeasterly winds - the worst cocktail for bushfires. Although the fires are believed to have been started deliberately, the roasting temperatures are making it harder for the authorities to bring them under control. In Brazil, massive mudslides triggered by torrential rain in Rio de Janeiro state engulfed homes, claiming at least 50 lives and leaving nearly 2,000 people homeless. Over 30 people were still missing, rescue authorities said. The area around the former imperial capital of Petropolis, about 80 kilometers (50 miles) from Rio de Janeiro, was worst hit in the landslides after torrential rains struck for 16 hours earlier in the week.

In Saudi Arabia, however, thousands of people filled the country's Mosques to pray for rain, as the imam of Mecca's Grand Mosque blamed the drought on sin and corruption. Saudis have twice already offered up rain prayers this year, but with little apparent success. Most northern and central regions have remained dry and southwest areas of the kingdom have had only little rain. Meteorologists have forecast below average rainfall, which if accurate will result in further drought next year. The spate of extreme weather across the globe comes as many scientists warn that populations will have to get used to increasing incidences of drought, searing heat, icy cold and flooding, which they say characterize the so-called greenhouse-effect. Climatologists have warned that a trend of increasing global temperatures is not the only phenomenon from the effect they blame on a build-up of greenhouse gasses - those given off by burning fossil fuels - accumulating in the earth's atmosphere. Scientists have warned that along with rising temperatures, the world will see established weather patterns disturbed and higher frequency of extreme weather.

Countries which usually fairly modest temperatures, such as Germany, have reported intense lows, with the southern region of Bavaria seeing temperatures of almost minus 46 degrees Celsius (minus 51 Fahrenheit) on Monday. The chill is the lowest recorded in the region since 1870, while hurricane-force winds hit mountainous regions and a heavy blanket of snow forced many motorists to stay at home, according to weather services. Temperatures in Moscow dropped to minus 20 degrees Celsius (minus four

Fahrenheit) this month, where heavy snowfalls have been recorded. But, as in Poland, most of those reported to have been killed by the bitter weather are homeless people who fall asleep in the open after drinking large quantities of alcohol, according to officials. In Warsaw, where temperatures have fallen well below freezing, police say they pick up about 200 people from the streets every day and take them to detoxification centres. In Bulgaria, which is one of Europe's poorest countries and where the heaviest snowfall in decades has covered the country, two men were found dead in their unheated homes.



Troubled Times



Tornado Count

[Record Number of Tornadoes Stuns Weather Observers](#)

Unknown Country, 18-Oct-2001

The 83 tornadoes that have hit the United States so far this month set a record for the first half of October, according to the National Weather Service. Last week alone 59 twisters struck. "Despite the record number of tornadoes, there were no fatalities and only twelve minor injuries during this most recent outbreak," says Dan McCarthy, a meteorologist at the federal Storm Prediction Center. Last week tornadoes struck Alabama, Arkansas, Florida, Louisiana, Mississippi, Missouri, Nebraska, Oklahoma and Texas. "Just in those five days, there were more than double the average number of October tornadoes," says McCarthy. "The average number of tornadoes in October since the National Weather Service began tracking tornadoes in 1950 is 29 events. The previous record for the first half of any October was set in 1998, when 47 confirmed tornadoes hit various parts of the nation." 83 in just the first two weeks of this October is obviously a phenomenal weather event. "October is not usually this active but, since we are only halfway through this month, we are watching for any further changes in atmospheric systems that could continue this active trend," McCarthy says. The most tornadoes for any October occurred in 1997, with 100 reported. The second highest number was 86, set in October 1998.

Last weekend, tornadoes hit the Alabama, Florida and Texas, destroying homes and knocking out power. In Florida's Panhandle, about 20,400 households lost power Saturday during a storm that overturned cars and downed power lines. In Alabama a 63-year-old man was killed when a large limb from a tree hit his windshield. Two businesses were destroyed and several houses were demolished. In Texas, seven homes were destroyed and 68 were damaged about 60 miles northwest of Dallas. Two people were reported injured. Mobile home parks were special targets. In Hondo, Texas, tornadoes virtually destroyed two mobile home parks, while doing relatively minor damage elsewhere in the community. "It just seemed to hop from trailer park to trailer park," one resident said. One of the mobile homes that was hit in Texas was picked up by the wind before it was demolished. A man fled the structure moments before the twister struck. According to emergency management director Leigh Anne Ryals, "The frame was bent and portions of it were wrapped around a telephone pole, and the rest was strung out through the woods."



Troubled Times



Heatwave

The far north town of Iqaluit in Canada is experiencing extraordinary heat. On July 15, the temperature reached an all-time record of 75F. This is similar to what happened in the town/city of Tiksi, Russia on July 29th when the temperature there reached 80-F (26.4 C). Tiksi is located 350 miles north of the Arctic circle. Temperatures in that region are running 30 degrees higher than normal. About two or three weeks ago I mentioned a story in *The Independent* (from

London) reporting that the Arctic ice cap has melted by some 40% to 50%. The Independent didn't mention a time frame. Well, here's a time frame mentioned in *The Seattle Times* of July 15: "The Arctic ice field has shrunk by 40 to 50 percent the last few decades and lost 10 percent of its thickness, studies show." The story also contains evidence of a warming climate in Alaska, including this: "Gunter Weller, director of the Center for Global Change and Arctic System Research at the University of Alaska in Fairbanks, said mean temperatures in the state have increased 5 degrees in the summer and 10 degrees in the winter over the last 30 years." Also: "In many areas of interior Alaska, the permafrost has warmed to within 1 degree of freezing." The *The Seattle Times* article is called **Far North Record Heatwave - Summer 2001**

Offered by [Mike](#).



Troubled Times



Established

This from The Times of London: *Many birds are laying eggs two to three weeks early. Some species have stopped migrating, and others are leaving later than normal. Meteorologists have declared this "the strangest autumn in history." Scientists believe that in some areas this year's winter may be forgotten altogether, with trees such as oaks keeping their leaves through to spring. In Ireland, bluebells are now flowering two weeks earlier than a decade ago. Hedgehogs are hibernating for just a few weeks instead of months.* In addition: In Scotland, the number of annual skiers has dropped by almost 50% over the last decade. Trees are producing new leaves almost a month earlier than in 1970.

Offered by [Mike](#).



Troubled Times



Ocean Turbulence

New York Times, April 19, 1988

British scientists are making waves by measuring them. Their unsettling conclusion: at least part of the Atlantic Ocean is getting rougher. Researchers at the Government's Institute of Oceanographic Sciences have found that wave heights in the northeast Atlantic have increased more than 20 percent since the 1960's. Their analysis, published in a recent issue of *Nature*, a British science journal, raises the possibility of some significant climatic phenomenon in the Atlantic. However, it is not clear from the British wave measurements whether a similar long-term trend is occurring in the rest of the ocean. Britain is a leader in wave-gauging techniques and in its commitment to the practice. Dr. Ledolph Baer, a wave specialist for the United States National Oceanographic and Atmospheric Administration, said American records generally do not have the longevity or reliability to determine long-term trends. "This is an intriguing observation by researchers who are well known in the field," Dr. Baer said. "It could be very significant. And it's certainly worth looking into and trying to think about."

The *Nature* article, by David Carter and Laurence Draper, marine physicists at the Institute of Oceanographic Sciences, offers no definitive explanation for the bigger waves. "We really haven't been able to solve this mystery yet," Mr. Carter said. "We're hoping someone else can come up with the answer." The British scientists' study cites wave research done by others in the north Atlantic and the North Sea, but it relies mainly on the institute's wave ship, which is permanently moored off Land's End, the southwesternmost finger of the British mainland. The vessel has been measuring wave heights every three hours, with only a few interruptions, since 1962. It is believed to be the longest running wave recording effort at a single site in the world. Since the 1960's, the biggest waves have risen to 57 feet, from 39 feet. More significantly, the average wave height over the same period has increased to 9 feet, from 7.4 feet. Because their measurements have been made over more than two decades, the scientists are confident their findings reflect a long-term trend that cannot be explained away by seasonal or yearly variations.

Other scientific studies, though not based on as extensive on-site measurement, have also found wave sizes growing in the north Atlantic and in the North Sea. Atmospheric depressions, the main wave producers, often extend more than a thousand miles over the ocean and can generate waves hundreds of miles from where winds are gusting. Accordingly, the British scientists do not believe their measurements are an isolated fluke. At the least, they say, the higher-wave trend is probably similar over a sizable slice of the north Atlantic. "It must be a fairly large-scale phenomenon because the generating mechanism for waves is fairly large scale," Mr. Carter said. ... There is some anecdotal support for the institute's conclusion that the Atlantic is getting rougher. Des Hannigan, a commercial fisherman off the Cornish coast from 1966 to 1980, recalls that the waves did seem to get bigger during the late 1970's. "And my last year out there was the roughest," said Mr. Hannigan, who is now the nature correspondent for the *Cornishman*, a weekly newspaper in Penzance. "Just talking about it makes me seasick."



Troubled Times



Food Shortages

The following article was posted on the alt.future.millennium Usenet by Geri Guidetti, arkinst@concentric.net.

Grain Supply Update

June 20, 1996

© 1996, Geri Guidetti

Though we certainly could use some good news from the Nations grain states, today is definitely not going to be the day. As you may have suspected from national news stories this week, the torrential rains and flooding that have saturated the Central and Eastern U.S. have, indeed, had a negative impact on an already precarious grain supply situation.

The *Wall Street Journal* for June 19th reports that grain traders are retreating from their rosier forecasts for a 9.8 billion bushel corn crop. Many are figuring on 9.1 million, while **Conrad Leslie**, a Chicago agricultural forecaster, is even less optimistic. He sees the young corn crops potential as low as 8.5 billion bushels. This is an important estimate because that level would *not* allow rebuilding of this countrys corn stockpiles which are already at 48-year lows -- no cushion, maybe even a shortage, for all of next year. As noted in earlier updates, corn reserves will be down to a two-week supply just before this years harvest. Beyond direct human consumption, corn is the most important feed grain for poultry and livestock.

Unfortunately for those farmers who decided to switch to growing soybeans after spring-planted corn was rained upon and chilled a few weeks ago, and for the Nations regular soybean farmers, this crop, too, is having bad times due to weather. In fact, soybean farmers have yet to plant 17 million waterlogged acres in IL, IN, OH and other soybean growing areas. Thats a lot of soybeans. The wet fields have not only limited access by heavy farm equipment, but have also become covered with rain-loving weeds. Now herbicides must be sprayed before the planting can be done. Both soybean and corn futures contracts have risen in price once again.

Wheat crop harvests which were nearly on schedule in the Southeastern U.S., were slowed due to the same heavy thunderstorms. Here, too, field access by harvesting equipment was thwarted and weeds have begun to get the upper hand. The **USDA** rates the Nations winter wheat crop for the week ending June 15th as "mostly fair to poor condition." Spring wheat condition was good to fair.

Rice condition for the five major, rice-producing states was "mostly good to fair." Rice fields in two of these important producing states, California and Louisiana, were infested with water weevils and had to be treated with pesticides.

Despite spotty thunderstorms in parts of the drought-stricken Southwest, water supplies remain very low in many areas. An example: in Colorado City, Texas, reservoir holdings are at only 5 percent of normal conservation level at Lake J.B. Thomas and 64 percent at Champion Creek.

Unfortunately, if you look at precipitation and temperature prediction data through June 29th, the Southwest drought will continue, even worsen, while above normal precipitation will plague the saturated Central and Eastern states. Not a pretty picture, to be sure. At this point, it is difficult to imagine a scenario that would *not* result in higher food prices across the board well into 1997. It is likely that U.S. demand for diminishing supplies will decrease somewhat as a result of what the **USDA** fondly calls "market forces," but, with so many animal and human mouths to feed, it can only decrease so far. Perhaps this is the year the U.S. becomes just one more bidder on the tightening, international

grain market. A mere hint of things to come?

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Geri Guidetti, The Ark Institute



Troubled Times



Obvious

Post-No.: earthprophecy-1/1998-03-03/18 (digest-marker)

Recent CNN figures - In **Florida**, due to the rain/etc, 20% of the strawberry crop is lost already, 30% of winter vegetable crop gone! And it is estimated, if these storms continue, that up to 60% of potato and cabbage crops may suffer. In **California**, lettuce and almonds are taking big hits. (*Associated Press*) Between El Nino/La Nina, and what is being predicted in regards to the Y2K millennium (computer) bug, there may very well be worldwide disaster in food production, processing and distribution.



Troubled Times



Devastating

Infobeat reported on June 19, 1998:

State inspectors assessed the damage Friday from a drought estimated to have killed half of **Georgia's** corn crop and that threatens to turn cotton stalks to twigs, wiping out the state's No. 1 cash crop. "The corn is the most damaged of all our crops right now," said a spokesman for state **Agriculture Commissioner Tommy Irvin**. Irvin has asked **Gov. Zell Miller** to seek federal disaster designation for the farm losses, and state agents must assess crop damage before the request can be sent to Washington. "We've been keeping a close eye on this situation in south Georgia, and it looks like there is no relief in sight from the hot, dry weather that's literally killing our crops in the field," Irvin said.



Troubled Times



El Nino

El Nino spreads food crisis to 37 countries - FAO

By Jude Webber, *Reuters*

A near-record number of countries face food supply emergencies this year, mainly because of the effects of the El Nino weather phenomenon, the U.N.'s Food and Agriculture Organization (FAO) warned Wednesday. "Although cereal production in developing countries in 1997 is estimated to have declined only slightly from the good level of the previous year, the number of countries facing food emergencies has increased to 37 compared to 31 toward the end of last year, mainly due to the effects of El Nino," FAO said.

The Rome-based agency, in a January/February Food Outlook, painted a grim picture of food supply woes stretching through Africa, Asia, Latin America, parts of the former Soviet Union and including Iraq and North Korea. It listed a catalogue of crises, sparked by the searing droughts in some areas and punishing floods and erratic rains in others that are associated with the El Nino weather phenomenon. Africa, it noted, remained the continent with the most acute food shortages as a result of a combination of adverse weather and civil strife, which has hit countries such as Liberia and Sierra Leone where food production was starting to pick up. El Nino, which is expected to peak before mid-year and then dissipate, arises from a warm weather current in the Pacific off South America. But even when it has gone, problems may continue with the forecast arrival of La Nina, a cold weather event.

FAO said torrential rains associated with El Nino in Somalia in late October last year caused serious floods and deaths that, coming disastrously on the back of a succession of poor harvests, was a further big blow to its fragile food security. Kenya has suffered floods and an outbreak of Rift Valley Fever that has reportedly spread from livestock to humans and has resulted in human deaths and substantial animal losses. Crop losses as a result of El Nino-provoked weather conditions hit Uganda, Tanzania and Ethiopia in east Africa. A delay in the onset of the rainy season and then floods compounded persistent food insecurity in Burundi and problems in Rwanda in central Africa. "The outlook for the 1998 first season crops, now being harvested, is uncertain," FAO said. Opposite fears of an El Nino-inspired drought had hit southern Africa, it added. FAO said malnutrition remained a serious problem in Iraq, despite the easing of the food supply with oil-for-food sales allowed by the United Nations.

Turning to Asia, FAO said drought, coupled with a destructive typhoon coming on top of two years of floods, had caused a "most desperate food situation" in North Korea. Aid workers say millions may soon starve to death there. El Nino-related droughts had also hit cereal production in China, the Philippines, Thailand, Papua New Guinea and the Pacific Rim. In Indonesia, more than nearly one million acres of paddy were reportedly damaged by heat and drought, cutting forecast 1997 production by 1.3 million tons.

A dry spell sparked by El Nino severely affected first season cereal crops in El Salvador, Guatemala, Honduras, Nicaragua and Panama. Persistent bad weather hurt second season crops too, failing to ease the situation. FAO said the food supply situation remained tight in Haiti, where cereal production is substantially lower after a prolonged drought, and torrential rains have hit the Dominican Republic. Among former Soviet states, food aid was still needed for refugees and the elderly in Tajikistan, as well as in Armenia, Azerbaijan and Georgia, the report added.



Troubled Times



Speculate

Discovery Communications, 1998

Traces of the biggest storms remain embedded, like calling cards, in certain lake and ocean sediments, and their chemical signature can be found deep within caves. Dan Schrag dives around coral reefs to find out about hurricanes from the past. He's among a pioneering group of researchers that have begun to look back in time through a brand-new discipline aptly called paleotempestology. A geochemist from Harvard University, Schrag has an enviable field duty: he collects cores of tropical coral reefs and examines their delicate skeletons for hurricane clues. He's not searching for direct evidence of storms, rather he analyzes the chemistry of corals for clues about the salinity and temperature of the water. "Corals grow like trees," he says, "leaving bands in their skeletons like the growth rings in trees. The warmer the water, the faster they grow and the more spread out their bands."

Schrag uses corals to reconstruct the fluctuations of El Niño and La Niña events in the tropics. El Niño, the periodic warming of the tropical Pacific Ocean, suppresses hurricanes in the Atlantic and boosts them in other parts of the world. La Niña, the cooling of the tropical Pacific, intensifies hurricanes in the Atlantic. Since the links between hurricane activity and El Niño are well known, charting the comings and goings of this periodic ocean warming and cooling gives researchers an indirect measure of the hurricane activity back in time. It might also resolve the question of whether global climate change is pushing El Niño and La Niña to extremes, possibly fueling processes that create monster storms. "Since 1976, we've had two of the largest El Niños this century," Schrag says. "We've also seen a rise in global temperatures. It would be incredible to me if they weren't connected in some way."

Other paleotempestologists are looking elsewhere for signs of hurricanes gone by. They are finding signs in the sediments of nearshore lakes and on the ocean floor. Storm surges have carried sand inland, leaving a layer of coarse sediment on the bottom of nearshore lakes. Sediment cores collected from Lake Shelby in coastal Alabama reveal that Category 4 and 5 hurricanes struck the area about every 600 years. Strong hurricanes also stir up sediments in shallow ocean water, creating little land slides on the ocean floor. By looking for these stirred up sediment layers, researchers can reconstruct hurricane activity over long periods of the geologic past.

In Bermuda, researchers have looked to cave stalagmites as keepers of storm records. The rain that falls in the cloud banks surrounding a hurricane has special chemical properties, a signature, that leaves its mark when hurricane rain flushes straight through the water table and into underground cave deposits. By analyzing and dating sections of stalagmites, scientists can tally the number of hurricanes that have swept through. For all their innovative pursuit of ancient whopper storms, the scientists caution that such direct storm records can only be analyzed so far. "It's a space-time problem," says Schrag. "Even if you could reconstruct all the storms in Louisiana over a certain time period, that's only a small part of the coast. It doesn't tell you the overall frequency of storms globally."

At a time when global climate change is hotly debated and explored, this raises the question of whether human activities are somehow adding to the ingredients for creating more monster storms in the future. On the surface it seems like a simple equation: More carbon dioxide and other greenhouse gases reduce the amount of heat escaping from the atmosphere. This leads to more surface warming and a hotter ocean and atmosphere, which leads to more evaporation and more fuel for developing hurricanes. So, if CO₂ in the

atmosphere doubles, more hurricanes will emerge, and they should be more intense, right? Unfortunately, nature isn't that simple.

Computer modelers who have looked at hurricane activity, attempting to duplicate the complex interactions between the ocean and atmosphere, have gotten mixed results. Some experiments suggest that the number of tropical storms will actually decrease in a greenhouse-warmed world. MIT professor Kerry Emanuel, who studies the past, present and future of hurricanes, says it's too soon to draw conclusions from these models. Instead of tackling the big picture, Emanuel works on part of the problem: Will greenhouse-enhanced hurricanes be more intense?

Emanuel estimates that if the tropical oceans warm up 3 degrees, wind speeds of the most intense hurricanes will increase by 10 percent. This isn't trivial: An increase of 15 mph on a Category 5 hurricane could more than double the already catastrophic damages a whopper cane can dish out. So, how accurate is Emanuel's, or anyone else's, crystal ball? "There's a simple solution," Emanuel says. "If you can establish whether warmer climates had more hurricanes historically, or in the geologic past, we can say with confidence what global warming will do to hurricane activity in the future."



Troubled Times



Hypercanes

Discovery Communications, 1998

Kerry Emanuel describes the worst hurricane that could ever happen: Winds whip around its center at 500 miles an hour. Water vapor, sea spray and storm debris are catapulted into the atmosphere, punching a hole in the stratosphere 20 miles above the Earth's surface. If this meteorologist's nightmare ever made landfall, its super-gale-force winds would flatten forests and toss boulders. A 60-foot storm surge would flood nearby shores. The water vapor and debris could remain suspended high in the atmosphere for years, disrupting the climate and eating away at Earth's protective ozone layer.

Emanuel calls this a "hypercane."

Don't expect one to be brewing any time soon, however. These hurricanes from hell are a figment of Emanuel's computer models. A professor at MIT's atmosphere, oceans and climate program, Emanuel studies the physics of hurricanes, placing him among an elite group of scientists. He flies into these ferocious tropical storms and measures their physical properties. On land, he deconstructs their machinery using computer models, and digs into their geologic past -- all to understand what makes these whopper storms tick.

No one knows for sure how hurricanes get started. The ingredients for cooking one up still remain a mystery. A basic recipe: ocean water 80 degrees or warmer, super humid air, and a bunch of storms with thunderheads. Some assembly still required. "Hurricanes are accidents of nature," Emanuel says. "Even if all the conditions are right, and they often are in the tropical ocean, hurricanes don't happen by themselves. They literally need to be triggered."

Genesis is one of the great enigmas for those who study hurricanes. In 1991, Emanuel flew a research plane into some cloud clusters off the coast of Mexico to see which ones became hurricanes and which ones didn't. During those flights, Emanuel witnessed the birth of Hurricane Guillermo, a classic hurricane and one of the best studied pre-hurricanes.

Will we ever witness a hurricane as mighty as the ones depicted in Emanuel's computers? It's unlikely, even in the most dire global warming scenario, according to Emanuel. To create such a monster, parts of the ocean would have to warm up to at least 100 degrees. Only the impact of a large asteroid hitting the tropical ocean or a massive undersea volcano could generate such intense heating. It might have happened at least once in our past, though. Emanuel and his colleagues theorize that asteroid-triggered hypercanes may have contributed to massive global extinctions millions of years ago.

In our present climate, the worst possible hurricane would have winds of 200 mph. Thankfully most cyclones don't live up to that potential, although Hurricane Andrew came close. By the time it hit Florida in August 1992, it had sustained winds of 145 mph. When at sea, Andrew barely made it to hurricane status, which is defined by a wind speed of 74 mph or greater. Within a day or two, its intensity had shot up. It surprised everyone.



Troubled Times



Forecasting

I think it may be of interest to begin to learn the art of weather forecasting. Something we will all need to master to some degree after the pole shift. If anyone finds any more basics simply described on this subject please share it. Some of this would not apply immediately after a pole shift.

Offered by [Mike](#).



Troubled Times



S.E.P.P.

From: [Candace Crandall](mailto:comments@sepp.org) <comments@sepp.org>
To: jmc@steam.stanford.edu <jmc@steam.stanford.edu>
Date: 28. oktober 1997 7:11
Subject: Global Warming

The Science & Environmental Policy Project recently issued 38-page report on the global warming issue called *The Scientific Case against the Global Climate Treaty*. Written by atmospheric physicist S. Fred Singer, the report contains 14 graphs and outlines the current state of global warming research. These are facts, not hype. Several thousand copies of this report have been mailed to members of the news media. However, S.E.P.P. is now making a limited number of copies available to interested others, free of charge. One copy per address.

Those interested should contact Candace Crandall at the e-mail address above. Just say you'd like a copy of *The Scientific Case against the Global Climate Treaty* and include your name and mailing address.

Dr. S. Fred Singer is a respected member of the scientific community. He devised the currently used satellite instrument for measuring stratospheric ozone, was the first to forecast an increase in atmospheric methane due to human activities, and was principle investigator on an LDEF satellite experiment, retrieved by the space shuttle in 1990. Singer was honored by NASA in 1997 for important contributions to space research. Background information on Fred Singer and abstracts of his current scientific research are posted at the [S.E.P.P.](http://www.sepp.org) web site.



Troubled Times



Consensus

Global Warming Facts, Consensus Melt Away

From *TechCentralStation*, 1 October 2001

The exaggeration over the supposed scientific consensus on the human cause of global warming continues, even as the evidence that the underlying data supposedly proving a human connection melts away. In the July 20 *Science*, three British researchers attempted to defend the scientific integrity of the joint World Meteorological Organization and United Nation's Intergovernmental Panel on Climate Change (IPCC) Third Assessment Reports. That's hardly a surprise. After all, these scientists shared authorship for both the assessment reports' *Summary for Policymakers* and the *Technical Summary*. But their defense crossed into hyperbole when they claimed: "Individual authors can always make assumptions that may be controversial in order to explore their implications, but IPCC reports, which are subject to a long and exhaustive review process, do not have the luxury. ... The IPCC is a cautious body, and if evidence is not available in the peer-reviewed literature to support a statement, it will not make it, no matter how great the interest in that statement might be."

These authors would have people believe that the IPCC makes no controversial claims and fully accounts for the uncertainties and the unknowns. The science, in short, about climate change is settled. And as the summary for policymakers proclaimed: "There is new and stronger evidence that most of the warming observed over the last 50 years is attributable to human activities [i.e., the anthropogenic greenhouse gases, mainly carbon dioxide]." But this claim is empty. There is stronger evidence that it is not mankind that has caused global warming. It takes some hefty manipulation and illogical explanation of the data to show mankind has contributed anything at all. One key problem lies in the *Technical Summary* when it attempts to use surface temperatures and those of the troposphere, that layer of air up to 5 miles above the surface, to demonstrate human-caused warming. According to all the computer models, the troposphere temperature should warm faster than the surface air if carbon dioxide, the main greenhouse gas produced by man's burning fossil fuels, is really the culprit. It's a matter of physics. The more moist and warmer surface air is less affected by increases in CO₂ than the less moist and cooler upper air. At the higher level CO₂ both radiates energy back into space and down to the surface air to be absorbed.

The IPCC's *Technical Summary*, written in part by the three British scientists, claims that the temperature trends since 1958 for the lowest 5 miles of atmosphere and the surface are "in good agreement, ... with a warming of about 0.1 degree C per decade." To demonstrate this, a chart plotting the temperatures from 1958 to present is shown. The close agreement, if it existed, would not prove human-caused warming. As noted, the computer simulations forecast a greater warming for the troposphere than the surface. At the same time - as climate researchers know - a straight trend line as the *Technical Summary* provides is not the proper way to look at the data. This is especially so in this case as the starting point was cool, affected by Mount Agung's volcanic eruption. The end point is unusually warm, with the natural and cyclical 1997 - 98 El Nino event temporarily exaggerating warming at the end of the century. But that's not all. As climate experts know, there was a step-like shift in temperatures in the northern Pacific in 1976-77. It was strong enough to elevate global air temperatures both near the surface and in the troposphere. Climate models do not explain this abrupt Pacific climate shift.

This step-like rise argues against human-caused warming, which the computer models say should be a gradual trend over decades, not a jump within a year or two. Recent research results suggest that the 1976-

77 climate shift is not unique. Instead, the Pacific alternately warms and cools about every two decades, according to recorded tree ring changes of the past few hundred years. And climate researchers have noted that the Northern Pacific temperatures since the summer of 1998 appear to be returning to lower levels. Such measurements suggest the resulting Pacific and global climate shifts are very unlikely to be caused by man and his burning of fossil fuels. That, though, is not the only fact that the *Technical Summary's* distortion of the temperature record glosses over. The *Summary* finds a contradiction to the idea of human induced warming: "Since the beginning of the satellite record in 1979, the temperature data from both satellites and weather balloons show a warming in the global middle-to-lower troposphere at a rate of approximately 0.05 +- 0.1C per decade. The global average surface temperature has increased significantly by 0.15 +- 0.05C/decade." This, as the summary admits, is a statistically significant difference. Left unsaid is the fact that the result runs counter to the forecast that the troposphere would warm faster than the surface.

The *Summary* continues on to an outlandish claim: "By contrast, during the period 1958 to 1978, surface temperature trends were near zero, while trends for the lowest 8 km (5 miles) of the atmosphere were near 0.2 C/decade." If this were true, then those who have claimed that the climate has changed by human actions would have their strongest proof. For then the troposphere did warm and surface temperatures didn't, just as the models suggest. Only this just did not happen. The claim is an error, and no minor one for such a prestigious and important report. The troposphere showed no warming trend, or perhaps cooled slightly, during that period. The only way to produce a warming trend as large as stated for the troposphere warming is to selectively calculate a trend only between 1964 and 1983, with 1983 affected by a strong El Nino warming event. Finally, the IPCC, in making predictions of future warming as high as 0.58 degrees C per decade, said this rate "is very likely [90-99% confident] to be without precedent during at least the last 10,000 [sic] years, based on paleoclimate data." But what is the scientific evidence for that claim? The troposphere and surface records together undermine such an alarmist claim.

Perhaps the new IPCC statements contain typos or other sorts of inadvertent errors. Yet the IPCC authors in their commentary in *Science* leave the impression there were none that mattered. There is no clear signal to proclaim scientifically the large global climatic effects by man-made carbon dioxide forecast to date. The many political reports by the IPCC for the last 11 years or so have not changed that. Funding would have been better spent on searching for understanding of the climate science itself.



Troubled Times



Balloon Data

Excerpts from *The Times*, 13 August 1998

Science editor Nigel Hawkes reports on conflicting evidence over global warming

American scientists claim to have resolved one of the biggest puzzles over global warming. They say that evidence from satellites suggesting that the atmosphere is cooling, rather than warming, is the result of an error. The satellite scientists acknowledge the error, but say that it makes no difference - because they have found another error that cancels it out. They claim that, once both corrections are incorporated into the data, the atmosphere really is cooling - and so the puzzle remains. US weather satellites have measured the temperature of the atmosphere since 1979 and, in contrast to observations at ground-level, have shown a small decline. This has cast doubt over whether global warming is actually happening, and has been used by critics of the Global Climate Treaty.

But according to the new analysis, reported in *Nature*, the satellite data is wrong because it fails to take account of the slow decay of the satellites' orbits, which brings them slightly closer to Earth every year. The decline is small - three quarters of a mile a year - but it makes a significant difference, report Frank Wentz and Matthias Schabel, of Remote Sensing Systems, a company based in Santa Rosa, California. When the satellite is looking straight down, the annual change in height makes virtually no difference to the accuracy of its thermometers. They measure the temperature of the atmosphere by detecting microwave radiation emitted by oxygen atoms - the hotter the atoms, the stronger the radiation.

But when the instruments are looking sideways, towards the edge of the Earth, the angle of view matters. Small changes in that angle, caused by the decay of the orbit, can have significant effects on the temperature recorded. When allowances are made for these effects, the two scientists find that, rather than showing a decline in temperature in the lower troposphere of 0.05C per decade, the satellites show an increase of 0.07C per decade. While this is only half the rate of increase observed at the surface, it removes an anomaly in the satellite measurements, which had shown warming at some levels of the troposphere and cooling at other levels, in conflict with climatologists' expectations.

John Christy, of the University of Huntsville in Alabama, one of the scientists responsible for measuring the satellite temperatures, concedes that the decay theory is right. But he says that, on re-examining the data, he has found two other sources of error that, by coincidence, cancel out the effects of orbital decay. These errors are caused by the slow movement of the orbit, which means that the satellites do not cross the Equator at the same time every day, and by slowly accumulating instrument errors. "When these changes are also included, the result is a continued fall in satellite-measured temperatures," Simon Brown, of the Hadley Centre for Climate Prediction and Research at the Meteorological Office, said. "So there is still a contradiction between ground-based and satellite-based temperatures."

The problem is made more acute by the fact that balloon-based measurements of the temperature of the atmosphere during the same period - 1979-95 - back the satellite data, and show a small cooling. Looked at over a longer period, from the 1950s, the balloon data showed an increase, Dr Brown said.



Troubled Times



Cooling Trend

From the [NASA](#) web site:

Space-based measurements of the temperature of the Earth's lower stratosphere - a layer of the atmosphere from about 17 km to 22 km (approx 10 to 14 miles) - indicate that **December 1997 was the coldest month on record** since measurements of this type were begun in 1979.



Troubled Times



Shrinking Atmosphere

Scientists in Britain Say Sky May Be Shrinking, Outer Atmosphere Has Fallen 5 Miles

By Joby Warrick, *Washington Post* Staff Writer

September 17, 1998

Chicken Little may have been right: The sky appears to be falling, or at least shrinking. And global warming may be to blame. British scientists reported yesterday that the Earth's upper atmosphere contracted or dropped by nearly five miles in the past four decades - a decline they suggest is linked to "greenhouse gas" pollution on land. The long-term change in the Earth's outer "thermosphere" is apparently harmless, and, in fact, is barely noticeable against the daily ballooning and shrinking in the volatile outermost zone of the atmosphere. But researchers from the British Antarctic Survey said the shift appears to be another signal that human activity is profoundly influencing the planet's climate. "The closest you can get to explaining this phenomenon is greenhouse gases," said Martin Jarvis, an atmospheric research physicist in Cambridge, England, and the lead author of the report.

The findings, published in the September issue of the *Journal of Geophysical Research*, are based on 38 years of atmospheric measurements from research stations in the Falkland Islands and Antarctica. The data record changes in the thermosphere - the outer layer of the atmosphere that extends to roughly 300 miles above Earth -- by tracking the rise and fall of the ionosphere, a region of free electrons within the thermosphere that reflects certain kinds of high-frequency radio waves. The hottest and windiest part of the atmosphere, the thermosphere roasts by day as the sun's energy pushes temperatures as high as 800 degrees. The heating causes the thermosphere to expand by scores of miles and then contract at night. The amount of expansion varies according to seasonal cycles as well as long-term changes in the Earth's magnetism and in solar intensity.

But even after accounting for those fluctuations, Jarvis and his colleagues discovered that the thermosphere was in a long-term retreat. Compared with measurements from the late 1950s, the zone had "shrunk" by about 5 miles - an indication that the thermosphere is cooling. What does this cooling and shrinking have to do with global warming? Plenty, Jarvis said. Cooling in the upper atmosphere is one of the widely predicted consequences of global warming. In computer simulations of the so-called greenhouse effect, carbon dioxide and other gases trap heat near the Earth's surface while causing the upper atmosphere to cool, and therefore contract. Jarvis called the finding "not a shattering result, but another indicator that things are changing." Earlier, less ambitious studies in Europe also detected a contraction in the thermosphere, while a report earlier this month by two Indian scientists was unable to confirm the trend. The British scientist stressed, though, that the five-mile drop in altitude "is not in itself harmful to people." "It is however, another warning signal about what damage to the atmosphere can be caused by human impact," he said.

Jarvis conceded there could be alternative explanations for the trend, including a long-term change in the sun's intensity. So far, he said, scientists have not detected a shift in solar patterns large enough to account for the change in the thermosphere. Other scientists described the finding as interesting but said more research was needed to rule out other possible causes. "It does seem to be a noisy signal that we're trying to read," said Arthur Thomas, an atmospheric physicist and senior scientist at the National Center for Atmospheric Research in Boulder, Colo. "People at different locations have found different kinds of effects. We're still not 100 percent clear that we've pinned down the science."



Troubled Times



Ozone Hole

NOAA/NCEP Release: 98-178

Antarctic Ozone Depletion Sets New Size Record

NASA and NOAA satellites show that the Antarctic ozone thinning covers the largest expanse of territory since the depletion developed in the early 1980s. The measurements were obtained this year between mid-August and early October using the Total Ozone Mapping Spectrometer (TOMS) instrument aboard NASA's Earth Probe (TOMS-EP) satellite and the Solar Backscatter Ultraviolet Instrument (SBUV) aboard the NOAA-14 satellite. "This is the largest Antarctic ozone hole we've ever observed, and it's nearly the deepest," said Dr. Richard McPeters, Principal Investigator for Earth Probe TOMS.

Preliminary data from the satellites show that this year's ozone depletion reached a record size of 10.5 million square miles (27.3 million square kilometers) on Sept. 19, 1998. The previous record of 10.0 million square miles was set on Sept. 7, 1996. The ozone level fell to 90 Dobson units on Sept. 30, 1998. This nearly equals the lowest value ever recorded of 88 Dobson Units seen on Sept. 28, 1994, over Antarctica. **Scientists are not concerned that the hole might be growing because they know it is a direct result of unusually cold stratospheric temperatures, though they do not know why it is colder this year. ...**



Troubled Times



Trapped Heat

From: NASAnews@hq.nasa.gov <NASAnews@hq.nasa.gov>

Date: 08. april 1998 21:12

Subject: **Increasing Greenhouse Gases May Be Worsening Arctic Ozone Depletion and May Delay Ozone Recovery**

David E. Steitz; Headquarters, Washington, DC April 8, 1998; (Phone: 202/358-1730)

Lynn Chandler; Goddard Space Flight Center, Greenbelt, MD; (Phone: 301/286-9016)

Release: 98-58

In late 1997, larger levels of ozone depletion were observed over the Arctic than in any previous year on record. Now, using climate models, a team of scientists reports why this may be related to greenhouse gases, according to a paper published in the April 9 issue of Nature.

The study suggests the increase in greenhouse gas emissions is one possible cause of the observed trends in Arctic ozone losses and that this may delay recovery of the ozone layer. The research team, consisting of researchers from NASA's Goddard Institute for Space Studies (GISS) and Columbia University, New York, investigated the response of ozone to projected future emissions of greenhouse gases and ozone-depleting halogens over time, using the GISS climate model. This is the first time ever that the interaction between ozone chemistry and the gradual buildup of greenhouse gases has been studied in a climate model.

"Buildup of greenhouse gases leads to global warming at the Earth's surface, but cools the stratosphere. Since ozone chemistry is very sensitive to temperature, this cooling results in more ozone depletion in the polar regions," said Dr. Drew Shindell of Columbia University, the lead author of the study. NASA will continue research in this area to determine if these models are accurate.

The "greenhouse effect" is defined as the warming of climate that results when the atmosphere traps heat radiating from Earth toward space. Certain gases in the atmosphere - such as water vapor, carbon dioxide, nitrous oxides and chlorofluorocarbons - act like glass in a greenhouse, allowing sunlight to pass into the "greenhouse," but blocking Earth's heat from escaping into space.

Ozone, a molecule made up of three atoms of oxygen, comprises a thin layer of the upper atmosphere which absorbs harmful ultraviolet radiation from the Sun and protects people, animals and plants from too much ultraviolet sunlight.

Distribution and concentration of stratospheric ozone are influenced in two ways by human-driven activity in addition to natural, seasonal variations. Of first importance is the direct impact of industrially produced chlorofluorocarbons. Although ozone levels around the globe are expected to continue to decline over the next several years, NASA is now detecting decreasing growth rates of ozone-depleting compounds in the upper part of the atmosphere, indicating that international treaties to protect the ozone layer are working. The second influence on stratospheric ozone levels is the indirect impact of "greenhouse gases" on atmospheric temperatures. Ozone destruction is quite sensitive to temperature increases in the atmosphere.

Since upper atmospheric temperatures in the Northern Hemisphere during winter and spring generally are warmer than those in the Southern Hemisphere, ozone depletion over the Arctic has been much smaller than over the Antarctic during the 1980s and early 1990s. The Arctic stratosphere, however, gradually has

cooled over the past few decades resulting in very large ozone depletion, especially during 1996-97.

In the simulations performed by Shindell and his team, temperature and wind changes, induced by increasing greenhouse gases, clearly alter the dynamics of the atmosphere. According to this model, as the abundance of greenhouse gases gradually increases, the frequency of Northern Hemisphere sudden stratospheric warming is reduced, leading to significantly colder lower stratospheric temperatures. If proven correct, this dynamic effect would add to the greenhouse cooling of the stratosphere.

"Results suggest that the combination of these two cooling effects causes dramatically increased ozone depletion so that ozone loss in the Arctic by the year 2020 roughly is double what it would be without greenhouse gas increases," said Dr. David Rind of GISS, a co-author of the paper. Increasing greenhouse gases therefore may be at least partially responsible for the very large Arctic ozone losses in recent winters.

The authors caution, however, that though the model predicts a general trend towards increasing ozone depletion, the year-to-year variability is quite large, especially in the Arctic. For example, several years in the late 1990s and early 2000s show very little Arctic ozone depletion, while others show record losses. In fact, the 1997-98 winter that just occurred was characterized by significantly less ozone loss than the preceding six winters. A factor that should be considered, however, is the consistency in model predictions, i.e. whether the same results can be reproduced by other models.

According to this model, the severity and duration of the Antarctic ozone depletion also may increase due to greenhouse gas-induced stratospheric cooling over the coming decades. However, ozone in the Antarctic is already so depleted that any additional losses may be relatively small, Rind added.

The research was conducted by scientists at GISS, The Center for Climate Systems Research, Columbia University, and Science Systems and Applications Inc., New York. The GISS research is part of NASA's Earth Science Enterprise, a long-term coordinated research effort to study the Earth as a global system.



Troubled Times



Snow Cover

NASA's Terra Satellite Confirms a less [Snowy Winter](#)

NASA-GSFC News Release, July 29, 2000

If you think there was less snow on the ground this spring than usual in parts of the Midwest and western United States, Terra satellite data agree with you. Early results from the Moderate Resolution Imaging Spectroradiometer (MODIS) aboard NASA's Terra satellite clearly observed a lot less snow cover than normal. Dr. Dorothy K. Hall will present results from MODIS at the International Geoscience and Remote Sensing Symposium (IGARSS) today in Hawaii. "The winter of 1999-2000 brought relatively little snow cover to parts of the North American continent, and the snow melted early as compared to normal years. Low snow cover can result in drier soil conditions, affect crop production, and lead to wildfires," Hall noted. Using data from MODIS and other satellites, scientists can determine the extent of spring snowcover which can be a harbinger of flood or drought conditions.

The MODIS composite snowcover map, derived from data taken over an 8-day period between March 5 and 12, depicts the snow line into Canada, in the provinces of Saskatchewan and Manitoba. Only scattered snowcover existed over parts of the northern United States, though the mountains were still snow covered. According to the National Oceanic and Atmospheric Administration's National Environmental Satellite, Data, and Information Service (NOAA/NESDIS) the average March snow line would normally extend from New England through the Midwest including southern Wisconsin, to southern portions of North Dakota. The snow line then normally continues farther south in the western states including the Rocky Mountains and west into the Cascades and the Sierras. NOAA/NESDIS has been producing weekly snow maps of the Northern Hemisphere land surfaces since 1966 using visible-band satellite imagery. Because snow has such a high reflectivity compared to other surfaces on Earth, snow covered areas appear much brighter in satellite imagery than most other surface types. However, Dr. Hall noted that the key difference between the MODIS-produced snow maps and the images produced by NOAA/NESDIS is that "MODIS has a higher resolution and an improved ability to discriminate between snow and clouds."



Troubled Times



Riddle

Unraveling Two Riddles Of Global Warming

Washington Post, Feb. 21, 2000

Of all the troublesome questions in the study of global warming and potential climate change, none is more forbidding, or more profound, than these:

- Is the observed increase in the worldwide average temperature - around 1.1 degrees Fahrenheit over the past 100 years--genuinely abnormal, or is it well within the bounds of natural variability?
- And is the apparent super-warming of the past two decades - about 0.5 degree - actually a mistake, in view of the fact that upper-air temperature measurements over the same 20 years show no warming at all?

Both questions got closer to definitive answers last week. In the Feb. 17 issue of the journal *Nature*, Henry N. Pollack of the University of Michigan and others took on the issue of multicentury climate change, which has an aggravating built-in difficulty: Accurate measurements of surface temperatures have been taken only since the end of the 19th century.

So to discern how hot it was before 1850, scientists have to rely on what are called "proxy" indicators of temperature change: width of tree rings, chemical makeup of ice cores, type and amount of pollen in sediments, growth rates of coral and the like. Pollack's group used a different and completely independent proxy indicator: temperature at various depths in 616 boreholes on six continents. These holes, typically 2 to 4 inches wide and a quarter of a mile deep, originally were drilled for geological research, oil exploration or other reasons. Now they provide a handy means of taking the Earth's past temperature. Heat moves two ways through the ground. One is from the surface down, As thermal energy from the planet's sun- and air-warmed crust seeps downward through rock. The other is from the bottom up, as heat from the Earth's molten innards travels upward. By lowering thermometers into these holes, and subtracting the bottom-up signal from the readings, scientists can find evidence of past temperature shifts as they propagate down through the rock. It's a slow process; in 1,000 years, heat pulses penetrate only about 1,600 feet.

"By looking at these temperature disturbances," Pollack said, "we can reconstruct surface conditions" from centuries past by combining results from many sites. In all, 479 of the 616 holes showed average warming of 1.8 degrees F since 1500 (a bit higher than what other proxy measures indicate), with 80 percent of that since 1800, and more than half since 1900. Interestingly, the new five-century findings - which confirm a smaller study the group published in 1998 - suggest that natural temperature variation may be larger than previously thought. Any warming detected during the 16th, 17th and 18th centuries was almost certainly not caused by human society. It is likely to be the product of natural processes - perhaps a recovery from the "Little Ice Age," a cold snap that gripped Europe from 1400 to 1850. Atmospheric carbon dioxide levels did not rise appreciably until the early 19th century. As for the ultra-hot 1980s and '90s, surface measurements from thousands of land-based stations and ships show an increase of about half a degree. But two other, independent sources - weather balloon instruments and satellites that measure the temperature of the lower atmosphere - show no net warming during that period.

This contradiction suggests that either the surface measurements or the satellite/balloon figures are simply

wrong. Moreover, it casts doubt on the computerized global climate simulations, or "models," that are used to assess the threat of warming. In general, the models predict that enhanced greenhouse warming should heat the air in the lower troposphere - the layer of the atmosphere closest to the Earth, and the one sampled by balloons and satellite readings. That disparity became so vexing that the National Research Council (NRC) appointed an expert panel to consider the issue. Its report, issued last month, indicates that maybe both trends are right: Something different is happening at the Earth's surface from what is going on only a few thousand feet above.

In the Feb. 18 issue of *Science*, several of the NRC panel members confirmed and expanded that idea. Physicist Benjamin D. Santer of Lawrence Livermore National Laboratory and colleagues conducted a new analysis showing that "it really is plausible to have temperature trend differences between the surface and the troposphere in the '80s and '90s," as Santer noted. His group compensated for the fact that the surface data are not globally complete, as are the satellite data. Then, they factored into the climate models certain events peculiar to that period--such as the effects of stratospheric ozone depletion and the umbrella-like aerosol clouds blown aloft by volcanoes El Chichon and Mount Pinatubo. With those adjustments, "the predicted change in the troposphere is very much in line with observations," Santer said. "The discrepancy is quite small." In another paper in *Science*, research meteorologist Dian J. Gaffen of the National Oceanic and Atmospheric Administration and co-authors used a highly respected data set from weather balloons to show that "there has been a greater warming at the surface than aloft in the tropics" since 1979, when the first satellite measurements began. But when they extended their analysis to the 1960s and '70s, "we find that the discrepancy doesn't hold farther back in time," Gaffen said. The results indicate that either "we shouldn't make too much of differences over short periods" such as two decades, or "there may have been some different things going on in the atmosphere since 1979," such as volcano and ozone effects, Gaffen said.



Troubled Times



Pace of Change

[Faster Rate of Global Warming, NOAA reports](#)

NOAA News Release, Feb. 22, 2000

NOAA Researchers have found evidence that indicates that the rate of global warming is accelerating and that in the past 25 years it achieved the rate previously predicted for the 21st century (2 degrees C per century). Writing in the March 1 issue of *Geophysical Research Letters*, Thomas R. Karl, director of NOAA's National Climatic Data Center in Asheville, N.C., and his colleagues analyze recent temperature data. They focus particularly on the years 1997 and 1998, during which a string of 16 consecutive months saw record high global mean average temperatures. This, Karl notes, was unprecedented since instruments began systematically recording temperature in the 19th century. During much of 1998, records set just the previous year were broken. Karl and colleagues conclude that there is only a small chance that the string of record high temperatures in 1997-1998 was simply an unusual event, rather than a change point, the start of a new and faster ongoing trend. Since completing the research, the data for 1999 has been compiled. The researchers found that 1999 was the fifth warmest year on record, although as a La Niña year it would normally be cooler. Outside the band 20 degrees north latitude and 20 degrees south latitude, 1999 was the second warmest year of the 20th century, just behind 1998, an El Niño year.

The researchers at NCDC analyzed data from land based and satellite instruments for their study. Using sophisticated mathematical and probabilistic models in a series of experiments they concluded that the rate of warming since 1976 is clearly greater than the average rate over the late 19th and 20th centuries. To account for the string of record-setting temperatures, the average rate of global temperature increase since 1976 would have to be three degrees Celsius (five degrees Fahrenheit) per century. In its Second Assessment Report in 1995, the Intergovernmental Panel on Climate Change projected the rate of warming for the 21st century to be between 1.0 and 3.5 degrees C. Karl and his colleagues have already observed over the past 25 years a rate that is between 2 and 3 degrees C per century. The IPCC study used a "business as usual" scenario with regard to emissions of carbon dioxide and other atmospheric constituents. Karl and his colleagues aren't ready to say for certain that the rate of global warming has suddenly increased, because they know unusual events sometimes happen. Given the steady increase in atmospheric greenhouse gases and their decades-to-centuries atmospheric residence time, he urges that studies be conducted to better understand how society can minimize the risks of climate change and prepare for more, and perhaps even more rapid changes to come.



Troubled Times



Warming Trend

U.S. has Warmest Jan.-March on record

ENN World Wire News, April 19, 2000

The United States this year had its warmest-ever January-to-March period since authorities began keeping records 106 years ago, government scientists said Tuesday. The latest data also showed temperatures from June 1999 to March 2000 were the warmest on record, increasing the likelihood of more severe weather in the future, according to the National Oceanic and Atmospheric Administration (NOAA). "Our climate is warming at a faster rate than ever before recorded," said NOAA Administrator James Baker. "Small changes in global temperatures can lead to more extreme weather events, including droughts, floods and hurricanes," he warned. NOAA's findings coincided with a draft report just released by the world's leading climate researchers, who concluded that greenhouse gases caused by human activity have resulted in global warming. U.S. temperatures from January to March averaged 41.7 degrees Fahrenheit, 1 degree warmer than the previous record set in 1990, NOAA said. During the period, every state in the continental United States was warmer than its long-term average. During the three-month period, drought hit the Midwest and Mississippi Valley in particular, the agency said. NOAA's latest spring and summer forecast shows that most of the United States will have warmer-than-normal temperatures, with some Midwest and Great Plains states continuing to have drier-than-normal conditions.

July Temperatures Cooler in Much of U.S., [NOAA Reports](#),

But Hot Temperatures and Drought Persist in the South and West;

January Through July Warmest on Record

NOAA News Release, August 17, 2000

The average July 2000 surface temperature in the United States was above normal but far from a record, according to statistics calculated by NOAA's scientists working from the world's largest statistical weather database at NOAA's National Climatic Data Center in Asheville, N.C. The average July temperature based on preliminary reports was 74.78 F, which is 0.47 F warmer than the 106-year average, making it the 38th warmest July since records began in 1895. Conditions were generally cooler and wetter than normal in the Northeast and Midwest regions, while warmer and drier than normal conditions continued to prevail across many states in the Deep South and western U.S. Pennsylvania and West Virginia experienced their coolest July on record and seven other Eastern states were much cooler than normal.

It was the 7th warmest July on record for Utah and warmer than normal in 15 other states. Although heavy precipitation fell in portions of the Northeast and Great Plains in July, below normal rains and hot conditions exacerbated drought conditions in portions of the West, South and Southeast. Thirty-one percent of the U.S. experienced severe to extreme drought conditions including portions of Texas where July 2000 was the driest July in the 106-year period of record. The above normal temperatures in combination with below-normal precipitation in southern and western states have intensified drought conditions and led to the worst wildfire season in 50 years for many western states. Nevada and Arizona experienced their second driest July and six other states (Louisiana, Arkansas, Mississippi, Alabama, Tennessee, and Utah) received much below average precipitation.

Although the average July temperature was far from record-breaking in the U.S., the abnormally warm conditions observed earlier this year made the January-July 2000 average temperature (54.85 F) the

warmest such seven-month period on record. Every state in the contiguous U.S., except South Carolina, Maine, and Vermont was warmer than normal. Above average temperatures have been most persistent in the western half of the U.S. This was the warmest January-July on record for New Mexico, Texas and Utah. It was the second warmest for Colorado, Nevada, and Wyoming. Fifteen states throughout the South and West were much drier than normal including Florida which experienced it's second driest year-to-date period. Conversely, wetter than normal conditions prevailed in 17 states, primarily in the Northeast and Midwest. For the nation, January - July 2000 was the 32nd driest such period since 1895.

Average global surface temperatures were also warmer than normal in July 2000. The global land and ocean temperature was +0.59 F (+0.33 C) above the 1880-1999 long-term mean, the 7th warmest July on record and 0.65 F (0.36 C) cooler than the record set in 1998. Land surface temperatures were +0.88 F (+0.49 C) above average while the global sea surface temperature was +0.47 F (+0.26 C) warmer than the long-term mean. The average land and ocean temperature anomaly for the year-to-date period was +0.74 F (+0.41 C), the fourth warmest January-July period on record. Temperatures in the lower half of the atmosphere (lowest 8 km or 26,200 feet of the atmosphere) were colder than the 20 year (1979-1998) average. Satellite data provided by scientists at NASA and the Global Hydrology and Climate Center at the University of Alabama in Huntsville indicate that the average temperature in the lower half of the atmosphere was -0.16 F (-0.09 C) below average in July. The average January through July temperature was also -0.16 F below average, the 9th coolest such period since 1979.



Troubled Times



Wildlife

Climate Change and Wildlife

World Wide Fund for Nature, December 2, 1997

As governments around the world meet in Kyoto to hammer out an international agreement on climate change, evidence from Britain shows that many bird species - including redshank, wren, chaffinch and chiffchaff - are now breeding earlier than ever. Frogs, toads and newts are also arriving at ponds earlier to spawn. Wildlife worldwide is being affected by climate change, and without immediate action the impacts will increase. These are among the findings contained in *Climate Change and Wildlife*, a major new report from WWF and BirdLife International. It is based on the findings of international experts and evaluates growing scientific evidence for what is currently happening to wildlife as a result of a warmer world. It details both observed and predicted changes and focuses on migration strategies, the timing of life cycles, the distribution and population of species, and important wildlife sites.

Changes to sea temperatures, says the report, will affect food supplies for seabirds such as the Arctic tern and puffin - and the dotterel and snow bunting could decline or even disappear as their specialised habitat vanishes as a result of climate change. Migrating birds often rely on traditional stopping-off places such as coastal wetlands. But sea level rises could lead to the disappearance of many vital coastal areas - which in turn will cause changes in migration routes and fewer birds surviving the long journeys. The report emphasises the need for increased co-ordination between scientific disciplines such as climatology and ecology; and it calls for long-term monitoring of flora and fauna on a worldwide basis. Callum Rankine, WWF's habitats and species officer, commented: "The very fact that we are predicting these results is extremely worrying. For many people, the huge number of waders wintering on our estuaries epitomises the very essence of the natural world. To lose them would be a catastrophe, and the proven dangers of climate change can neither be denied nor over-estimated."



Troubled Times



CO2

Scientists feud while governments seek climate action

Reuters, November 2, 1998

Physicist and science writer Nigel Calder, in a recent presentation at Sussex University in England, said the rising atmospheric content of CO₂ is a reflection of rising temperature, not a cause. The key to climate change is the action of the sun, he said. "The increase in carbon dioxide in the air is due to the sun's activity and has nothing to do with man-made emissions. The scenario of a global warming disaster, as propagated by the IPCC, is apparently groundless," Calder told Reuters. In his presentation, Calder concluded:

- Increases in carbon dioxide in the air from year to year are the result, not a cause, of climate change.
- Carbon dioxide changes are related to temperatures and not to human activity.
- El Nino and volcanoes strongly influence year-by-year carbon dioxide changes but the sun controls long-term trends.
- The sun sets the level of carbon dioxide in the Earth's atmosphere by the cumulative effect of cosmic rays reaching the earth as modulated by the solar wind.



Troubled Times



Sun's Influence

Scientists feud while governments seek climate action

Reuters, November 2, 1998

Sallie Baliunas of the Harvard-Smithsonian Center for Astrophysics said IPCC data was unreliable and exaggerated the possible overheating. Astrophysicist Baliunas also sees merit in the notion that climate change is a natural phenomenon. "(IPCC) temperature measurements contradict predictions and show little of the expected warming to date," she said in an e-mail exchange from her office in Cambridge, Massachusetts. "The temperature rise made by (IPCC) computer scenarios must be lowered to about 1 to 1.5 degrees Celsius by the year 2100." In 1990, the IPCC said temperatures would rise an average 3.2 degrees Celsius by 2100. It cut this to 2.5 degrees in 1992 and to 2 degrees in 1995.

"I am one of those scientists who study the possible impact of changes of the sun on climate. A changing sun is one of a suite of possible causes of natural climate change, which makes the backdrop against which any human impact will be seen. Those natural changes must be understood in order that the projections of human-caused global climate change be accurate," Baliunas said. Experts on the other side of the argument do not claim irrefutable proof of human-induced global warming but they say mounting evidence makes it clearer that this is happening. Ben Santer, lead writer of the IPCC report that first pointed to the "discernible" influence of humans on the climate, is more convinced than ever that this is right.



Troubled Times



Human Induced

Scientists feud while governments seek climate action

Reuters, November 2, 1998

"It's getting easier to peddle that line. The effect of the 'discernible' influence statement provided the impetus for a number of studies in the past year-and-a-half," the atmospheric scientist said by telephone from his office at the Lawrence Livermore National Laboratory in California. "People like Sallie Baliunas who say the sun explains everything, I disagree with that and I don't think scientific evidence supports that view. Changes in the sun alone can't fully explain the roughly half a degree Celsius warming over the past century," he said. "It's my personal belief that science that has emerged since the IPCC report substantiates the conclusion we reached about the discernible influence. We've reduced some of the uncertainties."

Professor Stephen Schneider from Stanford University in California agrees and wants officials meeting in Buenos Aires to stop talking about emission targets and start acting. "There are so many pieces of circumstantial evidence, each one easily assailable, but together they all point to evidence of discernible human impact," he said in a telephone interview. "Let's have less talk of these targets and timetables and talk about real mechanisms, a real carbon tax, paying for miners who lose jobs and the disadvantaged. Let's create a real alternative to high carbon futures," he said.

This all too exasperating for Piers Corbyn, astrophysicist and managing director of forecasting company Weather Action, who challenges those who say the evidence for human-induced climate change is gathering momentum. "Nonsense, there's no more evidence whatsoever," Corbyn said. "So far as the science goes we've made considerable advances toward the view that solar activity is the only cause of climate change." He said his company was able to make accurate long-term weather forecasts based on solar activity. "We can make predictions six months ahead using solar activity. 'Warmers' claim that more storms are encouraged by carbon dioxide but this is just hot air."



Troubled Times



Computer Model

Retired Don's Simple Sum Uncovers a Global Error

From *The Sunday Telegraph*, 3 May 1998

By Robert Matthews

A chemistry professor has embarrassed experts by pointing out a flaw in their predictions about the warming of the Earth's atmosphere. David Taylor, an emeritus professor of chemistry living in retirement in Scarborough, has examined the claims for global warming - and, in particular, the argument that pollution must be to blame. He claims to have made an astonishing discovery: the mere act of burning fossil fuel may heat the atmosphere at the rate of around half a degree centigrade a decade - just the sort of rise that climatologists have tried to blame on pollution.

Climatologists, using sophisticated computer models, have claimed to be able to predict the consequences of this global warming, and have issued dire warnings to politicians. Last week, European ministers duly signed up to an international agreement aimed at cutting back on the amount of pollution. Mr Taylor said: "Whatever it is used for, all this energy will eventually turn up as heat - by friction if in no other way. And it ends up warming the biosphere." Of the claims made by scientists that global warming is caused by pollution, Mr Taylor said: "I think this calculation makes them look pretty silly."

Yet despite this, Mr Taylor initially met a wall of silence when he sent his calculations to climate experts. He said: "Someone accused me of missing out a factor of 10, which I hadn't. But apart from that, there did not really seem to be much reaction at all - except, I suppose, incredulity." However, shown Mr Taylor's calculations by *The Telegraph*, experts at the Hadley Centre, Britain's leading climate research centre in Bracknell, Berks, admitted that the effect was genuine - and that their computer models ignore the fact that burning fuel makes heat. Peter Rowntree, of the centre, said: "We have not so far included this heating effect in the climate model, although we have been considering whether we should." He insisted that the effect was almost certainly much smaller than Mr Taylor claims. But he conceded that the only way of showing that the effect highlighted by Mr Taylor could be ignored would be to include it in a full computer model - which may now be carried out, following Mr Taylor's discovery.

Critics of the reliance put on computer models of the climate point to previous cases of "garbage in, garbage out". They include the discovery that the warming effects of methane from the flatulence of the world's cattle had been radically overestimated - as scientists had forgotten that cattle in developing countries are half-starved. Mr Taylor said: "What my calculations really show is that one just doesn't know what other effects have been left out of the climate models. God knows what else they have missed."



Troubled Times



IPCC

Global Warming only Expected to Bring About Small Changes

by Miguel Llanos, *MSNBC*, April 28, 1999

While strong evidence exists to suggest that some types of severe weather are influenced by global warming, that cannot be said of hurricanes, also known as tropical cyclones or typhoons. The Intergovernmental Panel on Climate Change did not try to stretch the evidence when it concluded: "Knowledge is currently insufficient to say whether there will be any changes in the occurrence or geographical distribution" of hurricanes. Three senior members of the IPCC wrote in a *Scientific American* article last May that earlier suggestions that greenhouse gases might influence hurricanes were "overly simplistic." Historical data and computer models, they argued, are limited because of the complexity of hurricane formation.

And William Gray, a Colorado State University scientist and one of the foremost hurricane experts, doesn't think global warming has anything to do with it. "It sure as hell ain't global warming," he has said. "What we have to worry about is natural climate change. Beware of natural climate change. Nature still does more to affect our weather than humankind." His team's June 1997 forecast explained it this way: Global warming "is a very slow and gradual process that, at best, would only be expected to bring about small changes in global circulation over periods of 50 to 100 years." In fact, the team goes on, "Intense Atlantic category 3-4-5 hurricane activity experienced a substantial decrease over the period of 1970-1994," a time when global surface temperatures rose.



Troubled Times



Past Swings

The Times, 9 September 1998

Geologist attacks climate claims

An adviser to the Government said yesterday that some scientists and politicians were "talking rubbish" about global warming. David Bowen, a geologist at Cardiff University and vice-chairman of the Countryside Council for Wales, said that the computer models on which claims about the effects of man-made pollution were based were flawed. There was evidence that the Earth had gone through periods of warming and cooling over the past two million years, well before man-made pollution could have had any impact. Yet this natural variability in the climate, recorded in Arctic and Antarctic ice cores, was ignored in the computer models used to forecast the impact of man-made pollution on the Earth's weather systems, he said. The models used "assume the climate has been stable for 10,000 years", he said. "Until you build in natural variability it is impossible to forecast the future."

Professor Bowen told the festival that the United Nations Intergovernmental Panel on Climate Change knew of the ice-core work, but natural variability in the Earth's climate was not included in the report which paved the way for the Kyoto meeting where cuts in energy use were agreed. He emphasised that he was expressing his own views: "I am not paid by some large American oil conglomerate."



Troubled Times



Rapid Swings

Scientists See Evidence of Rapid Climate Change

MSNBC Online, October 28, 1999

In a study that may sound a warning about global warming, researchers have found evidence that the world's climate can change suddenly, almost like a thermostat that clicks from cold to hot. A new technique for analyzing gases trapped in Greenland glaciers shows that an ice age that gripped the Earth for thousands of years ended abruptly 15,000 years ago when the average air temperatures soared. "There was a 16-degree abrupt warming at the end of the last ice age," said Jeffrey P. Severinghaus of the **Scripps Institution of Oceanography**, lead author of a study to be published Friday in the journal *Science*. "It happened within just a couple of decades. The old idea was that the temperature would change over a thousand years. But we found it was much faster."

Change in Water Temperature

Severinghaus said the rapid rise in air temperature in Greenland may have been touched off by a surge in warm currents in the Atlantic Ocean that brought a melting trend to the vast ice sheet that covered the Northern Hemisphere. It still took hundreds of years for the ice to recede, but the start of the great thaw was much more sudden than scientists had once thought. This suggests, Severinghaus said, that the Earth's climate is "tippy" - prone to be stable for long periods, but then suddenly change when the conditions are right. This raises a red flag of caution for the effect of greenhouse gases on global warming.



Troubled Times



Ice Core

Ice Core Shows Greenhouse Gases

Associated Press, June 6, 1999

A 2-mile-long ice core laboriously drilled out of an Antarctic ice sheet shows that levels of heat-trapping greenhouse gases are higher now than at any time in the past 420,000 years. As the longest ice core record of Earth's weather history obtained to date, the core also shows that those gases - carbon dioxide and methane - play a big role in warming the planet when ice ages end. But how this icy record will influence current theories about global warming blamed on human activity isn't clear, the researchers said. "The ice core gives us the past, not the future. But it adds to our thinking about the future, about the future of our climate," said Jean-Robert Petit, director of research at the National Centre for Scientific Research in Grenoble, France. "It's clear that greenhouse gas levels are unprecedented compared with the previous 400,000 years."

The core was extracted from 1992-98 by a U.S.-Russian-French team at Russia's Vostok research station, the coldest spot on Earth. Petit and team members endured readings as cold as minus 70 Fahrenheit, though the station holds the world record low of minus 129. ... Each cylinder-like chunk of ice drilled out of the ice sheet contains a record of snowfall, atmospheric chemicals, dust and bubbles of air. Those clues, trapped in icy layers like tree rings, enable scientists to reconstruct past climates. The lengthy Vostok ice core is particularly significant because previous cores taken from Antarctica and Greenland dated back only about 150,000 years and showed just two ice age cycles. The new core reveals four ice ages at roughly 100,000-year intervals, shedding new light on how the icy interludes end.

All four appear to have given way to balmy times after levels of the heat-trapping gases carbon dioxide and methane rose by amounts smaller than the increase blamed on human industry in the past century. The multinational team reported its findings in the June 3 issue of the journal *Nature*. Petit and colleagues found carbon dioxide levels rose from about 180 parts per million during each ice age's height to 280-300 ppm in the subsequent warm periods - far below the current CO₂ levels of 360 ppm. Methane levels, meanwhile, rose from 320-350 parts per billion during the icy interludes to 650-770 ppb during the warm spells. Current methane levels are 1,700 ppb. The levels of both greenhouse gases are expected to continue their rise in the next century due to continued burning of fossil fuels such as coal and other human activities.

"This study is probably the most convincing evidence to date that humans are making some really large changes to Earth's climate system," said Jonathan Overpeck, head of the paleoclimatology program at the National Geophysical Data Center in Boulder, Colo. "What this says is we're going well beyond the bounds of natural variation." Petit estimates that the rising greenhouse gas concentrations contributed to about 50 percent of the post-ice age warming; he attributes the remaining heat to periodic shifts in Earth's orbit that increase the amount of sunlight warming the planet. The natural rise in the gases was attributed to a variety of factors, including changes in oceanic processing of CO₂, increased plankton activity and the return of methane-producing swamps. But the core also appears to call into question previous research suggesting a 500- to 1,000-year lag time between the post-ice age temperature increase and the CO₂ increase. Instead, the core suggests temperatures rose in step with rising CO₂ levels, a finding of interest to scientists studying global warming. "This core is telling us to get busy and understand the climate system because it really could change," said Richard Alley, a professor of geosciences at Pennsylvania State

University.



Troubled Times



Ozone

Severe Loss to [Arctic Ozone](#)

BBC News, April 5, 2000

Ozone levels over the Arctic have fallen dramatically this winter, say scientists. An international group of researchers found cumulative ozone losses of more than 60% at around 18 kilometres (11 miles) above the polar region between January and March. "These are among the largest chemical losses at this altitude observed during the last 10 years," said the European Commission, a main sponsor of the research, in a statement. Ozone, a molecule in which three oxygen atoms are joined together, shuts out harmful ultraviolet radiation (less than 290 nanometres) coming from the Sun. This radiation can damage DNA and lead to the formation of skin cancers.

EU spokeswoman Piia Huusela said the report did not point to a hole in the ozone layer such as the one that has opened over the Antarctic, but a weakening of ozone content in the stratosphere. Ozone amounts over the Arctic today are now said to be 15% "below the pre-1976 average". "This is not a hole in the ozone layer," said Piia Huusela. "We are not even close to a hole, but it is nevertheless alarming." The results were obtained in the biggest study yet of ozone levels over the Arctic. The EU-sponsored Third European Stratospheric Experiment on Ozone (Theseo 2000) and Nasa's Sage III Ozone Loss and Validation Experiment (Solve) used a range of satellites, aircraft, balloons and ground-based instruments to collect data. Much of the work was based near Kiruna, Sweden.



Troubled Times



Shuttle Damage

San Francisco Chronical, August 21, 1990

Group Says Space Shuttle Damages Earth's Ozone, by David Sylvester

Every time the space shuttle is launched, 250 tons of hydrochloric acid is released into the air. With each launch, .25 percent of the ozone is destroyed. So far, the space shuttle has destroyed 10 percent of the ozone.

Dr. Helen Caldicott, world renown physician and environmentalist stuns audiences when she makes that statement in her talks across the country. A brief article, in a small-circulation environmental publication, supports Dr. Caldicott's charges.

Two Soviet rocket scientists have warned that the solid fuel rocket boosters used on the space shuttle release 187 tons of ozone destroying chlorine molecules into the atmosphere with every launch. Valery Burdakov, co-designed of the Russian "Energia" rocket engine, also noted that each shuttle launch produces seven tons of nitrogen (another ozone depleter), 387 tons of carbon dioxide (a major contributor to the "greenhouse effect") and 177 tons of aluminum oxide (linked to Alzheimer's Disease) before reaching an altitude of 31 miles.

Burdakov also notes that the history of ozone depletion correlates closely with the increase of chlorine discharged by solid fuel rockets since 1981. Soviet rockets employ a fuel combination that is 2000 times less damaging than the shuttle's but which still destroys 1500 tons of ozone per launch. According to Burdakov and his colleague, Vyacheslav Filin, a single shuttle launch can destroy as much as 10 million tons of ozone. This means that 300 total shuttle flights will completely destroy the Earth's protective ozone shield.

All other solid fuel rockets also contribute to ozone destruction. Near the top of the list are the U.S. Delta rocket (which destroys eight million tons per launch), the U.S. Titan, and the French Ariane V. In an article published originally in South, Burdakov warned that, at present rates of increase, rockets will soon be pouring 100,000 tons of chlorine and nitrogen into the atmosphere annually. Burdakov has called for international controls and a phase out of solid fuel rocket technology as well as a ban on supersonic aircraft flights into the stratosphere. The extraordinary charges by the Russian scientists were supported by research done by the Military Toxics Network, headquartered in San Francisco. Working with the Russian figures and data obtained from NASA, the Network concluded that significant damage was being done to the ozone layer by the space shuttle launches.



Troubled Times



Bush Retreat

Bush Retrenches

CNN, July 25, 2001

Bush also continued his opposition to the Kyoto Protocol, the international treaty that requires mandatory reductions in greenhouse gas emissions, despite increasing pressure from Europe. Frustrated allies pledged to ratify the agreement without the United States. Bush argues the treaty does not include developing nations such as China and that it could hurt U.S. industries and the American economy. The day after the G-8 summit, Kyoto supporters got a boost when the world's environmental ministers hammered out a compromise agreement for implementing the treaty.



Troubled Times



Neptune's Moon

Organization: Jet Propulsion Laboratory, Release: 98-110

Hubble Space Telescope Helps Find Evidence that Neptune's Largest Moon is Warming Up

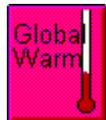
Observations obtained by NASA's Hubble Space Telescope and ground-based instruments reveal that Neptune's largest moon, Triton, seems to have heated up significantly since the Voyager spacecraft visited it in 1989. "Since 1989, at least, Triton has been undergoing a period of global warming - percentage-wise, it's a very large increase," said James L. Elliot, an astronomer at the Massachusetts Institute of Technology (MIT), Cambridge, MA. The warming trend is causing part of Triton's frozen nitrogen surface to turn into gas, thus making its thin atmosphere denser. Dr. Elliot and his colleagues from MIT, Lowell Observatory, and Williams College published their findings in the June 25 issue of the journal Nature.

Even with the warming, no one is likely to plan a summer vacation on Triton, which is a bit smaller than Earth's moon. The five percent increase means that Triton's temperature has risen from about 37 degrees on the absolute (Kelvin) temperature scale (-392 degrees Fahrenheit) to about 39 degrees Kelvin (-389 degrees Fahrenheit). If Earth experienced a similar change in global temperature over a comparable period, it could lead to significant climatic changes.

Triton, however, is a very different and simpler world than Earth, with a much thinner atmosphere, no oceans, and a surface of frozen nitrogen. But the two share some contributing factors to global warming, such as changes to the Sun's heat output, how much sunlight is absorbed and reflected by their surfaces, and the amount of methane and carbon monoxide (greenhouse gases) in the atmosphere. "With Triton, we can more easily study environmental changes because of its simple, thin atmosphere," Elliot explained. By studying these changes on Triton, the scientists hope to gain new insight into Earth's more complicated environment. ...



Troubled Times



El Nino

El Nino Spurs Rise in Global Average Sea Level

[CNN](#), Dec. 9, 1998

Average global sea level rose by about 2 centimeters (0.8 inch) during the 1997-98 El Nino event and has now returned to normal levels, according to scientists studying **TOPEX/Poseidon** satellite measurements of sea surface height.

This is the first time scientists have been able to link El Nino to a change in average global sea level, said Dr. R. Steven Nerem, a **TOPEX/Poseidon** science team member at the **Center for Space Research** at the University of Texas at Austin. Global mean sea level change on seasonal and inter-annual time scales is a measure of the changing heat content of the ocean. The 2-centimeter (0.8-inch) rise during the El Nino implies that, on average, the global ocean may be gaining heat.



Troubled Times



Volcanism

From the Disaster-L list serve:

Date: Sun, 26 Oct 1997 01:53:10 -0800
From: Rick <Ricksweb@webtv.net>
To: DISASTER-L@sonic.net
Subject: [DISASTER] El Nino

Did any of you hear John Zajack about 4 weeks ago on "Dreamland?" John stated that over a thousand underwater volcanoes and fissures have recently been discovered in the vicinity of Easter Island. If there are so many clustered in such a small area, then how many are there total spread throughout the South Pacific. If we conjecture magma flow is being caused by a magnetic shift (or visa versa, I suppose), then it's not hard to imagine what's heating up the ocean. Mainstream meteorologists say ocean currents are causing the weather changes. **Oceanographers say atmospheric changes are heating the ocean, and causing current changes. But, what's the ultimate cause? I subscribe to Zajack's vulcanology theory.**

Rick Jackson

You know, I swear I learned in my 5th grade science class that **water more than a 1/2 mile deep was heated by volcanic activity** and volcanic activity was caused by variations in earth's magnetism. No solution was given for what causes earth's magnetism but we know that now don't we!?! From a logical point of view it makes total sense. Show me sunlight that reaches down more than 500 feet in the water. It doesn't happen. I will say that I had this discussion with some friends that I've known since the 5th grade and they looked at me like "what class were you in", though they did agree with the logic.

Offered by [John](#).



Troubled Times



Ocean Floor

Date: Mon, 29 Dec 1997 12:38:23 EST
From: BetHughes <BetHughes@aol.com>
To: DISASTER-L@sonic.net
Subject: [DISASTER] Re:El Nino ocean tempertures

YES, the El Nino is apparently related to volcanic action along the ocean floor. Its source is in the volcanic region of Indonesia. From there it makes its way east along the equator until it reaches South America. Weather patterns associated with El Nino usually do not affect USA until in mid January. Whether present unusual weather patterns are related to El Nino is uncertain. They may be connected with the general change in weather patterns taking place. We shall see in mid-January if El Nino brings anything different! **According to Dr. Charles Pyke, El Nino specialist, increased volcanic activity (on land as well as on ocean floor) is characteristic of an El Nino year.**



Troubled Times



Core of the Earth

An Alternative Opinion of Global Warming
Millennium Group, March, 1999

Global Warming is not a proved phenomena, but after two record-setting warm years in a row, and the mildest winter I can remember, there are some pretty good indications. Many Scientists apparently agree, and delving into the cause of the increasing heat usually finds the blame in human made pollution. Doctor Henrik Svensmark sites the various possible causes of Global Warming and decides that pollution is the weakest possible cause. This is because the growth rate of greenhouse gases in the atmosphere has declined in recent years and the increase in Global temperatures has climbed steadily.

As an alternative cause, Dr. Svensmark provides evidence that the Earth is heating up from the core. One of the causes for this could be more radiation coming from the Sun. This could be bad news for us, as while there was something the population of the World could have done about pollution, there is little we can do about Solar radiation. In this case the effects of warming will simply have to be accepted, though nations fall.



Troubled Times



Ocean Warming

Warmer [Tropical Waters](#) portend Climate Change

ENN News, August 7, 2000

Since 1984, tropical waters in the Northern Hemisphere have warmed at a rate of about 1 degree Fahrenheit per decade, according to data compiled by NOAA. This figure is 10 times the global rate, a harbinger of climate change. "If temperatures continue to increase in the tropical North Atlantic, many of the coral reefs there (and their ecosystems) may be affected by bleaching. Also, since hurricane development does depend on sea surface temperatures, the conditions necessary for hurricanes to form may be accentuated," said Edward Kearns of the Rosenstiel School of Marine and Atmospheric Science. Kearns and a team of scientists led by Alan Strong of NOAA's National Environmental Satellite, Data and Information Service analyzed sea surface temperature data from the agency's polar-orbiting satellites from 1984 through 1996. Analyses of the Atlantic, Pacific and Indian oceans show a significant warming trend in tropical areas of the Northern Hemisphere, close to what is known as the thermal equator. "The most troubling finding is the marked increase in the tropical waters off the Northern Hemisphere centered around the globe at a latitude of roughly 5 degrees north," said Strong. "If this trend were to continue, implications for our coral reefs throughout these waters would be bleak."

Many coral reefs are found within the region of increasing temperatures, and most of the reefs within these latitudes have experienced bleaching over the past 10 years. Bleaching damages corals and is a sign that marine life is stressed by a number of factors. These factors include high water temperatures, pollution, sedimentation, high light levels, reduced water levels and changes in salinity. "The oceans store an enormous amount of heat energy, and they act to buffer any rapid climate change," said Kearns. "If there is any significant change in the amount of heat stored by the oceans, this would effect global temperatures." Data also showed a warming in the equatorial Pacific, cooling in the central North Pacific and general cooling the Southern Hemisphere. "The oceans are not cooling or warming uniformly; there appears to be a great deal of geographic variability," said Kearns. "When people usually speak of global warming, they think of the entire ocean warming up or cooling down. We don't have the accuracy yet to determine the magnitude of the average global trend, but we at least are trying to point out the signs of these trends." "If these trends are real ... the extensive bleachings that our reefs have experienced in the past two years would likely become commonplace," said Strong.



Troubled Times



Debate

From: B.J.PEISER@livjm.ac.uk <B.J.PEISER@livjm.ac.uk>
To: cambridge-conference@livjm.ac.uk <cambridge-conference@livjm.ac.uk>
Date: 09. december 1997 10:18
Subject: Re: CC Digest, 9/12/97

Global Warming: Both Sides of the Argument Could be Wrong

From: Jonathan Shanklin <jdsh@mail.nerc-bas.ac.uk>

Benny,

A few points on the subject. **The concensus view on global warming is that from the IPCC: The balance of evidence suggests that increased greenhouse gases are having an effect.** There is the possibility that the IPCC is wrong, but they could be wrong in either direction. Vociferous minorities are just that and they exist on both sides of the debate. They do little to enhance the public view of science. Some parts of the world have definitely warmed. **The Antarctic Peninsula is a case in point where the mean annual temperature has risen by 2.5 deg C over the past 50 years.** We think that this is a regional effect, but only on the basis that global climate models don't suggest that the area is unduly sensitive to global warming. The effect can be seen in decaying ice-shelves and increased vegetation (albeit in one form of grass). Regional changes should not be used to validate or invalidate global changes unless there are very good scientific reasons for doing so.

The view of GLOSS is that global sea level has risen 10 - 25 cm in the past century. These are objective measurements made on an international basis. I think it is worth pointing out that NASA satellites failed to detect the ozone hole, although it was there in the data once they looked for it. It must be realised that almost by definition satellites use cutting edge technology which is very difficult to use for detecting long term changes. Each new sensor tends to be different and makes measurements in a different way. Satellites are very good for getting a global view of what is going on 'now'.

It is true that the majority of climatologists do not consider solar variation as a factor in their models. This does not invalidate the models or the predictions, but it does make interpreting past climate and predicting future climate more uncertain. Finally it does not really matter whether the predictions of global warming are right or wrong. What is undeniable is that we are using up resources, which have a finite lifetime, in a wasteful and thoughtless fashion. This is what needs to change.

Jon Shanklin
j.shanklin@bas.ac.uk
British Antarctic Survey, Cambridge, England
<http://www.nbs.ac.uk/public/icd/jds>



Troubled Times



El Nino Frequency

August 1 through October 27, 1997 Alan Schroeder and Dave Bassett,
OPEC/EE/ U.S. Department Of Energy

At the University of Houston, Texas, Dr. Wellington studies the El Nino phenomenon. In particular the effect of global warming and El Nino. "I suspect that global warming is exacerbating the El Nino phenomenon, but we all know now there is a link." says Wellington. Data from his research shows that **since 1970 El Ninos have been occurring every 2.2 years, up from every 3.4 around 1870, every 4.5 year around 1750, and every six years in the late 1600's.** The data was obtained from coral growth rings from the Galapagos Islands, where the coral are particularly sensitive to water temperature from El Nino.



Troubled Times



Hottest Year

Gore Blames Global Warming for Heat

Associated Press, July 14, 1998; 7:57 p.m. EDT

The temperature data tracked by the National Oceanic and Atmospheric Administration showed that near-surface temperatures for June over both land and water were at an all-time high. Records for each month also were eclipsed in the previous five months. "There is no time in recorded data history that we have seen this sequence of record-setting for six consecutive months," said NOAA Administrator James Baker, calling the findings "remarkable and sobering." Tom Karl, NOAA's senior climate researcher, said the monthly data - along with other evidence, including the fact that 1997 was the warmest year on record -- provide "compelling evidence" that global temperatures are on a long-term warming track.

Temperatures in June were the highest recorded for the month in more than 100 years of record keeping, averaging 1 degree Fahrenheit above the long-term mean temperature dating back to 1880, officials said. Temperatures over land were even more dramatic -- 1.75 degrees higher than the long-term mean, exceeding the old record by several tenths of a degree. Even with a cooling of the central Pacific Ocean because of the end of El Nino, "we still have the warmest global temperatures on record," said Karl. "That is extremely remarkable."

Global warming skeptics have criticized the use of the ground temperature data and pointed to satellite findings that have shown temperatures 5,000 to 30,000 feet above Earth have changed little over the past 20 years -- showing perhaps even a slight cooling. But the latest data, as well as the recent frequency of unusually severe storms and drought, were enough to further convince Gore, the administration's most vigorous voice on the need to address climate change. "It is so incredibly unusual to have six months in a row and every single one of those months sets an all-time new record for being the highest month ever," said Gore. "You can see quite clearly the long-term warming trend."



Troubled Times



Nighttime Heat

Harmful Heat Is More Frequent, Especially at Night, Study Finds

by William K. Stevens, *New York Times*, December 10, 1998

Extreme summer heat and humidity of the kind most threatening to health have become more frequent in the United States over the last half century, two Federal researchers say. According to their study, in today's issue of the journal *Nature*, the frequency of extremely hot, humid days and of heat waves lasting several days increased substantially from 1949 to 1995. In terms of the threat to health, however, another finding was especially significant: The increase in heat stress was greater at night than in the daytime. Many experts say that extremely high temperature and humidity over successive nights is a crucial factor in heat-related deaths.

When nearly 600 people died in a heat wave in Chicago in 1995, for example, many of the deaths were attributed to an unremitting combination of record high nighttime heat and humidity that allowed no respite from daytime heat stress. Some studies have shown that extreme summer heat has more impact on people's health than any other kind of severe weather and that the elderly are most vulnerable. "If these climate trends continue, they may pose a public health problem, particularly as there are increasing numbers of elderly people," wrote the authors of the study, Dr. Dian J. Gaffen and Rebecca J. Ross, research meteorologists at the National Oceanic and Atmospheric Administration's Air Resources Laboratory in Silver Spring, Md.

The apparent trend toward more extreme heat generally coincides with a warming of the earth's surface in recent decades, globally and in the United States. The dominant view among scientists is that at least some of this warming has been caused by emissions of heat-trapping gases like carbon dioxide, which is emitted by the burning of coal, oil, natural gas and wood. The earth's average surface temperature, which has risen 1 degree in the last century and is projected to rise 2 to 6 degrees over the next century, further increasing humidity and making heat waves more frequent and intense. By comparison, surface temperature has risen 5 to 9 degrees since the depth of the ice age 18,000 to 20,000 years ago.

While the increasing frequency of extreme heat and humidity cannot be directly linked to the warming trend, Dr. Gaffen said it was "consistent with what is predicted in the global warming scenario." Thomas R. Karl, director of the National Climatic Data Center, agreed. "I think these are the types of conditions that will become more frequent and more intense when they do occur" if the climate warms as projected, Karl said. "We've already seen examples of that this past year," he added, referring to last summer's heat wave in Texas. The projected increases in global temperatures, he said, "would make this rather commonplace." By and large, Karl said, the Gaffen-Ross findings "seem to be consistent with what we know from other analyses." He said that if data through 1998 were included in the study, "I'm sure they would find even stronger trends."

Worldwide, the last two years have been the two warmest on record. Dr. Gaffen and Ms. Ross had for some time been studying global distributions of temperature and water vapor, and they found an increasing trend of rising humidity accompanying rising temperatures. So, Dr. Gaffen said, they decided to see whether this meant that extremes of heat and humidity were also increasing. They defined "extreme" as the highest 15 percent of temperature and humidity measurements, as recorded every three hours around the clock in July and August from 1961 through 1990. This threshold, they report, is "closely correlated"

with levels above which, other researchers say, mortality increases sharply. Dr. Gaffen and Ms. Ross analyzed records at 113 Government weather stations around the country, mainly at airports, in search of information on two variables: the combination of temperature and humidity that meteorologists call "apparent temperature," and temperature alone.

Apparent temperature is a measure of the combined impact of heat and humidity on people and the sensation that results. It is increasing faster than temperature alone, the researchers said, because humidity is increasing faster. This would be expected in a warmer climate, because more water evaporates and the atmosphere can hold more. The researchers computed their thresholds of extremity for the average daily temperature, the daily maximum temperature and the daily minimum temperature for July and August at each weather station. They found that from 1949 to 1995, the annual frequency of days on which the thresholds were surpassed increased at all but 16 of the 113 stations. The increases were largest for the minimum "apparent temperature," which basically translates to a measure of combined nighttime heat and humidity.



Troubled Times



Thinning Ozone

Antarctic Ozone Layer Thinning Dramatically

Discovery Earth Alert, August 31, 2000

A United Nations agency reported on Tuesday that the ozone layer above Antarctica is being depleted at an accelerated rate. The Geneva-based World Meteorological Organization (WMO) said, "The latest satellite observations in the sunlit portion of the Antarctica perimeter show an average decrease of about 30 percent in the total amount of ozone overhead, when compared to the 1964-76 norms." The hole has been closely monitored by satellites and ground-based instruments after being discovered in the 1970s. Last September, the WMO reported that the so-called "ozone hole" above Antarctica was the largest yet recorded for the month. The size of the hole equaled an area two and one half times the size of Europe. Taysir al-Ghanem, a spokesman for WMO, said, "This is an alarming rate of decrease. It is double the amount we had observed two weeks ago, and this could lead to a much greater ozone hole." Widening of the hole is blamed on the release of manmade gasses such as chlorofluorocarbons and bromides into the atmosphere. Depletion of the ozone layer enables more ultraviolet radiation to reach the Earth, increasing the incidence of skin cancer and cataracts, as well as the suppression of the immune system.



Troubled Times



Polar Ice

Warmer Weather Melts Ice at North Pole

Associated Press, August 20, 2000

For the first time in 50 million years, visitors to the North Pole can see something extraordinary: water. The thick ice that covers the Arctic Ocean at the North Pole has melted, leaving a mile-wide (1.6-kilometer-wide) stretch of water at the top of the world, *The New York Times* reported Saturday. Two recent visitors to the pole told the *Times* about the unexpected sight. "I don't know if anybody in history ever got to 90 degrees north to be greeted by water, not ice," said Malcolm C. McKenna, a paleontologist at the American Museum of Natural History. The water could be the result of global warming, although there is a debate among experts about the cause. Some believe it could simply be a natural occurrence rather than the result of a "greenhouse effect" caused by manmade pollution and increased concentrations of carbon dioxide in the atmosphere. Scientists have said that the last time the North Pole had this much water was 50 million years ago. For oceanographer James C. McCarthy, who visited the pole earlier this month on a tourist cruise, the disappearing ice was a cause for concern. Passengers aboard the cruise were shocked to find water when there has long been only ice.



Troubled Times



Mountain Ice

Ice Core Study Shows High Mountain Warming

By Paul Recer, *Associated Press*, September 14, 2000

In another indication that the Earth may be warming, an analysis of ice samples drilled from deep inside a glacier shows that the last century has been the hottest period in 1,000 years high in the Himalayan Mountains. The new finding supports other studies that show a rapid melting of mountain ice fields on three continents and a dramatic decline in water levels of some glacier-fed rivers. "We think this is alarming," says Ellen Mosley-Thompson of Ohio State University, the co-author of a study appearing Friday in the journal *Science*. Mosley-Thompson is a member of a team, led by Lonnie G. Thompson of Ohio State, that has analyzed ice cores from some of the most remote mountains in the world. The new cores, cylindrical specimens of ice, came from deep within a glacier more than 20,000 feet high in the Himalayas.

"The last century has been warmer than the previous nine centuries," Mosley-Thompson said, while the last decade has been the warmest period of all. Other studies, based largely on surface temperature readings, have found a global average warming of almost one degree F over the last century, but the effect may be even more dramatic in the world's mountains, she said. "These high elevation ice fields seem to be warming more strongly than what you could call the global average," Mosley-Thompson said. She said there has been a significant shrinkage of permanent ice fields in Asia, South America and Africa that provide a significant part of the flow in major rivers. Many such rivers are in areas with monsoon weather patterns, where there usually is little rain for six months of the year. Ice melt from the rivers has become an increasingly important source of water for cities and farms, Mosley-Thompson said. "For these rivers to continue to flow year-round, they have to be fed by ice in the high mountains," Mosley-Thompson said. If the ice fields continue to shrink, she said, "the question then is where will the river flow come from during the dry season." Mosley-Thompson said the mountain warming effect seems to be worldwide.

"Everywhere we go, we get the same picture" of shrinking ice fields and increasing high altitude warming, she said.



Troubled Times



UN Warning

UN Report - Water Wars

The Daily Telegraph, September 16, 1999

It is already too late to stop the first stages of global warming, the destruction of thousands of the world's species or prevent shortages of water across Africa and Asia that could provoke wars over the next 25 years, the UN claimed yesterday. A wasteful consumer society in rich countries, coupled with rapid population growth in poor ones, is threatening to destroy the natural resources on which human life is based, according to a report by the **UN Environment Programme. UNEP**, described as the world's environmental conscience by its director, former German environment minister Klaus Topfer, predicted in its report on the state of the planet at the Millennium that the time to tackle major problems was fast running out and in some aspects it was already too late. Dr Topfer said it was likely that many countries would fail to meet the targets for preventing man-made climate changes set at Kyoto two years ago, dooming the world to an average temperature rise of up to 3C during the next century. Dr Topfer added: "I am not being pessimistic, just realistic." According to the report the USA, the world's largest emitter of carbon dioxide, has refused to ratify the Kyoto treaty.

GEO 2000, The Global Environment Outlook report, have stated that 'full-scale emergencies' now exist as a result of water shortages, land degradation, tropical forest destruction, species extinction, overfishing and urban air pollution in the developing world's mega cities. ... Dr Topfer said there had been an increased frequency and severity of natural disasters, such as hurricanes, now killing and injuring many millions of people every year and causing mounting economic losses. He said it was impossible to say that Hurricane Floyd was a result of global warming, but that it was consistent with the increase in extreme weather conditions which was the signature of global warming. He pointed to other phenomena which had appeared since the last **UNEP** report two years ago, such as more and larger forest fires, caused by El Nino, and slash-and-burn techniques which made forests more susceptible to major conflagrations. Dr Topfer called for 'inspired political leadership and intense co-operation' in existing and new environmental treaties. But he conceded that as far as the UN was concerned it was 'too weak' in a lot of areas.

Time is Running out for the Environment, UN Says

Reuters, September 21, 1999

It is now too late to halt global warming and time is fast running out to prevent other environmental catastrophes, the U.N.'s environment agency said in a major report on Tuesday. **Global Environment Outlook 2000** paints a devastating picture of the Earth's health on the eve of the new millennium, and points to new threats, such as increased levels of nitrogen in the water supply, which the world has not yet started to tackle. "The gains made by better management and technology are still being outpaced by the environmental impacts of population and economic growth. We are on an unsustainable course," Klaus Toepfer, head of the United Nations Environment Programme said at the African launch of the report in Nairobi. The report says emissions of greenhouse gases that cause global warming have quadrupled since the 1950s, and "binding" targets to reduce emissions agreed by governments at last year's Kyoto summit may not be met. ...

Disasters such as hurricanes and forest fires are increasing in frequency and severity and have killed some three million people in the last three decades. Armed conflicts and unprecedented refugee flows are

causing greater damage to the environment than ever before. There is also mounting evidence that humans are seriously destabilising the global nitrogen balance. Huge amounts of nitrogen are being deposited on land and in water through intensive agriculture and the burning of fossil fuels. Eventually, this could make freshwater supplies unfit for human consumption, the report says. "The full extent of the damage is only now becoming apparent as we begin to piece together a comprehensive overview of the extremely complex, interconnected web that is our life support system," said Toepfer, a former German environment minister.



Troubled Times



Climate Change

The Dangers of [Climate Change](#)

BBC News, August 7, 2000

Global warming may have played a part in floods in India that have destroyed the homes of millions of people and claimed hundreds of lives. The devastating floods were triggered by heavy monsoon rains, which caused the Brahmaputra river and its tributaries to burst their banks. This is the second flood disaster in east India in two years; last year 30,000 people died after a massive cyclone hit the east Indian state of Orissa. The past month has also seen lethal floods in China, Brazil and Russia. And earlier this year hundreds of thousands of people were stranded by floods that killed 48 people in Mozambique. At the same time, east Africa and Ethiopia are struggling through one of the worst droughts in living memory. Bizarre global weather over the past two years has fuelled speculation that global warming is beginning to destabilise the Earth's climate. A recent report by the United Nations Environment Programme, or Unep, said there was "little doubt that climate change is a major factor in making natural disasters nightly news".

But there are other factors involved; massive deforestation in many parts of the world has made way for new human settlements in flood-prone areas. There is also the influence of the El Nino effect, a periodic weather disturbance which can lead to hot, dry weather in one part of the world, and heavy downpours and floods in another. While aid agencies like the International Red Cross accept that the causes for the latest floods in India may be the result of a combination of all these factors, they say governments need to do more to prepare for bizarre weather before, not after, it arrives. No single event can be ascribed to global warming. Some researchers still doubt that human activities are inducing rapid climate change. They highlight the inconsistencies between the temperature records taken at the Earth's surface, which show rapid warming over the last two decades, and the data produced by satellite and balloon studies. These show little if any warming of the low to mid-troposphere - the atmospheric layer extending up to about 8km from the Earth's surface. Climate models generally predict that temperatures should increase in the upper air as well as at the surface if increased concentrations of greenhouse gases are causing the warming seen at the surface.



Troubled Times



Spy Satellite

Clinton Releasing Antarctica Images

Associated Press, September 14, 1999

President Clinton, warning that global warming could bring cataclysmic consequences, announced the release Wednesday of classified satellite images of part of Antarctica to help scientists chart world climate changes. He said the two sets of images *taken 10 years apart* were “one small contribution” to the understanding of climate change studies. “The overwhelming consensus of world scientific opinion is that greenhouse gases from human activity are raising the Earth's temperature in a rapid and unsustainable way,” the president said in a speech at the International Antarctica Center. “The five warmest years since the 15th century have all been in the 1990s.” “Unless we change course,” Clinton said, “most scientists believe the seas will rise so high they will swallow whole islands and coastal areas. Storms like hurricanes and droughts both will intensify. Diseases like malaria will be borne by mosquitoes to higher and higher altitudes and across borders, threatening more lives, a phenomenon we already see today in Africa.”

The data include seven previously classified images taken by US spy satellites in the mid-1970s and 1980s of the so-called Dry Valleys environment. Satellite pictures traditionally are classified because they reveal US intelligence-gathering capabilities. The new images are intended to give scientists a baseline for environmental studies, including the monitoring of the Antarctic ozone hole and the West Antarctic ice sheet. “Together with data gathered on the ground, the newly released images will help scientists better understand ecological dynamics in this extreme environment and their response to climate change,” a White House statement said. ...

The pristine areas of Antarctica are closely watched because scientists expect climate changes to be more significant in the polar regions. Moreover, the Antarctic ice sheet helps regulate the climate of the entire Earth, and preserves a climate history going back more than 400,000 years. The pictures released by Clinton, taken by military satellite, show a detailed view of the Dry Valleys region of the Transantarctic Mountains, a 1,900-foot-long range that splits the east and west regions of Antarctica. The region pictured is near the US McMurdo Station, an observatory for the international global positioning system. The newly released pictures are modified versions of fine-resolution images taken by spy satellites. ... Last month, Gore announced the declassification and release of 59 satellite images of the Arctic to help scientists study the interaction between polar ice caps and global warming.



Troubled Times



Correlation

Researchers link earthquakes to volcanic eruptions

The Associated Press, October 28, 1998

Historical records appear to confirm what many researchers have always suspected - large earthquakes can trigger eruptions in nearby volcanoes. A study of records dating to the 1500s found a statistical link between the two, Alan T. Linde and I. Selwyn Sacks of the Carnegie Institution in Washington reported in Thursday's issue of the journal *Nature*.

While the exact mechanism is not known, an earthquake may cause bubbles to rise from the bottom of reservoirs of molten rock known as magma chambers, increasing the pressure that leads to an eruption, Linde said. "Seismic waves from earthquakes have the potential to increase the pressure in magma chambers even at large distances from large earthquakes," the researchers said. "For a volcano already close to the critical pressure state, this could result in a premature eruption." While earthquakes alone cannot be used to predict eruptions, close monitoring of active volcanoes may be able to determine which volcanoes could be set off by a quake, Linde said. Linde said he and Sacks reviewed 204 so-called great earthquakes, or those with magnitudes of more than 8, and found eight quakes appear to have triggered eruptions, some triggering more than one.

The researchers also compared earthquakes with magnitudes between 7.0 and 7.9 and found a total of nine eruptions in the two days following such earthquakes. Eruptions were only considered if they occurred within 465 miles of great earthquakes and 125 miles from the 7.0-to-7.9 quakes. By comparison, in the 1,000 days before and after all of the quakes studied, there were no more than four eruptions on days other than the days of the quakes. "They show that a volcanic eruption is about eight times as likely on a day of a big earthquake as compared to any other day, within 500 miles or so," said Bill Menke, a Columbia University professor who studies volcanoes. "Earthquakes are kind of the straw that broke the camel's back."

Menke said Linde's work provides a statistical basis for what many had already suspected and also supports one theory on the causes of eruptions. "This work gives more credence to one of the theories that says pressure is slowly building up in the volcano and when it reaches some critical pressure, something breaks," he said. David Hill, a volcano expert with the U.S. Geological Survey in Menlo Park, Calif., said: "I think their paper really provided strong circumstantial evidence that there are relationships like this, but we really have a long way to go to understand this."



Troubled Times



Quake Watch

This Quake Watch indicates recent activity only, since 1995 and through 1999 when the trends had become obvious. Data is summarized by year, with more detail and a cumulative extreme quake and volcano map available on the year's individual page. The trends can therefore be seen if one year and then the next is examined, in turn. This Quake Watch only reports volcano activity that can be considered truly unusual or quakes at or about 8.0 in magnitude. Typical activity no matter how extreme, is not listed here. This is to show the recent trends, without clutter.

- During [1995](#), earthquakes greater than magnitude 8 struck **Chile** on July 30 with an 8.1 and the **Kuril Islands** north of Japan on December 3 with an 8.0. Inactive volcanoes sprang back to life with Japan's **Mount Hosshu** erupting for the first time in 257 years, **Montserrat** in the Carribean becoming active in an area not known for seismic activity. Quake activity under Calderas such as **Yellowstone** lake increased dramatically, with 1,200 quakes recorded in 1995.
- During [1996](#), earthquakes greater than magnitude 8 struck Indonesia on February 17 with an 8.2 in a formerly quake-quiet zone. The USGS reported an alarming increase in deep quakes at the 550-650 km level. New Zealand's **Mount Ruapehu** erupted without warning on June 17, as did **Canlaon** in the Phillipines on August 11. Iceland's **Grimsvotn** volcano began to melt the Vatnajoskull Glacier, creating a wall of water rushing to the sea. The **Long Valley** caldera at Mammothe Lake, California went on the watch list.
- During [1997](#), active volcanoes proved noteworthy for their violence or long running eruptions. **Popocatepetl** threw an ash cloud 2.5 miles high and shook the ground for 15 minutes prior to the eruption in June, and Kilauea continued with its longest eruption in recorded history. **Monserrat**, roaring to life after almost 4 centuries of dormancy, forced evacuation of the Caribbean island.
- During [1998](#), an 8.8 earthquake occurred near **Balleny Islands** region south of Australia, an 8.3 in the **Ceram Sea** near Sulawesi, Indonesia, and a 7.9 near Taiwan. The dormant volcanos on the Caribbean nation of **Dominica** threatened to erupt. **Cerro Azul** on the **Galapagos Island** in Ecuador, **Iwate-san** on the island of **Honshu**, and **Mount Peuet Sague** in **Indonesia** in the province of Aceh reawakened, with more volcanoes acive than in the memory and history of man.
- During [1999](#), no large earthquakes occurred but the 7.4 in **Turkey** was indicative of more devastation and death occurring from the more frequent and unpredictable quakes. A [Domino](#) effect, where quakes moved to contiguous fault lines, was [Noted](#) during analysis of the 7.4 quake in Turkey in August and had been predicted by the Zetas. The dormant volcano **Mt. Marsili** near **Naples**, Italy became active, and active volcanoes increased their activity worldwide. Mt. Etna, always active, began erupting and per the [Cayce](#) prediction this is a recursor of the Earth Changes.



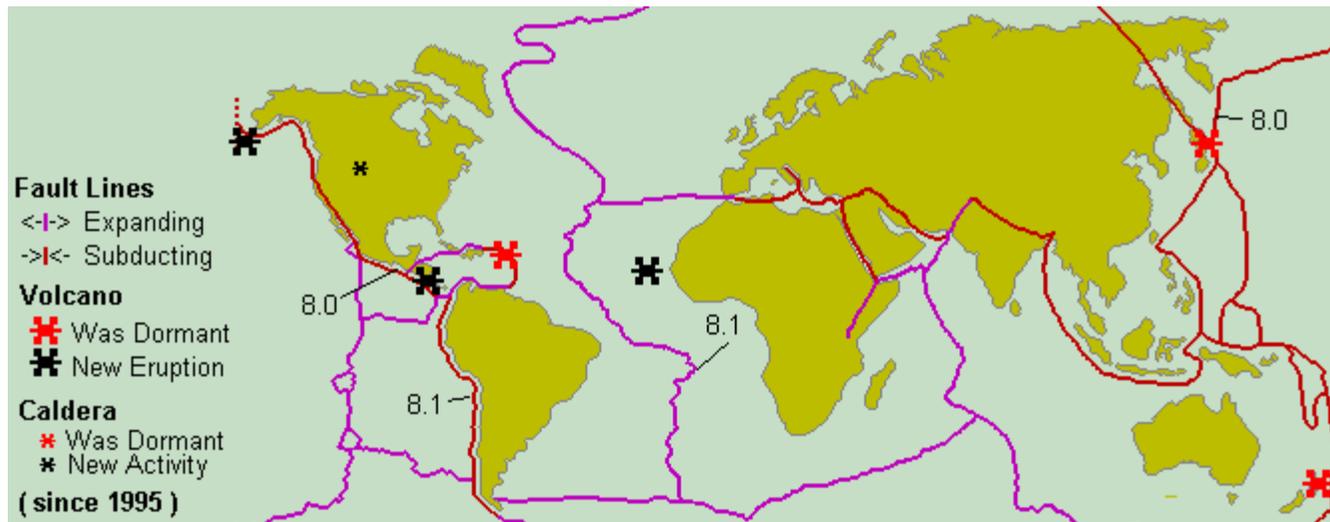
Troubled Times



1995

- **Fogo** in the **Cape Verde Islands** erupted on April 2, 1995 for the first time since 1951, per the *USGS*.
- On July 30, 1995 an **8.1** magnitude earthquake struck near Antofagasta, **Chile**. A magnitude **8.0** earthquake struck the **Kuril Islands**, just north of Japan, on December 3, 1995, causing the Pacific Tsunami Warning Center to issue an alert to the entire Pacific basin, from Alaska to the Philippines.
- **New Zealand's Mount Ruapehu** sprang back to life in 1995 with a mushroom cloud that marked the largest eruption of the mountain in 50 years, and the *New Zealand Civil Defence* reported an eruption on June 17, 1996 with an ash plume 8 miles high.
- On the **Caribbean** island of **Montserrat** a long dormant volcano become active during 1995 in an area not known for seismic activity.
- **Japan's Mount Hosshu** erupted in 1995 for the first time in 257 years.
- Cerro Negro in **Nicaragua** reawakened on November 19, 1995, per the *Institute Nicaraguense*.
- **Yellowstone National Park**, crossed by five major geological fault lines, sits above a caldera that is pushing upward under **Yellowstone Lake**, causing the water level to rise, per an article in the *New York Times* on November 26, 1995. Where quakes as large as 7.5 in 1959 and 7.3 in 1983 have occurred in the Yellowstone area, seismic activity has recently been picking up. Over 1,200 quakes have rattled Yellowstone during 1995, up from 800 in 1994 and 179 in 1993.
- On December 23, 1995, **Shisbaldin** on the **Unimak Island** in the Aleutians erupted, per the *Alaska Volcano Observatory*.

The Quake Watch extreme quake and volcano map at the end of 1995 looked like this.



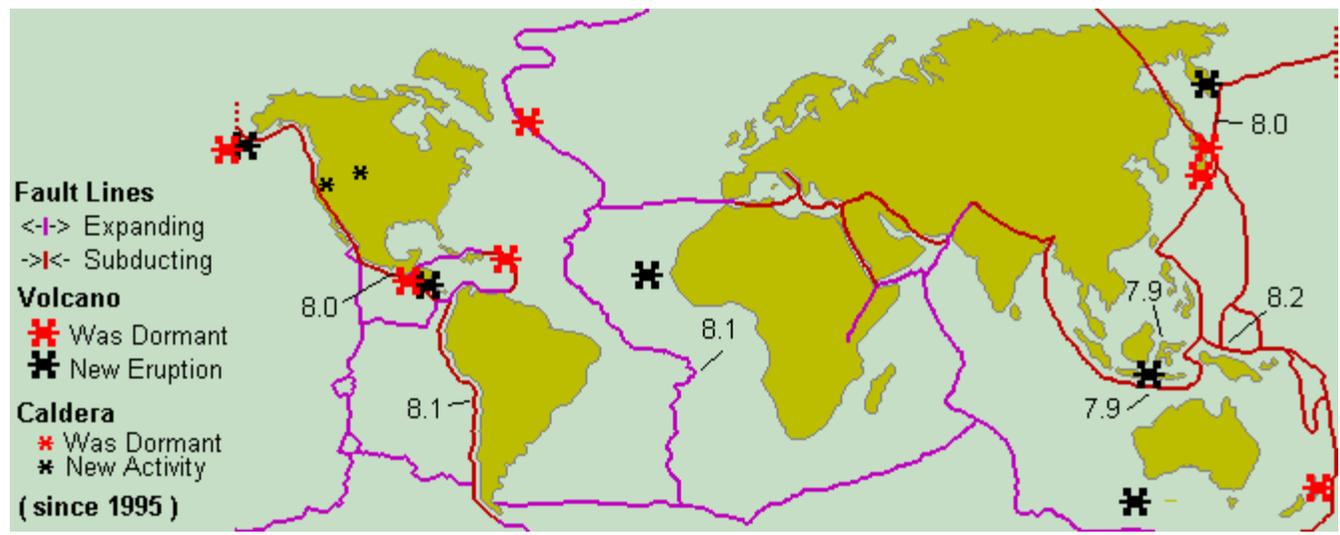
Troubled Times



1996

- *Toyko University* reported that an **8.2** quake jolted eastern **Indonesia** on February 17, 1996, with 21 foot tidal waves. This was a quake in a formerly quake-quiet zone, leading the January, 1997 issue of *Discover* magazine to quote geophysicist Emil Okal at Northwestern University, who stated that a subduction process was just starting up.
- The Long Valley caldera at **Mammoth Lake, California** began acting up in mid February, 1996, per the Berkeley seismic station.
- **USGS** statistics show that quakes in the 6.0-6.9 Richter Scale range have increased steadily since 1985 from a yearly average of 100 to 161 in 1995-96, with an similar increase in deep quakes at the 550-650 km level from a yearly average of 138 to a count of 255 in 1995 and 271 well before the end of 1996.
- On March 5, 1996, **Komaga-Take, Hokkaido, Japan**, erupted for the first time since 1929, per the *Tokyo Volcano Research Center*.
- On April 2, 1996, **Momotombo, Nicaragua**, reawakened with minor activity following an earthquake. It last exploded in 1905.
- On May 26, 1996, fumarolic plumes rose 10,000 feet high over **Sheveluch** in **Kamchatka, Russia**, inactive since 1993, per *KVERT*.
- On September 17, 1996, **Amuka** in the **Aleutian Islands** erupted for the first time since 1987, per the *Alaska Volcano Observatory*.
- *CNN* reported on November 6, 1996 that the eruption of **Iceland's Grimsvotn** volcano melted the Vatnajoskull Glacier, creating an immense wall of water rushing steadily into the sea.
- Active volcanoes are beginning to erupt without warning, as **New Zealand's Ruapahu** did in '96, erupting violently just 2 days after geologists had reported that the danger was passed.
- *Reuters* reported on 11 Aug 96 that in the **Philippines** "**Canlaon** erupted without warning shortly after 2 p.m. (2 a.m. EDT) sending a plume of ash soaring 5,000 feet skywards."
- *Associated Press* reported that significant earthquakes, those of magnitude 6.5 or better, increased by 35% over the number recorded in 1995.
- In December, 1996, a seamount off **McDonald Island** southwest of **Australia** erupted, per the *Volcano Listserve*, with pumice coming to the surface.

Below is the Quake Watch extreme quake and volcano activity as of the end of 1996.



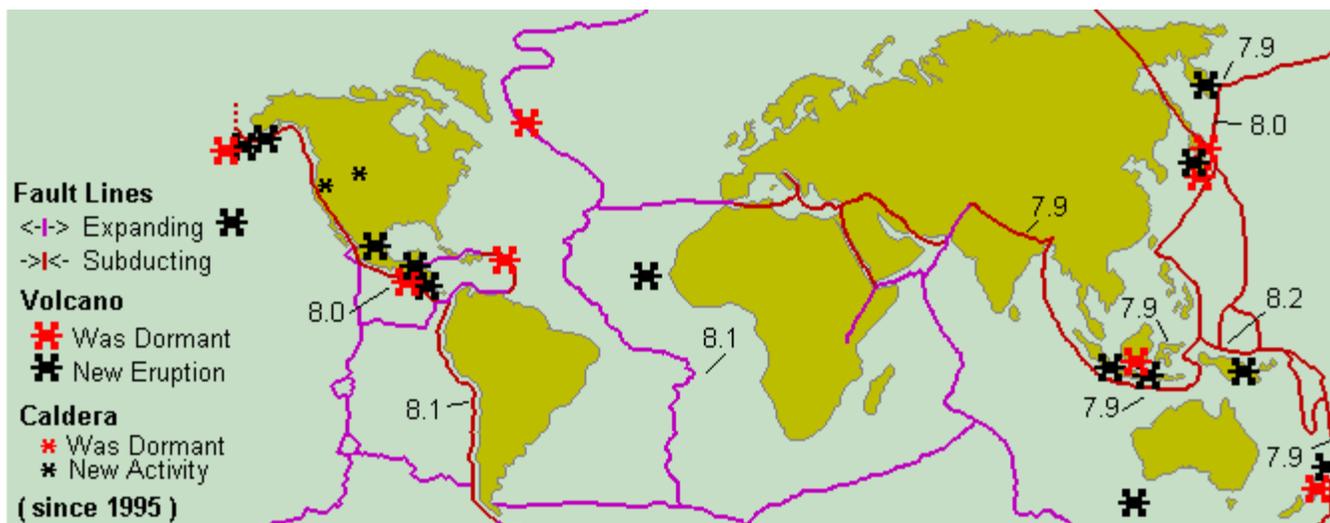
Troubled Times



1997

- The *US Geological Survey* at the Hawaiian Volcano Observatory reported on January 30, 1997 that 25 million cubic meters of magma migrated down the east slope in a single day, and that eruptions at **Kilauea**, which began on January 3, 1983 are the longest in the recorded history of **Hawaii**.
- **Manam** in Paupau, **New Guinea** began erupting on February 10, 1997, per the *Port Moresby Post Courier*.
- On February 28, 1997, the **Monowai** seamount northeast of **New Zealand**, began erupting per the *Volcano Listserv*.
- On April 19, 1997, **Mount Karangetang** in **Indonesia** near the town of Siau became active, per the *Nando Times*. The last eruption was in 1974.
- The *USGS* reported that on April 21, 1997 a **7.9** magnitude earthquake occurred along plate boundaries under water north of **New Zealand**.
- On May 3, 1997, **Bezymianny** in **Kamchatka**, Russia erupted, per the *Alaska Volcano Observatory*.
- **Mount Hili Aludo** in **Indonesia** began erupting on May 13, 1997 for the first time in 40 years.
- San Cristobal, **Nicaragua** erupted on May 20, 1997 since last erupting in 1977, per *Volcanoes of the World*.
- *Reuters* reported that **Popocatepetl** near **Mexico City** erupted repeatedly in the spring of 1997, throwing an ash cloud 2.5 miles high on June 11, 1997. The ground shook for 15 minutes leading up to this eruption. Popocatepetl is continuously active to some degree. No evacuations were conducted.
- *MSCBC* reported on July 4, 1997 that the **Popocatepetl** volcano rumbled ominously, at risk of possible new eruptions. The 17,887-foot volcano blew three giant plumes of hot ash four miles into the air - its fourth consecutive day of violent activity following its largest eruption in 70 years Monday.
- On July 1, *Reuters* reported that **Montserrat** may have killed up to 20 people while two dozen others are missing. Deadly pyroclastic flows - fast-moving bursts of 930 degree Fahrenheit volcanic material - devastated a swath of southern Montserrat. Montserrat roared to life two years ago after nearly four centuries of virtual dormancy.
- On October 22, 1997, **Chiginagak**, south of King Solomon on the **Alaskan Peninsula** became active, per the *Alaska Volcano Observatory*.
- On November 8, the *USGS* reported a **7.9** in **Tibet**, the largest earthquake instrumentally recorded in the area to date.

Below is the Quake Watch extreme quake and volcano activity as of the end of 1997.





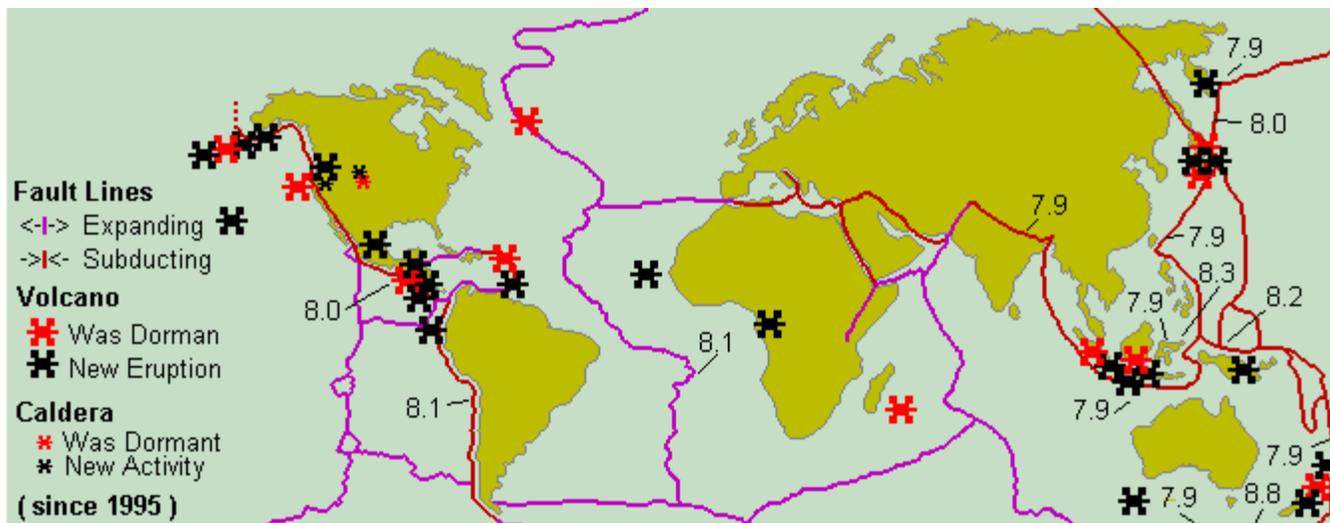
Troubled Times



1998

Below is the Quake Watch extreme quake and volcano activity as of the beginning 1998.

- An earthquake on January 9, 1998 in the **Yellowstone National Park** caldera caused the **Vault** and **Cascade** geysers to begin erupting, per *Discovery Online*.
- On January 25, 1998, the **Axial Seamount** in the center of the Juan de Fuca Ridge 300 miles west of **Oregon** erupted, accompanied by an earthquake, per the *NOAA*.
- **Piton de la Fournaise**, on Reunion in the **Indian Ocean**, erupted on March 12, 1998 after five years of dormancy, per the *Volcano Listserve*.
- The *USGS Earthquake* report stated that a magnitude **8.8** earthquake occurred near **Balleny Islands** Region south of Australia on March 24th.
- On April 27, 1998, **Mount Peuet Sague** in **Indonesia** in the province of Aceh erupted, with the last eruption ending in 1921, per the *Global Volcanism Network*.
- On May 3, 1998 an **7.9** quake occurred near **Taiwan**, per the *USGS*.
- On May 5, 1998 **Arenal** in **Costa Rica** erupted, per *La Nacion*, with the last eruption in 1993.
- In June, 1998, 318 quakes events were recorded at **Mount St. Helens**, per the *USGS*.
- On June 24, 1998, **Iwate-san** on the island of **Honshu** reawakened, per *Tatsuro Chilba*.
- On June 30, 1998, **Korovin** in the **Aleutian Islands** erupted for the first time since 1987.
- **Papandayan** in **Java** began activity again on July 1, 1998, per the *Global News* page. The last eruption was in 1942.
- On August 21, 1998, the **White Island** volcano in **New Zealand** was put on an alert due to fumaroles and gas vents with temperatures of 463 C, per the *Smithsonian*.
- **Cerro Azul** on the **Galapagos Island** in Ecuador reawakened on September 15, 1998, per the *Smithsonian*.
- On October 27, 1998, the **Nyamuragira** in the **Congo** began producing lava again, per a *CNN/Reuters* report.
- *Associated Press* reported on October 26, 1998 that the dormant volcanos on the Caribbean nation of **Dominica** are threatening to erupt, with 200 shallow tremors on a single day.
- The *USGS* reported on November 29, 1998 that an **8.3** magnitude earthquake occurred in the Ceram Sea near Sulawesi, **Indonesia**.





Troubled Times

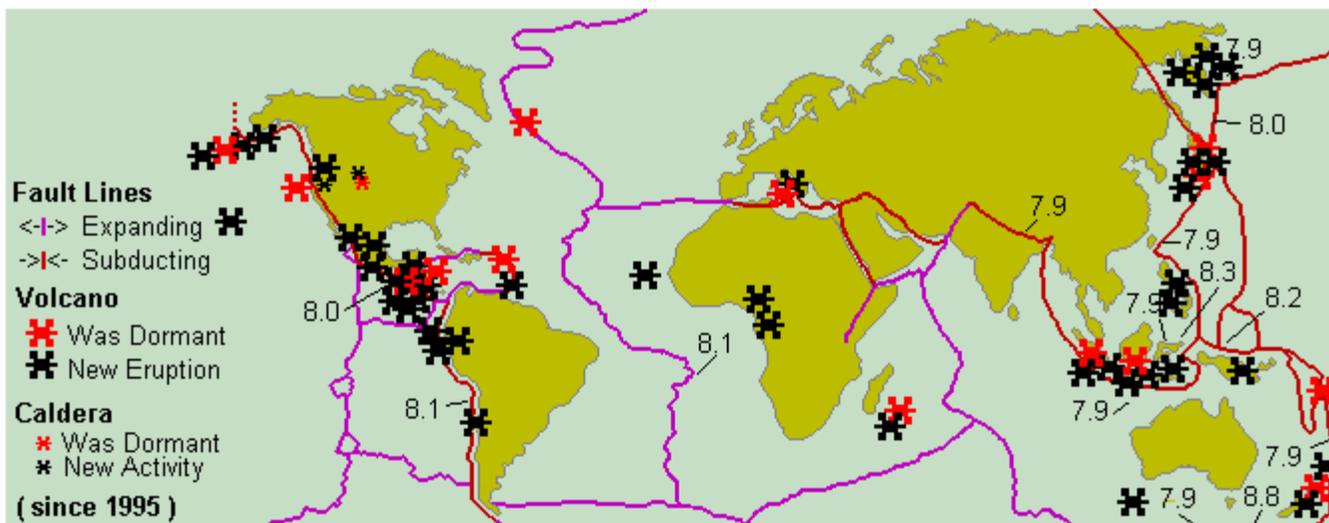


1999

Below is the Quake Watch extreme quake and volcano activity through 1999. Quake Watch stopped at this point as the trend had become obvious.

- A new volcanic island (**Unnamed**) emerged from the ocean 30 miles from the **Tongan** capital of Naku'alofa on January 18, 1999, per *Volcano World*. Warnings were issued to ships traveling near the area.
- **Mt. Etna** erupted again on February 4, 1999, per *Volcano World*, opening a new vent on the volcano's southeastern side and releasing a huge jet of lava.
- **Krakatau** erupted on February 4, 1999 with an explosion that could be heard 40 miles away, per *Volcano World*. Smoke reached 1,000 feet above the crater.
- **Bezymianny**, on the **Russian Peninsula**, sustained a large explosion, sending gas and ash plumes 5 miles into the air on February 24, 1999 per *Volcano World*.
- **Mount Cameroon** in **Africa** exploded on April 2, 1999, adding three more vents to the four already escaping on the sides of the volcano. The *Panafrican News Agency* reported the fresh rumblings shook nearby villages and destroyed 14 houses. 247 people living in villages surrounding the 4070-metre high mountain were made homeless following the destruction of their homes by the earth tremors.
- **Shishaldin**, on the **Russian Peninsula**, extruded glowing rocks, causing snowmelt, and sending plumes 45,000 feet in the air on April 19, 1999 per *Volcano World*.
- The *Volcanological Society of Indonesia* reported that during the days leading up to May 3, 1999, ash emission, white in color and reaching 400m in height, was observed at **Java's Slamet**. This was accompanied by hot spring measurements showing a rise from 40.1o to 81.1o C. and seismic events dominated by tremors, which had a 4 to 30 mm amplitude. The volcano status was raised to the alert level.
- *Fox News* reported that officials in **Colima** and Jalisco states in **Mexico** evacuated several hundred people from villages at the foot of Colima, a 13,325 foot volcano, which sent a 15,000 foot high plume of ash and gas into the air May 10, 1999. A large new hole opened in the crater. Colima's last eruption was in 1994.
- On May 20, 1999, *Discovery News* reported that Mexico's **Volcan de Fuego** let out 20 outbursts during a 24-hour period, sending volcanic ash raining onto surrounding communities. The Volcan de Fuego is situated about 280 miles (450 km) west of **Mexico City**, on the border between the states of Colima and Jalisco.
- *Fox News* reported on May 22, 1999 that Guatemala's **Volcan de Fuego** (Volcano of Fire), which last erupted in 1978, began ejecting ash and rocks. Volcan de Fuego, near the colonial city of Antigua, some 30 miles (48 km) southwest of the capital **Guatemala City**, has had violent eruptions in the past.
- On May 26, 1999, **Nicaragua's Telica** volcano erupted again, though Telica's magmatic eruptions appear to be less violent than those of nearby Cerro Negro which last erupted in 1995.
- **Mount Cameroon**, known locally as Mount Faka, the highest peak in West and Central **Africa**, poured more magma from its crater on June 10, 1999 and appeared to be on the verge of another eruption, per *Volcano World*.
- The **Indonesia** stratovolcano **Lewotobi**, on the Flores Islands, erupted again on July 1, 1999, per *Volcano World*.
- **Kliuchevskoi**, one of the most active volcanoes on the **Kamchatka Peninsula** in Russia, erupted again on July 1, 1999 per *Volcano World*, sending a plume of gas and steam 50 meters above the crater.
- *Fox News* reported on July 6, 1999 that an eruption by the **Philippine Mayon** volcano is pending, as lava has been moving within the magma chambers. Mayon last erupted on June 22, 1999 when it sent smoke and ash 4 miles into the sky.
- **Reunion's Piton de la Fournaise** (Fiery Peak) volcano, located on the island of Reunion in the **Indian Ocean** some 118 miles southwest of the island of Mauritius, erupted again on July 20, 1999, per *Discovery Online*.
- **Montserrat** continues to explode and erupted with a powerful blast on July 21, 1999 that sent ash soaring as high as 40,000 feet into the **Caribbean** sky, per *Discovery Online*, where it could be seen by airline pilots.

- *Discovery Online* reported that the **Institute of Geological and Nuclear Sciences** had said that the **White Island** volcano, off **New Zealand's** northeastern coast, erupted on July 23, 1999, spewing steam and ash about 10,000 feet into the air.
- **Mexico's Colima** volcano, located 110 miles south of **Guadalajara**, erupted again on July 29, 1999, spewing ash from the 13,448 foot crater. This was the fourth eruption during July alone, per *Volcano World*. *Discovery Online* reported that disaster authorities evacuated residents from the town of Yerbabuena in the state of Colima, where the volcano is located, as well as from five communities in the neighboring state of Jalisco.
- *Discovery Online* reported that subterranean explosions and tremors on the **Cerro Negro** volcano on August 9, 1999 forced evacuations from the **Nicaraguan** city of Leche Cuajo. Cerro Negro, which is considered one of the most dangerous volcanoes in Central America, became active again after four years of silence when lava and ash began spewing from three new openings in the volcano, which is located about 44 miles northwest of the capital city of Managua.
- **Nicaragua's Telica** volcano roared back to life on August 11, 1999, spewing hot ash and rocks, per *Discovery Online*. The 1,650-foot (503 metre) volcano, located 50 miles (80 km) north of the capital city of Managua, sent up a huge plume of smoke and ash, which later blanketed nearby villages with ash. Activity within the volcano had increased for the past month after it first sent out a plume of smoke in June.
- On August 12, 1999, the **Karymsky** volcano on the **Russian Peninsula** erupted again with 15 gas explosions and possible pyroclastic flows, per *Volcano World*.
- The stratovolcanoe **Guagua Pichincha**, in Ecuador, located 7 miles from **Ecuador's** capitol city of Quito, erupted again on August 12, 1999, per *Volcano World*. This was the seventh reported activity in the volcano during 1999.
- **Mexico's Popocatepetl** continued activity on August 19, 1999, per *Volcano World*, the fifth alert during 1999 where eruptions of ash and gas affecting nearby communities have occurred. Fuego, in Guatemala, Central America's more active volcano, erupted again on July 26, 1999, per *Volcano World*. Popocatepetl was silent for 67 years until it exploded back to life four years ago.
- **Japan's Mt. Shindaka** on Kuchinoerabujima Island showed signs of increased activity on Aug 27, 1999, per *Discovery Online*. Shindaka is a 2,140-foot volcano located in Kagoshima Prefecture about 620 miles southwest of **Tokyo**, and last erupted in 1996.
- The Philippines **Taal** volcano activated again per *Discovery Online* on Oct 1, 1999. Taal, which is 47 miles south of **Manila**, last erupted in 1977 and prior to that, in 1965.
- **Ecuador's** active volcano **Tungurahua**, near the capitol of Quito, exploded with gases again per *Discovery Online* on Oct 7, 1999.
- **Villarrica**, in **Chile**, erupted again on Oct 17, 1999, per *Volcano World*.
- Two **Nicaragua** volcanoes increased their activity, per *Discovery Online* on Nov 23, 1999 - **San Cristobal**, 95 miles northwest of Managua, and **Masaya**, also close to Managua.
- **Mt. Marsili**, which rises 9,800 feet from the seabed in the Tyrrhenian Sea southwest of **Naples**, was believed to be dormant but is now active, per *Discovery Online* on Nov 28, 1999.





Troubled Times



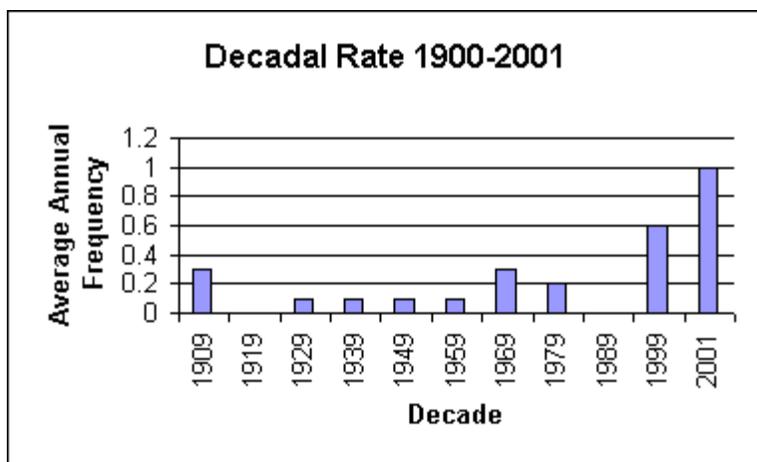
2001

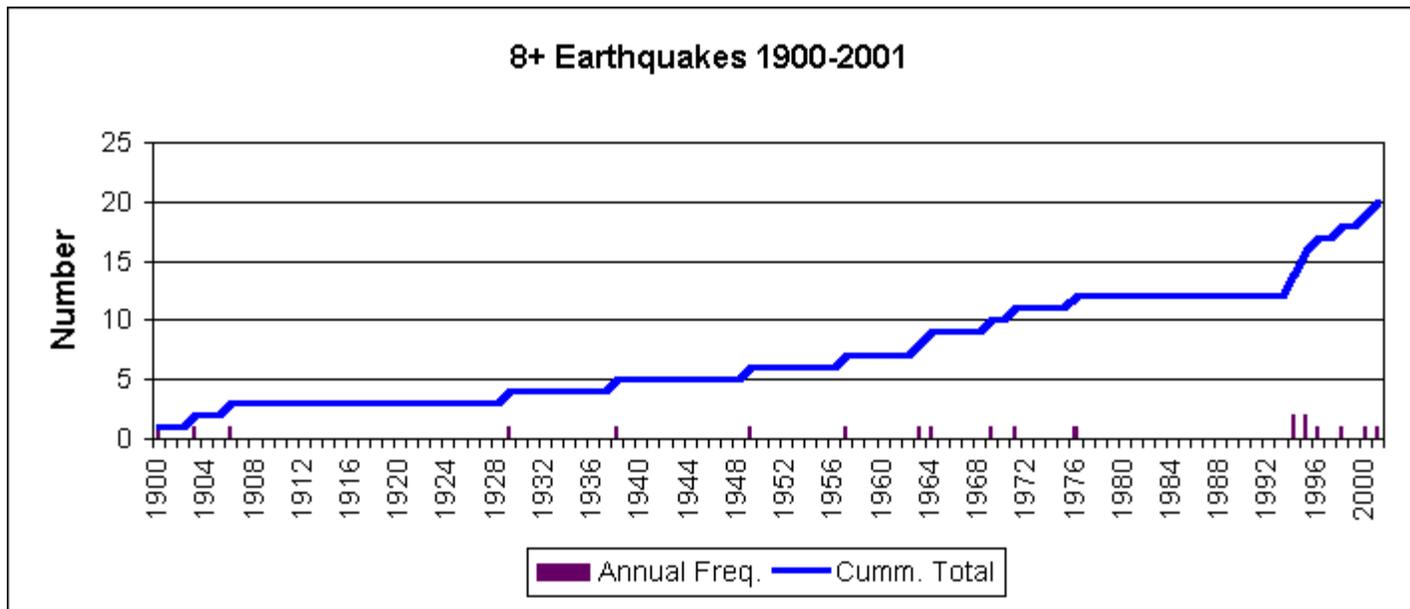
I have been having another look at the 8+ quake stats, this time from 1900, and a definite increase in the frequency of these size quakes is observed over the last decade. Note that, prior to 1994, 8+ earthquakes had only occurred in consecutive years once before. I can hear the scientific explanations now ...

This is clearly an indication that there is better data collection now and the continual improvement in seismic monitoring observed demonstrates just how effective those tax dollars are in the hands of the establishment. Not hing to worry about here, just continual improvement in monitoring standards." and "No, actually there is no baseline established for "normal" so we can not infer anything from this apparent trend. The reference period is insufficient and we really need 10,000 years of data before we can infer anything at all. Certainly the bunching up of lines on the right hand side of the graph is nothing to worry about.

And here's another way of looking at it, the average annual number of 8+ quakes over each decade of the last century. The 2001 number is the annual average occurrence so far this decade (ie. for 2000 and 2001). The raw data I extracted is from the CNSS database for the period 1900 - 2001. The search parameters were:

- a.. catalog=CNSS
- b.. start_time=1900/01/01,00:00:00
- c.. end_time=2001/07/15,00:00:00
- d.. minimum_magnitude=8
- e.. maximum_magnitude=10
- f.. event_type=E





Offered by [Gino](#).



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Confirmed

I wrote a small perl program to test things from this quake database. I came across some interesting results. This is how I computed them. I was interested in what I deemed as surface quakes, ie. those occurring between 0 to 100 km of depth; I was interested in quakes of magnitude 6.5 to 10, and I wanted them from the whole globe. I also wanted the statistics from 1970 to 2001, to 16th of July (today). I grouped the quake statistics yearly, taking advantage of these properties:

- date of quake (year),
- magnitude of quake (mag)
- (1) count of quakes per year, which I called cnt
- (2) 10^{**} mag , which I called exp
- (3) $\text{mag}^{**} 2$, which I called pwr

The purpose of the 10^{**} mag was to produce a sum-up and average of the magnitudes of the quakes in non-logarithmic scale, which I deemed more appropriate in following the trends of the quakes recently and in past. Also, the average magnitude is computed using $\log(\text{exp} / \text{cnt})$ for each year. This should be a more proper manner of computing average of a logarithmic property. This is the data which I received from my [Perl Program](#) (source code in bottom). Notice that the year 2001 statistics are [Shooting](#) through the roof. I do not know what this means, in general terms, but I thought you might be interested in this.

It must be noted that having higher activity earthquake periods is not at all uncommon, latest similar peak in earthquakes has been in the 1970s, as is shown. So, it could be erroneous to judge that this period is in particular more severe than any other recorded peak. It could be interesting to also check the data from 1900 onwards, but I didn't do this. I must admit that the numbers for 2001 do look large but more quakes in this year that would be somewhat milder could do a lot in lessening the seeming strength of those numbers. Or they might increase them.

Offered by [Antti](#).



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Increasing

USGS updated one quake recently, which is here, from their database:

```
Date      Time      Lat      Lon      Depth Mag Magt Nst
2001/06/23 20:33:14.13 -16.2650 -73.6410 33.00 8.40 Me 518
```

Due to it, all my values jerked strongly upwards. They became *so* significant, that I had to bring it to your attention.

```
catalog=CNSS
start_time=1990/01/01,00:00:00
end_time=2001/08/15,20:16:31
minimum_magnitude=5.5
maximum_magnitude=10
minimum_depth=0
maximum_depth=70
event_type=E
```

Now, the analysis.

N = count,
 E**2 is my old pwr property, X_n always indicates average, where X is name
 E = 10 ** mag
 m_max is new and shows the strongest event for that year.

year	N	E**2/G	E**2_n/G	E/k	E_n/k	m_n	m_max
1990:	286	1078448	/ 3771	243680	/ 852	5.93	7.40
1991:	242	815370	/ 3369	237267	/ 980	5.99	7.20
1992:	322	2802484	/ 8703	378968	/ 1177	6.07	7.50
1993:	280	1320784	/ 4717	335934	/ 1200	6.08	7.10
1994:	332	17969639	/ 54125	513444	/ 1547	6.19	8.10
1995:	404	35508634	/ 87893	961635	/ 2380	6.38	8.00
1996:	412	43992506	/ 106778	929913	/ 2257	6.35	8.20
1997:	346	11004743	/ 31806	569957	/ 1647	6.22	7.80
1998:	289	20770312	/ 71870	551891	/ 1910	6.28	8.10
1999:	337	9364165	/ 27787	601623	/ 1785	6.25	7.70
2000:	380	29052484	/ 76454	812284	/ 2138	6.33	8.00
2001:	154	72232249	/ 469041	663005	/ 4305	6.63	8.40

Last 2 years value percentages (2001 value / 2000 value - 1) * 100%:

N: -59.5% of quakes of previous year so far, detailing:

E**2 figure: +148.6% / +513.5% average
 E figure: -18.4% / +101.4% average
 Average magnitudes of later year have changed +4.804%

Latest event which made it to these figures:
 2001/08/13 20:11:22.55, a 6.40 mag. quake

Well, wow! +500% average increase and +100% average increase, although I would not talk about the E**2 that is built specifically to show strong events very clearly. As the E**2 is really not any physical property, I think it would

probably be best to ignore it, despite it's very juicy. However, I do think that the E value I computed is at least in the correct direction. The /k or /G indicates scale, not unit. Energy would presumably be in Joules. k is for 1_000, G for 1_000_000_000 multiplication. The data shows a 100% increase for average strength of events so far. Before the update on 2001/06/23, it used to be more modestly some 30 % high, but this of course changes the stage significantly. I have also another idea which would be to plot a 3-dimensional graph showing quakes assorted by magnitude and year. So, it would be a plane where the height is the count, x is the year, and y is the magnitude range, 5.5, 5.5 to 6.0, 6.0 to 6.5, etc. I think it would also give important insight, and hopefully show the trend over years as well, without being hard to comprehend (from what I see, the trend is blindingly obvious and very alarming).

Offered by [Antti](#).



Troubled Times



During 2001

Quakes Kill More Than 21,000 in 2001

Associated Press, Jan 4, 2002

Researchers say 2001 was a particularly deadly year for earthquakes, with 65 significant quakes worldwide blamed for killing more than 21,000 people. The U.S. Geological Survey said most of the fatalities occurred in the magnitude 7.7 quake that struck northwestern India on Jan. 26. Strong earthquakes are rare in the remote Gujarat state, which borders Pakistan. Most of the nearly 13,000 victims were trapped as thousands of dwellings and offices were reduced to rubble. "Dense urban populations coupled with weak building structures near the epicenters are responsible for most of the fatalities, in any year," said Waverly Person, director of the USGS National Earthquake Information Center.

In all, 21,436 people died in earthquakes last year, the USGS reported this week. The toll was significantly higher than in 2000, when 225 earthquake deaths were reported worldwide. On average, 10,000 people die in earthquakes annually, the USGS said. The deadliest earthquake in the past 100 years occurred in 1976 in Tangshan, China, where at least 240,000 died in a magnitude 7.8 event. The largest earthquake in 2001 was a magnitude 8.4 off the coast of Peru on June 23. It caused more than 100 deaths, but the impact was reduced because of its offshore location. El Salvador suffered a pair of major quakes on Jan. 13 and Feb. 13 that killed 5,000.

In the United States, a magnitude 6.8 earthquake struck the Seattle-Tacoma area on Feb. 28, causing \$1.5 billion in damage and injuring 400. Officials said the toll was limited by an aggressive public campaign to enforce building codes and other earthquake mitigation measures. Millions of minor earthquakes occur annually. Significant earthquakes are those of magnitude 6.5 or greater or those that cause fatalities, injuries or substantial damage. During a typical year, 18 major temblors (magnitude 7.0 to 7.9) and one great earthquake (8.0 or higher) occur worldwide, the USGS said.



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2002 Trend

I checked out the NEIC web site and found out there were 23 earthquakes of magnitude 5.9 or above. That is about 1 a day. NEIC claims that on average there are only about 1 such earthquake every 3 days.

Offered by [Ehsen](#).

Last 5 days; a 7.9 in Alaska, a 7.7 near Sumatra, the two 5.somethings in Italy with Etna blowing, and also a Volcano erupting in Pakistan, with a 5.+ earthquake there. Also a big one in Northern Japan. In the last 30 days, 108 earthquakes of 5 or above. Sounds like a lot. A 7.5 just hit Ascension Island (Near St. Helena) and a 5.2 in Southern Japan. Plus another volcano, this time in Quito, Ecuador. A sudden increase.

Offered by [Kirk](#).

An article on the [Rense](#) site in turn leads to this URL listing earthquakes 6+ and above. 500 earthquakes just since 20 August 2002 (listed bottom of page of above URL) Wow!

Offered by [Richard](#).

Swarm earthquakes Manchester UK
Swarm earthquakes Tawian
Swarm earthquakes Alaska
They all seem to be 5.0km depth. Strange.

Offered by [Cliff](#).



Troubled Times



Dramatic Increase

I took a snap shot from the [National Seismic System](#) comparing Sep/Oct in 2001 to the same period in 2002.

In 2001 there were, during Sep/Oct:

3 Quakes 7+ Ave 7.17
22 Quakes 6+ Ave 6.36
227 Quakes 5+

In 2002 there were, during Sep/Oct:

4 Quakes 7+ Ave 7.65
42 Quakes 6+ Ave 6.36
244 Quakes 5+

An increase in number *and* intensity.

Offered by [Nancy](#).

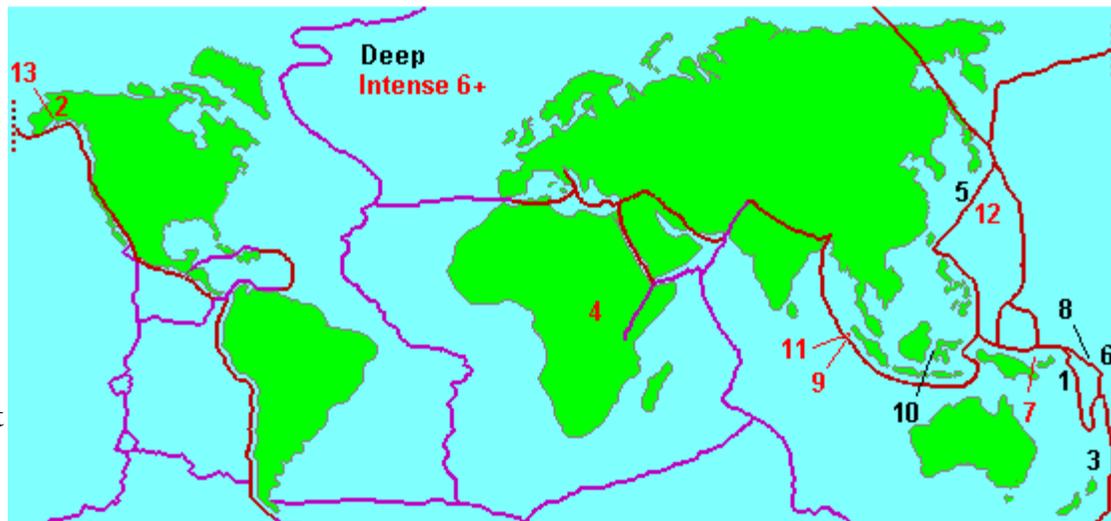


Troubled Times



Pre-Shift Adjustments

Where Domino quakes, one plate pushing another, became evident in 1999, by 2002 pre-shift adjustments in compression around the Pacific Rim and tearing of the African Rift were evident. Searching the [CNSS Earthquake Catalog](#) for quakes 5.0 Richter or greater for the 2 week period preceding the 7.9 Alaskan quake on Nov 3, 2002, we find there is an almost instant reaction, within the *same day*, for deep quakes on one side of a plate to push to a strong surface quake on the other side of the plate or abutting plate. Compression around the Pacific Rim and tearing of the African Rift were the focus of this activity, plate adjustments expected during the shift itself.



Offered by [Nancy](#).

Date	Location	No.	Lat.	Long.	Depth	Mag.
10/22/02	Fiji	1	-20.4610	-178.5720	551.60	6.20
10/23/02	Alaska	2	63.5760	-148.0880	14.00	6.70

Deep quake in Fiji [southern edge of Pacific Plate] followed by strong quake in Alaska [northern edge of Pacific Plate]

10/23/02	New Zealand	3	-30.6780	-179.8210	360.50	5.00
10/24/02	Zaire	4	-1.8990	28.9040	11.00	6.20

Deep quake in New Zealand [eastern edge of Indio/Australian Plate] followed by strong surface quake in Zaire [rift point in African Plate]

10/25/02	Iwo Jima	5	30.6010	130.0160	119.10	5.30
10/30/02	Fiji	6	-17.4870	-174.3500	86.50	5.30
10/31/02	New Guinea	7	-3.4200	148.4740	33.00	6.10

Deep quakes in Iwo Jima [eastern edge of Euroasian Plate] and Fiji [western edge of Pacific Plate] followed by strong surface quake in New Guinea [northern edge of Indio/Australian Plate abutting both]

11/01/02	Solomon Is	8	-19.6430	169.2820	400.00	5.10
11/02/02	Sumatra	9	3.0240	96.1810	33.00	7.50

Deep quake in Solomon Is [western edge of Pacific Plate] followed by strong quake in Sumatra [edge of abutting Indio/Australian Plate]

11/02/02	Indonesia	10	-7.1490	128.8550	82.20	5.30
11/02/02	Sumatra	11	2.9540	96.4230	33.00	6.20
11/03/02	Iwo Jima	12	38.8760	141.9170	49.30	6.10
11/03/02	Alaska	13	63.5200	-147.5300	5.00	7.90

Deep quake in New Guinea [center of southern lob of Euroasian Plate] followed by strong surface quakes in Sumatra [abutting Indio/Australian Plate border], then Iwo Jima [abutting western edge of Pacific Plate] then Alaska [upper edge of Pacific Plate]

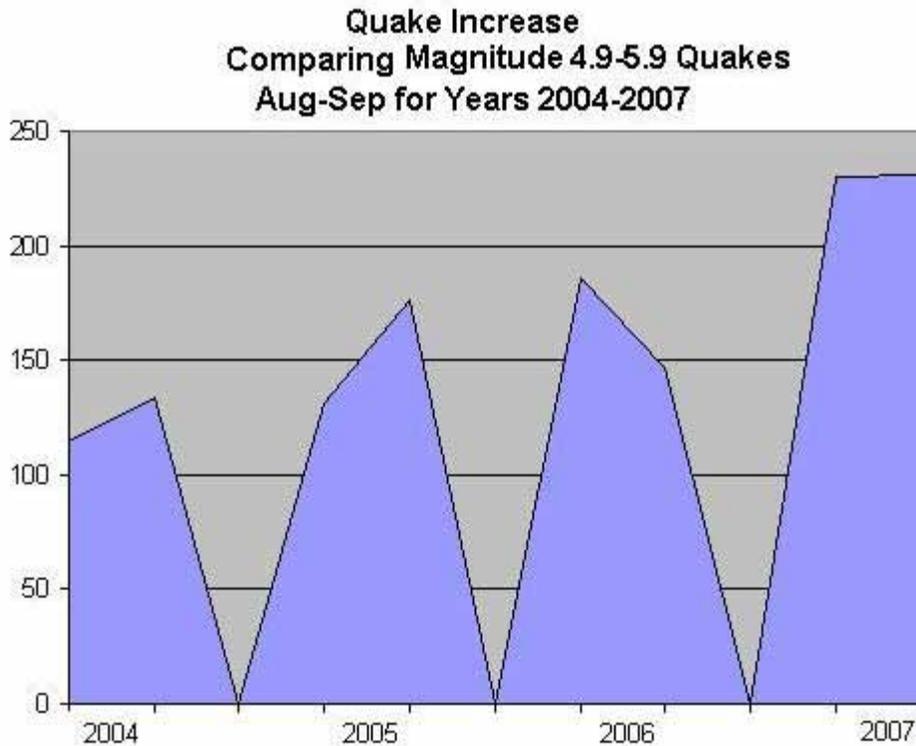


Troubled Times



Sabilizing

This was predicted by the Zetas, who predicted an exponential increase in quakes after years of what they termed a lineal increase. Checking the data at the [Advanced National Seismic System](#), comparing apples to apples for the months of August-September during the years 2004 though 2007, we find a *greater* than lineal increase in 2007. This was for quakes in the 4.9 to 5.9 Richter range, essentially Richter 5-6. The USGS has a reputation for [reducing Richter](#) or simply [dropping quakes](#), a practice they instituted in 2003. From 2006-2007 quakes in this range took a 38% jump, from a total in Aug-Sep of 333 in 2006 to 461 in 2007. Comparing 2005 to 2006 for Aug-Sep, the increase was only 8% and the year before only 23%. The lineal increase had begun!



Offered by [Nancy](#).



Troubled Times



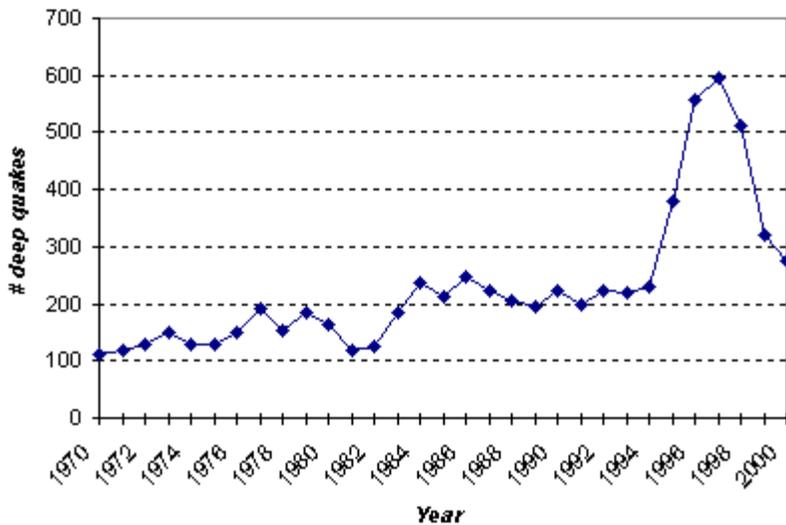
Sabilizing

The data used for this report is extracted from [CNSS Earthquake Catalog](#) using the following search criteria for deep quakes.

```
catalog=CNSS
start_time=19xx/01/01,00:00:00
end_time=20xx/12/31,23:59:59
minimum_magnitude=3.0
maximum_magnitude=9
minimum_depth=500
maximum_depth=700
event_type=E
```

Deep quakes seem to be stabilizing, after a peak of 600 per year in 1998.

Deep Quakes 1970-2000



Offered by [Kiko](#).



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Quake Analysis

The purpose of this quake analysis was to ascertain if there were correlations between undersea volcanic activity in Indonesia and the El Nino phenomena, and to determine correlations to the deep earthquake increases which has had an almost exponential increase over the past couple decades. The data used for this report is extracted from the [CNSS Earthquake Catalog](#) using the following search criteria:

```
catalog = CNSS
start_time = 19xx/01/01,00:00:00
end_time = 20xx/12/31,23:59:59
minimum_magnitude = 3.0
maximum_magnitude = 9
minimum_depth = 0
maximum_depth = 100
event_type = E
```

As you see, I excluded earthquakes Richter 1-3. I did this, because we've heard many comments over past years that earthquakes are not on the increase, and that more earthquakes are detected simply because there are more and more seismic stations installed, which detect more weak earthquakes. By doing this, I think, I avoided this comment. Also, since the data is from the CNSS Catalog, which is a union of reports from many seismic stations around the world, the Richter 3 earthquake data seems to be *less* than what was detectable in 1970 and not missed because of a few seismic stations less than today. Thus, in my analysis, this spotty data is dropped. The data for the present year is estimated, not actual (number of quakes in first 6 months multiplied by 2). All the data obtained from CNSS was imported into a database for easier running of queries.

Offered by [Kiko](#).
May 17, 2000



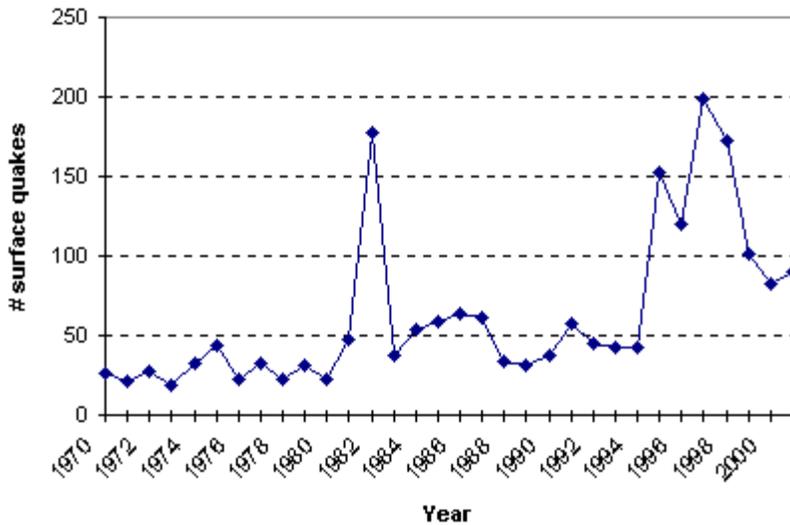
Troubled Times



El Nino Correlation

To determine if there were a correlation between undersea earthquakes and the El Nino phenomena, I executed a query excluding Richter 5+ earthquakes and earthquakes deeper than 50km in the El Nino area of the Pacific from 1970-2000, since stronger and deeper earthquakes rarely indicate volcanic eruptions. This seems reasonable to me, since we're looking here for a connection between volcanic eruptions and El Nino. This very interesting graph shows earthquakes in the area east of Indonesia, where El Nino originates. The graph shows extreme peaks in 1982 and 1995-98, that correlates with the 1982-83 and 1997-98 extreme El Ninos. From this I conclude that the idea of El Nino being caused by under sea volcanoes is correct.

**Surface Quakes 3-5 (<50km) 1970-2001
in El Nino Area**



Offered by [Kiko](#).



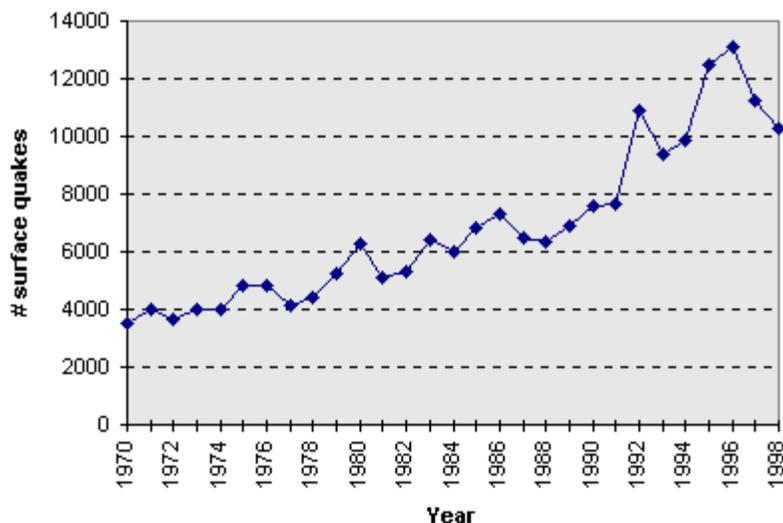
Troubled Times



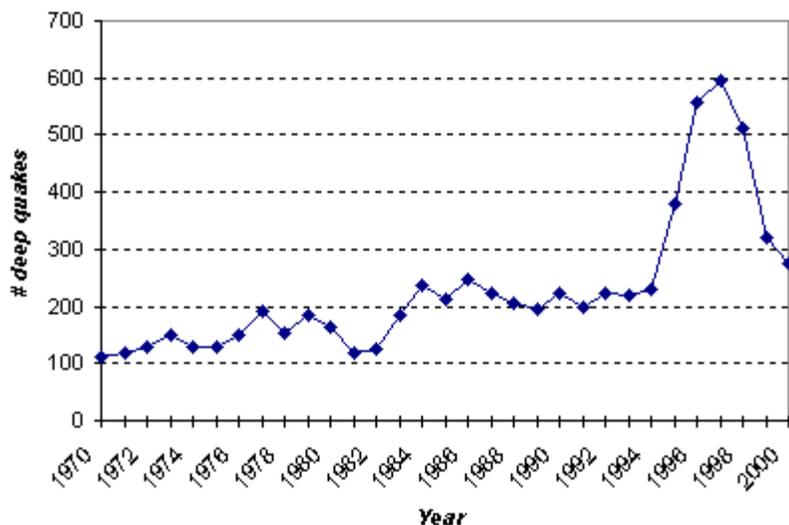
1997-98 Lull

After executing queries for Richter 3+ Quakes from 1970-1998, and again for Richter 5+ Quakes 1970-1998 we can see an exponential increase in earthquakes in general and a relatively stable incidence of Richter 5+ earthquakes. I conclude that earthquakes are on the increase, however, all of this increase to 1998 falls to weaker earthquakes (below Richter 5). Both graphs also show an interesting significant decrease in earthquakes in 1999. While this may indicate a "cooling down", there's another interpretation. If you look at the Richter 3+ graph more closely, you will see that after every increase there was a decrease followed by a stronger increase. If we assume this pattern to continue, we may expect that we're currently in a "silence before a storm" and that the earthquakes will drastically increase later, probably including an increase in higher Richter earthquakes.

Surface Quakes 3+ 1970-1998*



Deep Quakes 1970-2000



Richter 3+ Quakes 1970-7/1998

1970	3504
1971	3980
1972	3670
1973	4010
1974	3991
1975	4821
1976	4805
1977	4121
1978	4408
1979	5223
1980	6295
1981	5113
1982	5344
1983	6431
1984	5998
1985	6834
1986	7310
1987	6496
1988	6315
1989	6907
1990	7553
1991	7636
1992	10884
1993	9400
1994	9830
1995	12495
1996	13112
1997	11273
7/1998	10300

Richter 5+ Quakes 1970-7/1998

1970	1097
1971	1198
1972	1167
1973	1174
1974	1174
1975	1281
1976	1447
1977	1451
1978	1272
1979	1130
1980	1130
1981	953
1982	1173
1983	1460
1984	1256
1985	1410
1986	1393
1987	1188
1988	1181
1989	1189
1990	1382
1991	1214
1992	1316
1993	1262
1994	1333
1995	1211
1996	1164
1997	940
7/1998	708

Offered by [Kiko](#).

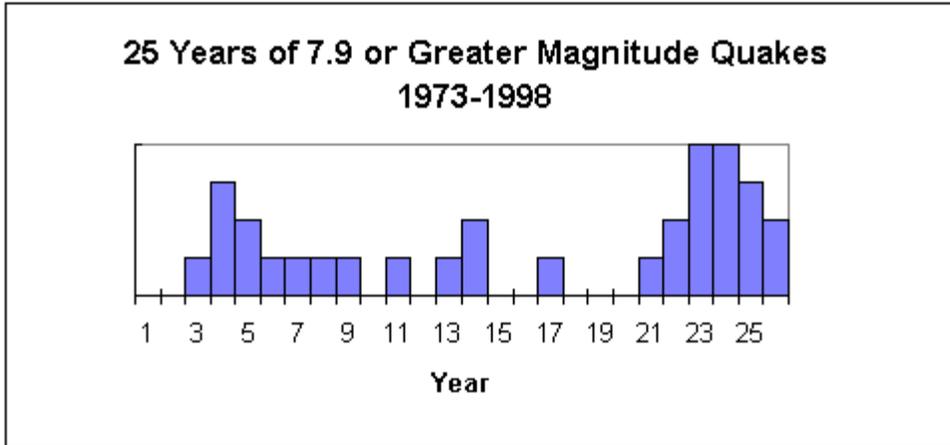


Troubled Times



Magnitude

The NEIC (*National Earthquake Information Center*) of the USGS reports earthquakes, by year, with magnitude. These statistics shows an increase in magnitude 7.9 or greater, the magnitude used as a threshold by Troubled Times on their *Quake Watch* pages. A magnitude of 7.9 was used as the threshold as it was noted that the USGS downgraded quake magnitude slightly, from the magnitude originally reported in the news. Since 8.0 is used by the USGS to include a quake in their "major" quake category, including 7.9 avoids any statistical manipulation.



Troubled Times



Frequency

Here's the scoop. I did a search and counted quakes with a magnitude 6 or greater:

1995 **171** quakes

1996 **164** quakes

1997 **135** quakes

1998 **125** quakes

1999 **149** quakes by May 15th (is 56 at 5/16, so assuming a steady rate)

But the uptick during May 1999 is dramatic!

9 in January

11 in February

10 in March

12 in April

14 in May to 5/16 alone!

Offered by [Nancy](#).



Troubled Times



Richter 3+

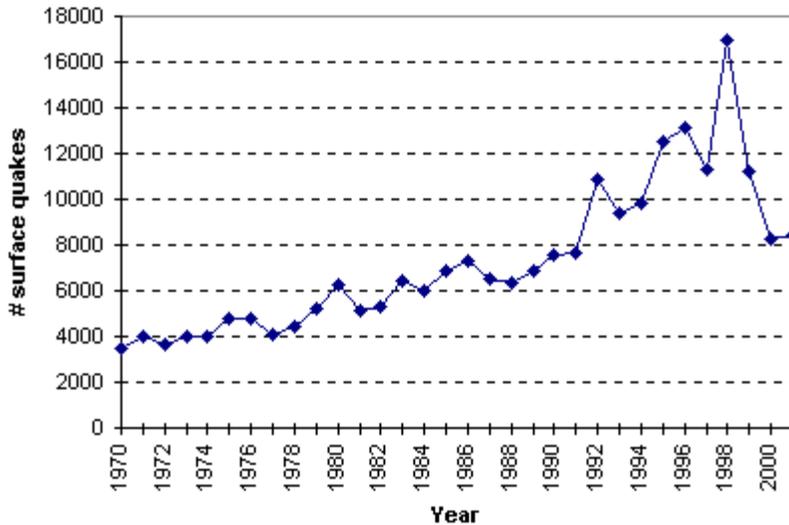
The data used for this report is extracted from [CNSS Earthquake Catalog](#) using the following search criteria for surface quakes:

```

catalog=CNSS
start_time=19xx/01/01,00:00:00
end_time=20xx/12/31,23:59:59
minimum_magnitude=3.0
maximum_magnitude=9
minimum_depth=0
maximum_depth=100
event_type=E
    
```

As you see, I excluded earthquakes Richter 1-3. I did this, because we've heard many comments over past years that earthquakes are not on the increase, and that more earthquakes are detected simply because there are more and more seismic stations installed, which detect more weak earthquakes. By doing this, I think, I avoided this comment. Since the data is from CNSS catalog, which is a union of report from more seismic stations around the world, the Richter 3 earthquake seems to be a lower limit of what was detectable in 1970 and not missed because of a few seismic stations less than today.

Surface Quakes 3+ 1970-2001



Offered by [Kiko](#).



Troubled Times

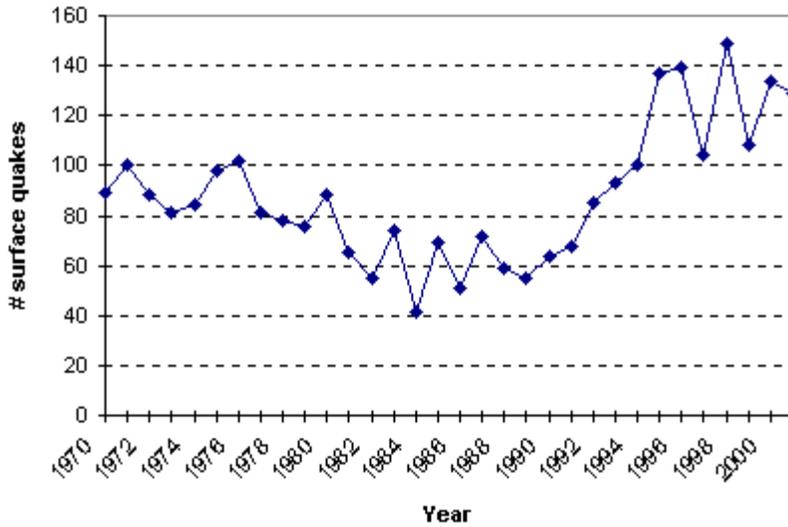


Richter 6+

The data used for this report is extracted from [CNSS Earthquake Catalog](#) using the following search criteria for surface quakes:

```
catalog=CNSS
start_time=19xx/01/01,00:00:00
end_time=20xx/12/31,23:59:59
minimum_magnitude=6.0
maximum_magnitude=9
minimum_depth=0
maximum_depth=100
event_type=E
```

Surface Quakes 6+ 1970-2001



Offered by [Kiko](#).



Troubled Times

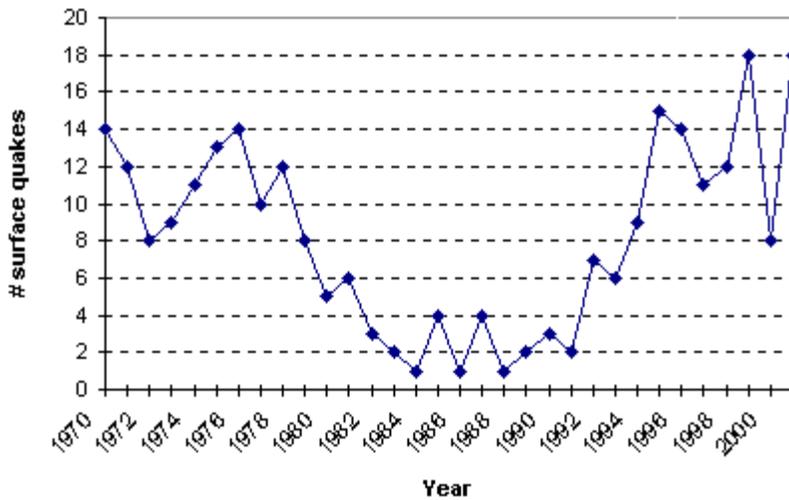


Richter 7+

The data used for this report is extracted from [CNSS Earthquake Catalog](#) using the following search criteria for surface quakes:

```
catalog=CNSS
start_time=19xx/01/01,00:00:00
end_time=20xx/12/31,23:59:59
minimum_magnitude=7.0
maximum_magnitude=9
minimum_depth=0
maximum_depth=100
event_type=E
```

Surface Quakes 7+ 1970-2001



Offered by [Kiko](#).



Troubled Times



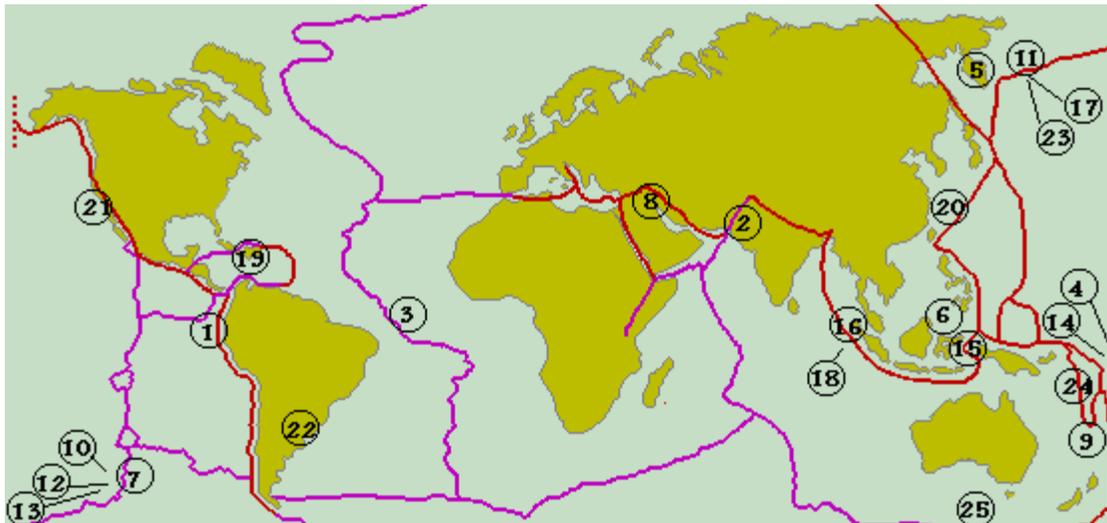
Domino

For over a year I've been saying we would start to have domino earthquakes, meaning that the plates are so tightly compressed together (due to the up-tick in deep earthquakes that have occurred since 1985) that any change reverberates around the world, quickly. Lately I've noted that they seem to come in bursts, all over the world. I noted it starting about 6 months ago, and now during and after the 7.6 quake in Turkey it seems to be evident, so I did some research. I searched the [CNSS Earthquake Catalog](#) for quakes 5.0 Richter or greater, during a comparable time during August of 1998 and 1999.

```
catalog=CNSS
start_time=1998/08/17,00:00:00
end_time=1998/08/22,23:59:59
minimum_magnitude=5.0
maximum_magnitude=9
minimum_depth=0
maximum_depth=100
event_type=E
```

Both these 6 day periods conveniently have a 7.0+ quake in them. What the statistics show is that a year ago quakes did not seem to be related, or were only locally related, when they occurred close together in time. The statistics and map for 1998 is below. There was no reverberation around the world.

Offered by [Nancy](#).



Date	No.	Location	Lat.	Long.	Mag.
8/04/98	1	Ecuador (off shore)	-.059	-80.39	7.2
8/05/98	2	Pakistan	29.32	68.74	5.4
	3	Brazil (off shore)	5.90	-33.08	5.2
	4	Somoa (western)	-21.47	-178.03	5.3
	5	Kamchatka	56.16	163.36	5.3

	6	Indonesia	6.49	125.98	5.3
	7	Pacific (near Antartica)	-54.67	-135.52	6.2
	8	Iraq	33.20	46.25	5.6
8/06/98	9	New Caledonia Is.	-21.84	169.81	5.5
	10	Pacific (near Antartica)	-54.39	-135.95	5.4
	11	Bering Sea	51.66	-177.28	5.1
8/07/98	12	Pacific (near Antartica)	-59.45	-151.03	5.3
	13	Pacific (near Antartica)	-59.58	-150.71	5.9
	14	Fiji Is.	-20.50	-177.72	5.4
8/08/98	15	Indonesia	0.22	122.24	5.2
8/09/98	16	Indonesia	7.34	94.35	5.4
	17	Bering Sea	53.00	171.13	5.2
8/10/98	18	Indonesia	7.32	94.30	6.0
	19	Dominican Republic	18.64	-70.54	5.2
8/11/98	20	Taiwan (East China Sea)	25.01	123.01	5.4
8/12/98	21	Los Angeles	36.75	-121.46	5.35
8/13/98	22	Uruguay	-58.78	-24.87	5.5
	23	Bering Sea	53.06	171.10	5.0
8/14/98	24	Solomon Is.	-11.43	166.21	5.8
	25	South Pole (magnetic)	-63.60	147.48	5.5



Troubled Times



Noted

This is an excerpt from the *LA Times*, Sept 5, 1999:

Another intriguing thing about the earthquake (Turkey) was the way it skipped from one fault to another. It began near Izmit, then jumped over 3-mile-wide Lake Sapanca and activated the Akyazi fault. The quake then set off a third fault called the Duzce. Until now, scientists didn't believe a quake could traverse a body of water so wide and set off another fault. "Every time we get a major earthquake, it humbles us, Stein said

Offered by [John](#).



Troubled Times

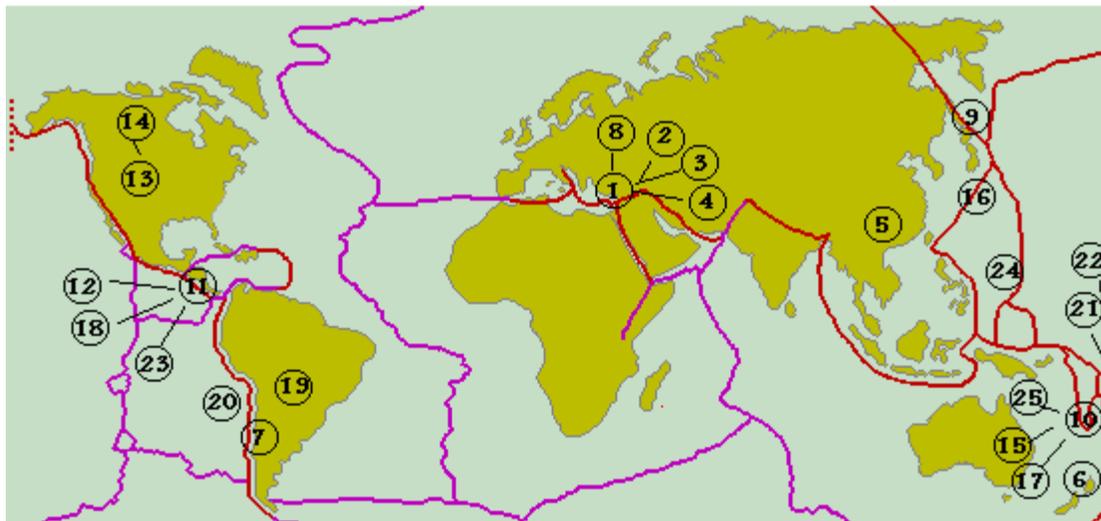


Ricochet

Searching the [CNSS Earthquake Catalog](#) for quakes 5.0 Richter or greater, during a comparable time during August, 1999, we find there is an almost instant (or within days) reverberation on the opposite side of the plate, rolling around the world from west to east.

```
catalog=CNSS
start_time=1999/08/17,00:00:00
end_time=1999/08/22,23:59:59
minimum_magnitude=5.0
maximum_magnitude=9
minimum_depth=0
maximum_depth=100
event_type=E
```

Offered by [Nancy](#).



Date	Location	No.	Lat.	Long.	Mag.
8/17/99	Turkey	1	40.70	29.98	7.6
	Turkey	2	40.70	30.59	5.0
	Turkey	3	40.78	30.08	5.0
	Turkey	4	40.63	30.70	5.3
	Burma	5	29.37	105.61	5.1
8/18/99	New Zealand	6	-37.25	177.27	5.8
	Chili	7	-30.79	-71.65	5.1
8/19/99	Turkey	8	40.58	29.07	5.0
	Japan	9	43.04	146.96	5.0
8/20/99	Tongo	10	-25.78	-179.68	5.3
	Costa Rica	11	9.20	-84.09	6.9

	Costa Rica	12	9.21	-84.04	6.7
	Idaho	13	44.87	-112.73	5.3
	Idaho	14	44.78	-112.77	5.3
	Tongo	15	-21.59	-174.45	5.1
	Japan	16	34.06	135.37	5.7
8/21/99	Tongo	17	-20.50	-173.70	5.7
	Costa Rica	18	9.06	-83.94	5.4
	Brazil	19	-58.16	-13.21	5.6
8/22/99	Peru	20	-40.42	-74.82	6.3
	Tongo	21	-16.10	167.92	6.2
	Tongo	22	-16.10	167.92	6.5
	Costa Rica	23	8.99	-84.01	5.3
	Guam	24	13.86	145.51	5.1
	Tongo	25	-15.24	167.81	5.1



Troubled Times



NEIS

The National Earthquake Information Center reports:
10 Largest Earthquakes in the World, 1900 to 1994

1.	Chile	05/22/1960	9.5 Mw
2.	Alaska	03/28/1964	9.2 Mw
3.	Alaska	03/09/1957	9.1 Mw
4.	Russia	11/04/1952	9.0 Mw
5.	Ecuador	01/31/1906	8.8 Mw
6.	Japan	11/06/1958	8.7 Mw
7.	Alaska	02/04/1965	8.7 Mw
8.	India	08/15/1950	8.6 Mw
9.	Argentina	11/11/1922	8.5 Mw
10.	Indonesia	02/01/1938	8.5 Mw



Troubled Times



USGS Coverup

Let's notice a huge discrepancy in earthquake reporting. The BBC says the March 25, 2002 quake in Afghanistan registered "about seven on the Richter scale." The U.S. Geological Survey lists it as a 6.0. In a smaller discrepancy, the USGS lists yesterday's Japan quake as a 6.3. China's news agency reports 6.9. Then they updraded the magnitude of the Afgan quake from 6.0 to 6.1, and the Japan quake from 6.3 to 6.5. If the BBC and Xinhua figures hold up, this will mark at least the fourth earthquake this month in the vicinity of 7.0 or more. If news reports claim there are 5,000 people feared dead and *no standing homes* now in the vicinity of Nahrin, Afghanistan, my limited knowledge of earthquake reporting says this is more consistent with a 7.0 than a 6.0. My faith in the integrity of USGS figures is about as solid as my faith in the Bush/Enron Administration.

Offered by [Mike](#).

Another earthquake discrepancy. Get this: On March 26, 2002 *ABC News* reported that the March 3 earthquake in Afghanistan registered a huge 7.9. But back on March 3, the U.S. Geological Survey called it a 7.2, a major difference given the logarithmic Richter scale. They now call it a 7.4. And if you recall, on March 26 the USGS listed that day's largest Afghan earthquake as a 6.0, which they've now upgraded to a 6.1. Meanwhile, the BBC said that quake registered "about seven" As a result of that earthquake, it was widely reported that the town of Nahrin was virtually obliterated. National Public Radio (U.S.) also reported that large swaths of trees were knocked to the ground. Also, the USGS has upgraded the March 5th earthquake in the Philippines from a 7.2 to a 7.5.

Offered by [Mike](#).



Troubled Times



Dropping Quakes

Hey Ma, They Lost 900 Earthquakes! And That Was Just In Alaska

by Dorothy Anne Sees

It isn't that the government would ever disseminate disinformation ... it's just puzzling how they could lose over 900 quakes on a Tuesday afternoon and not post an explanation. I know the nation is on a wartime footing, but since when has earthquake data become classified information? Or could this have anything to do with a call made by a listener to the Art Bell program the other night where the listener wanted to inform Art that the USGS site never registered certain quakes in the Sumatra and Japanese Islands areas, something I also noticed but at the time didn't consider really relevant.



Troubled Times



Global

It seems that there is activity all around the planet which is not reported in the press.

Offered by [Stephen](#).

I wonder what would generate this kind of seismic activity on a global basis? I've copied those USGS [cities where] seismographs [of significant quakes occurred for March 17, 2003].

Offered by [Gino](#).

Live Internet Seismic Server

These data update automatically every 30 minutes!!

Last update Mon Mar 17 16:03:49 MST 2003

Seismograms may take several moments to load.

Click on a plot to see an expanded view.

The GTSN stations will return soon.

IC/BJT, Baijiatuan, Beijing, China
IC/ENH, Enshi, China
IC/HIA, Hailar, Neimenggu Province, China
IC/KMI, Kunming, China
IC/LSA, Lhasa, China
IC/MDJ, Mudanjiang, China
IC/SSE, Shanghai, China
IC/QIZ, Qiongzong, Guangduong Province, China
IC/WMQ, Urumqi, China
IC/XAN, Xi'an, China
IU/ADK, Aleutian Islands, Alaska, USA
IU/ANMO, Albuquerque, New Mexico, USA
IU/ANTO, Ankara, Turkey
IU/BBSR, Bermuda
IU/BILL, Bilibino, Russia
IU/CCM, Cathedral Cave, Missouri, USA
IU/COLA, College Outpost, Alaska, USA
IU/COR, Corvallis, Oregon, USA
IU/CTAO, Charters Towers, Australia
IU/DWPF, Disney Wilderness Preserve, Florida, USA
IU/GNI, Garni, Armenia
IU/GUMO, Guam, Marianas Islands
IU/HKT, Hockley, Texas, USA
IU/HRV, Harvard, Massachusetts, USA
IU/INCN, Inchon, Republic of Korea
IU/KBS, Ny-Alesund, Spitzbergen, Norway
IU/KIP, Kipapa, Hawaii, USA
IU/KMBO, Kilima Mbogo, Kenya

IU/KONO, Kongsberg, Norway
IU/LSZ, Lusaka, Zambia
IU/LVC, Limon Verde, Chile
IU/MA2, Magadan, Russia
IU/MAJO, Matsushiro, Japan
IU/MBWA, Marble Bar, Western Australia
IU/MIDW, Midway Island, Pacific Ocean, USA
IU/MSKU Masuku, Gabon
IU/NWAO, Narrogin, Australia
IU/OTAV, Otavalo, Equador
IU/PAYG Puerto Ayora, Galapagos Islands
IU/PET, Petropavlovsk, Russia
IU/PMSA, Palmer Station, Antarctica
IU/POHA, Pohakaloa, Hawaii
IU/PTCN, Pitcairn Island, South Pacific
IU/PTGA, Pitinga, Brazil
IU/QSPA, South Pole, Antartica
IU/SPA, South Pole, Antarctica
IU/RCBR, Riachuelo, Brazil
IU/RSSD, Black Hills, South Dakota, USA
IU/SBA, Scott Base, Antarctica
IU/SJG, San Juan, Puerto Rico
IU/SNZO, South Karori, New Zealand
IU/SSPA, Standing Stone, Pennsylvania USA
IU/TATO, Taipei, Taiwan
IU/TIXI, Tiksi, Russia
IU/TRQA, Tornquist, Argentina
IU/TUC, Tucson, Arizona
IU/ULN, Ulaanbaatar, Mongolia
IU/WAKE, Wake Island, Pacific Ocean
IU/WCI, Wyandotte Cave, Indiana, USA
IU/WVT, Waverly, Tennessee, USA
IU/YAK, Yakutsk, Russia
IU/YSS, Yuzhno Sakhalinsk, Russia

Return to Seismic Data Page

This page is URL: http://aslwww.cr.usgs.gov/Seismic_Data/heli2.shtml

Maintained by: <mailto:asl.cr.usgs.gov>

Last modified on March 28, 2000 (hfb)



Troubled Times



Active Volcanoes

Does anybody know how many active volcanos there are on Earth? Find out at Volcano World. Why should you care? Of course, as the 12th moves closer, volcano activity is expected to increase. As of March 17, 1998 Volcano World lists 53 active volcanos.

Offered by [Charles](#).



Troubled Times



Record Number

Current volcanic activity shows a record number of newly active or erupting volcanoes.

5 in 95
10 in 96
19 in 97
20 in 98
12 already in 99 as of March 20, 1999

Offered by [Liela](#).

Just thought I would update you on some news that I've just come across. It involves the number of earthquakes and volcanic eruptions we've been seeing lately. I'm not intending to provoke any alarm, but they really do seem to be on the increase. Could we be seeing the initial phases of the polar shift, and a new cycle in the Earth? The US Geological Survey reports that for the period of January 1 through July 10 of 1999, the Earth had 16 quakes of a 6.0 or greater magnitude. In that same period of 2000, by comparison, we had 28 quakes of 6.0+ magnitude. (This does not count the three that have occurred from last Sunday to Wednesday.) As you can see, there's been a sharp increase in quake activity - nearly double - and it has gone unreported in the press. Volcanic activity seems to be up too, also doubled. I don't have quite as good a resource for this information as the USGS, but the site I referenced is at least supported by NASA. According to the information posted on this website, we have the following upward trend occurring over the last five years.

Year	# Eruptions
1996	10
1997	13
1998	16
1999	14
2000	26 - so far (as of Aug 10, 2000)

As I understand it, this is counting only eruptions that have begun in a particular site year, not ones that have continued through multiple years. The site I used for the volcano info is:
http://volcano.und.nodak.edu/vwdocs/current_volcs/current.html
 If anyone out there has a better, more authoritative source, please let me know - I'd like to have an accurate count.
 Scott Grady

Volcano Eruption Data

Southwest Volcano Research Centre, Apache Junction, Arizona USA
 Compiled by R.B. Trombly, Ph. D, Principal Research Volcanologist

Number of Volcanoes Erupted in Past 11 years (data does not include submarine volcanoes)

1989=46, 1990=32, 1991=40, 1992=50,
1993=44, 1994=44, 1995=45, 1996=35,
1997=33, 1998=36, 1999=48, 2000=51 (so far*)

*Last count made on October 9, 2000

I thought you all might like to see the volcanic activity (eruptions and activity) for the last 6 years. The [Chart](#) I am

referring to does not go back any further.

1995 - 4

1996 - 9

1997 - 13

1998 - 13

1999 - 11

2000 - 22

2001 - 23 (YTD as of August 13, 2001)

Offered by [Kevin](#).



Troubled Times



Inactive

Dormant Volcanoes Show Signs of Life, Satellite Reveals

NASA/JPL NEWS RELEASE

Posted: April 14, 2002

Previously dormant volcanoes in two widely separated areas of the Pacific "ring of fire" are showing signs of life, as documented by new images taken by the Advanced Spaceborne Thermal Emission and Reflection Radiometer (Aster) on NASA's Terra satellite.

Chiliques volcano in Chile

Geologists had previously considered Chiliques, a simple 5,778-meter (18,957-foot) stratovolcano with a 500-meter (1,640-foot)-diameter circular summit crater in northern Chile, to be dormant. However, a January 6, 2002 nighttime thermal infrared image from Aster found a hot spot in the summit crater, as well as several others along the upper flanks of the volcano's edifice, indicating new volcanic activity. Examination of an earlier nighttime thermal infrared image from May 24, 2000 showed no such hot spots. ...

Meanwhile, a couple of thousand miles to the northwest, a 10-by-20-kilometer (6.2- by-12.4-mile) section of ground near one of the long-dormant Three Sisters volcanoes in the Cascade Mountains of west-central Oregon has risen approximately 10 centimeters (3.94 inches) since 1996. According to the U.S. Geological Survey, this indicates the slow flow of magma or underground lava into the area. ...

Three Sisters volcanoes in Oregon.

The Three Sisters area -- which contains five volcanoes -- is only about 273.6 kilometers (170 miles) from Mount St. Helens, which erupted in 1980. Both are part of the Cascades Range, a line of 27 volcanoes stretching from British Columbia in Canada to northern California.



Troubled Times



Rifts

Earthweek, August 22, 1998

New Rift in Rift Valley

A 2.5 mile-long crack in the earth has opened up at Adami Tulu, about 105 miles south of Addis Ababa, according to the Ethiopian News Agency. The report quoted Adugna Urgessa, vice chairman of the east Shoa District, as saying that the crack resulted from a receding earth and is 16 feet wide and 40 feet deep. Adugna said the depression has been gradually growing southward in the direction of lakes Abiyata and Shala, two in a chain of lakes that stretch down the famed Great Rift Valley. Officials fear that if the crack widens and joins the lakes, it could result in the flooding of some agricultural areas.



Troubled Times



Superplumes

Studies Find That Magma Superplumes Are Rising From Base of Earth's Mantle

Associated Press, Apr 18, 2002

Two superplumes of molten rock appear to be powering through the boundary between the Earth's upper and lower mantle, perhaps feeding volcanoes and affecting movement of the planet's crust. New evidence of the superplumes - located beneath the south central Pacific Ocean and southern Africa - comes from studies of seismic waves conducted by scientists at the University of California at Berkeley and reported in Friday's issue of the journal *Science*. Smaller regions of magma rising to the Earth's crust power volcanoes and other hot spots. But the superplumes come from far deeper, crossing the boundary between the upper and lower mantle about 400 miles deep, an area that had been thought by some scientists to impede the flow of material. "Emphasis so far has been on the cold down-moving subducted plates and their critical role in mantle dynamics. We think the superplumes play an important role as well," researcher Barbara Romanowicz said.

When two of the planet's large surface plates collide, one slips beneath the other in a process called subduction. This can generate earthquakes and volcanoes along the boundary. The study seeks to focus attention on the hot material rising upward from the base of the mantle - the partially molten region that extends about 1,740 miles from the Earth's core to its crust, or lithosphere. "The hot material brought under the lithosphere by the superplumes then spreads out horizontally toward mid-ocean ridges," Romanowicz explained. The ridges are often active volcanic areas. The material heats up the region under the plates that cover the Earth's surface and thus may be an active contributor to their movement. ...

Regions above the superplumes tend to bulge upward. The plateaus of southern and eastern Africa are about 1,600 feet higher than most old continental areas in the world, she pointed out. This is referred to as the "African superswell." Also, she said, heat flow from the Earth's interior measured in a wide area of southern Africa is higher than expected, indicating that an unusually large supply of heat must be coming from underneath. There are volcanoes in Africa and in the southern Atlantic Ocean that could be related to the superplume in the same way as Hawaii and other hotspot volcanoes in the southern Pacific may be related to the Pacific superswell, she said.



Troubled Times



Congress Concerned

Congress Backs [Earthquake Systems](#)

CNN, April 30, 1999

The House of Representatives last week passed a bill that allocates more than \$200 million in fiscal 2000 for new computer projects to monitor and analyze earthquake activity, including systems that would provide early warnings to help save lives. The Earthquake Hazards Reduction Authorization Act, which the House overwhelmingly approved 414-3, would earmark more than \$170 million for the U.S. Geological Survey to modernize its existing earthquake-monitoring systems during the next five years. The bill also authorizes the National Science Foundation to spend almost \$82 million for a five-year project to build a computer network to connect earthquake research centers across the nation.

If the bill becomes law, congressional appropriations committees will consider it in current and future funding deliberations. "Earthquakes may be inevitable, but catastrophic losses in life and property can be avoided if we use science and technology to help communities prepare," Rep. James Sensenbrenner Jr. (R-Wis.), House Science Committee chairman, said in a prepared statement. "This legislation represents a sensible, long-term investment that will pay for itself many times over in saved lives and reduced property losses." According to some estimates, earthquakes cost the U.S. economy about \$4.4 billion each year. But costs can rise dramatically when strong earthquakes hit metropolitan areas, such as the 1994 Northridge, Calif., quake, which caused an estimated \$40 billion in property damage.

The money authorized by the bill would help the USGS update its network of seismographs, which detect earthquakes, and strong-motion detectors, which monitor how buildings and other structures react to earthquakes. The agency now operates about 1,900 seismographs and about 840 strong-motion detectors. When an earthquake occurs, the sensors - placed in fields, on bridges and in some buildings - pick up the tremors. Most of the devices send the information via radio or telecommunications lines to computer systems at USGS offices or select universities, which then analyze the strength of the earthquake. If a quake is strong, USGS informs federal and local emergency services of its location and magnitude. Computer systems also analyze other effects, and USGS uses this information to plan for future quakes, according to John Unger, a USGS seismologist.

But the seismographic system is aging, and USGS officials say they need additional money to fund a digital program, called the Advanced Seismic Research and Monitoring System, to replace devices in the field. The upgrade would enable digital devices to collect more detailed information. The analog devices now used detect only vertical motion and often do not detect slight movements, Unger said. USGS also would put the money toward more high-powered software applications to analyze earthquake information. With more information, as well as more rapid access to that information, emergency management officials would be able to almost instantly pinpoint areas where the most violent shaking from an earthquake has occurred. This can allow officials to send help more quickly where it is needed most, Unger said. Typically, the epicenter of an earthquake is not the area that experiences the strongest shaking, Unger said. Sometimes the strongest effects are felt a few miles away.

Susan Tubbesing, executive director of the Earthquake Engineering Research Institute, praised the passage of the bill, noting especially the bill's focus on giving the NSF money to create a network to connect earthquake research centers. NSF's project, called the Network for Earthquake Engineering Simulation

(NEES), will upgrade hardware and software at earthquake engineering research centers nationwide and link those centers via one network. Researchers will be able to more easily share data such as computer-constructed designs for earthquake-resistant structures. Building a network for researchers will allow greater participation in designing structures to withstand earthquakes, Tubbesing said.



Troubled Times



Cayce Prediction

Edgar Cayce said that the first sign of the coming Earth Changes would be when Mt. Etna erupts. It happened yesterday - Sept 7, 1999.

Offered by [Maggie](#).

Correct!

When there is a shifting of the poles. Or a new cycle begins. The earth will be broken up in the western portion of America. The greater portion of Japan must go into the sea. The upper portion of Europe will be changed as in the twinkling of an eye. Land will appear off the east coast of America. There will be upheavals in the Arctic and in the Antarctic that will make for the eruptions of volcanoes in the Torrid areas, and there will be the shifting then of the poles - so that where there has been those of a frigid or the semi-tropical will become the more tropical, and moss and fern will grow.[3976-15]

In reading [311-8] he indicates that changes in the South Pacific seabed's condition and the eruption of Sicily's Mount Etna volcano would signal the general physical start of the upheavals.

Offered by [Crister](#).



Troubled Times



Mt. Etna

I found an interesting article in local [Slovenian] newspaper. This is a short abstract.

The article is titled "Is good mountain turning into a pile of gunpowder (Etna erupts differently)". It explains that Etna erupts approx. 18 times per century, with relatively mild eruptions. Etna's lava is very fluid and most eruptions are simply a "spill over" of lava. That's why locals called it a "good mountain", as that spilled lava, when hardened, is very good as a soil for plants. That was until last year (2001). Last year's, and this year's eruptions were different. Eruptions were more explosive, with more strong earthquakes. Vulcanologists analyzed lava and found that it is no longer so fluid, but more dense. Such denser lava was last found in 15,000 years old layers, when very explosive eruptions occurred (that's when Etna's previous dome collapsed).

Offered by [Kiko](#).

Delo [Work], Sobotna priloga [Saturday's Addition],

November 9, 2002

Is Good Mountain Turning into a Pile of Gunpowder?

References: Der Spiegel, Hamburg



Troubled Times



Impact

On May 11, 1997, CNN reported on
Some of the world's worst earthquakes this century
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May 10, 1997, **Iran** -

Nearly **2,400** people were killed and thousands injured when an earthquake measuring 7.1 magnitude rocked rural areas of eastern Iran. The quake leveled 11 villages and inflicted heavy damage on the towns of Qaen and Birjand near its epicenter.

January 17, 1995, **Japan** -

At least **6,055** people were killed after a strong earthquake ripped through central Japan. Measuring 7.2 magnitude, the earthquake, centered near the port of Kobe, was the biggest quake to hit Japan in half a century.

September 30, 1993, **India** -

Up to **22,000** people were killed in 36 villages destroyed after a series of powerful earthquakes which rocked western and southern India. The first of the five tremors measured 6.4 magnitude. The epicenter was in the region where the states of Maharashtra, Andhra Pradesh and Karnataka meet near Latur. Two weeks after the earthquake the number of bodies recovered was just under 10,000 and officials said the true death toll may never be known.

July 16, 1990, **Philippines** -

at least **2,000** killed, **3,500** injured. Magnitude 7.7, epicenter the city of Cabanatuan. About half the deaths were around the tourist center of Baguio. An estimated **148,000** were displaced or made homeless.

June 21, 1990, **Iran** -

50,000 dead, **100,000** injured, The worst recorded disaster in Iran. Registering 7.7 magnitude, devastated Caspian regions of Gilan and Zanjan. Some **500,000** were made homeless.

December 7, 1988, **Soviet Union** -

More than **25,000** killed, **18,000** injured in northwest Armenia. 6.9 magnitude. The town of Spitak almost totally destroyed and Leninakan half-destroyed.

September 19, 1985, **Mexico** -

Between **6,000** and **12,000** killed, **40,000** people injured. 8.1 magnitude. The earthquake hit Mexico City and adjoining region.

December 13, 1982, **Yemen** -

3,000 people killed and **2,000** people injured. 6 magnitude. The earthquake devastated Dhamar province 60 miles southeast of San'a.

November 23, 1980, **Italy** -

2,735 people killed and more than **7,500** injured. 7.2 magnitude. The epicenter was at Eboli but

damage was reported over a huge area to Naples. More than **1,500** people were reported missing.

October 10, 1980, **Algeria** -

Provisional figures issued by the United Nations said **2,590** killed. It registered up to 7.3 magnitude. The earthquake centered on the town of El Asnam and left **330,000** people homeless.

September 16, 1978, **Iran** -

25,000 people killed by the earthquake which measured between 7.5 and 7.9 magnitude. It leveled the town of Tabas and many other villages.

November 24, 1976, **Turkey** -

In Van Province **5,291** confirmed dead with more than **5,000** injured. **50,000** people left homeless with the destruction of the town of Muradiye and hundreds of villages.

August 16, 1976, **Philippines** -

An earthquake followed by an 18-foot tidal wave struck and swamped the islands of Mindanao, Sulu, Basilan and Tawi Tawi. **8,000** people were killed and **150,000** people were left homeless.

July 28, 1976, **China** -

The city of Tangshan was devastated by an earthquake which measured 7.8 magnitude. The China Morning Post on May 1, 1977, quoted a report saying **655,237** had died with about **779,000** injured. However the New China News Agency released figures following the inaugural Congress of the Chinese Seismological Society in November 1979 which claimed **242,000** dead and **164,000** injured. This is the 20th century's worst earthquake.

February 4, 1976, **Guatemala** -

A rash of quakes and resulting mudslides caused much destruction just north of Guatemala City. **23,000** people were killed in the quake which measured 7.5 magnitude. **80,000** people were injured and 1.5 million people were made homeless.

September 6, 1975, **Turkey** -

An earthquake devastated the town of Lice and surrounding villages which measured 6.8 magnitude. At least 2,350 people were killed and **3,000** injured.

December 28, 1974, **Pakistan** -

A quake measuring 5.5 magnitude destroyed villages over 100 square miles in the Karakom mountains leaving **5,200** dead and more than **16,000** injured.

December 23, 1972, **Nicaragua** -

A massive earthquake struck Managua measuring 6.5 magnitude. Between 5,000 and **7,000** people were killed.

April 10, 1972, **Iran** -

An earthquake over a 250-mile radius struck southern Iran around Ghir Karzin. **5,374** people were killed.

May 31, 1970, **Peru** -

An earthquake measuring 7.9 magnitude struck the towns of Yungay, Huaraz and Chimbote, destroying all three as well as surrounding villages. This resulted in more than **70,000** dead and **600,000** left homeless.

March 28, 1970, **Turkey** -

1,100 people were killed and **3,000** injured when an earthquake struck the town of Gediz in western Anatolia, almost completely destroying the town and surrounding villages.

August 31, 1968, **Iran** -

More than **12,000** people were killed in the northeastern province of Khurasan.

September 1, 1962, **Iran** -

An earthquake struck northwest Iran near Ghazvin resulting in the deaths of **12,000** people and the destruction of more than 300 surrounding villages.

May 21, 1960, **Chile** -

An earthquake struck Santiago and Concepcion, the after effect of which was tidal waves and volcanic eruptions. The Chilean death toll was more than **10,000** dead and missing.

April 24, 1960, **Iran** -

An earthquake measuring 5.75 magnitude struck the southern town of Lar, reducing it to rubble. More than **3,500** people were killed.

February 29, 1960, **Morocco** -

The port of Agadir was destroyed in an earthquake. **12,000** people, out of a population of 40,000, were killed.

December 13, 1957, **Iran** -

A severe earthquake in western Iran killed more than **2,000** people.

August 5, 1949, **Ecuador** --

An area of some 1,500 square miles was struck by an earthquake measuring 6.75 magnitude. **6,000** people were killed and about **100,000** people were made homeless from the area at Ambato and four other towns.

October 4, 1948, **Iran** -

An earthquake measuring 7.3 magnitude killed **3,000** people in Turkmenistan.

June 28, 1948, **Japan** -

An earthquake measuring 7.3 killed **3,769** people at Fukui 28 miles northeast of Kyoto.

January 15, 1944, **Argentina** -

5,000 people were killed in an earthquake that struck San Juan.

January 25, 1939, **Chile** -

Between **25,000** and **30,000** people were killed when an earthquake measuring 8.3 magnitude virtually destroyed the town of Concepcion. The town of Chillan was struck in the same earthquake, causing **10,000** of the casualties.

May 13, 1935, **India** -

30,000 people were killed in an earthquake that struck the hill station of Quetta in British-ruled Baluchistan.

September 1, 1923, **Japan** -

An earthquake estimated at 7.9 magnitude struck Tokyo and Yokahama, leaving 2.5 million people homeless. Floods followed as the rivers Fukuro Chiyo and Takimi burst their banks. At least 142,000 people were killed, although unofficial estimates say as many as **300,000** may have died.

December 16, 1920, **China** -

An earthquake measuring an estimated 8.6 magnitude struck Jiangsu province killing **180,000** people.

January 13, 1915, **Italy** -

The town of Avezzano in central Italy was struck by an earthquake killing **30,000** people.

December 28, 1908, **Italy** -

More than **82,000** people were killed in an earthquake that reduced Messina, Sicily's second town, to rubble. A tidal wave followed, causing more devastation, also to the town of Reggio across the straits.

April 4, 1905, **India** -

19,000 people were killed in an earthquake that struck the province of Lahore. The earthquake, which measured 8.6 magnitude, demolished the towns of Kangra and Dharmsala.



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Megathrust

Giant Megathrust Earthquakes

A megathrust fault is the boundary between a subducting and an overriding plate. A megathrust earthquake is produced by a sudden slip along this fault. The world's largest earthquakes are all megathrust earthquakes. Megathrust earthquakes have never been observed in the short (~150 year) written history of the west coast of Canada, but there is compelling evidence that they did occur in prehistorical times. Some of this evidence includes:

- Buried tidal marsh or coastal forest soils pointing to sudden land subsidence of about 1 metre occurring at the same time from Vancouver Island to Northern California.
- Changes in tree ring growth from coastal old-growth also suggest a sudden, widespread subsidence and drowning of roots.
- Sand layers on top of the buried coastal marshes, driven in from offshore bars by the wave of the large tsunami that rushed into the subsided coastal region.
- Silt turbidite (landslide) layers on the deep sea floor far off the coast from underwater landslides, likely caused by strong seismic shaking.
- Tsunami evidence from local sources - marine organisms swept into and preserved in the bottom muds of coastal lakes that are separated from the ocean by land elevations of some 5 miles high.
- Tsunami evidence from distant sources - large tsunami in Japan with no local Japanese earthquake. Modelling this tsunami has revealed that the most recent earthquake for Cascadia was M ~ 9.0 and occurred on January 26, 1700, at around 9 pm!

The last point agrees with some legends of first nation people. One legend describes a severe ground shaking on a winter night accompanied by huge waves that destroyed a coastal village. This legend is likely reporting the effect of the last megathrust earthquake. Geothermal and seismic structure studies are being used to estimate the downdip extent of the potential seismic rupture zone. The landward extent of the rupture is an important factor for the shaking hazard at the inland cities of Victoria and Vancouver. The potential for the next megathrust earthquake for Cascadia is also being studied by monitoring the deformation of the crust using very precise satellite technology (GPS), repeat leveling, changes in gravity, and long term tide gauge measurements.



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Blind Faults

It's not my fault: New study shakes up interest in earthquakes

Purdue News, by Xan Davidson, October 30, 1998

A new look at the information on a 1971 California earthquake shows that several nearby faults were activated during the temblor, supporting evidence from more recent earthquakes that nearby faults may contribute to earthquake damage. Xan Davidson, a graduate student working with Purdue University earthquake expert Arvid Johnson, found that surface fractures and other strains actually were caused by two faults other than the main fault, and contributed to the damage to streets, highways and buildings in the 1971 San Fernando earthquake. Her study also found that because of blind faults, or faults that cannot be seen at the surface, the San Fernando fault zone is 11 miles long instead of 8 miles long, as it previously was assessed.

Results of the study, presented Oct. 29 at the annual meeting of the Geological Society of America in Toronto, suggest that estimates of potential earthquake damage should include areas surrounding nearby faults, as well as damage caused by the main rupture and ground shaking. "Prior to 1989, scientists thought that all of the damage from an earthquake was the result of a single fault," Davidson says. "Since 1989, we have found evidence that more than one fault can be activated during an earthquake." This is the first study that ties such an event to an earthquake prior to 1981, Davidson says. "If, in fact, further research supports the notion of coactive faults during earthquakes, then predictions of earthquake damage must change focus from the main fault and the ground shaking caused by it, to include faults that might slip and move coactively with the main fault," she says.

Davidson says damage produced by blind faults and coactive faults was not recognized until studies of the 1989 Loma Prieta, 1992 Landers and 1994 Northridge earthquakes. Those studies were carried out by Johnson and Bob Fleming of the U.S. Geological Survey. To see if nearby faults were activated during the 1971 San Fernando earthquake, Davidson used survey data, from 1972 and earlier, to determine damage to streets, highways, office buildings and dwellings in areas the size of city blocks. Her study showed that patterns of energy release -- illustrated by ground ruptures and other damage -- indicate that two nearby faults were activated during the earthquake. "Damage in these areas could not be attributed to the ground shaking caused by the main fault," she says. Davidson and Johnson now are working with others to study how coactive faults are activated during an earthquake, and how fault lines may be interconnected.



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Great Lisbon Quake

Taken from *The Astrology of the Macrocosm*

by Joan McEvers (ed.), Diana K Rosenberg, pages 338-340

November 1, 1775: Lisbon, thriving port and capital of Portugal, teemed with activity: At the harbor, work gangs unloaded vessels at the magnificent new gray marble Cays de Prada; merchants argued loudly over prices; noisy children dodged bellowing stevedores; but the exquisitely clad aristocracy were not part of the crowd. It was All Sait's Day and Lisbon's six magnificent cathedrals were packed with kneeling worshippers. At 9:20 in the huge Basilica de Sao Vincente de Fora, the chant of the introit had just begun

...

A rolling, swaying surge ground marble and timbers together; like a ship in a storm the great church groaned and heaved, and then crumbled, its huge stones crushing the congregation. ...

For a relentless three-and-one-half minutes, a terrible violence shattered Lisbon; gigantic fissures 15 feet wide ripped through the center of the city. As after shocks heaved and rumbled, choking dust rose from more than 18,000 collapsed buildings. Fire licked, then roared through the ruins.

In the first two minutes, 30,000 died.

The terrified survivors rushed to open space of the docks for safety ... they stared at the ocean in stunned fascination as the water receded and the sea floor lay revealed, a litter of lost cargo and old shipwrecks. Suddenly someone screamed a warning but it was too late. The withdrawn ocean had coiled and roared up into a huge wall of water, rushing to engulf them. In a moment, 20,000 more were gone.

The proud Basilica de Santa Maria, Sao Paulo, Santa Catarina, Sao Vincente de Fora, The Misericordia---all had become rubble of carved stone grave piles for thousands....hundreds of patients in the Hospital Real burned to death. Out of a city of 230,000, about 90,000 were dead (another 10,000 were killed across the Mediterranean in Morocco); 85% of the city's buildings were destroyed, including *all* of Lisbon's magnificent museums and libraries. The king's palace, housing a 70,000-volume library and hundreds of priceless works of art, including paintings by Titan, Rubens, and Coreggio, burned to the ground.

As the stunned survivors desperately tried to save their families, priests of the inquisition roamed the ruins rounding up innocent people, dubbing them "heretics" and hanging them on the spot for angering God ...

The shock waves of the Lisbon Earthquake were felt over 1,300,000 square miles through Europe and North Africa, and tidal waves up to 60 feet high hit a vast areas stretching from Finland to North Africa and across the Atlantic to Martinique and Barbados. Vesuvius, which had been in eruption, abruptly stopped! There were no recording instruments in 1755, let alone a Richter scale, but modern experts have estimated that the Great Lisbon Earthquake may have been an incredible magnitude 9.



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23 Foot Wave

San Francisco Chronicle, July, 1998

Tsunamis: the Killer Sea Wave

A 23-foot (7-meter) wave, propelled by a magnitude-7 undersea earthquake, destroyed a stretch of Papua New Guinea's northwestern coast. It is believed that at least 3,000 people died. Hundreds were injured. Others are believed to have fled to higher ground. An estimated 6,000 people are left homeless.

- Tsunamis are generated by massive underwater earthquakes and are common in the Pacific.
- The destructive waves can travel at more than 435 mph.
- The waves move inland from deep ocean to shallow water, growing larger.
- Individual waves may occur at intervals of 15 minutes, or 125 miles apart.
- Approaching a coast, the waves slow down, bunch up and rise, sometimes as high as a 10-story building.
- The breaking waves can cause massive destruction.



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Thera

According to current data, the last two great eruptions of Vesuvius occurred in 3580 B.C.E and 79 C.E. (the latter being the eruption which buried Pompei and Herculaneum). Both Krakatoa and Thera have a Volcanic Explosivity Index or VEI of 6 which rates them as “colossal” with a plume height over 25 km and a displacement volume of between 10 and 100 km³. Eruptions of this size occur only once every few hundred years on earth. Although the dating of pottery supports the fifteenth century time frame for the Thera eruption, dendrochronology and radiocarbon dating supported by historical records place it at 1628/7 B.C.E.

The Eruption of Thera

When Krakatoa exploded on August 26, 1883, it caused widespread destruction and loss of life on the coasts of Java and Sumatra. Blast waves cracked walls and broke windows up to 160 km. away. Tidal waves, reportedly up to 36 metres high, inundated the shores of the Sunda Strait, destroying nearly 300 towns and villages, and overnight more than 35,000 people lost their lives.

J. V. Luce, *The Changing Face of the Thera Problem*

Krakatoa erupted noisily. It could be heard as much as 3,000 miles away on Rodrigues Island in the Indian Ocean. Vibrations shattered shop windows 80 miles off. The energy released in the main explosion has been estimated to be equivalent to an explosion of 150 megatons of TNT.

Ships navigating the seas in the vicinity of Krakatoa reported that floating pumice in some places had formed a layer about 3 m thick. Other ships, 160 miles off, reported that they were covered with dust three days after the end of the eruption. In fact the dust cloud completely shrouded the area, so that it was dark even 257 miles away from the epicenter. The period of darkness lasted twenty-four hours in places 130 miles distant and fifty-seven hours 50 miles away. The black-out in the immediate vicinity continued for three days and was so total that not even lamp-light could penetrate it. Stunningly beautiful sunsets were observed during the winter months in both America and Europe, thanks to the suspension of fine particles of dust in the atmosphere.

Christos G. Doulas, *Thera - Pompeii of the Ancient Aegean*, p. 141

Two titanic volcanic explosions occurred in the Mediterranean in the fifteenth century BC, one on Mount Vesuvius and the other on the island of Thera near Crete. Each dwarfed the great explosion of the Krakatoa volcano in 1883.

Robert Jastrow, **Hero or Heretic?** *Science Digest*, Sep/Oct '80

Descriptions of the Krakatoa explosion convey a sense of the horror that must have gripped the people who witnessed the earlier and more violent eruptions in the Mediterranean:

- A tremendous roar, heard over two thousand miles away
- vibrations of the atmosphere circling the earth
- ninety-foot waves breaking with devastating force
- burning ashes raining down, blistering and killing people

Robert Jastrow, **Hero or Heretic?** *Science Digest*, Sep/Oct '80

Estimates of the volume of material displaced by the Thera eruption indicated an intensity five or six times as great as that of Krakatoa.

Dr. Floyd McCoy, in *Ground Truth, Earthwatch Research Report*

7 cubic miles (30 cubic km) of rhyodacite magma was erupted. The plinian column during the initial phase of the

eruption was about 23 miles (36 km) high.

Santorini, Greece

The caldera (or crater) created by this eruption of the the Stroggili volcano on Thera (now known as Santorini) is said to have measured as much as 83 square kilometers in area. It presently extends down as much as 480 meters below sea level inside of the wall of cliffs which ring it and which themselves rise up as much as 300 meters above sea level.

Encyclopaedia Britannica



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Plates

Earthquakes and Plate Tectonics

The world's earthquakes are not randomly distributed over the Earth's surface. They tend to be concentrated in narrow zones. Why is this? And why are volcanoes and mountain ranges also found in these zones, too? An explanation is to be found in plate tectonics, a concept which has revolutionized thinking in the Earth's sciences in the last 10 years. The theory of plate tectonics combines many of the ideas about continental drift (originally proposed in 1912 by Alfred Wegener in Germany) and sea-floor spreading (suggested originally by Harry Hess of Princeton University).

Plate tectonics tells us that the Earth's rigid outer shell (lithosphere) is broken into a mosaic of oceanic and continental plates which can slide over the plastic asthenosphere, which is the uppermost layer of the mantle. The plates are in constant motion. Where they interact, along their margins, important geological processes take place, such as the formation of mountain belts, earthquakes, and volcanoes.



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Plate Tectonics

On Sat, 11 Oct 1997 18:54:43 -0300, in sci.geo.earthquakes
gentryd@pipeline.com (Dennis Gentry) wrote:

In article <343F1FEF.7246@earthlink.net>, obrlndr@earthlink.net wrote:

Dennis Gentry wrote:

In article <Pine.SV4.3.94.971006141531.4322A-100000@almaak.usc.edu>, Al
Cooperband <coop@almaak.usc.edu> wrote:

On Sun, 5 Oct 1997, David Stinson wrote:

In article <gentryd-
0510971330410001@ip81.burbank5.ca.pub-ip.psi.net>,
gentryd@pipeline.com (Dennis Gentry) wrote:

...<snip>...

I brought the plate tectonics question up.
Nothing else. As to the answer to your
question, mountain raising is a side effect of
the interaction of two plates through stress
related deformation. Tahoe is in the
mountains created through that interaction.
Stresses build up along the faults created in
the mountain building process and discharge
their stress in an earthquake. So mountains
on a plate boundary, 200 miles from a plate
boundary, or 500 miles or so from a plate
boundary can be identified as being built
because of stress. Pretty convenient theory
I'd say. Can't go wrong with that at all.

Dennis

Sure can't. You do need a sense of scale. And of the
concept of zones rather than lines. Plate boundaries cover
HUNDREDS OF MILES around the "line" of motion.

...<snip>...

The zone of uplift produced by the collision of India with Asia must
extend a thousand miles or more.

Aren't the circumstances there a little different then here in California where both

of the plates aren't in a direct collision with each other?

They were in the past. There will continue to be tremendous residual stress from an event that created enough pressure at one time to lift a quadrillion ton batholith (150 cubic miles) 10000 feet. The area of which you speak is formerly volcanic due to the subductions that took place up to about 80 million years ago. The west to east subduction of the Farallon Plate and later on the docking of the Sonoma microplate terrane(the suture of which can be seen on I-80 in the Donner Pass area) created tremendous stress. It uplifted the Sierra Nevada Ranges 15000 feet. You still ask what plate tectonics has to do with an EQ here?

I had heard before some thought of a microplate up in that area but was under the impression that it was still under discussion. But now were saying that the North American plate is made up of several other plates that it absorbed? If the plates have been moving at a constant rate for the last 80 million years, wouldn't the Tahoe area have been up around the Yellowstone area back then?

Read a book. "Assembling California" by John McPhee and also "Basin and Range"



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California

Getting Ready For [The Big One](#)

By Larry Wright, December 23, 2000

mailto:wright@iinet.com

The current USGS [Earthquake Map](#) for California and Nevada shows many micro earthquakes from the Southern Nevada border to the southern portion of California. In addition you will notice similar earthquake activity running the length of the state along faults just east of the San Andreas. There is little or no activity on the San Andreas Fault itself which follows the California coastline. The Ocean side of the San Andreas Fault is moving north while the continent side which is moving south. At a point just above Santa Barbara on the California coast there is a outcropping of land called Point Conception. The San Andreas Fault goes around Point Conception as it follows the California coast line south through Los Angeles Harbor on down to San Diego. This area can be seen on the map just above the group of islands off the Southern California coast known as Santa Cruz, Santa Rosa and Catalina Islands. The San Andreas Fault is unable to slip past Point Conception. This is the only area along the entire fault line that does not run in a relative straight line.

Despite this fact the north / south movements of the tectonic plates are continuing. This is resulting in an enormous rip or tear across the state from the Southern California coast to the Nevada border as the two plates drag past each other. This is also triggering micro earthquakes along the numerous minor faults running the length of California. But no major action has occurred along the San Andreas. This is a clear indication that pressure and stress along the San Andreas is building to a critical level. The area preventing a major slippage of the San Andreas is Point Conception. No earthquakes have occurred in the Point Conception area. If the area around and through Point Conception begins to fracture the San Andreas will be free to move. Eventually this must happen as pressures continue to build. The rip in the state can only take up so much of this movement before something snaps. In my opinion the snap will occur in the Point Conception area. Once a fracture crosses Point Conception and joins the San Andreas on each side cutting through the point, the San Andreas will begin to move. This sudden snap movement will release a tremendous amount of energy all along the San Andreas fault from Southern California to the northern part of the state.

I hope I am wrong about this in so much as I live in the Southern California area. But in studying this earthquake map I can come to no other conclusion. The earthquake swarms and the many faults and fractures shown on this map southeast of Point Conception toward Nevada indicate a pressure relief due to lack of movement of the San Andreas through Point Conception. How much longer this will continue before the big one strikes is anyone's guess. USGS and other scientists conclude that there is a 70% probability of at least one magnitude 6.7 or greater quake, capable of causing widespread damage, striking the San Francisco Bay region before 2030. Judging by this map I think it will be much sooner and much greater than anticipated.



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Red Ants

Discovery Channel Online News, October 14, 1998

Ants Invade Colombia

A particularly tough and aggressive strain of red ants has destroyed nearly 10,000 acres (4,000 hectares) of sugar cane, cassava and corn crops in Bucaramanga, Colombia. Called "crazy ants" by farmers in Colombia's Santander and Boyaca provinces, the ants are especially hard to kill because they make their nests under stones and branches, and beneath the tiles of farmhouse roofing. Beyond the crops already destroyed, the ants threaten to consume another 100,000 acres (40,000 hectares) of farmland. Many of the region's farmers, powerless to protect their land from the insect invasion, have abandoned their properties. The ants are advancing 220 yards (200 meters) each month, according to an official from the Institute of Agricultural Colonization (ICA). The ants also attack animals, clinging to their nostril hairs and often causing death by asphyxiation.



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Killing Crabs

Crazy Ants Killing Christmas Island Crabs

Discovery Communications, March 30, 1999

Killer ants on Christmas Island in the Indian Ocean are decimating the island's world-renowned crab population. During the past 18 months, the ants have killed 3 million crabs by digging down into the crab's burrows, where they kill and eat them. The "crazy ants" - so called because of their frenetic movements - are attacking the crab population at a phenomenal rate, according to Monash University ecologist Dennis O'Dowd. "I've never seen a single invader have so much impact in such a short time," said O'Dowd, who is doing a long-term study of the crabs. The crazy ant, *Anoplolepis gracilipes*, is believed to have been introduced to the island by West African traders about 50 years ago.



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Beetles

Beetles and Fungus Ravaging Calif. Oaks

Discovery Earth Alert, Dec. 16, 1999

Foresters in California are alarmed over 30,000 coast live oak and tan oak trees that have been destroyed by beetles and a predatory fungus in the past few years. Oaks, the state's most common trees, are an emblem of California and are valued for the picturesque landscapes they create. Researchers believe that the trees have been weakened by the droughts of the mid-'80s and early '90s, followed by heavy El Nino rains in 1997 and 1998. The oaks' distressed state has made them susceptible to a fungus that in turn, lures bark beetles to the trees. The hypoxylon fungus takes hold of the trees' soggy roots. Sensing a feast, the female bark beetle bores into the tree. Once there, she sends out a pheromone call to other beetles, said Larry Cooper, spokesman for the state Department of Food and Agriculture. The beetles then attack the tree until it's dead, Cooper said.

Teamed up, the beetles and fungus can kill a tree in two weeks. "I'm sure it's part of the natural scheme of things, but there's no historical record of this occurring before," said Bruce Hagen, an urban forester with the California Department of Forestry. "It's really a strange and kind of unexplained phenomenon at this time." The oaks can live for 250 to 300 years, and are mostly found on private land. More than 300 species of animals and more than 5,000 insects make a home out of the habitats provided by the trees, said Bill Tietje, a natural resources specialist with the University of California.



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Caper Butterflies

I heard on ABC Radio (yesterday) that millions of White (Caper) Butterflies from all over the State (Sth in Australia) were flying North. This occurrence hasn't been seen since 1974 and never in such numbers. The lines were running hot with the speculation of what it meant and people were asked to phone in with information to the Adelaide Museums entomology dept. Some people rang in saying it was like walking through a snowstorm.

Offered by [Jan](#).



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Giant Grasshoppers

Britain May Face Invasion Of [Giant Grasshoppers](#)

Yahoo News, 8-23-99

Swarms of giant grasshoppers could invade Britain from continental Europe and devour crops and gardens across the country, a scientist said on Sunday. The "superhoppers", up to 12 cm (nearly five inches) long and eight times as hungry as most British grasshoppers, are usually found in Spain and France but could spread thanks to global warming, entomologist Peter McEwen said in a statement. "The recent hot weather in the UK will only serve to encourage the invasion," said McEwen, research director of Insect Investigations, owned by Cardiff University's School of Biosciences. The spread of the insecticide-resistant bug could be aided by increased cross-border travel between Britain and the continent by car, rail and air, he said. The grasshoppers have not caused widespread damage elsewhere in Europe, but McEwen told Reuters that the impact of insects outside their natural habitat was unpredictable.



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Deer

I thought I would let you all know about the stories of deer here in Iowa attacking cars and in some cases hunters. Usually during hunting season you here a few stories about rogue deer going after hunters, but never vehicles. My son came over the other day and told about a deer that put his antlers down and tried to attack his car. (My son doesn't hunt, he was just driving along a road.) I have heard several stories like this in the past couple of weeks. I know that several have "predicted" the animals going after people with no provocation and animals that normally don't do this. Something is affecting the animals.

Rebecca

It is not unusual for deer to become aggressive this time of the year. It is their rutting season which also coincides with the hunting season. This makes them doubly aggressive. Trying to mate and deal with constant gunshot will make them attack just about anything that moves that is not a doe.

Offered by [Pat](#).

We had deer roaming thru our back yard when I lived on a farm. But during hunting season, they are nowhere to be seen. Pretty smart if you ask me. Anyhow, I never saw one attack a car before!

Offered by [Leila](#).



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Charging Sheep

Charging Sheep Kill Farmer's Wife

Reuters, January 28, 1999

A flock of sheep charged a British farmer's wife bringing them food and pushed her over a cliff to her death. Betty Stobbs, 67, had taken a bale of hay on the back of a power bike to feed the animals grazing in a field overlooking a disused quarry. The sheep rushed forward and jumped up onto the vehicle, knocking the bike and its rider over the edge of the quarry near Durham, north-east England. "I saw the sheep surround the bike. The next thing she was tumbling down the incline," neighbor Alan Renfry told reporters. Stobbs died when the bike fell on top of her.



Troubled Times



Jack Rabbits

Jack Rabbits Attack Walkers in Sonoma County

Associated Press, Mar 29, 2002

Sonoma County musician Doug Bowes will remember this Easter season as the one where he happened upon the Easter Bunny, and it attacked him. Bowes was walking near his home at about 11 a.m. Wednesday when the attack occurred. A small, gray jack rabbit bounded toward him from a nearby fence. "I thought, 'Gosh, this is somebody's pet,' " Bowes said. He put his hand down in a friendly gesture and the bunny lunged and bit him. Bowes began to walk home, nursing a sore hand with broken skin, but the rabbit followed him. A short time later, a nearby neighbor had to retreat up a hill after another aggressive jack rabbit forced her back. Bowes had to get rabies shots and faces five additional vaccinations, though area health officials say it would be rare if the animal had rabies. "If it were (rabid) it would make history," said David Yong, director of laboratory services for the county public health division. No rabbit has tested positive for rabies in Sonoma County in the past 16 years, Yang said.



Troubled Times



Moose

Moose Taking to Highways

Discovery Earth Alert, Feb.14, 2000

More than 470 moose in central Alaska have been killed by trains and automobiles this winter. Record-breaking snowfalls have driven the animals onto roads and railroad tracks in their search for clear paths. The moose have been plodding through snow as deep as 10 feet, in the largest accumulation since the winter of 1989-90. They are unable to forage beneath the deep snowpack and wander into towns in search of food. Railroad workers have taken to carrying rifles and firecrackers to frighten the aggressive animals off the tracks. The moose are frequently belligerent, charging humans and seriously threatening snowboarders. Alaska's State Troopers have worked with volunteers to collect moose carcasses from the state's highways and butcher them for distribution to charitable organizations.



Troubled Times



Polar Bears

Polar Bears May Move North

Discovery Earth Alert, December 14, 2000

Thousands of polar bears that make their home near Hudson Bay in Canada may be forced to move north to survive melting ice caused by global warming. Environmental science professor William Gough of Toronto University's Scarborough College has spent the past six years evaluating the temperature and ice coverage of Hudson Bay, using records that date back to 1900. Polar bears normally spend November to June on the region's thick ice floes, feeding on newborn seal pups. The seal pup diet enables the bears to store enough energy to make it through the summer months on land. Gough said, "The length of time polar bears are able to spend on the ice is crucial because the weight they gain during this period determines their survival rates and the number of cubs they'll raise." The rising temperatures have already triggered abnormal behavior in the bears. Witnesses have reported seeing caribou being stalked and adult seals being killed on land. The bears have also begun to increasingly view humans as a source of food. Professor Gough said, "There has been a dramatic increase in bear and human confrontations over the past few years. Just recently, a woman north of Churchill was devoured and we're seeing more and more bears in garbage dumps close to towns." Gough chose Hudson Bay for his studies because it houses the most southerly polar bear population in the world.



Troubled Times



Cattle

Cattle from a huge area in Queensland (Australia) are terrified and Station owners (Ranchers) are alarmed and extremely puzzled by their behavior. The cattle are refusing to eat or drink and are becoming thin and keep stampeding to the West and looking behind them. When I saw the News on television I was quite upset at the sight of the cattle's obvious fear, their eyes showed real terror. The Owners have asked the government to send scientists and seismologists up there to investigate, They say it is too widespread and involves too many cattle to be linked to wild animals.

Offered by [Jan](#).



Troubled Times



Carp

Indiana Fish Commit Suicide

UPI News clip, posted 24 Jan, 2000

Riverfront residents knew something was wrong when carp began leaping an astonishing 7 feet out of the water and thrashing about on shore. Before long, dead carp and minnows were piling up on the banks. Hundreds of thousands of fish - more than 85 tons - have collected along a 50-mile stretch of the White River. State and federal officials still are trying to pinpoint the source of what has become one of the worst fish kills ever in Indiana. The state Department of Environmental Management said the contamination never posed a threat to people. The water was polluted even before the fish kill.



Troubled Times



Penguins

Wayward Penguins Invade Rio's Beaches

Discovery Earth Alert, August 10, 2000

At least 114 off-course penguins and one seal showed up on Brazil's tropical beaches of Rio de Janeiro on Tuesday, nearly 3,000 miles from their usual winter home in the Strait of Magellan and the coasts of Patagonia, Argentina's southernmost province. Their presence startled sun bathers, but alarmed wildlife experts. Denise Monsares, the biologist with the foundation Rio Zoo, said, "Despite the relatively cold winter in Rio, it's definitely too warm for the penguins and other animals" from further south.

Temperatures on the beaches hovered at 82 degrees Fahrenheit. Monsares said the birds had probably been thrown off course by unusually cold ocean currents and strong winds during the past weeks. Most of the penguins landed exhausted and with injuries. Although they were taken to zoos in Rio for treatment, Monsares reported that the facilities were nearly at capacity. There were no immediate reports as to the condition of the seal.



Troubled Times



Bullfrogs

Giant Bullfrogs Invade Canada

Reuters, July 26, 2000

Baseball-size bullfrogs are invading large areas of British Columbia and endangering native species with their hearty appetites, according to a Canadian biologist. The intruding *Rana Catesbeiana*, more commonly known as the American Bullfrog, is the largest frog in North America with females weighing up to 24.5 ounces. University of Victoria biologist Purnima Govindarajulu, probing the sudden increase in the number of bullfrogs, said the voracious predators are threatening delicate aquatic ecosystems in Victoria, Duncan, Nanaimo and Parksville.

“The main problem is that bullfrogs eat other frogs and snakes as well as insects, fish, mice, and young birds. Actually they’ll eat whatever they can fit into their huge mouths,” Govindarajulu told Reuters. Bullfrogs are naturally only found in eastern parts of North America. It is believed they were brought to the west coast by people who wanted to sell them as a delicacy or as live ornaments for garden pools. They were first noted in the 1940s but their numbers did not explode until the early 1990s. To find out more about presence and number of bullfrogs in British Columbia the biologist is looking for volunteers who lend a listening ear and spot out the invaders. “It’s easy to identify them in summer because they have a loud breeding call.”



Troubled Times



Jellyfish

Giant Jellies Invade Gulf of Mexico

By Hillary Mayell, *National Geographic News*, August 16, 2000

Scientists are working to determine whether an invasion of alien jellyfish into the Gulf of Mexico is an environmental disaster in the making, a new food crop that can be profitably harvested, or something in between. The spotted jellyfish, a native of Australia, first reached the Caribbean about 20 years ago, probably travelling as polyps on the hulls of ships coming through the Suez and Panama canals. Formally known as *Phyllorhiza punctata*, the jellies began arriving in the Gulf in June and are positively thriving in the nutrient rich waters of the Mississippi Sound. Typically 6 inches (15 centimeters) in diameter, they are reaching sizes of more than 2 feet (nearly 70 centimeters) across. "The magnitude of the invasion is unique, both in terms of the area invaded and the sheer numbers," says Monty Graham, a biological oceanographer at Alabama's Dauphin Island Sea Lab, speaking from the Pelican, a National Science Foundation research ship currently cruising in the Gulf. "The phyllo are phenomenally concentrated; in one area that we surveyed the other day they were actually bumping into one another every minute or so." The largest concentration of the gelatinous creatures is located off the coast of New Orleans, Louisiana, at the mouth of Lake Borgne. "There are easily a million," says Graham.

The current speculation is that the jellyfish made their way north by hitching a ride on the Loop Current (LC). The LC enters the Gulf of Mexico through the straits between Yucatan and Cuba, loops through the southeastern Gulf and then exits through the Straits of Florida. Satellite imagery shows that a big water mass broke off the Loop in early June into an eddy south of Alabama and the Florida panhandle. "This is a totally unusual biological event," says Harriet Perry, director of the Center for Fisheries Research and Development at the Gulf Coast Research Laboratory, who along with Graham, is heading an emergency response effort to get a handle on the invasion. "Everything was in place. The jellies were entrained in the water mass, there's a lot of plankton available to feed on now, the water is warm, and because of the drought, we have very high salinity, which jellies thrive in." The Australian natives have now spread along the continental shelf, extending across the Mississippi Sound and along the Louisiana and Texas coasts to the west side of the Mississippi River. The short-term question is will they survive the winter? The long-term question is what can be done about them? There are no easy answers.

Spotted jellies don't have much of a sting and thus are not considered dangerous to humans, but the ecological implications of such a widespread invasion are extremely worrisome. "Jellies put off a lot of mucous, and the water in the areas of densest concentrations is extremely viscous," says Graham. "Copepods Ñ very small grazers Ñ in the areas we surveyed were very lethargic and not producing eggs. In addition, zooplankton numbers appeared to be substantially reduced." Zooplankton is the animal component of plankton, small crustaceans and fish larvae that float or drift in great numbers at or near the surface, and serve as a basic component of the food chain for fish and other larger organisms. Gulf fishermen are upset; the jellies are voracious predators in an area known as the Fertile Fisheries Crescent. The brown shrimp fishery that is coming to an end has already been impacted. Large concentrations of the jellies present a physical barrier to shrimpers, says Perry. "They clog the nets and can tear the webbing out of trawls. The fishermen want to know what we're going to do about it." The white shrimp fishery opens in early fall. "The jellies are really efficient filter feeders," says Perry. Graham described one area with a large concentration of spotted jellies as "a big hole in the water," devoid of food and other prey. Information gathered on the Pelican will help determine whether the jellies are eating the larvae of shrimp,

crabs, oysters, and other fish, or feeding on the food that helps other species survive, or both. The problem is not confined to the Gulf of Mexico; jellyfish blooms and invasions have been increasing worldwide



Troubled Times



Gray Whales

[Grey Whales Dying - Scientists Seeking Answers](#)

Newsworld, Canada, 7-15-99

Researchers faced with more dead grey whales on the shore of Washington are trying to determine whether the problem is too many whales or too little food. They say many of the whales died with low body fat, indicating they probably starved to death. More than 150 dead grey whales have been found along the Pacific Coast this year, including seven in British Columbia, and 24 in Washington. When the seventh whale was found in B.C. in early June a Vancouver Aquarium veterinarian said the deaths may be caused by more than one factor. And more whales could have come ashore this year because of extra stormy weather last winter. Normally, for every whale found dead, it's estimated there may be 10 or 20 others that never wash up on shore. All of the whales have been found during the species' annual migration north from Mexico

Gray Whale Toll Raising Alarm

By Rene Sanchez, *Washington Post*, April 30, 2000; Page A03

Gray whales keep turning up dead on the beaches along the West Coast this spring, and scientists who study the giant, mysterious creatures are having a hard time figuring out why. Each year at this time, thousands of gray whales in the Pacific swim north on their annual migration from warm, shallow lagoons off Mexico, where they breed and give birth, to their summertime feeding grounds in the chilly depths of Arctic seas. It is one of the most epic journeys in the animal kingdom, and something might now be going wrong along the way. Then again, the opposite could be true: The rash of deaths might be an encouraging sign of growth for the species, which in the past few decades has made a strong comeback from the brink of extinction. So far, no one knows. About two dozen gray whales, which as adults extend over 30 feet long and weigh as much as 40 tons, have washed up over hundreds of miles of shoreline from Southern California to the San Francisco Bay this month. The tally is higher than it was at this time last year - midway through the migration season. By the end of the last migration season, 47 gray whales had been found dead on the California coast.

The rising number of whale deaths has many scientists worried and puzzled. Last year's total was three times higher than the annual average for the past decade. And the total in 1998 was about double what the average had been. "No one is pushing the panic button yet," said Joseph Cordaro, a biologist for the National Marine Fisheries Service in Long Beach, Calif. "But we have to find some definitive answers, because this is unusual." The detective work is daunting. By the time they are found in the sand, whale carcasses are usually decomposing, which makes necropsies difficult. There also seems to be no clear pattern to the latest deaths. Gray whales are not being found dead in roughly the same spots along the coast, nor do most of them appear to be victims of man-made hazards such as fishing nets or boats. Biologists also say that many of the whales do not look extremely malnourished. Those being found are both young and old, male and female. The lack of consistent clues is even prompting some biologists to wonder whether the deaths may in fact be no cause for alarm. The rising number of beached whales, they say, may only be a natural side effect of their population boom.

Some biologists are speculating that the gray whale population may now be growing at a rate greater than its food sources in the Arctic can sustain. There is also reason to believe that El Nino weather conditions

in recent years have warmed waters in ways that have made the things they eat most more scarce. And do they eat. Every summer, gray whales spend months scouring the ocean floor gulping sediment in search of food. Most pack on more than 10,000 pounds before they make the long trip back south to Mexico for the winter. They need the blubber as fuel, because they rarely do much dining during either leg of their marathon route. If El Nino is to blame for food shortages, scientists say that it could take years for their feeding habitats to be fully restored. Because gray whales swim in small groups near the shore - whale watching is a popular tourist attraction along much of the Pacific Coast--scientists can keep close watch on them. Marine groups also take aerial photographs of their annual migration. From those observations, some biologists say that overall the gray whales appear to be thinner than they once were. That discovery suggests competition for food is getting tougher, and that more of their deaths could be from starvation. But it all may be nature's way of restoring balance. "More gray whales just don't seem to have such a good layer of blubber anymore for their migration," Cordaro said. "Some people think they may be reaching their capacity in their environment."

Clusters of gray whales have even spent a few weeks this year in the San Francisco Bay, foraging on its bottom and seeming to make attempts to create a habitat. That phenomenon is amazing biologists. Until now, migrating gray whales had not ever shown signs of taking up even temporary residence so far south along the Pacific Coast, especially in waters so heavily trafficked by people and shipping. "In previous years, that was unheard of," said James Gilardi, a biologist with the Oceanic Society, a nonprofit marine conservation group. "It flies in the face of everything we know about their migration habits." Sightings of whales in the bay have gone from rare to routine so quickly that last week the Oceanic Society launched a five-year study of what they are doing there. Researchers plan to track the whales' behavior regularly and to plumb the bottom of the bay to examine samples of the turf they are foraging. But because most of the gray whales being spotted there appear to be healthy, biologists are also busy taking skin and blubber samples from the carcasses of those that have washed up in Southern California and elsewhere. In case a disease, and not starvation, is at the root of the problem, they have begun searching for evidence of either virus-carrying parasites or man-made toxins. Some biologists say that every budding theory for why more gray whales are being found dead during their migration may turn out to be partly true. "It's a widespread situation and it has been happening for a few years to gray whales," Gilardi said. "We don't think we're dealing with some kind of fluke."



Troubled Times



Dolphins

Dolphins Dying Off Florida Coast

Discovery Earth Alert, Jan. 4, 2000

Wildlife officials are becoming increasingly alarmed over the number of dolphins washing up on the shores of northwest Florida. Over the weekend, three dolphin carcasses a day were found on the shores of Fort Walton Beach on Choctawhatchee Bay. Throughout December, rescuers reported finding a dead dolphin a day on average. Officials say that various forms of sickness had been ruled out because the dolphins appeared to have been healthy before they died. George Gray, coordinator for a Fort Walton Beach wildlife rescue group, said that most of the dead dolphins were full-grown with stomachs full of fish, and many of the females were pregnant. Laboratory tests targeting an outbreak of red tide as the culprit are pending. In large doses, the algae can be deadly to sealife and poisonous to humans. A red tide outbreak in late summer at Fort Walton Beach killed thousands of fish, but no dolphins.

Dolphins Wash Ashore in Florida Keys

Yahoo News, Reuters, Jan. 17, 2000

An estimated 75 to 100 bottlenose dolphins have beached themselves along jagged shores in the Florida Keys and as many as 25 have died, marine police said on Monday. Some dolphins were injured by rocks and sharp coral as they came ashore overnight along Long Key or thrashed in shallow waters, wildlife officials said. Other strandings involving fewer dolphins had been reported at two other spots in the Keys, a string of narrow islands south of Miami, according to spokesman Stephen Acton of the Florida Fish and Wildlife Commission. No cause for the beachings, similar to one involving more than 100 dolphins in 1999, had been determined. A cause was not likely to be uncovered until detailed physical examinations now underway on some dead animals had been completed, Acton said. Bottlenosed dolphins normally live 40 miles (65 km) or more offshore but have been known to head for the coast when one or more in a group falls ill.

Dozens of Commerson's dolphins found dead in Patagonia

DolphinDreamsUK News. January 27, 2000

56 Commerson's dolphins have been found dead at Rio Gallegos, Santa Cruz Province, Patagonia. Fundacion Cethus, an Argentine cetacean organisation funded by WDCS, is currently at the scene investigating possible causes of death. Cethus has been studying these dolphins at Rio Gallegos and other locations in southern Patagonia for several years. Photo-id studies suggest that the Rio Gallegos population is very small (possibly in the dozens), so the loss of any individuals is a serious matter. Females typically give birth between December and February, so the timing of this tragedy couldn't have been worse.

Details of Cetacean Deaths in France

DolphinDreamsUK News, February, 2000

A report from Eric Poncelet of the Centre de Recherche sur les Mammifères Marins (CRMM) in La Rochelle, France states that around 350 cetaceans were found dead stranded since the beginning of 2000. The stranding rate drastically increased on 10 Feb 2000. Some dead animals may still reach the coast, but to a lesser extent. By order of decreasing frequency, the species are: common dolphin (96%), harbour

porpoise, long-finned pilot whale, striped dolphin and bottlenose dolphin. Among the 94 whales examined by the CRMM staff, 80% had bycatch marks. This doesn't mean that all these died in the nets, some may be dead when bycaught. No virologic examination has been carried out. However, as a whole, the animals that could be necropsied seemed to be healthy (good blubber thickness and corpulence, full stomach).



Troubled Times



Sea Lions

Sea Lion Deaths leave Scientists Swimming

ENN News, March 3, 2000

Scientists are searching for clues to explain the high mortality rate of Australian sea lion pups. Sea lion populations in Australia are sinking in alarming numbers, and researchers from CSIRO, the country's national science agency, are at a loss to know why. "The sea lion colonies should be bouncing back from over-harvesting last century," said CSIRO researcher Peter Shaughnessy, who has studied sea lions since 1990. "We don't know why they aren't." In 1999, sea lion pups died in record numbers at a major breeding colony near Port Lincoln on Australia's western coast. The mortality rate exceeded 40 percent, sounding a loud alarm for scientists.

Some 3,000 seals die in Caspian Sea

Associated Press, May 23, 2000

An epidemic has killed more than 3,000 seals along Kazakstan's Caspian Sea coast and scientists fear that the entire population of the animals could be wiped out, officials said Tuesday. A report by the Kazak Agency for Emergencies said the bodies of the dead seals had been collected and destroyed, but that the cause and type of epidemic had not been determined. Experts from Russia, Kazakstan and Great Britain were trying to determine the nature of the epidemic.

Scientists are Stumped by Dwindling Numbers of Sea Lions

By Lee Dye, *ABCNEWS.com*, June 29, 2000

Where they used to see thousands, they now see hundreds. Where they used to see hundreds, they now see a few. Often, they see none at all. The population of Steller sea lions in the northern and western Pacific Ocean has declined so much that many scientists say the once-noisy rookeries scattered along the Aleutian Islands now seem more like ghost towns. These great behemoths of the north, as graceful in the water as they are awkward on land, have declined by over 80 percent in the last 30 years throughout the area from central Alaska's west coast to Japan. A recent report by the National Marine Fisheries Service says the Steller sea lion, which has been on the endangered species list since 1990, may be headed for extinction.

Some believe the fishing industry has depleted the Steller sea lion's food supplies. The reason for the dramatic decline from more than 250,000 to fewer than 50,000 animals appears obvious: the Steller sea lion competes for food with the aggressive commercial fisheries of the northern Pacific, and the lion is no longer the king of that jungle. "The best available evidence indicates food limitation remains the primary hypothesis for the ongoing decline of the species," the National Marine Fisheries Service concludes in a recent report. That statement is based primarily on the fact that commercial fishing for pollock, cod and mackerel (the sea lion's primary diet) has grown explosively in the northern Pacific at the same time that the population of sea lions has gone down. But with such qualifiers as "best available evidence" and "primary hypothesis," the statement also reveals a level of uncertainty that is unacceptable to a multi-billion dollar fishing industry that could be severely curtailed.

The simple fact is that nobody knows for certain what's going on here, and finding the right answers to the right questions is very difficult. The scientific basis for limiting the fishery is so woefully lacking in

evidence that a federal judge in Seattle recently found that authorities don't have the data needed to make the right decisions to protect the sea lions while limiting the fisheries. The reason for the uncertainty lies chiefly in the nature of the beast. The Steller sea lion, also called the northern sea lion, is indeed a monster of the deep. Males can be more than 10 feet long, and weigh more than a ton, and they can dive to depths of more than 600 feet. They range from Southern California's Channel Islands to the Arctic and to the coasts of Russia and Japan. They make their homes in some of the planet's most inhospitable places, like the barren islands of the Aleutians that divide the Bering Sea from the Gulf of Alaska, making it virtually impossible for scientists to monitor their activities over a long period of time.



Troubled Times



Sea Otters

California's Sea Otter Population in Decline

National Wildlife Magazine, June/July 2000

When all the numbers are in, the 1999 spring count tells a worrisome tale--for the fourth year in a row, southern sea otter numbers have gone down. Scientists have been unable to pinpoint the cause: Starvation, disease, pollution, drowning in fishing gear and even El Nino's storms may all play roles, but none by itself seems enough to explain the problem. "This decline is real, it is significant, and we do not have a simple understanding of why," says Dave Jessup, a senior wildlife veterinarian with the California Department of Fish and Game. From a peak of nearly 2400 animals in 1995, the southern sea otter count has slid steadily downward year by year - in normal years as well as the stormier El Nino years - until today there are barely 2000 otters left. A bigger concern is that dead animals have been washing up on shore in unprecedented numbers - more than 200 animals in 1998 alone. "We picked up 10 percent of the population dead in 1998. That's not something that happens very often in wildlife population," says Jessup. Many of the dead southern otters looked like they were starving, which led some experts to wonder whether the animals were running out of sea urchins, crustaceans, and other bottom-dwelling creatures that form the bulk of their diet. The idea makes sense: Otters are ravenous eaters, gulping down as much as a quarter of their body weight every day.

Despite their enormous appetites, though, Kenner says it's not clear that otters are dying of hunger. There is little evidence that the otter's prey species have dwindled in recent years, and there are few signs that hungry otters are migrating up and down the coast in search of better food. Moreover, the wrong animals seem to be dying. "If it was just a food limitation, you'd expect to see the very young and very old dying, but see a lot of prime-aged animals," says Kenner. The starving animals may be the result, not the cause, of the problem, some scientists think. "It doesn't take too many days of being too sick to eat to get real skinny real fast," says Jessup. And indeed, when pathologists examined the recently dead animals, the biggest killer turned out to be disease, which accounted for 40 percent of all deaths. About half of the diseased animals were felled by parasites, especially spiny-headed worm that normally passes from sand crabs into seabirds. If hunger drove more otters to eat sand crabs in recent years, Jessup figures, they may have picked up the parasite in greater numbers than before. The other half of the diseased animals fell victim to an odd variety of problems: massive bacterial infections, a protozoan called *Toxoplasma* that infects the brain, and even the fungus that causes valley fever, a respiratory disease that affects humans in the Southwest. All three disease organisms are common, yet rarely cause problems in healthy animals. Instead, they tend to pop up when something weakens the immune system. "These three syndromes together suggest there may be something wrong with the immune system of sea otters," says Jessup.



Troubled Times



Sea-Bed Fish

[Dead Fish Swamp Omani Coast](#)

Earth Changes TV, September 4, 2000

Huge numbers of dead fish have been washed up on the coast of Oman for the second time in a week. Omani TV showed fish strewn along the coast in Barka province, on the Gulf of Oman, 50 miles (80km) north-west of the capital Muscat. Large quantities of the fish littered beaches along the neighbouring governorate of Muscat last week. An official from the Omani Agriculture and Fisheries Ministry told the TV station that the fish had died of natural causes and there had been no environmental disaster in Oman's waters. Cold currents entered the Gulf of Oman from the Arabian Sea bringing organisms called phytoplankton, Assistant Director-General for Fisheries and Guidance Eng Saud Bin-Humud al-Haysi said. These organisms and plants attached to them used up large amounts of the oxygen which sea-bed fish need to survive. Unlike surface fish, sea-bed fish are not able to move fast to find areas free of phytoplankton.

Local fishermen said they had never seen anything quite like it. "It might last for a day or two with small quantities, but not like this," one said. "The fish have never been stranded like this." The fishermen fear that if this carries on their livelihoods will be threatened, but Mr al-Haysi believes there is no great cause for concern. "We have examined quantities today," he said. "If the phenomenon continues, then it may have a medium-term effect. "But we do not expect the quantities we examined today to affect the fishermen noticeably..." Oman, which boasts 1,050 miles (1,700 km) of coastline, has a flourishing fishing industry exporting throughout the Arabian peninsula as well as to the European Union.



Troubled Times



Sea Turtles

N.C. Sea Turtle Deaths Puzzle Scientists

By Jerry Allegood, *Raleigh News & Observer*, May 11, 2000

More than 200 dead sea turtles have washed ashore on North Carolina's Outer Banks beaches in the past week, an unusually high number for such a short period of time. The strandings have pushed the toll for this year to more than 340 and have prompted an investigation by the National Marine Fisheries Service. State and federal fisheries biologists said Tuesday they do not know what killed the turtles, but remnants of fishing nets were found on four carcasses. Charles Oravetz, assistant administrator for the National Marine Fisheries Service in St. Petersburg, Fla., said the agency is examining the pieces of net and fishing operations at the time to see if commercial fishing contributed to the deaths. "It's kind of unprecedented for that many turtles to wash up in North Carolina over this time period, and we're very concerned about it," he said. Because sea turtles are protected by federal law, the agency could order changes in fishing gear or close areas to fishing. A decision on what action will be taken is expected in a few days, Oravetz said.

Most of the dead turtles were loggerheads, which are designated as a threatened species under the federal endangered species law, and a few were Kemp's ridley turtles, which are listed as endangered. About 210 to 220 dead turtles were found last week on beaches from Oregon Inlet to Hatteras Inlet. That's more than the total of 191 stranded from January through May last year, according to Ruth Boettcher, sea turtle project coordinator for the N.C. Wildlife Resources Commission. She said the animals were severely decomposed, making it difficult to determine the condition of turtles before they died or the cause of death. Most were immature turtles about 22 to 40 inches long. Northeasterly winds apparently blew the carcasses from offshore waters, she said, with most washing up last Wednesday and Thursday. Authorities were unable to determine what killed 71 turtles that washed up between April 14 and April 17 on beaches on Ocracoke and Hatteras Islands. "Those turtles were in better condition generally than this last batch, but there were no indications at all of what the cause of death might have been," Oravetz said. The animals were apparently healthy at the time of their death, he said. Oravetz said gill nets strung out to catch fish can hold and drown turtles when they become entangled in them. The fisheries service will look at the different mesh sizes being used for various fish to determine if they likely conflicted with turtles.



Troubled Times



Sharks

Up to 300 Sharks Die in Panhandle, Cause a Mystery

Associated Press, October 18, 2000

Dead sharks have been washing up on beaches along the Gulf of Mexico and officials can't figure out why. "We really have no idea," said Jack Mobley, a wildlife biologist at Tyndall Air Force Base, where about 50 sharks, mostly blacktips, had washed up. "There needs to be tests done before that can be determined." The sharks, which ranged up to 5 feet (1.5 meters) long, started showing up Monday in waters off the Florida Panhandle. Traces of blood reported on nostrils and gills of some sharks suggests an infection might be the culprit, said Mike Brim, an ecologist with the U.S. Fish and Wildlife Service. Other theories include the lack of oxygen in shallow waters and dumping of shark carcasses by fishermen who sell the prized fins for food. Red tide, an algae bloom toxic to fish, was reported in the area last week, but other species apparently have been unaffected. "Why would these sharks be dead and the fish be alive?" helicopter pilot Skip Franck said after flying over the bay. "When we flew over, it was bubbling with fish."



Troubled Times



Vultures

Catastrophic Vulture Die Off Creates a Stink in India

By Pallava Bagla, *National Geographic News*, November 14, 2000

The stench is overpowering. Rotting cattle carcasses seem to be strewn all over northern India now that nature's highly efficient clean-up brigade - vultures - are dying off in catastrophic numbers. Such a large-scale die off of this hardy group of scavenger birds is believed to be unprecedented in the world. Over the past decade in India, entire populations of vultures have declined catastrophically. In some areas they have been wiped out. A 1999 study by the Bombay Natural History Society (BNHS), in Keoladeo National Park, found a 96 percent decline in the population of white-backed vultures and a 97 percent drop in the population of long-billed vultures. According to Vibhu Prakash, an ornithologist with the BNHS, the nesting population of white-backed vultures within this protected area has crashed 95 percent over the last decade. During the 1987-88 season 363 nesting pairs were counted in the park. That number dropped to a mere 20 in 1998-99. "The vulture die off has created a real vacuum in the ecosystem," says Shruti Sharma, director of Keoladeo National Park. Without the vultures to scavenge dead animals, "rotting carcasses lie around for days."

In areas where vultures remain, many show signs of a mysterious illness that is characterized by prolonged periods of neck drooping. Adults, juveniles, and nestlings are all being affected by the disease, and invariably die as a result. Typically, die offs follow toxic exposures, leading scientists to believe the current situation may be linked to the use of pesticides. But new investigations have shown that a more likely cause of the decline is infectious disease. This is unusual, as vultures are highly efficient scavengers and are normally resistant to many diseases due to the scavenging nature of their lives. "An epidemic has not yet been confirmed, but the more progress we make with our investigations, the more likely it seems that a viral disease is involved," says Andrew A. Cunningham, a veterinary pathologist at the Zoological Society of London, who recently spent several weeks in India investigating the situation. Cunningham speculates that a "scenario of the introduction of a pathogen into native populations may have occurred." He feels there are strong similarities between the vultures in India and recent amphibian die offs in Central America and Australia that have been attributed to "pathogen pollution." Symptoms of the disease have also appeared in birds in Nepal and Pakistan, indicating the epidemic is spreading.



Troubled Times



Pilot Whales

Discovery Online, October 30, 1998

New Zealand conservation officials found 250 dead pilot whales in the remote area of Doughboy Bay in southwestern Stewart Island Thursday. More than 300 whales had been stranded on the island since Wednesday, but rescuers were only able to save 60 of the marine mammals. According to the Department of Conservation's acting conservator, Dave Taylor, it was the second largest stranding of whales in New Zealand history. Officials were unable to determine what caused the whales to beach themselves.

Whales Stranded on New Zealand Beach

Discovery Earth Alert, December 22, 2000

Rescuers in New Zealand's southernmost island worked frantically on Friday to save a pod of more than 100 pilot whales that had beached themselves. The group sprang to action after 22 of the marine mammals died. By daylight, at least 30 of the whales were on Maori Beach on Stewart Island, close to where the deaths occurred, and scores of others were less than a half mile (1 km) offshore in dangerously shallow water. The rescuers used inflatable boats to circle the whales and try to encourage them to return to the sea, but Department of Conservation officials said the distress calls from the beached mammals attracted even more of the huge beasts to the shore. The group used the boats as a sort of barricade to discourage the whales from swimming ashore. A spokesman said, "Hopefully they will stay off. If they start heading for the beach again we push more craft in between the whales and beach to keep them off as best we can." Although there is no history of whales beaching themselves on Maori Beach, at least 288 whales died two years ago in a similar beaching at an isolated bay on the island's southeast coast.

Isn't this related to magnetism changes, like the lost pigeons?

Offered by [Leila](#).

I tend to believe it is the magnetic field, because so much else is going on with other life forms indicating confusion and discombobulation.

Offered by [Martha](#).



Troubled Times



Killer Whales

98 Whales Beach themselves in Yucatan; 76 dead

Associated Press, June 2, 2000

Nearly 80 whales died after beaching themselves on Mexico's southeastern coast, officials said. A group of 98 whales worked their way onto the shores of a nature reserve in the Yucatan peninsula on Wednesday, Ramiro Rubio, the director of the reserve, said Thursday. Authorities launched a rescue effort and were able to bring 22 to deeper waters but 76 died, said Rubio. Officials were taking samples from the animals and the water to determine what might have led to the beachings. This particular species, known as false killer whales, is prone to beaching itself, Rubio said, who heads the Ria Lagartos Biosphere. Officials buried the corpses to prevent any damage their decomposition might cause to the ecosystem.



Troubled Times



Dolphins

Dolphins Die in Mass Beaching in South Africa

Discovery Earth Alert, March 27, 2000

The carcasses of 28 beached dolphins were found on a remote beach in South Africa on Sunday, leaving marine biologists mystified. The dolphins were discovered on a stretch of white sandy beach in the Woody Cape Nature Reserve near the Indian Ocean city of Port Elizabeth. Sandy Thackeray, of Bayworld Oceanarium, reported that a group of scientists and volunteers discovered the sea mammals were already dead when they were found and appeared to have been beached for several days. Thackeray said, "We go regularly to get one or two (beached dolphins), but it's really unusual for a whole lot to strand themselves at the same time at the same place." She speculated that a possible cause was that the dolphins had become disoriented in a frantic attempt to escape predators. Autopsies will be conducted to try to determine the cause for the mass beaching.



Troubled Times



Sea Turtles

Sea Turtles Stranded on Cape Cod Beaches

National Geographic News, Dec.23, 1999

Biologists, veterinarians, and volunteers are reeling from an unprecedented rash of sea turtle strandings on the shores of Cape Cod in Massachusetts. The highly endangered animals began washing up on the beaches of the Cape in November. By mid-December, 218 sea turtles, some dead and others alive, had washed ashore. A majority of the turtles (203 at last count) are juvenile Kemp's ridley, the most endangered of the sea turtle species. They were suffering from a condition known as "cold-stunned," which occurs when the water temperature drops and the turtles become so cold that they go into shock. Most years, the turtles leave the Cape before the water gets too cold.

Strandings are not unusual; about 17 turtles wash ashore every year. It's the sheer number that has rescue workers scrambling. "This stranding is so much bigger, more drastic and much more tragic than in previous years," says Cynthia Smith, an intern veterinarian with the New England Aquarium. The turtles that have been plucked from the beaches alive suffer from a variety of ills, including hypothermia, dehydration, pneumonia, and a deadly bacterial infection called sepsis. The huge number of sick turtles has overwhelmed the New England Aquarium, and nearly a hundred have been flown to five other rehabilitation centers in Florida. The sea turtles that are successfully rehabilitated will be

released back into the wild sometime during the spring and summer. It's unclear to scientists why the turtles aren't leaving the area before the water gets too cold. As reptiles, their body temperature is essentially the same as the water temperature; optimally 60 to 70 degrees Fahrenheit (15-21 Celsius). The temperature of the stranded turtles after rescue is between 45 and 55 degrees Fahrenheit (7-13 Celsius), according to Smith. "We don't know if they lose direction, get too cold too fast, didn't get out [of the North Atlantic] in time or are confused about the temperatures," she said.



Troubled Times



Magnetism

Whales and Dolphins Trapped Magnetically

No. 38, March/April 1985

Joseph L. Kirschvink, of the California Institute of Technology, has plotted the hundreds of beachings of whales and dolphins along the U.S. east coast. He finds that these cetaceans tend to run aground at spots where the earth's magnetic field is diminished by the local magnetic fields of rocks. These coastal magnetic lows are at the ends of long, continuous channels of magnetic minima that run for great distances along the ocean floors. Kirschvink believes that the stranded whales and dolphins were using these magnetic troughs for navigation and failed to see the stop sign at the beaches and ran aground. The magnetic troughs in this view are superhighways for animals equipped with a magnetic sense.

If Kirschvink's theory is correct, the magnetic sensors of the whales and dolphins are extremely sensitive, because the deepest magnetic troughs are only about 4% weaker than the background magnetic field. Magnetite crystals have been found in birds, fish, and insects, where they are thought to contribute to a magnetic sense of some sort. So far, no magnetite has shown up in whales and dolphins.

(Weisburd, S.; **Whales and Dolphins Use Magnetic 'Roads,'** *Science News*, 126:389, 1984.)



Troubled Times



Many Creatures

Sensing Earth's Magnetism

ABCNEWS.com, July 23, 1999

Maybe humans do it. But lobsters, fish, frogs, sea slugs, even some rats, do it better. These animals find their way by using Earth's magnetic field. Some use their magnetic sense to navigate over enormous distances, while others use it for short jaunts. Bobolinks, otherwise known as "glorified blackbirds," have a hugely long migratory trek. Racking up 10,000 frequent-flier miles during round trips between North and South America, each bird returns to the same breeding spot year after year. The loggerhead sea turtle in the North Atlantic is another long-distance traveler. They mostly nest in the southeastern United States, and journey thousands of miles, always finding their way back to the same beach to lay eggs. The turtles spend five to 10 years swimming around the North Atlantic before returning to nest. Ken Lohmann, a biologist at the University of North Carolina, thinks turtles may use their magnetic sense to stay inside the warm regions of the North Atlantic, then navigate a return to their home beaches.

On a much shorter scale, small salamanders, called newts, need a directional sense to dash across the pond to escape from predators. They can remember where a sloping shore lies, which means safety for them. Newts also magnetically navigate to their home pond, from a distance of usually less than eight miles, after roaming the forest floor in their adolescent stage. Sometimes scientists don't know why an animal has a magnetic sense. "We were astounded when the data showed [sea slugs] have a well-developed magnetic sense," Lohmann says. Sea slugs use it to slither shoreward for mysterious reasons; Lohmann thinks access to food is a big motivation.

Though orientation to Earth's magnetic field is nearly ubiquitous in the animal kingdom, no one knows exactly how animals detect it. "It's like understanding that animals can sense light, but not knowing about the eye," explains Mark Deutschlander, a biologist at the University of Victoria in Canada.



Troubled Times



Snowbirds

Snow Bird Drawing a Crowd in Fla.

Associated Press, December, 1998

Snowbirds of the two-legged variety have some winged company in Florida these days. The South Polar skua, a bird that typically frequents the frigid waters off Antarctica, has spent the last five weeks hunting, resting and drawing crowds at a beach known for surfing. Bird watchers by the hundreds have flocked to this stretch of beach, just south of Boynton Inlet Park on Florida's east coast to see the bird. It is the first confirmed sighting of the large predatory species in southern Florida. Environmentalist Kim Jones first reported seeing the bird on Nov. 11. "It's really doing better over the past three days. It's feathers have grown back on the one side where they were gone," Ms. Jones said. She believes the bird may have been blown off course by Hurricane Mitch - a likely scenario, according to birders from the Florida Audubon Society. Birders also have spotted skuas in the Jacksonville area and off the coast of Georgia.



Troubled Times



Arctic Birds

Arctic Warming Signals Dire Straits for Birds

ENN News, April 5, 2000

The emperor goose is one of many Arctic birds that will feel the effects of climate change and habitat loss in the region, researchers say. Climate change could eliminate 50 percent of rare Arctic bird populations, according to a study released Monday by the Worldwide Fund for Nature. Using climate models, scientists from the World Conservation Monitoring Centre assessed the effects of temperature and shrinking habitat on water birds in the Arctic region. During the past century, global mean temperature increased by .9 degrees Fahrenheit. Nowhere on the planet has the warming been more striking than in the Arctic, where average temperatures have risen as much as 2.7 F per decade since the 1960s, the researchers note. In the next 70 to 100 years, scientists predict that the concentration of carbon dioxide in the environment could double. Arctic habitats are expected to be among the first biomes to show the direct impact of climate change. The report warns that higher temperatures will cause wooded forests to advance northward, replacing the Arctic tundra, an essential breeding area for millions of birds.

Arctic water birds most threatened by the global warming include the critically endangered red-breasted goose, tundra bean goose, spoon-billed sandpiper and emperor goose. The lesser white-fronted goose, pictured here, is not as threatened by global warming as its Arctic friend, the white-fronted goose. With a global temperature increase of only 1.7 degrees by 2070, all of these birds would lose more than 50 percent of their habitat, the report notes. More than two-thirds of all geese and nearly 95 percent of all calidrid waders breed in the Arctic. The study forecasts that a 40 percent to 57 percent loss of tundra in the next 100 years may mean a loss of habitat for 5 million geese and 7.5 million calidrid waders. While some scientists argue that the birds might adjust to their changing surroundings, others argue that many species such as waders, cannot physically adapt to brushy or tree-like habitats.



Troubled Times



Homing Pigeons

Homing Pigeons Mysteriously Vanish

APNet, October 9, 1998

Several thousand homing pigeons speeding home this week didn't make it. The pigeons, flying in separate races in and around Pennsylvania, are beginning to turn up, exhausted, in distant backyards. But scientists and pigeon enthusiasts are at a complete loss to explain how the precision navigators lost their way. The weather was clear and solar activity was at a lull during many of the races. "This is extremely unusual," says Jim Effting, president of the Sportsman's Racing Pigeon Club in Emmaus, Pennsylvania. Effting and his son entered 37 pigeons in a 320-kilometer race that began in New Market, Virginia, at 10 o'clock Monday morning. Only two flew back. Of a total 1800 pigeons "liberated" that morning, only 200 made it to their respective homes. It's common to lose a lone pigeon to a hawk. "Or sometimes one says 'the heck with this' and goes to live in the wild," says Effting. But losses of this magnitude are unusual. Effting says similar numbers took wrong turns in a separate race from Breezewood, Pennsylvania, to the Philadelphia suburbs on the same day.

The Washington Post and Associated Press have also reported vanishing pigeons in nearby races that took place over the weekend. Pigeons are thought to use both Earth's magnetic field and the sun to find their way. Many of the details remain a mystery however, says homing expert Charles Walcott at Cornell. "You can take them out inside a metal case with filtered air, anesthetized on a rotating turntable, and after they recover being carsick, they come home just fine" - even over distances of 1600 kilometers. Some researchers suspect some pigeons can smell their way home. Pigeons are also thought to have a magnetic sense which allows them to "see" a map of the local magnetic topology. In the history of pigeon racing, Walcott says, there have been isolated "smashes" where a large number of pigeons vanish into the hinterland. But Walcott says he's never seen so many pigeons get lost over an extended period of time in the same area. Frankly, "we're puzzled," he says.



Troubled Times



Continuing Trend

Oct 5, 1998: Dark Day for [Homing Pigeons](#)

Science Frontiers #121, JAN-FEB 1999

Just what happened on October 5 may never be known. On that day thousands of homing pigeons were released by their proud owners in widely separated locations expecting they would quickly race home to their lofts. Few made it.

- In three separate races in New York and Pennsylvania, a total of 4,000 birds were released on October 5. Only 400 returned home.
- 3,000 pigeons released in California on the same day are still missing.

All over the planet, homing pigeons are not homing as well as they used to. Performance has been falling steadily over the past two decades. The favorite theory blames geomagnetic storms, but no such correlation has been shown. Microwaves are fingered next. Cell phones and satellite communications fill the atmosphere ever more densely will microwaves that may throw off the navigation equipment of homing pigeons, but this hasn't been demonstrated yet either.

(Ensley, Gerald: **Case of the 3,600 Disappearing Homing Pigeons Has Experts Baffled**, *Chicago Tribune*, October 18, 1998. Cr. J. Ciecziel. Also: Schoettler, Carl: **Pondering the Great Homing Pigeon Panic**, *Baltimore Sun*, October 18, 1998.)



Troubled Times



Sea Slugs

Sea Slugs Invade Auckland Coast

Discovery Earth Alert, May 18, 2000

Large sea slugs are infesting beaches along New Zealand's North Shore, giving scientists reason to believe that bacteria in the water is attracting the creatures. The slugs, also known as sea hares, look like balls of brown jelly and grow to the size of a fist. The slugs crawl on the seabed and live off a cyanobacterial algae caused by sewage. When they are squashed, they squirt out a purple-colored fluid. Witnesses have reported that the stench in the infested area is so horrendous that even seagulls will not go near the slugs.

Professor John Buckeridge of the Auckland University of Technology reported that the slugs' population is becoming increasingly larger as they gather near Long Bay and Red Beach. He warned that local officials needed to scrutinize the impact of new high-density housing and its subsequent generation of sewage in the region. Alwyn Rees of Auckland University related the warm weather patterns caused by La Nina to the growth of the cyanobacteria, which in turn had produced large numbers of slugs. "What happens is we get very, very low biodiversity but large numbers of a few species. When that happens that's what I'd call an indication that something's not quite right," said Hugh Leersnyder, the Auckland Regional Council's coastal resources manager.



Troubled Times



Killer Bees

Killer Bee Migration Due to Dry Weather

Discovery Earth Alert, May 2, 2000

Africanized honeybees are migrating to Arizona cities from hot, dry desert regions where the plant life that supplies their pollen and nectar has dried up. The killer bees are moving into the backyards of urban areas to find new sources of food. Dr. Dave Langston, an expert on the bees and superintendent of the Maricopa Agriculture Center at the University of Arizona, said, "In periods of dry weather, these bees will pack up and move on." He continued, "They're going to where the water and flowers are. We have more bees looking for places to live. That increases bee-human interaction." Dry weather conditions cause the bees to become more defensive, with fewer bees able to forage and more bees remaining in the hive to protect their scanty reserves of honey. Tom Martin, the owner of a company specializing in bee removal in Tucson and Phoenix said, "A colony of Africanized honeybees will employ more guard bees to fend off would-be intruders."

The bees, which first arrived in Arizona in 1993, typically attack more frequently in July and October when they are relocating to new hives. The Africanized variety of bee will create new hives as often as every six weeks, while domestic bees change only about once a year. Experts have reported that drought-like conditions in the state are causing the problem to worsen, and the Africanized bees are beginning to outnumber the docile European honeybee. Four people have been killed in stinging attacks since the bees first arrived and experts fear that number could rise drastically with the increase of both the human and the bee populations. Although the sting of the Africanized bee is not more venomous, the insects will attack intruders in swarms of tens of thousands. They remain agitated for as long as eight hours following an attack and will chase their victims for long distances. A hive can be set off by someone using power equipment such as a lawn mower within 100 feet or by any movement within 50 feet.



Troubled Times



Marine Organisms

Global Warming: Lessons Taught By [Snails And Crabs](#)

Science Daily, November 23, 2000

If you think that global warming is some far-off problem for future generations to worry about, consider what George Somero has to say. As acting director of Stanford's Hopkins Marine Station, Somero has to walk only a few dozen steps from his lab to the waters of Monterey Bay, where he and other marine biologists have found disturbing signs that higher ocean temperatures have transformed wildlife populations in the Pacific. "The effects of global warming already seem evident," says Somero, the David and Lucile Packard Professor in Marine Science at Stanford. "The vast majority of scientists regard continued warming of the Earth as inevitable," he adds, "and some of the best information we have on the potential effects of climate change comes from data collected right here at Hopkins." Somero points to a three-year study conducted in the 1930s, when Stanford graduate student Willis Hewatt counted and identified all of the marine invertebrates living in a 95-square-yard section of intertidal shoreline near the marine lab located in Pacific Grove, Calif.

The study was all but forgotten until 1993, when researchers decided to re-survey the same area to determine if the types of invertebrate species present at Hopkins had shifted during the past few decades. Scientists counted everything from limpets to crabs and discovered that marine populations had changed dramatically in just 60 years. "There was a significant decrease in northern species - those that tend to occur to the north of Monterey Bay, but eight out of nine southern species increased in abundance," says Somero. "The overall message in these data," he notes, "is that cold-loving species tended to move out, and warm-loving species moved in." Could this shift in species distribution have been caused by a change in climate?

To answer that, researchers needed to determine if the temperature of Monterey Bay had changed since the 1930s. Fortunately, notes Somero, Hopkins Marine Station personnel have been meticulously recording seawater temperatures every day for nearly 80 years, and a review of those records showed that, indeed, Monterey Bay had gotten warmer. "The data showed that, during the 60-year interval between the two animal surveys, annual mean water temperatures increased on average by about 1.3 F [0.7 C]," says Somero. More significantly, he adds, peak summer temperatures in August rose nearly 4 F (2.2 C). Although these temperature increases seem relatively small, Somero believes they may have been substantial enough to push some species over the edge of what he calls their thermal tolerance range. "When thermal stress pushes body temperatures to values that are unnaturally high or low, biochemical structures and the physiological processes they support - such as the heart and nervous system - may be severely, and perhaps lethally, upset," Somero observes. Climatologists predict that, if global warming continues at its current pace, the average temperature of the Earth could increase another 6 F (3.3 C) in the next 50 years.



Troubled Times



Bear Attacks

Bear Attacks Blamed on Drought

By Amy Lewis, *Weather.com*, July 28, 2000

Camping is a way of life for Boy Scouts but recently campgrounds in one New Mexico park have seen more than their share of bear attacks. Officials are blaming the encounters on the drought. The Philmont National Boy Scout Ranch has been the site of six separate incidents so far this year. "It should be pointed out that all the injuries were minor and were taken care of here at the ranch, except for one, which was sent to Taos for two days, and he has been discharged," said Comptroller Ron Bromley of the Philmont Scout Ranch. Bromley says the bears are acting out of desperation because the dry weather has slowed the development of their food source. "The bears are probably more active because they have less to eat because of the drought," Bromley said. "The berries didn't mature on time this year. Three or four months ago they should've matured." Chief of Public Affairs Luke Shelby of the New Mexico Game and Fish Department agrees. "We do feel that they are all exacerbated by the drought," he said.



Troubled Times



Purple Pigs

EPA probes Purple Pigs, Stunted Crops

Philadelphia Inquirer, March 5, 1999

Deformed calves. Discolored crops. Purple pigs dying by the hundreds, then decomposing quickly. It isn't some *Old Testament* pestilence. It's a here-and-now mystery that has driven one farmer in western Montgomery County out of business and has others in the area scared for their own businesses - and for their health. U.S. Environmental Protection Agency officials will visit at least four farms today as part of a continuing effort to figure out what is going on, said Carrie Deitzel, an EPA community-involvement coordinator. Thus far, the long series of reported problems, first noted in the early 1990s, has confounded environmental and agricultural officials. The EPA did its most recent round of soil and water testing on the farms in January, and more tests will be run in the next few weeks. "The data we've got back so far do not indicate any kind of environmental or human health emergency out there," Deitzel said. "We're looking at what needs to be done from here on out."

Deitzel acknowledged that the lack of environmental danger did not mean the lack of an environmental problem. And the problem does not appear to be restricted to these parts. "This isn't an isolated thing," said Lynn Campbell Wingert, an EPA spokeswoman. "Throughout the mid-Atlantic region, farm animals are dying, and we don't know why. We're going to make any connection we can to figure out what is going on here." One farmer, Wayne Hallowell of Douglass Township, said there was no real way to know how many farms were involved locally because it was unlikely every farmer would be willing to cooperate with investigators. "A lot of farmers with something wrong won't tell anyone," Hallowell said. "They don't want the government coming in and shutting them down, or they're trying to sell their land. They're very tight-lipped on that."

But problems there are - enough that Tom Yarnall, a farmer for 30 years, finally gave up raising pigs on his Gilbertsville spread. Yarnall still grows some corn, but spends most of his time these days as a carpenter. "I had almost 1,000 pigs when this thing started," Yarnall said. "In the spring of '92, it all went downhill. We had whole litters die when they were born." More than 200 pigs died during a two-month period in 1993, Yarnall said. All displayed similar symptoms: turning a purplish color, with newborns just not growing to maturity. His crops also turned purple, and have been stunted for several years, Yarnall said. "The yields are way down," he said. "They just don't do well." The pigs' bodies decomposed in about half the normal time, Yarnall said. Generally, dead pigs decompose in two to seven days, depending on the surrounding climate and other variables, said Arlen Wilbers, a large-animal veterinarian at the Quakertown Veterinary Clinic who examined livestock at Yarnall's farm. "Whatever was in their system broke down their fat," Yarnall said. "They'd turn into slop."

Kenneth Kephart, an associate professor of animal science at Pennsylvania State University, investigated the goings-on at Yarnall's farm. "We went at it from a lot of different directions, and unfortunately we came up with zero," Kephart said. "Whatever it was seemed to be pretty persistent. It's extremely rare that you can't find at least some evidence of what's going on." Kephart added that livestock management might have accounted for some of the problems. But Yarnall is not the only local farmer facing unexplained and unusual disease among his livestock. Merrill Mest said he had had a decade's worth at his farm, just a few miles from Yarnall's. "I've had health problems with cows," Mest said. "They just waste away. They don't grow right. Couldn't live, couldn't die. Kind of in-between." Other cows on Mest's farm have had

displaced stomachs and cystic ovaries, he said. "My vet says I have a lot more problems than I should," Mest said. "But nobody knows why." Wilbers, who is also Mest's veterinarian, said that some of the problems again might be chalked up to livestock management. "Some of the stuff kind of rings true" as being caused by external problems, Wilbers said. "But there's nothing I could specifically say. Nothing seems to crop up" as a definitive cause.

Down the road at Hallowell's dairy farm, three deformed calves were born in a year and a half in the mid-1990s - after nearly 50 years without any deformed calves being born on the land. One newborn calf weighed three times the typical birth weight. Another was born with both a testicle and a vagina. A third was born without a neck, without a tail and with reversed leg joints. During the same period, Hallowell said, several calves on his farm would not grow. "They more or less just deteriorated on us," he said. "If we hadn't gotten rid of them, they would have died." And, like Yarnall, Hallowell's corn and grass have turned an unsettling shade of purple, and they do not reach maturity. State and federal officials say they have not given up searching for answers. State Department of Environmental Protection spokesman Pete Trosini said the agency would review its old records on the farms' problems in search of "any inconsistencies or anything that might raise a red flag." And in today's visits, farmers will be asked to offer their suggestions. "We'll basically talk to them to see what their specific concerns are, and see if they have specific places on the farms they want included in the sampling plan," Deitzel said.

Hallowell said he suspected radiation poisoning, citing the Cabot Corp. chemical plant in Boyertown, just a few miles from his farm. The Cabot plant uses a wide variety of chemicals in its operations, and was listed by the Nuclear Regulatory Commission (NRC) in 1992 as one of 46 sites in the United States with serious and long-term radioactive contamination that required accelerated cleanup. "The Boyertown site had stored in mausoleums 25,000 tons of residue product from their operations," said Michael Lamastra, a senior project manager with the NRC. Lamastra said the Cabot plant was removed from the NRC list after the contaminants were transferred offsite last year. And he said the Cabot site was on the list only because of the high cost of moving so much radioactive waste, not because of a perceived health or environmental danger. Cabot officials said that the levels of radiation were low, and that the storage methods were proper. "I'm not aware of any incidents that could have contributed to these types of problems," said Tony Campitelli, the plant's manager of environmental affairs. The EPA probably will look into Cabot's environmental record and practices as part of its investigation, Deitzel said. But, she noted, neither DEP nor NRC had reported problems with the firm's Boyertown plant.

The unexpected consequences that result when industrial refuse and farms get too close to each other could provide an explanation, said Sarah Caspar, who is the EPA's on-site coordinator for an area in Parkersburg, W.Va., that also has seen unexplained livestock deaths. The affected farms in that area are near a chemical company's landfill. "Part of me has this feeling that as time has passed since industrialization, things that people weren't aware of may be coming to the fore because of time and accumulation," she said. As the riddle continues unsolved in western Montgomery County, the farmers say they fear for their lives as well as their livelihoods. Yarnall, 60, and Hallowell, 44, both complained of aches, pains and memory loss over the last few years. Hallowell said he would like to keep farming. He also wants answers. "If I could just get things back to normal around here," he said. "Or if it's that deadly, let me know so I can sell out and move someplace else. I don't want cancer, I don't want my kids getting cancer. I don't know whom to trust."



Troubled Times



Crocodiles

Mass Fish Deaths in Upper Nile River

Discovery Communications, April 1, 1999

Floating carcasses of fish, hippos and crocodiles in the famed Nile River of southern Sudan have alarmed local residents and baffled government officials. Residents in the town of Juba believe the river's polluted waters are causing the deaths, and refuse to use the water or eat any of the fish from the Nile. One environmental official described the river water as "greenish and smelly because of the decomposing marine creatures." The local government on Tuesday issued a statement saying that laboratory tests had established that the water was safe for human consumption. The water scare has aggravated an already acute shortage of water, with Sudanese lining up around the few wells scattered in town.



Troubled Times



Sea Birds

Russia Seabirds Die in Mass

Associated Press, August 30, 1999

More than 2,500 dead seabirds have been found in Russia's Far East and scientists are not sure why, a news agency reported Monday. About 2,500 birds have been found on Kunashir Island in the southern Kurils, and another 100 on Sakhalin Island, the Interfax news agency said. People started reporting unusually large numbers of dead birds this month, and some experts say it could be caused by unusually hot weather. Zoya Revyakina, the chief of the state environmental protection authority on Sakhalin, said the same phenomenon had been reported in Japan, the Interfax said. The birds' bodies have been lying for many days in hot sand, making it hard to researchers to discover a trace of disease or poisoning, the report said.



Troubled Times



Lobsters

Illness Kills Long Island Lobsters

Associated Press, October 18, 1999

A mysterious illness is killing tens of thousands of lobsters in Long Island Sound, alarming lobstermen and conservation officials. The die-off is the Sound's worst in nearly a decade, officials said. About eight of every 100 lobsters caught are coming up dead, said Byron H. Young of the state Department of Environmental Conservation. Tests on blood taken from the lobsters have not pinpointed the cause. Water quality tests have ruled out pollution and low oxygen levels.

New York has 900 commercially licensed lobstermen. New York was the nation's No. 3 lobster producer in 1998, behind Maine and Massachusetts, with 8.5 million pounds of lobsters worth nearly \$30 million. The fall harvest normally accounts for half of the annual income for lobstermen. There have been no reports of illnesses from eating lobsters since fishermen first reported the die-off about six weeks ago. Boiling the lobsters will kill any microbes, Young said. Last fall, thousands of lobsters died in the waters off Maine, the nation's top producer. Scientists there have not pinpointed the cause.



Troubled Times



Frogs

Amphibian [Declines](#) Complicated, Disturbing

Source: [Oregon State University](#)

Date: Posted 2/22/2000, Washington D.C.

People who are looking for a magic bullet that will explain all of the amphibian deaths and declines around the world are going to be disappointed, a leading expert said Friday at the annual meeting of the American Association for the Advancement of Science. It's now a certainty that there are multiple causes contributing to this problem, said Andrew Blaustein, a professor of zoology at Oregon State University and one of the pioneers in this field of study. But the lack of a single, definite cause does not diminish the seriousness of this alarming ecological phenomenon, he said. "At this point we can say for sure that there are several causes of amphibian declines, which include rising levels of UV-B radiation in sunlight, pathogens, pollutants, habitat destruction, introduced predators and most recently, crop fertilizers," Blaustein said. "But the overall result is that this group of animals which has been around since the time of the dinosaurs is now in serious decline all over the world. And some of the things that are killing frogs almost certainly have implications for other animal species, including humans."

The multiple causes of amphibian declines, in fact, helps to illustrate how ecological changes may have a synergistic effect to compound problems, Blaustein said. In various instances it might be that UV-B radiation, or pathogens, or high nitrate levels by themselves would not be enough to cause death or deformity.

Put them all together and you have far more serious impacts, he said, such as: The 14 species of amphibians that have disappeared from Australia in recent years. The five species of amphibians in the Pacific Northwest of the United States that are listed as candidates for the endangered species list. The extinction of the golden toad in Costa Rica. Massive egg mortalities of the Cascades frog in Oregon. Amphibian declines in Europe, South America, Asia, Africa. Even problems in the pristine confines of Yosemite National Park.



Troubled Times

Prophet

2000

Prophecies

At certain periods
the universe has its present circular motion, and at other periods it revolves in the reverse direction.
There is at that time great destruction of animals in general,
and only a small part of the human race survives

Politicus, by Plato

When a world cycle is destroyed by wind ..
First it raises a fine dust, then coarse dust, then fine sand, then coarse sand, then grit,
stones, up to boulders as large as trees.

Visuddhi-Magga, a Buddhist text

In the fields of archaeology, geology, and astronomy the last few years have brought
a vast array of facts to corroborate the claims ...
that there were physical upheavals of a global character in historical times;
that these catastrophes were caused by extraterrestrial agents;
and that the nature of these agents may be identified.

Earth in Upheaval, by Velikovsky

I, Aph, Son of God, trained in the change and tumult of corporeal worlds.
Proclaim my decrees of the red star and her heavens in the crash of her rebellious sides,
for I will harvest.

A wave of breath speedeth forth in the broad firmament.

The red star flieth toward the point of My whetted sword.

Fly with all speed where first the red star's vortex gathered up its nebulae, millions of years ago,
and on the way say: God hath decreed a pruning- knife to a traveling world.

Oahspe, 1882

Sunlight may be scarce, so crops grown under artificial light will be most abundant.

Rivers and seas may be poisoned, what with the volcanic dust falling everywhere,
so fish tanks fed from algae grown in human sewage will likewise be most abundant.

Certain crops fair better and go further than others.

Good cooks, skilled at making the plain fare tasty, will be much appreciated.

A natural way of life reminiscent of life during the last century.

It is no small matter to have music, poetry, and art.

This fills the heart of the musician, poet, or artist as much as the recipient.

There will be much need for such distraction, as the days will be dim, and the nights dark and long.

But do plan to educate your young. Save educational material.

There is no reason that technology should stop, just because the infrastructure of human society has been torn asunder.

Technology is in the minds and documentation that all humans can access, and rescue.

Do that.

ZetaTalk



Troubled Times

Prophet

2000

Tom Brown

Night of the Red Sky, The Prophetic Vision of 'Grandfather'

In the 1920s, an Apache wise man had a Vision of four prophecies that foretold death and destruction for mankind, unless we incorporate Spirit in our daily lives. Two of these prophecies may already have come true.

by Tom Brown, Jr © 1991

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Troubled Times

Prophet

2000

Grandfather

A number of people can predict the future, but few get the timing correct. "Grandfather" was an Apache wise man and scout, named **Stalking Wolf**, who grew up outside white man's influence. His many predictions not only came true in the manner he predicted, but also when he predicted.

Tom Brown, Jr learned extensively from Grandfather for twenty years, from their first meeting when Tom was seven years old. Stalking Wolf was the real-life grandfather of Tom's best friend at the time. The following excerpt from Tom's book, *The Quest*, tells of Grandfather's predictions for all of mankind.

Looking back, I can clearly see that Grandfather's prophecies, unlike anything else, had the greatest influence on my life. At the time they had little more effect than to frighten me and cause me to sit up and take notice. It wasn't until after his prophecies began to come true that their haunting impact began to affect me in a very profound way.

More than any other person-prophet, religious leader or psychic-I have ever met, Grandfather's prophecies, on both a major and a minor scale, came true exactly at the time he prophesied and exactly as he prophesied. With that record, I could not help but feel the impact of these prophecies on my life.

Grandfather could foretell the future with tremendous accuracy. Not only could he precisely tell us what would happen in the next moment, day, week or year, but with the same accuracy he could predict the possible futures for ten years and more away. It was not long before I began to keep detailed records of his predictions, along with other notes I kept on survival skills, tracking, awareness and things of the Spirit. I received from Grandfather hundreds of personal, minor predictions, and well over half have since come true. Along with the minor personal prophecies was a list of 103 major predictions, of which, to date, over 65 have become absolutely true, not only in time and place but also in the exact order in which they were predicted to happen.

Grandfather said that there was not future, only possible futures. The 'now' was like the palm of a hand, with each finger being the possible future, and, as always, one of the futures was always the most powerful, the way that the main course of events would surely take us. Thus his predictions were of the possible future, which meant that he always left a choice.

"If a man could make the right choices," he said, "then he could significantly alter the course of the possible future. No man, then, should feel insignificant, for it only takes one man to alter the consciousness of mankind through the Spirit-that-moves-in-all-things. In essence, one thought influences another, then another, until the thought is made manifest throughout all of Creation. It is the same thought, the same force, that causes an entire flock of birds to change course, as the flock then has one mind."

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Troubled Times

Prophet

2000

Prophecy

Out of all the personal and major prophecies that Grandfather foretold, there are four that stand out above all the rest. It is these four that mark the destruction of man and life on Earth, as we know it to exist now. Yet Grandfather said that we could still change things, even after the first two prophecies came true, but that there could be no turning back after the third.

Now that we have gone well past the second prophecy, danger and destruction are very apparent, and our only recourse is to work harder to change what has possibly become the inevitable. The urgency that I feel-now, more than ever-is a direct result of the second, impossible prophecy coming true. It is the reason that I teach, sometimes with a certain desperation, and constantly with the sense that we are quickly running out of time.

I should have worked harder and with that same desperation at a much earlier date, but, like the rest of mankind, it took a strong message to get me motivated. I should have known that these things he prophesied would some day come true, because his personal, minor predictions were coming true daily.

He so accurately foretold of Rick's death on a white horse, that I would some day teach, that I would have a son-and that taking him into the Pine Barrens for the first time would forever change my life. He predicted the formation of my school, my books, my family, and even the horrible mistakes I would make as I tried to live within society.

Yet with all of this coming true on a daily basis, I simply would not believe or accept that the major prophecy of man's destruction would come true, and its reality hit me hard. It was then that the urgency made itself known.

I remember so vividly the "night of the four prophecies"-as I have become accustomed to calling that night when Grandfather first made us aware of their possibility. We had been with Grandfather for five years at the time and were accustomed to his prophecies and their accuracy.

Our ability to understand the things of the Spirit world were as sure as our ability to survive and track. Very little of what society calls "the paranormal" shocked us any more, because miracles were part of our everyday existence. Grandfather was a living miracle, and so many of the things that he did on a daily basis, sometimes unconsciously, would be considered miraculous by most. Yet as savvy as we were spiritually, the night of the four prophecies shocked us like nothing we had ever experienced before.

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Troubled Times

Prophet

2000

Spiritual Lessons

We had been hiking all day without much of a break, making our way to a place where we were going to camp, atop a small hill that I now call Prophecy Hill. It was a typical midsummer hike: hot, humid and dusty, with no water available along our entire travel route. As usual, we still took time to stop frequently or take side trips to explore various areas along our route. The adventure and exploration kept us fresh and eager, making the fatigue, heat and thirst hardly factors.

Many times along the way, Grandfather would stop and teach us-not physical lessons of survival, tracking or awareness, but lessons dealing with the awareness of Spirit. Very often he would discuss the future and, almost as frequently, the past - the distant past.

At one point we stopped along the deer trail we were travelling and followed Grandfather through some heavy brush. The trees and shrubs were far different than those throughout the rest of the Pine Barrens, and I immediately knew this place as an old homestead or town of some sort. Even though the buildings had long since rotted away, the plants and trees still marked the spot where civilisation had once stood. Passing through several very thick areas, we finally entered a grove of very tall, old sycamore trees. From their branches and up their trunks ran huge vines, the kind one might imagine finding in a jungle. In fact, the whole place looked like a jungle-so out of place from the pine, oak and blueberry that is typical in the Pine Barrens. As we sat down, a deeper spiritual sense of awareness came over me, and it was then that I noticed the gravestones.

This was the place of a very old and probably long-forgotten cemetery, possibly belonging to the town that had once been here. The stones were old; some lay flat on the ground and others stood upright, though none was straight. Plants and bushes had overrun many of the stones, and I could barely make out the markings on the stones. The weathering process had worn away many of the names and dates, making them barely readable.

At once we were in awe, humbled and reverent in this place of death; at the same time, we were amazed that Grandfather had found it so easily. To my knowledge, none of us had been there before, nor had Grandfather ever spoken of this graveyard. Yet for some reason he seemed to be drawn to it, knowing that it was there on some unseen spiritual level, at least unseen to us. I suspect now, as I look back, that he knew that it would become a teaching lesson for us.

He walked over to a gravestone that was partially hidden by foxglove vines and gently pulled them away. After a long moment, he motioned us to come over. We could barely make out the name on the grave or the dates, but at the bottom was carved clearly: "12 years old".

Grandfather then spoke. "Who are these people; who is this boy? What did they work for and what were their hopes, dreams and visions? Did they just work physically or did they work for the things beyond the flesh, for a grander purpose? Certainly they affected the Spirit-that-moves-in-all-things, but did they really work to the best of their ability to make things better for the future of their grandchildren, or did they do nothing other than to perpetuate the myth of society? Were they happy, joyous and filled with spiritual rapture, or did they just lead lives of labour and mediocrity? And did this boy live close to the Earth and the Creator, or did he just give up his youth, his sense of adventure, to toil, as did his parents and their parents before them? This boy was exactly your age, and I suspect he had hopes and dreams

much like yours. But this is his legacy, lying in a forgotten grave."

"But, Grandfather," I said, "isn't it enough just to be happy and live your life fully?"

After a long moment of silence, Grandfather answered. "It is not enough that man be just happy in the flesh, but he must also be happy and joyous in spirit. For without spiritual happiness and rapture, life is shallow. Without seeking the things of the Spirit, life is half lived and empty. And by spiritual life I do not mean just setting aside one hour of one day of one week for worship, but to seek the things of the spirit every moment of every day. I ask you, then: What did these people do to seek spiritual enlightenment and rapture? Did they just give in to a life that was little more than work? They were given a choice every day of their lives-as you will be given a choice to seek the rapture of the Spirit or to resign yourselves to a life of meaningless work. The end result is always the same: forgotten graves and forgotten dreams of forgotten people. It is not important that anyone notice or remember, but that you work to touch God and affect in a positive way the consciousness of the Spirit-that-moves-in-all-things, thus bringing the consciousness of man closer to the Creator."

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Troubled Times

Prophet

2000

Warnings

We left the graveyard without a word and headed up to the campsite on the hill. By the time we reached the camp, it had cooled off and the Sun had long since set. As we built shelters and a fire and gathered food, time seemed to fly by unnoticed, as my mind was thoroughly engrossed in thoughts of the lessons in the graveyard. I wondered how much I might be like that nameless dead boy in that forgotten grave. Was I just seeking the flesh and not working hard enough in the things of the Spirit?

It was then that I realised the deeper lessons of what Grandfather was trying to teach me. I realised then that I should live life as if I were to die tomorrow, for that is what happened to that young boy. No one can be assured of another day, but we must live each day fully, in flesh and most of all in Spirit. It isn't important that anyone remember who we were, but that we made a positive change in the consciousness of the Spirit-that-moves-in-all-things, the life force of the Earth, and, in doing so, find spiritual rapture and touch the Creator.

I sat by the fire after the work was done, relaxing, still deep in thought about the boy in the graveyard. Grandfather sat at the far end of the fire, his eyes closed, but I suspected that he was not sleeping. In the firelight, his features appeared more that of a spirit than of flesh. Quietly he leaned forward and answered the many questions I had on my mind. At times, his ability to know what was on my mind was unnerving, sometimes making me angry to think that he could know my thoughts.

"Did you ever watch a flock of sandpipers on the beach, how they ebb and flow with the tides, becoming at times not a gathering of individual animals but one organism, moving as a unit together along the surf? When they burst into flight, their cohesiveness is even more startling and wondrous. At once they all will be flying in a certain direction, and then in an instant the entire flock will turn simultaneously and take a new direction.

"Studied closely, there is no one bird that makes the decision to turn, but it seems to be a Spirit, a collective consciousness, that runs through the flock instantly. When viewed from afar, the flock appears to be one animal, one organism, one consciousness, governed by the collective force and spirit of all the individuals. It is this same consciousness that runs through man, Nature and the Earth-that which we call the 'Spirit-that-moves-in-all-things', or the 'life force'.

"I suspect," he continued, "that it is but one bird that creates the thought that turns the flock, and the one thought becomes immediately manifested in all the others. The individual then transcends self and becomes one with the whole. Thus, at once, the bird moves within the flock and the flock moves within the bird. So, then, do not ask what you can do to affect the life force in a positive way, for the same Spirit that moves within the birds also moves within you. One person, one idea, one thought can turn the flock of society away from the destructive path of modern times. It is not a question as to whether we make a difference, for we all make a difference, each of us in our own way. It is the difference we make that is important."

"So if we live a life that is close to the Spirit, seek the spiritual rapture of oneness, that will affect the outcome of life," I said. My statement was more a question than a declaration.

"It is not enough," Grandfather said, "just to seek the things of the Spirit on a personal level. To do so is

selfish, and those who just seek the spiritual realms for themselves are not working to change the Spirit that moves through the consciousness of man. Instead they are running away, hiding from their responsibility and using their wisdom for their own glorification. Spiritual man must then work for a principle, a cause, a Quest far greater than the glorification of self, in order to affect the spirit that can change the course of man's destruction."

I sat for a long time in the quietude of the night, trying desperately to understand what Grandfather had told me. In essence, it was not enough to work for spiritual enlightenment for self, but to work for the spiritual enlightenment of all of mankind. To work only for self, to cloister oneself in the seeking of spiritual rapture, is to run from this responsibility. What Grandfather was saying is that a spiritual person must take the wisdom and philosophy of the Earth and bring it back into modern society.

Grandfather spoke again. "Trying to live a spiritual life in modern society is the most difficult path one can walk. It is a path of pain, of isolation and of shaken faith, but that is the only way that our Vision can become reality. Thus the true Quest in life is to live the philosophy of the Earth within the confines of man. There is no church or temple we need to seek peace, for ours are the temples of the wilderness. There are no spiritual leaders, for our hearts and the Creator are our only leaders. Our numbers are scattered; few speak our language or understand the things that we live. Thus we walk this path alone, for each Vision, each Quest, is unique unto the individual. But we must walk within society or our Vision dies, for a man not living his Vision is living death."

For a long time there was no other conversation. I retired into my own thoughts and doubts. I did not want to live within society, for the wilderness was my home, my love, my life and my spiritual rapture. I could not see why a man could not live his Vision in the purity of wilderness, away from the distractions of society. I could feel no urgency or see any reason why I should take what I have learned back to society.

Grandfather's voice shattered my thoughts. "The Earth is dying. The destruction of man is close, so very close, and we must all work to change that path of destruction. We must pay for the sins of our grandfathers and grandmothers, for we have long been a society that kills its grandchildren to feed its children. There can be no rest, and we cannot run away; far too many in the past have run away. It is very easy to live a spiritual life away from man, but the truth of Vision in spiritual life can only be tested and become a reality when lived near society."

"How do I know that we are so close to that destruction?" I asked.

"I had a Vision," Grandfather said. "It was a Vision of the destruction of man. But man was given four warnings to that destruction, two of which gave man a chance to change his ways and two of which would give the children of the Earth time to escape the Creator's wrath."

"How will I know these warnings, these signs?" I asked.

Grandfather continued. "They will be obvious to you and those who have learned to listen to the Spirit of the Earth; but to those who live within the flesh and know only flesh, there is no knowing or understanding. When these signs, these warnings and prophecies, are made manifest, then you will understand the urgency of what I speak. Then you will understand why people must not just work for their own spiritual rapture but to bring that rapture to the consciousness of modern man."

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Troubled Times

Prophet

2000

Four Signs

The Four Signs

Grandfather had been wandering for several years and was well into his forties when the Vision of the four signs was given to him. He had just finished his third Vision Quest at the Eternal Cave when the Vision made itself known. He had been seated at the mouth of the cave, awaiting the rising Sun, when the spirit of the warrior appeared to him. He felt as if he were in a state somewhere between dream and reality, sleep and wakefulness, until the spirit finally spoke and he knew that it was not his imagination. The spirit called Grandfather's name and beckoned him to follow.

As Grandfather stood, he was suddenly transported to another world. Again, he thought that he was dreaming, but his flesh could feel the reality of this place; his senses knew that this was a state of abject reality, but in another time and place.

The spirit warrior spoke to Grandfather. "These are the things yet to come that will mark the destruction of man. These things you may never see, but you must work to stop them and pass these warnings on to your grandchildren. They are the possible futures of what will come if man does not come back to the Earth and begin to obey the laws of Creation and the Creator. There are four signs, four warnings, that only the children of the Earth will understand. Each warning marks the beginning of a possible future, and as each warning becomes reality, so too does the future it marks."

With that, the spirit warrior was gone and Grandfather was left alone in this strange, new world.

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Troubled Times

Prophet

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First Sign

The First Sign

The world he was in was like nothing he had ever known. It was a dry place with little vegetation. In the distance he saw a village, yet it was made out of tents and cloth rather than from the materials of the Earth. As he drew closer to the village, the stench of death overwhelmed him and he grew sick. He could hear children crying, the moaning of elders and the sounds of sickness and despair. Piles of bodies lay in open pits awaiting burial, their contorted faces and frail frames telling of death from starvation. The bodies appeared more like skeletons than flesh, and children, adults and elders all looked the same, their once dark-brown complexions now ash-grey. As Grandfather entered the village, the horror of living starvation struck him deeper. Children could barely walk, elders lay dying, and everywhere were the cries of pain and fear. The stench of death and the sense of hopelessness overwhelmed Grandfather, threatening to drive him from the village.

It was then that an elder appeared to Grandfather, at first speaking in a language that he could not understand. Grandfather realised, as the elder spoke, that he was the spirit of a man—a man no longer of flesh, but a man who had once walked a spiritual path, possibly a shaman of this tribe. It was then that he understood what the old one was trying to tell him.

The elder spoke softly. "Welcome to what will be called the 'land of starvation'. The world will one day look upon all of this with horror and will blame the famine on the weather and the Earth. This will be the first warning to the world that man cannot live beyond the laws of Creation, nor can he fight Nature. If the world sees that it is to blame for this famine, this senseless starvation, then a great lesson will be learned. But I am afraid that the world will not blame itself, but that the blame will be placed on Nature. The world will not see that it created this place of death by forcing these people to have larger families. When the natural laws of the land were broken, the people starved, as Nature starves the deer in winter when their numbers are too many for the land to bear."

The old one continued. "These people should have been left alone. They once understood how to live with the Earth, and their wealth was measured in happiness, love and peace. But all of that was taken from them when the world saw theirs as a primitive society. It was then that the world showed them how to farm and live in a less primitive way. It was the world that forced them to live outside the laws of Creation and, as a result, is now forcing them to die."

The old man slowly began to walk away, back to the death and despair. He turned one last time to Grandfather, and said: "This will be the first sign. There will come starvation before and after this starvation, but none will capture the attention of the world with such impact as does this one. The children of the Earth will know the lessons that are held in all of this pain and death, but the world will only see it as drought and famine, blaming Nature instead of itself."

With that, the old one disappeared, and Grandfather found himself back at the mouth of the Eternal Cave.

[Author's note: This is the great African famine that inspired the Bob Geldof "We are the World" Live Aid relief effort.]

Grandfather lay back on the ground, thinking about what he had witnessed. He knew that it had been a Vision of the possible future and that the spirit of the warrior had brought him to it to teach him what could happen. Grandfather knew that people all over the Earth were now starving-but why was this starvation so critical, so much more important than all the rest, even more important than the starvation that was taking place now?

It was then that Grandfather recalled that the tribal elder had said that the entire world would take notice, but that the world would not learn the lessons of what the death and famine were trying to teach. The children would die in vain.

Grandfather looked out across the barren land that surrounded the Eternal Cave to try to re-establish the reality of his 'now'. He said that it was still hard to discern between waking reality and the world of Vision, but he felt that he was back into his time and place.

He told me that the Eternal Cave was always a place to find Visions of the possible and probable futures, and it was not uncommon for the searcher to have a Vision at the mouth of the cave, not just inside.

In a state of physical and emotional exhaustion, Grandfather fell into a deep sleep, but it was in this sleep that the warrior spirit appeared to him again and brought the remainder of the first sign to completion.

In his dream, the spirit spoke to Grandfather. "It is during the years of the famine, the first sign, that man will be plagued by a disease, a disease that will sweep the land and terrorise the masses. The white coats [doctors/scientists] will have no answers for the people, and a great cry will arise across the land. The disease will be born of monkeys, drugs and sex. It will destroy man from inside, making common sickness a killing disease. Mankind will bring this disease upon himself as a result of his life, his worship of sex and drugs, and a life away from Nature. This, too, is a part of the first warning; but, again, man will not heed this warning and he will continue to worship the false gods of sex and the unconscious spirit of drugs." [Author's note: This is presumably a reference to AIDS.]

The spirit continued. "The drugs will produce wars in the cities of man, and the nations will arise against those wars, arise against that killing disease. But the nations will fight in the wrong way, lashing out at the effect rather than the cause. It will never win these wars until the nation, until society, changes its values and stops chasing the gods of sex and drugs. It is then, in the years of the first sign, that man can change the course of the probable future. It is then that he may understand the greater lessons of the famine and the disease. It is then that there can still be hope. But once the second sign of destruction appears, the Earth can no longer be healed on a physical level. Only a spiritual healing can then change the course of the probable futures of mankind."

With that, the warrior spirit let Grandfather fall into a deep and dreamless sleep, allowing him to rest fully before any more Vision was wrought upon him.

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Second Sign

The Second Sign

Grandfather awoke at the entrance of the cave once again, the memory of the warrior spirit still vivid in his mind, the spirit's words becoming part of his soul.

When Grandfather looked out across the landscape, all had changed. The landscape appeared drier; there was no vegetation to be seen, and animals lay dying. A great stench of death arose from the land, and the dust was thick and choking, the intense heat oppressive. Looking skyward, the Sun seemed to be larger and more intense; no birds or clouds could be seen, and the air seemed thicker still. It was then that the sky seemed to surge and huge holes began to appear. The holes tore with a resounding, thunderous sound, and the very Earth, rocks and soil shook.

The skin of the sky seemed to be torn open like a series of gaping wounds, and through these wounds seeped a liquid that seemed like the oozing of an infection, a great sea of floating garbage, oil and dead fish. It was through one of these wounds that Grandfather saw the floating bodies of dolphins, accompanied by tremendous upheavals of the Earth and violent storms. As he held fast to the trembling Earth, his eyes fell from the sky, and all about him, all at once, was disaster. Piles of garbage reached to the skies, forests lay cut and dying, coastlines were flooded and storms grew more violent and thunderous. With each passing moment, the Earth shook with greater intensity, threatening to tear apart and swallow Grandfather.

Suddenly the Earth stopped shaking and the sky cleared. Out of the dusty air walked the warrior spirit, who stopped a short distance from Grandfather. As Grandfather looked into the face of the spirit, he could see that there were great tears flowing from his eyes, and each tear fell to the Earth with a searing sound.

The spirit looked at Grandfather for a long moment, then finally spoke. "Holes in the sky."

Grandfather thought for a moment, then, in a questioning, disbelieving manner, said, "Holes in the sky?"

And the spirit answered. "They will become the second sign of the destruction of man. The holes in the sky and all that you have seen could become man's reality. It is here, at the beginning of this second sign, that man can no longer heal the Earth with physical action. It is here that man must heed the warning and work harder to change the future at hand. But man must not only work physically, he must also work spiritually, through prayer, for only through prayer can man now hope to heal the Earth and himself."

There was a long pause as Grandfather thought about the impossibility of holes in the sky. Surely Grandfather knew that there could be a spiritual hole, but a hole that the societies of the Earth could notice would hardly seem likely.

The spirit drew closer and spoke again, almost in a whisper. "These holes are a direct result of man's life, his travel, and of the sins of his grandfathers and grandmothers. These holes, the second sign, will mark the killing of his grandchildren and will become a legacy to man's life away from Nature. It is the time of these holes that will mark a great transition in mankind's thinking. They will then be faced with a choice—a choice to continue following the path of destruction, or a choice to move back to the philosophy of the

Earth and a simpler existence. It is here that the decision must be made, or all will be lost."

Without another word, the spirit turned and walked back into the dust.

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Third Sign

The Third Sign

Grandfather spent the next four days at the cave entrance, though for those four days nothing spoke to him, not even the Earth. He said that it was a time of great sorrow, of aloneness, and a time to digest all that had taken place.

He knew that these things would not appear in his lifetime, but they had to be passed down to the people of the future with the same urgency and power with which they had been delivered to him. But he did not know how he would explain these unlikely events to anyone. Surely the elders and shamans of the tribes would understand, but not society, and certainly not anyone who was removed from the Earth and Spirit.

He sat for the full four days, unmoving, as if made of stone, and his heart felt heavy with the burden he now carried.

It was at the end of the fourth day that the third Vision came to him. As he gazed out onto the landscape towards the setting Sun, the sky suddenly turned to a liquid and then turned blood-red. As far as his eyes could see, the sky was solid red, with no variation in shadow, texture or light. The whole of Creation seemed to have grown still, as if awaiting some unseen command. Time, place and destiny seemed to be in limbo, stilled by the bleeding sky. He gazed for a long time at the sky, in a state of awe and terror, for the red colour of the sky was like nothing he had ever seen in any sunset or sunrise. The colour was that of man, not of Nature, and it had a vile stench and texture. It seemed to burn the Earth wherever it touched. As sunset drifted to night, the stars shone bright red, the colour never leaving the sky, and everywhere the cries of fear and pain were heard.

Again, the warrior spirit appeared to Grandfather, but this time as a voice from the sky. Like thunder, the voice shook the landscape. "This, then, is the third sign, the night of the bleeding stars. It will become known throughout the world, for the sky in all lands will be red with the blood of the sky, day and night. It is then, with this sign of the third probable future, that there is no longer hope. Life on the Earth as man has lived it will come to an end, and there can be no turning back, physically or spiritually. It is then, if things are not changed during the second sign, that man will surely know the destruction of the Earth is at hand. It is then that the children of the Earth must run to the wild places and hide. For when the sky bleeds fire, there will be no safety in the world of man."

Grandfather sat in shocked horror as the voice continued.

"From this time, when the stars bleed, to the fourth and final sign, will be four seasons of peace [that is, one year]. It is in these four seasons that the children of the Earth must live deep in the wild places and find a new home, close to the Earth and the Creator. It is only the children of the Earth that will survive, and they must live the philosophy of the Earth, never returning to the thinking of man. And survival will not be enough, for the children of the Earth must also live close to the Spirit. So tell them not to hesitate if and when this third sign becomes manifest in the stars, for there are but four seasons to escape."

Grandfather said that the voice and red sky lingered for a week, and then were gone as quickly as they were manifest.

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Fourth Sign

The Fourth Sign

He did not remember how many days he'd spent at the mouth of the cave, nor did it make a difference, for he had received the Vision he had come for.

It was in his final night at the Eternal Cave that the fourth Vision came to Grandfather, this time carried by the voice of a young child.

The child said, "The fourth and final sign will appear through the next ten winters [that is, ten years] following the night that the stars will bleed. During this time, the Earth will heal itself and man will die. For those ten years, the children of the Earth must remain hidden in the wild places, make no permanent camps, and wander to avoid contact with the last remaining forces of man. They must remain hidden, like the ancient scouts, and fight the urge to go back to the destruction of man. Curiosity could kill many."

There was a long silence, until Grandfather spoke to the child spirit, asking, "And what will happen to the worlds of man?"

There was another period of silence until finally the child spoke again. "There will be a great famine throughout the world, like man cannot imagine. Waters will run vile, the poisons of man's sins running strong in the waters of the soils, lakes and rivers. Crops will fail, the animals of man will die, and disease will kill the masses. The grandchildren will feed upon the remains of the dead, and all about will be the cries of pain and anguish. Roving bands of men will hunt and kill other men for food, and water will always be scarce, getting scarcer with each passing year. The land, the water, the sky will all be poisoned, and man will live in the wrath of the Creator. Man will hide at first in the cities, but there he will die. A few will run to the wilderness, but the wilderness will destroy them, for they had long ago been given a choice. Man will be destroyed, his cities in ruin, and it is then that the grandchildren will pay for the sins of their grandfathers and grandmothers."

"Is there then no hope?" Grandfather asked.

The child spoke again. "There is only hope during the time of the first and second signs. Upon the third sign, the night of the bleeding, there is no longer hope, for only the children of the Earth will survive. Man will be given these warnings; if unheeded, there can be no hope, for only the children of the Earth will purge themselves of the cancers of mankind, of mankind's destructive thinking. It will be the children of the Earth who will bring a new hope to the new society, living closer to the Earth and Spirit."

Then all was silent, the landscape cleared and returned to normal, and Grandfather stepped from the Vision. Shaken, he said that he had wandered for the next season, trying to understand all that had been given to him, trying to understand why he had been chosen.

Grandfather had related the story to me in great detail during that night of the four prophecies. I don't think that any event had been left out, and his emotions and thoughts were such that he actually relived it for us. Thus the power of his Vision became part of our spirit, our driving force, and a big part of our fears.

I sat for a long time up on the hill. The fire had gone out, and all had retired to sleep for the night. Creation seemed to be at a standstill, awaiting this darkest part of the night to pass by. I felt alone and vulnerable, as if all of Creation were scrutinising my every thought.

Grandfather had this Vision some time in the 1920s.

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The MOBIUS Projects

Excerpts from [The MOBIUS Projects](#), a remarkable web site that contains insights on many prophecies and rumors, including the alien presence, genetic engineering, ancient documents, and much much more! Visit this site!

This collapse of the present house of cards will not occur from within, but from without as it has before every **3600** years by the celestial clock, for 4 billion years ...

After many years of research by many people who have questioned the mysterious geological problems of our planet, certain areas governing the geophysical mysteries are being inspected by computer. What is truly interesting is our planet's rotation was most likely set by a collision 4 billions years ago. Then we have ice ages that mysteriously come and depart, plus sudden magnetic **pole changes**, all leading to scientific impasses that can only be dismantled by time. As an engineer, my research into these geophysical areas leads me to believe the time is close. ...

Debris between Mars and Jupiter, a place that by **Bode's Law** should be occupied by an orbiting body, does not contain enough material to make up such a planet but could well be the remnants of a collision. Then there is the puzzle of Pluto, which is 17 degrees out of solar plane as defined by the rest of our planets, with an orbit so erratic that it actually travels inside the path of the planet Neptune for a short duration during its 248.43 year trip around the Sun. Certain other solar observations suggest a missing planet, aptly named "X", is out there in the deeps somewhere and astronomers have been looking for this disturbing force for decades. One or two even have gone so far as to say it does not exist because they could not find it, which is not very scientific at all, is it ...

Now let us take a quick look back at the **asteroid belt** between the red planet Mars and the largest planet in our system, the giant Jupiter. That orbit seems to be empty, but is it? Pluto proves to us that orbits can intercept other orbits and not be uniform at all. This could very easily mean that **planet "X"** could still be occupying or crossing through the orbit of the asteroid belt if it were on a long elliptical path such as Haley's Comet. In short, it just is not here to be seen yet. That even would very neatly repair the only known hole in Bode's Law, one of the most logical rules for solar orbiting bodies of any large mass. ...

The year **1613+ BC**, the period of Joseph in Egypt, becomes highly important to us for it seems to be the last traceable period of the planet of the crossing. The reason the seven year famine occurred was an over abundance of rain which rotted the seed in the ground. This was a world wide problem, not a local one. ...

In any respect, the **Lord and his Hosts** from the bible are recognized to be the Planet of the Crossing and the comets which travel with it. This is why comets are considered to be bad omens. This periodic orbiting body totally disrupts the weather as its mass, magnetic and gravitational fields assault our own. It is suspected it also has influence on our ice ages. It goes without saying the closer the object, the greater the problems. The prophet Amos summed it up when he said "Ask ye not for the Day of the Lord .."

Key **time frames** to check would be roughly +2000 -1600 -5200 -8800 -12400 -16000 -19600 -23200 -25800 -29400 -33000 -36600 -40200 -43800 years for a starting place to inspect severe geophysical problems, then keep going backwards in 3600 year increments. Keep in mind elliptical orbits can vary slightly because of other planetary mass positions each time the object in question travels through the system.

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Coming Attraction

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Introductory Notes

1. The following includes a brief synopsis of events that **may** occur in the **near future**. I have no way of knowing with absolute certainty, but the **confluence** of **prophetic, psychic, alien,** and **biblical** predictions along with **historical evidence** has led me *to strongly believe* that these events will unfold. If your belief system is solely rooted in a physically manifested world, then discussion of higher dimensions, spirit guides, and OBE's will seem dubious, however, *considering the stakes*, you should approach this synopsis with an **open mind**. In the interest of brevity, this synopsis can only serve as a mere introduction to the subjects discussed. Since there is only room here to introduce the main elements in a large and complex story-*without any supporting evidence* -it would be premature to make a judgment based solely on this limited outline. In order to intelligently evaluate the significance of this material, participating in a far more detailed exposition or personal investigation is necessary.

2. The information about the *Awakening, Transformation, Harvest, and Spiritual Orientation, Geophysical Effects, Earth Changes,* and other topics were derived from a group of aliens* who are described as **Zeta Reticulans** or **Zetas**. When Betty & Barney Hill of Vermont were taken aboard an alien spacecraft in the early 1960's, Betty Hill asked her Grey abductors where they came from. They showed her a star system which Earthlings refer to as **Zeta Reticuli** (in the constellation **Lyra**), thus the name Zeta Reticulans. The Zeta communications can be accessed at a web site called **Zeta Talk** (<http://www.zetatalk.com>) The web site is maintained by a woman named Nancy, whom the Zetas describe as their emissary. Nancy, a Zeta contactee since early childhood, had material implanted in her brain by the Zetas which allows her to engage in instantaneous communication with them. She does not channel these communications. Nancy has been interviewed on different occasions by talk show host Jeff Rense of *Sightings on the Radio* (<http://www.sightings.com>). You can access her [interviews](#) using [Real Audio](#). Information discussed about *The 12th Planet, the Anunnaki,* and the *Giza Plateau* were mostly derived from the work of **Zecharia Sitchin**, however, some additional details are augmented and elaborated by Zeta data {indicated by (**Z**)}. A channeled source that closely corroborates and parallels the Zeta information is referred to as The **RA Material**. The RA Material is extensively covered in **Scott Mandelker's** book *From Elsewhere: Being ET in America*. The full four volume RA texts can be obtained from L/L Research, PO Box 5195, Louisville, KY 40255-5195.

3. Further corroboration of Zeta statements on earth changes and spiritual evolution is available in the many books of **Edgar Cayce**. Other sources of corroboration include *Mary's Message to the World* by **Annie Kirkwood**; *Notes from the Cosmos* (1997) by **Gordon Michael-Scallion**; Two books by **Bob Frissell**: *Nothing in this Book is True, But it's exactly the Way Things Are* and *Something in This Book is True* also bear special mention..

4. I initially learned of **The New World Order agenda, the Government & Aliens, MJ Twelve, Detention & Relocation Centers, FEMA, Alternatives 1,2, & 3, and The Council on Foreign Relations** by reading , *Behold a Pale Horse* (1991), written by ex-Naval Intelligence officer, **William Cooper**. Later, the books of authors **David Icke** and **John Coleman** have revealed the most astounding insights and revelations into the makeup, agenda, and ultimate goals of these treacherous individuals who wish to enslave all of humanity. They are collectively referred to as **The New World Order**. The threat is **REAL** and **rapidly advancing** towards fruition of a global agenda of domination and genocide. **John Whitley** has a web site with considerable material devoted to the New World Order. You wish to take a look (<http://Home.InfoRamp.Net/~jwhitley>)

5. * Other Alien groups including **Pleiadians** and **Sirians** are also attempting to help prepare humans for the coming changes. Their input can be read in the books of **Lyssa Royal** (bookstores) or downloaded at <http://www.spiritweb.org/Spirit/lyssa-royal.html>

6. The topics that follow may initially appear disparate, but they are related. Some topics such as the *Giza Plateau* aren't essential. but are included to satisfy curiosity about common mysteries. The **most critical** information to focus upon in this synopsis is: **Transformation, Spiritual Preparation, The 12th Planet, Pole Shift & Earth Cahnges, Emerging Diseases, and Survival.**

7. I decided to begin with a discussion of the **Soul** to help the reader overcome the natural tendency to react to some predictions with fear and anxiety. Spiritual forces and *Service-to-Others* Aliens are trying to convey the concept to mankind that we should not allow ourselves to be *manipulated and controlled by others* (institutions or individuals) out of **fear**. We all have the *capacity* to overcome any difficulty; but most folks lack sufficient *faith in themselves* to prevail. On a personal note, I believe that I was led (among many I'm sure) to realize this information in order to *inform others*, as small an audience as that might be.

I have found that many people will react with anger towards disturbing predictions and will often direct that anger towards the messenger. **Try to resist that.** If you absolutely cannot believe these matters, then laugh it off as amusement, but *it's foolish to engage in blind, uncritical denial and squander away the remaining time available to you-precious time that could allow you to prepare and ... prevail.* I offer this information to help and inform you; not to frighten you. To be forewarned is to be prepared and that is the purpose of this document.

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Immortal Soul

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Immortality of the Soul

Physical death is a **transition** to a *greater awareness and is not an ending*. People who have gone through *Near Death Experiences (NDE's) & Out of Body Experiences (OBE's)*; ancient *Tibetan, Hindu, and Egyptian* writings (*Book of the Dead*); *Past Life Regression; Remote Viewing; Channeled Spirits* and *Aliens* all corroborate the same story: Under the advice of **spiritual guides**, we decide on the course our lives will follow *before birth*. The consensus is that we are **immortal, Spiritual Light Beings** who experience physical life over and over again. Earthly life is described as a **schoolhouse** where we learn **lessons**, following a curriculum of our choice, while on a *journey towards higher spiritual maturity*. This theme seems to be the purpose of physical life.

People with OBE's *know* that physical life is an **illusion** and that the real action is on the other side. When out of body, you retain your appearance (in astral form), your personality, your memories, your likes & dislikes, all your senses, etc.. In fact, you retain *everything* that makes you, you! While we all have an obligation to the Creator and to our higher selves to participate in life, learn lessons, and attend school to its natural end, there is *no reason to fear death as a finality*. ***We don't really die.***

Many authors cover the subject, but **Danion Brinkley's** two books: *Saved by The Light* and *At Peace in the Light*, tell the story as well as any.

Awakening

The rising increase in UFO sightings, alien contacts, abductions, crop circles, frequent appearances of The Virgin Mary, widespread dreams of cataclysmic events, etc. are connected. The human race is presently undergoing an **Awakening** to dormant memories about our place and role in the universe; as well as an understanding of the *true* origin of our species. *Many* people are arriving at this realization, with some fully informed of the approaching changes while others are grappling with pieces of the puzzle. Most people, however, **aren't taking notice of the signs** (E.g. *crop circles, emerging diseases*) and are mostly **unaware** of the momentous change that has started to occur (with no small thanks to the mainstream media who continue to ignore these important events which are reported daily) . The *ever-increasing* frequency of **unusual phenomena** (bizarre & severe weather, earthquakes, volcanoes, alien contact, UFO sightings, Chupacabras, new disease outbreaks, etc.), *are signs of impending change*. Some indigenous native people like the American Hopi Indians and Australian aborigines have had contact with certain alien groups throughout their history and are aware of the events (with some variations) about to unfold. **Hopi prophecies**, particularly, align with the events predicted by the Zetas.

Transformation

In addition to rising awareness, a **Transformation** has started that will finally culminate in a *quantum shift in human consciousness, abilities, and attitudes* towards each other and towards the planet within the

time span of a few generations. The Zetas have indicated that when a substantial majority of the *remaining* Earth inhabitants have made the decision to be of a **Service-To-Others* spiritual orientation, a **density shift will occur** simultaneously for everyone to the *next higher dimension*. We will graduate from our present reality (**3rd Density**) to the next higher vibrational plane of physical reality (or **4th Density**). Humans will eventually openly share the Earth with Greys and the Human/Grey hybrids which the Greys have produced from female human abductees over the past few decades. In 4th density, human psychic abilities will expand (E.g. telepathy, ability to see auras, etc.) and we will once again, as in the Garden of Eden, be able to communicate with animals. *After a difficult period of survival and rebuilding*, the planet is destined to become a peaceful home for all who live here. Proper care of the Earth's ecosystem will be a top priority for future generations. The Zetas say that human souls who are principally *Self Serving* in nature will *not be allowed* to reincarnate again on Earth *after* the density shift. Such prohibitions are enforced by a galactic oversight committee of sages known as the **Council of Worlds**. The Council of Worlds made a decision 50 years ago that the Earth was to become a home to those of the Service-to-Others orientation *exclusively*. And as in the past with other worlds, and in other parts of the universe, a **Harvest** of souls accompanies the density transformation process. As noted in the *Bible*, the Meek *shall* inherit the Earth.

Spiritual Orientation

The Zetas relay that **all** intelligent life throughout the universe fall into one of three categories of spiritual orientation: *Service-to-Others* are those who are concerned at least 50% of the time about the welfare of others. *Service-to-Self* individuals are those who think of their needs and desires to the exclusion of others at least 90% of the time. The majority of Earthlings at this time fall into the 3rd category of *Undecided*.

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The 12th Planet

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The 12Th Planet

Introduction

21 years ago, **Zecharia Sitchin** (linguistic scholar & historian of ancient Hebrew, Sumerian, Akkadian, and other early Mesopotamian civilizations) published *The 12Th Planet* (1976) which discusses the **periodic return to our solar system** of a large, red planet called **Nibiru** by ancient Sumerian historians (and **Marduk** by the Babylonians). Nibiru was home to a race of war-prone hominids referred to in ancient texts by either their earlier Sumerian name of **Anunnaki** or their later Hebrew name of **Nefilim** (the word *Nefilim* is mentioned repeatedly in the Bible). The Anunnaki are described as handsome, well developed human look-a-likes who are *physically larger* than humans; averaging 10-15 feet tall. While the rank and file astronauts who first came to Earth were called **Anunnaki** by Sumerian historians, the ruling royalty were always referred to as *gods*. The Anunnaki were technologically capable of interplanetary space travel when they first arrived on Earth about **450,000 years ago**.

*Nibiru was called the 12Th Planet by the ancients because it is a member of **our** solar system (ancients included the Moon and Sun as planets). However, unlike the other planets in our solar system, which are in a singular orbit around the sun, Nibiru is in a **binary orbit (Z)** between **two suns**: our sun and another **cold {unlit} sun far out in our galaxy**.*

Nibiru returns to our solar system approximately every 3,600 years. Nibiru is sometimes referred to as the **red comet** or **red star** in some ancient texts (and the 19th century channeled work, the **Oahspe**). Sitchin explains in his book that the 3,600 year periodic cycle of Nibiru is called a **Shar** or **Sar** by Sumerian historians. While a single *shar* occupies a time span of a little more than *3,600 years on Earth*, it is equivalent to *one year on the planet Nibiru*. All told, ancient Sumerian clay tablets and cylinder seals record a total period of occupation/visitation by the Anunnaki of over **124 Shars**. Sitchin provides compelling historical evidence that the Anunnaki actively participated in the affairs of mankind up to the final destruction of the great city of **Sumer** in Mesopotamia, about 2,000BC. The Anunnaki's original objective in coming to Earth was **to mine for Gold**; an element they atomically dispersed in their **atmosphere** in order to prevent *core-produced heat from dissipating excessively into space*. Since 99% of Nibiru's orbital cycle is too far from our sun to benefit from its heat, it has to *retain its internally generated* heat in order to survive. The Anunnaki first extracted gold from the waters of the Persian Gulf area, but later switched to land mining in South Africa and other locations due to greater abundance of gold ore.

The Zetas report that the Anunnaki have access to a plant (or tree), native to Nibiru, *that prevents normal aging* and bodily deterioration. Sumerian texts referred to it as the **Tree of Life**. Later, the *Bible* referred to it as **Knowledge of The Tree of Life** in the Garden of Eden story. Only Anunnaki royalty had privileged access to the Tree of Life (sometimes called *Ambrosiac* in Sumerian texts). They absorbed this substance into their bodies by taking baths soaked with this life extending plant. This special bath water

was the origin of the story of *The Fountain of Youth* (Z). Apparently, Anunnaki royalty enjoyed *extremely* long lives. Sitchin's research reveals that some members of the highest echelons of the royal pantheon participated intermittently throughout the entire 446,000 years of the Anunnaki's occupation of Earth.

Exodus and The 12th Planet

The **last time** the 12th Planet passed by the Earth was during the time of the ***Exodus from Egypt***. In fact, the upheavals, cataclysms, and *fear* generated by the near passage of the 12th Planet *allowed* the Israeli slaves the opportunity to escape from the grip of Pharaoh's troops—who had become completely overwhelmed by panic and confusion (Z). A red dust (iron oxide), along with larger chunks of debris, traveling in the tailing wake of the fast moving 12th Planet (as with other comets), rains down onto the Earth's atmosphere during a close passage. This red dust landing in water accounted for the Biblical account of the rivers running *red with blood*. The Bible also refers to *fierce lightning storms* and the red particle debris "*reddening the face*" of men. Electrical/magnetic storms of an intensity which only occurs during a close passage of the 12th Planet *reacts with carbon materials* thrown into the atmosphere by volcanic action. This produces a type of sticky **carbohydrate substance** in the atmosphere (Z). In some areas, this substance precipitates to the ground and is *available as food* if collected in the early, pre-dawn hours. When the substance falls on water, it appears whitish in color. Called **Ambrosia** in ancient texts (Greek), or **Manna**, this carbohydrate material is the biblical reference to **milk and honey** ("*Unto a land flowing with milk and honey*". **Exodus 33:3**)

Return of The 12th Planet

The Zetas predict that the 12th Planet will pass closest **between** the Earth and the Sun in **late Spring or early Summer of 2003, probably May or June**. At that time, the earth, *being completely overwhelmed by the gravitational influence of the 12th Planet*, **will stop rotating completely for 3 days or so**. There are numerous historical references to 3 days of darkness (non-rotation) cited in the *Bible*, Hopi Legends, Mayan Epics, etc. and well referenced by Sitchin in the books of his *Earth Chronicals*.

Geophysical Effects of the 12th Planet

The 12th Planet is **4 times larger** and **23 times more dense** than Earth (Z). The Biblical narration of 7 years of plagues, crop failures, increased earthquakes/ volcanic eruptions, and other phenomena that preceded the Exodus was caused by *the magnetic & gravitational effects of the approaching 12th Planet* on the **Earth's molten iron core** (which behaves exactly like a giant bar magnet running from the North to the South Pole). The growing disruptions in **our present day weather** patterns, increased earthquake/ volcanic activity, the **gradual slowing** of the Earth's rotation, reports of **magnetic deviations**, new manifestations of **DNA mutation** (deformed frogs & fish, recent births of albino buffalo calves {predicted by Hopi Prophecies}, emerging viruses and bacteria, etc.), and other anomalies are being precipitated by unique and **unrecognized forms of energy** being released from the core of the Earth *due to the approach of the 12th Planet*.

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Pole Shift & Earth Changes

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Pole Shift & Earth Changes

The most dramatic earth movements/cataclysms will occur in **late Spring or early Summer of 2003**. **The North and South Poles will *shift* from their *current location.** *The 12th Planet will pass between the earth and the sun, approaching from below the elliptic (from the direction of the South Pole) and move in a trajectory towards the North Pole. As the 12th Planet passes by the central portion of the earth, the magnetic influence of the 12th Planet will be so great that its North Pole's magnetic field will cause the Earth's North pole to deflect away about 90 degrees.* *This rapid movement of the Earth's molten interior core will pull the Earth's crust along with it.* **The resultant earthquakes, volcanic eruptions, mountain building, mega winds, and tidal waves will be on a scale beyond normal reference or imagination.** The Zetas report that new land masses will rise in the Pacific Ocean, reducing its overall area; while land will sink in the Atlantic, expanding its current dimensions. Vast areas of both the East and West coasts, as well as the Mississippi valley of the United States will be inundated by tidal forces and permanently flooded. A large section of northern Europe, the western half of Australia, and most of Japan will go under water as well (as predicted by Edgar Cayce).

During the period of non-rotation, obviously half of the earth will be exposed to the sun while the other side of the earth experiences darkness. This scenario corroborates with the biblical revelation and Hopi Prophecies concerning **3 days of darkness** (Sitchin also points to many **historical texts** by ancient historians describing events from *both the dark side and the illuminated side* of the planet during past visits by the 12th Planet).

After the 12th Planet moves beyond its obstructing position vis a vis the sun, its gravitational grip will lessen and allow the Earth to again respond to the influences of the sun and other planetary bodies in our solar system. This lessening gravitational influence will permit the Earth to begin rotating again; slowly at first; but gradually returning to its normal speed as the 12th Planet pulls away from us. Due to the enormously long, debris-filled tail of the red giant, the close passage of the 12th planet will cause a **tearing away of a portion of the earth's atmosphere** as well as **raining down of a great deal of chunky debris and red dust into our atmosphere**. Oxygen in the atmosphere will burn with this inbound debris and ignite superheated **atmospheric firestorms** that will consume much oxygen. Continuous volcanic eruptions will throw up massive amounts of smoke & ash. The large amounts of sulfur and lead in this ash *will poison most sources of surface drinking water* such as lakes and rivers, and possibly contaminate some underground water sources as well. The Zetas report that it will take a few years for the atmospheric pressure to rebuild to former levels. During this period, clouds and **wind** currents (the jet stream), which normally blow aloft, will occur at the surface. This atmospheric change will translate into an *almost constant rain and drizzle* and *very high surface winds*. Therefore, it will not be possible to grow food unprotected or live above the surface for a few years. **Underground protected environments will be a necessity for survival.**

*New Polar Regions

After the North and South Poles shift, they will *permanently assume this new position* and **not** return to their former positions. Present day **India**, as well as the mid-ridge of the Atlantic off the eastern tip of **Brazil** will be near the center of these **new polar regions** and will flash freeze within a matter of hours (Z). This will obviously change the location of the *Equator*, the *Tropical* and *Temperate Zones*, etc. The Zetas report that Nibiru has passed close enough to Earth to have caused Pole Shifts many times before. Today, there are many books which discuss the ample physical evidence of former Pole shifts, but **Immanuel Velikovsky** was one of the earlier authors to thoroughly document the evidence and make the case for Pole shifts in the early 1950's. **John White's** contemporary book *Pole Shift* is also well done.

Safe Areas

The **Zetataalk** (<http://www.zetataalk.com>) web site discusses safe areas in depth. You should read these files carefully and study the attached maps (if you can't get the information from the internet, write me for copies). There are too many details to consider in choosing a safe area to include in this synopsis, but it should be borne in mind that the climate in your chosen safe area will change *immediately following* the pole shift. Southern Canada, for example, will assume the temperature range of present-day southern California. More detail on safe areas can be found at:

1. **TroubledTimes...** (<http://www.zetataalk.com/thub.htm>), an independent survival information site working in tandem with the Zetas towards similar goals.
2. **Lori Toye's site** (<http://www.iamamerica.com>) also includes *post-cataclysm* maps of the United States and other parts of the world which indicate safe areas for relocation.
Call 1-800-930-1341 or write to:
PO Box 2511, Payson, AZ 85547.
3. **Gordon-Michael Scallion** (<http://www.matrixinstitute.com>), a modern seer/futurist in the tradition of Edgar Cayce, provides post-cataclysm maps of the United States and the rest of the world.
1-800-628-7493/ Matrix Institute, PO Box 367, Chesterfield, NH 03466.
Fax (603)256-6614/ Voice (603) 256-6520

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Genetic Engineering

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Genetic Engineering of Homo Sapiens

According to Sitchin, while the Anunnaki production of gold was increased by mining in South Africa, so was the physical effort to extract it. After continuous day and night gold mining for a period of 150,000 years (450,000-300,000BC), the South African Anunnaki mine workers **revolted**. The mutiny was resolved through the intercession of the brother/sister gods of the Anunnaki named **Enki** and **Ninharsag** by *genetically engineering* an African apewoman to create a replacement laborer. After considerable trial and error, according to the Sumerian story, a suitable hybrid worker was developed. Capable of gene manipulation technology, the Anunnaki implanted the apewoman's egg into surrogate Anunnaki maidens. This early hybrid could not sexually reproduce, but at a later time, some of these hybrids (referred to as **black heads** in Sumerian tablets) were moved from Africa to a place the Sumerians called **E.DIN** in Mesopotamia and further engineered to be able to sexually reproduce. Some considerable time later, some of the Anunnaki (including royalty) began to mate with human females. It's noted in the *Bible*: "*That the sons of God saw the daughters of men that they were fair; and they took them wives of all which they chose.*" **Genesis 6:2**. Offspring of this union were referred to as *Men of Renown or Demigods* (.Biblical ref.: "*when the sons of God came in unto the daughters of men, and they bare children to them, the same became mighty men which were of old, men of renown.*" **Genesis 6:4**).

The Zetas, on the other hand, have indicated that the Anunnaki genetic contribution to the human gene pool was a minor one at best. They state that man was genetically 'upgraded' at different times by **different aliens groups** and that while the Anunnaki genetically 'tinkered' with man, they were not the creators of homo sapiens per se. The physical effect of these upgrades is most obvious in the *appearance of the human brain* which has **3 discreet sections** or regions: the lower reptilian brain (*Medulla*), the middle brain (*Cerebellum*) the upper brain (*Cortex*). Other mammals have a single, unified brain design. In addition, the anthropological evidence of the **sudden flourishing** of advanced civilizations such as **Sumeria** which followed a long period of *decline* can only be rationally reconciled by the recognition of some sort of 'boost' that placed man back on the right track. Most historians (including Sitchin) and anthropologists agree with this conclusion.

According to the Zetas, man as a species already existed when the Anunnaki performed their genetic adjustments to create their hybrid workers. The Zetas further point out that the principal extraterrestrial genetic contributions to the human gene pool came from the *Pleiadians, Sirians, and Lyrians* {Greys}. Due to that genetic ancestry, it is these alien groups that are having the greatest interactions with humans at this time. It's interesting to note that many human contactees or abductees (E.g. Travis Walton) have reported seeing at least one group of aliens, known as *Nordics*, that look **exactly** like humans. They are blond, blue eyed and about 7 feet tall.

The Giza Plateau

Edgar Cayce predicted in 1934 that a **Hall of Records** (which contained details about earlier high

technology civilizations such as *Atlantis & Limuria*) would be unearthed in ** Asia, South America, and Egypt. He specifically predicted that in 1996, chambers buried beneath the left paw of the Sphinx would be discovered and would eventually reveal such a Hall of Records. These chambers were indeed discovered in 1996, but the Egyptian director in charge of the Giza plateau, **Zahi Hawass**, prefers the world to accept the orthodox view that the Sphinx was built by human slaves in 1250 B.C. and that the Great Pyramid was a tomb/monument built by the **Pharaoh Khufu**. Hawass is now denying access to the Sphinx and Great Pyramid to the very archaeological groups (the Shore Group, John Anthony West, Robert Bauvall and who were responsible for the discovery of the buried chambers. **Richard Hoagland** has presented credible evidence on the radio that Zahi is in bed with **NASA** and other **New World Order** people who want to keep the lid on information about the revelations of former advanced civilizations.

A documentary shown on public TV in the early 90's called *The Mystery of The Sphinx* with Charlton Heston, demonstrated that *long-term water erosion* evidence on the Sphinx pushed the date of its construction to beyond 11,000BC; when the Egyptian climate permitted long periods of rain. That date matches up closely to the time of the Great Flood. Sitchin points out in his book, *The Wars of Gods and Men*, that numerous Egyptian texts discuss a period after the Great Flood when "gods" helped the Egyptians construct canals, drainage systems, dikes, etc. to reclaim the flooded Egyptian plain. The gods were the **Anunnaki**.

**Asian Hall of Records

Tibetan monk, physician, and writer **T. Lobsang Rampa**, reports on pages 88-97 in his 1963 book *The Cave of The Ancients* that while still a young boy and trainee, he was taken by a group of monks to a highly concealed crevice entrance far up in the Tibetan mountains. The entrance led to a huge, cavernous interior. The interior was illuminated with artificial lighting in which the "bulbs" were ice cold to the touch. Spread throughout the smooth-walled rooms were many strange machines that seemed to be in working condition, but the monks could not understand their function or purpose. One oval shaped device allowed the viewer to place his head within its shell, whereby he could both hear and see different animals, music, etc.; a sort of visual encyclopedia of Earthly life (some alien contactees have reported being taken into such cavernous locations deep within the Earth and shown similar **Halls of Remembrances**). Later, they entered another room with a machine that allowed them to view a holographic "movie" with sound and narration explaining that the machines were working models left as part of a *time capsule/hall of records* explaining the history of these pre-diluvian advanced civilization which spiritually declined, misused their technology and brought about their demise. The holograph revealed cities and forests disappearing in a twinkling of an eye due to massive earthquakes, volcanic eruptions, atmospheric fire storms, tidal waves, etc. While Rampa did not mention any knowledge of Nibiru, the Anunnaki, or Cayce's predictions, it is my opinion that this Tibetan time capsule/mountain location discovered by these monks is probably one of the Asian Hall of Records cited by Cayce. Cayce also wrote of other Halls of Records and of a **Golden City**, yet to be unearthed (or perhaps undisclosed by the Chinese), in the **Gobi Desert**.

In Rampa's first book, *The Third Eye* (1956), he lends corroboration to physical evidence of the Anunnaki themselves. On pages 210-214, he describes being taken down into a chamber deep below the Lamasery in Lhasa, Tibet. There, at the beginning of a 3 day long initiate ritual in which Rampa was expected to travel out of body and "walk among the dead", Rampa was first shown 3 uncovered black stone coffins. When he peered into the coffins, Rampa was startled to see the bodies of 2 men and one women; nude, and completely *covered in gold leaf* (the final step in the Tibetan mummification process). The woman was 10 feet tall and the larger of the 2 men was 15 feet. The elderly monk who escorted Rampa to this location said: "My son, look upon these. They were gods in our land in the days before the mountains came. They walked our country when seas washed our shores., and when different stars were in the sky. Look, for none but initiates have seen these."

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Great Pryamid

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The Sphinx and the Great Pyramid

The Zetas report that the image of the **Sphinx** or that of a *women's* head *on the body of a cat was ubiquitous in the statuary and monuments of the pre-diluvial civilization of **Atlantis**. They indicate that the Sphinx at Giza was built as a tribute to a highly admired Anunnaki warrior/leader killed in battle. The post diluvial *reconstruction* of the **Giza Pyramid** was a joint project carried out by the **Anunnaki** utilizing levitation technology(Z) and Egyptian builders* under the supervision of **Thothma** (or Hojax {or Enoch}), whom the **Oahspe** calls one of the greatest adepts ever to live. Thothma "*could hear the gods and talk with them understandingly, and could cast himself in the death trance and go spiritually into the lower heavens and return at will*". It appears that the Sphinx and the Great Pyramid were built at different times, but might have been intended to function in concert as suggested in **Bob Frissell's** book, *Nothing in this Book is True, But it's exactly the Way Things Are*. According to Edgar Cayce, the Great Pyramid alone took a 100 years to complete. Edgar Cayce also mentions the names **Ra Ta** and **Hermes** as important Egyptians involved in the building of the great Pyramid.

* A recent article dated November 9, 1997 on CNN's website (<http://www.cnn.com>) entitled Egypt considers creating Underwater Museum mentions in reference to an underwater area of recently discovered artifacts off the coast of Alexandria : "*Some of the treasures found at the site this year include two copies of the Sphinx, one with the face of a woman.*"

The Great Pyramid

The Great Pyramid at Giza served multiple functions in its long history. It had been rebuilt at least once, possible more than once. It served both spiritual enhancement (initiation) purposes (discussed in the books of Edgar Cayce and more recently by Gordon Michael Scallion in his book, *Notes from the Cosmos*, and Bob Frissell's book, *Nothing in this Book is True, but...*) as well as pragmatic functions as outlined by Sitchin in *The 12th Planet*:

The Great Pyramid was not the first, nor the only pyramid built by the Anunnaki as a **Mission Control/Communication Center** for inbound **spacecraft**. It had to be built large enough and heavy enough in order to *withstand earthquakes*; so as not to alter its critical astronomical alignments The polished limestone blocks originally covering the Great Pyramid was utilized as an aid to visual alignment as the inbound Anunnaki shuttlecraft approached their space port at **Sippar** (located in the region of present day southern Iraq on the Euphrates River) The reflected light of the sun off the pyramid could be seen for vast distances, even from the ground. The Nefilim built and (after the Great Flood) *rebuilt* spaceports and giant pyramids in other parts of the world as well.

The **Grand Gallery** leading to the Kings Chamber inside the Great Pyramid, at one time contained **27 pairs of different and extremely large crystals** obtained from sources both native and extraterrestrial. Besides emitting multicolored lights, these crystals produced radiating energies which allowed space communications, directional landing information, and some sort of air defense capability. The strongly

fortified King's chamber contained a powerful, but delicate instrument housed in a huge hollowed-out stone chest. In 820AD, the son of the Caliph of Baghdad, **Prince Abdullah Al Mumun**, tunneled into the Great Pyramid anticipating great treasure. After finally working his way up to the King's Chamber, he was greatly disappointed to find the huge*stone chest (which is still there) empty. The purpose of the crystals and instruments originally housed in the stone chest included astronomical sighting/alignment functions and *communications with the 12th Planet* (using the moon as a relay station) as it approached Earth from the **Constellation Orion**.

* Sitchin relates in his book *The Wars of Gods and Men*, the eventual fate of the great crystals originally housed in the Great Pyramid.

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Spiritual Preparations

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Spiritual Preparation

Spiritual preparation should be addressed-even before physical preparations. **Spiritual growth** comes with the recognition that *love and compassion for others* (as well as yourself) is *the most important thing in life*. **Following the Golden Rule** ("*Do unto others as you would have them do unto you*".) and developing *greater consciousness* through **meditation** can open the door for spiritual awakening and *permit contact with higher beings* who will help guide you in the work that will be most beneficial to yourself and others during the difficult times ahead.

Marian Messages

For the past 200 years, The Virgin Mary has appeared to many individuals with warnings and predictions of future events. These apparitions have increased dramatically in the past few decades. While the catholic church has only officially recognized 7 visitations, there have been literally hundreds of multible visits all over the world, many unreported by the media. The Blessed Virgin has specifically spelled out the increasing weather problems, upheavals, cataclysms, and pole shift with the resultant lost of life of the vast majority of the world's population in the very near future. She asks for everyone to pray and meditate for at least an hour each day. She promises that God will aid those who ask for His Help and spiritually prepare for the earth's cleansing. **Annie Kirkwood**, an unassuming housewife, has been receiving regular visits from The Virgin Mary since 1985. The Blessed Virgin asked Annie to tell the world her messages of the coming changes. I **strongly urge** you to read her book: *Mary's Message to the World*. It only costs \$10. and is available in most bookstores. **Brad Steiger** has also recently published an excellent book on the Marian Apparitions. It's called: *Mother Mary Speaks to Us*.

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Government & Aliens

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The Government & Aliens

The United States government has actively negotiated with aliens since the Roswell crash of 1947. A formal treaty with the aliens was signed by President Eisenhower in 1954. **Majestic Twelve**, a powerful and secret committee, was created to liaison with the aliens and coordinate negotiated exchanges. In exchange for access to certain military and underground facilities, *official denial*, and *non-interference* with human abduction and animal mutilations, the aliens have given the US government:

- alien spacecraft and other high technologies
- provided transportation to **bases** set up on the **Moon, Mars**, and other planets
- access to alien telepathic/mind probe capabilities
- **time travel** and other advantages.

Over the years, numerous problems had arisen between the military and the group of aliens that the government made a pact with. Essentially, the government negotiated a treaty with the bad guys of the alien world-**Service-to-Self** aliens. This group lacks the honesty, integrity, and altruistic motivation not being their better known characteristics. Truman and Eisenhower were the last American Presidents to have complete knowledge of the alien activities and negotiated agreements. Today, a worldwide secretive governing elite, *far more powerful or influential* than either the President or Congress is running the show behind the scenes. The New World Order* (NWO), decides how much information will be given to US Presidents as well as the public. Anyone who defies them or doesn't play ball is eliminated; including U.S. Presidents (Kennedy). Here in the United States, Majestic 12 has known about the return of the 12th Planet since the late 40's and has taken many steps to protect their own, as well as the elite, wealthy, and well connected of the world. **Only the average American Taxpayer, who paid for all of it, has been left out of the loop.**

Alternatives 1, 2, & 3

In 1957 a world symposium on future development concluded that over-population and exploitation of the environment would result in the earth's self destruction by the beginning of the next century. By secret executive order, President Eisenhower commissioned a group of scholars know as **The Jason Society** to review the symposium's conclusions. They confirmed its findings and recommended three plans designated as *Alternative 1*, *Alternative 2*, and *Alternative 3*. **Alternative 1** was rejected because it involved the use of nuclear weapons. **Alternative 2 and 3**, however, were simultaneously put into place by both the United States and the Soviet Union. **Alternative 2** called for the construction of a vast network of huge underground cities and tunnels in which a select representation of all cultures and occupations would survive and carry on the human race. These facilities have been built, however, there is concern today that these facilities might not offer complete protection for the government in-crowd. The Russians have already built enough underground cities to house 85% of the Russian population. They continue to build underground sites to this present day. The Swiss and many other wealthy nations have built similar

underground cities to house their populations.

Alternative 3 involved the exploitation of alien technology to permit resettlement on off-planet locations. This included bases on both Mars and the Moon which have long since been in operation. In fact, when President Kennedy announced plans in his inaugural address to reach the moon by the end of the 60's, a moonbase, with *both American and Russian* personnel on site, was *already in operation* (Kennedy was in the dark at the time of his announcement).

As a delaying action to population expansion, all 3 alternatives included recommendations for 1. Birth control, 2. Sterilization, and 3. **The introduction of deadly microbes to reduce or otherwise slow the growth of the Earth's population** (see Emerging Diseases) .

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New World Order

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The New World Order

Introduction

There is a **worldwide conspiracy** being orchestrated by a **tribe** of *genetically-related individuals* which include many of the very wealthy, politically powerful, and corporate elite of the world, as well as members of the so-called **Black Nobility** of Europe whose goal is to create a **One World Government**, stripped of nationalistic and regional boundaries, that is obedient to their agenda. Their intention is to effect complete control over every human being on the planet and dramatically reduce the world's population, especially in resource-rich, but poor and undeveloped countries like Africa. They manifest their agenda through the skillful manipulation of human emotions, especially fear and anguish. In the past century, they have repeatedly utilized a contrivance that NWO researcher and author **David Icke** has characterized as **Problem, Reaction, and Solution**.

NWO strategists create **The Problem** by funding, assembling, and training an "opposition" group to whatever established political power they wish to impinge upon and 'create' a *conflict*. In recent decades, the "opposition" groups have usually been identified in the press as 'freedom fighters' or 'liberators' (currently, the **KLA-Kosovo Liberation Army**), while the leader of the established political power is demonized and often referred to as 'another Hitler' (take your pick: Saddam Hussein, Milosevich, Kadaffi, etc.). Paradoxically, the same NWO strategists are also involved in arming and 'advising' the leader of the established power. The conflict is drawn to the world stage by the major media outlets with a barrage of photos and video tape reports of horrific and bloody atrocities and suffering civilians. The cry goes up "Something has to be done!" *That* is the desired **Reaction**. The NWO puppeteers then provide the **Solution** by sending in UN 'Peace Keepers' (Bosnia) or a UN 'Coalition Force' (Gulf War) or **NATO** Bombers and (very soon) ground troops (Yugoslavia).

Structurally, the NWO pyramid is dominated by **international bankers** and secondarily by the big **pharmaceutical** cartels and other major multinational corporations. The Royal Family of England, the **House of Windsor** (who are, in fact, descendants of the **German** arm of European royalty), seems to be the titular head of this tribe, but by no means makes all the decisions connected with the vast web of influence and intrigue exerted by these secretive elites. Queen Elizabeth II sits at the head of an organization known as the **Committee of 300** which is the planning committee of elites that *plan and decide* on what will be written in the world's history books. **The Club of Rome** is one of the more powerful implementation/enforcement arms working under the Committee of 300.

The **United Nations**, along with all the agencies working under the UN umbrella, like **The World Health Organization** (WHO), are full time players in this scheme. In fact, it is not an exaggeration to say that the UN is the New World Order. Similarly, **NATO** is a military tool of the NWO.

The **leaders** of **all** major industrial countries like the **United States, England, Germany, Italy, Australia, New Zealand**, etc. are *active and fully cooperative participants in this conspiracy*. In this century, the degree of control exerted by the NWO has advanced to the point that only **certain hand-picked individuals**, who are **groomed from childhood**, are even **eligible** to become the prime minister or president of countries like Great Britain or The United States. It didn't matter whether Bill Clinton or Bob Dole won the Presidency in 1996, the results would have been the same (except maybe for Zipper Gate). Both men are playing on the same team for the same ball club. **Anyone who isn't a team player is taken out**: i.e. *President Kennedy, Ali Bhutto (Pakistan), and Aldo Moro (Italy)*. . The decision-making nerve centers of this effort are in **London** and **Brussels**.

Most of the major **wars, political upheavals**, and economic **depression/recessions** of the 20th century were carefully **planned** and **instigated** by the machinations of these elites. They include **World War I** and **World War II**; **The Great Depression**; the **Boleshevic Revolution of 1917**; the **Rise of Nazi Germany**; the **Vietnam War**; the **1991 Gulf War**; and today: **The War in Kosovo**. The instigation of a trumped-up war as a cover for amassing fortunes can be dated back to the 12th Century when only a core group of **nine** members of a secret society arm of this elite tribe called **The Knights Templar** kicked off the **The Crusades** that lasted for over a half century. The king of France was a little leary that the Knights Templar might take his job, so he set out to arrest them, but not before giving them plenty of time to escape. They eventually resurfaced in Portugal and Malta (as the **Knights of Malta**) and in Scotland as **The Scottish Rites of Free Masonry**.

The acquisition and consolidation of ever-greater **wealth, political power**, and **control** over others are the motivating forces which drives the decisions of the NWO. The toll in human suffering and the loss of innocent lives is a non-issue for these individuals, who are aligned with very dark spiritual forces and malevolent aliens.

Organizational and political elements of the the **New World Order** include: *Majesty Twelve, The Illuminati, Order of the Quest, The Bilderberg Group, The Trilateral Commission, The Executive Committee of The Council on Foreign Relations, The PI-40 Committee, The Jason Group, The Club of Rome, The Group, The Royal Institute of International Affairs, The Open Friendly Secret Society, The Rosicrucians, The Brotherhood of the Dragon (or Snake), The Russell Trust, The Black Families (of Europe), Skull & Bones, the Scroll & Key, The Knights of Malta, the Illuminati arm of The Freemasons*, and many, many other groups. In general, only the upper elites at the top of these pyramid structures are the NWO decision makers and not the lower echelon functionaries and managers who are usually in the dark about the true aims of their organizations.

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FEMA

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FEMA

The **Federal Emergency Management Administration (FEMA)** was created in 1979 under Presidential Memorandum 32 authored for President Carter by Prof. **Samuel P. Huntington**, a Harvard professor and former FEMA Advisory Board chairman. Huntington wrote the *Seminal Peace for the Trilateral Commission* in the mid 70's, in which he criticized democracy and economic development as outdated ideas. As co-author of the book, *Crisis in Democracy*, the professor said: "*We have come to recognize that there are potential desirable limits to economic growth. There are also potentially desirable limits to the indefinite extension of political democracy. A government which lacks authority will have little ability short of cataclysmic crisis to impose on its people the sacrifices which may be necessary.*"

Huntington's ideas were rewritten into **National Security Decision Directive #47 (NSDD47)**, which was enacted in July 1982 by President Reagan. Treated as a passing footnote by the media, this law identified legitimate areas to be upgraded to maintain national defense, but it also laid the groundwork for **Emergency Mobilization Preparedness**, a plan under which *existing socio/economic regulations or other legal constraints* would be **waived** in the event of a national emergency. This plan was further strengthened in **Public Law 101-647**, signed by President Bush in November 1990. What it boils down to is this: in the event that the President declares a **national emergency**, for *any reason* (from major earthquakes to increased international tensions or economic /financial crisis of any stripe), FEMA can then, at *their* discretion, implement **Executive Orders 10995 through 11005***. *These Executive Orders permit a takeover by FEMA of local, state, and national governments and the suspension of constitutional guarantees.* **FEMA** will have the authority **to exert any sort of control that it deems necessary upon the American public.** A trained *National Police Force*, formally referred to by the name of **Multi Jurisdictional Task Force (MJTF)**, wearing *black uniforms* and composed of: 1. *specially selected US military personnel* 2. *foreign military units* carrying United Nations ID cards, and 3. *specially trained existing police groups* from larger metropolitan American cities. These members of the MJTF will implement and enforce martial law *under the direction and control of FEMA.* **The President and Congress are out of the loop.**

FEMA is the Trojan Horse by which the New World Order will implement overt, police-state control over the American populace.

*Executive Orders #10995-11005

The strategem of *Executive Order* allows the President of the United States to unilaterally create law *without congressional oversight and approval* **Thirty days** after signing an Executive Order, the order **becomes the law** of the land with the same force and permanence of any bill signed into law in the usual manner.

Col. James Ammerman (40 years as Army Chaplain) presented a talk to *The Granada Forum* (in southern California) on March 20, 1997. In this lecture, he outlined the details of **Executive Orders 10995-11005** as follows:

1. Executive Order #10995: Authorizes seizure of all communication equipment in the United States.
2. Executive Order #10997: Authorizes seizure of all electric power companies, fuels, fuel sources, and minerals (public and private)
3. Executive Order #10998: Authorizes seizure of all food supplies, food resources, all farms and all farm equipment (public and private).
4. Executive Order #10999: Authorizes seizure of **all** means of transportation- including personal cars, trucks, or any type of vehicle; Total control over all highways, roads, seaports, and seaways.
5. Executive Order #11000: Authorizes *forced conscription* of all Americans for work duties under supervision of Federal agents. This section also authorizes the splitting up of family units if deemed necessary by the government agencies in charge.
6. Executive Order #11001: Authorizes seizure of all health, education, and welfare facilities and their administrations (public and private).
7. Executive Order #11002: Empowers the Post Master General to register all men, women, and children in the United States for government purposes.
8. Executive Order #11003: Authorizes seizure of all airports and all aircraft, public, commercial, and private.
9. Executive Order #11004: Authorizes seizure of all housing and finance authorities and permits government agents *to establish forced relocation sites*. The government can declare any area of its choosing as "unsafe" and force the entire area to be abandoned of all persons. Authorizes establishment of new "relocation" communities; building new housing with public funds.
10. Executive Order #11005: Authorizes seizure of all railroads, inland waterways, and storage facilities, both public and private.
11. Executive Order #13010 (New): This Executive order is entitled **Critical Infrastructure Protection**. It established a commission made up of members from Federal government departments and agencies which will have *greater powers than any body of officials in the history of the United States when an emergency is declared*. This commission includes the heads of:

1. The Department of the Treasury
2. The Department of Justice
3. The Department of Defense
4. The Department of Commerce
5. The Department of Transportation
6. The Department of Energy
7. The CIA
8. The FBI
9. FEMA

Underground Cities and "Relocation" Centers

The government has built over **96** (known) **Federal Relocation Centers** with the majority located in Pennsylvania, Virginia, West Virginia, Maryland, and North Carolina. The operational hub of these centers is **Mount Weather**, a sprawling, multilevel city-beneath-a-mountain (containing the hardest granite in the eastern United States). Located 40 miles west of Washington DC in Bluemont, Virginia, Mount Weather was originally constructed in the early 50's under a civil defense plan called *The Continuity of Government Program* to house and protect the Executive branch during an emergency such as a nuclear attack. While its official title is **The Western Virginia Office of Controlled Conflict Operations**, it is most commonly referred to by its nickname, Mount Weather. Congress has repeatedly tried to find out what Mount Weather is really about, but has been stymied in that effort every time. The last attempt was by the *Senate Subcommittee on Constitutional Rights* in **September 1975**. Ret. Air Force **General Leslie W. Bray**, director of the **Federal Preparedness Agency** (FPA) which oversees the construction, maintenance, and daily operations of the Federal Relocation Centers, flat out **refused to divulge any information** to the Subcommittee's Chairman, **Sen. John Tunney** as to the "*role and the mission ... , or capability that we have at Mount Weather or at any other precise location*". Mount Weather and the other Relocation Centers contain advanced computers with **data banks and dossiers on millions of Americans**. More disturbing is the existence of a complete parallel government *in operation* at Mount Weather including all nine Federal departments; Agriculture, Commerce, HEW, HUD, Interior, Labor, State, Transportation, and Treasury; at least 5 Federal agencies in residence: FCC, Selective Service, Federal Power Commission, Civil Service Commission, and the Veterans Administration; and a

President, with a full cabinet. Former high-level officials from Mount Weather have indicated that this base is much more than a standby government facility and record storage center. It is, rather, a **separate government-in-waiting** which duplicates the functions of the Executive branch and the Cabinet. Protocol requires that personages be addressed as "Mr President" or "Mr Secretary", etc. Most of these mysterious appointees have held their positions through several administrations. In a 1974 Annual Report, the FPA stated that "*Studies conducted at Mount Weather involve the control and management of domestic political unrest where there are material shortages (such as food riots) or in strike situations where the FPA determines that there are industrial disruptions and other domestic resource crises.*"

Foreign Troops training on US soil

- Col. Ammerman has stated that **today**, there are over **1.4 million foreign troops** stationed on US soil. The bulk of these troops are **German and Russian**. If you add in the additional foreign troops spread out in Canada and Mexico, the **total might exceed 3 million** (this figure **doesn't include** Canadian or Mexican military). **These** troops (not US troops) will make up the bulk of the **MJTF**, who will be the enforcement arm of FEMA.
- Our larger National forests are being declared off-limits to all citizens based on the excuse of protecting endangered species. Witnesses have reported seeing large numbers of foreign troops bivouaced and training deep in these off-limits National forests.
- Reports continue to circulate that US troops are engaging in urban control training in some larger US cities, like *Phoenix*, AZ between the hours of 2-5AM on weekdays.

Government Detention Centers

The government has been quietly building very large capacity "Relocation Centers" (especially in **Texas**) which in fact will be used as **detention centers** for Americans who are likely to balk at the government's imposition of a police state.

Can it happen? Can the United States become a police state?

Yes, because all the machinery, authorization, logistics, and personnel are in place for a takeover. Of course, whether it *will happen* is another question. However, it would be naive to assume that all these preparations are going forward for naught.

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Troubled Times

Prophet

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Emerging Diseases

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Emerging Diseases

There are newly emerging viral and bacterial diseases that the weakened immune systems of *millions* of people will be unable to fight off. The *AIDS virus*, *Ebola virus*, *Hanta virus*, *Flesh-Eating Bacteria*, and *Gulf War Syndrome* are likely the tip of the iceberg. Former Army nurse **Joyce Riley** has brought to light that over **15,000** US servicemen who served in the Gulf War have *already died of Gulf War Syndrome* (GWS). She has found that **over 200,000** family members of troops from the battlefields and missile attack areas *have caught the same pathogen* (**Mycoplasma Fermentens -Incognitus**) that has infected the Gulf War troops. Mycoplasma Incognitus is only **one** pathogen involved in GWS that has been identified by **Dr. Garth Nicholson**, a respected microbiologist located in Irvine, California. Nicholson has suggested that there may be as many as **15** different pathogens involved in Gulf War Syndrome. **It's contagious and can be transmitted through the air.** It's also *incurable* using orthodox protocols. Disease progression can be controlled, however, if the right antibiotics are taken early enough (the *Bob Beck electro-medical devices* discussed later can also offer you complete protection). *Remote Viewer **Ed Dames** has said on a radio talk show that the Gulf War troops were also adversely affected by a **drug** {*pyridostigmine bromide*}, that was suppose to protect them from Iraqi biological nerve agents. Dames claims that the drug reacted with air borne petroleum compounds from the burning oil wells and compromised the immune systems of these troops.

Overwhelming evidence continues to mount that the majority of these newer deadly pathogens-**including AIDS**-were **intentionally genetically engineered** to cross over to humans hosts. Laboratories have been identified both inside and outside the United States where these pathogens had been developed. There are a number of books available on the topic, but *Emerging Viruses: AIDS & Ebola-Nature, Accident, or Intentional?* by **Dr. Len Horowitz** is a good place to start if you want the unsettling details.

The Zetas, working through their emmissary Nancy, responded directly to a question that I posed concerning the genesis of the Gulf War Syndrome. In an e-mail response dated Sept 30, 1997, the *Zetas* said that the *US government intentionally inoculated our troops with the pathogens that cause Gulf War Syndrome.* Their verbatim response follows:

(Begin ZetaTalk[TM]) **The Gulf War Syndrom is a direct results of infection injected into the servicemen under the guise of immunizing them.** The deliberate exposure of these men to biological warfare elements and burning petroleum was to disguise this infection. As has been noted during investigation of the causes of Gulf War Syndrom, the officers in charge were many times deliberately lax in enforcing safety measures, which was NO accident.

The CIA, as with most of the deliberate infection of what is termed undesireables by the New World Order, was at the fore in this escapade.

The purpose of this mass infection of unsuspecting foot soldiers was to measure the rate and speed of debility, which has proved disappointing to those who would eliminate large blocks of the US population ahead of the

cataclysms. As might be expected, these blocks would be inner city blacks and Hispanic populations, considered aggressive and/or unproductive by the elite .. (End ZetaTalk[TM])

The Zetas have reported that **Africa** and **South America** were **targeted for takeover by the CIA** with the help of Service-To-Self aliens in the late 70's and 80's. The **AIDS** and **Ebola viruses** were **suppose to wipe out most of the populations and pave the way for surreptitious domination and exploitation of these continents**. The AIDS infection went as planned, but the Ebola virus infection proved too deadly even for its CIA handlers, who were being killed by the virus faster than its intended victims. The project was abruptly abandoned!

* **Remote Viewing** is an information gathering technique developed by the military during the 70's and 80's for espionage work. Using teachable protocols, the remote viewer can tap into what psychologist Carl Jung called the *collective unconscious*. The collective unconscious can be thought of as a memory vault of all events and thoughts from any point in time (past, present, or future) that pervades every part of the universe. The **concept of linear time and space do not exist** outside of our 3rd density (normal) perception of reality. Time is an illusion created by man for his convenience, but does not exist in the spirit realm. As difficult as the concept is to grasp, all thoughts/events *exists simultaneously* in what some have called the **Spacious Present** (ref. Jane Roberts/*Seth*) of the collective unconscious. If you develop the ability to *tune into* these frequencies, you can experience the event. All humans are born with the capability of tapping into the collective unconscious. We only lack training. *Deep mind probes* of targeted individuals, in order to ascertain intention, attitudes, etc. are also possible with remote viewing.

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Health Concerns

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Health Concerns

*Big health problems are looming on the horizon. New deadly pathogens are going to emerge from **two areas**:*

1. DNA mutations of existing viruses, bacteria, etc. into *more virulent* forms caused by unique forms of radiation being released from the earth's core by the approach of the 12th Planet (Z). Signs of increasing and widespread DNA mutations among vulnerable organisms began to show up last year with many reports of **Frog Deformities** (some fish, salamanders species as well). Numerous newspapers covered the story, especially in Minnesota. *Time* and *Newsweek* magazines covered the deformities as well. Recently, new reports of a deadly outbreak of **Red Tide** (May, '97) which caused major fish kills in North Carolina and South Africa. The traditional algae responsible for Red Tide is *Gymnodinium breve*, but a new pathogen dubbed **Pfiesteria** is responsible for these new outbreaks which adversely affects both fish *and* humans.

2. Biological warfare efforts utilizing **genetically engineered pathogens**. *Intentional* biological assault against Americans might originate from two sources: one *domestic* and the other *foreign*. A) The **domestic effort** is an attempt by **to reduce the US population by at least 55%** (recommended in a 1955 Council on Foreign Relations (CFR) report discussed by Dr Len Horowitz in his book, *Emerging Viruses*). B) The **foreign effort** might come from *Islamic terrorists*. A chilling narrative presented by **Larry Harris** at the Global Sciences Conference, Tampa, Florida (April '97), outlined a sabotage conspiracy by Iranian Islamic fundamentalists to disperse biological pathogens in major US cities.

Precautions to Take

Avoiding all vaccinations from any source is a basic precaution that everyone (young & old) should take. Stocking up on *Tetracycline-type antibiotics* (which can be obtained without a doctor's prescription at animal feed stores) or obtaining *Blood Electrification* and similar electro-medicine devices will give you an effective means to fight off these deadly and fast moving agents, which would include **Anthrax** and **Bubonic Plague**.

Health Protection

In order to have the strength to fight off these pathogens, you have to *build up your immune system*. A strong immune system is built upon a truly healthy diet, free of contaminants (see *Immune System* below). Low cost, but effective devices like **Dr. Bob Beck's Blood Electrification Device**, *Cold Plasma Ozone Generator*, *Collodial Silver Maker*, *Magnetic Pulser*, and other new *electro-medicine* designs utilizing **Nikola Tesla's Scalar Wave Technology** can save your life (write for more info if interested). These devices offer the promise of more protection and curative abilities than conventional pharmaceutical protocols. Other things to consider for parents with young children:

1. **Avoid all vaccinations.** This is hard to do because doctors and schools etc. insist on them, but parents do have **the right to refuse** and can tell schools that they have religious reasons and sign a form to that effect. The vaccines are *contaminated* with multiple, animal viral/protein particles that will **weaken** the immune system, and can predispose the child to *succumb to later diseases* (including SIDS and other *mystery* fatalities). **Viera Scheibner**, an Australian physician, makes a convincing argument in her book *Vaccinations: 100 years of Orthodox Research shows that Vaccines Represent a Medical Assault on the Immune System* that the widespread use of the **Diphtheria** and **Small Pox** vaccinations of the late 19th and early 20th centuries compromised the immune systems of many Americans (and their *offspring*) who later succumbed to the **Polio Epidemic** of the 30', 40's and 50's. Remember, the Polio Epidemic *only occurred* in the United States! There are dozens of well researched books on the dangers of vaccines. Finally, young children **don't need Hepatitis shots!** They are at zero risk. The Clinton Administration is trying to snow the American public into believing that all school age children will benefit from a Hepatitis shot. They are using the tainted raspberry/strawberry scare to promote their agenda. **Don't believe it!** You have a much greater probability of succumbing to a disease condition related to the vaccine rather than the dying from the disease the vaccine was designed to prevent.

2. **Avoid Dairy Products:** For babies, *Breast feed* if at all possible or use **organic goat's milk** if not possible. After 2-3 years of age, humans don't need milk. Fats, minerals, and proteins can be obtained adequately from non-dairy sources. Remote viewer Ed Dames has said on the Art Bell talk show that many young babies will die in a few years because of an AIDS-type virus infecting cow's milk. I have no way of knowing if that's true, but Dames *did predict the frog deformities* in May of **1995** and the deformity reports began to appear in late Summer **1996**.

3. It would be wise to **avoid** eating **beef**. I heard the President of the Cattlemen's Association, during the height of the **Mad Cow Disease** (MCI) stories coming out of England (1996), assure TV viewers on the Oprah Show that there was **absolutely no chance** that US beef could be infected with Mad Cow's Disease. There are a number of cases of people with MCD in the United States.

The Immune System

It takes time and effort to build up the immune system, so why not take my 15 second health & nutrition course right now? *First, get a juicer* and use it; **Eat** organically grown fresh plant foods {*vegetables, nuts, seeds, grains, brown rice, legumes, fruit, garlic, kelp, ginger, etc.*} prepared with an absolute *minimum of cooking*; **No** meat {fish OK if you need animal protein}; **No** dairy; **Avoid** all forms of *sugar, artificial sweeteners, refined carbohydrates or fried foods, soft drinks, alcohol, snacks, cakes, pastries, ice cream, hydrogenated anything, or cooking with heated vegetable oils*; **Obtain fats** from plants {*flax seed oil, Olive oil*}, *nuts, and cold water fish oils*; **Drink daily** at least 8 glasses (12oz) of *distilled or reverse osmosis water, 1 glass each of colloidal silver and ozonated water*; **Take daily** vitamins, minerals, antioxidants, and tonic herbs; **Exercise and meditate.**

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Survival

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Survival

Consider the exponential increase in **strong earthquakes** (over 6.0 Richter) in 1997 alone around the Pacific Rim: China (January), Indonesia, Mexico, Ecuador, Peru, Costa Rica, Aleutian Islands, Japan, Iran (May), Pakistan (May), Marianna Islands (May), Bangladesh (May), the list goes on and on. Observe the **increasingly bizarre weather abnormalities**: tornadoes in Arkansas and Kentucky in *February*; heavy flooding already in many western states in *late February/early March '97*; 53 foot over-flood height of the Red River in North Dakota and Canada in *mid-April*; a never-before-recorded 12' wide tornado/waterspout along Miami Beach's hotel front area (May). Grapefruit sized hail from thunderstorms occurring 4 months too early in the season. *These unusual weather patterns will continue to increase in frequency and severity. Large scale crop failure is inevitable.*

Obtaining food and potable water will become the biggest concern for survival within a few years.

Widespread food shortages will lead to an **economic tailspin**, growing **civil strife**, and eventually **food riots**. This would intensify breakaway efforts by militias and other sovereign-minded groups (E.g. ... McLeran case in Texas). Harsh government crackdowns might lead to Waco type disasters and a further increase in anti-government sentiment. **Martial law** will be declared when things begin to get out of hand. When that happens, **you can throw the Constitution and the Bill of Rights out the window**. You won't be needing them any more.

History has repeatedly shown that as an economy goes downhill, **paper money** at first inflates and then becomes valueless when stock markets collapse. Precious metals will probably continue to be an instrument of currency as past history has shown, but **bartering** and **food exchange** will undoubtedly become the principle means of goods/service exchange for most folks. People will *have to fend for themselves*. There will be no other choice.

Location Planning

The general, pre-cataclysm survival strategy should be to **move inland** (if you live near the coasts or large bodies of water), to **higher ground** (*at least 700 feet, but preferably thousands of feet above sea level*), to an area that is **relatively remote** and located **between two mountain ranges**. This allows you a mountainous barrier from tidal waters and a wind barrier from both directions. Shelter will have to be built **underground** in remote areas in preparation for the major cataclysms of 2003. Initially, accommodations should be planned for a small core group of builders/settlers, but it will be necessary to plan on expansion facilities to accommodate wandering refugees after the major upheavals occur. Camouflage and defense strategies against violent marauders need to be in place, but some sort of aid for innocent refugees must be taken into account.

*Free energy devices should be explored with the greatest expediency, but conventional electricity production could take advantage of the perpetual high winds (post 2003) by using **wind generators**. Solar*

power probably won't work well because it will take some years (perhaps 10-20 years) before the atmosphere settles down enough to allow full sunshine to penetrate again (the Biblical references to Moses and the Israelites "*wandering in the desert for 40 years*" and walking through "*the Darkness in The Valley of Death*" allude to this darkened period (consider this: is there any logical reason why Moses would be wandering around in the desert "lost" for forty years?). *Hand tools* for work/repair should be the rule. Multiple-year supplies of long term storage food should be stocked as a backup to in-house food production strategies. Very few will have the resources and strength to survive as single family units. **Group strength allows a higher probability of survival.**

The web site, **Troubled Times** (../thub00.htm) provides plenty of information on survival techniques with links to other survival sites. It's a source of invaluable information and ideas.

Crop Failure

As the weather anomalies continue to escalate, sporadic instances of *crop failure will gradually rise* between now and the year 2000. Crops will not only be destroyed by flooding and droughts, but unexpected freezing and frost conditions will kill off flowering buds in many instances as well. The Zetas point out that the worst crop failures will occur in the **3 years prior** to the Pole shift in 2003. Self-contained, self-sustaining food production facilities need to be put in place *before* the major upheavals.

Some ideas for post-cataclysm food production include *hydroponically grown vegetables*, fish tanks, harvesting bugs/worms for proteins, and *green algae* (E.g. *Chorella*) for chlorophyll and amino acids, etc. Purchasing and caching of long-term survival rations should be implemented **now**.

The Clock is Ticking

There isn't a lot of time to prepare. Food production and supply problems might begin to show up in the later part of '97 and become more acute as we approach the turn of the century. Bizarre weather anomalies will abound. Tornadoes and hurricanes will escalate in frequency and severity. New plant diseases might show up which would further reduce food availability. *These crop-related calamities will act in concert to drive up food prices.* The media will explain it away as solar flare activity, ozone depletion, increased ultraviolet (UV) light radiation, etc. However, each succeeding year will be progressively worse than the previous *on all fronts*: including food availability, bad weather, the economy, etc. Rapid increases in the spread of infectious diseases, and worldwide epidemics will affect millions of people in the near future (Note: over 18 million died from the *Spanish Flu* pandemic of 1918). By the time 2003 rolls around, most people will be struggling to just survive. For most, any thought of escaping big cities and beginning the arduous task of setting up a remote, self sustaining, protected living environment will be next to impossible. **In order to survive, people need to prepare ahead of time to survive underground for a number of years following the cataclysms.**

When food supply problems start showing up, the economy will go south and *things will go downhill from there*. Folks lose their jobs, inflation goes through the roof, and people start getting desperate. **You don't want to be scrambling at the last minute.** Most people will act panicky and the situation (even to travel) can become dangerous. *Make provisions now. Spend your money now*, while it still has buying power. It will also be necessary to take steps to improve your nutrition and *build up your immune system now*, before the disease outbreaks occur.

(Contact me if you are interested in more information about joining up with groups who are planing to survive the coming difficulties. I'll probably be putting out a newsletter in the near future to keep folks updated).

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Sitchin & Velikovsky

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Zecharia Sitchin & Immanuel Velikovsky

Concerning the origins of the human race and the earlier make up of our solar system, **Zecharia Sitchin** and **Immanuel Velikovsky** have been prophets in the wilderness. Sitchin has published 7 books chronicling the story of the Anunnaki. 5 books are part of a group he calls **The Earth Chronicles*, as well as *Genesis Revisited*, and *Divine Encounters*. Sitchin presents **strong archaeological** and **ancient text** evidentiary support to the thesis he puts forth in *The 12th Planet*: namely, the Anunnaki /Nefilim were, in fact, the gods of Greek; Sumerian; Egyptian; African, and Indian *Mythology*. So called Mythological gods were in fact, **real living aliens** with advanced technological capabilities, superhuman physical prowess, and were capable of living very long life spans. The power struggles, conspiracies, betrayals, jealousies, rivalries, etc. which ensued among these gods while they occupied Earth constitute the tales of mythological lore.

Immanuel Velikovsky was a Russian writer/researcher who was belittled by the orthodox scientific community (led by **Carl Sagan**) in the early 50's for his theories about the earlier planetary configuration of our solar system and the unmistakable evidence of cataclysmic upheavals and previous Pole shifts here on Earth. Today, corroborating evidence by many other investigators (E.g. *Charles Ginenthal*) has shown that Velikovsky was correct in the majority of his theories. Velikovsky's books include *Worlds in Collision* (1950), *Ages in Chaos* (1952), and *Earth in Upheaval* (1955).

**The Earth Chronicles* refers to a group of 5 books by Zecharia Sitchin: 1. *The 12th Planet* (1976) 2. *The Stairway to Heaven* (1983) 3. *The Wars of Gods and Men* (1985) 4. *The Lost Realms* (1990) 5. *When Time Began* (1993)

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Troubled Times

Prophet

2000

Good and Bad

Positive sides of the Pole Shift

*Mourn not for those that live, nor those that die.
Nor I, nor thou, nor any one of these,
Ever was not, nor ever will not be,
For ever and for ever afterwards.
All, that doth live, lives always! To man's frame
As there come infancy and youth and age,
So come there raisings-up and layings-down
Of other and of other life-abodes,
Which the wise know, and fear not. This that irks-
Thy sense-life, thrilling to the elements-
Bringing thee heat and cold, sorrows and joys,
'Tis brief and mutable! Bear with it, Prince!
As the wise bear. The soul which is not moved,
The soul that with a strong and constant calm
Takes sorrow and takes joy indifferently,
Lives in the life undying!*

Bhagavad Gita

Although an old Chinese saying goes "*the only constant thing in man's life is change*", the majority of people are still afraid of changes in their lives. The greater the the change, the greater the fear. Where the Pole Shift represents **BIG** change, the great fear of many is understood. Just like with other changes, there will be some good points to the Aftertime, too.

- One thing many of our little ones miss out on is something that more primitive cultures and earlier times included - mixing the young and old, as they have so much to give each other. In the Aftertime, there will be more time for these things, and living together in large extended family type groups. No travel will be possible, nor staring at the TV, no insular little families. The young will seldom be without a lap or without someone wanting to bask in their curiosity and natural enthusiasm.
- We will become more "social" by necessity. The elders will once again be respected for their experience and knowledge and not considered to be society's refuse. Children will also be respected because of their energy and "promise" - they will not be reduced to cute little fluffs in society. Thus, the importance of homegrown talent will be seen as essential! We will need the singers, poets, drama people, comedians, etc.
- Many people fear for what life will be, when there are no institutions to hold on to. However, as we say, "*necessity is a mother of invention*". Therefore, people will become less pasive and start to act on their own. And as many institutions do a better job of holding you back instead of supporting you, this will equalize. Don't you have some "*I would do it, but...*" in your life? Well, many of these things will be possible in the Aftertime.
- While the Pole Shift itself will be a shock, life in the Aftertime, after you settle down, will be less stressfull than the present. No more waking up early in the morning, eating fast, running to catch your bus and being late at school or work anymore. You will be finally able to live at your own rate, instead of always running behind some "fast developing modern life" that many times drag you away from what you really want to be.

All in all, it won't be that bad, will it?

Offered by [Kiko](#).



Troubled Times

Prophet

2000

Red Heifer

Excerpts from article titled **Red Heifer Fulfillment of Prophecy?**

Sedona Red Rock News April 18, 1997

as reported by *New Heaven New Earth* newsletter

The birth of a red heifer, a breed thought to be long extinct, has renewed hopes of orthodox Jews in Israel that the *Old Testament* priesthood and animal sacrifices can be re-established in Jerusalem. The *Book of Numbers* required religious Israelites to sacrifice a red heifer as part of their ceremonial purification. The Temple was destroyed by the Romans in 70 CE. End time prophecies in the *Book of Ezekiel* refer to a time when such sacrifices are once again offered in a newly-rebuilt Temple, heralding the arrival of the Messiah. Ceremonial and moral law encoded in the Torah could again become a rallying point for Jewish religious, cultural and ethnic identity, just as it was under King Solomon, who built the original temple. According to Avraham Poraz, a member of the Israeli Parliament, "If the fanatics get ahold of [this] and try to take over the Temple Mount, God knows what will happen."

[Our information on this event and related prophecies is sketchy. If you are able to shed more light on the matter, we would like to hear from you. [James Gregory](#)]



Troubled Times

Prophet

2000

White Crab

My father, from the shore of Maryland State, has informed me that one of the local crabbers has caught a white crab. It is an example of the approach of the 12th, as with white buffalo, nature is receiving mixed signals. This happened in September, 1998.

Offered by [Aron](#).



Troubled Times

Prophet

2000

Scallion's Predictions

Scallion predicted three sets of earthquakes, each set occurring in a set order around the Ring of Fire that circles the Pacific Ocean. The first set at approximately 6.5 magnitude occurred in January/February 1995, right on schedule. The second set at approximately 7.0 magnitude also occurred in May/June 1995 as he predicted. The third set, to occur in December/January 1996 at an 8.0 magnitude or greater, began in early December and partially completed with an 8.2 in Indonesia on February 17, 1996. Appearing on the Art Bell show on December 8, 1995, Michael-Gordon Scallion described his now famous 1995 predictions:

- I identified the fact that I saw a pattern that was going to occur in 1995. A pattern of four quakes and this would happen three times.
- The first time it would occur, it would begin in the January/February time frame. And it would begin with a quake of a magnitude average; the four quakes would average 6.5 in magnitude. And it would be, first, hit Japan. Second, it would hit the South Pacific or Indian Ocean region. Third it would hit South America and lastly it would hit somewhere on the West Coast of America. So that was the first four-quake scenario.
- I said it would repeat itself again in the May/June time period of '95, with the same four patterns, except that this time the magnitude would rise a half a point. It would be 7.0 average range.
- And then I said it would repeat itself a third time, the same four quakes, and that would occur in the December/January time period [1995/1996 and be at magnitude 8.0 or greater].

Scallion believes the third set of quakes has started, stating during the December 8, 1995 interview, "And the third cycle, of course, just began a little over a week ago in Japan," referring to what the USGS reported was an 8.0 magnitude earthquake in the Kuril Islands on December 3, 1995. Art Bell stated that he believed the magnitude of this earthquake was closer to 8.5, and that it has been underreported as it occurred in a remote area. Scallion's prediction is that the third cycle will bring earthquakes at magnitude 8.0 or greater, and he does not think that 1995 will be our worst year. During the Art Bell interview, Scallion describes what he feels is the cause of this increased activity.

- My visions show me that there is a displacement in the earth core relative to our geocentric pole. ... My visions indicate that the magna core has been displaced already and it's seeking new pathways. ... So this magma displacement, I believe, will alter magnetic fields, eventually creating new compass headings and at the same time causing crustal displacement.
- What I see is this is just the beginning, actually we have already begun it. Look at the scale of 1 to 10. We have reached what I would call maybe the 2 point.

The quakes that occurred were remarkably on target. The dates, magnitudes and locations for the first two cycles and what are known of the third are:

Jan 17, 1995 7.2 Kobe, Japan, **Japan**
Jan 27, 1995 6.9 Indonesia, **South Pacific**
Feb 5, 1995 7.5 New Zealand, **South Pacific**
Feb 7, 1995 6.5 Columbia, **South America**
Feb 18, 1995 6.6 Eureka, Cal., **West Coast**
May 27, 1995 7.6 Sakhalin Island, **Japan**

Jul 4, 1995 7.1 Kermadec Isl., **South Pacific**

Jul 30, 1995 8.1 Chile, **South America**

Sep 14, 1995 7.5 Mexico, **West Coast**

Dec 3, 1995 8.0 Kuril Islands, **Japan**

Feb 17, 1996 8.2 Irian Jaya, **Indonesia**



Troubled Times

Prophet

2000

Pole Shift

From Art Bell's **Coast to Coast**, September 19, 1997 with **Michael Gordon Scallion**

To order his *Notes from the Cosmos*, \$16,95 plus shipping, call 1-603-256-6520.

AB: All right. You obviously felt that this was very imminent, very important to get on the air tonight instead of waiting several months, which would have been your physical preference otherwise. Correct?

GMS: Well, our agreement, at our little family meeting we had & with other people, was that I would not do anything until January of 1998, and then talk about another series of things that I see ... the spiritual occurrences I also see occurring in '98. But, six weeks ago, once the Antarctic and the Caribbean and the water temperature. ... it happened much faster than I thought. I really thought that this was not going to go until like '98, '99, maybe even 2005. But, we pushed the calendar up a lot and gave me concern. We need to at least make people aware of the options.

AB: All right. One question, then we'll go to the phones. With this pole shift and the weather and the winds, what kind of tectonic plate effect will there be? Uh, that much magma moving under the Earth would produce tremendous change tectonically, wouldn't it?

GMS: We'll have a new tectonic system. I've seen that in the future where it doubles, literally, so there're more breakages. You know, we've already discovered faults that we didn't even know existed, because of technology. And, of course, after quakes we've been able to explore and find those things. So, we're going to see the thrusting, a massive thrusting in a matter of moments, around the world. Again, the areas that are under the highest stress, which is the Ring of Fire ... anywhere along that Ring, we will see great releases and, of course, that's the entire west coast of the United States, the west coast of South America. Japan is probably going to be one of the very early places that's going to see this disruption, because they sit on three plates that converge there. So, the percentages are higher that we'll see greater releases, and sooner releases, in Japan. Japan would be kind of like another precursor.

...

AB: Being bluntly honest with everyone, Gordon, how inevitable do you see the coming pole shift and the changes?

GMS: I believe, at this stage, that it will occur, versus a year ago where I felt that we had some outside chances if we did certain things, as a collective body. I still would like to hope that, in some areas, consciousness can alter it and I *do* believe that, but I believe we're now outside of the global and are now into the communities. So, not I think it's up to communities and how they live their lives, how they treat their neighbors, how they treat the land. I think communities, depending on how they function spiritually, will determine how they fare through these changes. I now believe, with 100% of certainty, that this is to be and the events will occur.

...

CLR: I'm curious, myself, whether the north pole will be in our backyard one morning or not?

GMS: After these changes, these three abrupt magnetic shifts, most of the information you might read out there, I'm sure indicate that the poles reverse themselves. We know scientifically that the poles *have* reversed directions ... north to south, south to north ... thousands of times. We know that by core samplings & measuring magnetites in the materials, so we can go back and we know there were some major ones about 12,000 years ago, you know, which is when we found the [mastodon] frozen and dried and all the weather changes and cataclysms. The ones I see, however, are smaller and they are 6 to 7 degrees, which I said earlier, westerly movement. So, if you were sitting in Fresno and you were looking at your compass, north would point to somewhere around 300 degrees, there might be 325. 25 to 45 degrees ... the maximum would be 45 degrees ... 21 to 25 is what I have consistently seen, but that could shift a bit more. If it went as much as 90 degrees, we're obviously looking due west.



Troubled Times

Prophet

2000

Nostradamus

Got a new Nostradamus book for Christmas and there are several translations that seem to fit the coming changes. The book is *Nostradamus, the New Revelations* by John Hogue

Quatrain 67 in the first book:

The great famine which I sense approaching will often turn (up in various places) then become universal: It will be so vast and long lasting that (people) will grab roots from the trees and children from the breast.

Quatrain 98 in the Fifth book:

At a latitude of 48 degrees at the end of Cancer(July 22) there is a very great drought. Fish in the sea, river and lake boiled hectic, Bearn and Biggore (Southwest France) in distress from fire in the sky.

Quatrain 83 in the ninth book:

The sun in 20 degrees Taurus(May 10th). There will be a great earthquake; the great theater full up will be ruined. Darkness and trouble in the air, on the sky and land. When the infidel calls upon God and the saints.

Quatrain 69 in the first book:

The great mountain, one mile in circumference, After peace, war, famine, flooding. It will spread far, drowning great countries. Even antiquities and their mighty foundations.

Quatrain 3 in the second book:

Because of heat like that of the sun upon the sea, the fish around Negrepont (modern day Evvoia) will become half cooked...

Quatrain 51 in the ninth book:

Against the red ones religions will unite...

Quatrain 67 in the tenth book:

A very mighty quake in the month of May, Saturn in Capricorn. Jupiter and Mercury in Taurus. Venus also in Cancer, Maris in Virgo: (at that time) hail will fall greater than an egg.

Quatrain 30 in the fourth book:

For eleven more times the Moon will not want the Sun. Both raised and lessened in degree. And put so low that one will sew little gold; that after famine and plague the secret will be revealed.

Quatrain 48 in the first book:

When twenty years of the Moon's reign have passed Another will take up its reign for 7,000 years. When the exhausted Sun takes up its cycle and gathers up its days then my prophecy and threats will be accomplished.

Quatrain 96 in the fifth book:

The rose (color) upon the middle of the world scene... to speak the truth they will have closed

mouths. Then at the time of need the awaited one will come late.

Needless to say, the author has a much different interpretation than say, our group would have. This is what makes it tough for a prophet. Everyone colors it their own way. The author does talk about the documented movement of the magnetic pole towards India!

Quatrain 28 in book eight:

The imitations of gold and silver will become inflated which after the rape are thrown into the fire, after discovering all is exhausted and dissipated by the dept. All scripts and bonds are wiped out. (Could be 1929... could be 1999?)

Quatrain 5 in the sixth book:

A great famine through a pestilent wave. (It) will extend its rain over the length of the arctic pole, Samarobrin, one hundred leagues from the hemisphere, they shall live without law, exempt from politics.

Quatrain 90 in the fifth book:

In the southern Balkans and all of Greece, a very great famine and plague through false dust. It will last nine months through the whole peninsula(Italy) as of Peleponnesus (Greece).

The summer of 1999 seems like a time to lay low. Between what's been on our list serve and the following Nostradamus quatrain:

Quatrain 72 in the tenth book:

In 1999 and seven months the great king of terror will come from the sky. He will bring back to life the king of the Mongols. Before and after the God of war (and of transformation) reigns happily.

Quatrain 81 in the eighth book:

A great kingdom will remain desolate, near the they will be gathered in assemblies. The Pyrenees mountains will console him when in May (spring) there are great earthquakes.

The author talks about 5 quatrains "Nostradamus refers to sudden violent natural phenomena occurring spring - particularly in the month of May. No allusion is made to the year of these events". He also refers to the sun or moon appearing to stand still and turning blood red in color, but doesn't cite the quatrain that gives him that impression.

Offered by [John](#).



Troubled Times

Prophet

2000

Swedish

I found a swedish webpage (in swedish) about pole shifts, comets, and earth changes and I will translate a bit.

In the beginning of 1980 a British medium **David Jevons** said:

There will be great changes on this planet because of a burning messenger. A great celestial body is coming toward us at the moment. You cannot see it with your naked eyes or with a telescope at the moment. When it passes past the Earth, it will affect all the planets in our solar system. And the Earth will also be affected. Many countries will sink in the ocean and some new will rise.

David Jevons got some questions about this in 1980:

Has this messenger/celestial body passed through our solar system before?

DJ: Yes.

Is this the Haley's comet?

DJ: No. This one is larger than Haley's comet.

A comet researcher **David Solomon** has calculated that a great comet comes back into our solar system every 4000 years. He said:

This comet is known to our forefathers as a huge burning celestial body and when it entered into our solar system it caused cataclysms. The... Greeks called it TYPHON, Mayan people called it QUETZALCOATL, Sumerians Called it NIBIRU, people from Egypt called it APEP or SETH, and the old Chinese people called it THE RED DRAGON.

People throughout history have said things about great comets that causes cataclysms:

Helgonet Hildegard from Germany (1200)

Mother Shipton from England (1600)

Edgar Cayce (1900)

Offered by [David](#).



Troubled Times

Prophet

2000

Marianne Rasmussen

An interesting channeling from a Danish woman. She talks in the end about the 10th planet, how it will re-enter our solar-system! I found this information on the Earthprophecy List.

Offered by [David](#).

Hello Earthprophecy List

This is my first message to this list, and contains my rendering of a channeling I received from the Danish clairvoyant Marianne Rasmussen. Marianne has made several confirmed predictions and has great power - among other things she has been proved to be able to alter the surface tension of water. This message is given in love, and I hope it will be of use to somebody somewhere.

Sent: Friday, September 10, 1999 12:55 PM

Subject: **a Message from Marianne**

Hi list.

An hour ago I was sitting here by the computer and the phone rang. The minute I touched it I could feel a wave of energy wash over me, and I knew who was calling: Marianne Rasmussen the clairvoyant. The following is the gist of our conversation. It is written from memory, so these are not Mariannes exact words, but my recollection of them. She told me this: Last year in August a neutron star exploded and the Earth was radiated for six minutes with as much energy as we get from the sun in 300 years (at the time Marianne had predicted this, and it has been confirmed). This has caused much disease - in humans as well as in the Earth herself - an aggression and conflict. We are now in the second wave of that radiation. People will get sick, tempers will flare and the planet will respond with natural disasters, mainly earthquakes. Three days from now, on the 14th, she sees people in panic. They are Asians, but she cannot tell from which country. She also sees Indonesia covered with blackness - in the near future something terrible will happen in this country.

Before the end of the year 2000 a great change will have taken place that will affect all of the world. We must prepare for that change by filling our hearts with love and acceptance - acceptance of people as they are, we should not wish to change anyone, but simply accept - this will be the keyword for the coming events. In the next five years there will be natural disasters all over the world, the tectonic plates will move, causing earthquakes and volcanic eruptions. This will happen in North America, Japan and Southeastern Europe and on a line between these places. This will be further intensified by human actions. Every time the energy of a weapon is released into the atmosphere it hurts the planets. It was the Russian bombings in Tjetjeny (sorry - spelling?) that caused the earthquake in Kobe.

This will also be the time when it will finally be clear to all that there are entities from other planets working their powers on the earth. They will come, not to invade, but to love and teach. For years the governments of the Earth have known about them, but have concealed their knowledge despite being told not to. **Finally, the tenth planet will re-enter the solar system and its magnetic field will cause much damage. The first five years of the new millennium will be a time of great turmoil, but it is not the end of the world, it is a passage onto something better.** The age of love will come. Fill your hearts with love and acceptance to meet the negative energies that will shower us in this period of time. Marianne has promised me that every message I write to the internet from now on will be accompanied by positive energy. His energy will be with the message at all times, and I can feel it as I write.

Love, Christel



Troubled Times

Prophet

2000

Marianna Guanter

Marianna Guanter is channeling several types of aliens (seems so, I'm not quite sure, maybe she is a clairvoyant). I found her message at the German *Magazin 2000*. She talks about Nibiru, causing the pole shift ! I translated a bit.

Offered by [Niels](#).

*Like the pressure in the interior of the Earth is getting stronger and stronger by atomic explosions, so the pressure from outside will appear stronger. Volcanoes have the function of a valve. Without them your Earth would burst. India has just triggered what will lead to a worldwide chain reaction. The pressure will release around the whole globe to prevent that the planet, which has been lurching for some time, performs the **pole shift** untimely.*

The actual cause for the above mentioned new alignment of the Earth' axis will be the often quoted Nibiru, which already has set its course toward Earth and which has already been sighted by your scientists. Its speed matches the prevailing oscillation on the surface of the Earth. You know that prayers increase the oscillation, and you also know that simultaneous concentrating on something together releases even more energy and can change things.



Troubled Times

Prophet

2000

David Jevons

As I continue my research, I find more names/sources. All should find this book very palatable - *When the Comet Runs* by Tom Kay. It's packed full of prophets. From page 27 here are a couple lines out of the book.

The major earth changes will be initiated by what I will call the "fiery messenger". There is even now a star of great power proceeding towards our solar body. As it passes it will effect the motions of all the planets of our system, therefore, will bring about changes on the surface of the planets themselves. the effect of the passage will be to set in motion the earth changes that are prophesied. Various lands will sink, others will rise. So I say to you now, as I said to you five years ago, that these earth changes are coming. They cannot be avoided. they are part of the destiny of the earth.

Apparently this is part of a speech given to an intuitive named David Jevons by his Ramala master at the request of his students in the late 1970s in Great Britain.

Offered by [Mark](#).



Troubled Times

Prophet

2000

Hopi Prophecy

During this past chat we discussed that the atmosphere seemed thicker, like a mist or fog was causing the sun's light to appear differently. Clipper said the effect in Alaska was more an orange color. At my latitude, it just seems hazy, and the moon is appearing more orange/red when it rises and sets. It even looked *pink* one evening. My friend (whom I can't discuss these things with yet.) looked up and said, "Look, the moon is pink!" While reading a Hopi future prophecy, I came across this and had to share it:

Offered by [Leila](#).

When the end is near, we will see a halo of mist around the heavenly bodies. Four times it will appear around the sun as a warning that we must reform, telling us that people of all color must unite and arise for survival, and that we must uncover the causes of our dilemmas. Unless man made weapons are used to strike first, peace will then come. So the time will come when we will experience late springs and early frosts, this will be the sign of the returning Ice Age.



Troubled Times

Prophet

2000

Catholic Prophecy

3 Days of darkness (Catholic Version)

Impending Signs:

Increasing violent disturbances on land, at sea and in the air; earthquakes, hurricanes, tornados, windstorms, cloudbursts, breaking of dams, overflowing of streams and seas, hugh tsunamis, floods, unusual "accidents" taking many lives. Famines, epidemics, destruction, destitution, failure of crops, water and crops will change, becoming more "polluted" and less nourishing.

Revolutions, downfall of governments, dissensions, wars, confusion in high places, lack of respect for authority, treachery, corruption, brutalities, atrocities. Immorality, lack of charity, heartlessness, indifference and lack of concern for our neighbor, people turning against each other.

A cross will appear in the sky. All will see it, but some will reject it. It will be a sign that the final events are near.

Immediate Signs:

The night will be bitterly cold, the wind will howl and roar, then will come lightning, thunderbolts, earthquakes, the stars and heavenly bodies will be disturbed and restless. There will be no light, but *total blackness*. Hurricanes of fires will rain forth from heaven and spread over all the earth, fear will seize mortals at the sight of these clouds of fire, and great will be their cries of lamentation, many godless will burn in the open fields like withered grass. 75% of the earth's population will be lost.

Source:

Blessed Anna Maria Taigi (Rome), Padre Pio (Italy), Pere Lamy (France), Elizabeth Canori-Mora (Rome), Saint Hildegard (Germany), Marie Martel (Normandy), and many more.



Troubled Times

Prophet

2000

Bible in Revelations

Quotes from the *Bible*, **Book of Revelations**, King James version.

1-1

things which must shortly come to pass;

6-12

And I beheld when he had opened the sixth seal, and, lo, there was a great earthquake; and the sun became black as sackcloth of hair, and the moon became as blood;

6-13

And the stars of heaven fell unto the earth, even as a fig tree casteth her untimely figs, and she is shaken of a mighty wind.

6-14

And the heaven departed as a scroll when it is rolled together; and every mountain and island were moved out of their places.

6-15

And the kinds of the earth, and the great men, and the rich men, and the chief captains, and the mighty men, and every bondman, and every free man, hid themselves in the dens and in the rocks of the mountains;

8-7

The first angel sounded, and there followed hail and fire mingled with blood, and they were cast upon the earth: and the third part of trees was burnt up, and all green grass was burnt up.

8-8

And the second angel sounded, and as it were a great mountain burning with fire was cast into the sea: and the third part of the sea became blood;

8-10

And the third angel sounded, and there fell a great star from heaven, burning as it were a lamp, and it fell upon the third part of the rivers, and upon the fountains of waters;

8-11

And the name of the star is called Wormwood:

8-12

And the fourth angel sounded, and the third part of the sun was smitten, and the third part of the moon, and the third part of the stars; so as the third part of them was darkened, and the day shone not for a third part of it, and the night likewise.

11-19

and there were lightnings, and voices, and thunderings, and an earthquake, and great hail.

12-3

And there appeared another wonder in heaven; and behold a great red dragon, having seven heads and ten horns, and seven crowns upon his heads.

12-4

And his tail drew the third part of the stars in heaven, and did cast them to the earth:

16-3

And the second angel poured out his vial upon the sea; and it became as the blood of a dead man:

16-4

And the third angel poured out his vial upon the rivers and fountains of waters, and they became blood.

16-8

And the fourth angel poured out his vial upon the sun; and power was given unto him to scorch men with fire.

16-9

And men were scorched with great heat,

16-10

And the fifth angel poured out his vial upon the seat of the beast; and his kingdom was full of darkness;

16-12

And the sixth angel poured out his vial upon the great river Euphrates; and the water thereof was dried up,

16-18

And there were voices, and thunders, and lightnings; and there was a great earthquake, such as not since men were upon the earth, so mighty and earthquake, and so great.

16-19

and the cities of the nations fell:

16-20

And every island fled away, and the mountains were not found.

16-21

And there fell upon men a great hail out of heaven, every stone about the weight of a talent:



Troubled Times

Prophet

2000

Amos

Amos 5: 7-8

Ye who turn judgment to wormwood, and leave off righteousness in the earth. Seek him that maketh the seven stars and Orion and turneth the shadow of death into the morning, and maketh the day dark with night: that calleth for the waters of the sea, and poureth them out upon the face of the earth: The Lord is his name.



Troubled Times

Prophet

2000

3rd Fatima Secret

The Third Secret Of Fatima Revealed?

by Mitch Battros (ECTV), January 25, 2000

I have received information from someone who is somehow close to the Vatican. The less I know, the better. He has pleaded to remain anonymous for fear of being thrown out of the clergy. He came to me because he was aware of my request of information from the Vatican over a year ago, asking for information on the "Third Letter of Fatima". What I received back was more than I had hoped for. I re-posted this [Letter](#) last month. Again, I want to reiterate, I believe all science, and in this case prophecy, should be held to the test of "subject conjecture" and should be seen as an interpretation of material. Having said this, I will disclose what has been sent to me. Over 30 years ago, Conchita of Garabandal said the "Warning" will happen on a Thursday in April between the 8th & 16th of the month, within the lifetime of Joey Lomangino (now 65) [and before the end of the century according to many sources], on the feastday of a young martyr of the Eucharist and on the day of a great event in the Church. Our Lady of Emmitsburg Message states "...This is a rejuvenating time but a time of cleansing from the ways of your self..." This Jubilee year seems a perfect time...the Warning would be 04/13/2000. Mirjana of Medjugorje said her first secret, will not be worldwide, but will nonetheless serve to "shake us up". This "secret" might concern some catastrophic event prior to the "Miracle" as described at Garabandal. Seemingly, the first 3 secrets and the Warning/Miracle must tie-in.

It has been prophesied John Paul II will be the last Pope before the end of time (as we know it) or "transition" is another specific and spectacular promise made at Garabandal. At the time of the apparitions of Garabandal, Pope Paul VI was Pope. Our Lady told the visionaries that, including the present Pope, there would be only 3 Popes until the end of time (the end of the Marian age, climaxing with the Miracle). John Paul II, who despite all sorts of problems besetting the world and his Church seems to be quite optimistic about the future. He has repeatedly said that the Great Jubilee year will mark the beginning of a "springtime for Christianity". But how can he be so optimistic and so apparently certain of the future? Since he is a deeply prayerful man - he opens his day with up to two hours of individual prayer then celebrates Mass and prays throughout the day - and he is Jesus' vicar on earth, so he is guided by the Holy Spirit the source of his certainty may be supernatural in nature. Further, if persistent 'rumors' that emanate from the Vatican are correct, he is also a visionary, purportedly receiving his own visions of his beloved 'Markka' - the Blessed Virgin Mary. In addition, he has read and evaluated Fatima's famous third Secret, yet to be revealed to the world, and may also be guided by its contents. In short, he has guidance that no one else possesses - and he is optimistic!

Fatima's Third Secret appears to involve a supernatural event as inadvertently disclosed by one of the few people alive who have read it - Archbishop Loris Capovilla. Moreover, the Pope has told his close associates not to plan his 2001 calendar implying that he won't be alive by then. It is possible that he believes Fatima's Third Secret will come to conclusion during the Great Jubilee celebration in the Catholic Church. Year 2000 A star, the Asteroid, will illuminate the earth causing it to appear to be surrounded by flames during a period of some twenty minutes, an event which will spread panic everywhere...This will occur in the near future. When the Asteroid lights up the earth making it appear that the whole world is in flames, many people will wish to die at that shower of fire...a fear which will in fact cause the death of many people; those who are just and who believe will not suffer."

In all prophecies, Jesus says that Divine events will be explainable scientifically for the spiritually weak. So even though God may act through nature, many will attribute these events to "nature" alone. According to NASA the Sun has been entering a very unusual cycle in which it is expected to have unusually large solar storms. Around April 2000 will be a "solar maximum or peak" period of flare activity. The Garabandal visionaries referenced a bright light in relation to the Warning, and Jacinta (of Fatima) supposedly told a Mother Godhino that a time would come when a warning would be sent to the whole world in which the skies would light up with a bright light shocking the world with its suddenness and magnitude. Before the "Miracle" will come the "Warning" (the original Spanish term was "Aviso", which translates as "Announcement", "Warning", or "Notification". It will precede (by between 8 days and 1 year) the Miracle prophesied by Our Lady at Garabandal, which will in turn precede the chastisement. A flash of brilliant white light (obviously bright enough to attract the attention of the third of the people in the world who will presumably be sleeping) will occur, "like 2 stars that collide and make a lot of light, but don't fall down." (Conchita's description).



Troubled Times

Prophet

2000

Saints & Priests

The following prophecy was found at the end of the 19th century in the library of Monastery Neamt, in Romania. It is supposed that the prophecy was written in the 14th century.

Unknown diseases and plagues will accompany the end of the Millennium, because the last beast will liberate gold and poison... and the gold will produce despair, while the poison will produce death. In the time of the seventh seal, the earth will be an abandoned factory of poisons. And the few wise men that will remain, will not be able to make another thing but to invoke the anger of God, so that the impious beast which will have destroyed the life be destroyed.

Maria Laach, German religious woman, who did several prophecies in the 16th century:

The 20th century will bring death and destruction, apostasy of the Church, discord in the families, cities and governments; it will be the century of three great wars with intervals of some decades. They will turn more devastating and bloody and they will leave in ruins not only Germany, but all the countries of the East and West. (...) After a great defeat of Germany, a great war will come. There won't be bread for the people and food for animals. Poisonous clouds, created by human hands, will lower and will exterminate everything. The human mind will be taken by madness.

At his time, Stormberger was well-known for his prophecies. Several Austrian specialists of prophecies from the area of Bavaria documented his prophecies, but the books containing his writings were condemned by the Nazis and were burned, because they foresaw Hitler's defeat, who was interested in prophecies. But fragments telling that he foresaw the invention of cars, trains and airplanes survived. He said with precision the day that the First World War would begin, its duration, the weapons. He predicted the Great Depression in 1929, the Third Reich, the Second World War, the Swastika, the defeat and the division of Germany etc. He also said that there would be three world wars in the 20th century:

Two or three decades after the first war it will come one a Second War still larger. Almost all the nations of the world will be involved. Millions of men will die, without being soldiers. The fire will fall from the sky and many great cities will be destroyed. And after the end of the Second Great War, a third universal conflagration will come, so that it will determine everything. There will be weapons totally new. In one day, more men will die than in all the previous wars. The battles will be accomplished with artificial weapons (chemical bombs). Gigantic catastrophes will happen. With the open eyes, the nations of the planet will go through these catastrophes. They won't know what is happening, and those that know and tell, will be silenced. Everything will be different from before, and in many places the Earth will be a great cemetery. The third war will be the end of many nations.

German Monk, Ludwig Heinrich, who lived in the 17th century:

In the last years of the 20th century, one will see the disappearing of countless animal species, killed by man. But at the end, it will be the man that it will condemn the man to the death, because everything that grows on the earth will contain the essence of the death. The air will be the blow of the death, and as soon as the man breathe it, he will breathe the death. As soon as the millennium touches its end, it will rain from the sky one pestilence never saw before on the earth. And this pestilence will remove all the force from the man; and the man won't be able more to fight, even against the worm that crawls on the earth.

It is believed that the following prophecy, found in Monastery of Sainte Claire, Perpignan, in France, is from the 14th century. It was attributed by some to Abbot Reymond. The text is divided in five parts, each part prophesying about a century of the last five of the millennium. Here is a text from the last part:

For stranger than the last times may seem, the last century of the millennium will overcome all the others. It will be similar to one car that moves with difficulty, guided by unable and servants of Satan. In that period of terror, there will be great spiritual poverty. (...) Many kings will lose the throne and some kings will recover the throne. A war will begin. (first war). After, another war comes. (second war) and so another war. (third war) From the sky the hell will fall. In the anguish of a bad life, the man will finish poisoning everything. (chemical bombs) Poisoned clouds will cover the earth. Monstrous machines will dominate the skies. (planes with bombs) The fire will destroy many cities. The men will finish destroying each other.

The Ladino Prophecy, a Italian seer of the 18th century:

Attention to 1999! The sea is crazy. Many lands will tremble. One deep plow will pass in the lands of the world. The Great Serpent will be born in the East. When the millennium arrives its end, the Christians will be equally pagans. The only faith will be on the money and on the power; the mistake, the corruption and the violence will triumph.

The Russian Monk Rasputin, who did prophecies fulfilled - on his murder, on the Russian Revolution etc. said:

Mankind is going in the direction of the catastrophe. The less able ones will be guiding the car. This will happen in Russia, in France, in Italy and in other places. The humanity will be squashed by the lunatics' roar. The wisdom will be chained. The ignorant and the prepotent will dictate the laws to the wise and to the humble person. So, most of the humanity will believe in the powerful ones and not more in God. The punishment of God will arrive late, but it will be tremendous. And it will arrive before our century ends. Then, finally the wisdom will be free from the chains and the man will return entirely to God, as the baby who goes to his mother. In this way, mankind will arrive on the terrestrial paradise.

The German magazine *Neues Europa* published in 1963 what it said to be the third part of the secret of the apparition at Fatima, Portugal in 1917. The message explains that a "the great war will come in the second part of the 20th century. The fire and the smoke will fall from the sky and the waters from the oceans will become vapour, projecting its scum up to sky and destroying everything below. And millions and millions of people will die from one hour to another..." In 1981, in Fulda, Germany, when asked what was this secret message, the Pope Jean Paul II answered:

Due to the seriousness of the contents of the Fatima secret, my predecessors in the Throne of Peter have preferred to postpone the publication. Furthermore, it may be enough to the christian people to know that, if there is a message saying that the oceans will flood whole parts of the globe, and millions of people will die, from a minute to another, it is not really the case to will the publication of this secret message.

The spiritualist Brother "X", published in the 50s, in Brazil:

At the end of the century, the earth will be a chaos. Its surface will be scorched by the fire of the atomic bombs. Europe will be a vast cemetery. Asia and Africa will be true deserts. Part of America will be horribly destroyed. The polar ice, because the efect of the verticalization of the axis of the earth, will shift abruptly, inundating many regions. The waters will cover immense extension of the earth and the inhabitable part of the continents will be reduced to one third.

The American spiritualist Ruth Montgomery, in a book edited in 1966, did prophecies given by Arthur Ford:

In the last decade of this century will occur a great shift in the axis and the weather will change so drastically that it will be difficult to recognize old vegetations in many points of the globe. Many people will not survive to this change, but others will, because, after a period of excited seas and incredible speed of wind, the turbulence will cease, and the people in the North will live in a tropical weather and the people in the south in a cold weather. This will happen

before the year 2000.

Prophecy of Marienthal (1749)

And for the coming events of the 20th century... a war will break out, and will make all the precedent wars disappear. Rivers of fire will fall from the clouds, where there are no clouds (...) All the capitals in the two sides of the ocean will be destroyed.

In his book "Prophecies on Future Happenings" published in 1536, Paracelso said that the last century of the millennium would be a time of "changes, unquietness, dissatisfaction and illness".

Prophecy of a Saint-Almis Templar

Near the middle of the last year (1999 or 2000), the signals and the number will appear in the sky. The iron birds will obscure the sun. The beasts of Apocalypse will come out from the sea. The flames from the hell will surround the Earth. At the same time, the sky will burn and the sea will grow and the lands will be swallowed. And the man will know the truth.

Filippo di Lione (March 28th, 1897):

In one hundred years, there will be a cataclism so that the Earth will be rotated and we will be in the South Pole (...) because this century (20th) will not end without the happening of all these things.



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Kolbrin

The passing of the 12th in the past is mentioned in a book I became acquainted with on my arrival in New Zealand 3 years ago. The book is called *The Kolbrin* and compiled of manuscripts saved before the burning of Glastonbury Monastery and safeguarded by a group called "The Culdians". I hasten to mention that I am not a Culdian and was given the book by a friend who is a member. The present work was published in 1994 here in Thames by The Culdians and the translation appears in modern English. It is a parallel bible, but interestingly has more detail on certain accounts such as The Flood and Exodus. It names **The Destroyer** as precipitating both events and there are many pages describing the terrible events to come. Although no dates are mentioned, there can be no doubt that it will be soon. Chapter Four, titled *The Deluge* from *The Book of Gleanings*, Paragraph 24

Then, with the dawning, men saw an awesome sight. There, riding on a black rolling cloud came the Destroyer, newly released from the confines of the sky vaults, and she raged about the heavens, for it was her day of judgement. The beast with her opened its mouth and belched forth fire and hot stones and a vile smoke. It covered the whole sky above and the meeting place of Earth and heaven could no longer be seen. In the evening the places of the stars were changed, they rolled across the sky to new stations, then the floodwaters came.

The floodgates of Heaven were opened and the foundations of Earth were broken apart. The surrounding waters poured over the land and broke upon the mountains. The storehouses of the winds burst their bolts asunder, so storms and whirlwinds were loosed, to hurl themselves upon the Earth. In the seething waters and howling gales all buildings were destroyed, trees were uprooted and mountains cast down. There was a time of great heat, then came a bitter cold. The waves over the waters did not rise and fall but seethed and swirled, there was an awful sound above.

Four more paragraphs to the end of the chapter, describe how the stars were loosened in the Heavens. A ship that had been built been borne up by the waters. The waters filling the valleys and going over the mountain tops in huge surging torrents. The Destroyer then passes, the flood remains for seven days and the ship finally comes to rest in the mountains of Ashtar. And here is described the last passage of the 12th Planet at the time of the Exodus. *Book of Manuscripts*, **The Destroyer** Part 3 from the scroll of Adephe, Chapter 5, Para 1:

The Doomshape, called the Destroyer, in Egypt, was seen in all the lands thereabouts. In colour it was bright and fiery, in appearance changing and unstable. It twisted about itself like a coil, like water bubbling into a pool from an underground supply, and all men agree it was a most fearsome sight. It was not a great comet or a loosened star, being more like a fiery body of flame.

Para 4:

This was the aspect of the Doomshape called the Destroyer, when it appeared in days long gone by, in olden times. It is thus described in the old records, few of which remain. It is said that when it appears in the Heavens above, Earth splits open from the heat, like a nut roasted before the fire. Then flames shoot up through the surface and leap about like fiery fiends upon black blood. The moisture inside the land is all dried up, the pastures and cultivated places are consumed in flames and they and all trees become white ashes.

Chapter 6, Para 31:

There was a strange silence and then, in the gloom, it was seen that the waters had parted, leaving a passage between. The land had risen, but it was disturbed and trembled, the way was not straight or clear. The waters about were as if spun within a bowl, the swamp land alone remained undisturbed. From the horn of the Destroyer came a high shrilling noise which stopped the ears of men.

Para 29

Pharoah fought against the hindmost of the slaves and prevailed over them, and there was a great slaughter amid the sand, the swamp and the water.

Para 37

The great surge of rocks and waters overwhelmed the chariots of the Egyptians who went before the footmen. The chariot of the Pharoah was hurled into the air as if by a mighty hand and was crushed in the midst of the rolling waters.

There is much description of massive upheaval in this chapter caused by **The Destroyer** leaving no doubt that the Slaves only managed to escape during a time of great chaos in the fermenting landscape. Then, about the future: Chapter 3 **The Destroyer** Part 1, from the Great Scroll, Para 1:

Men forget the days of the Destroyer. Only the wise know where it went and that it will return in its appointed hour.

Para 3:

When ages pass, certain laws operate upon the stars in the Heavens. Their ways change, there is movement and restlessness, they are no longer constant and a great light appears redly in the skies.

Para 4:

When blood drops upon the earth, the Deastroer will appear and mountains will open up and belch forth fire and ashes. Trees will be destroyed and all living things engulfed. Waters will be swallowed up by the land and seas will boil.

The timing for this event will be when “women will be as men and men as women”, “men will fly in the air as birds and swim in the sea as fishes”, “then shall the high strive with the low” etc, etc. There follows a depiction of the effects of **The Destroyer** this time around which is poetic and terrifying, i.e. “when children will turn grey headed”.

Offered by [Dermott](#).

Note: an inexpensive paperback or ebook copy of the Kolbrin can be purchased, available at Amazon or from the publisher, [YOWUSA](#).



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Prophet

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Islam

After I became a Muslim, I realized that there is great correlation between studies of the modern day writers like Daniken and Sitchin and what has been clearly predicted in Islam and other religions before it. The more I learnt about Islam the more I was able to correlate these things. A common beliefs that exist in most of the major religions are that the Apocalypse or the Doomsday when earth and the skies will be destroyed. The DoomsDay has been a topic of interest for everybody and every religion has mentioned about it with a remarkable similarity but no date has been given as to when it would happen. Also, most of the religions especially recent religions like Christianity and Islam have thrown light on signs of the Apocalypse. This document ascribes to summarizing these signs as predicted in Islam and their correlation with present day Planet X scenario. It throws light on the signs that have been fulfilled and signs that are yet to be fulfilled. Islam is based on two things *Quran* (The book of God revealed to Prophet Muhammad) and Prophets teachings to his followers called as *Hadiths*. The *Hadiths* are basically an explanation in detail of verses of *Quran*. Every true Muslim should believe undoubtedly as regards to apocalypse and dooms day. Most of these facts have also been mentioned in Christianity. Specifically, **there will be a day when the earth will be completely destroyed and mountains would fly and the land will be covered by oceans**. There are many *Hadiths* in which Muhammad has predicted the signs of the Hour or the Apocalypse. I have summarized those signs that have been fulfilled and those that are yet to be fulfilled especially the ones that relate to Planet X. The *Hadiths* that have been used are such that their authenticity is acceptable by any muslim without any controversy.

Muslim Hadith 6908:

Hudhaifa b. al-Yaman reported: By Allah, I have the best knowledge amongst people about every turmoil which is going to appear in the period intervening me and the Last Hour; and it is not for the fact that Allah's Messenger (may peace be upon him) told me something confidentially pertaining to it and he did not tell anybody else about it, but it is because of the fact that I was present in the assembly in which he had been describing the turmoil. And he especially made a mention of three turmoils, which would not spare anything, and amongst these there would be turmoils like storms in the hot season. Some of them would be violent and some of them would be comparatively mild. Hudhaifa said: All (who were present) except I have gone (to the next world).

Sahih Muslim Hadith 6931 Narrated byHudhayfah ibn Usayd Ghifari

Allah's Apostle (peace be upon him) came to us all of a sudden as we were (busy in a discussion) He said: What do you discuss about? (the Companions) said: We are discussing about the Last Hour. Thereupon he said: It will not come until you see ten signs before and (in this connection) he made a mention of the smoke, Dajjal, the beast, the rising of the sun from the west, the descent of Jesus son of Mary (Allah be pleased with him), The Gog and Magog, and landslides in three places, one in the east, one in the west and one in Arabia at the end of which fire would burn forth from the Yemen, and would drive people to the place of their assembly.

Sahih Al-Bukhari Hadith 9.237 Narrated byAbu Huraira

Allah's Apostle said, "The Hour will not be established till ... earthquakes will increase in number ... till a man when passing by a grave of someone will say, 'Would that I were in his place,' and till the sun rises from the West. ... "

Sahih Al-Bukhari Hadith 41.6927 Narrated by Yusair b. Jabir

Once there blew a red storm in Kufah that there came a person who had nothing to say but (these words): Abdullah

b. Mas'ud, the Last Hour has come.

Al-Tirmidhi Hadith 5450 Narrated by Abu Hurayrah

Allah's Messenger (peace be upon him) said, "When the booty is taken in turn, property given in trust is treated as spoil, zakat is looked on as a fine, learning is acquired for other than a religious purpose, a man obeys his wife and is unfilial towards his mother, he brings his friend near and drives his father far off, voices are raised in the mosques, the most wicked member of a tribe becomes its ruler, the most worthless member of a people becomes its leader, a man is honoured through fear of the evil he may do, singing-girls and stringed instruments make their appearance, wines are drunk, and the last members of this people curse the first ones, look at that time for a violent wind, an earthquake, being swallowed up by the earth, metamorphosis, pelting rain, and signs following one another like bits of a necklace falling one after the other when its string is cut."

There are very few *Hadiths* that describe the events of the actual day of Apocalypse when the universe will be destroyed because this has been clearly described on many occasions in *Quran* by God himself. This section contains translation of only few such verses from *Quran* whereby the events of Apocalypse are described.

*And When the Trumpet shall sound,
One blast,
Earth and the mountains,
Will be lifted up,
and crushed with one crash.
Then on that Day,
The Event will fall (69:13-15)*

*When the heaven is cleft asunder,
When the planets are dispersed,
When the seas are poured forth,
And the sepulchers (graves) are overturned (82:1-4)*

*The (Day) When the sun is overthrown.
And when the stars fall losing white light and when the mountains fly out their positions (81:1-3)*

Offered by [Imtyiaz Shafi Loya](#)



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Vanga

There is another confirmation of the coming pole shift I found recently in the *Megapolis-Express* newspaper, of June 6, 2001. This is Vanga's last interview, recorded on the Dictaphone by one Russian journalist in 1994. Vanga very seldom allowed tape recording, but this time she has agreed, on condition that he will not show it nobody until new century. Vanga was old blind woman from poor Bulgarian village. At the age of 11 Vanga got into a tornado. She has become blind, but found abilities of clairvoyance and contact with souls of the died. She died in 1996 at the age of 84. I have left here only answers of the questions. The interview is more extensive, but I have included here only the themes connected to the coming global cataclysms and ET.

Then miracle will come, wonderful times will come. The science will tell, that in the old books the truth and that is not, people will find life in space and will know, whence it has come. The large underground city will dig out. The new people will arrive from the sky and there will be great miracles. But it is necessary to wait, it is impossible to hurry events, it will not be soon.

Soon, in nine years [2003], there will be the end of the world. The Earth will turn away from the Sun. Where was hot, there will be an ice, many animals will die out. The people will fight for energy, but they will have enough soul to stop. And then time will turn back.

The flood will be too, in 30 or 40 years. The large body will fly to the Earth and will hit the water. The waves will wash away a lot of countries, and the sun will dim for three years. The good-hearted people will survive, and malicious people, which consider themselves clever, will perish. Many people will perish. And then will be a very good life, and immortality will come.

Offered by [Dmitri](#).



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Isaiah 24

Behold, the LORD maketh the earth empty, and maketh it waste, and turneth it upside down, and scattereth abroad the inhabitants thereof. And it shall be, as with the people, so with the priest; as with the servant, so with his master; as with the maid, so with her mistress; as with the buyer, so with the seller; as with the lender, so with the borrower; as with the taker of usury, so with the giver of usury to him. The land shall be utterly emptied, and utterly spoiled: for the LORD hath spoken this word.

The earth mourneth and fadeth away, the world languisheth and fadeth away, the haughty people of the earth do languish. The earth also is defiled under the inhabitants thereof; because they have transgressed the laws, changed the ordinance, broken the everlasting covenant. Therefore hath the curse devoured the earth, and they that dwell therein are desolate: therefore the inhabitants of the earth are burned, and few men left. The new wine mourneth, the vine languisheth, all the merryhearted do sigh. The mirth of tabrets ceaseth, the noise of them that rejoice endeth, the joy of the harp ceaseth. They shall not drink wine with a song; strong drink shall be bitter to them that drink it.

The city of confusion is broken down: every house is shut up, that no man may come in. There is a crying for wine in the streets; all joy is darkened, the mirth of the land is gone. In the city is left desolation, and the gate is smitten with destruction. When thus it shall be in the midst of the land among the people, there shall be as the shaking of an olive tree, and as the gleaning grapes when the vintage is done. They shall lift up their voice, they shall sing for the majesty of the LORD, they shall cry aloud from the sea. Wherefore glorify ye the LORD in the fires, even the name of the LORD God of Israel in the isles of the sea.

From the uttermost part of the earth have we heard songs, even glory to the righteous. But I said, My leanness, my leanness, woe unto me! the treacherous dealers have dealt treacherously; yea, the treacherous dealers have dealt very treacherously. Fear, and the pit, and the snare, are upon thee, O inhabitant of the earth. And it shall come to pass, that he who fleeth from the noise of the fear shall fall into the pit; and he that cometh up out of the midst of the pit shall be taken in the snare: for the windows from on high are open, and the foundations of the earth do shake.

The earth is utterly broken down, the earth is clean dissolved, the earth is moved exceedingly. The earth shall reel to and fro like a drunkard, and shall be removed like a cottage; and the transgression thereof shall be heavy upon it; and it shall fall, and not rise again. And it shall come to pass in that day, that the LORD shall punish the host of the high ones that are on high, and the kings of the earth upon the earth. And they shall be gathered together, as prisoners are gathered in the pit, and shall be shut up in the prison, and after many days shall they be visited. Then the moon shall be confounded, and the sun ashamed, when the LORD of hosts shall reign in mount Zion, and in Jerusalem, and before his ancients gloriously.



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Barbara Clow

The Pleiadian Agenda - A new cosmology for the age of light, p 234

by Barbare Hand Clow

Just before 10,800 BC, there were meetings between humans, spirits of place, animals, and plants. You humans were powerful and integrated, almost as if you were gods yourselves, and then the strange times began. The Earth began to shake, the weather began to change, and you began to feel very afraid. The wind coming from the wrong direction was too strong and fitful, and the lightning was so intense that sparks flew off your feet as you walked. You saw portents in the sky, and you thought the gods must be coming back. You did see Nibiru in the sky as it came into the solar system, but you'd forgotten it was where the gods came from.

Your world was collapsing as you moved into Photon Band, and you have almost no memory of their landing during the Age of Leo. The Earth shook and writhed, the weather became unpredictable, and then one day the poles shifted! It was the strangest day. Great winds swept the land, the light changed, and the shadows in the great stone temples moved. There was tremendous pressure in your heads and bodies, and many of you died when your inner organs just gave out and filled with blood. **A new electromagnetic field settled on the surface of the planet and the energy from the Sun seemed to be lost. Only remnants of species survived this great shifting, and Earth experienced many years of dim light because volcanic dust particles blocked the rays of the Sun. The new poles began to collect ice during months of continual rain, and water levels rose all over the planet.** Nibiru came blasting around the other side of the Sun, and the gods landed in Sirian territory because it was the only stabilized zone on Earth. Northern Egypt was a great electromagnetic vortex that aligned Earth to the Sun in relationship to the Sun's position in between the Galactic Center and Orion ...



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Oahspe

I have read the [Oahspe](#) and like it very much. To me it's the most spiritually uplifting book you can read. It's also very interesting with its history of languages and religions and the involvement of good aliens/angels in guiding our progress and the bad ones in messing things up. I highly recommend it. References to the Red Star are found in the first chapters of these books: Sethanthes, Ahshong, Aph, Sue, Thor, Osiris, Fragapatti and some others, and is used as in "the red star, the earth" so that most readers think the red star is the earth. However Zetataalk says the two planets were administered as one in those days. Also, why would our blue earth or our yellow sun be called a red star, but yet it's not real clear. See what you think.

Offered by [Milly](#).



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Pope's Denial

Pope Assures Italians the End is Not Yet Nigh

From *The Times*, 24 April 1998, by Richard Owen in Rome

To the dismay of Seventh Day Adventists, Jehovah's Witnesses and followers of Nostradamus, but to the relief of almost everyone else, the Pope has declared that the world is not about to end. He said that it was doomed to end "at some point", but there was no fixed date, "nor can one be discerned from the Bible". At his weekly audience the Pope assured his listeners that the end of the world was not nigh, or anywhere near nigh, and said widespread fears that the new millennium would usher in the Last Judgment were unfounded.

Italy has been gripped by pre-millennial anxiety since the earthquakes in Umbria last September, which killed 11 people and damaged the Basilica of St Francis at Assisi. There are frequent rumours that Vesuvius, which destroyed Pompeii in AD79 and last erupted in 1944, is about to erupt again. The Vatican has sought to reassure people that the mysterious Third Secret of Fatima - allegedly revealed by the Virgin Mary to three Portuguese children in 1917 and kept secret by the Pope - does not predict Doomsday. But books on Fatima and interpretations of the arcane predictions of Nostradamus, the 16th-century sage, remain sought-after in bookshops.

Speaking on "The Second Coming of Christ at the End of All Things", the Pope said that attempts to predict the end of the world were "illusory and misleading ... history is moving towards its conclusion, but Christ did not indicate any chronological deadline." Apocalyptic visions were to be taken "symbolically" as images of "the precarious position of humanity and the sovereign power of Christ". Theological experts said biblical references to the Apocalypse were at best "open to interpretation", including the Revelation of St John, with its visions of plagues, earthquakes and "mountains of fire" ushering in "a new heaven and new earth".



Troubled Times

Prophet

2000

Shiva

Indian mythology states that there are 3 prime forces in our solar system.

1. Bramha- The Creator
2. Vishnu - The Preserver
3. Shiva - The Destroyer

Shiva in Indian lore represents destruction, death and rebirth. Please have a look at this aspect of Shiva:



He is called Nataraja the lord of Dance. Nataraja means cosmic dance. Nataraja also means (vermillion) red dust! Nataraja means cosmic destroyer. His dance symbolizes destruction and creation anew. The circle around him represents its moons locked into an eternal dance around him. See his hair? That is how this planet appears when viewed from afar. See the guy under his feet? That's supposed to be us, Earth. Have you noticed the guy's lying on its stomach. That's the pole shift. In Shiva's upper right arm he carries fire. In his left upper arm he carries a musical instrument called a 'damru'. It is hour glass shaped. Tik tak tik tak. It is always on time. Now look at the following:



Here we see Shiva with Ganesh believed to be his son. Now the thing is that Ganesh is associated with the planet Mercury! At the back we see a bull. Meaning that he comes from Taurus constellation near Orion. His trident represents the moon swirls. Can it mean that Planet X will be seen when there is a new moon and just underneath it is Mercury? Did ancient Indians represent Nibiru as Shiva? Also we know that there is a festival in Febuary/March every year which is called Shivaratree. It means thegalactic wedding night of Shiva or the great night. Could this be a possible clue?

By Allan Marimootoo, on the [Pole Shift ning](#).



Troubled Times



Pole Shifts

I found an interesting site that is fairly nonbiased in the way in which it showcases many theories on plate tectonics, why and how the poles move, how often, and with what severity. The section on myths was just what I was looking for as a link to the ancient folklore section of Condensed Planet X evidence. Check it out for yourself.

Offered by [Slugga](#).

References to many different types of cataclysms, including poleshifts, can be found in the literature and mythology of numerous nations and peoples, as the following examples show. This does not of course mean that the descriptions are intended as literal descriptions of historical events; mythology is a complex mixture of fact, allegory, and symbolism, often woven into a dramatic narrative.

In the Book of Enoch (64:1, 3),¹ we read: *'In those days Noah saw that the earth became inclined, and that destruction approached. ... And he said, Tell me what is transacting upon earth; for the earth labours, and is violently shaken.'* In the **Bible** (King James Version), we find the following: *'Behold, the Lord maketh the earth empty, and maketh it waste, and turneth it upside down, and scattereth abroad the inhabitants thereof. ... The earth shall reel to and fro like a drunkard' ...* (Isaiah 24:1, 20),² *'Immediately after the tribulation of those days [prior to the Second Coming] shall the sun be darkened, and the moon shall not give her light, and the stars shall fall from heaven, and the powers of the heavens shall be shaken.'* (Matthew 24:29) *'The earth shook, the heavens also dropped at the presence of God: even Sinai itself was moved at the presence of God' ...* (Psalms, 68:8),³

The last two quotations could refer to a change in the declination of the stars, as would result from a poleshift. According to Ovid's account of the deluge catastrophe, the chariot of the sun, driven by Phaeton, changed direction, the horses pulling it broke loose from their course and rushed aimlessly, knocking against the stars, and the constellations of the Cold Bears tried to plunge into the ocean. In the **Timaeus** **Plato** says that this *'signifies a declination of the bodies moving around the earth and the heavens'*. In the same work he describes a cataclysm in which the earth moves *'forwards and backwards, and again to right and left, and upwards and downwards, wandering every way in all six directions'*. The paradisaical Eden, Asgard, Meru, or Airyana Vaejo are said to have enjoyed a perennial spring-like climate, despite their traditional northern or polar location - indicating that the axis must have been more or less upright.

The **Greek** astronomer Anaxagoras taught that during the Golden Age the stars revolved in a tholiform manner (i.e. in a horizontal plane), a belief shared by another Greek astronomer, Anaximenes. Diogenes Laertius added that at first the polestar always appeared in the zenith, but afterwards acquired a certain declination. Similar references can also be found in ancient **Japanese** cosmogony and **Chinese** traditions. For the **Egyptians**, a large fiery circle symbolized the cosmos, and a serpent with a hawk's head represented the pole. When the latter was placed across the diameter of the circle, it symbolized the pole of the earth lying in the plane of the ecliptic. The Harris Magical Papyrus speaks of a cosmic upheaval of fire and water when *'the south becomes north, and the earth turns over'*.

Hopi mythology speaks of the creation of four worlds, three of which were destroyed in succession. The first world was destroyed by fire and volcanoes. In the creation of the second world, land was put where water was, and water where the land was. When the time came for its destruction, the *'pole twins'* left their posts at the north and south ends of the world's axis, where they were stationed to keep the earth properly

rotating. The world teetered off balance, spun around crazily, then rolled over twice. Mountains plunged into seas, the land was inundated, and the earth froze into solid ice. Eventually the pole twins were ordered back to their stations at the poles. With a great shudder and a splintering of ice the planet began rotating again. As the ice melted, the world began to warm to life, and the third world was created. It was destroyed by waves higher than mountains which rolled in upon the land. Continents broke asunder and sank beneath the seas. The present (fourth) world will be destroyed by a pole shift and flooding, unless we change our nature sufficiently to prevent it.

The **Pawnee Indians** of North America preserved memories of a remote time when the north and south polar stars '*changed places*' or '*went to visit each other*'. They believed that a similar cataclysm would happen at the end of the world, when there would be a great flood, the skies would move, and the stars would come to earth. The **Eskimos** of Greenland recalled a time when the earth tilted over and all people were drowned in the sea. The **Andaman Islanders** fear a repetition of a great natural disaster that occurred in the days of their remote ancestors when the world capsized. The **Norse Edda** refers to shifts in the position of the Midgard serpent, Midgard being our planet, and the serpent denoting the equator, ecliptic, or Milky Way. According to a Norse legend, the wolf Fenrir, who had been chained up by the gods, managed to break his bonds and escape. He shook himself and the world trembled. The ash tree Yggdrasil (the earth's axis) was shaken from its roots to its topmost branches. Mountains crumbled or split from top to bottom, and the stars came adrift in the sky.

One ancient **Chinese** work, consisting of 4320 volumes, tells of the consequences that followed when mankind rebelled against the gods and the universe fell into disorder: '*The planets altered their courses. The sky sank lower towards the north. The sun, moon, and stars changed their motions. The earth fell to pieces and the waters in its bosom rushed upwards with violence and overflowed the earth.*' Many legends refer to long periods of darkness when the light of the sun vanished from the sky, while others speak of the sun not setting for long periods of time. One possible interpretation is that such stories refer to the '*age of horror*', when the earth's axis is tilted at 90°, and there would be continuous darkness during the winter months and continuous daylight during the summer months. **Norse** mythology teaches that before the present order of things, the sun rose in the south, and it places the frigid zone in the east, whereas now it is in the north. This, too, could be a graphic way of referring to a time when the earth was inclined at 90°.



Troubled Times



Sun Stood Still

Discussion of the *Missing Day in Earth's History (The Day the Sun Stood Still)*

It is reported by historians that records of the Chinese during the reign of Emperor Yeo, who lived at the same time as Joshua, report "a long day." Also, Heroditus, a Greek historian, wrote that an account of "a long day" appears in records of Egyptian priests. Others cite records of Mexicans of the sun standing still for an entire day in a year denoted as "Seven Rabbits," which is the same year in which Joshua defeated the Philistines and conquered Palestine. (**Bible-Science Newsletter**, *Daily Reading Magazine* - Supplement, Vol. VIII - No. 5, May 1978, Caldwell, Idaho.) Additionally, the historical lore of the Aztecs, Peruvians, and Babylonians speak of a "day of twice natural length."

In 1970, a story appeared in *The Evening World*, a newspaper in Spencer, Indiana, about a consultant to the space program named Harold Hill (deceased) citing that he was told a computer program had found a "missing day." Though the computer program story could never be validated, interesting speculations and studies ensued about what astronomical mechanism might result in the "Earth standing still" for 24 hours.



Troubled Times



Beth Horon

Stones from Heaven- Battle of Beth Horon

Excerpt from book *Ancient Mysteries*, 1999, pg. 140-142

Authors: Peter James and Nick Thorpe

"Sun, stand thou still upon Gibeon; and thou, Moon, in the valley of Aijalon." And the sun stood still, and the moon stayed, until the people had avenged themselves upon their enemies....So the sun stood still in the midst of heaven, and hasten not to go down about a whole day. And there was no day like that before it or after it, that the Lord hearkened unto the voice of a man...

Joshua 10:11-14

Is there anything that could possibly provide the energy necessary to alter the Earth's rotation without actually destroying it? A force much nearer than the Sun would do the job, but there seems to be only one way of providing it - a body almost as large as Earth itself must pass close enough to affect it with its gravitational pull. In astronomical terms such an event would be extraordinary, to say the very least. Yet a detail of the incident at Beth Horon does suggest that the Book of Joshua was describing an extraordinary astronomical event.

The omen and eclipse interpretations of Joshua's long day (provided by Holladay and Sawyer) completely overlooked what was said to have happened just before the Sun "stood still". A rain of stones was supposed to have fallen on the Amorites and decimated them before Joshua's army chased them through the Beth Horon pass to finish them off. What kind of stones were they? In some modern translations of the Old Testament, such as the often far from literal New English Bible, the impression is given that hailstones--the familiar blobs of ice that are frozen from rain as it falls - were involved. However, the Hebrew text describes the deadly rain as "great stones," or "stones of barad". "Barad" were also said to have fallen as one of the Ten Plagues of Egypt, which forced the Pharaoh to release the Israelites from bondage. Rabbinical tradition is clear in noting that "barad" were not mere hailstones. At the time of the Exodus, "barad" fell mingled with fire, and the stones themselves were said to be hot, which would rule out ice and leave only one possibility - meteorites. (Volcanic ejecta are unlikely -- there are no volcanoes near enough to have actually rained rocks on Palestine.)

These apparent meteorites are the most tangible part of the "long day story," and they may provide the clue to understanding the rest. The most realistic explanation of the biblical story would be one that accounts for *both* the extraordinary phenomena at the battle of Beth Horon: a devastating rain of stones, followed by the Sun's standing still in an extended day. Can a reasonable explanation be found to connect the two?



Troubled Times



Plato

In **Plato's Timaeus** we read of the Earth

overtaken by a tempest of winds.... alien fire from without, and with a solid lump of earth... the immense flood which foamed in and streamed out....

The **Greek Solon** visited **Egypt** and an old priest spoke to him as if to one of today's establishment figures:

You are all young in your minds which hold no store of old belief based on long tradition, no knowledge hoary with age. The reason is this. There have been, and will be hereafter, many and divers destructions of mankind, the greatest by fire and water, though other lesser ones are due to countless other causes. Thus the story current also in your part of the world, that Phaethon, child of the Sun, once harnessed his father's chariot but could not guide it on his father's course and so burnt up everything on the face of the earth and was himself consumed by the thunderbolt - this legend has the air of a fable; but the truth behind it is a deviation of the bodies that revolve in heaven round the earth and a destruction, occurring at long intervals, of things on earth by a great conflagration...

Any great or noble achievement or otherwise exceptional event that has come to pass, either in your parts or here or in any place of which we have tidings, has been written down for ages past in records that are preserved in our temples; whereas with you and other peoples again and again life has only lately been enriched... when once more, after the usual period of years, the torrents from heaven sweep down like a pestilence, leaving only the rude and unlettered among you. And so you start again like children, knowing nothing of what existed in ancient times here or in your own country... your people remember only one deluge, though there were many earlier...



Troubled Times



52 Year Round

From *A Catastrophics Newsletter*, VOL I, No. 25, November 3, 1997

Editor: Michael Armstrong, Publisher: Brian Stewart

Across Mesoamerica, the combination of two calendars, the solar or seasonal calendar and the 260-day ritual calendar, produced an extended sequence of sacred time, in which the two calendars concluded on the same day only once every 52 solar years--a cosmic cycle of extreme import. This 52-year cycle the Maya called the Calendar Round and the Aztecs a "bundle of years" or "Perfect Circle" of years. Interestingly, to Sylvanus Morley observes that the Maya "never indicated dates in hieroglyphic texts or historical documents by the solar year designation alone. Most often the date was specified by its designation in the Calendar Round."

Among the Aztecs this extended cycle was intimately tied to the myth of Quetzalcoatl, who was born on the day ce acatl ("One Reed") and departed on the day ce acatl 52 years later. He will return, the Aztecs claimed, on a future day ce acatl. It is only reasonable to assume, therefore, a close relationship between the symbolism of the Calendar Round and the symbolism of the founding god-king. Mesoamerican timekeepers show an extreme ambivalence about this extended calendar period. Its conclusion was both a renewal--the end of the old cycle and the beginning of a new cycle--and a potential moment of disaster, since the Aztecs believed that the entire world order was then in jeopardy. At that critical moment the astronomer priests anticipated world destruction by fire, wind, or water, repeating the great cataclysm that ended the golden age of Quetzalcoatl.

The synchronous Earth-Venus movements appear to have figured prominently in the calendar, enabling priest astronomers to draw on the mathematics of Venus cycles to anticipate the recurrence of doomsday. For example, 65 Venus cycles were equivalent to 104 solar years, or two 52-year cycles, which the Aztecs called **huehueliztli**, an old age or "long-period." To Velikovsky, this role of Venus in calculations of world ages was, at the very least, evidence to be considered in assessing Venus' catastrophic role in the past.

The works of Fernando de Alva Ixtlilxochitl, the early Mexican scholar (circa 1568-1648) who was able to read old Mexican texts, preserve the ancient tradition according to which the multiple of fifty-two-year periods played an important role in the recurrence of world catastrophes. He asserts also that only fifty-two years elapsed between two great catastrophes, each of which terminated a world age.

Now there exists a remarkable fact: the natives of pre-Columbian Mexico expected a new catastrophe at the end of every period of fifty-two years and congregated to await the event. "When the night of this ceremony arrived, all the people were seized with fear and waited in anxiety for what might take place." They were afraid that "it would be the end of the human race and that the darkness of the night may become permanent: the sun may not rise anymore."

It happened that the end of a cycle occurred in mid-November, 1507, and available records give us a good sense of the collective fears embedded in the symbolic rites of renewal. It is said that five priests moved in procession with a captive warrior out of the city of Tenochtitlan to the great ceremonial center on the Hill of the Star. The occasion was preceded by ritual extinction of fires across Mexico, the casting of statues

and hearthstones into the water, and rites of sweeping--all of these gestures bearing a significant symbolic tie to an ancient cultural memory of catastrophic transition. We are also told that on this frightening occasion women were locked in granaries to avoid being turned into man-eating monsters, pregnant women donned masks of maguey leaves, and children were kept awake to keep them from turning into mice while asleep. (That these fears trace to the cosmic night and the associated chaos hordes should become clear in the course of this series.) David Carrasco writes,

fire priests celebrated "when the night was divided in half": the New Fire Ceremony that ensured the rebirth of the sun and the movement of the cosmos for another fifty-two years. This rebirth was achieved symbolically through the heart sacrifice of a brave, captured warrior specifically chosen by the king. We are told that when the procession arrived "in the deep night" at the Hill of the Star the populace climbed onto their roofs. With unwavering attention and necks craned toward the hill they became filled with dread that the sun would be destroyed forever.

When the priest astronomers did confirm that the heavens were still in order, the country broke into celebration, the Sacred Fire was rekindled, houses, roads and walkways were swept clean and normal life resumed, the gods having granted man another 52-year cycle. As in the case of disaster portents, the fears implicit in the calendar symbolism flowed from a core idea of recurrence. In the same way that the appearance of a comet OR the rising of Venus recalled the world-ending catastrophe, the calendar system (which undeniably related to observed Venus cycles) rested on a memory of former upheaval, when heaven fell into confusion. Could the terrestrial king, whose life always mirrored that of the founding god-king, escape the fate of the great predecessor, whose death ENDED a cosmic cycle? Would the world itself survive a full turn of time's wheel?

It's too easy for archaeoastronomers, when chronicling the calendar symbolism, to slip into a state of enchantment over the system's mathematical symmetry, forgetting that there is a far more vital question: what were the experiential origins of the collective fear--the fear of a world falling out of control? And why did the planet Venus figure so prominently in the calculations of world ages? Perhaps the answer lies with the famous Calendar Stone, on which the time-keeping hieroglyphs are recorded. Enclosing the stone, and thus encompassing the entire cycle or world age is the two-fold form of the great serpent Xiuhcoatl, the mythical parent of comets, the great celestial torch launched against the rebel powers when the world was overrun by demons of chaos. That the archetypal comet should define the great cycle of time does not surprise us. For it seems that bringing one world age to an end and inaugurating another is, in the universal tradition, the comet's most distinctive role.

One Fear, Many Expressions

Due to the progressive fragmentation of evidence over time, the experts have missed the most significant fact of all. Mesoamerican cultures as a whole expressed the doomsday anxiety in pervasive ritual practices which themselves offer vital keys to the nature of the original events: the rites of sweeping practiced in every sacred precinct; the great festivals reckoning with critical moments in the calendar and repeating memorable episodes in the age of the gods; the virtually endless rites of sacrifice, by which tens of thousands died in a culture-wide bargaining with celestial powers; and the ritually-ordained wars by which the city's bravest and strongest repeated the catastrophic interlude between two world ages. Together with the available information on disaster portents, these mythically-rooted themes provide a great reservoir of evidence as to the character of the remembered catastrophe.

The repeated ritual patterns re-enacted on every scale (from household sweeping rites to nation-wide celebrations of the 52-year cycle) a world falling into darkness; the death of the creator-king, whose heart-soul was torn from him to soar aloft as a comet-like "spark"; the end of the kingdom (symbol of the "world"); a sky filled with celestial dust and cometary debris--the feared chaos-hordes; the gathering of great armies in the heavens to wage celestial combat; and overwhelming commotion: reverberating

- shouts and cries, the earthshaking moans of the great goddess, the shrieks
- of whistles, trumpets blaring, the beating of drums, and--in the very midst
 - of this world-ending havoc--a smoking star (the prototypical comet of the
 - Aztecs and Maya, (the planet Venus) announcing the disaster in the most literal, causative sense, and presiding over the recovery of order, as if sweeping clear the darkened and cloud-filled sky.



Troubled Times



Mother Sun

Ran across tale that is quite interesting and was run in our local paper. It's a kids section called "Tell me a story". This one is adapted by **Amy Friedman** and distributed by *Universal Press Syndicate*. It is entitled: *Mother Sun* and is an ancient Cherokee tale "from the earliest time".

Offered by [John](#).

In the earliest time, Mother Sun was angry with the people, and she was jealous of Moon. Mother Sun spewed flaming fury as she strode across the sky and looked down at the people. At noon she reached her daughter's house. She stood outside, raised her arms and beamed her hottest rays on the people below. What are you doing mother? her daughter asked. "The people of Earth are ugly. They squint and frown at me and twist their faces into knots, but when they look at Moon, they gaze warmly and lovingly. I'm going to destroy the people". Daughter Sun did not approve of her mother's fury, but she could say nothing. Mother Sun was powerful, and when she was angry, everyone cowered and stepped away from her blaze. On Earth, the people became ill and exhausted with Mother Sun's relentless heat. At last they met in council to discuss what they might do to save themselves. After much talk, they decided to stir up strong medicine, to send poisonous snakes to destroy Mother Sun.

And so Copperhead, Rattlesnake and Water Moccasin slithered to the top of the sky and coiled themselves beside Daughter Sun's door, awaiting Mother Sun. Copperhead flicked his long tongue, Rattlesnake shook with fury, and Water Moccasin, so excited he could not be still, slithered this way and that, his tail so long that at night it covered moon and stars. His terrible red eyes and bright white fangs were the only lights in the sky. "Calm down" the other snakes said, but Water Moccasin could not relax. The next day, just before noon, Daughter Sun opened her door to look for her mother's arrival. Rattlesnake, startled by the movement behind him, turned and struck. He killed Daughter Sun. "You fool," Water Moccasin shouted, "You killed the wrong one!" In his fury he churned back to the watery world below the Earth. He has never left that place. Copperhead and Rattlesnake sneaked back home.

When Mother Sun found her daughter's body, she moaned. She gathered her child into her arms, and as she did, Sun Daughter's ghost peeled away, and her spirit journeyed to the ghost country in the dark land of the west. After that, Mother Sun would not leave her dead daughter's house, so instead of the relentless heat and light, the people suffered endless darkness. Again the people held council. They agreed they must bring Sun Daughter back from the ghost country. They sent seven people with seven sticks and a strong box to ghost country. "Whatever you do, bring Daughter Sun back to her mother. Do not set her free from the box before you reach her home" the council told them.

When the seven people arrived in the ghost country, they saw the ghost people dancing. They spotted Sun Daughter in her bright red dress, and they began to touch her with their sticks. The first man touched a stick to her shoulder, and then the second did, and the third, and at last, with the seventh touch, Sun Daughter moved out of the ghost dance. The seven people caught her and folded her into their strong box. On the journey east, they heard Sun Daughter calling to them. "Let me out! I'm so hungry. I can't breathe. I'm dying. Please let me out!" The people began to tremble. "What if she dies?" they asked each other. "If she dies, Mother Sun will never leave her house and we will live in darkness forever". At last, as Sun Daughter wailed and cried, the people opened the box a tiny crack. When they did, they heard a fluttering sound and felt something brush past their faces. A bright redbird perched in a nearby bush and began to

sing. Now Daughter Sun was Redbird, and though the people tried to catch her, she could fly faster than the wind.

If they had kept that box closed, we would be able to bring people we love back from the ghost country, but now that can never be, for those seven people failed to obey the wise council. Still, the people knew they must go to Mother Sun. They continued their journey, and when they reached Mother Sun, she opened the box and wept harder than ever. She had been hoping and praying she would see her daughter once again, but now she understood she never would. As she wept, the world was flooded with her tears. Once again, the people held council. After much deliberation, they decided to send up a group of children to Mother Sun's house. In the sky the children, filled with delight, looked around. "What a beautiful world this is!" they cried, and they drummed and danced and held each other's hands, and the sounds they made were so happy, Mother sun peeked outside to see who was making them.

At that the drummers changed their beat. The dancers dropped hands. Each one began to leap and twirl and spin, faster and faster. Mother Sun, dazzled by their joy, stopped crying. And when the children saw her eyes open again, they rippled into a rainbow of pleasure. Mother Sun's eyes filled with tears once more, but these were tears of happiness at the sight of the singing, dancing children. They were so alive and beautiful. "I was wrong about the people" she said. "They are not ugly at all". And then she smiled, and stepped outside and raised her arms over the people. And from that day on, she offered gentle heat and dlight to the people of the Earth.



Troubled Times



Aztecs

After the destruction of the fourth sun, the world plunged into darkness during the space of 25 years. Amid this profound obscurity, ten years before the fifth sun, mankind was regenerated.

Offered by [John](#).



Troubled Times



Hopi Worlds

The Place of Emergence from between worlds was called "Sipapu".

They followed his indication, and took refuge underground with the Ant People as the First World was destroyed by fire, and a Second World was created for their emergence.

Offered by [Amonsoquath](#).

The Four Worlds of the Hopi, from the *Native American Wisdom Series*,
Hopi, Following the Path of Peace, San Francisco: Chronicle Books, 1994

The First World

The First World of the Hopis was corrupted not so much by evil as by "forgetting." The people had been instructed by Sotuknang and Spider Woman to respect their Creator, and to use their vibratory centers to help them follow his plan. But as they began to forget this, they began to quarrel among themselves. Finally, the situation reached a point where Sotuknang and Taiowa decided that the world had to be destroyed.

Sotuknang appeared before those "chosen people" who still remembered the Creator and his plan, and told them that the doors at the tops of their heads would lead them to safety before he destroyed the world. They followed his indication, and took refuge underground with the Ant People as the First World was destroyed by fire, and a Second World was created for their emergence.

The Second World

The Second World was almost as beautiful as the first, with the significant difference that the animals no longer trusted humans and remained separate from them. But here, too, people began to forget the plan of the Creator, until finally this world also had to be destroyed.

Again, those who had "remembered" were saved, and taken care of by the Ant People. Once they were safe, the twins at the poles were instructed to leave their posts so the world would spin off its axis and out of control. As it traveled through space it froze into solid ice, until the twins took up their stations again and restored the Earth to life, creating a Third World.

The Third World

Now in the Third World they multiplied in such numbers and advanced so rapidly that they created big cities, countries, and a whole civilization. This made it difficult for them to conform to the plan of Creation and to sing praises to Taiowa and Sotuknang. More and more of them became wholly occupied with their own earthly plans.

Some of them, of course, retained the wisdom granted them upon their emergence. With this wisdom they understood that the farther they proceeded on the Road of Life and the more they developed, the harder it was. That was why their world was destroyed every so often to give them a fresh start.

Some Hopi accounts of the Third World contain the tantalizing information that "flying shields" had been developed there, capable of attacking faraway cities and coming back so quickly that no one

knew where they had gone. When this world and its advanced civilization was finally destroyed by Sotuknang, this time with great floods, the people who still remembered the plan of Creation took refuge inside the hollow stems of the bamboo. Then came their emergence into the Fourth World.

The Fourth World

This time, the people had to search long and hard for a place to establish themselves and start over again. The Hopi tradition tells of endless journeys by boat, paddling uphill all the way. From time to time they would find a place to land, beautiful and bounteous, only to be told by Spider Woman that they must move on: this place was too easy, and soon they would fall into evil ways if they stayed.

Finally, completely exhausted from their fruitless efforts, the people "opened their doors" and let themselves be guided. The water carried them gently to a sandy shore, where they were greeted by Sotuknang and given further instructions. They were to separate into different groups, each heading in different directions, to claim all the land for the Creator. Each group would have to "follow its own star" to a place where the earth met the sea. They would complete such a journey four times in all, to cover all the four directions, before being guided back together again to settle permanently.

Before the newcomers to the Fourth World set out on their migrations, they were given a tablet [some say tablets] containing symbolic representations of their journey and final resting place, and events that would confirm their adherence to the Creator's plan. The tablet best known today is reportedly held by members of the Fire Clan. This tablet has always had one corner missing that, according to legend, is in possession of a "lost white brother" called Pahana. Pahana's return with the missing corner will signal the beginning of a new brotherhood of mankind.

These words were spoken by Sotuknang at the beginning of the Fourth World: "See," said Sotuknang, "I have washed away even the footprints of your Emergence; the stepping-stones which I left for you. Down on the bottom of the seas lie all the proud cities, the flying patuwvotas [shields], and the worldly treasures corrupted with evil, and those people who found no time to sing the praises to the Creator from the tops of their hills. But the day will come, if you preserve the memory and the meaning of your Emergence, when these stepping-stones will emerge again to prove the truth you speak."

The tablet given to the Fire Clan at the dawn of the Fourth World is still missing its corner....



Troubled Times



Henny Penny

The Independent (London), 17th September 1998

By [Alan F. Alford](#)

Henny-Penny discovers Atlantis

In the English fairy tale, Henny-Penny was hit on the head by a falling object, and then set off with Cocky-Locky, Ducky-Daddles, and the rest of the tongue-twisting farmyard crew, to warn the king that the Skys "are going to fall". What was the reason for this paranoid behaviour? Surprisingly, the answer can be found in the famous legend of the lost island of Atlantis. When the Greek philosopher Plato described Atlantis as an island, which was struck by an earthquake and sank into the sea, he inspired countless generations of explorers to search the deepest oceans and furthest corners of the Earth for the remnants of a lost civilisation.

But my study of the ancient Egyptian texts now reveals that these expeditions have been wild goose chases, because the Egyptians - the source of Plato's Atlantis legend - firmly believed that the lost island was up in the Sky. It was a central tenet of ancient Egyptian religion that the Sky had fallen to Earth on more than one occasion. The oldest of these fallen Sky-deities was Geb, who was said to have laid a Great Egg out of which emerged the Phoenix with a blinding flash of light. Geb then let out a piercing scream and fell to the Earth's surface, carrying out construction work in millions of places. Another fallen god was Osiris, who was born in the Sky but was then laid low by the evil god Seth. Osiris was said to have split open the Earth, and come to rest in the deep dark caverns of the underworld.

What is the connection to Atlantis? Well the Egyptians believed that the gods had descended to the Earth from a place in the Sky, known variously as the Homeland of the Primeval Ones, the eastern Horizon of Heaven (the Land of Light) or the Mountain-Land of the God. But underlying all of these epithets was the image of an island floating in an infinite abyss of primeval waters (which we nowadays call space). How did this island come to be lost? The Egyptians claimed that Osiris had drowned (compare the sinking of Atlantis), but they also said that Osiris had been dismembered i.e. chopped into pieces - a close parallel to the earthquake which destroyed Atlantis. The myth of the Sky falling to Earth reflected an Egyptian belief in a catastrophic act of creation, a day when the Sky-goddess Nut gave birth to her children of chaos, and the Sky became choked and stifled. The Earth was said to have become an "Island of Fire" as a result of impacts from heaven.

Was ancient Egyptian religion inspired by a meteorite which fell from the asteroid belt? The idea seems plausible in view of the meteorite-cults which are well-attested in Egypt. However, whereas modern astronomers claim the asteroid belt is nothing more than space debris, the Egyptians believed that asteroids and meteorites were parts of the body of their Sky-deity, who had been dismembered. Remarkably, this Sky-deity was described in the same terms as used for the Earth herself - an island, a mountain, a throne, and a horizon. In other words, the Egyptians believed that their "God" was a planet. The same idea is found in depictions of the god Atlas, supposedly the first king of Atlantis, who was shown supporting the heavens in the form of a planetary globe. The Greek meaning of his name tells us that Atlas failed to withstand the Sky, which came crashing down to the Earth.

Atlantis was thus conceived as a planet which suffered a catastrophe and sank into the waters of space. But might there be a reality behind this myth? The notion that one or more planets have actually exploded

in our solar system is not without its supporters in the science of astronomy. If their predictions concerning the explosive origins of asteroids and comets are proved correct (and we should find out in 1999), the ancient Egyptian myths will become due for a re-assessment. And Henny-Penny won't be the only one to wake up with a sore head.



Troubled Times



Kolob

The planet Kolob is mentioned in the writings of Abraham in the third chapter. Here is what is written on Kolob:

1. And I, Abraham, had the Urim and Thummim, which the Lord my God had given unto me, in Ur of the Chaldees;
2. And I saw the stars, that they were very great, and that one of them was nearest unto the throne of God; and there were many great ones which were near unto it;
3. And the Lord said unto me: These are the governing ones; and the name of the great one is Kolob, because it is near unto me, for I am the Lord thy God: I have set this one to govern all those which belong to the same order as that upon which thou standest.
4. And the Lord said unto me, by the Urim and Thummim, that Kolob was after the manner of the Lord, according to its times and seasons in the revolutions thereof; that one revolution was a day unto the Lord, after his manner of reckoning, it being one thousand years according to the time appointed unto that whereon thou standest. This is the reckoning of the Lord's time, according to the reckoning of Kolob.
5. And the Lord said unto me: The planet which is the lesser light, lesser than that which is to rule the day, even the night, is above or greater than that upon which thou standest in point of reckoning, for it moveth in order more slow; this is in order because it standeth above the earth upon which thou standest, therefore the reckoning of its time is not so many as to its number of days, and of months, and of years.
6. And the Lord said unto me: Now, Abraham, these two facts exist, behold thine eyes see it; it is given unto thee to know the times of reckoning, and the set time, yea, the set time of the earth upon which thou standest, and the set time of the greater light which is set to rule the day, and the set time of the lesser light which is set to rule the night.
7. Now the set time of the lesser light is a longer time as to its reckoning than the reckoning of the time of the earth upon which thou standest.
8. And where these two facts exist, there shall be another fact above them, that is, there shall be another planet whose reckoning of time shall be longer still;
9. And thus there shall be the reckoning of the time of one planet above another, until thou come nigh unto Kolob, which Kolob is after the reckoning of the Lord's time; which Kolob is set nigh unto the throne of God, to govern all those planets which belong to the same order as that upon which thou standest.
10. And it is given unto thee to know the set time of all the stars that are set to give light, until thou come near unto the throne of God.
11. Thus I, Abraham, talked with the Lord, face to face, as one man talketh with another; and he told me of the works which his hands had made;
12. And he said unto me: My son, my son (and his hand was stretched out), behold I will show you all these. And he put his hand upon mine eyes, and I saw those things which his hands had made, which were many; and they multiplied before mine eyes, and I could not see the end thereof.
13. And he said unto me: This is Shinehah, which is the sun. And he said unto me: Kokob, which is star. And he said unto me: Olea, which is the moon. And he said unto me: Kokaubeam, which signifies stars, or all the great lights, which were in the firmament of heaven.
14. And it was in the night time when the Lord spake these words unto me: I will multiply thee, and thy seed after thee, like unto these; and if thou canst count the number of sands, so shall be the number of thy seeds.
15. And the Lord said unto me: Abraham, I show these things unto thee before ye go into Egypt, that ye may declare all these words.
16. If two things exist, and there be one above the other, there shall be greater things above them; therefore Kolob is the greatest of all the Kokaubeam that thou hast seen, because it is nearest unto me.

In a Mormon scripture entitled [Pearl of Great Price](#).

The *Book of Abraham*, published in March 1842, gives us a grand view of the stars, planets, and the residence of God. ... Thus Kolob, the star which governs planets of the same order as the earth, is similar to the sun, which Africanus calls "the prince, Lord and ruler of all the other worlds, the mind and guiding principle of the entire universe."

Offered by [Christer](#).



Troubled Times



Prince of Egypt

I watched a show on the making of the 1998 movie, *Prince of Egypt*. Over 300 historians specializing in the life and times of Moses were interviewed before writing the movie. If there is any correlation between the years of the past cataclysm portrayed in the movie and the cataclysm yet to come, it is more out of historical accuracy than hidden agenda. Makes it even more creepy.

Offered by [Doug](#).



Troubled Times



Jewish Exodus

From *Discovering Archaeology*, July/August 1999

An Impact, Plus a Volcano, May Have Battered Biblical Egypt

Moses called down a host of calamities upon Egypt until the pharaoh finally freed the Israelites. Perhaps he had the help of a comet impact coupled with a volcano. A volcano destroyed the island of Santorini in the Aegean Sea (between today's Greece and Turkey) around the middle of the second millennium B.C. Researchers Val LaMarche and Kathy Hirschboeck suggest the volcano might be associated with tree-ring evidence for several years of intense cold beginning in 1627 B.C. Could that form the basis for strange meteorological phenomena recorded in the biblical book of Exodus? In the book of Exodus, which describes events a few hundred kilometers from Santorini, we read of a pillar of cloud and fire, a lingering darkness, and the parting of the Red Sea.

An enormous column of ash must have hung in the sky over the eruption (the Israelites' "pillar of cloud by day and fire by night?"), and the volcano doubtless caused a tsunami, or tidal wave (which could have drowned a pharaoh's army). The Exodus story is traditionally dated to either the thirteenth or fifteenth century B.C. Those dates, however, depend ultimately on identifying the "Pharaoh of the Oppression," and historians have never proven to which ruler that infamous title referred. Many biblical scholars will disagree, but I suggest that a seventeenth-century B.C. date is not impossible. The argument can be bolstered. Equally catastrophic meteorological conditions are recorded in the Bible for the time of King David. Psalm 18, in reference to David, speaks of terrifying events: "Earth shook and trembled. The foundations of the hills moved and were shaken. ... Smoke ... fire ... darkness ... dark waters ... thick clouds of the skies ... hailstones and coals of fire." On some chronologies, David is placed 470 years after the Exodus. The spacing between the two disastrous events recorded in Irish tree rings at 1628 and 1159 B.C. is 469 years.

The Exodus story includes dust, several days of darkness, hail, dead fish, undrinkable water, cattle killed by hail, water breaking out of rocks, the earth opening, the sea parting as in a tsunami, and so on. Someone looking at the Exodus story and knowing descriptions of other distant volcanic effects might offer the possibility that the Israelites escaped from Egypt under the cover of a major natural catastrophe. There may be veiled references to comets in the biblical narrative leading to the possibility that the Santorini eruption itself may have been triggered by a bolide (comet or asteroid) impact. David Levy, co-discoverer of the comet that bears his and Jean Shoemaker's names, has argued that the description of the "angel of the Lord in the sky over Jerusalem with a drawn sword" (1 Chronicles 21) could be a reference to a comet. The Angel of the Lord was, of course, also present at the Exodus, as it was "traveling in front of Israel's army." Further, there are indications that as the Israelites left Egypt, the night was as bright as midday. The nights over Europe were reported to have been daytime-bright after the only known modern bolide impact, the Tunguska explosion over Siberia in 1908.

These stories raise the question of whether comets recorded by the Chinese at the start and end of the Shang Dynasty, at very near the same dates, were the same as the comets that may be recorded in the Old Testament. I believe that we know the answer: In the last five millennia, several dynastic changes and dark ages have been the direct result of impacts and/or volcanoes. The consequences of such events must have been devastating, leading to apocalyptic imagery in religious writing and predictions of the end of the world. Zachariah of Mitylene lived through the environmental disaster that began about 540 A.D. In the

mid-550s, he wrote in his twelve-volume records of the trials the world had survived: "In addition to all the fearful things described above, the earthquakes and famines and wars, ... there has also been fulfilled against us the curse of Moses in Deuteronomy." The curse included pestilence, consumption, fever, fiery blasts from the skies, mildew, a rain of powder and dust, and darkness. The curse of Moses must have seemed an appropriate description of life after the impact of a piece of a comet.



Troubled Times



Ipuwer

Here is something that looks to be a description of what things were like in Egypt at the last passage of Planet-X. I note that in the passing, Earth would have been swept by the tail of comets and debris following the passing giant brown dwarf, and Earth's atmosphere would have been clouded with red dust if this passing were close enough. This dust would have created many of the effects we observe in the description of conditions as they were in Egypt at that time. The [Ipuwer](#) papyrus is an average eye-witness account of the time of Exodus in Egypt. This is just something else for you to consider. The Biblical references to "turning the seas red with blood" and the "moon shown red as blood in the sky" are probably also the observations of phenomena directly caused by the passage of Planet X, if it were to sweep the Earth with its tail. All of this, IMHO, but the papyrus is authentic.

Offered by [Russel](#).



Troubled Times



Red Rain

My mother, now in her late 70s, recalls her forefathers telling her the story of how there was "red" rain, once long ago. It "cooked" all the plants and people had nothing to eat. At the end of that Red rainy season, they noticed grubs/worms coming out of the ground. They lived off these until they were able to grow crops again.

Offered by [Susan](#).



Troubled Times



Cree Medicine Man

Well, as a newbie on this internet thing, imagine my surprise when I read of the petrochemicals falling from the sky during the pole shift. I was surprised as this reference was strikingly similar to another dream that was recounted to me by a respected medicine man some 14 years ago, this dream told of fire falling from the sky and of a great calamity in which many people would die, this was also accompanied by a reassurance that our Mother the Earth would protect her children if they remembered the old ways and lived in her bosom (the Rockies). This dream could be interpreted as the fears of an old man confronted with the specter of nuclear annihilation, if only the Bomb had been invented before he had the dream and if he had had knowledge of atomic power. However both of these events happened *after* he had this vision and now that I am aware of the predictions concerning the pole shift, I find these similarities somewhat disturbing..

As a Cree Indian I respect my Elders and I know without question that there are many more things that we as contemporary people have forgotten but that the old people knew and lived, I myself have seen things that would curl your toes. I was lucky enough to have met this man the year before his death and although he spoke only Cree, he knew I was there to see him and he knew who I was as well as my family affiliations. I was instructed that it is my job to tell people of these stories because I'm a big mouth.

Told by [Dan](#), a Cree Indian and member of Troubled Times.



Troubled Times



Cherokee

Summary of points from *Voices of our Ancestors*, by Dhyani Ywahoo.

1. The sacred teachings of the Tsalagi people encompass a 100,000 year time period, during which there have been four great upheavals of Earth's life forms.
2. The first was a change in direction of in Earth's rotation and polarity, caused by a large comet and its attendant radiation destroying and mutating many life forms.
3. The second change was brought about by intense winds arising from people's confused thought and action, distorting the Earth's mantle. It was during the second change that beings who were once male and female in one body separated into different entities, and are even now looking for their other halves.
4. The third change was due to volcanic action stirred by the destruction of Earth's sister planet that once dwelt between Mars and Jupiter. The volcanic action forced humans to live beneath the ground for generations, subsisting on transparent fish and fungi.
5. The fourth change was wrought by water as the human types sought to integrate emotion and mind power. this was the time of the destruction of Atlantis, Elohi Mona, and during this age only those who heeded the voice of truth within were able to avoid destruction by reaching the high places.

Dhyani is a keeper of the Cherokee oral teachings, and is passing on what she has to offer as of 1987. I could be wrong, but I doubt she has any idea what we've been talking about at Troubled Times, or any of the background reading which precipitates our present thinking. The fact that the Cherokee traditions speak of the great flood is no mystery, since every heritage does, but it is *absolutely fantastic* to me that they speak of the Pleiades, Atlantis, Star Beings, great comets, and living underground. And the destruction of the planet now occupied by the asteroid belt? *Holy cow!* I'm sure much of the interpretation needs to be taken with a grain of salt. This book was a turning point for me in my realization that absolutely everyone is talking about the same scenario, just so many of them don't realize it.

Offered by [Ron](#).



Troubled Times



Hopi

Ladies and Gentlemen: Before I begin this paper, allow me to make my position very clear: Extra-terrestrial beings and extra-terrestrial craft exist.

I have, in fact, written several books in which I suggest that human beings are the direct result of the intervention by extra-terrestrial beings. I have suggested that a 'hidden' history of humankind exists, one that indicates that humankind has been guided, manipulated, and directed by, star beings. I have also suggested that we are the direct descendants of these very same star beings, that we possess in our veins the very blood of these star beings. Not only have I suggested that star beings are real but I have also suggested that they are still here... that they walk amongst us.

With these statements firmly expressed, I shall proceed.

Robert Morning Sky



Troubled Times



Hopi Elders

A Hopi elder speaks:

You have been telling the people that this is the Eleventh Hour, now you must go back and tell the people that *this is the Hour*. And there are questions to be considered:

Where are you living?
What are you doing?
What are your relationships?
Are you in right relation?
Where is your water?
Know your garden.

It is time to speak your Truth.
Create your community.
Be good to each other.
And do not look outside
yourself for the leader.

Then he clasped his hands together, smiled, and said,

This could be a good time

Wisdom of the Elders

There is a river flowing now very fast. It is so great and swift, that there are those who will be afraid. They will try to hold on to the shore. They will feel they are being torn apart and will suffer greatly. Know the river has its destination. The elders say we must let go of the shore, push off into the middle of the river, keep our eyes open, and our heads above the water. And I say, see who is in there with you and celebrate. At this time in history, we are to take nothing personally, least of all, ourselves. For the moment that we do, our spiritual growth and journey comes to a halt. The time of the lone wolf is over. Gather yourselves! Banish the word struggle from your attitude and your vocabulary. All that we do now must be done in a sacred manner and in celebration. We are the ones we've been waiting for.

Oraibi, Arizona
Hopi Nation



Troubled Times



Material Goods

I have been listening and I seem to sense that most of the discussions are in regards to what material goods you can take with you. True that these man made things will be valuable but they can also be taken from you. Should you rely solely on man made products or should more emphasis be placed on knowledge and skills? My grandfathers tell us that all life will survive, that all life is important, even our planet, our mother, is alive , that we must live harmoniously with all life not just ourselves. To treat all life with respect and to not be greedy but to give more than we receive. It is knowledge and experience that are truly yours to keep, all else is not yours as it belongs to our mother. Not even your body is yours, she is just lending it to you for a little while.

So I ask, when you have your stockpiles of vitamin C and your producing gardens, will you feed ten people for ten years or will you feed 100 people for one year? Could you not be better served by teaching all 110 people to feed themselves with what our mother will give us? Remember that we are her children and she will provide for her children, it has been this way forever. The new buds in the spring from a pine tree when boiled will make a good tea that you can use to treat scurvy. But you must thank the tree when you take the buds with prayer.

Offered by [Dan](#), a Cree Indian and member of Troubled Times.



Troubled Times



Chet Snow

In Chet Snow's book, *Mass Dreams of the Future*, he writes this about the conditions he saw after the pole shift. Prior to that he had been in Arizona, where their community had to abandon their log cabin and live in tents because of the constant earth movements.

There are several thousand people living in this valley (north of Edmonton, Alberta). There are only a few really permanent structures and these are of a geodesic dome design. Most everyone lives in lightweight collapsible buildings just one story tall. They're made of plastic or synthetic fabric stretched around aluminum or wooden poles, depending on how big they are. Sort of like Mongolian yurts. The domes are covered with an aluminum-foil metallic skin. There were still quite serious earth movements, nothing like what we experienced in the Southwest, to be sure, but still enough that most people feel better about living in these yurt-like collapsible structures, which can fall down without doing appreciable damage.

Offered by [Milly](#).



Troubled Times



Worst Case

Strongest shaking to occur just after the polar shift which should take about 1 hour or less. Shaking to reach a maximum amplitude 1 to 1.5 hour after the shift starts. Biggest jolts coming from crust sliding on top of or in collision with crust (subduction, mountain building). The estimated duration of the strongest shaking to last 30 minutes before it drops by a magnitude of one on the Richter scale. Three hours of high magnitude shaking. 12 hour duration before shaking settles down to less than magnitude 6. Able to barely crawl around after about 9-10 hour. Earth in continuous shaking for approximately 12 days. Quakes continue off and on for 10-20 years after. Maximum of 11.5 magnitude (amplitude) earth quakes with exponential decline with time.

Depending on the location on the planet: Average maximum expected amplitude of motion vertical (up and down) of the ground to be 100 ft to 200 ft with a maximum of 5 G acceleration. This applies to something fastened to bedrock. Maximum expected amplitude of the motion of the ground in a horizontal (side to side) direction to be 200 ft to 300 ft with a maximum of 9 to 10 G acceleration. Note: "G" is a useful measure of force exerted when something is vibrating. $1\text{ G} = 32\text{ ft/sec}^2$ or acceleration of gravity - practically speaking 1 G produces a force of acceleration or deceleration equal to it's current weight - 2 Gs would produce a force equal to twice it's current weight and so on.

With a vertical acceleration of 5 G anything loose on the surface will leave the surface of the bed rock which is vibrating, this includes sand, hard clay soil, domes, and other objects not securely fastened to bed rock. As a worst case say a dome is accelerated up for an amplitude of 200 ft at up to 5 G acceleration. The Bed rock stops and reverses direction. The dome being not tied to bedrock will still keep going up and will reach a maximum of say 250 to 300 ft and began to fall at 1 G. Meanwhile Bedrock has gone down to the bottom of it's amplitude and reversed its direction, and on it's way up it hits the falling dome instantly reversing it's direction, picking it up to then be tossed again into the air again. Vertical accelerations of over 1 G bedrock vibration will last for an estimated 10 to 15 minutes. During this time objects will be leaving the earth's surface. After this Clay, soil and sand due to liquefaction (acts like a liquid) causes sloshing back and forth in a wave action sometimes engulfing objects floating on the surface. This lasts for about 3 hours.

Winds to build up during and after the time of the actual motion of the earth to an average maximum of 350 miles/Hr. High winds expected for 2 weeks to 6 weeks depending on the temperature shift for the area. The greater the temperature shift of the region would causes winds for a longer period of time. Some areas near long term melting ice will experience strong winds for several years. Any standing structure will need to withstand flying objects of various sizes averaging from half a pound up to occasional as large tree trunk size, with up to 2 weeks duration. The closer to the ground the slower the wind, but also, the potential for the larger blown or rolling objects.

Temperature to be in transition for several weeks to 6 months depending on the amount of latitude change for the given location. Due to cloud cover temperature to be warmer at night and cooler in days to stabilize at 12 degree Fahrenheit (7 degree Centigrade) below the current average for the season at any given ending latitude. This would be due to lack of sun light, the cloud cover, and melting poles. Rain, sleet, or snow (depending on location) to be continuous for 1-2 months. Precipitation to continue to be above normal tapering off to near normal for the latitude after about 10-20 years.

The average amount of daylight at midday, (one month after PS) to be equivalent to a typical clear 4 watt (115v) night light bulb held about 6 ft away from the surface being view in a completely dark room. The amount of light, on a full to a new moon night, to be equivalent to the 4 watt bulb about 21 (full moon) to 46 ft (new moon) away from the surface being viewed. Two years after PS the light at midday will improve to become 5 ft (midday), and on a full to

new moon night, 18 to 39 ft. The trend will improve exponentially, until we have the light we have today in 25-30 years.

The difference in the radius of earth at the pole, and at the equator is about 13.1 miles (21.4 KM), due to the centrifugal force of rotation at the equator making it bulge. This is over twice the height of the highest mountain on the planet. If the planet poles shifts position by about 90 degrees then the tectonic plates that the north and south poles are on will need to adjust, once the planet begins to rotate. Pressure from the molten liquid, that these plates float on, will grow at the old poles. This will cause slippage, and adjustment in plates which will cause major earth quakes as the land rises about 13 miles at the old poles, and sinks about 13 miles at the new poles. This I believe to be the cause of the near continuous shaking for approximately 12 days as the planet begins to rotate.

Static will make Ham radio communications impossible for 1-2 months for even the best of equipment.

Offered by [Mike](#).



Troubled Times



Low Profile

I feel reestablishment will possibly be after a few years, growing plants to get new seeds and etc, waiting to move when things settle down. I feel I may wait up to 5 years. By then the population that remains should be self supporting and not likely to lighten your load of those few things you still have. I also feel that any of the secret government groups will have fallen apart by then and less likely herding up the slaves, if you are unfortunate enough to live too close to such a group.

Offered by [Dave](#).



Troubled Times



Atmosphere

The Earth has a mantle of carbon dioxide (CO₂). This mantle is fragile but retains its consistency due to the delicate balance between plate tectonics and volcanic activity. The surface of Earth experiences considerable movement. The tectonic plates collide with each other, and as they do so carbonate deposits are pushed deep into the crust where they start to decompose. The decomposition process releases CO₂. When there is volcanic activity these CO₂ deposits are forced up to the surface, replenishing the atmosphere.

The current level of CO₂ in Earth's atmosphere is right for life as we know it, this especially goes for larger and more complex lifeforms as ourselves. The larger and more advanced a lifeform, the more vulnerable it will be to this CO₂ balance. As the volcanic activity in the past has been significantly higher than today so was the amount of CO₂ in Earth's atmosphere, therefore larger and more advanced lifeforms did not exist back then, though relatively simpler and smaller lifeforms could cope and flourish for a very long time alone.

As we humans still walk this Earth it is right to conclude that yet another pole shift won't destroy human kind. We will survive, as will most of nature survive. As the Earth's CO₂ mantle is a major part of our atmosphere, and traps the warmth of the sun, we can expect, due to the sudden rise in tectonic movement and volcanic activity when the Earth's poles shift and thereafter, to stand witness to a dynamic and relatively speedy re-build-up of the Earth's CO₂ mantle. A build-up speed which could not take place without the significant increase in volcanic activity and earthquakes.

As it has always been it will become again. The CO₂ will be used by plants and other CO₂ dependent lifeforms and eventually temperatures will return to 'normalcy' due to the increase in CO₂. Temperatures will return to normalcy sooner than the sun will warm your face again (as it is colder at a clear night than when it is a cloudy one). I don't know the results of the interaction between thick clouds, CO₂ levels, heavy rains and temperatures exactly though.

Offered by [Michel](#).



Troubled Times



Adjustments

For some time post the pole shift the Earth will not have as much "air" covering it. What that indicates is that the barometric pressure at the surface will be less than it is now. Just how much less? That's a very important question. Will the barometric pressure be, say, about that found on the mountain tops? If yes, then we must seriously reconsider our plans for physical activity post pole shift for some unknown time. Why, you ask. Because your ability to perform physical work will be seriously curtailed. You will feel "out of breath" because the partial pressure of the oxygen will be much less and your body unable to get the same amount of oxygen in a breath of air as it is currently accustomed to. Over time, you will adapt to the lower atmospheric pressure as do people who live at very high altitudes. But before you do, you will be in a similar situation as are mountain climbers who have to take bottled oxygen with them in order to maintain their physical activity.

Offered by [Ron](#).

All we know from folk lore is that "the sky was low to the ground" or something along those lines. No one gasping for air. That could be fog also, fog here in San Francisco is as thick as clouds, so maybe that is more moisture in the air, etc.

Offered by [Nancy](#).

If the air pressure drop is anything significant, many people will experience headaches until they are accustomed to the pressure drop, usually anywhere from a couple of days to a couple of weeks to get used to it.

Offered by [Steve](#).



Troubled Times



Latitude Climate

Where the poles will be under the equatorial sun, and thus melting and cooling the oceans surrounding these places. This is offset by the warm lands that have moved to the poles, warming the air that passes over these places as they slowly lost heat and freeze. All told, the temperature adjustments equalize, so that survivors can expect an average temperature for their latitude.

ZetaTalk™

Due to the clouds reflecting heat back into space before it gets to the ground, I estimated the planets surface would be a bit cooler. However, I am glad this is not a consideration. This is good news. I for one don't like cold weather. Has anyone seen a chart that gives average seasonal temperatures, minimums, and maximums by latitude. This could be posted as a guideline. The cloud cover will undoubtedly cause cooler days and warmer nights. Due to the heat being reflected back from the underside of the clouds. If we assume the earth will start to rotate at the same angle it is now 23.5 degrees with respect to the sun then the seasonal temperature changes should be about the same as they are today.

Offered by [Mike](#).



Troubled Times



New Land

I've been fantasizing about the possibilities when for example a big piece of land suddenly arises. This does sometimes happen. What if this piece of land is in the middle of the, lets say, the Atlantic Ocean. An unclaimed piece of land, not in any territorial waters of any country. What if I would discover this piece of land, and claim it. Give the new country a name, start a new way of living, totally different from the way we live nowadays. New laws for that country, and actually a whole new way of thinking, a change of mentality. Would all this be possible, and if yes, what would be the possibilities? I'd say they are limitless. Of course when I discover it I'm still Dutch, but before I claim or discover it, I don't want to be a Dutchman anymore and I am distancing myself from all rights and duties I have as a Dutchman. This would open up the possibilities to claim a piece of land when it arises somewhere, someday, and to live life as it was actually meant to be lived.

Offered by [Dennis](#).

If land was to rise in the Atlantic, it would surely be a major event and noticed by the rest of the world for sure. Many countries would instantly be on it for military reasons and claim it. An individual would not have a chance in today's world to claim a piece of land like that. One of those countries would just eliminate you. But, in tomorrow's world during and after the pole shift when land does rise in the Atlantic, claim on. But keep in mind there will be no vegetation or anything else living on it so food would have to be brought with you. That is if you could manage to travel the high seas with no electronics or stars to see to guide you. So realistically, probably won't happen.

Offered by [Clipper](#).

A wonderful thought you have. And in a few years there will be such places. But, as with all things, we need to temper our dreams with realities and logic. A newly emerging piece of land will, for an unknown amount of time, be barren and not support human life - water, food, and materials for shelter. By the time that the land becomes hospitable you can bet that whether in the current world political situation, or even post pole shift, you'll have to play King of the Mountain, a game in the US that is played by children. King of the Mountain is the one who can hang on to the piece of land when others decide that they would like to take it from you. Your dream is a good one, and not impossible given the changes we are expecting in the next few years. But, it's unfortunately not as simple as laying claim to any piece of land and establishing an order that fits your ideals. You must anticipate and prepare for as many eventualities as you can imagine in order to remain King of the Mountain. Do that, and if you are resourceful and a bit lucky your dream can indeed become a reality.

Offered by [Ron](#).



Troubled Times



Melting Ice

Global Warming Threat To Canada

by David Crary, *Associated Press*

Global warming might seem like a treat for Canada's frigid far north, perhaps even opening the ice-blocked Northwest Passage to east-west shipping. New research, however, depicts the expected thaw as far more of a threat than a boon. Displaced wildlife, increased pollution risks, a thaw of the permafrost that could destabilize infrastructure across the Canadian sub-Arctic - these are among the many perils detailed in a wide-ranging climate-change study released by Canada's environment department.

The study expresses particular concern for the region's indigenous people, the Inuit, who could find their hunting prey out of reach, their water supplies contaminated and their coastal communities subjected to erosion from seas no longer covered by ice. "Northern indigenous people, already one of the more vulnerable segments of Canadian society, would be affected by ecosystem shifts that may be outside the limits of historical experience," says the Canada Country Study, compiled by dozens of government, academic and industry experts.

There is nothing hypothetical about climate change in the far north. In the northwest corner of the Northwest Territories, where the Mackenzie River flows into the Beaufort Sea, temperatures this year have been 9 degrees above normal - among the highest jumps anywhere during this unusually warm year. "Northerners are obviously looking for ways to adapt," said Helen Fast, a Manitoba-based expert who co-authored a chapter of the study focusing on the far north. "They're probably ahead of us southerners because they see the problem as a reality. It's an immediate concern."

Subsistence hunting plays a vital role in many Inuit communities, sometimes accounting for half the local economy and providing much of the protein in Inuit diets. The warming trend will reduce the size and stability of ice fields where much of the hunting occurs, and could push many species out of traditional habitats. Eventually, forests could spread much farther north, taking range land from some of the world's biggest caribou herds. "Hunters, fishers and trappers depend on detailed local knowledge of animal distributions and behavior, snowfall patterns, and timing of freeze-up and breakup (of ice)," says the study. "Climate change can play havoc with the use of such knowledge." If less fresh meat is available, the Inuit would likely compensate with less nutritious food, increasing the risk of obesity, diabetes and vitamin deficiencies, the study warns.

The thaw has already affected animals. Fast said mammals' fur has dropped in quality as the temperature warms and a Canadian Wildlife Service scientist reported last week that polar bears around Hudson Bay are 90 to 220 pounds lighter than 30 years ago, apparently because earlier ice-melting has meant less chance to gorge on seal pups. The thaw of the rock-hard permafrost under the tundra could wreak widespread chaos. The study suggests that a warming trend could push the edge of the permafrost zone 300 miles further north, causing "massive slumping of terrain" in the thawed area. This could destabilize roads, bridges, buildings and oil pipelines, disrupting transportation and possibly entailing huge repair and replacement costs.

It would likely increase the danger of contaminated water resources, since bacteria would be able to move through thawed soil. There also would be a pollution danger from ponds at mine sites; many contain toxic waste and are situated in permafrost beds that until now were assumed to be impermeable. Fast said some

coastal communities already are noticing effects of erosion as the ocean - covered by ice for shorter periods - generates greater wave action. In Tuktoyaktuk, a town near the mouth of the Mackenzie River, several buildings have been lost to erosion, she said. On the plus side, major ice-melting could free up the Northwest Passage for shipping. This could fuel a boom in oil exploration - onshore and offshore - if tankers were able to reach the area reliably. But even this scenario has a potential catch. The study notes that although Canada claimed the Northwest Passage as an internal Canadian waterway in 1973, the claim is not recognized by the United States.



Troubled Times



Sunlight

Worms and bugs are a viable sources of protein and food energy, they do not provide a balanced nutritional profile for a human diet, this becomes critical when you consider that you may be stuck with that diet indefinitely if you do not provide for alternate means of food production. True, insect and worm cultivation can be done without benefit of light. The little critters will dutifully convert biomass to useable food. Remember, all biomass energy comes ultimately from photosynthesis. If you cannot achieve photosynthesis your biomass reserves *will become depleted!* A biosystem that does not have energy coming in from somewhere is not sustainable, this is just an application of the second law of thermodynamics.

Consider the scenario. There may be little or no useable sunlight for *decades*. You have a biomass reserve to feed your little food critters. This reserve becomes depleted. You must travel farther and farther to acquire additional biomass. The environment where you live may be extremely *hostile* (high winds, torrential rain, temperature extremes, toxic air, ground and water, etc.). You will have to expend ever more resources to acquire biomass since it is your basic energy source without photosynthesis. The point to my argument is that you cannot expect to sustain an existence on biomass reserves indefinitely, you must have a way to photosynthesize, and if you expect to have an indefinitely sustainable biosystem, your capacity to photosynthesize must at least equal to your food energy needs, but in practicality will have to be much greater.

The organisms largely responsible for driving our biosphere are algae. Algae convert light to food energy *ten times* more efficiently than any other plant, even so, in nature this efficiency is less than 1%. *There is no life without the sun.* To sustain life the sun must be replaced, temporarily.

Offered by [Steve](#)



Troubled Times



Volcanic Gloom

Colder Climate May Stifle Volcanoes

Associated Press, June 21, 1999

... The climate impact of volcanoes has long been a topic of speculation, going back at least to Benjamin Franklin. The eruption of the Indonesian volcano Tambora was blamed for a worldwide cooling in 1816 - the "year without a summer" when snow fell in New England in June. The effect was also observed recently. The year after the 1991 eruption of Mount Pinatubo in the Philippines, the average global climate cooled a degree or two because dust in the atmosphere blocked the sunlight. ...



Troubled Times



Food Chain

My thoughts on the food chain. There will be nothing (or very little) to hunt! Must come up with better idea. Food supplements, then grow food. What to grow? That's what we should be looking at. Earth worms, meal worms, rats, bunnies, or what ever. These all *take* food, and like beef I think they may need to eat more than you get in return.

Offered by [Bruce](#).

Humans will be just like all those other poor animals trying not to starve out in the weather with no sunlight or plants and all that rain and not a plant in sight! By far, the vast proportion of the population of the world subsists mostly from carbohydrates derived from vegetation (as in rice, corn, and wheat) and when they are able, supplement that with meat in some form. In the industrialized world, people eat both vegetation and meat in a proportion of approximately 3 parts vegetable or derivative and one part meat. In some cultures, because of tradition and environment, the bulk eaten is meat. As a working citizen of the current US, I am most definitely at the top of the food chain. In normal times my diet is about 3 parts vegetable to 1 part meat.

Offered by [Ron](#).

I think many of the assumptions about the need for hunting and for ruthlessness come from a post-apocalyptic fear of going without, creating a Mad Max mentality, a predatory, merciless society in which the only rule is "might makes right." Hunting is part of this mentality. Lots of other species don't have the inventiveness or foresight to profitably choose other alternatives, but humans do.

Offered by [Jenny](#).

But what do you suggest people do when they have no plant food? If you can create and sustain an agricultural community that survives the pole shift, *great!* I would also love to be a part of it. But there will be so many of the few survivors who don't know how to grow food and won't be in any position to do so anyway. What do you suggest they do to survive?

Offered by [Doug](#).

I think that everyone is becoming too hung up on growing green or seeing red. What we will need in the Aftertime is to be able to capitalize on the other natural systems that will be at work and in force after the pole shift. *Decay*, i.e. things that flourish in environments where things are dead or dying. If we can find the things that help decay along in its processes then we will be that much further ahead. I'm really excited about the prospect of eating bugs and I'm going to start as soon as we can see them again in my area. I think also that mushroom cultivation (not discovery), will be an option for people that don't have the time to prepare for energy to grow with or can hold the people that prepared for the shift, but had things that were essential broken. Understanding the systems that will be working around us without our effort or forethought will be key. Minimal effort, abundant supply, high nutritional content.

Offered by [John](#).



Troubled Times



Preparations

In a pole shift which generates global volcanic activity, atmospheric sunlight will be temporarily reduced. Even during that time the growth of low light plants is possible, and parabolic reflectors, (miniature versions of which I've long used in virtual no light locations for growth) can multiply ambient light and heat exponentially without needing an artificial energy source. But the greatest advantage is that such a global catastrophe is in the future, and growing and other preparations can start now. On the other hand, if we have x-radiation or other things to deal with, green house structures with glass panels and a high lead-based paint can enable plants to grow.

Catastrophic mud flows, such as Mitch caused in Central America in 1998? Each year the ancient Egyptians saw their fields inundated by the Nile, and built a kind of cyclical nomadism around it, in one season planting and living by the riverbanks, and retreating to other locations during the flood season. Yes, they learned to expect these things. But we also expect the catastrophes that are to come, and unlike the ancient Egyptians, we have access to modern science which will provide warnings to those willing to hear them. The Troubled Times website solicits suggestions on how survivors can overcome depression. My overwhelming feeling is that depression is part and parcel of a desperation mentality, and that mentality is not necessary.

In the US there is the Amish culture, in which cooperation and self-sufficiency has become a long-standing tradition. They will be vastly better off than most in a catastrophe because they lack the mentality of desperation. They provide a terrific model for setting up survival communities, in which, instead of each person or family needing to be experts at building, farming, etc., enough of a sense of stability is preserved that people practice individual specialties to mutual advantage. With long-established know how about digging wells and establishing pumps for potable water, growing crops without power sources or outside fertilizer, dairy and egg husbandry and the like, they have a great deal to offer in the way of survival skills and *especially* in the way of how to survive optimistically.

At present, as you know, there is a crisis in the American farming system, and with many farmers each year unable to survive financially, their lands are being sold at auction. For a survival group to purchase such farm lands (based selectively on your estimates of safe areas, water availability or ample tables, etc.) and to gather members with special skills to establish such a colony *now* would go far to lessen a sort of Road Warrior manifestation in post-holocaust America.

Offered by [Jenny](#).



Troubled Times



Without Delay

My principle suggestion is: start *now*. Of course, there are people who don't know how to grow food - they also don't know how to hunt, build shelter, or any other skills that imply direct contact with the earth. Hi-tech civilization has allowed us to forget these skills, and we are personally responsible for re-acquiring them. If they don't know, they need to learn! If you're serious about surviving, make plans in the next few months to do a couple of things.

1. want to make a house without using power tools? make a chair? sliding door? Go to the Library of Congress and get blueprints of all these things from the notebooks of Thomas Jefferson.
2. want to learn low tech living? Go study with those who actually do this successfully, like the Amish or native Americans. Let's re-learn the age-old skills of growing crops, washing clothes, and cooking that have been lost in our hi-tech amnesia.

Now, I'm using Thomas Jefferson as a representative example. An ingenious man with a mechanical mind, he lived in an era when electricity was unknown. He was also *not* a member of a culture 1000s of years old; colonial Americans had to remake everything for themselves. What they *didn't* do, however, was to reinvent the wheel, because there were plenty of already invented low tech solutions for: plumbing, flush toilets, lighting, heating, etc. He started from the technical knowledge common to the 18th century, not from ground zero. For us, though, trouble is that we no longer respect or even *know* these long-standing human ways of making conveniences and running a civilization sans computer and sans electricity.

Is Jefferson too recent for you? Write to the British Museum for blueprints of aqueducts, roadwork (and again flush toilets) from the Celto-Roman period, circa 300 AD The Romans were magnificent engineers, with much less in the way of technical knowledge than we will have after the holocaust. The one thing they *didn't* have that we will be prey to is panic.

Being without anything - plant food, seeds, water, shelter - at the time of the great disaster is an indicator of wishful thinking and an absence of foresight. All of us happily do *not* fall in that category. If others do, and they turn a deaf ear when we try to warn them now, we can't help it. We are certainly entitled to protect ourselves and our families against their too-late desperation. But we should avoid such panic ourselves. In my opinion, we should try very hard, since we *do* have foresight, to arrange a mutual collaboration so we are not protecting ourselves against each other. They will probably perish; we won't. I think that it's important for us, the survivors, to understand that destruction to technology and buildings does not equate with destruction to civilization.

Offered by [Jenny](#).



Troubled Times



Communications

I think vital survival information will get disseminated by persons wandering between settlements, and by the communications between ham radio operators. It will be a lot slower then and a complete reverse of today's information overload. We may all develop a great hunger for what is happening elsewhere. Enough to provide a meal to the one willing to share vital scrapes of knowledge concerning the other areas in which they have traveled. With respect to information: to survive today, one needs to evaluate what is important and toss out the rest. To survive tomorrow, my best guess is that the evaluation of truth and fiction will be most important. I may be wrong but, I don't see many large congregations of people who end up being educators. Hunger and difficult travel will dictate actions. You can rest assured if you have a way of making food people will eventually find you. Probably more than you want or maybe more than you will be able to handle.

Offered by [Mike](#).



Troubled Times



Satellites

Excerpts from **Meteor Storms Threaten Satellites**

April 27, 1998

MANHATTAN BEACH, Calif. (AP) - In November, the Earth's atmosphere will be hit with the most severe meteor shower in 33 years, a bombardment of debris that could damage or destroy some of the nearly 500 satellites that provide worldwide communications, navigation and weather-watching. The debris consists only of particles - some thinner than a hair and most no larger than a grain of sand - but they are hurtling through space so fast that they can have the destructive power of a .22-caliber bullet.

As a result, about 200 commercial and military satellite operators, insurers and scientists began brainstorming here Monday about what they can do to prepare, such as turn off spacecraft or turn them away from the stream of particles. The two-day gathering is called the Leonid Meteoroid Storm and Satellite Threat Conference. "The consequences are still virtually unknown. There has not been a meteor storm since the onset of the modern space age. Nobody planned for it," said Peter Brown, a physics and astronomy graduate student at the University of Western Ontario who advises satellite operators.

The particles, known as meteoroids, are vastly smaller than the asteroids that could one day slam into Earth, and none are expected to come anywhere near the surface of the planet when they strike this November and again in November 1999. But before the particles burn up in Earth's atmosphere, they could poke holes in solar panels, pit lenses, blast reflective coating off mirrors, short out electronics with a burst of electromagnetic energy, even reprogram computers, said Edward Tagliaferri, a consultant to the Aerospace Corp., a nonprofit organization. In 1993, for example, a meteor struck the European Space Agency's Olympus satellite and destroyed its directional control, rendering it useless. "What if you get unlucky?" Delbert Smith, a Washington lawyer who represents international networks and satellite operators, asked at the conference. "Who's going to explain to the major corporations your satellites aren't there anymore?"



Troubled Times



Homelessness

Do you dislike it too that finances play such an important role, that it just rules the extent to which one can prepare? Some people will not have the finances to prepare enough because they stand alone in life and those they know might not support them and even not believe them. Most will suffer major damage to their outlook on the future due to *lack* of support and especially *lack of finances*. Individuals that otherwise would need to choose to stay where they are, buy some stuff most needed and await to survive in horrible conditions, and that is what awaits those who do *not have resources*. Who will help them?

Darkness shall rule the land, it's stomach filling itself with rotting flesh, it's lungs filling with water. All life will dwell in this world where when alone one will perish and together you may stand.

Today the weak survive by the touch of luxury, tomorrow they will die due to the lack of it. Tomorrow is for the strong of mind and heart, today is for the egoist. Alone or together they shall die tomorrow, tomorrow shall emphasize the goodness where this treasure lives in the hearts of those in each other's presence.

The light shall have to come during those times from each other as the light will come from nowhere else. Your hearts and strength of mind shall be the bases on which your future shall be build. A man without knowledge of self sufficiency shall not be better off than the egoist that has enough but dies because a cold emptiness will rule his life, becoming the emptiness, it's ability to freeze life, it is death.

The stench of death shall rule the air for a long time.

It's obvious that eventually there will be a better world.

Offered by [Michel](#).

Try to think of it in the terms that you have been informed, you have the possibility to save yourself and the ones you love, and you may help build a better society after the pole shift. And by the way, nothing comes for free.

Offered by [Jan](#).



Troubled Times



Social Leveler

The pole shift offers opportunities to help others, but is *not* that much different than life today. Today we have those too poor, their children suffer, their health suffers, and who helps them or does not help them? We have broken promises, where someone thought they would be taken care of and got left in the lurch. We have those with money faring well, but living miserable lives or being robbed and left in broken health. We have those with little money who have learned to smell the roses and live full lives with little where the rich live empty lives surrounded by plenty. It will be no different. More upheaval, more opportunities to chose for the self or others, but in the end, not much different.

It will be no different than exists in *most* of the world, where folks live hand to mouth and dictators reign. In the civilized countries, there will be shock, as those living soft and pampered lives, expecting some parent in the form of the government to care for them find the parent is *gone*! In the US, the aged will probably die quickly, unless their family is close at hand and caring. How much different will it be than Kobe after the last big earthquake? Folks sat on the curb waiting to be rescued. As disasters increase, those who assumed a security blanket will get a taste of what is coming. This happens in little bits now, those flooded out find they have no home anymore, and the insurance refuses to pay. In California bankruptcy would be rampant afer a big quake, as the insurance companies just decided *not* to insure quake damage anymore.

One of the reasons we have a Homeless view is because so many WILL be homeless. I, myself, expect to be! I PLAN for that! You may think I'm kidding, but with the roving gangs and who-knows-what the last year, I expect the worst. Do likewise.

Offered by [Nancy](#).



Troubled Times



Infrastructure

If we can solve the food, water, and shelter problem for enough people on this planet then the attention will automatically shift to rebuilding the infrastructure. If we don't solve these basics for the majority then we won't have roads, transportation, manufacturing, or a very rapid rebuilding. Without transportation, there will be no effective trading of goods. Thus, we will ultimately fall back in time as the years progress. A scrounging type of mentality will prevail. The goals of such a society would have a definite Mad Max, or Water World flavor - short term survival only.

If nothing changes, we are headed for a long-term scrounging mode; and if this is the case, CD-ROMs and PCs lasting 100 years or so will not help us. So lets get back to basics - how to effectively solve "Food, Water, and Shelter" problems so that in the Aftertime we can turn our attention toward rebuilding civilization's technology, transportation, manufacturing, etc. This is the bottom line basic challenge for all of us.

Offered by [Mike](#).



Troubled Times



Sharing

Assume it's just after the pole shift. You and your small group of loved-ones have survived. You have a store of food to keep you going until you can rebuild your settlement and secure food sources. To what extent, in this difficult time, do you help other survivors in your vicinity that are less well-prepared? How long do you continue to take people in, when every extra mouth diminishes your food supply and deprives you of time to set up sustainable living? When, if ever, do you stop serving others, and concentrate on serving yourself and your group?

Two extremes: you help others unreservedly, putting your group at risk of starvation, or you hunker down, jealously guarding your stores for three months, waiting until the issue of helping survivors matters no longer as they have all died of starvation. You emerge to carry on, facing less competition for scarce food resources. Is there a balance to be found between these two extremes?

Offered by [Euan](#).

I think the only possible way out is to find that balance, no matter how hard it may seem to be. One important factor may be to locate your survival site at a not too central location, so that you will not be found by that many people. Secondly, take in only those that:

1. can contribute at least as much as they consume,
2. need a place where they can die in peace (without prolonging their lives unnecessary)
3. those few that your heart says to take in, and finally
4. those that you believe our benevolent friends have sent for the benefit of the group.

Thirdly, in the initial critical stage, do not lose control over your site. Maintain a strong leadership until the situation becomes better, and the critical survival stage is passed. (Not very democratic, but you just cannot afford democracy at this stage.) Bottom line: Do as much as you can for as many as possible without jeopardizing the survival of others.

Offered by [Jan](#).



Troubled Times



Hard Choices

Let me relate a present day story that came to me from a friend who witnessed it first hand.

There is what can be called an "eco-tour" that begins in Northern France and travels overland all the way to Cameroon West Africa. The first part of the trip is easy and just like any other holiday or vacation, traveling through Europe and even in Northern Africa. As part of this journey, the caravan travels across the Great Sahara desert - a passage that takes at least 10 days. Precautions are taken for safety. There are check points along the way where permanent radio facilities have been installed in order to keep others advised as to the state of the travelers. You are only allowed a certain amount of poundage for food, water, clothing, and funzies per person.

According to my friend Jaques from France, there was a young woman in her twenties who was with his touring group, that continued to waste water from her own store until midway through the desert she ran out. At first, the others in the group gave her water from their personal supplies. She still did not realize the seriousness of the situation and washed when not needed and so forth. The others, seeing their own stores being dangerously depleted, finally refused her any more water. She died of severe dehydration between the time the next check-point was reached and when the rescue helicopter was able to make it to the still traveling group. (Remember they had depleted stores of water and still had a considerable way to go.)

My friend is to this day troubled about what happened to this young French woman. He and others will always ask themselves whether one ounce would have saved her life, or would that one ounce less have killed the rest of them. There is no good answer to these questions. We only know that in order to be troubled by such a moral dilemma, one must be alive and surviving to ponder it.

Offered by [Geoff](#).



Troubled Times



Barter System

It would be a good idea to have goods at hand to barter, and a striker in some cases could get you a boat.

Offered by [Mike](#).

You raise a phenomenally important point. Barter! Your specific point is accurate. However there is a larger point: How do we prepare for a barter economy?

Offered by [Stephen](#).

Any member here knows that survivability is based upon the 3 basic needs; food, clothing, and shelter. Barter will be an absolute necessity to assure a higher probability of sustaining a more comfortable and protected life style, (if it can be called that) meager as it will be. First, consumables will disappear, namely food, and I don't have an answer to that dilemma other than what has already suggested on tt-forum; aquaculture, worm beds, seeds, etc. Food is life; get a dehydrator now and prepare as much as your budget can handle. You'll be able to trade for *anything* with food. When the dehydrated meat is nearly exhausted use the last of it to trade for a good rifle to kill game which can be butchered and prepared as jerky. How do you prepare jerky? Trade your extra knife for a 55 gallon drum and convert it to a smoker. Next, clothing begins to wear, (have some needles and thread ready to trade for a whet stone) and waterproof boots will leak, (have some mink oil ready to trade for a piece of cloth to patch the holes in your jacket).

As has been said here before, "the mother of genius is need". There is no end to the list of items that can be used as barter. How about Bayer aspirin, the simplest and most effective of medicine cabinet medications (you can stash them by the hundreds). The most practical items for trade will most likely be those which are small, and easy to hide or carry. Really important, however, will be tools used to repair, replace, or maintenance what we already have in the camp, in the settlement, or on your back. A file, for example, to sharpen the ax that you lost will get you another one. Fish hooks are a great trade item along with the smarter end of that related equipment and a supply of durable string will make a fish net.

Eventually, many survivors will find their way into groups and camps where organizational processes will already be moving in the direction of some form of government (if that word remains extant) where elected or appointed individuals, or small groups will handle the business and needs of the day. Trade with other groups will be no less important as that with the individual surviving out in the wilds. Eventually, we'll deplete our supply of trade goods, but by then looms will be in use, old vehicles will be pirated, building kilns and forging metals will have been learned and developed, and we'll just move right along in the barter system as if nothing ever happened.

Offered by [Mike](#).

If the same mix of personalities post shift as prior to the shift remain on Earth, and the infrastructure is destroyed it's survival of the fittest. Dog eat dog, something like now. One person being an expert in all areas of surviving post shift very limited since it's a new experience for most. Should be plenty of opportunity for scavengers, plunderers, and nomads. Bartering requires first of all a degree of safety and trust afforded by a group, tribe, or gang. Overcoming the fear of death, and a victim mentality with an understanding there is no safe place while it's more like who you are as opposed to where you are that might be helpful.

Offered by [Bobby](#).



Troubled Times



Knowledge

One thing to remember is that any *thing* can be taken away from you. Any preparation which is highly dependent on *things* is doomed to fail. Most things are not mobile and so can be found. Once found they can be taken or destroyed in battle or for spite. Things tend to stand out from the background. A windmill will be visible for quite some distance if it is to be effective at capturing wind. A solar panel will cause glint at certain times of day and angles of view. Firearms will cause sounds that can be tracked for miles. Even the smoke from a camp fire can be seen for miles. The only thing that can *never* be taken from you is knowledge. As far as the "love and light" folks, while I appreciate the sentiment, I'd rather have someone around who has read the US Army survival manual and has a clue how to make a rabbit trap out of sticks and weeds even if he is cranky. To paraphrase the Beatles: "all you need is love" (and the ability to feed yourself and find clean water, first aid knowledge, how to defend against predation, manufacture of simple shelters, start a fire etc). OK, so the Beatles were completely wrong, you need a lot more than love.

It is worthwhile noting that the original pilgrim settlers to America came with iron tools, guns and a *serious* attitude problem. They starved to death. The very first Virginia colony simply disappeared without a trace. The native peoples had knowledge and were able to not only feed themselves but were able to take pity on these moronic foreigners who did not have a clue as to how to care for themselves and feed them as well. (Much to their eventual dismay.) It was only after the settlers achieved a certain critical mass that the situation was self-sustaining, and this was only achieved with *considerable* and constant subsidy from outside. In a situation where our civilization is in a state of collapse, such a subsidy is impossible and so the inevitable scenario will play out. The most effective plan would be to simply wait it out and allow "them thar furiners" to go away by themselves. A parasite, by definition, feeds off of others, and the best way to deal with a parasite is to take away its food. This is simply an avoidance tactic.

But in the mean time, this requires knowledge, not things.

Offered by [Kahuna](#).



Troubled Times



Gullible

This note was sent to me - I found it interesting.

Offered by [Mike](#).

A student at Eagle Rock Junior High won first prize at the Greater Idaho Falls Science Fair, April 26. He was attempting to show how conditioned we have become to alarmists practicing junk science and spreading fear of everything in our environment. In his project he urged people to sign a petition demanding strict control or total elimination of the chemical "dihydrogen monoxide."

And for plenty of good reasons, since:

1. it can cause excessive sweating and vomiting
2. it is a major component in acid rain
3. it can cause severe burns in its gaseous state
4. accidental inhalation can kill you
5. it contributes to erosion
6. it decreases effectiveness of automobile brakes
7. it has been found in tumors of terminal cancer patients

He asked 50 people if they supported a ban of the chemical.

Forty-three (43) said yes,
six (6) were undecided,
and only one (1) knew that the chemical was water.

The title of his prize winning project was, *How Gullible Are We?* He feels the conclusion is obvious.



Troubled Times



Bush Scams

Junior's Social Security Plan And Poppy's Savings & Loan [Scandal](#)

By Stanley Cohen, *Bush Watch* (The Florence Fund), 2000

Both major presidential candidates are offering plans to enable working people to participate in the stock market frenzy. Both plans involve unmentioned risks for the federal budget and the economy. Significantly they highlight differences between the character of the candidates as well as the trustworthiness of their parties. On this point Gore's plan - Social Security Plus - stamps him as the more prudent candidate. He would use budget surpluses to provide subsidies to help moderate income workers set up investment savings accounts without risking their Social Security retirement benefits. His plan is consistent with the Clinton-Gore strategy of using budget surpluses to help the less affluent. The Bush strategy, still being calibrated, encourages moderate income workers to divert part of their Social Security tax payments from Social Security to investment savings accounts. It is consistent with Republican ideology which contends that everyone should have an opportunity to earn more (if they are lucky) with at least a portion of their Social Security account by investing it themselves. For those with few assets, however it's a high risk game. So he sweetens the pot by dangling the prospect of a government guarantee to offset losses. Can he be unaware that only a decade ago his father sat helplessly by as taxpayers paid upwards of \$100 billion to bail out the far less risky Savings and Loan deposit insurance guarantee fund?

Any government plan which encourages moderate income families to go into the stock market breaches the wall between government and business with unpredictable consequences. But Bush's semi-privatization of Social Security is especially uncharted, for it creates a relationship where the tax collector becomes an agent of the investment counselor. Once government encourages the less affluent to put their meager resources into stocks through a hand-in-glove relationship with the financial community business lobbyists will have powerful new strings in their bow. Will public policy decisions be public interest driven or stock market interest driven? Will stock market regulators be able to count on support from higher-ups or, will they, like the career auditors in the ill-fated savings and loan system, be checkmated by the opportunist instincts of politically appointed superiors? Will anti-trusters be able to undertake cases like Microsoft which cause shudders on Wall Street?

The all-but-forgotten savings and loan debacle of the Reagan-Bush years, once described by former Attorney General Dick Thornburg as the biggest white collar scandal in history, is a classic example of the price the public pays for cronyism which flourishes between politicians and lobbyists once that wall is breached. In that convivial environment policymakers removed the padlock from a rich government honeypot without taking into account that when there is an unethical buck to be made predators are always ready to pounce; that the public's defenses may prove to be unreliable; that the consequences can be catastrophic; and that politicians who betray their trust have little to fear if the scam embroils both parties. Behind a bi-partisan political shield, S&L looters operated for more than six years until the insurance fund was wiped out and taxpayers were left with the mess. Under law, the government guaranteed one account per person up to a maximum of \$100,000. But shrewd investors, salivating at the prospect of 18 percent government guaranteed deposits, circumvented the limit by opening multiple accounts under various names. Money hemorrhaged through this loophole year after year, as the Senate Banking committee obligingly pigeonholed legislation to stop it. The Bush plan to semi privatize Social Security might well be called Son of S&L. Like S&L, it is ideology-driven policy, destined to nurture cronyism among economic opportunists and politicians of easy scruples. By encouraging fraternization between policymakers and

Wall Street wizards Governor Bush can transform the incidental transgressions of amateurs to the level of professional sport.

The Reagan-Bush administration task force on deregulation had confronted a real problem: the inability of tightly regulated S&Ls to compete for deposits during a period of spiraling interest rates. It could have reduced the risk by authorizing new services to produce enhanced earnings. But Vice President Bush and his colleagues saw only an opportunity to make good on the Republican promise to get government off the backs of business. So they not only lifted the regulation which had kept S&Ls safe for forty years, but they compounded that reckless decision by reducing the number of auditors who watch for banks heading toward insolvency. This policy proved to be all accelerator and no brakes, to the point where it bordered on malfeasance. The 18 percent government insured deposits were soon flowing to risky projects which prudent banks wouldn't touch. When auditors spotted skullduggery they frequently found that an influential senator had already blocked them by meeting with their higher-ups. Often, as in the notorious Silverado bank in Denver, where taxpayers were nicked for \$1.6 billion, directors, including President Bush's son Neil, were subsequently found to have brazen conflicts of interest.

Given the strategically placed senators who were helping the looters the pressure for President Bush to look the other way must have been unbearable. How else are we to understand why he sat immobilized even after newspapers reported that two of his sons were involved? What pressure could induce this man, proud of his New England heritage and Yale education, to forget that his first responsibility was to protect the safety of the country, come what may? What ultimately persuaded him to comply with the unsavory wishes of the Senate cabal to vest the clean-up in their man, the former Chief Counsel of the Senate Banking Committee, who had been at the helm when the S&L Titanic hit the iceberg? As Governor Bush proposes to give Wall Street access to an even richer government fund it is sobering to remember that the political arrangements which oiled the successful raid on the S&L insurance fund are still in place. This costliest of all scandals was made possible by a campaign funding system - now more bountiful than ever - that fosters conviviality between needy politicians and lobbyists who know that the most cost effective expenditure they make is to buy strategically placed members of Congress. Representative Jim Leach (R. - Iowa), the ranking Republican on the House Banking Committee at that time, attributes the charmed existence of the plotters to the ability of 3,000 S&L executives to buy the Congress. A post mortem investigation - if there had been one - might have found it was not S&Ls alone which bought Congress.

The cabal which induced President Bush to do its bidding was so powerful that there was no day of reckoning. No post mortem investigation established who did what and why; no effort was made to reform the campaign funding system; President Bush was able to run in 1992 as "Mr. Clean"; no senator who betrayed the public trust was unseated, disbarred or jailed. Where were the watchdog press? During the years looters were cleaning out the vault, the press played S&L bankruptcies as business news, in the financial section for readers seeking investment opportunities. By 1988 taxpayer losses were beyond anything previously experienced by any government. Yet it was not mentioned by either party during the campaign and reporters let the participants, from President Bush down, sail through the election without submitting to the accounting that elections are supposed to provide. When President Bush entrusted the clean-up to the Senate's man he took an unthinkable risk. Yet it was a good bet. For no reporter asked the obvious question: "Why are you going to such lengths for this man?" On Capitol Hill the conspirators profited from an equally benign press. Unlike the fiction reports in TV entertainment shows, they had no urge to learn what went on as senators trooped through that nominee's office as the looting went on. When the Democratic-controlled Senate voted not to require a confirmation hearing the press looked the other way.

To sum up: Governor Bush would remove the padlock from a trust fund many times bigger than the savings and loan insurance reserve. Like the deregulation of the savings and loan system, his plan is ideology-driven; the shady politics that overwhelmed his father remain in place; and in the wings are Wall Street power players who know how to extract the last nugget from a Washington gold mine. For millions of Americans Social Security benefits will continue to be all they will have for retirement. Given his family's involvement in the S&L scandal -- both as bungling decision maker and opportunists - Governor

Bush must know the peril that will arise when he removes that padlock. What does he know about the art of governing which warrants confidence he can cope more effectively than his father? If credibility counts, it is important that Governor Bush clarify his rhetoric. Is it an accident that he talks about "2 percent" in a way which might cause unsophisticated voters to assume he means 2 percent of 100 percent? In fact he is talking about 2 percent out of 15.5 percent, the tax collected for retirement. That's a big slice of a modest nest egg, and is not something to fudge by playing word games. He ought to be more candid about the slippery slope that he creates. He certainly knows that influential Wall Street gurus are unlikely to be content to settle for 2 percent. In view of the S&L experience, what reason is there to believe they can be stopped before they have the whole enchilada? Where is he leading us when he considers a government guarantee to insulate semi-privatized social security accounts from the volatility of the market? Is this a crap shoot which will make the S&L tab look like small change?



Troubled Times



Stop a Leak

Art: On my Area 51 line, you're on the air, hello.

[male] **Caller:** Hello, Art?

Art: Yes

Caller [sounds frightened]: I don't have a whole lot of time.

Art: Well, look, let's begin by finding out if you're using this line properly or not.

Caller: OK, in Area 51?

Art: Yes. Are you an employee or are you now?

Caller: I'm a former employee. I, I was let go on a medical discharge about a week ago and, and... [chokes] I kind of been running across the country. Damn, I don't know where to start, they're, they're gonna, they'll triangulate on this position really soon.

Art: So you can't spend a lot of time on the phone, so give us something quick.

Caller [voice breaking up with apparent suppressed crying]: OK, um, um, OK, what we're thinking of as aliens, Art, they're extradimensional beings, that, an earlier precursor of the space program they made contact with. They are not what they claim to be. They've infiltrated a lot of aspects of, of, of the military establishment, particularly the Area 51.

The disasters that are coming, they, the military, I'm sorry, the government knows about them. And there's a lot of safe areas in this world that they could begin moving the population to now, Art.

Art: So they're not doing, not doing anything.

Caller: They are not. They want those major population centers wiped out so that the few that are left will be more easily controllable...."

Art [fragment]: ...discharged...

Caller [sobbing, then fragment]: I say we g



Troubled Times



Doomsday

Incoming: Part Two of Latest Briefing by high-level National Security Informant

Dr. Rich Boylan Reports, 2000

In the previous report, I wrote of what the National Security informant I'll call "Z" had to say about such matters as current terrorist threats, the U.S. antigravity craft fleet, and what U.S. Presidents have known about ET visitation. But there was more. That is included in this second report. Many will recall the uproar in the newspapers and on television several months ago when NASA reported that astronomers had spotted a huge asteroid out in deep space on a trajectory to strike the Earth in 2030. This story generated much press attention and interviews. And then suddenly NASA did a follow-up news release, this one saying that astronomers had made an error, and that upon rechecked calculations, the asteroid would miss Earth by thousands of miles. Great sighs of editorial relief took place all over the world. But Z says there is more. Actually, the first news release was the accurate one! NASA released it to allow the authorities to gauge what public reaction would be to the doomsday announcement. Actually, the world took the news without extraordinary immediate panic and hysteria. But NASA then retracted the story, to avoid the long-term corrosive effect of such news on society, so that life could go on as normal, and people would not begin to question why they were going to their boring jobs and paying the mortgage when massive destruction was coming anyway. And so the stock market would not crash, nor other institutions lose allegiance from the public.

Z added some details on the Doomsday asteroid. It is indeed huge, larger than five miles by 10 miles: the size of a small county. NASA has also calculated the impact zone: the north Atlantic, somewhere between Europe and the United States and Canada. It will have devastating impact. As it comes through the atmosphere, it will create the loudest sound humans have ever heard in history, a noise which will be heard around the world. The pressure waves caused by its impact will fracture the immediate tectonic plate it strikes, and create great earthquakes everywhere. Its impact will create tremendous tidal waves that will tower well above one mile high. Scientists have calculated, for example, that everything on the U.S. eastern seaboard below 5000' facing the wave will be inundated. Similarly, monstrous waves will be generated eastward towards Europe's Atlantic coast and elsewhere.

Z revealed that emergency plans have already been drafted. One such plan calls for important designated persons to be placed aboard the largest airliners and go airborne to ride out the earthquakes and tidal waves from a safe altitude. Z said that currently government and military planners are desperately figuring out strategies to prevent the disaster: for example, whether to try to deflect the asteroid by explosions from rockets with nuclear warheads sent out into space to meet the asteroid. But even such a plan has downside risks. What if the nukes do not nudge the asteroid out of its current course, but instead fragment it, so that instead of one big object, several enormous pieces are created which still continue in their current course and strike with a wider shotgun pattern of destruction on Earth? The planners and scientists continue to wrestle with choices and decisions, feverishly working despite the huge rock's being a little over 29 years away.

There is a second large object incoming of quite a different kind, Z stated, and it is due much sooner. This object is due around 2011-2012, and has already been spotted by Naval observers coming from a direction visible from the Southern Hemisphere. Z confirmed that this is the Tenth Planet of our solar system, which takes an extremely elliptical orbit,. He said it is the one of which Orientalist scholar Zecharia Sitchin has

written in his books decoding the Sumerian tablets. These tablets also spoke of a Tenth Planet, with a 3600-year orbit cycle. That planet, which they called Nibiru, is inhabited by the extraterrestrials who told the Sumerians that they bioengineered humans, using Earth primate stock and extraterrestrial genes. I commented to Z that perhaps then we will meet our makers in 2012, before we later meet our Maker in 2030, (if a solution to the asteroid is not worked out beforehand.) I thanked Z for sharing the news, although it is weighty indeed. And after he finished, I understood better the momentous concerns that some high in government wrestle with, and why some in government feel that the people are better off not knowing. Nevertheless, I believe that information is our public right. And knowledge is power.



Troubled Times



Saudi Arabia

Saudi Orders Subsidies to Curb High Barley Prices

Reuters, June 25, 2000

Saudi Arabia's King Fahd has ordered "billions of riyals" in state subsidies to help livestock owners cope with high barley prices, a Saudi official said on Sunday. Saudi Arabia is the world's largest importer of feed barley. According to the International Grains Council, Saudi Arabia is expected to import 4.5 million tonnes of barley during the current crop year. But traders see the desert kingdom importing between five and six million tonnes because of the impact of drought.



Troubled Times



Saudi Ban

On June 30, 2000 the ZetaTalk Accuracy TOPIC in Troubled Times was updated with a massive amount of substantiation on wide ranging topics, including the accuracy of ZetaTalk predictions on [Cataclysm Masks](#), [Weather Changes](#), [Migrations](#), [Domino Quakes](#), and [Summer Snowstorm](#). Within 24 hours, access to the ZetaTalk had been blocked, for the first time, by the Emirates Internet in Saudi Arabia.

Subject: [tt-gossip] Access to Zeta-Talk site blocked in the Middle East
Date: Sat, 01 Jul 2000 08:59:26 +0300

Nancy,
I was stunned to see today that for the first time I could not access to the Zeta-Talk site (I am in Saudi). The message is : **Blocked site - Emirates Internet denies access to this site.....**



Troubled Times



Bumper Harvest

Fickle Weather Plays With [Farmers' Fortunes](#)

By William Claiborne, *Washington Post*, July 16, 2000

If ever there was a season that demonstrated the fickleness of farming, this is it. In May, Agriculture Secretary Dan Glickman and National Weather Service officials predicted that severe drought could cripple the farm economy in much of the Midwest and Deep South. Glickman warned that the lack of rain could be "catastrophic" to farmers, and Weather Service Director Jack Kelly gloomily observed that the Midwest drought was the worst since 1955. Farmers in the agricultural heartland took heed of the warning. Many who were still storing their 1999 yields held off putting their crops on the market, reckoning that a drought-induced falloff in production this year would drive up prices. What happened was just the opposite. Timely rains and cooler-than-predicted temperatures have offered promise of bumper crops in much of the Midwest and other parts of the nation this fall, ensuring that grain and soybean prices will go down for the third straight year because of continuing oversupply, according to farm economists.

The U.S. Agriculture Department last week lowered its price projections for corn, soybeans and wheat because of bountiful crops and sagging markets in the United States and overseas. The USDA said farmers should get an average of \$1.70 per bushel for corn this year, 15 cents less than a projection issued last month and 10 cents below what growers got for last year's crop. The projection for soybeans is down 10 cents from June's estimate and 25 cents less than last year's average. The estimate for wheat is \$2.50 a bushel, down 15 cents from the June forecast. The forecast for soybeans is the lowest since 1972, and for corn it is the lowest price since the mid-1980s, when farmers rebelled and descended on Washington in tractor motorcades to protest farm policies. Agriculture experts said the already abundant stores of commodities are likely to aggravate the price declines. Keith Collins, the USDA's chief economist, said the turnaround in the weather pattern and the new commodity price estimates were "disturbing" to him because he had had reservations about holding the joint USDA-Weather Service news conference on May 17 and about the Weather Service's first spring drought forecast, which he said was based on new and unproven long-range predicting technology. "I felt there was not necessarily an implication for the size of the crop because timely rain could be opportune and you could have normal crops," Collins said. "But fairly strong signals were sent from the federal government that could have influenced some farmers' marketing decisions."

Huge U.S. Crops Drive up Surpluses, Sour Prices

Reuters, September 12, 2000

The record-large corn and soybean crops being harvested by U.S. farmers will drive up grain surpluses sharply and bring another year of low prices, U.S. Agriculture Department forecast Tuesday. Based on field inspections and interviews with 15,000 growers, USDA estimated the corn crop at a record 10.362 billion bushels and soybeans a record 2.90 billion bushels, both 10 percent larger than last year. Drought whittled the cotton crop to 18.3 million bales, each weighing 480 lbs. Wheat was forecast at 2.3 billion bushels, the same as last year. "We're going to have continuing low prices" persist far into 2001, said private consultant John Schnittker. Greg Doud of the consulting firm World Perspectives said the expanding U.S. stockpiles means "There is just no way out of the box as far as corn is concerned," which would weigh on soybeans and wheat prices as well.



Troubled Times



F-15 Excuse

Residents Sound off after Mystery Boom

By Joe Earle and Gary Hendricks, *Atlanta Journal-Constitution*, July 22, 2000

The ground shook. Buildings quivered. People stopped whatever they were doing and looked up in wonder. Scores called 911 centers to ask what was going on. Put simply, something in the skies over metro Atlanta boomed Friday. People heard the unexpected noise shortly before 1 p.m. They heard it all over the metro area, at least from Woodstock to Griffin. Perhaps 100 people dialed 911 in Spalding County to ask what the heck was going on. At least 50 called in DeKalb County. "Some of my folks thought it was an explosion," said DeKalb police Maj. Gene Moss. "We didn't know where to respond. We had no location. I don't know where we would have responded to." The National Weather Service office in Peachtree City thought the boom might be the sound of the space shuttle landing. But a National Aeronautics and Space Administration spokesman said the shuttle was sitting on the ground when the Georgia sky boomed. No satellites fell, either. "Everything we have is either in orbit or on the ground, nowhere in between," said NASA spokesman James Hartsfield.

Tim Long, a Georgia Tech professor of earth and atmospheric science, recorded the boom. The machinery he uses to measure seismic activity recorded that the earth shook around Georgia Tech about 12:50 p.m. A similar machine recorded activity in McDonough a few seconds later. The recordings convinced Long the noise probably belonged to an aircraft. It appears he was right. Maj. Gary Carruthers of Dobbins Air Reserve Base in Marietta said the sound was the sonic boom of an F-15 from Mountain Home Air Force Base in Idaho flying to Warner Robins. The Federal Aviation Administration confirmed the boom was produced by an F-15 flying to Warner Robins. Tim Kurtz, spokesman for Robins Air Force Base in Warner Robins, in Middle Georgia, said an F-15 did land there about 1 p.m. Friday. He said base officials are investigating. Pentagon spokesman Maj. Rob Koon said military aircraft usually should not exceed the sound barrier without authorization or unless they are in a military air space on maneuvers. "In general, they should not exceed the speed of sound," he said. If they do, people notice.



Troubled Times



FEMA Disaster Plan

I listen to the radio quite a bit as a trucker and heard this on a truckers radio show: According to the bid notice, the firms need to have professionals, including engineers, architects and other real estate-related experts. According to a source familiar with the current bid, the program is a major expansion of a smaller program FEMA has had for temporary housing in case of disasters. The Standby Technical Assistance program bid offering sets out a broad mandate for the firms being contracted, stating that "The Contractor shall be required to provide support capability for all types of disasters with emphasis on riverine and coastal flooding, tornadoes, hurricanes, typhoons, earthquakes, and tsunamis.

Offered by [NightBird](#).

The Emergency Housing Cities

Newsmax, July, 2002

On June 19, FEMA posted a special bid notice for one of the agency's largest contract awards ever – offering contracting firms \$300 million for a five-year contract to simply prepare plans to create temporary housing on a scale never before imagined, and then stand by. This is reportedly one of the largest contracts ever awarded by FEMA for a disaster preparedness program. The name of the program is entitled "Standby Technical Assistance for Disaster Related Operations." The bid notice states ... that three real estate/engineering firms will be selected for the program. The firms will be required to provide "technical support, consultant and project management resources" with the specific duty to "provide project management resources and expertise to support the Disaster Housing Program." According to the bid notice, the firms need to have professionals, including engineers, architects and other real estate-related experts.

According to a source familiar with the current bid, the program is a major expansion of a smaller program FEMA has had for temporary housing in case of disasters. The Standby Technical Assistance program bid ... sets out a broad mandate for the firms being contracted, stating that "The Contractor shall be required to **provide support capability for all types of disasters with emphasis on riverine and coastal flooding, tornadoes, hurricanes, typhoons, earthquakes, and tsunamis.**" The bid states: "... the firm must have at least one permanent and adequately staffed and equipped office located in the Washington Metropolitan area, and two (2) additional offices in other geographic locations within the United States with the capability supporting deployment operations in the event that one area is incapacitated." ... NewsMax reported the contracted firms need to be prepared for creating such cities by January of next year. Mr. Kolton said the firms only need be **hired by January of 2003.**

NewsMax reported that FEMA told contractors it had ordered tents and trailers for temporary housing. Mr Kolton said the tents and trailers have not been purchased yet. (That may be the case, but FEMA does currently possess tents and trailers for disaster housing.) ... Mr. Kolton ... stressed that the Standby Program is being implemented to prepare for "all types of disasters" including terrorist ones. ... the program's main focus, he said, is on natural disasters. **What natural disaster had caused such a need for the largest program of its kind ever in the history of FEMA?** In decades of emergency response, why, all of sudden, is FEMA set to spend \$300 million just for architects and engineers over the next five years simply to be on "standby"? This \$300 million doesn't include the probable billions that would be needed for infrastructure and labor to implement the emergency cities. What natural disaster would require FEMA

to create emergency cities in different geographic areas of the U.S. at the same time? Kolton responded that FEMA could foresee two Category 4 hurricanes slamming into two distinct parts of the East Coast at about the same time. ...



Troubled Times



Asteroid Findings

NASA Wants Delay in Notification of Asteroid Discoveries

Associated Press, May 19, 1998

If professional stargazers catch sight of an asteroid that might be on a collision course with Earth, the government wants them quiet about it- for at least 72 hours. The new procedures aim to avoid panic from mistaken reports of doomsday, like the flurry of worry in March when astronomers reported asteroid 1997XF11 could collide with Earth in 2028. That was soon found to be erroneous. Astronomers whose work is funded by NASA have agreed for now to keep asteroid and comet discoveries to themselves for 48 hours while more detailed calculations are made. The findings would then go to NASA, which would wait an additional 24 hours before going public.

The new interim procedures are not an attempt to hide anything but to make sure the information is accurate, said scientist Donald Yeomans of the Jet Propulsion Laboratory, whose calculations helped dispel the fear asteroid 1997XF11 was headed straight for Earth. "It is an attempt for the small scientific community that tracks these objects to build a consensus, to determine if an asteroid is a threat," he said. Some scientists question the new push from NASA, saying quick action from astronomers is needed to determine if an asteroid's danger. "I don't think one should be secret about these things," said Brian G. Marsden, the director of the International Astronomical Union who made the announcement about 1997XF11's close pass to Earth. "I think the public would be unhappy."

NASA officials were "very upset" that they first heard of the 1997XF11 threat from reporters. "Almost all of us found out by press release," Yeomans said. "Clearly that is not the way it should work." The first reports estimated it would pass within 30,000 miles of the Earth's center and could possibly collide. That distance was later recalculated at safe distances of 600,000 miles.



Troubled Times



Mar's Photos

Florida Today, October 10, 1998

Scientist Says New Mars Photos Being Withheld

Speaking at the Space Coast UFO Conference at the Hilton Hotel in Cocoa Beach, Florida on Friday, October 9, 1998, Vincent DiPietro, who worked for NASA's Marshall Spaceflight Center for 23 years, claimed recent photographs taken by the Mars Global Surveyor were being withheld from the scientific community. DiPietro, a scientist who was first to evaluate photos of the surface of Mars taken by the Viking landers in 1976, cited a September Space News report on the growing number of planetary scientists disgruntled over the slow release of photographic data from the Mars Global Surveyor and "suggested that new images were being consciously withheld.

Images are radioed to Earth and downloaded by Malin Space Systems, Inc. of San Diego, California, NASA's contractor. DiPietro criticized MGS camera operator Michael Malin, whose (NASA) contract gives him a six-month proprietary embargo on the images. He and other scientists reported Malin had taken numerous photos of the so-called Face on Mars, other than the single one released by NASA in April, that appeared to reflect natural terrain rather than artificial features. "This leads me to believe that we are not getting all the facts from Malin Enterprises," DiPietro said.



Troubled Times



Smell a Rat

From: Benny J Peiser <b.j.peiser@livjm.ac.uk>
To: cambridge-conference@livjm.ac.uk <cambridge-conference@livjm.ac.uk>
Date: 18. maj 1998 12:14
Subject: CCNet DIGEST 18/05/98

The Secrets of Asteroid Peril - British Media Smells a Rat

From Benny J Peiser <b.j.peiser@livjm.ac.uk>

In *Deep Impact*, the world is kept in the dark about an approaching comet for almost a year by the American and Russian administrations - and the scientific community. Nobody in the DreamWorks movie seems to be bothered about this year-long cover up. One only wonders why the news is broken in the first place (other than for dramaturgical reasons) before the Messiah mission lifts off. Yet in the real world of NEO politics, journalists aren't as restrained and understanding as in the movies (thank goodness). A report in London's *Daily Mail* on Friday openly accuses the astronomical community in the US of trying to cover up important scientific data on NEO research - at least until NASA has the final word (and who is to say that 'earth-shattering' information would not be kept secret for more than two or three days if the US administration were to follow the *Deep Impact* script).

Despite many inaccuracies in the *Daily Mail*'s news story, I have attached the article below. It shows that NASA's hasty and ill-considered attempt to politically control scientific research and the way NEO related data is allowed to be reported by NASA-funded astronomers (i.e. all American NEO researchers) can easily backfire. It would appear that NASA's failure to widely consult with the scientific community has led to an own goal. Instead of protecting the integrity and trustworthiness of scientific and astronomical research, the interim procedures cast a dark shadow over the openness of science in the US. It is essential, I believe, that NASA and the world's main scientific institutions will come to an international agreement on these matters in due course if further damage to the integrity and openness of scientific research is to be avoided.

Delayed Impact, or the Secrets of Asteroid Peril

From the *Daily Mail*, 15 May 1998
Mail Foreign Service

If a giant asteroid is hurtling in the general direction of our planet, we will be the last to know about it. For astronomers have decided that the news would be too earth-shattering for ordinary mortals to handle - and likely to cause widespread panic. In a week that sees the release of the film *Deep Impact* - a fictional account of just such a catastrophe - astronomers funded by the American space agency NASA have now agreed to keep asteroid and comet discoveries to themselves for 48 hours while more detailed calculations are made. The findings would then go to NASA, which would wait another 24 hours before going public. The new procedures aim to avoid causing a repeat of a doomsday alert in March when astronomers reported that the asteroid 1997 XF11 could collide with Earth in 2028. That apocalyptic prediction was soon found to be a mistake and there was virtually no chance of any such impact.

The new interim procedures are not an attempt to hide anything but to make sure the

information is accurate, claimed scientist Donald Yeomans of the Jet Propulsion Laboratory, whose calculations helped dispel the fear that 1997XF11 was headed straight for Earth. 'It is an attempt for the small scientific community that tracks these objects to build a consensus, to determine if an asteroid is a threat,' he said. Some scientists question the new push from NASA, saying quick action from astronomers is needed to determine an asteroid's danger. 'I don't think one should be secret about these things,' said Brian Marsden, the director of the International Astronomical Union [sic], which made the announcement about 1997XF11's projected collision with Earth. 'I think the public would be unhappy,' he added. Some astronomers say releasing their discoveries quickly and openly is critical. When a new asteroid or comet is discovered, scientists need as many sightings as possible in order to plot its orbit precisely and gauge how close it may pass to Earth, they claim. Meanwhile, other leading scientists have recommended that manned missions to asteroids approaching Earth should be undertaken to discover more about their possible threat. ...



Troubled Times



2001 PM9

This [Plot Simulator](#) places 2001PM9 closest to Earth in between April 7 and April 11, 2003, *not* May 10, 2003 as reported.

Offered by [Horatio](#).



Troubled Times



Red Planet

Mars To Get Closest In Recorded History In 2003

SPACE.com, Nov 8, 2002

Mars recently emerged into the morning sky and has begun an orbital dance with Earth that will, over the next several months, lead to the best viewing opportunity since Neanderthals looked skyward. We're not kidding. To get ready for this momentous skywatching event, now would be a fine time to reacquaint yourself with the Red Planet. All during the summer of 2002 Mars was pretty much out of view because of its close proximity to the Sun. But during the latter part of September it began to emerge back into view in the morning sky and is in full view, though for now it appears rather small in the sky and low on the horizon. However, this is only the beginning of what will turn out to be the most dramatic and spectacular Mars apparition you or any of your ancestors has ever had a chance to see. The Red Planet is getting progressively closer to Earth with each passing night, and consequently it will slowly appear to grow larger and brighter. By late August 2003, when it will be about 191 million miles closer, the reddish point of light in our night sky will appear more than six times larger and shine some 85 times brighter than it appears now.



Troubled Times



2002/V1

Some have noticed that the orbital path of NEAT (C/2002 V1) as displayed on this NASA [Orbital Animation](#) site tell of NEAT (C/2002 V1) Orbital Path as bringing it within .90 au on a May 15th date this year. Not that V1 will be there at that date but that the orbital path is such that it is at its closest to earth on the May 15th date. During the May 15th date V1 will actually be some two million miles away from us on the other side of the sun. What is interesting is the May 15th orbital similarity. Some are watching for any other comets coming into solar system on the same orbit, for the purpose of monitoring it as one may expect it to end up coinciding with the May 15th date as the V1 path. It is thought that we would be seeing comets prior to Planet X as a indication that it is on the way. So the orbit is what is significant.

Offered by [George](#).

The [Path](#) page given to me in 1995 has Planet X on May 15, 2003 at about
RA 4.1
Dec -7

at passage. Comet 2002/V1 is not *at* that point, being on May 16, 2003 at:

RA 04 00.54
Dec -15 54.2

But close.

Offered by [Nancy](#).

Mitch Battros of [earthchangestv.com](#) said it was huge, planet sized. The images look huge but I don't know enough to determine the size and can't find any size references on the net.

Offered by [Steve](#).

Something's Up With Comet "C/2002 V1"...02/23/03

by Mitch Battros (ECTV)

There is a great deal of noise circulating the newsrooms surrounding the arrival of comet "C/2002 V1". There is good reason it should be. First I want to bring attention to the SOHO (solar and heliospheric observatory) photos made available by Nasa and JPL. It appears there may have been a grave mistake, or another cover up by the United States Space Agencies.

First take a look at the photo which is circulating the internet. Photo:

<http://science.nasa.gov/spaceweather/swpod2003/21feb03/soho1.gif> Note: when viewing the SOHO photos, remember to reverse the east and west limbs. This does not affect north and south. You can see comet "C/2002 V1" coming in from the north and coming around the western limb. As the comet heads down towards the western side, we see a tremendous CME (coronal mass ejection) explode from the Sun, directly towards the comet. No one disputes this fact. However, what we can see clearly in this next photo is the photo had been turned upside down. That's right, upside down. Photo:

http://soho.nascom.nasa.gov/hotshots/2003_02_12/C2002_v1.gif

This means the CME is directly Earth bound. If this is correct, watch for sudden windstorms to occur. Also watch for huge and spectacular Aurora's which may come down to 35 degree's

latitude. Keep an eye on the Kp index and GOES for spikes in geomagnetic flux.
<http://www.maj.com/sun/noaa.html> Now, lets consider the size of this comet. I had to take a double look when I located the diameter of comet "C/2002 V". It is approximately 176,000 miles across. This is twice the size of Jupiter. Twenty two times the size of Earth. Remember, the size of the last known "planet buster" asteroid 65 million years ago was bout 6 miles in diameter. Any celestial orb 1 kilometer or (.6 miles) is considered a great danger to Earth. This would mean even a small particle from the tail of this comet could be devastating. I do not believe there is any danger of a near miss, however, there is no doubt in my mind, a celestial orb of this size coming into our solar system will have an effect on ever planet. Just what that will be, no one in the science community really knows.

This story is only beginning to develop. I believe some of our astronomy colleagues will be coming forward with new information in the coming days. Hmm, nothing like a war to distract a person looking to the sky's. But perhaps this surge of energy we witnessed last Friday will continue. Perhaps an invasion of Iraq can be avoided, while at the same time safety of all counties can be secure. Again, only time will tell how this plays out.

Planet-Sized Comet Headed This Way?

By Edgar J. Steele, Hutton Commentaries

I have read a good deal of speculation on several different internet sites. Some see it as biblical prophecy fulfilled (see Revelations - you might agree). Some consider this to be "Nibiru" or "Planet X," foretold by the Mayans as passing through the solar system every 3600 years or so. Some consider this simply to be an awesome photo opportunity. Some say the strange weather on Earth lately is the result of an effect caused by the Sun which in turn is responding to Comet NEAT. Electromagnetic fields reach hundreds of millions of miles into space, you see, and are generated by all celestial objects. Influences occur at distances far in excess of that between the Sun and comet Neat or, for that matter, between Earth and comet Neat. Maybe it is nothing. Maybe it is something. If something, it could be the most significant occurrence in recorded human history. Generally, the concern is not that Comet NEAT will strike Earth or even come near us (although I have yet to see a good description of its path relative to Earth). Rather, the concern is for the effect upon us through the electromagnetic interaction between it and Earth and the Sun.



Troubled Times



2002/X5

I find it really interesting that the Arksky posting says comet Kudo-Fujikawa, 2002/X5, is currently passing through the constellation of Hercules, but in early April it should be passing through the Orion Nebula. Here is the ephemerides [projected location] for December, 2002:

Date	RA	Dec.	Delta	r	Elong.	Mag.	Const.
Dec 15	15 54.3 +44	48	1.085	1.210	71.4	7.5	Her
Dec 16	16 02.6 +44	13	1.069	1.189	70.6	7.4	Her
Dec 17	16 11.0 +43	35	1.054	1.167	69.8	7.3	Her
Dec 18	16 19.5 +42	54	1.039	1.146	68.9	7.2	Her
Dec 19	16 27.9 +42	09	1.025	1.124	68.0	7.1	Her
Dec 20	16 36.4 +41	22	1.012	1.102	67.0	6.9	Her
Dec 21	16 44.9 +40	31	0.999	1.080	66.0	6.8	Her
Dec 22	16 53.4 +39	36	0.987	1.058	64.9	6.7	Her
Dec 23	17 01.8 +38	38	0.976	1.035	63.8	6.6	Her
Dec 24	17 10.2 +37	37	0.966	1.012	62.6	6.5	Her
Dec 25	17 18.5 +36	32	0.957	0.989	61.3	6.4	Her
Dec 26	17 26.7 +35	24	0.948	0.966	60.0	6.2	Her
Dec 27	17 34.9 +34	13	0.941	0.943	58.6	6.1	Her
Dec 28	17 42.9 +32	59	0.934	0.919	57.2	6.0	Her
Dec 29	17 50.8 +31	41	0.928	0.895	55.7	5.9	Her
Dec 30	17 58.6 +30	20	0.923	0.871	54.2	5.7	Her
Dec 31	18 06.2 +28	57	0.919	0.846	52.7	5.6	Her

Offered by [Chris](#).



Troubled Times



3D Mapping

Pentagon Funds Global 3D Mapping Mission

Space Daily, January 31, 2000

Opinion by Bruce Gagnon

The space shuttle Endeavour, now scheduled for launch on January 31 from Cape Canaveral, is one more visible sign of the military takeover of the so-called "civilian" space program. The primary mission of Endeavour will be an 11-day radar Earth topology mapping mission that will provide high resolution 3-dimensional maps for 80% of the Earth's surface. Few in the corporate dominated media though are discussing the fact that the Pentagon gave NASA over \$200 million for the shuttle flight. Most of the high resolution maps created by the mission will be classified "TOP SECRET" and will be under the control of the military. This mission is just one more example of the steady and dramatic takeover of the space program by the Pentagon. While the public is being fed the usual hype about international astronauts, high-tech feats, and rocket launch fireworks we witness the consolidation of military control of the space program and there is hardly a peep out of anyone.

NASA was set up ostensibly as a civilian agency for 'peaceful space exploration' in 1958 and this violates their charter. With state-of-the-art high resolution maps from the Endeavour mission the Pentagon will increase their ability to identify and hit targets virtually anywhere on the planet via space technology. Through this "global view" the Pentagon and their corporate allies will ensure "global dominance" which they outline in U.S. Space Command documents like *Vision for 2020*. It is this space "control and dominance" agenda that is driving the U.S. to force the deployment of new space-based weapons systems which will create global repercussions and will eventually lead to a costly and deadly arms race in space.

Bruce K. Gagnon is coordinator of the **Global Network Against Weapons & Nuclear Power in Space** based in Gainesville, Fl.



Troubled Times



Infrared Flights

SOFIA Sets [Infrared Eye](#) On Heavens

By Andrew Bridges, *Space.com*, October 4, 2000

It takes a 747 to bring the world of infrared astronomy into plain sight. In 2002, the American and German space agencies will begin flying a unique telescope in a bid to understand everything from the birth of stars to how galaxies evolve. Soaring high above the atmospheric water vapor that makes ground-based infrared astronomy all but impossible, a modified Boeing 747-SP jet will carry astronomers and the largest airborne telescope in the world on 140, eight-to-nine hour flights a year. The nighttime sorties of the \$350 million flying mission, formally called the Stratospheric Observatory For Infrared Astronomy (SOFIA), will allow the astronomers on board an unfettered view of the heavens through the plane's 99-inch (2.5-meter) telescope. Once operational, the reflecting telescope the mirror of which edges out even the Hubble Space Telescope's in size should open up the hidden reaches of our galaxy, penetrating the dust and gas that foils the observation of many features in visible light. And unlike telescopes tied to the ground atop mountains in places such as Arizona, Hawaii and Chile, SOFIA will be free to flit across the globe, practically at the drop of a hat. "It will be," said SOFIA spokesman Michael Bennett, "the world's largest portable telescope." The telescope will peer from a cavity cut in the side of the plane, which in a previous life made more than 10,000 takeoffs and landings while ferrying passengers for Pan Am and later United Airlines. The jet is expected to fly for at least 20 years. The jet and its staff of 85 will be based at NASA's Ames Research Center in California's Silicon Valley for most of the year, with perhaps an annual two-month layover in New Zealand to probe targets visible only from the Southern Hemisphere.

An open-door policy will literally dictate the use of the jet, which will cruise at altitudes ranging as high as 45,000 feet (13.5 kilometers) to make its observations. For once the jet climbs to altitude, the door shielding the telescope will roll back, exposing the instrument to the sky. Rather than train astronomers to hold their collective breaths, the telescope enclosure will be sealed off from the main cabin thanks to a double bulkhead designed to withstand up to 100,000 pounds (45,000 kilograms) of pressure. Although the telescope can be maneuvered, most of the targeting will be accomplished by pointing the airplane itself as it flies wide arcs over the Pacific Ocean. Raytheon E-Systems Co. is now modifying the \$12 million jet in Waco, Texas for NASA and the German Aerospace Center (DLR). The Universities Space Research Association (USRA) is the prime contractor and operator of the facility on behalf of the two agencies. The project will cost \$40 million a year to operate. Buffeted by 550-mile- (880-kilometer-) per-hour winds and the unpredictable jouncing of flight, the telescope will have to withstand conditions that make for an unlikely mix of the worst of both hurricanes and earthquakes. The telescope's specifications say it can operate even in moderate turbulence. "That's white-knuckle time," warned Chris Wiltsee, the SOFIA project manager at NASA Ames. There won't be flight attendants on the flying observatory, but the scientists, engineers and educators will have use of a refrigerator, microwave and coffee maker.

SOFIA will hardly be the first project to take to the heavens to do infrared astronomy. Astronomers have used aircraft as observational platforms for infrared projects since the early 1960s, beginning when NASA mounted telescopes on both a Convair CV-990 and a Lear Jet. The short-lived Convair and Lear projects later gave way to the Kuiper Airborne Observatory (KAO), the first full-fledged airborne astronomical research facility and SOFIA's predecessor. KAO also based at NASA's Ames Research Center first took wing in 1974. Its career lasted until 1995, at which point SOFIA had already been under study for nearly a decade. KAO used a 36-inch (0.9-meter) reflecting telescope mounted aboard a Lockheed C-141A for its

science. Making roughly 72 flights a year, KAO delivered more than many scientists had bargained for, including direct confirmation of Pluto's atmosphere and the stunning 1977 discovery of the nine rings surrounding the planet Uranus. In 1994, scientists scrambled to fly KAO to watch fragments of the Comet Shoemaker-Levy smash into the planet Jupiter. Indeed, the ability to dart from spot to spot on Earth gives airborne observatories a distinct advantage over both ground- and space-based telescopes. "If there's a target of opportunity, like a comet or a supernova, we're able to go after it very quickly," said Eric Becklin, SOFIA's chief scientist and observatory director designate.



Troubled Times



Whale Monitoring

NASA plans Satellite Launch to study Earth's Magnetic Field

Associated Press, November 3, 2000

The second satellite to be launched, SAC-C, is a joint venture of NASA, Argentina, Brazil, Denmark, France and Italy. SAC-C carries 11 scientific instruments designed to study such targets the Earth's surface features, atmosphere and magnetic fields. One instrument is designed to receive signals from tracking instruments being attached to whales. John Labrecque of NASA said the Argentina whale experiment is designed to monitor the migration of the Franca Southern Right Whale, a large ocean mammal hunted almost to extinction by whaling ships before it was protected by international agreement in 1935. Labrecque said tracking instruments will be attached to whales by divers. When the whales surface to breathe, the instruments will contact the global positioning satellite system and record the animals' geographic positions. When the SAC-C satellite makes its daily pass over the South Atlantic, the instruments on the whales will upload the data to the satellite, which will relay it to scientists in Argentina for study. A series of such readings will enable researchers to monitor the whales' migration.



Troubled Times



NASA/FEMA

NASA, FEMA Focus on Disaster Prevention from Space

NASA Newsroom, December 7, 2000

NASA and the Federal Emergency Management Agency (FEMA) today signed a Memorandum of Understanding (MOU) and joined in partnership on a major national disaster initiative. It is affiliated with Project Impact: Building Disaster Resistant Communities. The cooperative agreement will result in updated and more accurate maps of flood plains, a better understanding of wildfires and maps to improve disaster recovery and mitigation by state and local communities throughout the United States. Under the new partnership arrangement signed by NASA Administrator Daniel S. Goldin and FEMA Director James Lee Witt, NASA and FEMA will apply science, technology and remote-sensing research images of the Earth taken by satellites to emergency management issues on the ground, such as mapping of flood plains, earthquake fault lines, and observation of wildfires and other natural hazards.

"This new partnership between NASA and FEMA demonstrates the diverse and wide-ranging applications of NASA's Earth Science research and technology and its benefit to the American people," said Dr. Ghassem Asrar, Associate Administrator of Earth Sciences, NASA Headquarters, Washington, DC. "The Office of Earth Sciences is eager to form new partnerships with other government agencies such as FEMA, as well as with industry and public groups to expand America's use of our Earth Science data." "I am extremely happy to have NASA as a Project Impact partner," said FEMA Director James L. Witt. "Using the technologies by NASA for disaster prevention will help in saving lives and make communities all across America disaster resistant." The agreement outlines a first cooperative effort to map flood plains in California's Los Angeles basin around Sacramento, CA Virginia Beach, VA the Red River along the North Dakota and Minnesota borders and San Francisco, CA. Using laser-imaging and radar-mapping data, NASA and FEMA are evaluating technology for creating more accurate maps of these areas that will help state and local officials model and understand drainage and run-off that are vital to their disaster preparedness. Local communities will benefit from these precise maps by better understanding the physical characteristics of their communities.

At the same time, NASA Earth scientists will gain valuable data for technology development, validation and calibration of satellites, and the understanding of land use and land cover, as well as flood hazards. America's flood-insurance industry also will benefit from the accuracy of these new maps, which will provide more precise views of flood-threatened areas. As the agreement is implemented, NASA researchers and their FEMA colleagues will use a variety of public and private satellites and aircraft mounted Earth-observing instruments. These efforts will help us to understand issues such as soil permeability and saturation, which affect how much water during a flood would likely be absorbed as opposed to remaining above the ground and possibly causing damage to crops, houses and communities. Satellite imagery also can provide state and local officials with maps of vegetation in areas prone to wildfires.

This information can be used by firefighters to determine which types of plants are more likely to fuel wildfires and better predict what paths such fires may take. Using airplanes and spacecraft that observe characteristics of the Earth invisible to the naked eye, researchers can better see characteristics of the Earth's surface that are changing and can indicate where Earthquake fault lines may be expanding, vital data for understanding and preparing for these dangerous phenomena. The partnership between the space

program and FEMA is part of NASA's Earth Science Enterprise, a coordinated research program that studies the Earth's land, oceans, ice, atmosphere and life as a total system. This initiative is part of an aggressive new strategy devoted to significantly increasing the application of NASA remote sensing data, information, science and technologies to societal needs, ensuring maximum return on taxpayer investments.



Troubled Times



Deep Space Probes

NSA's Deep Space Probes?

By Robert M. Collins, Jan. 28, 2000

Over the past year there have been a number of intelligence reports to suggest that NSA may have any number of what are termed "Deep Space Probes" some reaching beyond the orbit of Neptune. The real purpose of these space probes has not been determined especially the fact that NSA/OCR is the reported office responsible for tracking these probes: Why then is NSA in deep space when the "threat" as we know it is centered here in the near Earth environment? And, deep space exploration is suppose to be within the jurisdiction of NASA?

(Website provides a list of reported NSA probes that have been launched from Earth to points in the inner/outer Solar System since 1985)



Troubled Times



Zeta Reticuli

Home System of the Greys?

Source: Joe LeSesne

Since the 6th October, 1995 several new planets orbiting other suns have been discovered and officially announced. However, in what may be a breakthrough for ufology, on the 20 September, 1996, a planet was discovered orbiting the star Zeta 2 Reticuli. In 1961, Betty and Barney Hill were abducted by aliens and taken aboard their spacecraft. During her abduction, Betty was shown a star map. She was asked by an alien to point out the Earth, but since Betty had no knowledge of astronomy, she couldn't reply. After her abduction, and under hypnotic regression Betty Hill drew the star map as accurately as possible. A few years later, Marjorie Fish built a few models of star systems using plastic balls and wire .. one of these models matched Betty Hill's diagram. The star system from which Betty had been told the aliens originated from was Zeta 2 Reticuli!

In 1988, Bob Lazar came forward with an incredible story - he said he had worked at Area 51 (S4) in Nevada to reverse engineer alien spacecraft that had been captured by the US government. During his stay at S4 he was given briefing papers to read and some of them described the alien's home solar system .. and yes, you've guessed it .. Zeta 2 Reticuli, and specifically the 4th planet in that solar system!

Below is some interesting information found on several mailing lists:

From the *Extra Solar Planets Encyclopedia*

*Star M[.sini] Semi-maj. Period Ecc. Inclin. Radius
Jup. mass:(J) Axis (AU) years(y) (deg) (Earth
Earth mass:(E) days(d) rad.)
(note 1)*

*zeta2 Ret 0.27(J) 0.14 18.9 (d) 0. -
11 pc
G1V
V = 5.24*

In a rather strange "about face", the above information was removed from the Extra Solar Planets Encyclopedia site after 4 days .. the official reason was that "the data may have been misinterpreted and there probably is no planet." Fortunately, I had saved the original version of the Encyclopedia with the Zeta 2 Reticuli information still present.



Troubled Times



Phil Schneider

The [Mysterious Life and Death](#) of Philip Schneider

UFODigest.com

By Tim Swartz with assistance from Cynthia Drayer

Al Pratt suspected something was wrong with his friend Philip Schneider. For several days in a row, Al had gone to Phil's apartment, in Willsonville, Oregon, saw his car in the parking lot, but received no answer at the door. Finally, on January 17th, 1996, Al Pratt, along with the manager of the Autumn Park Apartments and a detective from the Clackamas County Sheriff's office entered the apartment. Inside, they found the body of Philip Schneider. Apparently he had been dead for five to seven days. The Clackamas County Coroner's office initially attributed Philip Schneider's death to a stroke. However, in the following days disturbing details about his death began to surface, leading some to believe that Philip Schneider had not died from a stroke, but had in fact been murdered.

Philip Schneider's life was certainly as controversial as his death. He was born on April 23, 1947 at Bethesda Navy Hospital. Philip's parents were Oscar and Sally Schneider. Oscar Schneider was a Captain in the United States Navy, worked in nuclear medicine and helped design the first nuclear submarines. Captain Schneider was also part of OPERATION CROSSROADS, which was responsible for the testing of nuclear weapons in the Pacific AT Bikini Island. In a lecture videotaped in May 1996, Philip Schneider claimed that his father, Captain Oscar Schneider, was also involved with the infamous "Philadelphia Experiment." In addition, Philip claimed to be an ex-government structural engineer who was involved in building underground military bases (DUMB) around the country, and to be one of only three people to survive the 1979 incident between the alien Grays and U.S. military forces at the Dulce underground base. Philip Schneider's ex-wife, Cynthia Drayer believes that Philip was murdered because he publicly revealed the truth about the U.S. government's involvement with UFOs.

For two years prior to his death, Philip Schneider had been on a lecture tour talking about government cover-ups, black budgets, and UFOs. Philip stated in his lecture that in 1954, under the Eisenhower administration, the federal government decided to circumvent the Constitution and form a treaty with extraterrestrials. The treaty was called the 1954 Greeda Treaty. Officials agreed that for extraterrestrial technology, the Grays could test their implanting techniques on select citizens. However, the extraterrestrials had to inform the government just who had been abducted and subject to implants. Slowly over time, the aliens altered the bargain, abducting and implanting thousands of people without reporting back to the government.

ZetaTalk: [Phil Schneider](#)



Troubled Times



Robert Harrington

The Alien Question: An Expanded Perspective

by Neil Freer

A key underpinning of the Sitchin paradigm is the existence, now or in the past, of the tenth planet in our solar system, the home planet of the Anunnaki with the size, orbit, characteristics described, as Sitchin has demonstrated, in the Enuma Elish and corroborated by Harrington.

Tombaugh discovered Pluto in 1930. Christie, of the U.S. Naval Observatory, discovered Charon, Pluto's moon, in 1978. The characteristics of Pluto derivable from the nature of Charon demonstrated that there must still be a large planet undiscovered because Pluto could not be the cause of the residuals, the "wobbles" in the orbital paths of Uranus and Neptune clearly identifiable. The IRAS (Infrared Astronomical Satellite), during '83 -'84, produced observations of a tenth planet so robust that one of the astronomers on the project said that "all that remains is to name it" - from which point the information has become curiously guarded. In 1992 Harrington and Van Flandern of the Naval Observatory, working with all the information they had at hand, published their findings and opinion that there is, indeed, a tenth planet, even calling it an "intruder" planet. Andersen of JPL later publicly expressed his belief that it could possibly be verified any time. The search was narrowed to the southern skies, below the ecliptic. Harrington invited Sitchin, having read his book and translations of the Enuma Elish, to a meeting at his office and they correlated the current findings with the ancient records and Harrington acknowledged the detail of the ancient records while indicating where the tenth planet may now be in the solar system.

It is the opinion of this author that, in light of the evidence already obtained through the use of the Pioneer 10 and 11 and two Voyager space craft, the Infrared Imaging Satellite (IRAS, '83-84) and the data available to Harrington when consulting with Sitchin that the search has already been accomplished, in fact that the planet has already been found. It is interesting that Harrington dispatched an appropriate telescope to Black Birch, New Zealand to get a visual confirmation, based on the data leading to the expectation that it would be below the ecliptic in the southern skies at this point in its orbit. On Harrington's early death the scope was immediately called back - as one observer noted, "almost before he was cold". To acknowledge a tenth planet is to open up the possibility of the Anunnaki's existence. The reason for the downplaying of the data, the difficulty of obtaining it, the performance of the scientists publicly speaking about it, all have the same flavor as the Air Force's handling of the Roswell matter.

Robert Harrington used to be the head of the Naval Observatory. As a supporter of Zecharia Sitchin's work, I happened to purchase a video containing a discussion between Sitchin and Harrington, called *Are We Alone?* It is available from Amazon.com for about \$18. I was astonished when I saw Dr. Harrington speaking with Sitchin in his office. In this video, Dr. Harrington confirms that he has read Sitchin's research and agrees with the proposed existence and orbit of the 12th planet. They also show each other's diagrams of the proposed orbit.

Offered by [Mike P.](#)

Robert Harrington - The other day I saw a Sitchin/Hoagland fansite that claimed he was trying to get a telescope operating in Australia to find Planet X when he died in an accident. Tom van Flandern worked closely with Harrington at the US Naval Observatory. Gary Neugebauer from the infamous Washington Post story is one of the biggest names in Infrared astronomy. He completed the first infrared survey of the sky in the 1960's.

Offered by [Anonymous](#).



Troubled Times



Contradictions

Quotes from UFOs; Getting the Questions Right

The Air Force has found no evidence of any kind that anyone has ever seen, heard, smelled, photographed, touched, or in any way detected a trace of an interplanetary spacecraft. Extraterrestrial visitors have not arrived, and may never arrive. If and when they do, our Air Force wants to be the first to know.

Air Force consultant **Dr. Donald Menzel**, *World of Flying Saucers* pg 288-289

There never has been an official Air Force conclusion that flying saucers are real.

AF headquarters spokesman **Lt. Col L.J. Tacker**, *Aliens from Space* pg 9

The Air Force is not hiding any UFO information. And I do not qualify this in any way.

Asst. AF Secretary **Richard E. Horner**, 1958, *Aliens from Space* pg 9

The phenomena reported is not visionary or fictitious.... There are objects probably approximating the shape of a disc, of such appreciable size as to appear to be as large as a man-made aircraft... Apparent common description of the objects is as follows:(1) Metallic or light reflecting surface (3) Circular or elliptical in shape, flat on bottom and domed on top. (4) Several reports of well-kept formation flights varying from three to nine objects.... It is recommended that Headquarters, Army AF issue a directive assigning a priority, security classification and Code Name for a detailed study of this matter.

Chief Air Technical Command **LT. Gen. Nathan F. Twining**, *Aliens from Space* pg 7-8

There were some cases we could not explain. Repeat again. Never could.

Head of Strategic Air Command etc etc. **Air Force General, Curtis LeMay**, *Aliens from Space* pg 309

The Air Force has constantly misled the American public about UFOs... I urge Congressional action to reduce the danger of secrecy.

Pacific Commander of Intelligence in WWII and 1st Director of CIA **Vice-Admiral R.H. Hillenkoetter, Major Donald E. Keyhoe** USMC Ret., *Aliens from Space* pg 12

The general said it would cause a stampede....Also he said we didn't have physical proof, like a captured spaceship, and a lot of scared people would grab at this to claim the conclusion was wrong, in spite of all the expert evidence. To hide the spaceship answer, the general ordered the secret analysis burned. But one copy was held out - Major Dewey Fournet and I saw it in 1952.

Chief of Project Bluebook **Capt. Edward J. Ruppelt**, *Aliens from Space* pg 17

The AF withholds UFO information, including sighting reports.

Maj Dewey Fournet, AF HQ monitor of Project Blue Book, *Aliens from Space* pg 309

Our study would be conducted almost exclusively by non-believers... The trick would be, I think, to describe the project so that, to the public, it would appear a totally objective study...

Condon Commission Administrator **Robert J. Low**

Air Force interceptors still pursue UFOs as a matter of security to this country and to determine technical

aspects involved.

AF Headquarters spokesman **Maj. Gen Joe W. Kelly** 1953, *Aliens from Space* pg 39

We were naturally anxious to get hold of one of the things. We told pilots to do practically anything in reason, even if they had to grab one by the tail.

Air Force HQ Intelligence officer **Maj Gen Jeremiah Boggs**, *Aliens from Space* pg 45

In our squadron at least we were told to ram one and bail out, if we could do it without getting hurt. I don't know anybody that tried it-- I certainly didn't.

Interceptor pilot interviewed by **Maj Donald Keyhoe**, *Aliens from Space* pg 45

It is recommended that CIA surveillance of subject matter, in coordination with proper authorities of primary operational concern at ATIC, be continued. It is strongly urged, however, that no indication of CIA interest or concern reach the press or public....

Memo from **Acting Chief CIA Weapons & Equipment Division** 1952, *The UFO Cover-up, Fawcett and Greenwood* pg 123 pp

I had started out as an outright debunker' taking great joy in cracking puzzling cases My transformation was gradual but by the late sixties it was complete. Today I would not spend one further moment on the subject of UFOs if I didn't seriously feel that the UFO phenomenon is real...

Air Force consultant and Northwestern University astronomer **J. Allen Hynek**, *Hynek UFO Report Frontispiece and Above Top Secret* pg 129

I must say that if your listeners could see for themselves the mass of reports coming in from the airborne gendarmerie, and from the gendarmerie charged with the job of conducting investigations, all of which reports are being forwarded by us to the CNES (National Center for Space Studies), then they would see that it is all pretty disturbing.

Robert Galley, French Minister of Defense Feb 21, 1974, *Above Top Secret* pg 129



Troubled Times



Roswell

Roswell: The Basic Story

Cover-ups.com

On the evening of July 2, 1947, a bright, disk-shaped object was seen flying over Roswell, New Mexico, heading northwest. The following day widely scattered wreckage was discovered about seventy-five miles northwest of Roswell by a local ranch manager, William Brazel, together with his son and daughter. The authorities were eventually alerted and a quantity of wreckage was recovered by Major Jesse Marcel, a staff intelligence officer of the 509th Bomb Group Intelligence Office at the Army Air Forces base at Roswell Field, together with a Counter-Intelligence Corps officer. When the officers had returned to the Roswell base, an official press statement was released, authorized by Colonel William Blanchard, confirming that wreckage of a flying disk had been recovered. Shortly after that, Marcel was ordered to load the debris on a B-29 and fly it to Wright Field (currently Wright-Patterson AFB) at Dayton, Ohio, for examination. On arrival at an intermediate stop at Carswell Army Air Forces Base, Fort Worth, Texas (headquarters of the Eighth Air Force), General Roger Ramey took over and ordered Marcel and others on the plane not to talk to reporters. A second press statement was issued which stated that the wreckage was actually the remains of a weather balloon and its attached tinfoil radar target, and this was prominently displayed at the press conference. Meanwhile, the "real" wreckage arrived at Wright Field under armed guard; Marcel returned to Roswell, and Brazel was held incommunicado for nearly a week while the crash site was stripped of every scrap of debris. A news leak via press wire from Albuquerque describing this fantastic story was interrupted and the radio station in question, and another, were warned not to continue the broadcast: "Attention Albuquerque: Cease Transmission. Repeat. Cease Transmission. National Security Item. Do Not Transmit. Stand By..."

The unidentified wreckage, scattered over an area three-quarters of a mile long by several hundred feet wide, consisted of various types of debris, which according to Major Marcel was like nothing he had seen before or since. In his words, "There was all kinds of stuff - small beams about three eighths or a half inch square with some sort of hieroglyphics on them that nobody could decipher. These looked something like balsa wood, and were of about the same weight, except that they were not wood at all. They were very hard, although flexible, and would not burn. There was a great deal of unusual parchment-like substance which was brown in color and extremely strong, and a great number of small pieces of a metal like tinfoil, except that it wasn't tinfoil." Marcel added that one piece of metal foil, two feet long and a foot wide, was so durable that it could not be dented with a sledgehammer, despite its being incredibly light. Marcel was absolutely convinced that the material had nothing to do with a weather balloon or radar target. His testimony cannot be dismissed, owing to his background in aviation: he had served as bombardier, waist-gunner and pilot, had logged 468 hours of combat flying in B-24 aircraft, and was awarded five air medals for shooting down enemy aircraft in World War 2. Toward the end of the war he was attached to the 509th Bomb Wing, an elite military group for which all involved required high-security clearances. Following the Roswell incident he was promoted to Lieutenant Colonel and assigned to a Special Weapons Program. Marcel was certain that no bodies were found among the debris, and that whatever the object was it must have exploded above ground level.

But the evidence suggests that there was another crash site, in an area west of Socorro, New Mexico, known as the Plains of San Agustin, where witnesses supposedly discovered not only a damaged metallic "aircraft" resting on the flat desert ground, but also dead bodies. The first witness on the scene was Grady

L. "Barney" Barnett, a civil engineer with the US Soil Conservation Service who was on a military assignment at the time. He told some friends that in early July 1947 he had encountered a metallic, disk shaped "aircraft" about twenty-five or thirty feet in diameter. While he was examining it, a small group of people arrived who claimed to be part of an archaeological research team from the University of Pennsylvania. Barnett later told his friends, "I noticed that they were standing around looking at some dead bodies that had fallen to the ground. I think there were others in the machine, which was kind of a metallic...disk It was not all that big. It seemed to be made of a metal that looked like stainless steel. The machine had been split open by explosion or impact." "I tried to get close to see what the bodies were like. They were all dead as far as I could see and there were bodies inside and outside the vehicle. The ones outside had been tossed out by impact. They were like humans but they were not humans. The heads were round, the eyes were small, and they had no hair. The eyes were oddly spaced. They were quite small by our standards and their heads were larger in proportion to their bodies than ours. Their clothing seemed to be one-piece and gray in color. You couldn't see any zippers, belts, or buttons." "While we were looking at them a military officer drove up in a truck with a driver and took control. He told everybody that the Army was taking over and to get out of the way. Other military personnel came up and cordoned off the area. We were told to leave the area and not talk to anyone whatever about what we had seen... that it was our patriotic duty to remain silent."

It is not known for certain if the craft and occupants allegedly witnessed by Barnett were connected with the Roswell wreckage. The Plains of San Agustin, near Magdalena, New Mexico, are about 150 miles west of Brazel's ranch site. Was the wreckage recovered at Roswell part of the same craft that had somehow managed to remain airborne for that distance before crashing on the Plains, or was it another craft that had also crashed? Some believe that two flying saucers collided, with one crashing at Roswell, the other making it to the Plains of San Agustin before crashing. Bill Moore (co-author of *The Roswell Incident*), in one of his updated research papers on Roswell, concludes that while there is insufficient evidence to substantiate Barnett's story or to justify linking it with what he calls the "proven" recovery of out of the ordinary wreckage at Brazel's Roswell ranch site, there is no reason to entirely dismiss the account. There is also the intriguing theory that the first press release, announcing the recovery of a crashed disk, was a counterintelligence ploy to deflect attention from the craft and bodies then littering the Plains of San Agustin. Leading researchers Stanton Friedman (a nuclear physicist and author) and Bill Moore have interviewed at least ninety-two witnesses who provided information about this sensational incident, of whom thirty were involved with the discovery, recovery or subsequent official cover-up. Ten of the original witnesses have identified the object as nonterrestrial in origin.



Troubled Times



Crash Dummies

Report: Roswell 'aliens' were Crash Dummies

CNN Interactive, June 24, 1997

A new Air Force document being released on Tuesday reportedly says that so-called space aliens allegedly sighted in the New Mexico desert in the 1940s were actually Air Force dummies used in high-altitude parachute drops.

Philip Klass, publisher of a UFO skeptics newsletter, said the Air Force report concludes that people who reported seeing alien bodies at a crash site near Roswell, New Mexico, in 1947 were actually recalling dummies they saw in the 1950s. Klass said he saw the report. Air Force public affairs officers refused to discuss its contents in advance, although word of the conclusions circulated widely in the network of UFO buffs. Retired Air Force Col. Richard Weaver edited the report for the Air Force.

Karl Pflock, a UFO researcher who does not believe the Roswell incident involved either a spacecraft or alien bodies, said Monday he had not read the report. However, he questioned the Air Force's theory that those who claimed to have seen the crash debris and the alien bodies could have mixed up the crash, which was in 1947, with dummy parachute tests that took place as much as a decade later. Frank Kaufmann, now 81 and one of the few witnesses to the so-called "Roswell Incident," still insists he saw dead aliens put into body bags after their spacecraft crashed near the town 50 years ago. But the Air Force has repeatedly denied the claims and says it has no evidence of alien spacecraft or that there has been any UFO cover-up.

Time Magazine's report: Did Aliens Really Land?

By Leon Jaroff, June 23, 1997 VOL. 149 NO. 25



Troubled Times



Star Wars

U.S. Scientists Urge Against Missile Defense System

Reuters, April 11, 2000

A panel of prominent U.S. scientists on Tuesday opposed plans for a national anti-missile shield, entering a fierce public debate before President Clinton decides whether to deploy the system this summer. The 11 scientists, some of whom have worked in government missile programs, said the proposed system, in which a land-based missile would intercept an incoming missile carrying a nuclear, biological or chemical weapon, would not work. "Any country capable of deploying a long-range missile would also be able to deploy countermeasures that would defeat the planned National Missile Defense system," their report said, adding, "It makes no sense to begin deployment." The report, written under the auspices of the Union of Concerned Scientists and the Massachusetts Institute of Technology Security Studies Program, said attackers could use decoys and other means to deceive the heat-seeking anti-missiles.

It said biological or chemical weapons could be split into a number of small warheads which would be released during the missile's flight and avoid destruction. Nuclear warheads could be protected by being enclosed in cooler shrouds or could be placed in balloons with numerous empty balloons deployed with them, making it impossible for the U.S. missile to select the right target. "Deployment of the planned NMD system would offer the United States very little, if any, protection against limited ballistic missile attacks, while increasing the risks from other more likely and more dangerous threats to U.S. national security," it said.

"This so-called national missile defense system won't do the job," said the chairman of the group, Andrew Sessler, a senior scientist at the Lawrence Berkeley National Laboratory and a former president of the American Physical Society. Pushed by the Republican-led Congress, Clinton has said he will decide by the end of this summer whether to commit to deploying the system, meant to defend against accidental or "rogue" firings rather than a full-out attack from Russia. Its deployment would require adjustments to the 1972 Anti-Ballistic Missile treaty, a basic element in the web of international arms control agreements. Such changes are strongly resisted by Russia and most other countries. The principle of U.S. nuclear weapons policy up to now has been that of deterrence, that any power would be deterred from using a nuclear weapons because it would provoke an enormously destructive nuclear response.

Proponents of the NMD system, a scaled down version of the "Star Wars" concept proposed by President Ronald Reagan in the 1980s, insist that some form of defense is essential as "rogue" states like North Korea and Iran develop long-range missiles. The conservative Heritage Foundation released a paper on Tuesday saying Clinton must resist those who oppose deployment on the grounds that the issue is too politically charged in an election year and because there has been insufficient testing. Researcher Baker Spring argued that the technology had been shown to be effective in earlier tests and in tests of other anti-missile systems like the Patriot PAC-3, although even NMD backers agree much still has to be worked out.

The Pentagon estimated last week that the system including an anti-missile base, upgrading radars and deploying 100 interceptors, would cost at least \$30.2 billion. That figure, far higher than previous estimates, would cover the cost of the program from 1991 to 2026 when all 100 proposed interceptors could be mounted at a base likely to be built in Alaska. The military will conduct its third test of the

system in late June when it attempts to shoot down a dummy warhead high over the Pacific Ocean. The first such test was successful in October 1999, but a second test failed earlier this year. Shortly after a third test flight in June, Clinton is expected to decide whether to begin soon building a base in Alaska and deploying 20 interceptors there by 2005. White House national security advisers say he does not intend to leave the decision to a successor. His decision will be based on an assessment of whether the project is technologically feasible, on its cost and on its impact on international affairs. The government has already determined the national security threat justifies it.



Troubled Times



Pentagon Denials

Pentagon: No ETs in our Programs

Associated Press, April 19, 2000

Believe it or not, the Pentagon denied that extraterrestrials participate in classified U.S. military programs. Spokesman Ken Bacon was responding to reporters' questions about Monday's Internet posting of the first detailed satellite images of Area 51, the super-secret Air Force test site in Nevada that UFO buffs think holds alien technology. Asked Tuesday if the Internet posting revealed military secrets, Bacon said he was "not aware that any information was revealed that compromised" military activities. "Since Sputnik, we have operated in a world of overhead surveillance, and we have had more than 40 years to learn how to deal with overhead surveillance," he said. Asked to confirm or deny whether alien spacecraft or anything extraterrestrial has ever been stored at the facility, Bacon didn't answer directly. "I think I can say beyond a shadow of a doubt that we have no classified program that relies on aliens from outer space," he joked. Raleigh, North Carolina-based Aerial Images Inc. - in collaboration with Kodak, Digital Equipment Corp., Autometric Inc. and the Russian agency Sovinform Sputnik - posted five images of the hush-hush desert proving ground on the Web at <http://www.teraserver.com>. "This is the first glimpse into the most secret training and testing facility for the Air Force," said John Hoffman, president of Aerial Images.



Troubled Times



Triangular UFOs

[Shadowcraft: UFOs, Spy Planes, or Something Else?](#)

By Jim Oberg, *Space.com*, March 17, 2000

The decade-long struggle to understand the mystery of the super-secret "Aurora" hypersonic aircraft and its role in the UFO phenomenon's rash of "triangle sightings" has entered a new phase. Veteran UFO litigator Peter Gersten (of CAUS - Citizens Against UFO Secrecy) argues that military secret-keepers did not make a "good faith" effort to provide him with information about large triangle-shaped craft seen repeatedly within the United States and elsewhere. The Department of Defense (DOD) has maintained it could find no information confirming the existence of such craft, military or otherwise. However, the U.S. District Court in Phoenix, Arizona, recently denied DOD motions to dismiss Gersten's lawsuit, instead demanding that the DOD produce additional affidavits about the way it handled the request. This sets the stage for a rare opportunity to submit oral arguments regarding UFO sightings possibly caused by secret military aircraft like the notorious "Aurora".

The quest for Aurora has consumed the passions and skills of a diverse army of investigators for more than a decade. One of the more knowledgeable is Dr. Scott Miller, associate professor of aerospace engineering at Wichita State University in Kansas. Miller has recently been touring the country lecturing on "shadowcraft" - his term for the elusive mystery vehicles reported all around the world. His travels are sponsored by the American Institute of Aeronautics and Astronautics, the world's largest professional society of aerospace engineers, as part of the annual "Distinguished Lecturer" series of about a dozen speakers who visit local chapters. "A lot of the audience is a bit skeptical," he admits. "Yet they're also intrigued, and they'd like to think these things really exist."



Troubled Times



Mutilations

Jim Marrs On the [Mutilation Mystery](#)

Extracted from *X Factor* magazine, UK, No 85, May 2000

Jim Marrs began investigating the cattle mutilation phenomenon in the mid-1970's when numerous cases occurred in his home state of Texas. He immediately discovered that, in almost every incident, UFO sightings had been recorded in the areas where the mutilations occurred. Then, in 1979, Marrs attended the only official conference ever held on cattle mutilation. Organized by Senator Harrison Schmitt in Albuquerque, New Mexico, it involved the FBI and local law-enforcement agencies. Marrs explained that police officers who wished to present accumulated evidence were legally prevented from doing so, and some even admitted privately that they felt they had been 'muzzled'. Marrs also claimed to have been shown incredible photographs of a mutilated cow in which a cylindrical shaft of blue light could be seen rising from the mutilated area. When the cow was re-photographed to eliminate the possibility of a flaw in processing, the same cylindrical light was recorded. However, Marrs was unable to obtain copies of the images from the officers concerned.



Troubled Times



3 Month Delay

SearchNet's **IUFO Mailing List** reports ..

On March 13, 1997 at approximately 8:20 PM a very strange thing happened in Phoenix Arizona. Suddenly a string of six lights appeared over the city and remained there for 106 minutes. Numerous photographers took the opportunity to film the incident and you may view a short portion of this film by simply calling:

<http://www.in-search-of.com/frames/events/images/phoenix.lights.mov>

This incident was first brought to our attention by Mr. William 'Bill' Hamilton III who has been doing UFO research for 21 years as a field investigator. Bill stated that similar sightings have continued ever since.

As usual, the sighting was brought immediately to the attention of the internet and radio talk show host Art Bell. In his usual excellent journalist coverage Art fully discussed the sighting. Over the ensuing three months the sighting began to dim in people's minds.

Then without warning, on June 19, 1997 *USA Today* effected a front page nationwide story on the March 13 Phoenix sighting. Within hours, **ABC**, **NBC**, and **CBS** began to cover the story. **CNN** has run coverage on the sighting basically on a hour-by-hour basis ever since. To view the entire **CNN** article you may use the following url:

<http://cnn.com/US/9706/19/ufo.lights/index.html>

Additionally, **CNN** has a live video feed that will provide you with a 4 minute broadcast on the Phoenix Lights at:

<http://cnn.com/US/9706/19/ufo.lights/video.html>



Troubled Times



Governor Flipflops

Sources Paul Davenport of *Associated Press* via *CNI News*, 7/1/97, and *NHNE* reporting.

In one of the weirdest turns yet in the ongoing Arizona UFO saga, **Governor Fife Symington** called a press conference on June 19, 1997 to announce a serious investigation of the UFO sightings that have rocked the state since March. The governor, an admitted *Star Trek* fan, said he was ordering a state investigation into a strange, boomerang-shaped light formation reported over Phoenix on March 13, 1997. "Obviously it wasn't an American West airliner or something like that," Symington said in the news conference. "The video that I saw was intriguing, so I'm going to order a full investigation."

A few hours later, the governor called reporters to his office for a second news conference to announce "important leads" in the case. With Department of Public Safety officers beside him, Symington said that the source of the lights had been found. At that point, Chief of Staff Jay Heiler entered the room in a glittery, pink-and-silver space alien costume. "This just goes to show you guys are entirely too serious," Symington said, while his aides laughed heartily. No one seemed able to explain the governor's bizarre response to the UFO controversy. Outraged UFO researchers were quick to point out that Symington is currently on trial for multiple charges of fraud.

In an oddly-related story, *CNI News* recently published an unconfirmed report that on June 22, when New Mexico **Governor Gary Johnson** was asked by an Albuquerque TV reporter what he thought about all the Roswell hoopla, the governor responded that Roswell really happened and it was alien and that he had access to information that the public was not privy to but he couldn't say anything else about the matter. However, when a call was placed to the governor's office a couple of hours later, the governor's press secretary stated that what Governor Johnston said was "tongue in cheek" and that there was no substance to it. He had no further comments and there would be no printed statement handed out.



Troubled Times



Military Crashes

Where not reported by the media, there were reports that a UFO forced the B-1 bomber down, just prior to its crash. Excerpts from *U.S. News & World Report*, week of September 18, 1997

In the week of its 50th anniversary, the Air Force suffers four crashes. ... Eberhart recalled Sept. 18, 1947, when Harry Truman granted independence to the Army Air Corps, creating the modern Air Force. The ceremony epitomized the way the Air Force views itself: bold, flashy, and high tech. ...

Last week's anniversary festivities took place, however, under the cloud of a 24-hour "stand-down," or grounding, of all training flights--called amid an astounding string of crashes of military aircraft including five Air Force jets. A B-1 bomber crashed in Southeastern Montana, killing all four crew members; two New Jersey Air National Guard F-16 fighters collided over the Atlantic Ocean; a \$43 million F-117 "stealth" fighter flying at an air show near Baltimore lost part of its wing and crashed into the yard of a harborside home; and a C-141 cargo plane apparently collided with a German military plane off the west coast of Africa, killing the nine-person crew and the occupants of the German plane.



Troubled Times



OKC Murders

Unresolved Deaths in Oklahoma

by Michael A. O'Camb, July 22, 1998

Distributed by Groom Watch, Norio Hayakawa

In the first minutes and hours following the blasts that devastated the Alfred P. Murrah Federal Building in downtown Oklahoma City, the morning of April 19, 1995, a number of selfless individuals risked life and limb to rescue many of the victims. Among them were Oklahoma City police officers, Terrance Yeakey, Gordon Martin and Ken Griffin, a number of Oklahoma City firefighters, Dr. H. Don Chumley, G.S.A. employee Mike Loudenslager and others.

In the aftermath of the "bombing" the name Mike Loudenslager holds particular significance in the hearts of many families in and around Oklahoma City. And this is so, because of the forewarning he gave to a number of those who had children in the Murrah Building's day-care center. In the weeks preceding the bombing, G.S.A. employee, Michael Loudenslager, 48, became increasingly aware that large amounts of ordnance and explosives were in the building and strongly urged (along with the operator of the day-care center) a number of parents to take their children out of the Murrah Building.

This situation arose after other employees became concerned with an increased amount of ordnance (missiles) being brought into the building by the B.A.T.F. and D.E.A. As a result of this concern, a grievance was filed with G.S.A. by the building's security director. The result was, the man who'd complained lost his job there. Then, after the operator of the day-care center (the security director's wife) notified the fire marshals after some remodeling had been done (as her license required her to do), the fire marshals were denied access to do their inspection by federal agents and told to leave! And the day-care operator lost her contract.

As a result of this (fearing the worst with all the talk around town of a possible bombing), Mike Loudenslager and the day-care center operator then told many of the parents to get their children out. And, because of their warnings, far fewer children were in the day-care center on that horrible Wednesday morning than there otherwise would have been. A number of families, in and around Oklahoma City, have these two people to thank for their children's lives today.

Shortly after the bombing, Michael Loudenslager was actively helping in the rescue and recovery effort. A large number of those at the bomb-site either saw or talked with him. During the course of the early rescue efforts, however, Mike Loudenslager was seen and heard in a very "heated" confrontation with someone (there). Much of his anger stemmed from the fact he felt the B.A.T.F. was in large part responsible not only for the bombing, but for the death and injury to those inside, including all the children.

To the absolute astonishment of a large number of police officers and rescue workers, it was later reported that G.S.A. employee Mike Loudenslager's body had been found inside the Murrah Building the following Sunday, still at his desk, a victim of the 9:02 A.M. bombing! This, mind you, after he'd already been seen alive and well by numerous rescue workers at the bomb-site *after* the bombing! He is also officially listed as one of the 168 bombing fatalities.

The question now becomes: Was he murdered and placed at his desk by federal agents? Or was he just simply murdered by them and *said* to have been found at his desk? Access to the inside of the building,

from shortly after the bombing onward was extremely limited to nearly all but federal employees by the F.B.I. His death is *unquestionably* the most important sidelight of the Oklahoma City bombing. Mike Loudenslager's murder, most assuredly was one of the major factors leading to the demise of both Dr. H. Don Chumley and later Terry Yeakey!

For whatever reason, the Oklahoma City Police Dept. has always down-played Officer Terry Yeakey's presence at the Murrah Building the morning of April 19, 1995, even though a large number of Oklahoma City police officers, firefighters, emergency personnel and survivors *know* he played a much larger role in the early rescue-effort than he's given credit for. In an effort to cover up Mike Loudenslager's murder and to intimidate others who were there early-on that morning, someone has taken out a number of internal witnesses. Dr. Don Chumley *and* Terry Yeakey, both, besides being at the Murrah Building that morning, shared one other commonality. Each at the time of his "death" was attempting to deliver *evidence* concerning the fact Mike Loudenslager was alive and well *after* the bombing, and also to get certain other facts out about the "bombing" as well.

In Terry Yeakey's case he thought he was delivering evidence and information to a multi-county task force who would help get the truth out. That's how he was set-up. In Dr. Chumley's case, he was killed, some months earlier, when his personal jet aircraft "crashed" while attempting to do the same thing. Were the deaths of Jack Colvert, Jackie Majors and Buddy Youngblood also directly related to the cover-up of Mike Loudenslager's murder? Each of them had been at the Murrah Building that morning and each had also seen Mike Loudenslager *alive* and well after the bombing.

Others who were there that morning have also felt threatened. Officer Gordon Martin, for one, feels at least two attempts on his life have been made. Other police officers and emergency services personnel fear for their personal safety as well. And while all this goes on, the moguls of the major-media remain silent! The so-called "fourth pillar of democracy" - the press - once again falls flat on its face, forsaking its sacred duty to *report the news*. Remember, Hell is just as hot for those who go there for sins of *omission* as those who go for sins of *commission*!.

Another interesting case of "suicide" in Oklahoma, since the bombing, is that of Kenneth Trentadue, who as the result of violating conditions of his parole in California, was re-incarcerated and sent to a federal (transfer) facility in Oklahoma. Mr. Trentadue, the brother of a prominent Salt Lake City, Utah attorney, supposedly committed suicide by hanging himself. But in actuality managed to commit a "suicide" very similar to Terry Yeakey's (minus the gunshot-wound-to-the-head). Only Kenneth Trentadue's was committed with knotted or "braided" bedsheet, barely long enough to fit around his neck in a "suicide-proof" prison cell.

The Salt Lake Tribune (Sat. July 11, 1998 - states M.E. says Trentadue death "suicide"!). later reported the trustees who cleaned Mr. Trentadue's cell after his "suicide" found copious amounts of blood inside. This included bloody fingerprints up a wall, to within a few inches of a "panic button" on or near the ceiling.

This certainly is not consistent with hanging. When his family was contacted by prison officials and informed of his "suicide", they were asked if they wanted his remains cremated. They indicated they did not, and after a very difficult time and much red-tape, the body was finally shipped back to them. Being very skeptical as to a suicide, family members removed the mortuary make-up and were shocked to find part of his skull crushed, his knuckles damaged, bruises, puncture-and-slash-wounds over a good portion of his body (including the soles of his feet) and his throat slashed. Boot heel marks were apparent around the right eye and on his chest. All evidence points to the fact Kenneth Trentadue was subdued after a fight - brutally beaten, tortured and murdered!

This case is "supposedly" being looked into by U.S. Sen. Orrin Hatch. Former 7-term U.S. Rep. George Hansen of Idaho and his organization, The United States Citizens Human Rights Commission, *is*, however, actively pursuing it. Former Rep. Hansen was himself unjustly convicted and imprisoned and spent a number of years literally as a political prisoner in the federal penal system until his case was finally

decided by the U.S. Supreme Court.

Many Americans who are familiar with the Trentadue case see a chilling similarity between Officer Terry Yeakey's "suicide" and Kenneth Trentadue's. Especially when each occurred in such close proximity to the other, in and around El Reno and Oklahoma City, *after* the bombing. Like Terry Yeakey, Kenneth Trentadue, (although smaller) was also a powerfully-built man. He lifted weights regularly, had a 19-inch neck and was a street-fighter with street savvy. In short, he knew how to take care of himself.

Many now wonder if Kenneth Trentadue might have had information regarding the Oklahoma City bombing, or its aftermath, that certain agents wanted him taken-out for. And many also wonder why a man re-incarcerated for violating his parole would *request* solitary confinement. What was Kenneth Trentadue afraid of? Could the murder of Murrah Building G.S.A. employee Michael Loudenslager and the subsequent cover-up be the reason for (many of) the unresolved deaths in Oklahoma since the bombing? A growing number of Americans certainly think so.



Troubled Times



Bombing Evidence

Phil Schneider recently lost his life due to what appeared to be a military-style execution in January 1996. He was found dead in his apartment with piano wire still wrapped around his neck. According to some sources, he had been brutally tortured repeated before being killed. Phil Schneider was an ex-government engineer. In May 1995, Phil Schneider did a lecture on what he had discovered. Seven months later he was tortured and killed.

Thoughts on the Bombings in the United States

A [Lecture](#) by Phil Schneider, May 1995

I was hired not too long ago to do a report on the World Trade Center bombing. I was hired because I know about the 90 some-odd varieties of chemical explosives. I looked at the pictures taken right after the blast. The concrete was puddled and melted. The steel and the rebar was literally extruded up to six feet longer than its original length. There is only one weapon that can do that - a small nuclear weapon. That's a construction-type nuclear device.

Obviously, when they say that it was a nitrate explosive that did the damage, they're lying 100%, folks. The people they have in custody probably didn't do the crime. As a matter of fact, I have reason to believe that the same group held in custody did do other crimes, such as killing a Jewish rabbi in New York. However, I want to further mention that with the last explosion in Oklahoma City, they are saying that it was a nitrate or fertilizer bomb that did it. "First, they came out and said it was a 1,000 pound fertilizer bomb. Then, it was 1,500. Then 2,000 pounds. Now its 20,000. You can't put 20,000 pounds of fertilizer in a Rider Truck.

Now, I've never mixed explosives, per se. I know the chemical structure and the application of construction explosives. My reputation was based on it. I helped hollow out more than 13 deep underground military bases in the United States. I worked on the Malta project, in West Germany, in Spain and in Italy. I can tell you from experience that a nitrate explosion would not have hardly shattered the windows of the federal building in Oklahoma City. It would have killed a few people and knocked part of the facing off the building, but it would have never have done that kind of damage. I believe I have been lied to, and I am not taking it any longer, so I'm telling you that you've been lied to.



Troubled Times



TWA800

TWA 800 Crash Update

By: *The Valley Advocate*, 02-03-1998

... in December, the National Transportation Safety Board released thousands of pages of data, charts, findings, figures and facts on the investigation of the July 1996 crash of TWA Flight 800. ...to several seasoned military crash experts, these numbers [in the released TWA 800 data] didn't speak; they sang.

"I'm looking at the hard physical evidence," Commander William S. Donaldson, a retired Navy aviator and air crash investigator, told the Advocate. "The government is saying one thing, and the evidence is saying another. ... All the physical evidence fits perfectly with an explosion outside of the airplane."

Donaldson's credentials are as impeccable as his research is outstanding: About Admiral Thomas H. Moorer, former chairman of the Joint Chiefs of Staff, joining the missile-theory camp, the Valley Advocate article reports that: Donaldson is attracting allies in high places elsewhere within the Beltway as well. Admiral Thomas H. Moorer, a former chairman of the Joint Chiefs of Staff, attended a Jan. 8 press conference in Washington at which Donaldson announced his findings. Moorer said he found Donaldson's report very persuasive.

"Commander Donaldson is a very experienced aviator and very experienced in the process of investigating accidents. He's a highly credible source," Moorer told the Advocate. Moorer found Donaldson's discussion of eyewitness testimony especially compelling. "You can't just brush it off by saying there was no missile, because so many people saw it from beginning to end. "We should seriously consider a formal congressional investigation," Moorer added, echoing his previous calls for independent and critical scrutiny of the crash in which, as Moorer told the Detroit News, "all evidence would point to a missile."

The Valley Advocate article also covers Commander Donaldson's extensive analysis of eyewitness accounts, which includes a carefully conducted triangulation of the accounts. Important to note is the fact that my own witness triangulation, which I first published last June 14th, based upon my own witness interviews and police reports concluded, just as Donaldson's independent triangulation later found, that the launch site for the most widely seen missile was about 3 miles off shore.

... Donaldson interviewed 96 people who saw the crash from the ground. All 96, scattered along 11 miles of shoreline, reported seeing a streak of light rise from the surface of the water and merge with the plane before the plane exploded. The FBI and NTSB have countered that the witnesses saw either burning jet fuel falling from the airplane or they saw the 747, decapitated by a fuel tank explosion, climbing several thousand feet before exploding a final time and falling into the ocean. Additionally, using Global Positioning System satellite technology, Donaldson triangulated the locations of the eyewitnesses and the trajectories of the streaks they reported. The data, he said, suggests that they all saw the same "streak of light" emerge from the water.

"These people are stretched out along 11 miles of coastline, and they're all pointing to the same place," Donaldson said. "Now, you get 11 miles of coast and dozens of people who have never met before all pointing to the same place. What's the chance of that being coincidence?" To Donaldson's surprise, federal investigators have not done such an analysis. "The NTSB literally did not consider the eyewitness testimony," he said. "They were operating under the premise that the FBI was already considering that." And the FBI, he added, has never addressed the eyewitness data as anything more than a series of anomalies. The bureau did not, so far as Donaldson has ever seen, even do his simple triangulation experiment. Instead, as he put it, "The FBI has thrown

a cloak over that kind of eyewitness."

Referring to the CIA's video that proclaimed - flying in the face of physics - that after losing its nose section TWA 800 shot upwards like a rocket leading witnesses to believe that they saw a rocket, the Valley Advocate article continues: The CIA's "contract cartoon" is the ultimate in irresponsibility, Donaldson said: It shows just how far some in the government's investigation will go to mislead the public. "It was entertaining but like most cartoons grossly abused universal laws of nature," he wrote to [FBI Director] Freeh. "In my view, the 'Alice in Wonderland' public positions the FBI has taken in this incident have now crossed over from being merely illogical or incompetent to the appearance of obstruction of justice," he added, saying that he had "seen better police work in Pink Panther movies." Donaldson said he finds too much suspicious behavior in the government's investigation to simply write its failure off to bureaucratic ineptitude. "I can't believe anybody can be this incompetent," he said. "I suspect it's a cover-up, yes."



Troubled Times



Missile

Pilots find evidence of TWA 800 missile

by Onell R. Soto, *The Press-Enterprise*, 01-13-1998

Refusing to believe the government's explanation for the crash of TWA Flight 800, a group of retired aviators said Thursday they had found evidence that a missile exploded just 60 feet from the front of the Boeing 747. The last line of data from Flight 800's flight data recorder, information released during National Transportation Safety Board hearings in Baltimore last month, includes readings that prove an explosion took place outside the plane, said William S. Donaldson, a retired Navy commander who investigated crashes.

"It looks to me like there was a huge explosive warhead about 60 feet from the plane and blew the nose up and to the left," Donaldson said during a news conference sponsored by the Associated Retired Aviation Professionals and the conservative group Accuracy in Media. Responding to the Donaldson theory, government officials said there was no evidence of a missile, saying that information from the flight recorders was being misinterpreted. Also at the news conference were two men who witnessed the crash - a military helicopter pilot who was flying over Long Island at the time and a businessman who saw the disaster while eating dinner at a yacht club - said a CIA video recreation of the crash doesn't reflect what they saw. Flight 800 was heading from New York to Paris when it exploded off Long Island in July 1996. All 230 aboard died.

An NTSB spokeswoman repeated Thursday that the agency has discounted a missile theory. Federal investigators have concluded vapors in the plane's central fuel tank were ignited by an unknown mechanical malfunction. "We have absolutely no evidence that a missile struck the aircraft or that a fragment of a missile entered the aircraft," said spokeswoman Shelly Hazle. Donaldson vehemently disagreed, drawing his conclusions that a missile shot down the plane as a terrorist act from a printout of flight data produced by the NTSB. The flight data recorder tracks information such as altitude, speed, engine power, the direction in which flight controls are pointing and how directly the wind hits the plane. Before printing copies of the flight data for distribution in Baltimore, an NTSB official drew a line through the last set of numbers, writing by hand "END OF FLT 800 DATA."

An NTSB official said Thursday that the figures represent incorrect readings from earlier flights and are junk data. Flight data recorders use the same reel-to-reel tape several times, erasing it and writing over repeatedly. If the data are to be believed, however, they indicate Flight 800's gauges recorded physically impossible conditions, such as dropping 3,645 feet and slowing to 100 knots from 298 knots in just one second. More likely, Donaldson said, the readings record the shock wave of an exploding missile as it ripped past sensors. Such a wave would increase the air pressure enough to skew the altitude and speed measurements, he said. It would also have rocked a device, not unlike a weather vane, which measures from which wind hits the aircraft. That reading went from 3 degrees to 106 degrees. The last reading, less than a second later, was again 3 degrees.

A shock wave would help explain how the plane's central fuel tank exploded, Donaldson said. Jet fuel, basically kerosene, does not burn easily, not even at the temperatures that the federal government says the central fuel tank reached, he said. Donaldson showed a video in which he repeatedly extinguishes a match in a can of jet fuel. The fuel does burn, however, when it is suspended in a mist, as he demonstrates by

putting the fuel in a spray bottle and spritzing it at a candle. Donaldson theorized the shock wave from the outside explosion knocked what little fuel remained in the plane's central fuel tank into the air. That fuel was ignited by a fragment from the missile exploding, he said. Unlike other missile theories surrounding Flight 800, Donaldson said he does not believe a missile struck the plane, but that one exploded near it.

He said the government is trying to cover up evidence of the missile because it failed in its job of protecting airliners from terrorist attacks. Donaldson, a one-time fighter pilot, first said last year that he didn't think it was possible for jet fuel vapors in the central fuel tank to explode without first being sent into the air by a shock of some sort. And he doubts that the data that led to his conclusions were left over from an earlier flight and were therefore incorrect. "A lot of the data recovered," he said, such as the angle of attack measurement. "It all fits with what I described." Others speaking at the news conference included Fred Meyer, a retired Air National Guard major who was flying a helicopter practice mission around Long Island.

He said FBI investigators talked to him briefly, but were not too interested in his account of a streak of light arcing through the sky and ending in what looked to him as a military explosion. "I've seen ordnance explosions," said Meyer, a Vietnam veteran. "This was military ordnance." Another witness, Richard Goss, a carpenter and businessman, said he was having dinner when he saw an ascending streak of light over the Atlantic Ocean, ending in an explosion. He said he twice talked with FBI investigators, but they didn't follow up with him. They were joined at the news conference by Mark Hill, a retired Navy rear admiral, and Howard Mann, a former TWA 747 pilot, who first picked up on the cross-out line in the flight recorder data while looking over documents he picked up during the Baltimore hearings.

TWA800 Eyewitness Meyer Speaks to the Granada Forum

When you fly a helicopter at 120 knots over North Vietnam in the iron triangle - in the most heavily defended airspace in the history of warfare - you see a lot of missiles - you see a lot of flak - and I did - I saw a bunch of it - I know what it looks like. My purpose in being here tonight is to tell you that what I saw explode in the sky on July 17, 1996 was military ordnance... We're here is to say it's no accident - somebody shot this aircraft down.

Major Fred Meyer
March 12, 1998



Troubled Times



Cmdr. Donaldson

IUFO Mailing List

In a 109 page report to the Aviation Sub-Committee of Congress, delivered by Cmdr. William S. Donaldson, USN (ret.) a review of FAA, NTSB, FBI, and CIA details show startling conclusions. The [Full Story](#) is on the web.

The preponderance of facts in this report support the following conclusions:

1. That TWA FL800 was intentionally destroyed by a powerful, proximity fused, airbursting, anti-aircraft weapon, launched from a position approximately one nautical mile Off Shore and three nautical miles east of Moriches Inlet, Long Island, New York.
2. That TWA FL800 was also engaged, seconds later by a second missile, fired from a closer position to the south of TWA FL800's track.

TWA Flight 800 was 'shot down'

Investigator makes his case in Washington

By Steven Allen, 1998, *WorldNetDaily*

WASHINGTON - "Somebody came into our waters and shot down - for the first time ever - a flag carrier of the United States," an expert on the explosion of TWA Flight 800 said at a Washington briefing yesterday. Commander Bill Donaldson, a retired Navy pilot and accident investigator who has spent 15 months examining the case, said that two missiles were fired in the vicinity of the airplane, and that one of them exploded close enough to bring the plane down. It's no wonder, he said, that investigators did not find evidence of a direct missile hit; the missile was of a type specifically designed to explode near (rather than in contact with) its target.



Troubled Times



NASA Death

As published by *American Association for the Advancement of Science*, June 18, 1997

NASA Solar System Chief Killed in Accident

Just weeks before a sophisticated probe reaches Mars and only months before launch of a major probe to Saturn, NASA's science program director for solar system exploration was killed on 18 June in a tragic accident. Jurgen Rahe, 57, died when a tree crushed his car during a severe storm.

Rahe oversaw general management, budget, and strategic planning for solar system programs, including the Pathfinder mission to Mars that will land on 4 July and the Cassini spacecraft slated for launch to Saturn this fall. "Under his leadership, NASA's planetary exploration program was experiencing an almost unparalleled period of major discoveries at the same time that a number of new missions were being started and launched," Wes Huntress, NASA's space science chief, said in a statement. "His legacy to the exploration of space is large."

Rahe was also the editor of *Astrophysics and Space Science* and a member of the editorial board of two other journals, *Earth, Moon, and Planets* and *Il Nuovo Cimento*. Prior to joining NASA in 1989, he worked at the Jet Propulsion Laboratory in Pasadena, California, and also as an astronomer at the Astronomical Institute of the University Erlangen-Nuremberg in Germany.



Troubled Times



Gene Shoemaker

NEO News (7/18/97)

Friends:

I just received the shocking and tragic news of the death of Gene Shoemaker, the founder and leading advocate of many **NEO studies**. Truly he is the father of our field of science. Following is the initial notice posted by *Sky & Telescope*.

David Morrison

Gene Shoemaker, 1928 - 1997

The world has lost one of its most renowned scientists with the death of Eugene Shoemaker at age 69. On the afternoon of July 18th, Gene and his wife, Carolyn, were involved in a car accident in central Australia. He was fatally injured; Carolyn suffered broken ribs but is expected to recover. The pair had arrived in Australia just six days before to study some of the continent's numerous impact craters - an annual trek Down Under that they'd made a habit in recent years.

Best known for his pioneering work in **elucidating the mechanics of impacts and in the discovery of Earth-crossing bodies**, Gene gained worldwide fame in March 1993 for his discovery, with Carolyn and colleague David Levy, of a comet that would strike Jupiter 16 months later. Comet Shoemaker-Levy 9 was just one of the finds that made this husband-wife team the leading comet discoverers of this century. They are also credited with discovering more than 800 asteroids. But the one research interest he never tired of was Meteor Crater, the kilometer-wide pit east of Flagstaff, Arizona.

While still in his teens, Gene realized that someday astronauts would walk on the Moon, and from that point forward his whole professional life would be directed toward becoming one of them. But a medical condition prevented him from ever being selected for the **Apollo** program. "Not going to the Moon and banging on it with my own hammer has been the biggest disappointment in life," he said last year. "But then, I probably wouldn't have gone to Palomar Observatory to take some 25,000 films of the night sky with Carolyn - she scanned them all - and we wouldn't have had the thrills of finding those funny things that go bump in the night."



Troubled Times



CSETI Announcement

Subject: Your support required (Two key CSETI key members very ill)
From: Francisco Lopez <d005734c@dc.seflin.org>
Date: 1997/07/04
Message-Id: <Pine.3.89.9707032055.A10316-0100000@dc>
Newsgroups: es.ciencia.astrofisica

From: A.J. Craddock <webmaster@cseti.org> and Dr. Steven Greer

3 July 1997

Dear Friends and Supporters of CSETI,

Your support - both morally and financially - has been key to the success of CSETI and to the historic breakthroughs of the past few months. Now we need your help on another matter, which is quite urgent.

Both myself and CSETI research director Shari Adamiak have been diagnosed with metastatic cancer. Both have appeared, rather enigmatically, at the same time, a fact which seems like a rather strange coincidence.

I have been diagnosed with metastatic malignant melanoma, and another lesion was removed yesterday and confirmed to be malignant melanoma. The primary cancer has never been found. However, I am otherwise doing well and hope no further lesions will be found.

Shari has been diagnosed with metastatic breast cancer of the right breast, with metastasis to the right axilla. This situation is very serious and necessitates immediate interventions which will be costly. For this reason, I am setting up through CSETI a Healing Fund to help pay for the expenses associated with Shari's condition. These funds will be used for the care and treatment for Shari until she achieves a full and complete healing.

If you can donate even a small amount to this special fund, please do so now. Make the donation to CSETI and earmark it for the Healing Fund. Donations are tax-deductible.

And please remember both of us in your prayers. We are certain that with your help, healing will be achieved and further historic successes realized.

Working together, I am certain that we can create a new civilization based on universal peace.

Wishing each of you the best of all worlds,

Steven M. Greer M.D.
Director of CSETI
PO Box 15401 Asheville NC
704-274-5671; Fax 704-274-6766
Website: <http://www.cseti.org>

Los archivos de ASTRO_ESPANA pueden ser consultados en:
http://listserv.rediris.es/archives/astro_espana.html



Troubled Times



CSETI DC Briefing

Subject: REPORT ON CSETI DC BRIEFINGS APRIL 7-11 1997

From: rich@pencil.math.missouri.edu (Rich Winkel)

Date: 1997/07/04

Message-Id: <5pjfa7\$1n4k\$1@news.missouri.edu>

Newsgroups: misc.activism.progressive

<http://www.cseti.org/frame.htm>

CSETI DC BRIEFINGS APRIL 7-11 1997

REPORT ON THE CSETI DC BRIEFINGS APRIL 7-11 1997

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Background:

CSETI founded Project Starlight over three and a half years ago as an initiative to identify the best scientific evidence related to UFOs and Extraterrestrial Intelligence. Of particular importance is the identification of bona-fide military, intelligence, government contractor and other government agency employees with direct, first-hand knowledge of the UFO/ET subject.

The goal of the CSETI Project Starlight initiative is to present the best available evidence and witness testimony in a manner which would constitute a definitive disclosure regarding the reality of the UFO/ET subject. This is to be done in a scientific, non-sensational and hopeful manner, assiduously avoiding an alarmist tone or emphasis.

Since 1993, Dr. Steven Greer, CSETI Director, and other CSETI Project Starlight team members, have provided preliminary briefings for White House staff, a sitting Director of Central Intelligence, senior military leaders, senior United Nations leadership, members of the Senate and House of Representatives, international leaders, and leaders in foreign governments, among others.

It has always been our intent to effect this disclosure in cooperation with the United States and other governments, if possible. We are acutely aware of the vast and profound implications of this matter and for this reason have carefully included key government figures and offices in our deliberations and plans. From the start, it was made clear that, while we desired a cooperative effort leading towards disclosure, the matter would be disclosed through a civilian-led initiative should the government choose to be uninvolved.

Through exhaustive and repeated private briefings with various government leaders, we learned that this subject was being managed in a way which kept the majority of our constitutional leadership uninformed on the subject. It became clear that we should collect the best evidence and witnesses and provide unmistakable and unambiguous information to these leaders so that they could make a decision on how to proceed. Obviously, unless the leadership was informed, there could be no chance of their disclosing any information to the public, or of even convening an open hearing and inquiry.

On 15 November 1996, a letter was sent to all pertinent offices of the United States Government asking for a determination on the validity of national security oaths related to the UFO/Extraterrestrial subject. In this letter, which is available on the CSETI website (www.cseti.org) it was stated that it was our assessment that these oaths and restrictions were null and void, since the oversight of the projects related to this subject was improper, illegal and

extra-constitutional.

Further, it was stated that, unless otherwise directed by 1 January 1997, we would regard all military, intelligence and other government-related witnesses to UFO/Extraterrestrial projects and events as free to speak openly about what they know concerning this topic.

No corrective measures or statements - oral , written or otherwise - were submitted to us by 1 January 1997. Through back-door channels it was conveyed that we would be allowed to move forward, and that our progress was being noted by various military, intelligence, government and private groups connected to the subject.

Pursuant to the above letter, since no instructions stating otherwise were sent by the US Government, CSETI proceeded to plan a Washington DC Briefing for this spring, as promised.

During the week of April 7-11, the CSETI Project Starlight team convened a gathering of nearly 20 first-hand government witnesses to UFO/ET events. These events principally took place at the Westin Hotel in Washington DC, although separate briefings took place at the Pentagon and elsewhere in the Washington vicinity.

All of the US government witnesses which were present signed a statement that they are willing to testify under oath before an open hearing in the US Congress concerning the UFO/ET projects and events which they personally and directly witnessed. These government UFO witnesses spanned from the early 1950s to the 1990s, and represented events and/or projects observed while these witnesses were in the Air Force, Army, Navy, NASA, private industry and intelligence operations.

Most of these witnesses had top secret clearances and were testifying regarding events which took place while they had those clearances.

It should be noted that the witnesses which were assembled during the week of April 7-11 are the courageous tip of a much larger iceberg: There are 107 such first-hand government UFO witnesses who have been identified to date, and who should be subpoenaed by the Congress to testify in open hearings. Conceptually, these witnesses may be divided into three levels:

Level One Witnesses. These are witnesses who are ready and willing to come forward today, as a unified coalition, to disclose what they know about the subject. There are 44 such witnesses thus far identified.

Level Two Witnesses: These are witnesses who have been identified but feel intimidated about coming forward and request the protection of Congressional hearings and the protective effect of a Congressional subpoena. They number 55.

Level Three Witnesses - These are witnesses who are known to us but who are considered probably hostile or uncooperative witnesses. They would need to be subpoenaed and treated as potentially hostile witnesses. There are at least 8 such witnesses in this category.

The Washington Briefings of April 7-11, 1997

The purpose of the events of April 7-11 were as follows:

To gather together bona-fide first hand government UFO witnesses to further solidify the coalition of such witnesses who are willing to come forward with definitive, unambiguous information concerning the UFO/ET subject.

To convene a closed, confidential briefing for members of Congress, congressional staff, White House staff, military leaders and other Washington leaders on the subject, and for these leaders to hear the direct testimony of the US government and military witnesses. This briefing was designed to present the best scientific evidence and witness testimony to establish the reality of the subject matter, and to specifically ask for open congressional hearings on the matter.

To conduct a background educational briefing for interested members of the media.

To provide private briefings to other military, intelligence and political leaders as needed.

All of the objectives listed above were met.

(All members of Congress, the President, Vice-President and key cabinet officials, as well as key military and intelligence leaders, were invited to the briefing. Further, they were offered the opportunity to receive private briefings at their convenience during the week.)

Chronology:

April 7, 1997: Various CSETI support staff arrive, as well as early arrival of some of the US government witnesses. En route with one of the Eisenhower era witnesses, Dr. Greer et al discuss witness' contacts to the president of a Latin American country which may be helpful in obtaining a United Nations symposium on the subject.

April 8, 1997: Arrival of all US Government witnesses, CSETI staff and others. During a lunch meeting, Dr. Greer, Shari Adamiak and one of the US government witnesses meets with a producer for a major investigative TV program, to provide background information and an overview of the subject. At 6 pm , all witnesses, along with Apollo Astronaut Edgar Mitchell and CSETI staff, gather for dinner. Introductions and an overview of the project's plans and goals were provided. At 10:30 pm CSETI support staff gather to discuss logistics, security and other issues related to the events of April 9 and 10.

April 9, 1997: 7:45 am breakfast meeting between Dr. Greer and an influential former member of Congress who offers to help us move this subject forward in the Congress.

9 am - 1 pm : Gathering of US Government Witnesses, with statements recorded. This is a closed meeting for the witnesses and senior CSETI staff, at which detailed accounts of the witnesses experiences related to their US government service or employment is shared. It is also a time of bonding and support for the witnesses as a coalition.

1 pm- Lunch with the witnesses and CSETI team. Dr. Greer also briefs during lunch an important Washington figure who offers to help network this subject to various points in the Washington leadership.

2:30 pm -5 pm - Continuation of US Government Witness testimony and recording of statements.

5 - 5:45 pm - Dr. Greer meets with new witness who relates definitive testimony related to Los Alamos and other facilities. (This is a Level Two Witness)

7 pm - 7:40 pm Reception for members of Congress, Congressional staff, foreign embassy staff and other Washington VIPs and leaders.

7:45- about 10 pm - Closed Briefing for members of Congress and Congressional staff, etc. Nearly 30 congressional offices were represented by either members of congress or staff members. Also present were VIPs from the executive branch, foreign embassy staff, government scientists, representatives sent to the briefing by 2 state governors' offices, and many other dignitaries.

During the briefing, participants were introduced to a substantial Briefing Document which contains numerous scientific cases and over 250 pages of definitive and unambiguous US Government documents related to the subject. The government documents were selected from a larger collection of several thousand. Many were provided to CSETI by the CIA in 1994.

These participants also viewed a collection of excellent photographic, video and movie footage evidence spanning over 40 years and from every continent.

Eleven first hand government and military witnesses were selected to testify before this group of government leaders. For over one and a half hours, they provided definitive and unambiguous testimony regarding UFO/ET events. Their testimony ranged from a world-renown astronomer who was present when an apparent extraterrestrial signal was received at the Harvard observatory (SETI) facility, to an Eisenhower military top secret witness who saw ET metal debris from a UFO crash , to a NASA employee who saw a picture with a UFO clearly in broad daylight which was destined to be air-brushed out before release, to a Navy employee with a top secret clearance who was present in 1981 during a major encounter off the eastern seaboard, which was tracked by satellite, radar, and chased by military planes with a resulting clear day- time photograph.

The richness of detail of this testimony, and the down-to- earth sincerity of these witnesses, was very moving to the gathered officials.

At the end of the briefing, one of the Congressional staffers came to the podium and, unsolicited by us, appealed to those congressional staffers and members of congress gathered to take definitive steps to let this information out to the public.

Numerous congressional offices represented at this historic briefing expressed a sincere desire to move this subject forward and to work with us in obtaining open congressional hearings as soon as possible. There was great enthusiasm for this, and one staffer from a congressional office has volunteered to coordinate these efforts in Washington with CSETI.

The combination of the extensive briefing materials, videotape evidence, first-hand witness testimony and the participation of so many congressional offices and other Washington leaders and dignitaries certainly constitutes the most historic civilian gathering in UFO/ET history.

In planning this event, we had hoped for positive RSVPs from 5-10 Congressional offices. The participation of nearly 30 such offices, as well as representatives from the executive branch and 2 state governors, certainly exceeded our expectations.

Each congressional office and VIP were provided with:

The CSETI Briefing Document and related case materials
The Videotape summary of photographs, videos and movie footage of UFOs
A copy of the 1965 Edwards Air Force Base Air Traffic Control Tower tape of multiple UFO encounters , with transcript

Following the presentation, a number of congressional staffers remained to discuss this subject with the witnesses and CSETI staff and leaders.

April 10, 1997: 10 am - Briefing at the Pentagon for very senior military staff . The CSETI team present included five members: Dr. Steven Greer, Astronaut Edgar Mitchell, Shari Adamiak, CSETI's military advisor and an Eisenhower-era first hand UFO/ET witness. This historic briefing lasted nearly one and one half hours and was enthusiastically received by senior Pentagon staff present.

During the afternoon of April 10, follow up with various congressional staffers, other Washington VIPs and the media took place.

7 pm - Reception for invitation-only media briefing. Note: Uninvited media were not allowed into this meeting. For example, long time debunker Phil Klass appeared without an invitation and was politely removed from the reception area. Similarly, had tabloid media appeared, they too would have been asked to leave. This meeting was a background educational briefing for major media only.

7:30 pm - Media Background briefing begins. Present are UPI, The Boston Globe , NBC, ABC the BBC and others. Seven first-hand witnesses provided statements to the media, and a general overview of the subject was provided by Dr. Greer. Following the briefing, a question and answer period took place, and the media all had excellent and insightful questions. It should be noted that the above meeting was a

background press briefing, not a press conference. The purpose of the meeting was to provide scientific background materials, and to introduce the invited media to the concept of open congressional hearings on the subject. The CSETI media team felt that such a meeting would be an important step towards preparing the mainstream media for a future disclosure, and would encourage them to cover the subject in an informed and serious manner.

Future Strategic Considerations:

Much work remains to be done to follow up with the considerable interest generated by these briefings. We will be forming a DC Coordinating Committee of congressional staffers, members of congress and other Washington area leaders to facilitate the educational and networking process needed to realize open Congressional hearings on this subject.

Strategically, we sense the need to move quickly with consolidating any interest in Congress on this subject, and to call for open hearings in the near future. In a parallel and therefore complementing effort, we are working with points of contact to other nations and the UN to facilitate an open symposium on the subject at the UN in the near future. We have been advised that the best route to achieve this is to secure the support of other nations with missions to the UN and have them directly ask for such an inquiry and symposium. Anyone with contacts to other nations which may be helpful in this regard should contact Dr. Greer as soon as possible.

Unless there are positive results from these efforts within a reasonable amount of time, it is our intent to move forward with a civilian disclosure process independent of any governmental involvement. We feel that the subject must be placed on the national and international agenda, and that we must have the resolve to move forward with or without specific governmental support or involvement.

However, the gravity of the subject, together with the far-reaching and deep ramifications of such a disclosure, necessitates a cautious, deliberate and inclusive policy for the present. We feel that it is imperative to provide excellent scientific cases, evidence and witness testimony to appropriate government leaders, in the US and elsewhere, thus empowering them to take the subject seriously, and to provide positive leadership. Only after such efforts, which are nearing completion, can we feel that we have done all that is possible to empower the democratic institutions which are the bedrock of our society.

As a civilian group taking a leadership position in this matter we feel that it is essential that we also move towards a global civilian multi-media educational project. Even should the Congress or UN take up this subject, it will be necessary for us to continue to provide perspective, a framework of understanding on the subject, and accurate information and evidence.

The concerned and interested public are encouraged to do the following to assist us in this historic undertaking:

- Write and call your congressional representative and members of the Senate from your state asking them to support open congressional hearings on the UFO/ET subject.
- Help us in identifying further first-hand US and other government UFO witnesses who may join in the historic and courageous witnesses coalition.
- Help us identify more of the best available evidence on the subject, including scientific cases, photographs, movie footage, videotape footage, government documents, and extraterrestrial artifacts (such as metal samples and biological samples).
- Assist us in networking this project to national and international leaders who can further assist in establishing a global disclosure on the subject.
- Help us identify sources of funding for this historic effort. We urgently need a full time staff to pursue the momentum already created; we have clearly gone beyond the point where an all- volunteer effort can be effective.

The time has come for the world to know that we are not alone in this vast universe. The era of excessive secrecy, which is so corrosive to a free and democratic society, must end. Working together, we can create a truly open and free society, which through much deliberation and wise efforts, may someday take its place among other planetary

civilizations.

15 April 1997 Steven M. Greer M.D. CSETI Director PO Box 15401 Asheville NC
28813 704-274-5671 - Fax: 704-274-6766 email: Dr_ET@compuserve.com



Troubled Times



Disclosure Project

The Greatest Secret in Modern History UFOs and a Solution to the Environmental and Energy Crisis

The Cover-up: UFOs

Former Chief of Defense, British Royal Navy, Admiral Lord Hill-Norton

I have frequently been asked why a person of my background-a former Chief of the Defense Staff, a former Chairman of the NATO Military Committee-why I think there is a cover-up [of] the facts about UFOs. I believe governments fear that if they did disclose those facts, people would panic. I don't believe that at all. There is a serious possibility that we are being visited by people from outer space. It behooves us to find out who they are, where they come from, and what they want. - Video and Disclosure, pp. 305 - 307.

Former Director of CIA, Admiral R.H. Hillenkoetter

Behind the scenes, high-ranking Air Force officers are soberly concerned about the UFOs. But through official secrecy and ridicule, many citizens are led to believe the unknown flying objects are nonsense. To hide the facts, the Air Force has silenced its personnel. ---The New York Times, Sunday, February 28, 1960: "Air Force Order on 'Saucers' Cited," p. L30. See also Disclosure, p. 58.

US Navy Pilot, Lieutenant Frederick Fox

There is a [military] publication called JANAP 146E that has a section that says you will not reveal any information regarding the UFO phenomenon under penalty of \$10,000 fine and ten years in jail. So the secret has been kept. - Disclosure, pp. 145, 146..

The Grand War Plan: It's All Based on a Lie

Corporate Manager of Fairchild Industries, Spokesperson for Wernher Von Braun, Dr. Carol Rosin

Von Braun [founder of modern rocket science] told me [in 1974] that the reasons for space-based weaponry were all based on a lie. He said that the strategy was to use scare tactics-that first the Russians, then the terrorists are going to be considered the enemy. The next enemy was asteroids. "The last card is the alien card. We are going to have to build space-based weapons against aliens, and all of it is a lie."...I was at a meeting in Fairchild Industries in the War Room. The conversation [was] about how they were going to antagonize these enemies and at some point, there was going to be a Gulf War. Now this is 1977! - pp. 255 - 259.

Disclosure Project, Founder and Director, Steven M. Greer, M.D.

The situation is so dire that senior Joint Chiefs of Staff leaders in the Pentagon who I have briefed, have no more access to such projects than any other civilian-unless they are on the 'inside'. The government is really quite outside the loop. We have insiders and scientists who can prove that we do in fact possess energy generation systems capable of completely and permanently replacing all forms of currently used energy generation and transportation

systems. Every single person who is concerned about the environment and the human future should call for urgent hearings to allow these technologies to be disclosed, declassified, and safely applied. - Disclosure, pp. 14, 15, 567. See also Dr. Greer's websites at www.disclosureproject.org, and www.seaspower.com.

For full story see book Disclosure and witness videos at www.disclosureproject.org.

Disclosure Project has over 400 government and military witnesses prepared to testify on this subject.



Troubled Times



Commerce Secretary

On December 2, 1997, the *Pittsburgh Tribune-Review* quoted Lt. Colonel Steve Cogswell, a doctor and deputy Armed Forces medical examiner with the Armed Forces Institute of Pathology, and once member of the Brown plane crash investigation, as stating that Secretary Ron Brown was found with an "apparent gunshot wound" to his head.

Officials who examined Brown's body at Dover Air Force base shortly after the April 3, 1996 Croatia crash discovered that "Brown had a .45 inch inwardly beveling circular hole in the top of head", a 45-caliber gunshot wound. The wound was documented, photographed, and X-rayed, in a medical examination at Dover Air Force base. Lt. Colonel Cogswell claims that one photo-X-ray even shows a possible "lead snowstorm" of metal fragments in Brown's head. Cogswell also states that incriminating X-rays were destroyed shortly after the examination of Brown, disappearing from the case file. "Even if you safely assumed accidental plane crash, when you got something that appears to be a homicide, that should bring everything to a screeching halt," Cogswell said, arguing that the finding of the apparent gunshot should have triggered the Presidential Assassination Statute - which covers Cabinet members like Brown - and immediately prompted an autopsy.

In a follow on report on December 8, 1997, the *Pittsburgh Tribune-Review* reports that US Army Lt. Colonel David Hause states he also personally examined a suspicious head wound on Brown's corpse while it was being examined at Dover Air Force Base. A commotion erupted on the examination table, Hause tells reporter Chris Ruddy, when the head wound was first discovered. He describes how the wound "looked like a punched-out .45-caliber entrance hole." The wound was documented, photographed, and X-rayed, in a medical examination at Dover Air Force base, according to both men. But Hause now says that all x-rays and photos of Brown's head are missing from the case file at the Armed Forces Institute of Pathology facility in Rockville, Maryland.



Troubled Times



John Kennedy, Jr.

Excerpts from [FBI Preliminary Report on Recovery of Piper Saratoga Aircraft](#)
by Sherman Skolnick, July 25, 1999

1. No declassification until 7/22/2029.
2. This is in deference to the wishes of a senior member of the Kennedy family.
3. Also in deference to the order of the national government and in respect to certain foreign intelligence agencies having reciprocal agreements with the U.S.
4. POTUS order and national security findings attached.
5. The recovered aircraft shows evidence of an explosive device having been glued or affixed within the tail luggage compartment.
6. Device was apparently actuated by a barometric trigger. Radio signals not ruled out.
7. Tail of aircraft was dismembered from the plane making it front heavy.
8. Study of radar shows the plane fell in excess of 6,000 feet per minute up to radar cutoff.
9. Satellite images supplied by the National Reconnaissance Office record an outbursting flash from the aircraft just prior to it going into perpendicular descent.
10. Tail structure was dismembered just prior to descent.
11. Recovery of a piece of luggage from beyond the flight path of the aircraft correlates with it being hurtled out of the tail luggage compartment at outburst.
12. Preliminary examination of the aircraft shows residue of an explosive device the Laboratory identifies as being the type used by certain foreign intelligence agencies. Refer to POTUS order and findings.
13. Study of Air Traffic Control and other radio signals shows no Mayday report from the aircraft, explained by rapidity of descent.
14. Investigation and examination has been strictly compartmentalized.
15. A short, perfunctory examination of the recovered bodies was completed. Examination revealed that Carolyn Bessette Kennedy was in third trimester pregnant, the fetus a boy. The four bodies were transferred to a senior member of the Kennedy family. The Bureau was not informed whether the bodies were actually cremated. Indirect advisories report that the bodies may have been shipped in untagged containers to foreign destinations. Reliable assets are to submit reports.



Troubled Times



Rockefeller Report

From the Sightings web site, [Rockefeller Report](#)

Bio Attack Underway On U.S. Military Front Line Personnel Clearly Targeted

by Lyndsay Griffiths, 12-4-97

Here is the location of the full "*The Rockefeller Report*" <http://www.gulfweb.org/bigdoc/rockrep.cfm>. A summary of findings from this staggering document from Paul Mitchell Candidate for Congress <http://supremelaw.com>:

Finding "For at least 50 years, DOD has knowingly exposed military personnel to potentially dangerous substances, often in secret."

Finding "DOD has repeatedly failed to comply with required ethical standards when using human subjects in military research during war or threat of war."

Finding "DOD incorrectly claims that since their goal was treatment, the use of investigational drugs in the Persian Gulf War was not research."

Finding "DOD used investigational drugs in the Persian Gulf War in ways that were not effective."

Finding "DOD did not know whether pyridostigmine bromide would be safe for use by U.S. troops in the Persian Gulf War."

Finding "When U.S. troops were sent to the Persian Gulf in 1994, DOD still did not have proof that pyridostigmine bromide was safe for use as an antidote enhancer."

Finding "Pyridostigmine may be more dangerous in combination with pesticides or other exposures."

Finding "The safety of the botulism vaccine was not established prior to the Persian Gulf War and remains uncertain."

Finding "Records of anthrax vaccine are not suitable to evaluate safety."

Finding "Army regulations exempt informed consent for volunteers in some types of military studies."

Finding "DOD and DVA have repeatedly failed to provide information and medical follow-up to those who participate in military research or are ordered to take investigational drugs."

Finding "The federal government has failed to support scientific studies that provide information about reproductive problems experienced by veterans who were intentionally exposed to potentially dangerous substances."

Finding "The federal government has also failed to support scientific studies that provide timely information for compensation decisions regarding military personnel who were harmed by various exposures."

Finding "Participation in military research is rarely included in military medical records, making it impossible to support a veteran's claim for service-connected disabilities from military research."

Finding "DOD has demonstrated a pattern of misrepresenting the danger of various military exposures that continues

today.”



Troubled Times



Dr. Len Horowitz

From the Sightings web site, interview with [Dr. Len Horowitz](#)
Dr. Len Horowitz On Anthrax Vaccine: Cure Or Conspiracy?
by Wes Thomas, 12-18-97

Dr. Horowitz is author of *Emerging Viruses: AIDS & Ebola* [1], a comprehensive, well-documented exposé of the role of tainted vaccines in the creation of genocidal AIDS and Ebola epidemics. He holds a Ph.D. in dental medicine from Tufts University, Master of Public Health from Harvard University, and MA in health education from Beacon College.

WT: There's a lot of paranoia on the Net right now about anthrax vaccine. Should people take it or not?

LH: Well, President Clinton won't take the vaccine [2] because he's no fool. I'm extremely concerned that anthrax vaccine is untrustworthy and that military personnel, when they sign up, turn their lives over to untrustworthy people. You'd have to be a fool, given the information we have in our possession, to take the anthrax vaccine, or any other vaccine that the FDA and/or the Department of Defense approves or tries to push on military personnel or citizens of the United States.

WT: Why?

LH: Numerous reasons. Everything from the most apparently benign vaccine to the tetanus vaccine used to sterilize hundreds of thousands of women during experiments, to Gulf War Syndrome, which is undoubtedly related and linked to vaccines.

We now have evidence that the potential initiator of Gulf War Syndrome was an AIDS vaccine that was being tested on uninformed and unconsenting troops. We have documentation that shows that General Schwartzkopf and General Powell were absolute outrageous liars in the congressional hearing statements and that the entire Gulf War congressional investigating panel, led by Jay Rockefeller, was a complete travesty to truth and justice.

We have this documentation on a new three-hour video called "Gulf War Syndrome: the Spreading Epidemic Cover-up" [3]. It shows that during the Gulf War, our troops were exposed to experimental vaccines and experimental drugs, that sustained drug interactions and vaccine damage were the result, and that the federal government still refuses to acknowledge the truth and the facts.

In no uncertain terms would I allow myself to be inoculated, nor would any rational human being, given the evidence. Which is the real intelligent reason why President Clinton has refused to be vaccinated with anthrax vaccine. So as Commander in Chief of the military he would allow his military personnel to be vaccinated when he himself has refused!

WT: USAMRIID [U.S. Army Medical Research Institute of Infectious Diseases] has stated [4] that "there are insufficient data regarding efficacy against inhalation anthrax in humans, although studies in rhesus monkeys indicate it is protective." So why are they administering it?

LH: Good question. Anthrax has been a fairly easy-to-reproduce microorganism that lots of people have capability of reproducing and spreading. Why all of a sudden would the Pentagon reverse its long-held position that it should not be administered? Haven't they learned enough from the Gulf War Syndrome?

WT: What evidence do you have that anthrax vaccine is contaminated?

LH: Look at all the vaccines. For example, the Clinton administration has stated that it's mandatory that 12-hour-old infants get hepatitis B vaccine. This is insane. It has no risk/benefit analysis done to it. We don't know if this vaccine is killing and maiming more people than it's helping. Besides the fact that this particular vaccine has carcinogenic enzymes in it, it doesn't make any sense whatsoever to give it to infants, because 96 percent plus of the people who get hepatitis B get it through sexual transmission or IV drug use. Plus the fact that those who get it develop life-long immunity and they do not develop major long-term problems.

The issue becomes how many people are being harmed by getting these vaccines. According to the CDC's own data [1], potentially 25,000 to 35,000 people were injured from that one vaccine. And consider all 18 or so vaccines that the federal government now is allegedly mandating (you still have religious and spiritual exemptions, so it's really against your civil rights to be told you must get a vaccine for school or work). If you use the CDC's own data, you find you have an ongoing holocaust of vaccine-induced injuries to the tune of as many as 800,000 vaccine-induced injuries occurring every year in the United States that you don't hear a word about from the federal government or mainstream media. So isn't that strange?

But today in the newspaper you do hear that the federal government wants to reevaluate nutritional supplements because three college wrestlers died of taking hormones. And yet we have 800,000 people sustaining vaccine-induced injuries, and you don't hear a word about it. If you don't think, given that information, that there's a covert operation here or an alternative agenda here...

WT: What's the agenda?

LH: According to top military personnel that I've interviewed from the Pentagon, the apparent agenda is a new world order where a strong U.S. military represents a liability.

WT: Sounds crazy. Why would they jeopardize their own troops?

LH: Because if you have rah-rah American patriotic military people who are stockpiling weapons and these people are healthy, happy, and prosperous, and you tell them "No, you've got to put down your guns and give up your national sovereignty and take orders from U.N. peacekeeping officials, and NATO Alliance officers" and soldiers are asked whether they'd be willing to shoot on American citizens before they give them a gun It may sound like foolish conspiratorial nonsense, until you evaluate you who this information is coming from: the senior Pentagon officials I've interviewed who take this threat seriously.

WT: Richard Preston [author, *The Cobra Event*] recently said [5] the Russians are actively developing advanced, genetically-engineered bioweapons and working with the Club Mad rogue nations and *Jane's Defence Weekly* [11] just announced that Russia has developed a highly contagious super black plague. Aren't those realistic external threats?

LH: The Russians had the capabilities for doing this for years, so when you read these press reports, what are they really telling you that's new? They're telling you propaganda. What's the motivation behind the news? It's persuasion. Look at the motive behind the persuasion, and

what is it? They're preparing us for biological holocaust and they're going to blame it on the Muslims, Christian patriots, and militia groups. The militia groups are already dysfunctional because they're penetrated by agitators.

Interesting that our good old friend Larry Wayne Harris [6] is again in the center of this controversy. He alleges to be a Christian and patriot, and yet he goes to the Preparedness Expositions and shows the hardware to produce and disperse the bioweapons and tells you and writes [7] how to go out and produce these bioweapons and distribute them. This man acknowledges being a CIA operative, acknowledges having friends from the CIA that feed him, alleges he was involved with the CDC.

American intelligence officials are seeding authors, reporters, and investigative journalists, saying that it's the Christian patriots who are now the ones who are suspected of being the future terrorists in bioweapons attacks. If this isn't an obvious setup, my name isn't Len Horowitz. Harris is setting up the Christian and patriot movements to be the fall guys for the most untrustworthy people who are in charge of these bioweapons.

When you look at the videotape [Gulf War Syndrome: the Spreading Epidemic Cover-up], you see that we -- the U.S. government and our companies -- supplied Saddam Hussein with biological and chemical weapons at least up until two weeks before he invaded Kuwait [8]. And now there's some evidence that Joyce Riley [9] cites that he may have even been getting these during the war.

And when you see who is involved in the corporations that developed the vaccines that most plausibly initiated Gulf War Syndrome, such as Tanox Biosystems [12] of Houston, Texas -- co-owned by James Baker III, secretary of state under George Bush, who is a major shareholder in Tanox -- it was George Bush who said this aggression shall not stand, and it was his administration who supplied Saddam Hussein with all the military and biochemical weapons they needed. And when you see these people tested those vaccines on prisoners in Huntsville Prison in Texas and they developed Gulf War Syndrome-like symptoms long before the Gulf War, can you trust these people?

WT: What do you know about Michigan Biologic Products Labs, the sole supplier of anthrax vaccine to the military?

LH: Look for links to I. G. Farben, George Bush, and the Nazis. It's seldom I don't find that those who are suspected of foul play are not led by the people or their heirs who were intimately involved in the biological weapons industry under Hitler and that we in the U.S. were literally partners with those people. I'm speaking about the well-documented historical partnership between I.G. Farben, Bayer, Merck & Co, and the Rockefellers [1].

In fact, the president of Merck, George W. Merck, was America's biological weapons industry director, personally appointed by President Roosevelt and Secretary of War Stinson in the early 1940s. And in 1945, when Hitler realized he was going to lose the war, he ordered Martin Bormann, the Third Reich's economic chief, to bury his war chest to assure Germany's economic recovery after WW II, but also to assure a virtual monopoly over the world's pharmaceutical and chemical industries and the "rise of the Fourth Reich." Much of that money went into Merck & Co.

Now this at the exact time that George W. Merck is advising President Roosevelt on America's biological weapons status, as director of the industry. And follow the history of those Nazis, including Erik Traub, Hitler's top bioweapons developer -- who was brought over by Henry Kissinger and General Bolling in Project Paperclip -- and the exportation of 2000 Nazis into the U.S. industrial and intelligence organizations. And Traub went to work for the U.S. Navy biological research lab, which is affiliated with many of the academic institutions

in the U.S. that are the premier biological weapons development and testing operations.

You have to begin to see that there is a whole underlying network of extraordinarily wealthy individuals, in fact, who have an ideology for population reduction, and specifically, the Merck company's fund as well as the Rockefeller Foundation, two of the premier American population control funding agencies. And when you see that these people are multinational supporters, and you understand that their ideology for population reduction follows the same reasoning that Hitler followed with racial hygiene: to make it American intelligence's and national security's primary interest for foreign policy.

This policy was funded by Prescott Bush (George Bush's father), General William Draper, and the Rockefellers - the first people in the congress in 1968 that came out in favor of population reduction in the third world -- and translated into legislation by Henry Kissinger in National Security Memorandum 200, penned in 1971.

So you begin to see that these are the same people with the same agenda and the same money. And far more money because they've invested it all those years. And today's history that is unfolding before our eyes is a repeat.

WT: According to the U.S. Army Medical, Chemical, and Biological Defense Program [10], the Anthrax vaccine licensed to USAMRIID is a killed vaccine tested to be free of mycoplasma incognitus (although it admits that "It is a difficult organism to detect under some circumstances") and has been available since the early 70s. So what makes you think it's potentially contaminated?

LH: That's the exact period of time I've been talking about. It doesn't matter if it's dead or alive. The anthrax bacterial protein, when it combines with your own host cell proteins, forms what is called an "antigenic complex": a combination of your own host cell protein with a foreign bacterial protein. The body recognizes the entire complex as foreign, and it mounts an immune response against the entire complex, including against your own host cell protein. And now you have an autoimmune illness developing that results in autoimmune diseases such as lupus, chronic fatigue, multiple sclerosis, and rheumatoid arthritis and doctors say "We don't know what caused this." They're doing it for population reduction.

WT: Of course, unlike bioweapons, vaccines can target specific groups (except perhaps for genetically-engineered bioweapons).

LH: Exactly. For example, the most plausible vaccine that initiated AIDS was the 1976 and 1978 strain of hepatitis B given to retarded children, gay men, and blacks - the same targets as Hitler. And now they're targeting militia groups.



Troubled Times



Goo Globbs

From the Sightings web site, [Goo Globbs](#) over Washington State
Military Conducting Biological Warfare in Washington
Air Force General Threatens Local Resident
from Anita Sands, 12-12-97

In August of 1994, a bizarre sequence of events began to occur in the small town of Oakville, Washington. Gelatinous blobs of biological material began to rain down over an area of over 20 square miles during a storm. It would happen six times in 1994, and continue periodically thereafter. The latest was during the third week of June 1997. The fact that this was going on would not generally be known outside of Oakville until an episode of Unsolved Mysteries on Thursday, May 8, 1997, hosted by Robert Stack: (9 min, 36 seconds)

(Introduction, **Robert Stack**): “It came from the skies to wreck havoc on the earth. It sounds like a bad science fiction movie, but for the little town in Washington there was nothing entertaining about the scourge that befell them in 1994. Six times it rained down from above, leaving dozens of local residents ill, and several pets and small animals dead.”

“It all happened in Oakville, Washington, population 665. Here in Oakville, clouds fill the skies daily, bringing rain some 275 days a year. So, when it began pouring on the morning of August 7, 1994, no one was particularly concerned - until they realized it wasn't raining rain. It was raining tiny blobs of gelatinous goo. It came down in torrents, blanketing 20 square miles, and brought with it something of a plague.”

Maurice Gobeil (local resident): “I got sick, my wife got sick, my daughter got sick and everybody that lived here got sick.”

Beverly Roberts (local resident): “Everybody in the whole town came down with something like the flu, only it was a really hard flu that lasted from seven weeks to two or three months.”

Robert Stack: “The local police were among the first to report the perplexing precipitation. Officer David Lacey was on patrol with a civilian friend at 3am when the downpour began.”

David Lacey (police officer): “We turned our windshield wipers on, and it just started smearing to the point where we could almost not see. We both looked at each other and we said 'gee this isn't right'. We're out in the middle of nowhere, basically, and where did this come from?”

Robert Stack: “Officer Lacey pulled into a gas station to de-goo his windshield. As an added precaution, he put on a pair of latex gloves.”

David Lacey (police officer): “The substance was very mushy, almost like if you had jello in your hand. You know, you could pretty much squish it through your fingers. We knew it wasn't something we would normally see, because we had never experienced it before. We had some bells go off in our heads that said that basically 'this isn't right, this isn't normal.’”

Robert Stack: “Local resident Dotty Hearn was equally baffled. By the time she stepped outside that morning, the storm had ended, but the blobs were everywhere. “

Dotty Hearn (local resident): “It looked like hail, laying on top of the wood box and everywhere else, so I just went over and I touched it. It wasn't hail. It was a gelatinous material.”

Robert Stack: “By mid-afternoon, officer Lacey had inexplicably taken ill.”

David Lacey (police officer): “I was to the point where I could hardly breathe. I started to put together that possibly whatever the substance was, it had made me violently sick and ill like I had never been before, to the point where it just totally shut me down.”

Robert Stack: “Across town, Dotty Hearn wasn't fairing much better.”

Dotty Hearn (local resident): “I started feeling dizzy, and everything started moving around. It got worse, and as it did I became increasingly nauseated.”

Robert Stack: “An hour later, Dotty's daughter and son found her sprawled on the bathroom floor.”

Sunny Barclift: “She was cold, drenched with perspiration and pale. My mom had been vomiting, had extreme vertigo and had been complaining that she had extreme difficulty with her vision.”

Robert Stack: “Dotty would spend the next three days in the hospital. They diagnosed her with ‘a severe inner ear infection.’”

Sunny: “For some reason, as we were going out the door, I remembered the substance, and I wondered if perhaps it might have had some sort of effect on her. So, I opted at that moment to take a sample of the gelatinous material to the hospital.”

Robert Stack: “A lab technician found the first startling clue. The substance contained human white blood cells, but exactly what it was could not be determined. The goo was promptly forwarded to the Washington State Department of Health for further analysis.”

Mike McDowell (Microbiologist, WSDH): “It was very uniform. There was no structure that we could see visibly with a microscope. I set it up on various microbiological media and attempted to isolate bacteria.”

Robert Stack: “Mike McDowell discovered that the sample was literally teaming with two species of bacteria, one of which make its home in the human digestive system.”

Sunny: “The initial speculation was that it might have been human waste from an airliner, however that was out, because under FAA regulations aircraft waste matter is dyed blue. This material was not blue, but crystal clear in color.”

Robert Stack: “The blobs rained down over Oakville six times over a three week period. Dozens of people took ill and many animals died after coming into contact with the toxic droplets. But the nature of the substance, and any connection it may have had with the outbreak, remained a mystery. Dotty took a sample of the material to a private research lab.”

Tim Davis (Microbiologist, Amtest Labs): “Here we have sample 128-76. I saw what I think was a eukaryotic cell, which was basically a cell that has a definable nucleus and is present in most animals.”

Robert Stack: “Translation? The goo was alive. How in the world did living matter make its way into the clouds? It was as mind-boggling as the substance itself. Perhaps inevitably, the finger of suspicion was pointed directly at the military. The Air Force denies any knowledge of the substance, or any involvement in creating or dispersing it. Local residents, however, don't buy it.”

Sunny: “We had a significant number of military aircraft flying over the home prior to this happening.”

Dotty: “Every day almost, there were low flying helicopters that were black in color. We kind of thought it might have come from them.”

Maurice: “They let off things in the air all the time here. There's testing done all over the place. There are places you can't go into.”

Robert Stack: “Translation - germ warfare. However, it seems unlikely, given the severe international restrictions regarding experiments with biological weapons in populated areas. At present, it is impossible to say what this goo was or where it came from. Unfortunately, all samples of this substance are gone, making further study impossible. Perhaps the answer will come someday soon, when the skies open up over another small community, and the blobs once again fall to earth.”

Media coverage of these events didn't stop there. A Seattle television station show called Evening Magazine also broadcast a story on the goings-on in Oakville in 1997. The Seattle Post Intelligencer had stories on August 18th and 20th in 1994 shortly after the original Unsolved Mysteries broadcast.

Evidence that the same type of activity may still be occurring in Washington State came in on Seattle TV Channel 5, 5:30pm, on December 9, 1997, in which mysterious “blobs” of material are now falling in Everett, Washington. According to the television news report on December 9th, mysterious goo turned up in a parking lot in Everett, Washington. Appearing to be a clear, gel-like substance similar to that which has been periodically falling from the skies since 1994, coincident with the overflight of military aircraft, it was discovered after a storm. Hazardous materials testing failed to discover what the substance was. Samples have been sent to a laboratory for testing. The news broadcast made reference to six 1994 falls of similar unidentifiable material in Oakville, Washington. Testing results should be known within a week, according to the news broadcast.

FLUBBER fell on the wrong Washington.



Troubled Times



Blaming Chemtrails

The UFO - Chemtrail Connection

By Brenda Livingston, August 1, 2000

Dear Jeff--I am so pleased that George Filer has his radar up for connections between UFOs and 'Chemtrails'. *bravo!* Over the last year or more both Greg Avery and I have been researching this area and have worked closely the last few months to reveal some very strange happenings in our skies associated with persistent contrails. One major goal we both pursued was to inspire both 'Chemtrail'/contrail and UFO researchers to look up and take a hard serious look at possible connections. This goal may indeed be on the brink of realization. Greg Avery has developed videographic techniques using the Canon GL-1 Video Camera capturing spectacular images of fast moving dark objects moving in, around and through persistent contrails and associated clouds. Over the last year, I have taken and collected hundreds of photographs honing an enhancement/enlargement technique which brings known and unknown objects to immediate focus in close-up images. I have placed many photos and enhanced images which appear to reveal an association between anomalous objects and persistent contrails on my website Tracers.

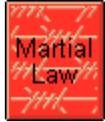
A very strange story is being revealed by chemtrail researchers: strange and unusual forms and content within samples... red blood cells... synthetic material... protein... some mixed with fuel components. These and the mysterious concoctions of fungi, bacteria and unidentifiable matter presented - if factual and reliable evidence - seem almost beyond the realm of any logical black government project. These results even try the most imaginative minds to come up with who would rain this material down on the citizenry or why. In all the efforts - to show evidence that PCs (persistent chemtrails) are unusual and contain unusual and perhaps unhealthy material - the critical area of associated anomalous objects has not been examined with the thoroughness it deserves... and, most unfortunately, has been treated as a "foreign object" threatening to de-legitimize current work in the PC area. Sightings of spherical and oval shaped objects of varying sizes hovering near and moving in and out of persistent contrails are increasingly being reported worldwide. While witness testimony and trained field observations can present error - these can be invaluable in ascertaining new evidence and direction for study. With new technology and techniques becoming available, photographic and videographic evidence may hold the key to understanding the source, formation and behavior of PCs, related "clouds" and aircraft and anomalous objects associated with PCs.

I personally do not believe that any study of the PC phenomena can be fully legitimate or reach the truth without a full scale study of these objects which clearly appear to be a part of the form and function of persistent contrails ("chemtrails"). I have been watching the steady increase in persistent contrails - PCs- which often fill the skies with a milky white haze or strange cloud remnants closely over the last year and a half. And I have attempting to document what I have witnessed... the contrails themselves, the apparent aircraft creating them and what appear to be anomalous objects in and near specific types of contrails. Over time after much observation and documentation - a theory has developed. The process has been revelatory ... and gradual awakening to a realm very new to me. Piece by piece the puzzle began to take shape before me. My journey into the contrail mystery began on February 25, 1999 with a sighting of a broad persistent contrail formed by a KC-135 no more than 10,000 feet overhead and two objects hovering and moving through it.. Since then... -I have seen large white oval objects hovering and moving in and out of contrails... usually appearing to observe... traveling slowly. These appear to self-illuminate before moving off at an extreme speed or "winking out". I witnessed one of these objects (March 16, 1999)

hovering in the southwestern sky over the lake with a mid-sized aircraft flying past and in front of the object - the aircraft making a sudden dive to apparently avoid the object. Attempting to compare the two- I would estimate that the size of the white oval object was at least the length of the aircraft and twice plus its height... no small object.



Troubled Times



Panic Excuse

Media Hyped Up War of the Worlds: No Panic When Martians Invaded 60 Years Ago

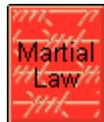
[BBC News Online](#), Nov 4, 1998

On the 60th anniversary of one of the most famous radio broadcasts in history - Orson Welles' War of the Worlds - new evidence suggests that America did not panic as is commonly believed. Millions tuned in 60 years ago to hear Orson Welles' adaptation of the HG Wells science fiction classic. Set in 1938 the American broadcast presented the Martian invasion as if it was really happening. Although a warning was broadcast at the start of the radio play, many missed it. Later, while listening to dance music they heard, "Ladies and Gentlemen we interrupt this broadcast ... " and the invasion was underway. An explosion on the surface of Mars; gas clouds heading for Earth; cylinders land at Grovers Mill, New Jersey; Martians stride over the landscape destroying the US army with their heat rays.

The following days newspapers said many panicked but a new assessment of what happened that night says the hysteria has been exaggerated. According to Robert Bartholomew of James Cook University in Australia, panic was the exception and not the rule. "People were concerned," he says, "but there is very little evidence that they actually did anything." "The supposed panic was put down to the power of the media. The fact that many believe a panic took place when it did not, is also testimony to the power of the media." Listening to the play some people thought they could hear the Martians and smell their poison gas. Others believed that it was not the Martians but the Germans who were invading America in a surprise attack with a secret weapon. "Human perception is unreliable," says Robert Bartholomew. "Some people saw what they believed was happening. It shows that believing is seeing." He also believes that something like it could happen again. "It is not a question of if but when there will be another scare like it. It will take a different form but we are still vulnerable. We have to learn the lessons of the War of the Worlds."



Troubled Times



Terrorism Excuse

War Watch 2000 - Preparing for a Grave New World

By William S. Cohen, United States Secretary of Defense

Washington Post, July 26, 1999

In recent months, the eyes of the world have rightly focused on the threat to American interest and values in the Balkans. At the same time, we cannot afford a national case of farsightedness that precludes us from focusing on threats closer to home, such as the potential danger of a chemical or biological attack on U.S. soil. The United States now faces something of a superpower paradox. Our supremacy in the conventional arena is prompting adversaries to seek unconventional, asymmetric means to strike our Achilles' heel. At least 25 countries, including Iraq and North Korea, now have - or are in the process of acquiring and developing -- weapons of mass destruction. Of particular concern is the possible persistence in some foreign military arsenals of smallpox, the horrific infectious virus that decimated entire nations down the ages and against which the global population is currently defenseless. Also looming is the chance that these terror weapons will find their way into the hands of individuals and independent groups - fanatical terrorists and religious zealots beyond our borders, brooding loners and self-proclaimed apocalyptic prophets at home.

This is not hyperbole. It is reality. Indeed, past may be prologue. In 1995 the Japanese cult Aum Shinrikyo used sarin gas in its attack on the Tokyo subway and also planned to unleash anthrax against U.S. forces in Japan. Those behind the 1993 World Trade Center bombing were also gathering the ingredients for a chemical weapon that could have killed thousands. In the past year, dozens of threats to use chemical or biological weapons in the United States have turned out to be hoaxes. Someday, one will be real. What would that day look like? A biological agent would sink into the respiratory and nervous systems of the afflicted. The speed and scope of modern air travel could carry this highly contagious virus across hemispheres in hours. Indeed, the invisible contagion would be neither geographically nor numerically limited, infecting unsuspecting thousands -- with many, in turn, communicating the virus to whomever they touch.

The march of the contagion could accelerate astoundingly, with doctors offering little relief. Hospitals would become warehouses for the dead and the dying. A plague more monstrous than anything we have experienced could spread with all the irrevocability of ink on tissue paper. Ancient scourges would quickly become modern nightmares. Welcome to the grave New World of terrorism - a world in which traditional notions of deterrence and counter-response no longer apply. Perpetrators may leave no postmark or return address - no tell-tale signs of a missile launch, no residue of TNT that can be traced to a construction site, no rental truck receipts leading to the foolhardy suspects. In fact, their place of business may be a number of countries that are conducting bioengineering under the guise of pharmaceutical research. Penicillin for the poor, or ebola for the enemy? Who is to say, and with what deterrent is America left?

Preparation is itself a deterrent. By minimizing the death and destruction would-be terrorists hope to spawn, we reduce the likelihood they will even try. Yet a chemical or biological strike on American soil could quickly surpass any community's ability to cope. As part of a federal interagency effort launched last year by President Clinton and led by the National Security Council, the Defense Department is doing its part to prepare the nation for the catastrophic consequences of an attack that unleashes these horrific weapons. Because it has long prepared to face this grim possibility on the battlefield, the military has

unique capabilities to offer in the domestic arena as well. Several core principles are guiding our efforts.

First, any military assistance in the wake of a domestic attack must be in support of the appropriate federal civilian authority - either the Department of Justice or the Federal Emergency Management Agency.

Second, an unequivocal and unambiguous chain of responsibility, authority and accountability for that support must exist.

Third, military assistance should not come at the expense of our primary mission - fighting and winning our nation's wars. A special Task Force for Civil Support is being created to ensure that we have the military assets necessary to help respond domestically while still meeting our foremost mission.

Fourth, our military response efforts will be grounded primarily in the National Guard and Reserve. In contrast to their more familiar role of reinforcing active-duty forces overseas, our guard and reserve are the forward-deployed forces here at home. Special National Guard teams are being positioned around the nation to advise and assist communities upon request.

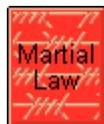
Finally, we must not and trample on American lives and liberties in the name of preserving them. Fears about the military's role in domestic affairs are unfounded, as evidenced by a long history of reasonable and successful military support to communities ravaged by natural disasters, such as fire and flood.

As in the past, any military support will be precisely that - support. Both legal and practical considerations demand it. The Posse Comitatus Act and the Defense Department's implementing policies are clear - the military is not to conduct domestic law enforcement without explicit statutory authority, and we strongly believe no changes should be made to Posse Comitatus. Also clear is that the military's unique assets are most valuable when used to supplement -- not supplant -- continuing federal, state or local efforts. This is one of the reasons we are helping to train the local emergency "first responders" in 120 cities under a program mandated by Congress and now being transferred to the Justice Department. But merely managing the consequences of an attack is not sufficient. We must be vigilant in seeking to interdict and defeat the efforts of those who seek to inflict mass destruction on us. This will require greater international cooperation, intelligence collection abroad and information gathering by law enforcement agencies at home. Information is clearly power, and greater access to information will require the American people and their elected officials to find the proper balance between privacy and protection.

There need be no fear or foreboding by the American people of the preparations of their government. On the contrary, the greater threat to our civil liberties stems from the chaos and carnage that might result from an attack for which we had failed to prepare and the demands for action that would follow. Mere months before the attack on Pearl Harbor shocked America out of its slumber, Walter Lippmann wrote, "Millions will listen to, and prefer to believe, those who tell them that they need not rouse themselves, and that all will be well if only they continue to do all the pleasant and profitable and comfortable things they would like to do best." The race is on between our preparations and those of our adversaries. We are preparing for the possibility of a chemical or biological attack on American soil because we must. There is not a moment to lose.



Troubled Times



Potential

U.S. not Prepared for Domestic Terrorism, Report says

CNN.com, December 14, 2000

The United States needs a new White House Office for Combating Terrorism, with a director chosen by the president and confirmed by the Senate, according to a blue-ribbon panel looking into the U.S. strategy to respond to domestic terrorism. The congressionally mandated panel, chaired by Virginia Gov. James Gilmore, released its report on Thursday, saying a terrorist attack using a nuclear, chemical or biological weapon on U.S. soil is "inevitable." "Because the stakes are so high, our nation's leaders must take seriously the possibility of an escalation of terrorist violence against the homeland," said the panel's report to the president and Congress. The panel described U.S. efforts to combat terrorism as "fragmented, uncoordinated, and politically unaccountable." "The next President should develop and present to Congress a national strategy for combating terrorism within one year of assuming office," the report concluded. "Setting priorities is essential," said the report by the Advisory Panel to Assess Domestic Response Capabilities for Terrorism Involving Weapons of Mass Destruction.

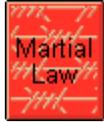
Among the many questions the report says need to be answered:

- Should the nation seek a higher level of preparedness for its large urban centers than for its rural areas?
- What relative attention should be given to preparing for "conventional terrorism, radiological incidents, chemical weapons, or biological weapons?"
- With respect to biological weapons, which pathogens deserve priority?

The report also said that Congress should streamline the number of committees with jurisdiction over terrorism issues from 25 down to one joint committee or two separate committees -- one for the Senate and one for the House. The report also recommended scrapping 1995 guidelines put out by the director of the Central Intelligence Agency which prohibit using international intelligence informants who may have been involved in human rights abuses. The move would improve the nation's "indication and warning" intelligence on what terrorist groups may be planning, the report said.



Troubled Times



Outside Threat

From Norio Hayakawa's website:

Today, America would be outraged if U.N. troops entered Los Angeles to restore order. Tomorrow they will be grateful! This is especially true if they were told that there were an outside threat from beyond, whether real or promulgated, that threatened our very existence. It is then that all peoples of the world will plead to deliver them from this evil. The one thing every man fears is the unknown. When presented with this scenario, individual rights will be willingly relinquished for the guarantee of their well-being granted to them by the World Government.

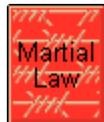
Dr. Henry Kissinger, Evians, France, 1991

The world can therefore seize the opportunity (Persian Gulf crisis) to fulfill the long-held promise of a New World Order where diverse nations are drawn together in common cause to achieve the universal aspirations of mankind.

George Herbert Walker Bush



Troubled Times



FBI Warning

FBI puts Fear of God in Year-End Revellers

The Times, Nov 2, 1999

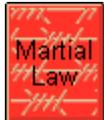
It might be better to stay quietly at home on New Year's Eve, if the FBI's latest warnings of millennial doomsday orchestrated by a hodgepodge of extremist groups are anything to rely on. The threat of violence is "very real", according to an alarming report the FBI will present to a closed-door meeting in North Carolina today of the International Association of Police Chiefs of Police. "The volatile mix of apocalyptic religious and New World Order conspiracy theories may produce violent acts aimed at precipitating the end of the world as prophesised in the Bible," the report, a copy of which was leaked to the Washington Post, grimly says.

FBI agents have spent months studying sinister ideologies to reach their conclusions of possible impending menace. They cast their eyes over white supremacists who seek to initiate a race war; "Black Hebrew Israelites" with the same intention; cults which anticipate a violent Armageddon; and radical elements of private militias who fear the United Nations will initiate an armed takeover of America and subsequently form a One World Government. Y2K power cuts could be enough to spark a millennial uprising. Jerusalem is definitely a no go area for seeing in the millennium, according to the FBI's gloomy calculations. The report says: "Israeli officials are extremely concerned that the Temple Mount, an area seething with tension and distrust among Muslims and Jews, will be the stage for violent encounters between religious zealots. Additionally, several cults have already made inroads into Israel, apparently in preparation for what they believe to be the endtimes."

The report is named Project Megiddo, after a hill in northern Israel that has been the site of many battles. The Hebrew word Armageddon for the final clash at the end of the world between forces of good and evil means "Hill of Megiddo", the study says. Among fringe American groups identified as having members who pose a violent threat are Christian Identity, Odinists and Aryan Nations, all white-supremacy sects. But they may be far from all. The FBI report says: "Armed with the urgency of the millennium as a motivating factor, new clandestine groups may conceivably form to engage in violence towards the US Government and its citizens."



Troubled Times



New Year's Eve

From: USCMike1@aol.com
Date: Sun, Oct 10, 1999, 3:46am
Subject: Navy-Marines to Blockade & Close Major Freeways to Travel at end of December

Dear Citizens, Patriots, Veterans, et al:

Bran S. Hunt <bh_medic@juno.com> says contacts in the Navy and Marines reveal that they have been instructed to blockade and close all major freeway arteries to travel at the end of December. THIS IS MARTIAL LAW! It is here, now.
USCMike1

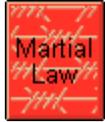
Subj: State Alert
Date: 10/9/99 10:47:44 PM Pacific Daylight Time
From: bh_medic@juno.com (bryan s Hunt)
To: USCMike1@aol.com

Southern California major freeway arteries are going to be closed by United States Marines and Navy, the end of December it was first reported to me by my mother who is a nurse up in Atascadero, who heard a broadcast from The US Navy also my contact with NRA attended a gunshow and talked with a marine for over 2 hours who confirmed the closures. Sorry, for security reason I cannot give up names of these people.

Major Bryan S Hunt
State Medical Command
California State Militia



Troubled Times



UK Martial Law

What follows is an article in today's newspaper.

Military on Millennium Eve Alert

Guardian, Oct 28, 1999

The armed forces have been put on high alert to deal with any protracted outbreaks of public disorder during the extended millennium holiday. Government sources yesterday said contingency planning was now almost entirely focused on public disorder and/or hysteria, rather than on breakdowns in public services caused by the millennium bug. The hope in Whitehall is that Britain and its advanced services will be virtually immune to any computer glitch that cannot recognize the century date change. Giving details of what is said to be the biggest planning operation since the Second World War, Jack Straw, the home secretary, said the ministry of defense had been drafted onto the civil contingencies committee he chairs. Also on the committee are an assistant Metropolitan police commissioner, the head of the Association of Chief Police Officers and officials from Northern Ireland, Scotland and Wales.

With hundreds of thousands of people expected on the streets of London alone on the millennium eve, the expanded committee has met three times since July 1st and is to meet virtually weekly between now and December 31st. Unveiling a government millennium center in the cabinet office, Mr. Straw said "enhanced stand-by arrangements" had been put in place for the military in case of disorder, computer breakdown or unforeseen disasters such as abrupt weather change. "But the police and fire services should be able to deal with a wide range of problems without outside help," he said. "We have to plan for a wide range of human behavior."

So why does Whitehall anticipate this New Years eve will be any different than any other? The government has already reassured the people that the UK will be Y2K free. So why do they anticipate any problem? And note the mention of "unforeseen disasters". Just what are their real intentions? (As if we didn't already know.) I suppose its just pure coincidence that Britain's arrangements match those rumored to be in place, in the USA, by Dec 31st. I wonder how many other countries have similar arrangements? Looks like the New Year might be more interesting than I'd thought. Keep you posted.

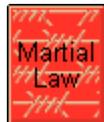
Offered by [Brian](#).

It has been mentioned on the radio (a member of my staff told me he listened to this report) that the army will be in place to control all the bridges over the river Thames in London on New Years Eve. The reason given was "to stop revelers from throwing themselves off the bridges". Mmm, so we have all become lemmings this yea. There has never been an army involvement like this in any previous new years. Bridges are strategic points in the control of any city that is like by a large river.

Offered by [Ian](#).



Troubled Times



Anthrax Scare

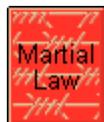
There is evidence that Larry Harris was setup in early 1998 to be an Anthrax scare, and excuse to effect Martial Law, with the CIA or other covert operants manipulating the situation, per

Terry W. Stough, B.A., M.H.A
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By [Leonard G. Horowitz](#), D.M.D.,M.A.,M.P.H
President, Tetrahedron, Inc
A Nonprofit Educational Corporation
P.O. Box 402 Rockport, MA 019665
08-546-6586



Troubled Times



FEMA

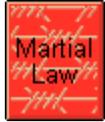
The Winds states:

In the event of a national emergency declared by the President of the United States, the **Federal Emergency Management Agency** (FEMA), would be invested with the power to suspend the U.S. Constitution and is positioned to take control of the United States government and its citizens. ... The authority of eleven preceding Presidential Executive Orders (1939 through 1991) has been consolidated into Order #12919. This concentration of executive authority invests FEMA with absolute power over:

- All United States communications facilities (EO 10995)
- Electrical power, petroleum, gas, fuels and minerals, public and private (10997)
- Food supplies, agricultural lands and facilities (10998)
- Transportation of any kind, including private, and control of seaports, waterways and highways (10999)
- Civilian labor forces without regard to financial remuneration as authorized under the *Defense Production Act of 1950* (11000)
- Health, education and welfare institutions (11001)
- All airport and air transportation, public, private and commercial (11003)
- Railroads, inland waterways, and public storage facilities (11005)



Troubled Times



Appointees

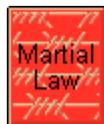
FEMA being given so much power. In my opinion, it is for simple political expediency. The director of FEMA has to take all the heat from specific acts it takes, while the President, being subject to all manner of political considerations, can sit back and take the position that he didn't make unpopular specific decisions himself; but that he backs the legally responsible agency that did, in fact make those decisions and perform those actions.

One absolutely necessary element of the Presidents actually handing so much power to FEMA is that he must trust the head of FEMA absolutely. Please note that Clinton's Chief of Security while Governor of Arkansas was Raymond 'Buddy' Young. Young was appointed Region Six FEMA Boss in Clinton's first presidential term. Young has recently been moved to Offices in Washington D.C. Will the present FEMA Chief step aside quietly or will he be simply replaced? It is totally within Clinton's power to do so.

Offered by [Ron](#).



Troubled Times



Posse Comitatus

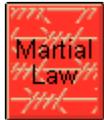
Cohen Predicts Army Will Patrol Streets

[Sightings](#) Political Articles

But using the U.S. military in a domestic law enforcement role would require revisions to laws in force for more than a century, cautions Shreveport attorney John Odom, Jr. “You can't do it from the Defense Department side unless Congress dramatically revises the Posse Comitatus laws.” said Odom, a colonel in the U.S. Air Force Reserve and a reserve Judge Advocate. “The 1878 law specifically prohibits the use of the military in domestic law enforcement unless authorized by Congress or the Constitution and does not allow for military intervention through action by the Secretary of Defense or even an Executive Order from the President” Odom said.



Troubled Times



State of Emergency

PROLIFERATION OF WEAPONS OF MASS DESTRUCTION
THE WHITE HOUSE
Office of the Press Secretary
For Immediate Release November 14, 1994

EXECUTIVE ORDER
#12938
PROLIFERATION OF WEAPONS OF MASS DESTRUCTION

By the authority vested in me as President by the Constitution and the laws of the United States of America, including the **International Emergency Economic Powers Act** (50 U.S.C. 1701 et seq.), the **National Emergencies Act** (50 U.S.C. 1601 et seq.), the Arms Export Control Act, as amended (22 U.S.C. 2751 et seq.), Executive Orders Nos. 12851 and 12924, and section 301 of title 3, United States Code,

I, WILLIAM J. CLINTON, President of the United States of America, find that the proliferation of nuclear, biological, and chemical weapons ("weapons of mass destruction") and of the means of delivering such weapons, constitutes an unusual and extraordinary threat to the national security, foreign policy, and economy of the United States, and hereby declare a national emergency to deal with that threat.

Accordingly, I hereby order:

Section 1. International Negotiations. It is the policy of the United States to lead and seek multilaterally coordinated efforts with other countries to control the proliferation of weapons of mass destruction and the means of delivering such weapons. Accordingly, the Secretary of State shall cooperate in and lead multilateral efforts to stop the proliferation of weapons of mass destruction and their means of delivery.

Sec. 2. Imposition of Controls. As provided herein, the Secretary of State and the Secretary of Commerce shall use their respective authorities, including the Arms Export Control Act and the International Emergency Economic Powers Act, to control any exports, to the extent they are not already controlled by the Department of Energy and the Nuclear Regulatory Commission, that either Secretary determines would assist a country in acquiring the capability to develop, produce, stockpile, deliver, or use weapons of mass destruction or their means of delivery. The Secretary of State shall pursue early negotiations with foreign governments to adopt effective measures comparable to those imposed under this order.

Sec. 3. Department of Commerce Controls. (a) The Secretary of Commerce shall prohibit the export of any goods, technology, or services subject to the Secretary's export jurisdiction that the Secretary of Commerce determines, in consultation with the Secretary of State, the Secretary of Defense, and other appropriate officials, would assist a foreign country in acquiring the capability to develop, produce, stockpile, deliver, or use weapons of mass destruction or their means of delivery. The Secretary of State shall pursue early negotiations with foreign governments to adopt effective measures comparable to those imposed under this section.

(b) Subsection (a) of this section will not apply to exports relating to a particular category of weapons of mass destruction (i.e., nuclear, chemical, or biological weapons) if their destination is a country with whose government the United States has entered into a bilateral or multilateral arrangement for the control of that category of weapons of mass destruction-related goods (including delivery systems) and

technology, or maintains domestic export controls comparable to controls that are imposed by the United States with respect to that category of goods and technology, or that are otherwise deemed adequate by the Secretary of State.

(c) The Secretary of Commerce shall require validated licenses to implement this order and shall coordinate any license applications with the Secretary of State and the Secretary of Defense.

(d) The Secretary of Commerce, in consultation with the Secretary of State, shall take such actions, including the promulgation of rules, regulations, and amendments thereto, as may be necessary to continue to regulate the activities of United States persons in order to prevent their participation in activities that could contribute to the proliferation of weapons of mass destruction or their means of delivery, as provided in the Export Administration Regulations, set forth in Title 15, Chapter VII, Subchapter C, of the Code of Federal Regulations, Parts 768 to 799 inclusive.

Sec. 4. Sanctions Against Foreign Persons. (a) In addition to the sanctions imposed on foreign persons as provided in the National Defense Authorization Act for Fiscal Year 1991 and the Chemical and Biological Weapons Control and Warfare Elimination Act of 1991, sanctions also shall be imposed on a foreign person with respect to chemical and biological weapons proliferation if the Secretary of State determines that the foreign person on or after the effective date of this order or its predecessor, Executive Order No. 12735 of November 16, 1990, knowingly and materially contributed to the efforts of any foreign country, project, or entity to use, develop, produce, stockpile, or otherwise acquire chemical or biological weapons.

(b) No department or agency of the United States Government may procure, or enter into any contract for the procurement of, any goods or services from any foreign person described in subsection (a) of this section. The Secretary of the Treasury shall prohibit the importation into the United States of products produced by that foreign person.

(c) Sanctions pursuant to this section may be terminated or not imposed against foreign persons if the Secretary of State determines that there is reliable evidence that the foreign person concerned has ceased all activities referred to in subsection (a).

(d) The Secretary of State and the Secretary of the Treasury may provide appropriate exemptions for procurement contracts necessary to meet U.S. operational military requirements or requirements under defense production agreements, sole source suppliers, spare parts, components, routine servicing and maintenance of products, and medical and humanitarian items. They may provide exemptions for contracts in existence on the date of this order under appropriate circumstances.

Sec. 5. Sanctions Against Foreign Countries. (a) In addition to the sanctions imposed on foreign countries as provided in the Chemical and Biological Weapons Control and Warfare Elimination Act of 1991, sanctions also shall be imposed on a foreign country as specified in subsection (b) of this section, if the Secretary of State determines that the foreign country has, on or after the effective date of this order or its predecessor, Executive Order No. 12735 of November 16, 1990, (1) used chemical or biological weapons in violation of international law; (2) made substantial preparations to use chemical or biological weapons in violation of international law; or (3) developed, produced, stockpiled, or otherwise acquired chemical or biological weapons in violation of international law.

(b) The following sanctions shall be imposed on any foreign country identified in subsection (a)(1) of this section unless the Secretary of State determines, on grounds of significant foreign policy or national security, that any individual sanction should not be applied. The sanctions specified in this section may be made applicable to the countries identified in subsections (a)(2) or (a)(3) when the Secretary of State determines that such action will further the objectives of this order pertaining to proliferation. The sanctions specified in subsection (b)(2) below shall be imposed with the concurrence of the Secretary of the Treasury.

(1) Foreign Assistance. No assistance shall be provided to that country under the Foreign Assistance Act of 1961, or any successor act, or the Arms Export Control Act, other than

assistance that is intended to benefit the people of that country directly and that is not channeled through governmental agencies or entities of that country.

(2) Multilateral Development Bank Assistance. The United States shall oppose any loan or financial or technical assistance to that country by international financial institutions in accordance with section 701 of the International Financial Institutions Act (22 U.S.C. 262d).

(3) Denial of Credit or Other Financial Assistance. The United States shall deny to that country any credit or financial assistance by any department, agency, or instrumentality of the United States Government.

(4) Prohibition of Arms Sales. The United States Government shall not, under the Arms Export Control Act, sell to that country any defense articles or defense services or issue any license for the export of items on the United States Munitions List.

(5) Exports of National Security-Sensitive Goods and Technology. No exports shall be permitted of any goods or technologies controlled for national security reasons under the Export Administration Regulations.

(6) Further Export Restrictions. The Secretary of Commerce shall prohibit or otherwise substantially restrict exports to that country of goods, technology, and services (excluding agricultural commodities and products otherwise subject to control).

(7) Import Restrictions. Restrictions shall be imposed on the importation into the United States of articles (that may include petroleum or any petroleum product) that are the growth, product, or manufacture of that country.

(8) Landing Rights. At the earliest practicable date, the Secretary of State shall terminate, in a manner consistent with international law, the authority of any air carrier that is controlled in fact by the government of that country to engage in air transportation (as defined in section 101(10) of the Federal Aviation Act of 1958 (49 U.S.C. App. 1301(10)).

Sec. 6. Duration. Any sanctions imposed pursuant to sections 4 or 5 of this order shall remain in force until the Secretary of State determines that lifting any sanction is in the foreign policy or national security interests of the United States or, as to sanctions under section 4 of this order, until the Secretary has made the determination under section 4(c).

Sec. 7. Implementation. The Secretary of State, the Secretary of the Treasury, and the Secretary of Commerce are hereby authorized and directed to take such actions, including the promulgation of rules and regulations, as may be necessary to carry out the purposes of this order. These actions, and in particular those in sections 4 and 5 of this order, shall be made in consultation with the Secretary of Defense and, as appropriate, other agency heads and shall be implemented in accordance with procedures established pursuant to Executive Order No. 12851. The Secretary concerned may redelegate any of these functions to other officers in agencies of the Federal Government. All heads of departments and agencies of the United States Government are directed to take all appropriate measures within their authority to carry out the provisions of this order, including the suspension or termination of licenses or other authorizations.

Sec. 8. Preservation of Authorities. Nothing in this order is intended to affect the continued effectiveness of any rules, regulations, orders, licenses, or other forms of administrative action issued, taken, or continued in effect heretofore or hereafter under the authority of the International Economic Emergency Powers Act, the Export Administration Act, the Arms Export Control Act, the Nuclear Non-proliferation Act, Executive Order No. 12730 of September 30, 1990, Executive Order No. 12735 of November 16, 1990, Executive Order No. 12924 of August 18, 1994, and Executive Order No. 12930 of September 29, 1994.

Sec. 9. Judicial Review. This order is not intended to create, nor does it create, any right or benefit, substantive or

procedural, enforceable at law by a party against the United States, its agencies, officers, or any other person.

Sec. 10. Revocation of Executive Orders Nos. 12735 and 12930. Executive Order No. 12735 of November 16, 1990, and Executive Order No. 12930 of September 29, 1994, are hereby revoked.

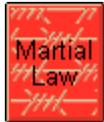
Sec. 11. Effective Date. This order is effective immediately.

This order shall be transmitted to the Congress and published in the Federal Register.

WILLIAM J. CLINTON
THE WHITE HOUSE,
November 14, 1994.



Troubled Times



Rapid Deployment

Domestic Rapid Deployment Forces

by Joseph Farah, *WorldNetDaily.com*, 1998

Under the guise of preparedness for domestic terrorist attacks, the U.S. military is training thousands of local police officers, national guardsmen and other officials to respond to national emergencies under centralized federal authority and control, according to plans revealed by Defense Department sources. In addition, U.S. military forces are stepping up training exercises in American civilian population centers, prompting constitutional concerns in some quarters.

The plans for military involvement in the civilian sector are a direct result of the "**Defense Against Weapons of Mass Destruction Act of 1996**," which mandated the federal government to develop response scenarios to domestic terrorist incidents involving nuclear, biological, chemical and radiological weapons. The legislation designated the Department of Defense as the lead agency in coordinating sweeping plans involving the Federal Emergency Management Agency, the FBI, Department of Energy, the Environmental Protection Agency and the Department of Health and Human Services. Representatives of all these agencies meet monthly as the Senior Interagency Coordination Group, or SICG.

The **Defense Appropriations Act of 1997** added funding for the Pentagon "to improve the capability of the federal, state and local emergency response agencies." "The **United States Army Chemical and Biological Defense Command** leads interagency training development and city visits," H. Allen Holmes, assistant secretary of defense for special operations and low-intensity conflict, testified to the Strategic Forces Subcommittee of the **Senate Armed Services Committee** earlier this year. "Interagency teams coordinate with fire, police, emergency medical and hazardous material officials and tailor training to city requirements. Additionally, FEMA has developed a terrorism annex to the **Federal Response Plan** to ensure coordination across all agencies at all levels."

In 1997, the Defense Department spent \$30.5 million on the training and civil response aspects of the program, Holmes reported. An additional \$10 million was dedicated to improving the **U.S. Marine Corps Chemical-Biological Incident Response Force**. This year, Congress allocated \$50 million for the domestic preparedness program. Another \$50 million is appropriated for the program in 1999. The money is for training purposes only. However, the Defense Department is lending equipment to state and local agencies, according to Holmes. The program calls for the **National Guard** to stand up 10 Rapid Assessment and Initial Detection teams in selected cities across the nation using 200 full-time active guardsmen and reservists. Members of **Army Guard** and reserve chemical companies will be trained next year to conduct searches for weapons of mass destruction.

The goal of the domestic preparedness program is to train 120 cities by 2001 and to provide mechanism for every community in the nation to "leverage federal expertise," according to the Defense Department. The interagency team has trained more than 10,000 "first responder trainers" - drawn from firefighting, law enforcement, emergency medical communities and emergency telephone operators and dispatchers - in 30 cities, according to Defense Secretary William Cohen. Another 25 cities will receive training in the next year, he said. "Our program is specifically designed so that the people we train become trainers themselves," Cohen said earlier this month in a report to the **Council on Foreign Relations** titled "*Security in a Grave New World*." "This approach will greatly magnify our efforts to produce a core of

qualified first responders across the nation."

FEMA has compiled a master inventory containing information on the resources and capabilities of each agency involved in the program and what is available to state and local officials in emergency situations. However, the information on that inventory is not available to the public or the press - only to federal and state emergency planners. Undisclosed surplus military equipment is being made available to state and local government agencies through this program. Some civil liberties groups have pointed out that the intense, coordinated rush to "fight terrorism" in America comes at an odd time - given the government's own figures reporting a 25-year low in such attacks and incidents.

The **National Association of Criminal Defense Lawyers** points out, for instance, that the overwhelming majority of law enforcement's record number of applications to eavesdrop on people through electronic surveillance technology involves investigation into drug, racketeering and gambling offenses - not terrorism. There was bipartisan support in Congress for giving the executive branch of government vast new, codified authority to plant wiretaps and electronic bugs and to confiscate property as a result of investigations in this effort to "combat terrorism."

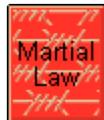
The 1996 law grants the president exclusive, unreviewable powers to designate groups "terrorist organizations." Under such powers, the government could deport suspects - including permanent residents and non-immigrants - based on "classified" or "secret evidence" under the cloak of national security. Another provision of the legislation requires banks to freeze assets of domestic groups and citizens deemed agents of such "terrorist organizations." There is no mechanism established to challenge such decisions by banks.

In a development the Defense Department claims is unrelated to the terrorism plans, more actual combat training is taking place in urban centers. Earlier this month, Marines took part in such a training exercise in Maryland. Last month, a special unit of **U.S. Marines** with assault rifles conducted maneuvers in Birmingham, AL. These exercises are part of a program called "**Training in the Urban Environment.**" All of the operations, including the exact timing of the exercises, were kept secret from the public, raising concerns about civil liberties issues. Similar exercises have been conducted recently in Chicago, Jacksonville, FL, and other U.S. cities.

The question on some minds is: Who exactly are the Marines preparing to wage war with in America's urban environments? The training is part of a certification program in "urban combat." The program includes missions, such as rescuing a pilot, which the Marines might be called to perform in foreign countries such as Somalia, military spokesmen say. Marine officials say the urban landscape adds a new dimension to the training the Marines have already received.



Troubled Times



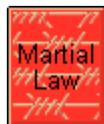
War Powers Act

The U.S. has technically been at war with it's own citizens since the 1930's time period after we were sold out by one of our own presidents, Roosevelt. The declared **National Emergency of March 9, 1933** amended the **War Powers Act** to include the American People as enemies. This allowed **Maritime Law** to come onto land. Be careful of that pretty little flag with the gold trim that sits on a pedestal in your courtrooms. That is an Admiralty flag (an ensign, a military flag) flown on the open seas, not the American flag. You will find the American flag hanging in front of my house, with *no* gold trim - the flag for common law. The US Constitution allowed for three types of laws, **Common Law** (We the People), **Contract Law** governing contracts and agreements, and **Maritime Law** that is to be used on the open seas to govern our Naval forces while out there since the ships are not on our land. Only in times of war can Maritime Law govern on land. This is proclaimed by the president. This flag changes your status from Sovereign (God's Law) to subject (the Kings Law).

Offered by [Clipper](#).



Troubled Times



Erosion

Is the current government of the United States of America *really* a democratic republic as promised by the **Constitution**?

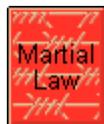
For several years I have read a number of articles that mention various **Executive Orders** that basically give the **President** the power to suspend constitutional government (everything we know and expect regarding our form of government) and impose upon it's citizenship conditions that we naturally assume could never exist within the United States. I've taken these articles with a large "grain of salt"; that is, I really didn't believe them. From time-to-time, during the last couple of years, I have been studying for myself just what these claims are based upon. What I have concluded, to my great alarm, is that with a stroke-of-the-pen the President has been given the authority to do just such a thing. The extent of the power of the President to suspend everything that we assume about our Constitutional rights is extreme. I will provide proof of the above statements a little latter in this post.

The ultimate authority, which gives these powers to the President, is provided by the United States Code, which is the "Law-Of-The-Land". This document is *huge* and complicated (as it is all "legal talk", and very difficult to follow because so much of it references other parts of the document and to a very large extent speaks in very general terms open to various interpretations that can only ultimately be determined by the courts). The site provided above helps very much as it provides a number of ways to help find what you are looking for. Although there are many sections that are applicable to my conclusions, **Title 50 War and National Defense**, is where the President gets most of his extensive and mostly unknown powers. In particular, the United States Code gives the President the authority to issue "Executive Orders". An Executive Order thus becomes an extension of the "law-of-the-land."

Offered by [Ron](#).



Troubled Times



National Emergency

Before I start talking about the **Executive Orders** that give rise to such concern, please let me make clear that although these Executive Orders were made by **President Clinton**, I have no “ax-to-grind” with President Clinton as a person. I suspect that almost any President in office during these times would place into effect similar Executive Orders. They are a response to existing conditions during these times. These Executive Orders are specifically justified by the President on the grounds described in the following excerpt from the following Executive Order:

CONTINUATION OF EMERGENCY REGARDING WEAPONS OF MASS DESTRUCTION

On November 14, 1994, by Executive Order 12938, I declared a national emergency with respect to the unusual and extraordinary threat to the national security, foreign policy, and economy of the United States posed by the proliferation of nuclear, biological, and chemical weapons ("weapons of mass destruction") and the means of delivering such weapons. Because the proliferation of weapons of mass destruction and the means of delivering them continue to pose an unusual and extraordinary threat to the national security, foreign policy, and economy of the United States, the national emergency declared on November 14, 1994, and extended on November 14, 1995 and November 14, 1996, must continue in effect beyond November 14, 1997. Therefore, in accordance with section 202(d) of the National Emergencies Act (50 U.S.C. 1622(d)), I am continuing the national emergency declared in Executive Order 12938.

This notice shall be published in the Federal Register and transmitted to the Congress.

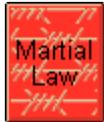
-WILLIAM J. CLINTON-

Notice that the “single-stroke-of-the-pen” has already occurred, on November 14, 1994 and has been continually extended to this day. We continue to enjoy the continuation of our constitutional form of government, even to include the start of impeachment proceedings, because the time has not yet come for the President to start exercising the powers he enjoys while the Nation is under a state of “National Emergency.” While under this state, again with a “single-stroke-of-the-pen”, the President can begin to invoke those extraordinary powers this state of “National Emergency” bestows upon him. Note that the grounds for this state is based upon the threat of “weapons of mass destruction.” All it would take is some incident along these lines for the President to start using these powers.

Offered by [Ron](#).



Troubled Times



Fabricated

At this point I must point out that an *actual* event of this sort need not even take place. For those of you who are old enough to remember **President Johnson**'s national address on television wherein he stated that a US military ship had been attacked in the Tonkin Gulf off the coast of Vietnam, you will recall that lead to the **Tonkin Gulf Resolution** by the Congress. That, in turn, is what formally placed the United States into a state-of-war with **North Vietnam**; an unpopular war that lasted 13 years. It was a full 10 years after we got out of Vietnam before the American people and the Congress learned that the "attack on a US military ship by the North Vietnamese" was a *total fabrication* intended to dupe the Congress and the American people into entering the war.

I now reference the two Executive Orders now in effect. On the surface they appear reasonable enough and even necessary for the purpose stated. While reading them carefully, notice two things. First is that they reference and thus include sections of the **United States Code**, and in particular **Title 50 War and National Defense**. One must read this in order to really understand the powers being invoked. Second, make note of the vague and all-encompassing scope of the orders. For instance, while the order does not specifically define the scope of the power of the **Secretary of Transportation**, when taken in the context of the orders and Title 50, it is quite clear that the movement and communications of the US citizenry can be totally controlled and inhibited. Notice that the **Department of Labor**, again using Title 50 specifically has the power of the **Selective Service** to "draft" ordinary citizens to perform whatever form of "labor" is determined to be needed.

Virtually every sentence, when one reads between the lines, effectively turns the United States into a martial state controlled exclusively by the **Executive Branch**, with the powers of the **Legislative and Judicial Branches** of government relegated to simply receiving reports from time-to-time. These two **Executive Orders** can be found on the White House web site.

Read carefully, and you will note the President even has the power to suspend elections and remain in office until the "State Of National Emergency" is lifted! How convenient all this is in the government's secret preparations for 2003! Readers please understand that what I am attempting to deal with here is what I consider the "worse case scenario." I am consciously "suspending disbelief" for the moment so as to address what I would rather not think of, or believe. There is no intent here to scare or cause undue anxiety on the part of the reader; but to layout in clear terms what I believe we should be considering as we plan for the eventuality of 2003.

Offered by [Ron](#).



Troubled Times



Y2K Bug

Panic in the Year Zero

Service will provide assistance to FEMA

By Jon E. Dougherty, 1999 *WorldNetDaily.com*

Americans were surprised during the past week to learn the National Guard and the US Army are making plans to provide "assistance" to civilian authorities in the event of a systemic meltdown of basic services as a result of Y2K-induced problems. Many may be equally surprised to learn that the US Naval Reserve will also be expected to provide assistance in the event of a domestic national emergency. Those provisions, which provide for military assistance to civilian authorities during national emergencies, are outlined in USC Title 42, Chapter 68 (Public Health and Welfare) and apply universally to the armed forces at the president's discretion. Like the National Guard and elements of the Army, however, the Naval Reserve will have key designated liaison officers working in conjunction with various Federal Emergency Management Agency personnel in affected regions of the country.

Specifically they are called "Navy Emergency Preparedness Liaison Officers" (NEPLO), and they were developed under a "Naval Reserve program designed to provide active duty commanders who serve as Regional Planning Agents (RPA) with trained personnel to assist the RPA in providing support to civilian authorities," according to Navy literature. ... The Navy -- as well as all other military branches associated with providing disaster assistance to civilian authority -- has been granted its liaison powers under the Robert T. Stafford Act. That act stipulates, in subsection 5221 of Title 42, Chapter 68, that "it is the intent of the Congress, by this chapter, to provide an orderly and continuing means of assistance by the Federal Government to State and local governments in carrying out their responsibilities to alleviate the suffering and damage which result from "disasters."



Troubled Times



Test Opportunity

Gary North's Y2K Links and Forums Category: Martial_Law

If the computer failures are sufficiently widespread, urban society will collapse. Without banks, water, sewers, communications, and electrical power, cities will become nightmares. Under such conditions, the Federal government would have to declare martial law. The question is: Could the Army carry out its assignments? It, too, is noncompliant. Its systems are vulnerable to y2k.

There are indications that the U.S. government is preparing for martial law. Under the cover of the phrases "critical infrastructure protection" and "cyberterrorism," the government is setting up rapid deployment forces designed to provide order in American cities. The two politically convenient facts about about cyberterrorism are these: (1) the timing is not specific; (2) the target is not specific. This keeps panic from occurring. "It's the other guy's statistically remote problem." Or: "I'm probably OK; you're probably OK." This is why "cyberterrorism" serves as a code work for "Year 2000 breakdown." The problems with y2k are the reverse: (1) it is date-specific; (2) it hits everywhere at once. No cyberterrorist or hacker could dream of doing what y2k has been programmed to do.

Plans to impose martial law have been in effect since late 1997. The training is the same, so the public will not be alarmed. The Army has created special emergency response divisions made up of National Guard units and Reserve units. But the plans seem to have begun with an Executive Order signed by President Clinton in July, 1996, which set up the Presidential Commission on Critical Infrastructure Protection (PCCIP).

A series of executive orders that go back over three decades are in reserve, ready to be announced and enforced by the President. In a y2k crisis, the public will call for emergency actions. Congress will not object.



Troubled Times



CB Exercise

Is Something Brewing In Texas, Ham Operators Ordered Off Air

by Roger Thibault, March 13, 1999

Just a few minutes ago I received the following letter from longtime contact David B. He is a ham radio operator. Ham radio operators in Texas have just been told to stay off of certain frequencies. I'm not a ham radio operator, so I cannot make heads or tails of this. However, I am asking you for your comments. David will send more info as available.

Thanks & God bless,
Roger Thibault
e-mail: info@yellowstoneinfo.com

Below is the official notice from the FCC

SB QST @ ARL \$ARLB017
ARLB017 GENERAL COMMUNICATIONS EMERGENCY DECLARED
ZCZC AG17
QST de W1AW
ARRL Bulletin 17 ARLB017
From ARRL Headquarters
Newington CT March 13, 1999
To all radio amateurs
SB QST ARL ARLB017

ARLB017 GENERAL COMMUNICATIONS EMERGENCY DECLARED UNDER THE AUTHORITY OF SECTION 97.401 OF THE FEDERAL COMMUNICATIONS COMMISSION'S RULES AND REGULATIONS (47 C.F.R. PART 97) A COMMUNICATIONS EMERGENCY IS DECLARED TO EXIST IN THE TEXAS AREA, REQUIRING THE PROTECTION OF AMATEUR EMERGENCY COMMUNICATION FREQUENCIES. AMATEURS ARE REQUIRED TO REFRAIN FROM USING 3873 KHZ FROM NOW UNTIL MARCH 13 AT 0800 CENTRAL STANDARD TIME. ALSO, AMATEURS ARE REQUIRED TO REFRAIN FROM USING 7290 KHZ FROM 0600 UNTIL SUNSET ON MARCH 13. BOTH FREQUENCIES ARE PROTECTED PLUS OR MINUS 3 KHZ UNLESS AMATEURS ARE TAKING PART IN THE HANDLING OF EMERGENCY TRAFFIC. THIS ORDER IS EFFECTIVE IMMEDIATELY.

JOSEPH P. CASEY
DEPUTY CHIEF
COMPLIANCE AND INFORMATION BUREAU
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, DC
NNNN /EX



Troubled Times



Resisting

National Guard Preparing for Y2K

Salem, Massachusetts

One oversight in computer programs is expected to produce a lot of disruptions as soon as the year changes to 2000. That includes civil disturbances as well as computer, power, and water failures. The Oregon National Guard is putting together plans to respond. Major Dan McCabe says planning has only gotten as far as having people available in the first few days of next year... but McCabe says there are no plans to use troops. Neighboring Washington is planning to have two-thousand troops on duty on New Year's Eve, this year, and next New Year's Day.

Guard May Be Called Out

Madison, Wisconsin

Some state legislators want to call in the National Guard next New Year's Eve to deal with fallout from the Y-two-K crisis. The Year 2000 Committee of the Wisconsin Assembly has voted to mobilize the Guard ... despite objections from State Senator Bob Jauch (JOK). He says calling out the Guard would be an overreaction that could lead to public panic. But supporters say it would be prudent to prepare now for any computer problems that may come up when the year 2000 arrives. The bill would have to pass the entire Assembly, pass the state Senate, and then be signed by Governor Tommy Thomson before the National Guard is called.

Governor's Guard Authority Recalled

Bismarck, ND

A measure giving the governor more authority in calling up the National Guard has hit a snag. The state House of Representatives approved the measure late last week. But the House recalled the bill yesterday, sending it back to committee. Lawmakers now say the measure is too broad and could lead to abuses.



Troubled Times



Hunger

Date: 98-11-30 21:26:29 EST
From: alandewalton@hotmail.com (Alan DeWalton)
Reply-to: theeagle-1@egroups.com
To: theeagle-1@egroups.com
29 November 1998

Dear BC Family,

Here is one of two messages we want you to be aware of. As some of you know, Brussels is the location of a monster computer whose involvement in our future may be a little unpleasant and intrusive in light of the New World Order. Think we aren't being slowly squeezed people? Read on.

Dear Holly,

Read your letter in Final Conflict. I'm a German-Australian. Just after the border between East and West Germany came down, my wife and I traveled extensively through the "eastern" zone (DDR) and we were surprised at how many fruit trees/ bushes (berries mostly) grew along the sides of country roads. Emergency food was obviously not a problem in the old DDR. Two years later and they were all gone - executive order!!

Further, all European farmers including the German farmers have orders from Brussels about how much foodstuff they may grow and what sorts of food. And in the name of the Planned economy, a certain number of fields must be left empty every year (rotation system). On some of these "empty" fields farmers were allowed to grow certain crops for the consumption of animals only (Grass forms usually).

One animal food allowed by the European Union in Brussels was corncobs. Smart thinking German farmers discovered that when they dried out this corn and stored it in their roof that it was the perfect insulation material against the winter cold. The corn could also be mashed like paper-mache and pressed to make biodegradable plates for picnics etc. The plates could then be tossed out and used as mulch on a garden. The farmers were busily putting these ideas into practice when one day officials from Brussels turned up and *banned* the whole business. Corncobs were no longer allowed to be grown as animal food. The irate and non-plussed farmers asked *why?* and the answer from the Brusseler bureaucrats was "Its been banned, because in an emergency you could use the corn as food."

The Farmers were left with two questions unanswered:

1. In *what* emergency?
2. *Why* shouldn't we have food in an emergency?

I watched the documentary on this on Bavarian TV. Strangely no-one in the TV world followed up the 2 questions. Remember these 2 Rules of the New World Order:

1. With Energy you control nations

2. With hunger you control people.

Regards, Paul

Sydney Australia

AUSTRALIAN site: <http://www.ballarat.net.au/~standeyo/>

AMERICAN sites: <http://www.millennium-ark.net>

<http://buddyebesen.com/standeyo/>

Emergency Preparedness:

http://www.millennium-ark.net/News_Files/Hollys.html



Troubled Times



Rumored

Subj: Confirmations and not
Date: 5/13/99 6:43:42 AM Pacific Daylight Time
From: maxa@rma.edu (Max Andrews)
To: USCMike1@aol.com

Friend,

I can confirm some items that you have been highlighting but have no first hand knowledge or experience in others.

* I can not confirm the number of "Civilian Resettlement Camps," but I can confirm the existence of such camps. There is one open for public view at the Jefferson County Fair Grounds in Jefferson, Wisconsin (along with 60 or so Ukrainian male nationals who now live in that small town). Also at Fort A.P. Hill in Virginia a large CRC is being completed. I have also passed by the two large CRC's located in Central Georgia near the famous Andersonville Prison Camp from the Civil War.

* I can confirm that Fort Riley, KS has all but been taken over by the Russians, and Camp McCoy in Wisconsin has also been largely turned over to international usage.

* I can confirm that Fort Gilliam in Atlanta, GA has been turned over to FEMA.

* I can confirm the existence of large numbers of German soldiers in the United States. As early as the summer of '96 I was being given reports of German soldiers arriving at Dullus International Air Port. In September of '96 a close friend of mine who worked for a large airline at Dullus confirmed that late night every Sunday, a special flight from Germany would arrive. Soldiers in BDUs would disembark, go through the terminal and then be bused to a large unmarked building about a half mile from the concourse. Over the next few days these soldiers would depart the building, now wearing civilian clothes, board buses and leave the area. I personally confirmed this in October of '96. Several of us badgered the DoD about this, but the Public Affairs Office, to which we were referred denied the existence of German military personnel in America. Finally a female Lieutenant Colonel from the Pentagon's PAO went to investigate. After that she refused to return our calls and we were effectively stone-walled. However, since that time the Germans are now arriving in civilian clothing, and the building, which takes up a city block is clearly marked with two large FRG flags and signs that read "German Military Representative." There are even airport marker signs that now point to the GMR building. When these reports were confirmed it was estimated that each week enough troops were arriving to fill a re-inforced company to a battalion. I have no knowledge of any of these troops departing (as if on rotation) but that doesn't mean they don't return to Germany from another airport. Judging by the number of buses now in use by the GMR I think it is safe to assume that the operation is still underway and that the numbers of arriving German troops have not been reduced, but perhaps have even increased. Since October of '96, the GMR building has added 360 degree camera surveillance and additional barb wire and constratina wire around the compound.

* I can confirm that a concrete manufacturing plant outside of Winchester, Virginia is making pre-fabricated prison cells designed to be placed underground, and are shipping dozens of these each week to areas throughout the nation.

* I can confirm that FEMA and its subordinate state agencies (Dep. Of Emergency Services) are preparing officials for a "terrorist attack" using weapons of mass destruction. I can also pass on my opinion that when such attacks do come, they will completely overwhelm all local and state resources.

* I can confirm that large numbers of professional military personnel are resigning or taking early retirement, and doing so now.

* I have reason to believe, through personal observation and investigation, that may be more CRC's or temporary holding facilities, being built and manned at the National Zoological Park and the U.S. Customs K-9 Training Center in Front

Royal, Virginia. Also there is increased activity at the regional BATF office, Coast Guard Port Facilities Center, and the Eastern United States District, U.S. Postal Service Encoding Center - all three facilities are located at the Spring Mill Rd. Exit off I-81, 10 miles north of Martinsburg, WV. NOTE: It is the Encoding Stations that will determine what each American will be assigned to do during martial law. It will also decide where each American will live, etc.

* I can confirm that each entry into Washington, D.C. is now covered with both surveillance cameras and RATS (Remote Auto Tracking Systems).

* I can also confirm the apathy of most Americans.

IN SUPPORT OF THE CONSTITUTION AND FOR THE FAITH,

Max



Troubled Times



Military Bases

Alabama:

Opelika WWII German/Italian POW camp now being renovated.

Alaska:

Wilds of Alaska possibly East of Anchorage. No access by road however, there is a railway system. Facility holds 500,000 people.

Arizona:

Ft. Huachua, 20 miles from the Mexican border, 30 miles from Nogales. Rex 84 program. Emergency Custodial Facility.

Florence WWII German/Italian POW camp now being renovated.

Pinal County Gila River. Renovated WWII Japanese-American special internment detention facility.

Yuma County Colorado River. Renovated WWII Japanese-American special internment detention facility.

Arkansas:

Ft. Chaffee Has a new runway for aircraft, new detention camp facilities with cap of 20,000 prisoners.

Chicot/Drew Counties Jerome. Renovated spec Internment camps for Japanese Americans WWII.

Descha County Rohwer. Renovated WWII Japanese-American special internment detention centers.

Blythville AFB This base was closed but is now being used as a camp location. New wooden barracks have been constructed at this location. This camp is surrounded by high wire topped with barbed wire, and has guard towers.

Berryville FEMA facility located east of Eureka on Hwy 62.

Omaha FEMA facility located on Hwy 65 south of old wood processing plant. It is on an old dirt road that leads to a toxic waste dump. Note: The facility in Miss. is also located on an old toxic waste dump.

California:

Oakdale Ca 90 miles East of San Francisco on HWY 120. Holds a minimum of 15,000 people. REX 84 program, Emergency Custodial Facility.

Vandenberg AFB Located midway between San Luis Obispo, and Santa Barbara. The base is on Hwy 1 and close to Hwy 101. REX 84 program, Emergency Custodial Facility.

Ft. Irwin Irwin is a remote Mtn region south of Death Valley, National Monument. This base is designated as inactive however, there is a concentration camp located at this facility about 30 miles from Interstate 15 in Barstow.

Inyo County Manzanar. Renovated WWII Japanese-American special internment detention center.

Modoc County Tulelake. Renovated WWII Japanese-American special internment detention facility.

Sacramento Army Depot No specific data at this time.

Colorado:

Old Lowell AFB. Recently all *new* chain link fence was installed around the borders, plus 400,000 handcuffs and shackles were purchased by the government for this site.

Florida:

Avon Park No data available

Camp Krome Located near Miami Dept of Justice detention and interrogation facility.

Elgin AFB This base is greater than 50 miles long extending from Pensacola Bay to Hwy 331 in De Funiak Springs. It is adjacent to Interstate 10 on the North and the Fort Walton Beach vacation spot. REX 84 program, Emergency Custodial Facility.

Georgia:

Ft. Benning Located East of Columbia near the Georgia/Alabama state line. - REX 84 program - Emergency Custodial Facility.

Unadilla, Ga Macon County; Located on east railroad street, Plunket road leads into the facility 1 1/2 miles from Unadilla on county road 230. This is a FEMA prison manned and staffed but no prisoners.

Oglethorpe, Ga. Macon County; facility is located five miles from Montezuma, three miles from Oglethorpe. Traveling south on highway 49, located on the west side of the highway. This FEMA prison has no staff and no prisoners.

Morgan, Ga. Calhoun County; I-75 exit 32 to 300 south to Albany. Take highway 234 to Morgan. Go through Morgan taking highway 45 south. The FEMA facility is 1 1/2 miles on the right (west) side of highway 45. This FEMA facility is fully manned and staffed but no prisoners.

Camilla, Ga. Mitchell County; from Camilla take highway 19 south, travel 5.4 miles from 37/19 junction to Mount Zion Road, turn left (east) on Mount Zion Road. The FEMA facility is located on Mount Zion Road approx: 5.7 miles south of Camilla. This facility is not manned or staffed and there are no prisoners.

Hawkinsville, Ga Pulaski County; located on fire road 100/ Upper River Road, 2 miles west from alternate 129 North 257 / 112 east. Five miles east of Hawkenville. This FEMA facility is fully manned and staffed but no prisoners.

Abbeyville, Ga. Wilcox County: south side of Abbeyville on highway 129 (Broad Street) off highway 280 (Main Street). This FEMA facility is fully manned and staffed but no prisoners.

McRae, Ga. Telfair County; 1.5 miles west of McRae on highway 134 (8th street). The FEMA facility is on Irwinton Ave. off 8th street. This facility is fully manned and staffed but no prisoners.

Frequencies: 153.7400 Georgia State Correctional Institutions 154.9050 Intrastate Coordinating (car to car state wide) 154.9350 Intrastate Coordinating (base to base / state wide) 155.3700 Georgia Police Intersystem (State wide)

Idaho:

Jerome County - Minipoka - Renovated WWII Japanese-American special internment detention facility.

Kooski plus 50 miles East. Near Lolo pass

Moose Creek Unmanned and there is a near by landing strip in or near a national forest.

Illinois:

Marseilles It is located on the Illinois river off Interstate 80 on Hwy 6. It is a relatively small facility with a cap of 1400 prisoners. Though it is small it is designed like other concentration camp facilities with high fences topped with barbed wire and guard towers.

Indiana:

Thousands of acres located just out of Indianapolis, Indiana holds a large Concentration camp facility complete with barracks, high fence, razor wire, towers, turnstyles, a railroad, helicopter landing pads, and what appears to be three large furnaces with 3inch mains on one of the buildings. This is a massive facility, still under construction with a completion date sometime in 1996.

Ft. Benjamin Harrison A U.S. Army facility located on the outskirts of Indianapolis will be used to hold prisoners.

Ft. Wayne FEMA Detention facility

Terre Haute FEMA Detention facility

Kansas:

Leavenworth U.S. Marshal's Fed Holding Facility PFP.

Concordia WWII POW German/Italian POW camp being renovated.

El Dorado Federal prison.

Topeka 80 acres converted to a holding camp.

Kentucky:

Louisville FEMA Detention facility

Lexington FEMA Detention facility

Louisiana:

Livingston WWII German/Italian POW camp being renovated.

Maine:

Houlton WWII German/Italian POW camp being renovated.

Missouri:

Richards Gebaur AFB This facility is located in Grandview, A large civilian internment facility has been built on this facility, and base personnel are restricted from the area.

Michigan:

Kincheloe Correctional Facility (Formerly Kincheloe AFB with B-52 sized runways). Has five large prison buildings able to house 5000+. The facility has about 500 prisoners at this time. Location: 20 miles south of Sault Ste. Marie (Soo Locks) at the eastern end of the Upper Penninsula of Michigan.

K.I. Sawyer AFB Large construction program has been going on under the name of "Operation Gateway". High security is in place with a large portion of the base closed to civilian view. Location: 20 miles south of Marquette, MI in the Upper Penninsula of Michigan.

Raco Field Raco field is an interesting facility. The above ground runways form a perfect triangle. Few buildings appear on the surface, but ventilators can be seen. Civilian workers report that a subsurface facility exists. No publicity exists indicating what the role of Raco Field is, although something *is* there. To observers, it is an "inactive WWII base." Location: 15 miles NW of Kincheloe Correctional Facility on Hwy 28.

Bark River A large construction operation is ongoing in the Bark River, MI, area. Locals are tight-lipped. The facility is off the main highway in a wilderness area. While most of the locals say that the construction is associated with the ELF (extreme low frequency) project of world-wide communications, others suspect FEMA is involved. (Note: the ELF grid is located 100 miles NE of the Bark River area) Location: 20 miles west of Escanaba in the upper penninsula of Michigan.

Bay City Sits on Saginaw Bay which connects to Lake Huron. This facility has high fencing, barbed wire and guard towers.

Grayling Camp Grayling Michigan National Guard Base. Detention facility. Guards towers, razor wire.

Southwest area of the state FEMA Detention facility

Central part of the state FEMA Detention facility

Detroit FEMA Detention facility

Mississippi:

Hancock County - The NASA facility at this location has two camps the first being located at the end of Kiln road at Waveland, and then the next road after ammo road at the Post Office. The second camp is located in the center of a rest station back from the Interstate. Inmates from the Hancock County jail claim they have worked details involving the delivery of food to these camps under the supervision of U.N. Guards.

Nebraska:

Scottsbluff WWII German/Italian POW camp being renovated.

Northwest corner of state FEMA Detention facility

Northeast corner of state FEMA Detention facility

South Central Hastings area FEMA Detention facility

Nevada:

Elco There is a prison facility 10 miles out of Elco.

Wells Camp is located in the O'Niel basin area, 40 miles North of Wells, and West off Hwy 93, 25 miles.

Winnemucca Camp is located at the I-80 mile marker 112, on the south side of the road and 3/4 miles off of the road.

Wells/Winnemucca Camp is located near the base line of the mountains. Reno Nevada *plus* 150 miles east south side of road if your headed west, 150 yards off the road.

New Jersey

Ft. Dix Fully operational prison camp with approximately 35,000 prisoners.

New York:

Ft. Drum located in upstate New York, probable location for Eastern area processing of people, located near the St. Lawrence river and access to Lake Ontario. Both waterways may be used for transport. Located very close to Canada.

Watertown FEMA Detention facility

Albany FEMA Detention facility

Buffalo FEMA Detention facility

Ohio:

Cleveland FEMA Detention facility

Columbus FEMA Detention facility

Cincinnati FEMA Detention facility

Lima FEMA Detention facility

Oklahoma:

Oklahoma City Tinker AFB, This is a civilian detention facility, all base personnel are prohibited from going near the area, and the area is under constant guard.

McAlester WWII German/Italian POW camp being renovated.

Will Rogers Air Port This is a newly constructed FEMA facility, and it is believed that it will be used as a primary processing center for prisoners West of the Mississippi River.

Pennsylvania:

Camp Hill Camp Hill Pa located off I-15. Sits across the navigable Susquehanna River from Harrisburg. Close to Cumberland Army Depot and the Camp Hill Correctional facility.

Crossville WWII German/Italian POW Camp being renovated.

Texas:

Ft.Hood Ft. Hood has a newly built concentration camp, constructed complete with towers, high fencing, and barbed wire.

Mexia WWII German/ Italian POW camp being renovated.

Amarillo FEMA Detention facility

Utah:

Millard County - Central Utah - Renovated WWII Japanese-American special internment detention facility.

Skull Valley Camp William property - west of the old bombing range South/southwestern portion of Camp Williams This camp was discovered by a man and his son who were rabbit hunting, they were discovered and apprehended.

Utah Lake 15 miles south of Saratoga Recreation center 200 - 300 yards off the road Black wire 40 to 50 feet tall, made to look something like a golf driving range.

Cedar City East of Cedar City Utah - no more data.

Washington:

Okanogan County borders Canada and is a site for a massive concentration camp capable of holding hundreds of thousands of people.

Wisconsin:

Ft. McCoy Located in Western Wisconsin 30 miles East of LaCrosse between the point where 90 and 94 intersect. REX 84 program, Emergency Custodial Facility.

Central part of the state FEMA Detention facility.

Wyoming:

Park County - Hart Mountain - Renovated WWII Japanese-American special internment detention facilities.

North Central part of the state FEMA Detention facility

Southeast part of the state FEMA Detention facility

Southwest part of the state FEMA Detention facility

East Yellowstone - Manned facility. Investigators were apprehended by European soldiers, unable to identify the language used by the foreign soldiers, American government helped clear the situation.



Troubled Times



Area 51

From the *Spotlight*, June 29, 1998

Article by Mike Blair

American taxpayers are funding an "enemy prisoner of war" camp for supposed "training purposes" on property adjacent to **Nellis Air Force Base** in Nevada. In addition, The *Spotlight* has learned from the office of **U.S. Sen. Harry M. Reid** (D-Nev.) that Congress has funded, in a project led in the Senate by **Sen. Kay Bailey Hutchinson** (R-Texas), the construction of a massive counter-terrorism training complex for the **Department of Energy** (DOE) and the FBI at the old U.S. nuclear test site 80 miles west of Las Vegas.

The DOE oversees America's nuclear weapons programs, as well as the peaceful use of nuclear energy, and maintains an Intelligence and National Security Office, which, like the FBI, is concerned with the current potential for nuclear terrorism and deploys its own agents and even SWAT teams. While aware of the counter-terrorism center, Sen. Reid's office was not aware of the enemy prisoner of war facility that is being built with U.S. Department of Defense (DOD) funding on a site recently transferred to the Nevada Army National Guard.

The construction of the compound is under the direction of the **Facilities Management Office** of the Nevada guard. According to Nevada guard spokesman **SFC John Eckert**, work on the compound was set to begin as this issue of The *Spotlight* was going to press, with the Las Vegas construction firm of **ZCON, Inc.**, being the low bidder. The cost will be \$64,314 for the 14,000-square-foot facility. According to Sgt. Eckert, the compound "is being constructed to official U.S. Army prisoner of war camp specifications". He said it would be capable of holding up to 100 inmates.

The compound will be surrounded by an outer security fence and will have two guard towers. The guard spokesman said that it is anticipated that work will be completed in time for the guard's **72nd Military Police Company** to use it for training scheduled to begin on August 1. He said the facility will be utilized for training by security police at the adjacent Nellis Air Force Base and by local law enforcement. Sgt. Eckert said that inquiries have been received by National Guard units from out of state, including the states of California and Oregon, about the possibility of using the compound for their training purposes.

Possible Connection

There is no official acknowledgment of any link between the prisoner of war compound and the planned new counter-terrorism facility to the west of Las Vegas. The exact location of the POW compound is 300 yards north of the Union Pacific railroad tracks in an area that has been designated the Nevada Army National Guard Training Area, which is located along Range Road in Las Vegas on a 3,000-acre site that was transferred to the guard by **Nellis Air Force Base** and the **Bureau of Land Management**, Eckert explained. He said that in addition to the prisoner of war compound, the site also is the location of an 800-man guard armory and maintenance facilities for the Nevada guard unit's M-1 Abrams heavy battle tanks. Eckert said the armory facility was opened last August.

Could the facility be utilized as a genuine concentration camp or prison facility? "Oh, yes, Eckert replied. "It is an actual facility built precisely to the Army's prisoner of war camp specifications." "It is just like facilities we built in the Middle East during the **Persian Gulf War** to house Iraqi

prisoners of war, Eckert added. The guard spokesman said he did not know why civilian police were interested in using a prisoner of war-type complex for training purposes, but he said he was aware of one inquiry to use it that was made by the local Clark County Sheriff's Department.



Troubled Times



Bunker Government

Reports of Mysterious Noise and Illness in Indiana

ABC News, Feb 13, 2002

Complaints about the "Kokomo Hum" began in 1999, when a handful of local residents began to report a constant low-pitched rumbling noise. They say they developed a range of mysterious health problems soon after, including dizziness, diarrhea, extreme fatigue, joint and muscle pain, nosebleeds, and excruciating, unending headaches... Hums Reported from New Mexico to Scotland...



Troubled Times



Contrails

There are stories about this from all over the country. Who knows what the motives are? Weather control? Bio-warfare? One person collected a sample of the stuff and it was found to contain white blood cells (human).

Offered by [Martha](#).

Contrails Mystify, Sicken Americans

ENS, William Thomas, January 8, 1999

Contrails spread by fleets of jet aircraft in elaborate cross-hatched patterns are sparking speculation and making people sick across the United States. Washington state resident William Wallace became ill with severe diarrhea and fatigue after watching several multi-engine jets spend New Year's day laying cloud lines in an east to west grid pattern. A neighbor working outside came down with similar symptoms. But their wives, who remained indoors, suffered no ill effects from the inexplicable maneuvers which observers liken to high-altitude "crop-dusting" by unidentified multi-engine aircraft.

Condensation trails, called contrails, are generated at altitudes high enough for water droplets to freeze in a matter of seconds and not quickly evaporate - typically where the temperatures are below -38 degrees Celcius. Contrails can form through the addition of water vapor to the air from the jet engine exhaust. Even tiny nuclei released in the exhaust fumes may be sufficient to generate ice crystals, and hence, condensation trails. Wallace wonders if ethylene dibromide, a highly toxic component of JP-8 jet fuel, is making people sick. Similar incidents over Las Vegas last year prompted a US Air Force spokesman to explain that the military aircraft were "dumping fuel" before landing. But the strange spray patterns are being reported repeatedly over towns in Tennessee, Connecticut, New Hampshire, New York, Nevada, Idaho, Mississippi, Montana, Oklahoma, Washington state and California.

Wallace has been watching formations of high-flying jets weave grid-like contrails above his home since last summer. Each time, "We get a taste in our mouth," he reports. He and his wife Ann get "kind of tired and sick," having "no energy to do anything." After plants began dying around his mountain cabin, "I got real sick for about three weeks," Wallace relates. "My eyes watered. Fluid came out of my nose. I could hardly move my arm up above my head to comb my hair for about a week." Wallace and his wife are not alone in their plight. In March, 1996, Dr. Greg Hanford bought an expensive camera and binoculars to keep an eye on jets spraying white bands above his Bakersfield, California home. Hanford has counted 40 or 60 jets on some "spray days."

"Everybody seems to be getting sick from it," Hanford told *ENS*. "Hackin' and coughin' when you really get nailed with this stuff." The dentist, many of his patients and two receptionists have repeatedly contracted severe respiratory infections. Hanford's illness lingered for five months despite courses of four different antibiotics. "It's really weird," Hanford says. "You think two jets are going to hit each other - and then they make an X." The dentist says he has sometimes seen "furry globular balls" spread downwind in a long feather from the high-flying aircraft.

Unlike normal contrails, which dissipate soon after a lone jet's passage, video taken by Wallace and Hanford show eerily silent silver jets streaming fat contrails from their wingtips in multiple, criss-cross patterns. But instead of dissipating like normal contrails, these white jet-trails coalesce into broad cloud-

bands that gradually occlude crystal clear skies. "Passenger jets don't make contrails that stay and become clouds," Wallace observes. Government officials deny that anything unusual is taking place. When Hanford called the local airport, tower personnel told him there was nothing going on." The jets were "just commercial" undergoing "international flight training." But a skeptical Hanford responded, "Is the FAA going to allow two jets to come at each other?"



Troubled Times



Uproar

Chemtrails Continue to Baffle, Sicken Americans

DJ Hewitt, *WorldBridger*, Nov 22, 1999

Exactly one year after Americans in 48 states began noticing an abrupt increase in unusual aerial activity and sickness on the ground, "flu-like" ailments are once again up sharply as eyewitnesses describe multiple broad white plumes being laid by tanker-type aircraft in Xs and grid patterns over the U.S. and central and western Canada. Unlike normal contrails formed when icy water vapor condenses around hot engines at high altitudes, "chemtrails" do not dissipate quickly, but broaden for hours, turning clear blue skies into hazy overcast - even in areas remote from heavily trafficked air routes.

Thousands of photographs and hours of amateur videotape show dozens of criss-crossing chemtrails over small towns unused to jet traffic. Commercial jetliners flying above other lingering plumes often leave no contrails, or trail a characteristic pencil-thin scrawl that fades in less than a minute like the wake behind a boat. "The Air Force doesn't do anything that emits anything other than a normal contrail, which is vapor," U.S. Air Force spokeswoman Margaret Gidding told Spokane's (*The Spokesman-Review*) from the Pentagon. But a lab test done in September, 1997 on a sample of JP-8 jet fuel by **Aqua Tech Environmental Labs** in Ohio found 51 toxic substances - including ethylene dibromide (EDB). Banned in 1983 by the Environmental Protection Agency in a rare emergency order, EDB is a potent pesticide, chemical irritant and known carcinogen. Air Force planes routinely jettison JP-8 to lower aircraft weight for safe landings.

A U.S. Air Force study - *Weather as A Force Multiplier: Owning The Weather In 2025* - also describes how jet tankers are deployed to spray chemicals that form "cirrus shields" capable of hiding aerial activity from observers on the ground. Other USAF weather modification techniques spread carbon black to heat up the atmosphere. On November 18, 1999 residents of Espanola, Ontario went before the Canadian Parliament in Ottawa to complain of widespread illness over a 50 mile area following months of spraying by KC-135 and C-130 aircraft. Tests conducted by the **Ontario Ministry of Environment** found carbon black in the fallout, as well as "chaff" used to jam radar signals - or track airborne dispersion patterns. But airborne pathogens are not used to modify the weather.

Two Congressional investigations and recently declassified British defense documents detail 50 years of "open air" testing that used ships and spray-equipped aircraft to spread biological warfare simulants on hundreds of cities across the U.S., Canada and the U.K. Americans urged to call special 1-800 "flu" and "migraine" tracking numbers may be taking part in a biowarfare experiment. Tests done in 1998 and 1999 by government-licensed laboratories on cobweb-like filaments, gel-like material and a red powder dropped over porches, power lines and patrol cars in Washington state, California, Oklahoma, Idaho, Michigan, Espanola and Pennsylvania have identified various pathogens, including bacilli and toxic molds capable of producing acute upper respiratory and gastrointestinal distress.

Last winter, patients flooded emergency rooms across the U.S. at up to double the rates usually seen in peak flu season. Often degenerating into double-pneumonia or asthma, their severe "flu-like" symptoms lingered for months. This November, Americans in heavily sprayed areas are also complaining of extremely severe headaches, stiff necks and joint pain. One mother whose white blood count is down by half says, "I live in a rural community and most of these people work outside and have their whole lives

and have never experienced these kind of symptoms till the contrails started showing up last fall. We live in no flight area, yet it is not uncommon for us to see up to 50 contrails a day...flying the multiple line pattern and the X pattern." Referring to the resulting illness, she added, "Not just the usual sicknesses... ones that doctors have no idea what is causing them and have no cure for. We had two children die here from totally unexplained illnesses when the contrails were flying all the time. We have dead birds in our yards... we have dead animals. The livestock are sick. Suddenly last winter my nine year old daughter came down with an asthma problem out of the blue. My uncle died of respiratory problem, again, out of the blue."

On November 20, 1999, a nationwide **Chemtrails Protest** was held in Times Square and cities across America calling for an end to the aerial spraying and full disclosure by responsible government agencies.



Troubled Times



Media Control

From Norio Hayakawa's website:

We are grateful to The Washington Post, The New York Times, Time Magazine and other great publications whose directors have attended our meetings and respected their promises of discretion for almost forty years. It would have been impossible for us to develop our plan for the world if we had been subject to the bright lights of publicity during those years. But, the work is now much more sophisticated and prepared to march towards a world government. The supranational sovereignty of an intellectual elite and world bankers is surely preferable to the national autodetermination practiced in past centuries.

David Rockefeller, June, 1991

In March, 1915, the J.P. Morgan interests, the steel, shipbuilding, and powder interest, and their subsidiary organizations, got together 12 men high up in the newspaper world and employed them to select the most influential newspapers in the United States and sufficient number of them to control generally the policy of the daily press. ... They found it was only necessary to purchase the control of 25 of the greatest papers.

An agreement was reached; the policy of the papers was bought, to be paid for by the month; an editor was furnished for each paper to properly supervise and edit information regarding the questions of preparedness, militarism, financial policies, and other things of national and international nature considered vital to the interests of the purchasers.

U.S. Congressman **Oscar Callaway**, 1917



Troubled Times



47 National Parks

Subj: **United Nations Amassing Troops in Ex-U.S. Nat'l Parks**

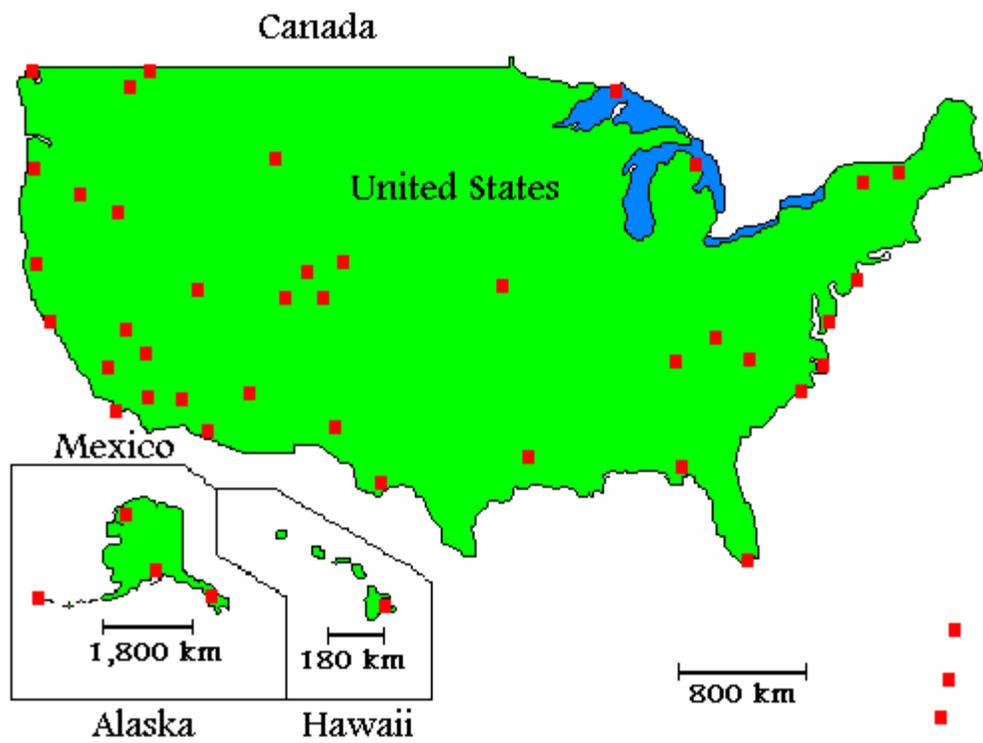
Date: Fri, 22 Mar 1996 05:39:26 GMT

As reported on Geoff Metcalf's radio show on KSFO AM in the San Francisco area.

Not all, but a large number of United States National Parks have now been deemed as "International Biosphere" areas, through the 1972 U.S. agreement with the United Nations. This is where we as a nation have lost control of the parks to the United Nations entirely. National Parks are not called National Parks anymore, but now show blue U.N. signs signifying "International Biosphere" areas. There are various zones within the parks, and if an area is deemed a 'Wilderness Area', this means that no person can enter into these areas whatsoever. If one tries to enter these areas you will be stopped. However there is now physical proof available and through numerous reports that foreign troops are amassing in these quote 'Wilderness Areas'.

Definite reports are coming in from not only the Tennessee Smokey Mountains and the massive areas of Death Valley, etc. but also most notably the Olympic National Park in the State of Washington where large convoys have been reported entering the parks, and that the equipment is not United States Army equipment. The Tennessee Smokey Mountain reports concern Russian troops. As a note for consideration: Please keep in mind that the United Nations Forces in Bosnia are actually NATO forces. While our U.S. forces are presently engaged in other activities around the world, there appears to be an elevated Non U.S. Military Presence in the newly acquisitioned Parks.

Reportedly a comprehensive list of the Ex-National Parks that have been taken over by the United Nations, and thus re-named as "International Biosphere" areas, can be obtained by doing a search in the World Wide Web area under "biosphere". Sorry I do not have the exact Web address presently. The United States does not control our Ex-National Parks anymore.



Troubled Times



Biodiversity

When ratified, any treaty - even if inherently unconstitutional - is then the law of the land.

Article II, Section 2., paragraph 2:

[The President] shall have power, by and with the advice and consent of the Senate, to make treaties, provided two-thirds of the Senators present concur.

Protecting various natural habitats (biospheres in NewSpeak) is certainly very important, but allowing foreign bureaucrats to dictate the terms of protecting such habitats on US soil, to the point of banning citizens' activity in such habitats, strikes me as a slick cover for nefarious NWO projects in such places.

Offered by [Brad](#).

From the [Sightings](#) website:

Inside Yellowstone, the Park Service is shutting down campgrounds as the park is being prepared to become the core of a huge biosphere reserve, as part of the United Nations global plan. Once established, no human activity will be permitted in the area. This represents fulfillment of plans outlined in the United Nation's Biodiversity Treaty - which, though still unratified by the U.S. Senate, is being implemented by the Clinton Administration.



Troubled Times



Foreign Troops

UN Intrusion at Yellowstone Stirs Anger

Washington Times, February 5, 1996



A United Nations delegation to Yellowstone National Park spurred outrage among Westerners. The UN World Heritage Committee then declared Yellowstone a World Heritage site "in danger." The committee's concern over the reopening of the New World Mine was overshadowed by the uproar over the delegation itself.

In areas of the West where the states' rights movement is flourishing and distrust of centralized government is at an all-time high, the arrival of a U.N. committee has been viewed as nothing less than an attempt to subvert United States sovereignty. Sen. Alan Simpson, R-WY called the international delegation's role "a terrible intrusion and blasted Interior Assistant Secretary George Frampton for inviting the committee to Yellowstone.

"It is astonishing that a group of extreme environmentalists can invite in a few folks from the United Nations to circumvent laws that Americans and Montanan's have worked hard for and lent their voices to," said Senator Conrad Burns, R-MT. Representative Barbara Cubin, R-Wy noted that Frampton is ultimately responsible for a "fair review of the project, yet he is the very person who requested the United Nations interference within the borders of the United States. Does he want foreigners to determine our environmental requirements?"



Troubled Times



Military Presence

UN military transports, ambulances, missile launchers and buses are being unloaded and transported (sample picture below) on US soil in many areas in great numbers. Why? What's up?

Offered by [Bill](#).

Well, we don't need them here, unless it's for peace keeping? Go door to door to take away all the evil guns from those nasty NRA people? Go door to door to confiscate food from those selfish food horders that won't share with those that wouldn't prepare? Maybe the government is getting ready for Y2K? Maybe its just a harmless exercise with some of our good friends around the world to sing in perfect harmony, we should trust the government so we can have peace and security? Where was that said before? Germany in the 30's maybe?

At any time there are 350,000 of them in our country. Where you might ask? In national forests that have restricted air space over them. Don't take my word for it. Find the aviation maps and check it out for yourself. On closed military bases and empty industrial parks of all the factories that moved to Mexico and China (about 9,000 taking some 46 million High Tech jobs from Americans.) The economy is not good, the stock market is going to crash soon. Y2K is a trigger for a crash. Study from history from 1926 through 1934, it is about to repeat, and we are at about 1928. Except there is a new deal in the works, all warm, fuzzy, feel good. NWO.

Offered by [Glen](#).



Troubled Times



World Government

From Norio Hayakawa's website:

In the next century, nations as we know it will be obsolete; all states will recognize a single, global authority. National sovereignty wasn't such a great idea after all.

Strobe Talbot, July 20th, 1992

We shall have world government whether or not you like it, by conquest or consent.

James Warburg to The Senate Foreign Relations Committee on February 17th, 1950

The Trilateral Commission is intended to be the vehicle for multinational consolidation of the commercial and banking interests by seizing control of the political government of the United States. The Trilateral Commission represents a skillful, coordinated effort to seize control and consolidate the four centers of power political, monetary, intellectual and ecclesiastical. What the Trilateral Commission intends is to create a worldwide economic power superior to the political governments of the nationstates involved. As managers and creators of the system, they will rule the future.

U.S. Senator **Barry Goldwater**, 1964

The powers of financial capitalism had another far reaching aim, nothing less than to create a world system of financial control in private hands able to dominate the political system of each country and the economy of the world as a whole. This system was to be controlled in a feudalist fashion by the central banks of the world acting in concert, by secret agreements, arrived at in frequent private meetings and conferences. The apex of the system was the Bank for International Settlements in Basle, Switzerland, a private bank owned and controlled by the worlds' central banks which were themselves private corporations. The growth of financial capitalism made possible a centralization of world economic control and use of this power for the direct benefit of financiers and the indirect injury of all other economic groups.

Professor **Carroll Quigley** of Georgetown University



Troubled Times



Implants

From **SUFOIT** Files:

The technology behind Implantation takes two routes scenarios. There are those who wish to use them for medical reasons as in implanting a prospective heart patient with a chip that can monitor their blood pressure/heart rate etc. The other end of the spectrum is the military who would like to - and the evidence indicates has, utilized implants to monitor personnel as well as control them. Then there are the uses of implants by the CIA and the Prison system. Within the Military and private sector, there is a flow of research dollars moving from one account to the other, and there are documents that I have read going back to the 50s where it is stated that control over the individual must be gained.

How does one gain control? Before you sell something you have to convince someone that they cannot live without it and that it will improve their situation. In this case of implants you get them hooked through the things they love - their pets and their children. Implants have been used successfully for several years now on fluffy and is now moving quietly to the livestock industry. Documents state that "growing automation and computerization of the livestock industry has brought a pressing need for data acquisition systems, including automated identification of animals to record statistical information and control feeding and disease prevention programs". A visit to the Patent Office produces a list of patents on Implantable chips.



Troubled Times



Tagged

Excerpt from **The Cashless Society is Here**
by Chris Beard

NFOPet is one of several companies that provide a syringe gun implantable bio-chip that is injected under the skin of an animal. The chip can be read by a scanner and the code identifying the owner and pet will bring up a file on a computer. The system boasts that it can track over 1 billion pets by satellites and cellular towers.

Motorola, who produce the microchips for the Mondex SmartCard, has developed several human implantable bio-chips. The BT952000 chip was engineered by Dr. Carl Sanders who was directed in 17 New World Order meetings to develop the device for global use in humans for economic and identification purposes. The bio-chip measures 7mm long and .75mm in width, about the size of a grain of rice. It contains a transponder and a rechargeable lithium battery. The battery is charged by a thermo-couple circuit that produces voltage from fluctuations in body temperature.

They spent over 1.5 million dollars studying where to place the chip in the human body. They found only two suitable and efficient places - the forehead just under the hairline, and the back of the hand, specifically the right hand. ... Dr. Sanders was against the use of the lithium battery because it was known that if it were to break the lithium would cause a grievous boil or sore and cause much agony to the host.



Troubled Times



Satellite

Excerpt from *OK Bomb - Conspiracy and Cover-up*
by Jim Kieth, 1996

Providing further information on implanted microchips is Dr. Carl Sanders, a 32-year engineering veteran and the designer of the Intelligence Manned Interface (IMI) biochip: "There are new satellites going up [such as the] sixty-six satellites that Motorola is putting up in conjunction with the Russians. These are low orbiting satellites," which according to Sanders, can monitor ground-based microchips. "We used this with military personnel in the Iraq War where they were actually tracked using this particular type of device." ...

EYE magazine provides more information about the biochips: "Sematech in Austin, Texas, developed a computer chip this year that is only 0.35 microns wide; roughly 1/200th the size of a human hair. Sematech is the maker of components for the advanced weapons systems used in the Gulf War, and will supply American companies with the tools necessary to manufacture these chips." *EYE* also reports, "Tracking objects with implantable transponders is ... a growing field, usually involving what is known as radio-frequency identification (RFID).

The idea is that tiny transponders - now small enough to be inserted into a variety of objects including animals [and humans] - are programmed with unique codes as well as data about the object if desired. The transponders remain passive until scanned, allowing the data to appear on a computer screen. Hughes Identification Devices, a division of GM Hughes Electronics, is using RFID transponders or 'tags' that can be embedded into objects for industrial applications.

One of the company's glass-encapsulated transponders, model TX1400, is so small (11 mm x 2.1 mm) that it can be used in applications where automatic identification would normally be impossible. Literature from the California-based company explains: 'It can be molded into plastic objects or inserted into predrilled holes. It can also be injected with a syringe in materials soft enough for needle penetration.'" Eye wryly notes, "And one wonders just what that soft material might be."



Troubled Times



GPS

Tiny Human-Borne Monitoring Device Sparks Privacy Fears

[CNN](#), Dec 20, 1999

A Palm Beach, Florida-based telecommunications company has developed a miniature digital monitoring device that can be implanted in people. It is intended to assist in locating missing children or to monitor the heart rate of at-risk patients. But electronic freedom activists are concerned about exploitation of the device, which would use global positioning system (GPS) technology to track implantees.



Troubled Times



Remote Control

Excerpt from *OK Bomb - Conspiracy and Cover-up*
by Jim Kieth 1996

Speaking of his research with Motorola, General Electric, and the Boston Medical Center, Sanders explains, "We noticed that the frequency of the chip had a great effect upon behavior and so we began to branch off and look possibly at behavior modification ... the project almost turned into electronic acupuncture because what they ended up with was embedding a microchip to put out a signal which affected certain areas. They were able to determine that you could cause a behavioral change." Sanders has also spoken about a "Rambo chip," which stimulates adrenaline and turns humans into fighting machines, the technology reportedly developed under the auspices of "the Phoenix Program." The Rambo chip has reportedly been tested on soldiers.



Troubled Times



Ethical Questions

Dr Carl W. Sanders is an electronics engineer, inventor, author and consultant to various government organizations as well as IBM, General Electric, Honeywell and Teledyne. He is also a winner of the **Presidents and Governors Award for Design Excellence**. Here he explains the microchip in his own words.

Thirty two years of my life was spent in design engineering and electronics designing microchips in the Bio-Med field. In 1968 I became involved, almost by accident, in a research and development project in regard to a spinal bypass for a young lady who had severed her spine. They were looking at possibly being able to connect motor nerves etc. It was a project we were all excited about. There were 100 people involved and I was senior engineer in charge of the project. This project culminated in the microchip that we talk about now a - microchip that I believe is going to be the positive identification and mark of the beast. This microchip is recharged by body temperature changes. Obviously you can't go in and have your battery changed every so often, so the microchip has a recharging circuit that charges based upon the body temperature changes. Over one and a half million dollars was spent finding out that the two places in the body that the temperature changes the most rapidly are in the forehead (primary position), right below the hairline, and the back of the hand (alternative position).

Working on the microchip, we had no idea about it ever being an identification chip. We looked at it as being a very humanitarian thing to do. We were all excited about what we were doing. We were doing high-level integration for the very first time. This team was made up of people out of San Jose, people from Motorola, General Electric, Boston Medical Center - it was quite a group of people. My responsibility had to do with the design of the chip itself, not the medical side of it. As the chip came to evolve, there came a time in the project when they said that the financial return on bypassing severed spines is not a very lucrative thing for us to be into, so we really need to look at some other areas.

We noticed that the frequency of the chip had a great effect upon behavior and so we began to branch off and look possibly at behavior modification. The project almost turned into electronic acupuncture because what they ended up with was embedding the microchip to put out a signal which effected certain areas. They were able to determine that you could cause behavioral change. One of the projects was called the Phoenix project which had to do with Vietnam veterans. We had a chip that was called the Rambo chip. This chip would actually cause extra adrenaline flow. I wonder how many people know that if you can stop the output of the the pituitary gland (the signal from the pituitary gland that causes oestrogen flow), you can put a person into instant menopause and there is no conception. This was tested in India and other different parts of the world. So here you have got a birth control tool, based on a microchip. Microchips can also be used for migraine headaches, behavior modification, upper/downer, sexual stimulant and sexual depressant. This is nothing more than electronic acupuncture, folks.

There are 250,000 components in the microchip, including a tiny lithium battery. I fought them over using lithium as a battery source but NASA was doing a lot with lithium at that time and it was the going thing. I had talked to a doctor at the Boston Medical Center about what that concentration of lithium in the body could do if the chip broke down. He said that you would get boils or a grievous sore. As the development moved along, I left the project and came back as a consultant several times.

I was used in many meetings as an expert witness in regard to the uses of the microchip. I was in one meeting where it was discussed. How can you control a people if you can't identify them?" All of a

sudden the idea came: "Lets make them aware of lost children, etc." This was discussed in meetings almost like people were cattle. As we developed this microchip, as the identification chip became the focal point, there were several things that were wanted. They wanted a name, a Digitised Image (picture of your face), Social security number with the international digits on it, finger print identification, physical description, family history, address, occupation, income tax information and criminal record. I've been in 17 "one world" meetings where this has been discussed, meetings in Brussels, Luxembourg, tying together the finances of the world. Just recently in the newspapers they've talked about the Health Care Program, the "Womb to Tomb" identification! A positive identification.

There are bills before congress right now that will allow them to inject a microchip in your child at the time of birth for identification purposes. The president of the United States of America, under the "Emigration of Control Act of 1996", Section 100, has the authority to deem whatever type of identification is necessary - whether it be an invisible tattoo or electronic media under the skin. So I think you have to look at the facts, folks: this is not coming as some big shock. The paving has been done ahead of time.

Dr Carl W. Sanders



Troubled Times



Health ID Card

Intellectual Capital

Feel Like a Number, by Robert Gellman, August 27, 1998

In 1996, Congress enacted a law that told the Health and Human Services Secretary Donna Shalala to select a standard unique identifier for individuals. The requirement received no public attention or debate at the time. Once Shalala began the process for selecting an identifier, however, anxiety about the loss of privacy exploded across the country. People are right to be concerned. A new federally issued health identifier surely would become a single national identifier used for all governmental and private purposes.

An endless list of users

Why am I so sure this will happen? For one thing, identifying individuals reliably and accurately is a problem for every institution. When you apply for credit, a job, welfare assistance or a driver's license, how does anyone know who you are? Most current identification documents have uncertain value. Controls over the documents are inconsistent, and they can easily be forged. The growth of identity theft is a symptom of the ease of providing false identification. For these reasons, every institution that needs to identify individuals wants a better form of identification.

A new patient identifier would serve that role nicely. The federal government would issue it after a careful review of everyone's identification. The number would have a check digit so that transposition errors could be more easily identified. In addition, there would be a token - a card with a picture or biometric identifier - that would offer further evidence that the card properly belonged to the person who presented it. Finally, a central registry of identifiers would help prevent counterfeits and phony numbers. Proponents of the health identifier say it would only be used for health purposes. They even point to statutory language protecting the identifier against other uses. But the protection is a figment.

Look at those who will need the health number in the ordinary course of their activities.

1. First is the health-care establishment - providers, payers and insurers. Health care represents one-seventh of the overall economy, and that includes many institutions you might not think of at first. For example, supermarkets fill a large percentage of prescriptions, so they would have the number of many customers.
2. Secondly, employers would have the identification number for their employees. Employers are the primary source of health insurance. Anyone want to make it easier for employers to track health information on employees?
3. Third, many federal, state and local agencies will need the health identifier for welfare programs, public-health activities, and fraud and abuse prevention. The Internal Revenue Service would have the number because health-care costs may be deductible. And do not forget law enforcement. The same law that called for a patient identifier also gave the U.S. attorney general's office the power to administratively subpoena every health record in the country.

No guarantees from Congress

A recent study by the American Civil Liberties Union in Wisconsin found that of the 50 governmental units studied, 30 maintained identifiable or potentially identifiable health data. For example, the Department of Natural Resources had health data because disabled sportsmen receive licenses at a discount. Who else? Schools provide health care to students. Credit-card companies allow patients to pay medical bills with credit. Health researchers also use patient records. Further, all users would share data with lawyers, accountants, computer-service companies and others providing support services. These are just the institutions that have a legitimate need for a health identifier. We have not even considered the others who would demand the ability to use the number for other purposes, like credit grantors, life and auto insurers, and the passport office.

Why am I so sure that a health identifier would become a national identifier? Look at what happened to Social Security numbers. The original Social Security card said that it was "not for identification purposes." In 1974, Congress passed a law restricting new uses of the number by federal and state governments. Despite these attempts to control the use of the numbers, they are now required to open a bank account, get a job, apply for a credit card, buy or sell property, or obtain insurance. If you want a license for driving, fishing, hunting or running a business, or if you have a baby, you must disclose your Social Security number.

How did these new uses occur? Congress allowed and even mandated new uses of the Social Security number. The number is now legally available for dozens of purposes, and private use is unrestricted. Can anyone guarantee that a future Congress will not allow the health identifier to be used to stop illegal immigration, prevent welfare cheating or locate skipped parents? My guess is that the health identifier would make the Social Security number obsolete within a few years.

Understanding the consequences

It is not just the new number that is a concern. The health ID card easily could become an internal passport. Once everyone has a government-issued health card, it may become impossible for an American citizen to walk down the street without being asked to produce that card on demand by a policeman. People will not be able to use a credit card, cash a check, fly on an airline, check into a hotel, go to school, or enter or leave the United States without showing the card. Anonymous health care may no longer be available.

To be sure, a better system of identification might benefit patients, increase efficiency and improve research. These benefits, however, have not been quantified. It may be years before benefits are realized, and they may not come cheap. A new identifier easily could cost \$10 billion or more. Before we take steps to create a new identification system, we need to pay more attention to the consequences. If we cannot offer Americans the assurance that the benefits are real, that the costs are not excessive and that civil liberties can be preserved, we should not proceed with a new system of health identification for patients.

Robert Gellman is a privacy and information consultant in Washington, D.C., and a member of the Health and Human Services Department's National Committee on Vital and Health Statistics.

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Troubled Times



William Cooper

I found this interesting, and thought I would share. I found this on [William Cooper's](#) website, copyright of 1997.

Since the United States Army's announcement of the inoculation of all of its personnel with Anthrax vaccine I can safely predict that the next large terrorist event within the borders of the United States of America may be biological using Anthrax as the agent of destruction and death. Anyone care to take me up on this with a substantial bet?

Offered by [JHawk](#).



Troubled Times



Anthrax

Scientists' Deaths are Under the Microscope

compiled by Alanna Mitchell, May 4, 2002

Eleven microbiologists mysteriously dead over the span of just five months. Some of them world leaders in developing weapons-grade biological plagues. Others the best in figuring out how to stop millions from dying because of biological weapons. Still others, experts in the theory of bioterrorism. ... The first three died in the space of just over a week in November. **Benito Que**, 52, was an expert in infectious diseases and cellular biology at the Miami Medical School. Police originally suspected that he had been beaten on Nov. 12 in a carjacking in the medical school's parking lot. Strangely enough, though, his body showed no signs of a beating. Doctors then began to suspect a stroke. Just four days after Dr. Que fell unconscious came the mysterious disappearance of **Don Wiley**, 57, one of the foremost microbiologists in the United States. Dr. Wiley, of the Howard Hughes Medical Institute at Harvard University, was an expert on how the immune system responds to viral attacks such as the classic doomsday plagues of HIV, ebola and influenza. He had just bought tickets to take his son to Graceland the following day. Police found his rental car on a bridge outside Memphis, Tenn. His body was later found in the Mississippi River. Forensic experts said he may have had a dizzy spell and have fallen off the bridge. Just five days after that, the world-class microbiologist and high-profile Russian defector **Valdimir Pasechnik**, 64, fell dead. The pathologist who did the autopsy, and who also happened to be associated with Britain's spy agency, concluded he died of a stroke. Dr. Pasechnik, who defected to the United Kingdom in 1989, played a huge role in Russian biowarfare and helped to figure out how to modify cruise missiles to deliver the agents of mass biological destruction.

The next two deaths came four days apart in December. **Robert Schwartz**, 57, was stabbed and slashed with what police believe was a sword in his farmhouse in Leesberg, Va. His daughter, who identifies herself as a pagan high priestess, and several of her fellow pagans have been charged. Dr. Schwartz was an expert in DNA sequencing and pathogenic micro-organisms, who worked at the Center for Innovative Technology in Herndon, Va. Four days later, **Nguyen Van Set**, 44, died at work in Geelong, Australia, in a laboratory accident. He entered an airlocked storage lab and died from exposure to nitrogen. Other scientists at the animal diseases facility of the Commonwealth Scientific and Industrial Research Organization had just come to fame for discovering a virulent strain of mousepox, which could be modified to affect smallpox. Then in February, the Russian microbiologist **Victor Korshunov**, 56, an expert in intestinal bacteria of children around the world, was bashed over the head near his home in Moscow. Five days later the British microbiologist **Ian Langford**, 40, was found dead in his home near Norwich, England, naked from the waist down and wedged under a chair. He was an expert in environmental risks and disease. Two weeks later, two prominent microbiologists died in San Francisco. **Tanya Holzmayer**, 46, a Russian who moved to the U.S. in 1989, focused on the part of the human molecular structure that could be affected best by medicine. She was killed by fellow microbiologist **Guyang (Matthew) Huang**, 38, who shot her seven times when she opened the door to a pizza delivery. Then he shot himself.

The final two deaths came one day after the other in March. **David Wynn-Williams**, 55, a respected astrobiologist with the British Antarctic Survey, who studied the habits of microbes that might survive in outer space, died in a freak road accident near his home in Cambridge, England. He was hit by a car while he was jogging. The following day, **Steven Mostow**, 63, known as Dr. Flu for his expertise in treating influenza, and a noted expert in bioterrorism, died when the airplane he was piloting crashed near Denver.

So what does any of it mean? ... Who they were:

1. Nov. 12, 2001: Benito Que was said to have been beaten in a Miami parking lot and died later.
2. Nov. 16, 2001: Don C. Wiley went missing. Was found Dec. 20. Investigators said he got dizzy on a Memphis bridge and fell to his death in a river.
3. Nov. 21, 2001: Vladimir Pasechnik, former high-level Russian microbiologist who defected in 1989 to the U.K. apparently died from a stroke.
4. Dec. 10, 2001: Robert M. Schwartz was stabbed to death in Leesberg, Va. Three Satanists have been arrested.
5. Dec. 14, 2001: Nguyen Van Set died in an airlock filled with nitrogen in his lab in Geelong, Australia.
6. Feb. 9, 2002: Victor Korshunov had his head bashed in near his home in Moscow.
7. Feb. 14, 2002: Ian Langford was found partially naked and wedged under a chair in Norwich, England.
8. Feb. 28, 2002: San Francisco resident Tanya Holzmayer was killed by a microbiologist colleague, Guyang Huang, who shot her as she took delivery of a pizza and then apparently
9. [Feb 28, 2002: Guyang Huang] shot himself.
10. March 24, 2002: David Wynn-Williams died in a road accident near his home in Cambridge, England.
11. March 25, 2002: Steven Mostow of the Colorado Health Sciences Centre, killed in a plane he was flying near Denver.



Troubled Times



Germ Warfare

U.S. Conducted Open-Air Biological, Chemical Weapons Tests, Records Show

Associated Press, October, 2002

The tests included releasing deadly nerve agents in Alaska and spraying bacteria over Hawaii, according to the documents obtained Tuesday. The United States also tested nerve agents in Canada and Britain in conjunction with those two countries, and biological and chemical weapons in at least two other states, Maryland and Florida. ... The summaries of more than two dozen tests show that biological and chemical tests were much more widespread than the military has acknowledged previously.

US Admits Chemical Weapons Tests

[BBC](#), October, 2002

But in large part the reason for revealing this information now and for briefing the US Congress, as the Pentagon has been doing, is because of concerns expressed by veterans. More than 50 of them have filed claims because of health concerns and fears they were exposed to dangerous substances.



Troubled Times



Fish in Maryland

Drought Behind Huge Maryland Fish Kill

Associated Press, July 3, 1999

Some 200,000 fish in two Chesapeake Bay tributaries have died in the past week, one of the state's worst fish kills in years and one authorities are blaming on a regional drought. The deaths in shallow creeks and coves of the Patapsco and Magothy rivers are due to low oxygen levels in the water, state officials said. Such widespread oxygen depletion has not been seen in more than a decade, said Charles Poukish, an environmental specialist with the state Department of the Environment. The deaths affected all fish species living in the affected areas, including menhaden, silversides, perch, mummichogs, pickerel, catfish and sunfish. Most were young, between 2 or 3 inches long. Officials have ruled out the influence of *Pfiesteria piscicida*, a toxic microbe blamed for wiping out huge numbers of fish in the Chesapeake Bay.



Troubled Times



East Coast

Normal Rainfall Won't Break Drought

Associated Press, August 1, 1999

Good news: The weatherman expects normal rainfall in August. Bad news: That won't even start to relieve the drought in much of the country. "We need a couple of feet of water to get out of this. That's a couple of tropical storms," D. James Baker, administrator of the National Oceanic and Atmospheric Administration, said Sunday. Baker, appearing on CBS Face the Nation, said the drought in the Northeast is the worst in 30 years and the second-worst of the century. "Droughts take a long time to set up, and they take a long time to get rid of," Baker said. "And in fact, even if we go back to normal rainfall for August, which is what we expect to have, it's not going to give up for a long time. In some parts of the country, it may go through the winter."

On the same program, Agriculture Secretary Dan Glickman said the ground is as dry in the Mid-Atlantic and Northeast as it has been since the Great Depression. Despite that regional crisis, Glickman said, people in most places should expect no serious increases in food prices or supply. "Ironically, the heartland of America - Texas, Oklahoma, Kansas, Nebraska, Iowa, all through the middle - they're doing pretty well now in terms of rainfall," Glickman said. "That means that this drought and heat wave probably won't have any kind of dramatic effect on food prices or shortages." There could be problems, however, in supplies of fresh produce in Northeastern cities, the secretary said. In parts of the region, he said, rainfall is 50 percent to 80 percent below normal.



Troubled Times



Afghanistan

Farmers pray for rain as water shortage becomes critical

By Amir Zia, *Associated Press*, April 17, 2000

Abdul Nadir bowed his head and prayed Monday for an end to a prolonged dry spell that has turned his golden wheat fields into dry stubble. Looking out over his fields on the western edge of the Afghan capital, 65-year-old Nadir said there is little else for him to do but pray. "It will be a tough year," he says shaking his head in despair. "All our hard labor is for nothing. We won't get a single morsel of wheat from our fields because there is no water." The drought - blamed on a mild winter and no spring rains - is the worst to hit Afghanistan in 25 years, according to some aid workers. Without international aid the drought could result in a famine, warned Abdul Baqi Afzali of the Danish Committee for Aid to Afghan Refugees. "This is the worst in decades, and these are just the initial days of the drought," Afzali said. "People have yet to feel its full effect. The crisis will become severe in the days ahead." The Taliban religious army that rules 90 percent of Afghanistan has been asking people to pray for rain. "We have prayed for hours. But Allah is not answering our prayers. It's only getting worse," said Sardar Mohammed, another farmer. In the southern provinces of Kandahar and Helmand, the World Food Program has brought in tons of feed for dying cattle. Some estimates say 60 percent of the cattle in southern Afghanistan have already died from the water shortages.

WFP to Aid 1.6 Million Afgans Survive Drought

Reuters, July 18, 2000

The United Nations' World Food Programme announced on Tuesday a major relief operation to help more than 1.6 million famine-threatened people survive the worst drought in Afghanistan in more than 30 years. The extremely low level of precipitation has destroyed almost all the rain-fed crops in the country and decimated the livestock, WFP said in a statement. "The estimated cereal deficit for Afghanistan in 2000/01 is expected to be as high as 2.3 million tons, more than double that of the previous year," WFP said. "The next chance for a normal crop from rain-fed areas will not be until May/June 2001. If the rains fail again, the situation, already of catastrophic dimensions, will worsen further, and will likely make for a widespread famine unless adequate preventive steps are taken in time."



Troubled Times



Albania

Drought Forces Albania to Ration Electricity

Reuters, August 12, 2000

Albania's national electricity company has begun cutting power for up to nine hours a day throughout the country following droughts which have halved water reserves, officials said on Friday. Economy and Privatisation Minister Mustafa Muci criticised the state-owned monopoly KESH, which imports up to five million kilowatts of power per day from Bulgaria, Greece and Macedonia. Muci told managers to stabilise the situation or quit. Albania, one of Europe's poorest countries, relies heavily on hydroelectric schemes for its power. "This extraordinary drought has brought water reserves in the Drin cascade to 30 cubic metres per second compared to the average of 70 cubic metres or more per second," Muci told reporters.

Muci said KESH would speed up investment in grid upgrades. "We will do our utmost so Albanian citizens do not have to live in the dark this winter," Muci said, adding talks were being held with Macedonia to increase imports. Experts say the situation is not likely to change until Albania liberalises the electricity market and creates new sources to generate power. About 25 percent of electricity generated in Albania is lost during distribution because of a worn-out network and another 25 percent is not paid for by consumers. The Economy Ministry is considering taking steps to enable the bank accounts of those who evade payment to be frozen. "KESH will turn a corner because this year the World Bank's board of directors will have reviewed the \$87 million dollar project it suspended pending agreement with Enel," Muci said. Italy's Enel manages KESH, a condition international financing institutions set for allocating credits.



Troubled Times



Algeria

Impact of Drought in Algeria-80% of Cereal Production Wiped Out

North Africa Journal, May 23, 2000 (posted in June)

In a recently held debate at the national assembly, agriculture minister Said Barkat told parliamentarians that 80% of the nation's cereal production may be lost this season due to the drought. This would represent a financial loss of some AD 33 billion.



Troubled Times



Argentina

Argentina 1999/2000 Crop Faces Cold, Dry Spring

Reuters, May 5, 1999

Argentina's rollercoaster weather is forecast to turn dry and cold enough for damaging frosts during the 1999/2000 crop's Spring sowing, following a normal winter, a top climate official said Wednesday. "The hoped-for scenario is a normal June and July, but then August and September are seen colder than normal with less rain," Cesar Rebella, director of the Climate and Water division of the National Agriculture Technology Institute (INTA), said at a news conference. "That kind of climate could complicate cattle and crop evolution," Rebella added.

For the 1998/99 harvest the La Nina weather phenomenon resulted in drought in the south of Buenos Aires province which hit local sunflowers, wheat and corn. Throughout the Pampas grasslands rainfall in the second half of 1998 fell by 25-50 percent. The storm also brought mid-April frosts this year to the heart of the soybean district, hitting second-crop beans, and torrential rains in March and April that have delayed harvesting and negatively impacted six million hectares of farmland in Santa Fe and Cordoba. March 1999 rains were up to 800 percent higher than normal in some spots, Rebella noted. "It is anticipated La Nina will be neutralised in July," he said. Until then no quarter is expected from the rains. "There will be a problem with rains this month (of May) with average or above average doses in the Pampas and the possibility of storms dropping 100 millimetres or more," said Rebella.

La Nina hit its peak in December 1998 just as its wet predecessor El Nino climaxed in December 1997. Saddled with La Nina's wonky weather and about one million hectares of less sown land year-on-year, the 1998/99 harvest is expected to reach 57.87 million tonnes according to the Agriculture Department. Last season the crops lapped up El Nino's consistent season-long storms as they charged to a record-splintering 67.09 million tonne turn-out. Argentina's Pampas grasslands are one of the four richest agriculture regions in the world alongside the midwestern United States, China's Yellow River valley and the steppes of southern Russia and the Ukraine. Covering 60 million hectares, the fertile Argentine soils encompass all of Buenos Aires province, Entre Rios, eastern Cordoba, southern Santa Fe and eastern La Pampa.

Rains Cut Into Argentine Wheat Crop Coverage Area

Reuters, July 28, 2000

A spate of rain throughout Argentina's wheat belt has delayed planting of the 2000/2001 crop and threatens to knock up to 300,000 hectares off intended sowing areas, analysts said Friday. Private sources originally expected the wheat seed to be spread over 6.4 million hectares, some 140,000 hectares more than the Agriculture Department's estimate. But wet weather has pushed current projections down to 6.1 million hectares. "In (northeastern) Entre Rios province, the majority of the crop was lost," said an analyst. "A lot of hectares have gone to the wayside because of the rains," he continued.



Troubled Times



Armenia

Armenia Drought - OCHA Situation Report

UN Office for the Coordination of Humanitarian Affairs (OCHA), September 29, 2000

High temperatures and lack of rain in recent months have resulted in a serious drought and shortage of water. The preliminary governmental estimates of the damages to the agricultural sector amount to USD 40 million. The drought has been particularly devastating for areas planted with grain, fodder and vegetables, mainly in the mountainous and sub-mountainous northern regions. According to WFP, emergency food assistance for subsistence farmers and other vulnerable groups in the affected areas is needed, in addition to seeds, animal feed, fuel and lubricants. According to the Ministry of Agriculture, the impact of the drought is further worsened by the poor conditions of the irrigation water system, as well as the fact that the water level in the country's rivers lowered by 40-45 percent.



Troubled Times



Austria

Low Rainfall Cuts Austrian Crop Yields

Reuters, July 12, 2000

Unusually dry and hot weather has taken its toll on the Austrian harvest but the quality of wheat is looking good, an official at the Ministry of Agriculture's research institute said on Wednesday. "We will not see the high yields of the last years," the official told Reuters. "But we are satisfied with the quality of wheat." The official said below-average rainfall from March to mid-June had reduced yields of all grains in eastern Austria, while crops in the west had seen more rain and yields would be average. "For Austrian conditions, this is serious," he said. Yields for summer grains would be below those of 1993, the last year when the harvest was so disappointing.



Troubled Times



Australia

Australian farmers bracing themselves for locust plague

Associated Press, April 27, 2000

Farmers across New South Wales state were bracing themselves Thursday for a locust plague believed to be heading their way after a wet summer provided the insects with ideal breeding conditions. Large numbers of the insects are expected to spread across the state next week following a massive outbreak in the state's west. "This is the most serious threat of a major plague occurring for 15 years," said New South Wales Agriculture executive director Geoff File. File said controlling the locusts had proved difficult because of the huge bulk of vegetation masking them and flood waters that have limited spraying. "Above average rainfall over summer has seen large numbers of locusts mature to egg laying and migration and despite a widespread control campaign there remains a significantly large population which could cause major problems in spring," File said. The next week was expected to be critical as a change in weather moves through and winds changed direction. File said winds could help spread the destructive insects into southern New South Wales and as far as southern states Victoria and South Australia.

Locust Threat Concerns Australia

Farmers Weekly Interactive, September 25, 2000

Australian grain growers and graziers in five states are bracing themselves for a hatching of plague locusts that has the potential to wreak \$A500 million-worth (US\$273m/£188m) of damage. The Australian Plague Locust Commission had estimated that the damage bill to crops and pastures could be the highest on record, according to a story in *The Land* newspaper. Swarms of grasshoppers were blown south from Queensland during the autumn dust storms. While these adult locusts are now dead, the agricultural community is closing watching their eggs. There are two major bands of locust eggs spread across Australia. The largest covers south-west Queensland, the entire western grain belt of New South Wales, northern Victoria and the whole eastern region of South Australia. The other band of eggs covers the grain belt of Australia's largest wheat producing state, Western Australia. The Australian Bureau of Agriculture and Resources Economics (ABARE) already has reduced the country's national wheat crop forecast due to the presence of locust eggs in WA.

Crops in western NSW are expected to come under attack any day now as the locust eggs begin to hatch, while in southern NSW, northern Victoria and South Australia the danger time is mid-October. *The Land* reports that authorities in South Australia are tipping the outbreak could be the worst since 1955, while in NSW and Victoria, it is shaping as the worst in at least a decade. Farmers throughout eastern Australia have enjoyed good winter rains, which should boost wheat yields, but the APLC says these rains have also assisted the development of eggs.



Troubled Times



Bolivia

Bolivia Flooding Destroys Crops

Discovery Earth Alert, March 21, 2000

Recent flooding in the South American nation of Bolivia has left hundreds of people homeless, killed thousands of cattle and destroyed acres of crops, the Civil Defense Office reported Monday. The incessant rains came at the end of a severe drought that hit one-third of the nation earlier this month. Swollen rivers washed out fields of soy bean, cotton, corn and grapes. More than 22,000 families have lost their crops, and the rains have caused severe food and water shortages. The United States Agency for International Development and CARE sent emergency food supplies to 39 farming communities in the Bolivian lowlands.



Troubled Times



Brazil

Floods Destroy Crops and Isolate Towns in Southern Brazil

Associated Press, September 16, 2000

Heavy rains lashed a rural region in southern Brazil for the third day Saturday, isolating hundreds of people and destroying crops. Rain-swollen rivers destroyed four major bridges in the state of Santa Catarina, and firefighters used makeshift wooden bridges to bring food and fuel to 600 families in 12 towns surrounded by floodwaters, said Martinho Silva, Santa Catarina Civil Defense spokesman. Farmers reported that 40 percent of their tobacco, bean and corn crops had been destroyed by the floodwaters that inundated fields in the western half of the state, Silva said.

Brazil Sugar Exports Seen Halving in 2000/01-UNICA

Reuters, July 31, 2000

Brazil's sugar exports could tumble to 5.5 million tonnes from the 2000/01 cane harvest, half the amount shipped in 1999/2000, the Sao Paulo Cane Agroindustry Union (Unica) said in a report on Monday. The center-south, which produces close to 90 percent of Brazil's cane, was likely to see its 2000/01 sugar output fall to 11.70 million tonnes from a previous 16.89 million tonnes.

Brazil Govt Sees 2001.02 Coffee Crop Off Sharply

Reuters, July 27, 2000

Brazil's 2001/02 (July/June) coffee crop may reach no more than 25.9 million 60-kg bags, sharply down from its potential, after drought and frost damaged vulnerable trees, the government said Thursday. The figures are a preliminary evaluation for the forthcoming coffee crop, the world's largest, based on a potential production of 35 million bags - first reduced by debilitating drought and then by frosts in key growing areas. Minas Gerais, the state which accounts for close to half of Brazil's coffee production, had a 2000/01 potential of 18.0 million bags, but the combined weather losses of 5.5 million bags had cut its expected output to 12.5 million bags.

Frost Causes Big Coffee Losses in Brazil's Parana

Reuters, July 18, 2000

Recent frosts in Brazil's state of Parana could destroy the forthcoming 2001/02 (July/June) coffee crop by up to 90 percent and the current crop by 20 percent, the Agriculture Ministry said Tuesday. Estimating the 2001/02 crop in Parana at 2.6 million 60-kg bags, the ministry said the ground frost which struck at dawn Monday "extended the losses in coffee plantations of the next crop...which could have a fall of 80 to 90 percent." "The low temperatures are also harming the production which is currently being harvested. The cold will reduce this year's crop, estimated at 2.2 million bags, between 15 and 20 percent in that state (Parana). Apart from that, it will damage the quality of the coffee," the ministry said in a statement.

Possible Massive Frost Damage to Part of Parana's Wheat Crop

World Wide Ag Network, July 17, 2000

Reports out of Brazil indicate that there may be some major damage to the wheat crop in the state of Parana after extremely cold temperatures struck over the past week. Temps were recorded as low as 21

degrees (F) in the western and midwestern sections of Parana. The Parana Ag Department admits that there will be losses. Agronomists estimate that approximately 40% of the regions wheat was in the flowering stage when the cold snap hit. Some speculate that the damage could run as high as 60% in the region.

Brazil Sugar Crop at Risk

Reuters, June 12, 2000

Drought in the world's biggest sugar producer Brazil, if prolonged, could help drive world sugar prices significantly higher, European traders and analysts said on Monday. Brazilian sugar areas are not expected to see rain until the end of July, he said, adding, "The crop, already small and low yielding, is getting worse."



Troubled Times



Bulgaria

Bulgaria Seeks International Aid to Offset Wildfire Losses

Associated Press, August 13, 2000

Bulgaria will seek international aid to offset losses caused by a series of wildfires that swept across the country since the end of June, a government official said Sunday. Aleksandar Pramatarski, a Cabinet minister, told the state BTA news agency that the United Nations and the European Union would both be approached for aid to help restore agricultural land and forests. Wildfire losses are expected to amount to leva 38 million (about dlrs 19 million), according to the report. The worst fires occurred in southeast Bulgaria in mid-July, but since then a protracted heat wave has been responsible for recurring blazes across the country.



Troubled Times



Burundi

Drought Hits 350,000 People in Northern Burundi

Reuters, July 24, 2000

More than 350,000 people in northern Burundi have been hit by a prolonged drought that has ravaged most of east Africa, the United Nations said on Monday. Evarist Kagimbangabo, the head of the local administration, said six people had died from the effects of hunger in recent weeks. "People plant but they get no harvest. This is a real catastrophe," he told Reuters. "If no one intervenes, by the end of July many more people will be dying."



Troubled Times



Cambodia

Bounty Placed on Cambodian Rats

Discovery Earth Alert, March 21, 2000

Rats in the southern Cambodian province of Takeo had a bounty placed on their tails by government officials on Monday in an effort to halt the destruction of the area's rice crops. Governor Keb Chutema said, "Today we launched a rat attack campaign in Kirivong district of Takeo. We have appealed to farmers to join us in killing those nasty rats." An invasion of the rodents during the past several weeks is being blamed for the destruction of at least 1,236 acres of rice crops.

WFP Reports on Cambodia Floods

World Food Programme, September 29, 2000

According to the Government (National Committee of Disaster Management), the flooding has created a state of emergency in 14 out of 23 provinces. WFP is preparing to deliver emergency food aid to some 500,000 people, following the destruction of thousands of homes and nearly 220,000 hectares of rice crop by a historic flooding from Mekong and Tonle Sap rivers. WFP is estimating that about 15,000 tons of food will be required to meet the immediate food needs of the flood victims. If the flood waters do not recede by mid-October there are fears that the farmers will not be able to plant on their land and will face prolonged and more serious vulnerability.



Troubled Times



Canada

Virus Attacking Fruit in Ontario May Spread

Agweek, September 5, 2000

Canadian fruit growers are worried that a virus that's been attacking fruit crops in southern Ontario may spread to other parts of the country. The plum pox virus attacks peach, plum, apricot and nectarine trees, eventually making the trees unproductive and the fruit tasteless. The trees have to be chopped down to keep the virus from affecting the entire crop. Since June, the virus has been found in more than 500 orchards in the Niagara area. But the virus has been detected beyond the region, affecting trees near Windsor. Blake Ferguson, from the Canadian Food Inspection Agency, is part of a team that's trying to find a way to control the virus. "If the virus was allowed to spread uncontained, it could have a serious economic effect over time on the peach industry," he said.

Wet Spring has Ontario Seeking Help

The Western Producer (Canada), July 6, 2000

Large swaths of Ontario farmland are water-logged this summer and a farm income crisis is looming, says the president of the province's largest farm organization. He estimated that crops worth hundreds of millions of dollars are in jeopardy because of one of the wettest spring and early summer seasons in many years. In many parts of the province, fields have been too wet to plant, or once seeded, too wet to produce a healthy crop. Fields of fruit and vegetables are rotting, soggy tobacco fields are being invaded by blue mould and the hay crop is either too wet to harvest or of diminished quality.



Troubled Times



China

Shanxi Province Struck by Drought

Discovery Earth Alert, Aug. 19, 1999

Northern China's Shanxi province has been struck by a severe drought for the third year in a row, says its state media. Nearly 4 million acres of crops have been affected, with a half million acres destroyed. More than 3 million people and 460,000 livestock animals are experiencing a shortage of drinking water, the Xinhua News Agency reports. Sixty percent of the province's small reservoirs have dried up, and another 20,000 wells are low on water. Meanwhile, in southern China, provinces are struggling through annual summer floods that have killed 800 people and left 5.5 million others homeless.

Natural Disasters Devastate China

Discovery Communications, April 15, 1999

The worst summer flooding in 40 years destroyed 645,000 acres (261,000 hectares) of valuable cropland last year, while construction projects destroyed 334,000 acres (135,000 hectares) in 1997. The Ministry of National Land and Resources blamed local governments for allowing farmland to be used for other purposes, thereby reducing crop-growing areas. About 66 percent of China's farmland is located in mountain and plateau areas. One-fifth of the total crop-growing area is polluted to some extent, the reported added.

China: Drought [Spreads To South](#)

Asia News, May 3, 2000

Severe drought is spreading from the mainland's north and threatening the southern provinces. In Jiangsu province, 1.13 million hectares were drying up, the Yangtse Evening News reported. The lack of water hindered the spring ploughing, the paper said. In the northern province of Shaanxi, the drought was affecting some 667,000 hectares, 40 per cent of the province's farmland, Xinhua reported. In Ankang prefecture, in the south of the province, 60 per cent of farmland has been hit hard, with 170,000 people affected in what the report called the worst drought on record. In Huoqiu county, Anhui, 66,000 hectares of farmland were seriously affected by drought as water levels in the county's reservoirs measured only 59 million cubic metres, about one-fifth of reserves held at the same time last year, the *Farmer's Daily* said. The western part of Guangdong province is experiencing its worst drought since 1954, the Yangcheng Evening News reported earlier.

Drought Forces Rationing in China's Capitol

ENN.com, June 11, 2000

Beijing, China will soon order homes, factories, hotels and bathhouses to ration water amid a severe drought that is devastating crops and drying up rivers across northern China, state media reported. Beijing's worst water shortage in nearly two decades has prompted the government to enact "strict and obligatory" quotas on water usage, Xinhua news agency said in a weekend report. The quota system < yet to be unveiled < would affect industries, hotels, restaurants and universities, Xinhua said.

A prolonged drought is baking China's northern plains, with wheat one of the crops worst affected. Agriculture sources said last week they expected the national wheat crop to drop nearly eight percent this

year, to 105 million tons from 113 million tons, in large part due to the drought. The mighty Yellow River, tapped by factories and farmers along its 3,000-mile (5,000 km) course, has been reduced to a stream by the time it reaches its mouth in Shandong province. In Beijing, the water table and key reservoirs are at their lowest levels since the early 1980s. Water resources per capita were 300 cubic meters just 3.3 percent of the world average in the capital city, Xinhua said, citing official statistics.

China Battles Drought with \$48 Mln Emergency Package

Associated Press, June 28, 2000

With northern China facing its most severe drought in a decade, the government announced a 400 million yuan (dlrs 48 million) emergency package Wednesday to sink wells, store rain, divert water and for other relief measures. The money will also be used to spray drought-resistant liquids on crops to ensure food for farmers and to buy pumps, fuel and equipment to transport and store water, the state-run Xinhua News Agency said. The drought has left 16.2 million people and 13.7 million livestock animals short of water and destroyed 14.4 million hectares (35.58 million acres) of crops, Xinhua said. It also has given rise to plagues of locusts that have attacked 3.3 million hectares (8.15 million acres) of crops, Xinhua said. Worst hit are the provinces of Shanxi, Shaanxi, Hebei, Gansu and Ningxia in the north and northwest and the northern region of Inner Mongolia, it said. Top soil in many areas has been reduced to dust, it added.

Flooding so far Kills Over 400 in China's Rainy Season

Associated Press, July 6, 2000

Flooding has killed more than 410 people in the opening weeks of China's annual rainy season and local governments were being warned to prepare for more floods, the official China Daily newspaper reported Thursday. It added that the rains damaged 110,000 houses, 35,000 hectares (86,500 acres) of crops and 90 kilometers (55 miles) of roads, causing losses of 133 million yuan (dlrs 16 million).

Chinese Corn Crop Production Expected to Drop Sharply this Year

World Wide Ag Network, July 18, 2000

Grain traders and analysts in China are saying that they expect to see a sharp drop in this year's total corn production due to the lingering effects of a widespread drought in many areas of the country. Experts now estimate that the total Chinese corn crop could come in as low as 103 million tonnes. That compares with earlier estimates of 115-122 million tonnes made only two months ago. Now, instead of being a main competitor to the US in the export markets, it is possible that China could actually wind up being a net importer of corn during the next marketing year.

Destructive Typhoon Hits China

Associated Press, September 11, 2000

A powerful typhoon that roared across coastal southern China over the weekend left five dead and severely damaged houses and crops, an official and state media reported Monday. Newspapers said the typhoon was particularly destructive. Packing high winds, it moved slowly to the southwest, lingering over the island considerably longer than most typhoons, the Beijing Morning Post and others reported. The storm caused over 1,000 houses to collapse and ruined 20,010 hectares (49,420 acres) of rubber trees, bananas, rice and pepper crops, the Yangcheng Evening News reported in its Sunday edition.

Drought in China Slows Down World Cereal Production, FAO Says

Associated Press, September 20, 2000

A drought in China is having a strong impact on world crops, making global cereal production increase at a lower rate than expected and forcing a large use of cereal stocks, a U.N. Food Agency said Wednesday. The Rome-based Food and Agriculture Organization forecast world cereal production this year at 1.8 billion tons, 15 million tons lower than the June forecast and about 0.3 percent above the revised 1999 estimate. The output is well below consumption requirements, causing global cereal reserves to be drawn

down, FAO said in its report. In China, reduced plantings and a serious drought have led to a sharp reduction in wheat production. The whole Asian continent has seen a significant fall in this year's cereal output, down 3 percent to 991 million tons.



Troubled Times



Croatia

Natural Disaster Proclaimed in Northern Croatia due to Drought

Associated Press, July 3, 2000

The prefect of Croatia's northern region of Medjmurje proclaimed a state of natural disaster on Monday after the current drought ruined up to 40 percent of this year's crop and caused damage totaling 44 million kuna (dlrs 5 million) to local farmers. Agricultural officials estimate this year's crops would be 30-40 percent below last year's output. In neighboring Slovenia, the damage caused by the drought is estimated at dlrs 30 million.

Fires in Southern Croatia Devastate Crops

Associated Press, August 23, 2000

Fires fanned by gale-force winds Wednesday razed two family homes to the ground and destroyed hundreds of acres of crops, prompting local authorities to declare a state of emergency. Planes were on hand to combat the flames and volunteer firefighters were summoned from neighboring towns, but high gusting winds and mines leftover from the recent independence war from Yugoslavia have impeded access and increased the risk. Dalmatia, a sparsely populated region of dry land dotted by brush and pine growth, has suffered under extremely hot, dry weather this year, often aggravated by high winds that can quickly whip a fire out of control and turn huge forests into tinderboxes.



Troubled Times



Cuba

Cuba Drought Raises Fears for 2000/2001 Sugar Crop

Reuters, July 31, 2000

An eight-month drought in Cuba is expected to worsen during August, raising fears the Caribbean island's 2000/2001 sugar harvest may be affected and fall below its official target of 4.5 million tonnes, the Meteorological Institute warned. Cuban meteorological experts said that over the weekend there had been a "worrying" lack of rainfall since the end of 1999, particularly in the western province of Pinar del Rio, the central zones of Havana and Camaguey, and the eastern provinces Granma, Holguin, Santiago de Cuba and Guantanamo.



Troubled Times



Cyprus

Forest Fires in Cyprus Brought Under Control

Reuters, June 16, 2000

A multinational force of firefighters on Friday succeeded in dousing the worst forest fires in decades on the Mediterranean island of Cyprus. Ninety percent of crops in the affected area were destroyed, locals said.



Troubled Times



Ethiopia

Horn of Africa "At Early Stages of Massive Tragedy"

Associated Press, April 25, 2000

The Horn of Africa is "at the early stages of what could be a massive human tragedy," according to a report by the U.N. special representative to the region. However, U.N. chief Kofi Annan said Tuesday that quick action might avert tragedy. "The situation is very serious but if we can pull together now, we might be able to avert a disaster," U.N. Secretary General Kofi Annan said at a brief news conference at Charles de Gaulle airport. Annan, headed to Dakar, Senegal, met with reporters during a stopover here. The U.N. will study the needs of draught-plagued countries such as Ethiopia, Kenya and Eritrea over the next three weeks and make specific aid requests to world governments in late May, Annan said. He made the decision to act quickly after reviewing the report by his special envoy Catherine Bertini, who also heads the World Food Program.

A three-year drought in the region has sparked food, water and medicine shortages. The World Food Program estimates that there are some 16 million people at risk from lack of food and water. With food supplies expected to run out in June or July, the region could soon face famine-like conditions, Bertini, who joined Annan, said. ... Bertini said current efforts were aimed at trying to avert a disaster like the 1984-85 Ethiopian famine, which left up to 1 million Ethiopians dead. "It's a crisis now, but it could become worse," Bertini said. The U.N.'s Food and Agriculture Organization said last week that current food needs for the Horn of Africa have risen sharply to about 2 million tons- more than double last year's requirement and the highest level in 15 years.

Drought Starved Ethiopia Needs Food

Reuters, July 4, 2000

A senior U.S. aid official has appealed for more food aid for Ethiopia, where an estimated 10 million people are threatened by drought this year. After the failure of the recent Belg rains in Ethiopia, the government says the number of people needing aid this year has risen by around 2 million people, and the amount of food needed has risen to 1.2 million tons from 836,000 tons.



Troubled Times



France

Miserable Summer Spells Gloom for French Farmers

Reuters, July 28, 2000

The gloomy weather that forced Parisians to switch on the heating this month - the country's coldest July in 20 years - will hit French farm revenues hard. "Even though grain, oilseed and pulse yields were looking promising, the incessant rains will trigger a very sharp drop in income," Luc Guyau, head of the leading FNSEA farm union, told Agriculture Minister Jean Glavany in an open letter this week. "Today we've reached a point where the situation is becoming dramatic and is raising serious worries about the quality and quantity of the crops," he said. Cereals and oilseeds crops had weathered an excessively dry spring and early summer and were on target for healthy, if not record production in 2000. Harvesting had only just begun when freak storms lashed the north of the country on July 2 and 3, downing power lines and damaging crops. Farmers reported wheat crops completely flattened by hail and rapeseed fields had turned white as violent winds split open stems.



Troubled Times



Georgia

Official Drought Cost Georgian Agriculture Dlr 237 Million

Associated Press, August 30, 2000

A devastating drought in the Caucasus this summer has cost Georgia about 464 million lari (237 million dollars) in lost crops and other damage, an agricultural official said Wednesday. The drought ruined grain crops in the country's southeast, said Mata Bigvava, a spokesman for the Ministry of Food and Agriculture. More than 70 percent of the country's wheat crop was destroyed, the ministry has reported. President Eduard Shevardnadze has asked the United Nations for disaster aid, including seed grain for next year's planting. Hot and dry weather also gripped neighboring Armenia this summer.



Troubled Times



Ghana

Army Worms Invade Ghana

Discovery News, July 2, 1999

Millions of destructive army worms have overrun 322,000 acres of Ghana's croplands, causing extensive damage. Ghana's state-owned newspaper, Graphic, stated that the worms have devoured an average of 2,500 acres of cereal crops each day in eastern parts of the country. Fields of rice, maize and millet have been laid waste by the pests. Agricultural officials are now concerned that the worms will move to the six bordering districts as well. The larvae of army worms travel in multitudes, destroying any fields or grasslands they inhabit.

W. Africa 00/01 Cocoa Crop to Start Slowly

Reuters, June 16, 2000

Cocoa crop forecasters say their pod counters are seeing a weaker than average early development of main cocoa crops in Ivory Coast and Ghana, indicating a slow start for the 2000/2001 season. Another forecaster said he saw earlier poor pod counts confirmed by low totals from counts which came in over the weekend. His June 6 report said the current setting in Ghana and Ivory Coast is lower than any other during the previous decade. The current rate of setting is more than 35 percent below average, he reported. He said that there was still room for things to get better but that the probability of a bumper crop is close to zero.



Troubled Times



Greece

Greece on Alert as Forest Fires Rage

Reuters, July 13, 2000

More than 100 new forest fires broke out in Greece Thursday, fanned by strong winds that hampered efforts to extinguish fires raging since a heat wave began 10 days ago, causing tinderbox conditions across the country. The fires have so far killed an elderly woman, destroyed thousands of hectares of forest and farmland and burned several houses.

Sponge Bug Threatens Ancient Trades

Associated Press, September 15, 2000

The island of the fearless sponge divers now has an enemy it dreads: a fast-spreading blight that has chewed up sponge beds across the Mediterranean. The disease, which leaves the few surviving sponges brittle and pock marked, first appeared in the area in 1986 and returned late last year - threatening to kill an ancient trade that has been in decline for decades. "There is total destruction (of sponges) across the Mediterranean," said boat captain Manolis Saroukos, who is also the head of the island's sponge fishing association. "People have lost their ability to make a living. I don't know what will happen to them."



Troubled Times



Guyana

Relentless Rains Threaten Guyana's Staple Commodities

Reuters, June 21, 2000

Floods from unusually heavy rains threaten Guyana's staple commodities and could hamper economic growth in the former British colony, top government officials said. The flooding has hit rice and sugar crops and bauxite output, export products that are critical to the economy of one of the poorest nations in the Western Hemisphere, located on South America's northeastern shoulder. Roger Luncheon, the head of the Presidential Secretariat, told reporters Wednesday there was a "worsening situation from relentless rains."



Troubled Times



Honduras

Honduran Lawmakers Ask President to send Food to Farmers Facing Drought

Associated Press, August 21, 2000

Legislators have appealed to President Carlos Flores Facusse to send food to 35,000 farmers to prevent hunger following a devastating drought in southern Honduras. Lawmakers approved the request Saturday night. Drought has damaged 90 percent of the corn and bean crops in the southern provinces of Valle and Choluteca. In some areas, unscrupulous sellers have increased their prices for basic food products by 200 percent, legislators said. The government is currently putting together a dlrs 100,000 emergency food aid package for 10,000 families, said Vice Minister of Agriculture, Miguel Angel Bonilla.



Troubled Times



India

Indian Government Prepares to Transport Water, Fodder to 11 States

Associated Press, April 27, 2000

Drought conditions, or prolonged periods of dryness leading to crop failure, exist in 11 of India's 25 states affecting 80 million people, mostly in the northern half of India, the national government said in a status report published Thursday. It warned that food grain production will drop by up to 30 percent, and oil seed crops will be cut in half in some of the worst hit areas. ... According to the national government, 26.2 million people in Rajasthan are affected by the drought in 23,406 villages. More than 345,000 cattle are facing food shortages, but many were dying of thirst first. The national government said in its status report that 25 million people in 19,421 villages in Gujarat state have been affected by the drought, and 7 million cattle face food shortages because of failing crops. In Andhra Pradesh, the drought has affected 36.4 million people in 17,431 villages, the government said. Endangered crops include maize, peanuts, sunflowers, castor beans and sugar cane. Other states affected by water shortages and crop damage are Madhya Pradesh, Himachal Pradesh, Jammu and Kashmir, Karnataka, West Bengal, Manipur, Mizoram and Tripura.

India Pepper Prices Seen Rising on Low Crop

Reuters, July 18, 2000

An anticipated fall in the 2000/2001 (April-March) crop by about 10 percent from last year's level is likely to push up Indian pepper prices, farmers said on Tuesday. The 2000/01 crop is seen lower because the pepper spikes - small shoots on pepper vines out of which the pepper berry emerges -- have been forming erratically or falling off.

Floods Kill 85 People and Wash Away Crops in South India

Reuters, August 24, 2000

Eighty-five people have been killed and over a thousands homes destroyed in floods following two days of heavy rain in the southern Indian state of Andhra Pradesh, officials said on Thursday. Chief Minister Chandrababu Naidu told state legislators that the situation was grim in three districts - Guntur, Prakasam and Kurnool. The floods in the south followed a catastrophic monsoon season in north and northeast India, Bhutan, Nepal and Bangladesh, where about 300 are feared dead and millions homeless. Naidu said preliminary reports on Andhra Pradesh showed 500 minor irrigation tanks were breached and 67,351 hectares of paddy and other crops washed away by vast lakes of water. The flood waters destroyed 1,440 houses and damaged a further 1,204 houses. Naidu said the government had sent 132 relief and rescue teams as well as 571 medical teams to the affected districts.



Troubled Times



Iran

Villagers Leaving Home due to Drought in Iran

Associated Press, April 25, 2000

A severe drought in Iran's arid Sistan-Baluchestan province is forcing villagers to leave their homes, the official Islamic Republic News Agency reported Tuesday. It quoted Adib Darvishi, governor of the city of Nikshahr in the eastern province, as saying that 157 families from nine villages have either already left or are in the process of doing so. "The meager rainfall that has resulted in the current critical situation has brought most of the cattle to the brink of perishing," IRNA quoted Darvishi as saying. The agency said that authorities believe that 17 of the nation's 28 provinces will be affected by drought this year. Mohammad Hassan Razavi, head of water affairs in the city of Qom in Iran's northern Markazi province, described this year's drought as "a national disaster," IRNA reported.

Iran Prtrolling Water Wastefulness

Earth Alert, May 21, 1999

A severe drought in Iran has forced government officials to create a water police force to monitor consumption and prevent the waste of the scarce resource. The agency's first assignment will be in the city of Gorgan, where residents face a water crisis this summer due to parched conditions since the beginning of the year. The capital city of Tehran will also have a force monitoring its streets due to an acute water shortage. An especially dry winter has left reserves 50 percent below last year's supply. In early January, thousands of Iranians in the holy city of Qom prayed for rain. The Ayatollah Hossein Nuri Hamedani told the faithful that sins such as murder, injustice and bad intention - as well as not trusting fellow Shiite Moslems - had kept the rain from coming.

Drought Displaced people, Wrecks Crops in Iran

Associated Press, August 19, 2000

Severe drought has ruined millions of dollars worth of crops and forced 50 families to abandon their homes in southeastern Iran, the country's official news agency reported Saturday. An agriculture official in Kerman province, Manouchehr Pourjamali, said the drought had dried up water reserves by 95 to 100 percent in Amjaz district, the Islamic Republic News Agency said. He said 970 hectares (2,397 acres) of citrus fruit orchards and 226 hectares (558 acres) of crops worth 28 billion rials (dlrs 3.5 million) have been completely destroyed, the agency reported. The Amjaz district is home to 1,450 families and has 2,100 hectares (5,189 acres) of land under cultivation.

U.N More than Half of Iranians Affected by Drought

Associated Press, August 22, 2000

More than half the population of Iran already is affected by the worst drought in more than 30 years, and the situation will worsen in the coming months, the United Nations said Tuesday. "Our assessment of the situation is that it is critical, and if no appropriate measures are taken now, we would face a fully-fledged disaster," said Vladimir Sakharov, of the U.N. Office for the Coordination of Humanitarian Affairs, who led a mission to assess the situation in Iran from July 22 to Aug. 8. He said living conditions are worsening by the day for the 37 million people affected. The biggest problem is a lack of drinking water, the mission found. An estimated 800,000 animals already have died and the United Nations is concerned

that up to 60 percent of the rural population may move into cities.



Troubled Times



Iraq

Drought Lays Waste 70 Percent of Cultivated Land in Iraq

Associated Press, April 4, 2000

Lack of rain may have devastated up to 70 percent of arable land Iraqis had planted with wheat, barley and other crops, U.N. and Iraqi government forecasts reveal. Rainfall in February was one fifth of that recorded last year, itself one of the driest in the past 50 years, according to an official report obtained Tuesday. In March, most areas had virtually no rain, the report added. "The situation is very bad," Amir Khalil of the U.N. Food and Agriculture Organization told The Associated Press. "For the first time Iraq has to import barley and in large quantities." Both U.N. and Iraqi officials declined to give figures on this year's produce. But given the severity of the drought, harvest is expected to be even lower than the meager amounts farmers shipped to state silos last year. Grain yields in 1999 fell to 1.3 million tons from 2.5 million tons compared with the previous year. Iraq needs at least four million tons of wheat a year.

Iraq's Crop Harvest Down by Half

Associated Press, May 25, 1999

The worst drought on record in Iraq has cut crop yields to half of last year's totals, a U.N. report released today said. The Iraqi government usually refuses to give figures or estimates on agriculture, making the U.N. report particularly significant. "The Tigris Basin has seen the lowest water flow rate ever recorded," the report said. "All indications point to a wheat and barley crop failure." The U.N. report predicts feed will become more expensive, adversely affecting livestock and poultry production. It also expected further increases in consumer prices of dairy and meat products. "The drought could cause crop losses estimated at 37 percent of wheat and 63 percent of barley" this year, according to the report submitted last week to the U.N. Security Council. Last year, Iraqi government granaries collected 1.2 million tons of wheat and 859,000 tons of barley. The government has admitted that the country is facing the worst drought ever recorded.

Another Dry Year in Iraq

Reuters, July 15, 2000

Farmers have abandoned their farms in this town and the surrounding district, once known for its high crop yield. For two consecutive years, the area has witnessed very dry weather with almost no rain at all. Iraqi and U.N. officials predict Iraq will suffer an even worse drought this year than last. They said the drought would have a devastating impact on crops and animal production. Iraq has been hit by the most severe drought ever recorded in the past 100 years, said Amir Khalil, the U.N. Food and Agriculture Organization (FAO) representative in Iraq. Khalil said the drought was expected to destroy 75 percent of Iraq's harvest this year.



Troubled Times



Israel

Severe Drought Wracks Israel

Discovery Earth Alert, Nov. 22, 1999

Israel is facing its worst drought in nearly a century, Environment Minister Dalia Itzik reported last Sunday. Itzik called for the Israeli government to declare a national state of water emergency and to launch a massive program to treat wastewater to be used for agricultural irrigation. Foreign Minister David Levy said the country "must import water from Turkey immediately" in order to resolve the escalating water crisis. Israel is already two months into the winter season and is still without any significant rainfall. The water level of the country's major water resource, the Sea of Galilee, is 7.5 inches below its red line, and officials expect the level to drop even further if the hot, dry weather continues. Government officials are considering a number of proposals, including desalination, to remedy the crisis. Experts commented that even if the government begins a seawaterdesalination project immediately, it will take a least two years before the first drop of fresh water is produced. Water is a central issue in the ongoing status talks between Israel and the Palestinians. Israel is in control of about 80 percent of the occupied West Bank's water sources.



Troubled Times



Italy

Severe Drought in South Italy Threatens Crops

Reuters, June 19, 2000

A serious drought in southern mainland Italy and the islands of Sardinia and Sicily is threatening crops as reservoirs recede, a senior irrigation expert said on Monday. "The situation is worse than last year in Sardinia, Sicily and Puglia (southern mainland)," Arcangelo Lobianco, president of the National Association for Land Reclamation, Irrigation and Land Improvement (Anbi), told Reuters in a phone interview. Lobianco said it was too late for some farmers to recover crops, and that they would need state aid.

Hot Weather has Italy's Wine Growers Hurrying in Harvest

Associated Press, August 30, 2000

Italy's grape pickers are working 12- to 15-hour days to complete the earliest wine harvest in memory, hurried along by torrid summer heat that threatens to turn the crop to raisins on the vine. July rains followed by two weeks in the high 90s could make for a great year of high-alcohol, full-bodied wine or grapes of wrath if the harvest isn't in soon. "I have been working in this territory for 20 years and certainly this is the earliest harvest," Col D'Orcia oenologist Pablo Harri said. "Brunello in August just doesn't happen."



Troubled Times



Jamaica

Jamaican Government says it may have to Limit Water Supply

Associated Press, April 6, 2000

The government's National Water Commission will begin "locking-off" the water supply to parts of Kingston for as long as eight hours a day starting Tuesday, with other parts of the country to follow, Water Minister Karl Blythe said. The water level at the two reservoirs serving Kingston has grown dangerously low, with the smaller Hermitage Dam reservoir at 37 percent of its normal level and the larger Mona Reservoir at 62 percent of capacity, Blythe said. The government's Rural Agricultural Development Agency blames the drought for 250 million Jamaican dollars (U.S. dlrs 6 million) in crop losses and livestock deaths in January and February. According to meteorologists, the Caribbean island has received only 56 percent of its normal rainfall since December with four of the country's 13 parishes receiving less than 40 percent of their normal rainfall.

FAO Reports Crop Damage from Drought in Jamaica

Food and Agriculture Organization of the U.N, June 2, 2000

Normal rains have recently resumed following a persistent long drought which severely affected the country since October last year. Official figures indicate that some 2 800 hectares of growing foodcrops, such as roots and tubers, plantains, fruits and vegetables have been lost. Between 2 500 and 3 000 rural families have been seriously affected. At the onset of the rainy season, the majority had no seedlings to plant and almost no farm inputs.



Troubled Times



Jordan

Jordan Announces Summer Water Rationing Plan for Parched Kingdom

Associated Press, April 26, 2000

Jordan lacks the rivers of neighboring Israel, Iraq and Syria and the money of the oil-rich Gulf states for desalination. It receives part of its drinking water from Israel under a peace treaty signed in 1994. The kingdom has been facing severe water shortages since a mild drought hit the region three years ago. But the situation worsened in 1999 because of inadequate rainfall - the main source of water for drinking and farming. This year's rainfall has been 56 percent of its annual average - or 21 percent more than in 1999. But the state says Jordan's six dams were only 33 percent full with 53 million cubic meters (1.86 billion cubic feet) of drinking water.

Syria Pumps Water to Jordan to Alleviate Drought

Associated Press, August 13, 2000

Syria began pumping water to Jordan on Sunday in an effort to help its neighbor make up for a severe shortage of drinking water due to a regional drought. In a ceremony attended by Safi Abu Dan, the governor of Dara'a, and Avadis Serkain, secretary-general of Jordan Valley, Syria began pumping from the Sahn-el-Jolan Dam, three kilometers (1.8 miles) from the Jordanian border. Some 60,000 cubic meters will be pumped daily for two months following an agreement made last month by the Syrian and Jordanian water ministers. Last year, from May to September, Syria provided Jordan with 8 million cubic meters of drinking water. A regional drought has left Jordan struggling with a water shortage for the past few years. The kingdom lacks the rivers of neighboring Israel, Iraq and Syria; it receives some drinking water from Israel under their peace treaty.



Troubled Times



Kazakhstan

Kazakhstan Government Braces for Locust Onslaught

Associated Press, May 2, 2000

Kazakhstan is bracing for summer swarms of locusts like the ones that damaged crops and caused widespread disruption in the Central Asian country last year, officials said Tuesday. Prime Minister Kasymzhomart Tokayev discussed anti-locust preparations at a cabinet meeting Tuesday and said that 1.86 billion tenge (drls 13 million) was being appropriated for pesticides and other measures, more than three times the amount spent last year. The economically hard-pressed former Soviet republic wants to avoid a repeat of last year's locust infestation, when the voracious insects covered some 9 million hectares (22 million acres) of land. They spread to southern Russia, affecting areas that had not had locust problems since the 1920s.



Troubled Times



Kenya

Kenians Starve as Maize Output Plunges

Reuters, July 10, 2000

Kenians, particularly children, are starving to death as a severe drought has ravaged the staple maize crop and livestock, the U.N.'s world food body said on Monday. The food situation was especially dire for farmers facing serious rain shortages, FAO said. "The long rains season (March-May), which normally accounts for 80 percent of total annual food production, has failed due to severe drought," the report said. Most of the country, including the "bread basket" Rift Valley province and the Central province which is normally close to self-sufficient in food, has received little or no rainfall, leading to widespread crop failures and large livestock losses.

Power Cuts in Kenyan Capital

EarthChangesTV.com, July 19, 2000

The Kenyan capital, Nairobi, is going through an unprecedented crisis. Power has been severely rationed, with factories and private homes limited to electricity for only part of the day, and water being provided only on certain days of the week. The government blames the crisis on the present drought which it says is the worst for 100 years though many Kenyans say that mismanagement of resources is more to blame. Industries and private homes in Nairobi are receiving perhaps only four hours of power a day, and people are desperate. It is not only electricity but water as well. The poorer people of Nairobi are used to queuing for hours to fill jerrycans. Now the middle classes are queuing for water too.



Troubled Times



Korea

3.5 Million North Koreans Have Now [Starved To Death](#)

BBC News, August 31, 1999

Up to 3.5m people have died of starvation in North Korea since 1995 and up to 300,000 have fled over the border to China, a Seoul-based charity says. And a United States congressman just back from North Korea hints at the possibility that Pyongyang could shelve plans for the launch of a new long-range missile in exchange for food. The Buddhist charity Good Friends has based its estimates on interviews with over 1,000 North Koreans living illegally in three provinces in China. It estimates that there are at least a 140,000 refugees who have fled to China in search of food, and says that the figure could reach 300,000. They face being sent back to North Korea, where they are likely to be punished for leaving. The charity's president, the Venerable Pomnyun, said at the launch of their report, based on analysis of the interviews with refugees, that the death toll from the famine in the North had to be estimated at 3.5m people since 1995.

Drought, Heat Attack DPRK

Xinhua, July 11, 2000

The Democratic People's Republic of Korea (DPRK) has been hit by a sustaining drought and heat this year, the Korean Central News Agency reported Tuesday. According to the report, maize, rice and other crops were badly affected by the sustaining heat and drought, which left roots of rice plants rotten and non-paddy crops dried up in some areas on the west coast, including Pyongyang, South Pyongan province, North Hwanghae province and Nampo city. In consequence, agricultural production this year is expected to suffer a sharp drop, said the report.

South Korea Plans to Loan Imported Grain to North Korea

Associated Press, September 9, 2000

South Korea plans to import a large amount of grain from foreign countries and loan it to hunger-stricken, communist North Korea, a top government official said Saturday. Unification Minister Park Jae-kyu told leaders of South Korea's political parties that North Korea asked South Korea to loan it up to 1 million tons of grain during high-level government talks in Pyongyang late last month. "The North wants to get as much grain as possible and also wants it as soon as possible," said Chung Kam-kyu, a ministry spokesman, relaying the minister's remarks. For a sixth straight year, North Korea's farm industry was damaged by bad weather this year, forcing the country to depend on outside aid to feed its people. In past months, North Korea has reported heat waves, drought and floods. ... North Korea needs 4.7 million tons of grains to feed its 22 million people annually, but it usually produces less than 3.5 million tons, Seoul officials say. Since the mid-1990s, up to 2 million North Koreans have died of starvation, according to U.S. officials.



Troubled Times



Laos

Red Cross Seeks Flood Aid

Associated Press, September 21, 2000

Unusually widespread monsoon floods are affecting major rice-producing areas of central and southern Laos, the Red Cross noted. At least four provinces have been badly affected and face food shortages, and the country's Red Cross society is preparing a relief operation, it said.



Troubled Times



Liberia

Hit by water shortage, Liberians line up in streets with buckets

Associated Press, April 27, 2000

MONROVIA, Liberia- Thousands of residents were lining up with buckets and barrels Thursday during a severe water shortage in Liberia's capital. Daily water supplies trucked into Monrovia by European Union have been slashed by nearly two-thirds - from 18,600 gallons to 6,000 gallons a day - because of declining levels in wells outside the city. The crisis was exacerbated by the fact that President Charles Taylor's government has neglected to restore running water, electricity and other basic services since Liberia's 1989-96 civil war. International aid agencies and foreign donors have roundly accused Taylor of spending lavishly on the military while neglecting development. An African diplomat who spoke on condition of anonymity also accused Taylor's government of neglect. "Any post-war government that is serious about attracting investment has to first prioritize lights and water," the diplomat said.

Meanwhile, residents like Mark Gedeh spent up to four hours on Wednesday waiting at the central supply station in central Monrovia for the 15 gallons allotted to him by the EU. His family would use it to drink and use putrid river water for washing, he said. An EU employee said the organization hoped the government would soon open its water treatment plant, which has been under repair for several years. "We will continue serving residents with small quantities until the water treatment plant is back in operation," Julius Clinton said. Yet an official in Taylor's government would give no timetable, saying the administration was in touch with "friendly governments" to provide aid. A generator and fuel was still needed to get the water plant back in operation, a sewage treatment plant worker said.



Troubled Times



Madagascar

Madagascar Rebuilding after Devastating Storms

Associated Press, April 21, 2000

Villagers in Madagascar's cyclone-ravaged northeast have quickly rebuilt many homes but much still needed to be done to repair schools and clinics and restore rice and vanilla crops, aid workers said Friday. Earlier this month, Cyclone Hudah ripped through the northeast section of this island nation off southeast Africa, killing at least 111 people and damaging or destroying the property or crops of up to 100,000 people, according to government estimates. In the worst-hit areas, up to 90 percent of infrastructure, two-thirds of rice crops and half of the vanilla crop were believed lost. The cyclone came on the heels of two other storms, Cyclone Eline in February and Tropical Storm Gloria in March, which together killed 130 people and damaged the homes or crops of some 185,000 people, mostly along Madagascar's eastern coast. ...With emergency operations well underway, other agencies have expressed concern over the costs of interrupted schooling and health care and the loss of cash crops such as cloves, coffee and vanilla. Madagascar is the world's leading exporter of vanilla, which takes some three years to grow.

Drought in Madagascar

Vita.org, June 7, 2000

The current drought is causing sharp declines in yields of maize, cassava and sweet potatoes. The Warning System which keeps a database on food security, climate, and prices and monitors all disasters in the South, reported that the situation is likely to deteriorate in regard to the food crops as well as livestock, while it has not yet reached the state of famine.



Troubled Times



Mexico

Mexico Declares Drought Emergency

Associated Press, April 17, 2000

The government has declared nine drought-stricken states in northern Mexico disaster areas, clearing the way for federal aid, the government news agency Notimex reported Monday. States across northern Mexico have been suffering from prolonged droughts and have experienced less than half of the average rainfall, according to *Notimex* reports. Similar drought conditions spread across the region last year, killing cattle, parching crops and forcing some communities to truck in drinking water.

Farmers Resort to Using Sewage Water in Dry Mexico

Nando Media/Associated Press, May 25, 1999

Meteorologists at the National Water Commission say it could be the worst drought in Mexico's history. It is the second consecutive dry year across northern Mexico - and for some states the fifth consecutive drought. Federal authorities have already declared five northern states disaster areas and plan to add seven more states within a few days. Rainfall in Sonora state is 92 percent below average this year. In Nayarit state, rainfall this year has been zero. The 20 big dams and water reservoirs in the five states declared disaster areas are down to an average of 19 percent capacity. Even the Rio Grande, which separates Mexico and the United States, is running almost dry along a long stretch of the border. To make matters worse, a heat wave is sweeping northern Mexico, especially the Pacific coast states. Temperatures in some parts of Sonora and Sinaloa states hovered around 110 degrees last week. Last year's drought was followed by disastrous hurricanes - including Mitch - that brought heavy downpours. ... Mexico is forced to import corn and wheat from the United States. A chief export product, beef cattle, is now under threat. More than 10,000 cattle have already died, and cattlemen fear more will perish if they don't sacrifice herds prematurely. Agriculture Department officials estimate several million acres of basic grains will not be planted this year if the drought lasts for another three weeks, forcing Mexico to import at least \$3.5 billion worth of wheat and corn.



Troubled Times



Moldova

Drought-Hit Moldova Sees Wheat Corps Just 500,00 T

Reuters, June 22, 2000

Moldova, hit by a severe three-month drought, is likely to gather a meagre 500,000 tonnes of wheat this year, below even last year's disastrous 790,000 tonnes and just half the 1998 figure, the agriculture ministry said on Thursday. Deputy Agriculture Minister Zosim Bodiou told a news conference that the unprecedented drought had already cost Moldova four billion lei (\$320 million). "We now see a harvest of some 500,000 tonnes of wheat," he said. "This is a crushing blow for the whole national economy."



Troubled Times



Mongolia

Red Cross: Mongolians Depleting Food Stocks, Animals Dying Off

Associated Press, April 30, 2000

Mongolians are depleting critical food stocks months before the summer harvest as more of their herds, weakened by drought and snowstorms, die off, the Red Cross warned. Already more than 2.2 million cows, horses, camels, sheep and other livestock have died since the severe and early storms began last year, the Red Cross reported Saturday. It added that in a month's time, at the start of the summer growing season, the number of dead animals will more than double to 5 million. ... A Red Cross relief effort has delivered 195 metric tons of wheat, rice and millet to 2,600 households and distributed 600 pairs of boots. By the end of May, it hopes to have distributed food to 6,300 households, or 35,000 people. Mongolia's latest troubles began last summer with drought and a rodent infestation that reduced ground fodder for animals. The worst snowstorms in 30 years then covered over what little the herds had for forage.

U.N., Mongolia Warn of Ongoing Disaster from Drought, Winter

Associated Press, June 27, 2000

A severe drought followed by Mongolia's worst winter in 30 years has killed millions of livestock, creating an economic crisis for 500,000 Mongolians and serious risk of epidemics, U.N. and Mongolian officials said Tuesday. More than 2.2 million cows, horses, camels, goats and sheep starved or froze to death, leaving some areas with a now decaying carcass every 100 meters (109 yards), said Douglas Gardner, the U.N. Development Program's regional disaster coordinator in Mongolia. With one third of Mongolia's 2.4 million people directly dependent on livestock raising, "this is not just a crisis of animals," Gardner told a news conference, "it's a human drama."



Troubled Times



Morocco

Morocco Wants Swift Moves to Offset Drought

Reuters, April 5, 2000

Socialist Prime Minister Abderrahmane El Youssoufi told Morocco's bureaucrats Wednesday to get cracking on action to counter the worst drought in a decade. "The realization of the anti-drought program should not at any stage suffer from slow procedures," he said in a four-page leaflet obtained by *Reuters*. Ministries and local authorities should speed up funding for water pipelines and for small and medium-sized rural firms, the prime minister said. The cabinet allocated 6.5 billion dirham (\$631 million) last month to combat water shortages in rural areas and create jobs to head off a drought-driven drift to the cities. The government expects gross domestic product to grow only three percent this year, instead of the 6.4 percent predicted before the rains failed. Agriculture accounts for 20 percent of Morocco's GDP, which was 365 billion dirhams (\$35.19 billion) in 1999. Half of the country's 10 million workers are employed in agriculture.

Germany Grants Morocco \$43 Mln to Fight Drought

Reuters, June 28, 2000

Germany said on Wednesday it had granted Morocco 90 million marks (\$43.29 million) in loans and a donation to fight the impact of drought. The Moroccan government has said it will devote more than \$630 million to offset the drought, which has battered the important farm sector.



Troubled Times



Mozambique

Flood ravaged Mozambique's needs remain pressing

Associated Press, April, 26, 2000

Torrential rains from two cyclones swept away the homes or livelihoods of 10 percent of Mozambique's 19 million people. They damaged more than 600 primary schools, wrecked more than 1,000 kilometers (620 miles) of roads and downed 400 kilometers (250 miles) of power lines. Crops in fertile river valleys in central and southern Mozambique were destroyed. Large tracts of agricultural land have become quagmires. Finance Minister Luisa Biogo recently cut economic growth projections to 6 percent for this year, and said inflation would almost double to 10 percent. The World Bank's preliminary estimates of the cost of the flooding is about dlrs 1 billion. Malloch Brown, speaking from Dakar, Senegal, where he was attending an education conference, said donors should help Mozambique recover totally from the disaster, in order to keep one of the continent's rare success stories going.



Troubled Times



Nepal

Flood Damage in Nepal

Food and Agriculture Organization (FAO), September. 22, 2000

Heavy monsoon rains, floods and landslides also killed a number of people and displaced several thousand in the worst affected areas in central parts of Nepal. Crops, mainly rice, infrastructure and communication systems were also damaged, with economic cost currently put at around US\$6 million. There are also concerns regarding the food security situation in remote parts of the country, particularly Rukum District, where supplies are declining and access remains difficult for food distribution.



Troubled Times



Pakistan

Pakistan Drought Threatens Nomads With Famine

By Cynthia Long, *DisasterRelief.org*, April 21, 2000

After touring affected regions, experts from the international relief organization Oxfam warned that some areas could face a famine similar to the one currently threatening thousands of people in Ethiopia. The team, which is preparing to launch a relief effort, said that a wide band stretching from southern Afghanistan to Pakistan and Gujarat in India had been badly affected by the searing drought. Many of the areas have been parched of rainwater for three consecutive years, with an almost total lack of rain during the past winter. The economic impact of the drought has been severe. Market prices for livestock have plummeted and, in lower-lying areas where wheat crops are usually grown, fields lay barren from the lack of rainfall. Now there is a shortage of wheat flour in the local markets and the yield is being rationed among the hungry population.

FAO: Severe Drought Devastates Pakistan's Largest Province

Food and Agriculture Organization of the U.N, July 2000

Three consecutive years of serious drought have severely damaged crop and livestock production in the Baluchistan province of Pakistan. Cereal output this year is 20 percent below average and livestock losses are extremely heavy. Baluchistan, Pakistan's largest province, accounts for nearly 20 percent of national livestock, making it the area's most important sector. According to a recent FAO/WFP joint mission, in the most affected of the province's 26 districts, farmers have lost up to 50 percent of their sheep and up to 40 percent of their goats. Domestic milk production is down by as much as 80 percent. Both animal feed and medicines are urgently needed simply to maintain a minimum breeding stock in these districts. The devastating drought conditions have similarly decimated crop production. Rainfed wheat has almost completely failed. Other cereal output is also down, leading to an overall 20 percent decline compared to the last four years. This leaves a deficit of 93 000 tonnes for the coming year.



Troubled Times



Palestine

Palestinians Request Emergency Aid for Drought

Reuters, May 12, 1999

Palestinian officials said on Wednesday they had requested \$40 million in foreign aid to compensate for damages caused by a drought this year. ... The money would be used primarily to purchase livestock feed and build water tanks, the officials said. Agriculture Minister Hikmet Zeid said at Tuesday's donor meeting that the Palestinian Authority would sell the feed to farmers at half price and waive the 17 percent value added tax. Najm said indications were good the emergency aid would be granted. The head of research in the Agriculture Ministry, Shaker Judeh, estimated the drought would cause \$253.3 million in damage, mostly to livestock and olives, a major cash crop in the West Bank. Judeh said the region had received less than half of the rainfall of the previous two years, dropping to the lowest level in decades.

Unequal Water Distribution, Shortages Dry Up West Bank

Associated Press, June 28, 2000

Yatta Mayor Khalil Younis said town residents consume just 18 liters (4.5 gallons) of water per person per day - less than one-fifth the minimum water allowance recommended by the World Health Organization. The average Israeli consumes about 300 liters (75 gallons) of water per day for household use. The Israeli human rights group Betsalem says the average Palestinian consumes one-fifth the water used by his Israeli counterpart, though Israel puts the ratio at 1:3. The situation is similarly harsh in the Gaza Strip, where overflowing septic systems pollute the aquifer and overpumping allows sea water to seep in. ... Israel has cut water to farmers by 40 percent and is considering an emergency purchase of water from Turkey. Both sides are developing desalination projects. Water experts complain that Israel subsidizes water-intensive crop exports like mangos, citrus fruit and avocados - effectively exporting water the region doesn't have.



Troubled Times



Paraguay

Coldest Paraguay Winter on Record Obliterates Crops

Reuters, July 24, 2000

The coldest winter in Paraguay's history destroyed 90 percent of the landlocked South American country's seasonal agriculture production over the past two weeks, the Agriculture Ministry said. "These last two weeks were fatal for our producers, over all for those in the north and central zones, where we have fruit and vegetable crops that were almost totally impacted," Alberto Mayeregger, head of the ministry's Agronomy Institute, told reporters.



Troubled Times



Peru

Peruvians Fear Locusts Are a Curse

Discovery Earth Alert, March 9, 2000

Residents of a farming town in Peru blame the attacks by hordes of locusts on "divine intervention." Locusts descended on the region several days ago and began devouring crops. The insects have torn through almost two thousand acres of corn, mangoes, yucca, and passion fruit. The area of Salas is known throughout the country as a haven for faith healers. One of the town's healers said, "This is God's punishment. This area is the cradle of faith healing and witchcraft and perhaps that angered the Lord." Mario Failot, the mayor of Salas, said that El Nino had "triggered the presence of these insects, which reproduce easily in fertile land and humid temperatures." A local radio announcer reported, "The locusts formed a horrifying red carpet over an area of about one kilometer (half a mile). If this situation continues, more than 5,000 families who depend on farming will be left without food."

Peru Military Deployed to Help Control Locust Swarms

Associated Press, June 22, 2000

Military helicopters with fumigation equipment and soldiers with flame-throwers have been deployed to Peru's northern Andes to join a two-month battle against swarms of locusts that have ravaged 1,000 hectares (2,500 acres) of forests, grassland and crops. The Agriculture Ministry declared a state of emergency Tuesday after it became evident that farmers in the northern regions of Lambayeque and Cajamarca were unable to contain the insects. The ministry said locusts have darkened the skies in dense swarms measuring as large as 5-by-10 kilometers (3-by-6 miles). Agriculture officials said Wednesday that about 200 hectares (494 acres) of corn, beans and yucca have been destroyed. Leading newspaper El Comercio reported lost crop estimates at more than 600,000 soles (dls 172,000). Authorities attributed the surge in the locust population to unusual vegetation growth after heavy rains from the El Nino weather phenomenon two years ago. Locust swarms have also damaged crops in parts of the central and southern Andes, including about 50 hectares (124 acres) of corn near the Inca capital Cuzco, 545 kilometers (350 miles) southeast of Lima.



Troubled Times



Philippines

Farmers Ask Gods to Remove Pests

Associated Press, April 7, 2000

Philippine Farmers, desperate to stop the spread of the disastrous leaf miner worm, have turned to the gods to help them get rid of the pests. The farmers, in the large vegetable-producing town of Buguias, performed the "padke" ritual, during which they slaughter a black pig and study its liver for omens. The leaf miners, which burrow into plants to make them wilt, have hit potato, lettuce, celery, cabbage and leek farms, according to municipal agriculturist Cirpiano Bayangan. The worms first appeared in September, and pesticides have not had any effect on the damage. Buguias mayor Dominador Bay-an approved the ritual but added that, "Ultimately we have to think of other measures to arrest the problem." Buguias was declared to be in a state of calamity, allowing it to receive emergency funding and provisions.



Troubled Times



Poland

Poland's Low Grain Output to Boost Imports, Prices

Reuters, July 31, 2000

Poland's grain harvest this year will suffer more than expected from bad weather in the past few months, the Central Statistical Office (GUS) said in a long-awaited output forecast released on Monday. If the forecasts prove true, Poland will have to import more grains this year and food prices will be underpinned during the next few months, analysts said. GUS said grain output was likely to shrink to 20.5-21.5 million tonnes in 2000, down by between 14.3 and 18.3 percent compared with 1999, more than the previously expected 10 percent decline. GUS also said in its preliminary harvest estimates that rapeseed output would drop by between 24.9 and 33.7 percent in 2000 to around 750,000 to 850,000 tonnes.



Troubled Times



Romania

Drought Followed by Storms Damage Crop Estimates

Associated Press, July 19, 2000

An extended drought, followed by recent storms raging over Romania have reduced crop estimates by 40 percent, the Ministry of Agriculture said Wednesday. The estimated financial losses from the reduced crop yields total 10.7 trillion lei (dlrs 492.4 million), the ministry said in a statement. Corn has suffered the most damage, followed by wheat, sunflowers, fodder, soybeans and sugar beats. No crops are expected to be harvested on 3.9 million hectares (9.7 million acres) of land, representing more than 30 percent of the area cultivated, the statement said. The effects of the drought could be seen in early June, culminating with an unprecedented heat wave with days of temperatures above 40 degrees Celsius (104 Fahrenheit). However, Agriculture Minister Ioan Muresan has repeatedly said the country will not need to import wheat. Impoverished Romanians, whose salaries average 2 million lei (dlrs 92) per month, rely heavily on bread in their daily diets.



Troubled Times



Russia

Russia's grain shortage amounts to 10 million tons

Associated Press, Jan. 21, 2000

MOSCOW- Russia faces a grain shortage of 10 million metric tons this year, including 1.5 million metric tons of food grain and 8.5 million metric tons of fodder, the country's top agricultural official said Friday. Russia's grain reserves are still recovering from the poor 1998 harvest, the worst in four decades, and Moscow has asked the United States and the European Union for food and grain aid. But Deputy Prime Minister Vladimir Shcherbak stressed that Russia's government had no plans to borrow money to finance foreign grain and food aid. He claimed that apart from the U.S. Agricultural Department, the rest of the U.S. administration opposes food aid. "The State Department opposes the idea and so do other ministries. The issue still remains open," Shcherbak said. The United States did approve sending 200,000 tons of food and 300,000 tons of grain for free, which could arrive in March provided the documents are signed this month, he said.

Russia's Potato Blight Worse Than Irish Famine's

Unisci.com, March 24, 2000

New virulent types of the potato late blight pathogen have emerged in Russia, threatening farmers and consumers with the destruction of an essential staple crop there, according to the Cornell-Eastern Europe-Mexico (CEEM) Potato Late Blight Program. The new strains of *Phytophthora infestans*, better known as potato late blight, are far more aggressive than the pathogen that triggered the Irish potato famine of the 1840s, having evolved through sexual mating. Unlike the old strains, the new pathogen can survive harsh winters in the soil, further endangering crops. "Potatoes are a sustaining food crop, the second bread for many parts of Russia. A severe late blight problem could harm millions of people and possibly destabilize the region," says W. Ronnie Coffman, the chairman of CEEM and the associate dean for research at Cornell University's New York State College of Agriculture and Life Sciences. "But that would depend on whether alternate food supplies could be moved into the affected areas in a timely manner."

Russian Grain Shortage Could Reach 10 Million Tons

Interfax Food and Agriculture Report, June 7, 2000

Russia will face a grain shortage of 6 million to 10 million tonnes in the new farm year (July 1, 2000 to June 30, 2001), the president of the Grain Union said. The state of the grain market shows that Russia "will not manage without imports" so the country "should not wait for a crisis, but immediately take steps to stimulate grain imports throughout the year," Alexander Yukish said at a Tuesday round-table discussion on grain supplies at the Chamber of Trade and Industry.

Locust Swarms Settle on Crops in Southern Siberia

Associated Press, July 4, 2000

Swarms of locusts have settled on more than 12,000 hectares (29,000 acres) of farmland in southern Siberia and are devouring grain crops, the ITAR-Tass news agency reported Tuesday. About 100 hectares (250 acres) were fully destroyed, the report said, and authorities have begun dusting crops with pesticide from the air.

Locust Swarms Devour Siberian Crops

Discovery News, July 6, 1999

Swarms of locusts migrating from Kazakhstan have devoured hundreds of acres of crops in central Siberia during a span of only a few days, according to the RIA Novosti news agency. The insects were first observed near the city of Novosibirsk, about 1,750 miles (2,800 km) east of Moscow. They have since descended on sunflower and grain crops, which are the region's key agricultural output. News footage shown on NTV television showed vast expanses of fields left barren by the ravenous insects. Officials estimate that nearly 1,250 acres of farmland have been devoured. The devastation comes during a year when grain supplies have dwindled across Russia. The nation's harvest is expected to be only slightly higher than last years' record low levels.

Flood Damage in Central, Eastern Russia Estimated at Millions of Dollars

Associated Press, August 3, 2000

Floods from heavy rains damaged hundreds of homes and ruined crops in central and eastern Russia, causing millions of rubles (dollars) in losses, officials said Thursday. In the central Russian region of Ryazan, heavy rains Wednesday damaged more than 780 apartment buildings and administrative buildings, and flooded large tracts of farmland, the regional Emergency Situations Center said, according to the ITAR-Tass news agency. Losses caused by the flooding in Ryazan were estimated at 490 million rubles (dlrs 18 million), ITAR-Tass said. Flooding washed out farmland and inundated hundreds of homes in the Far Eastern region of Primorye earlier this week. The damage was estimated at 37 million rubles (dlrs 1.3 million), ITAR-Tass said.



Troubled Times



Serbia

Drought Cuts Serbia Wheat Yields

Reuters, June 14, 2000

Serbia faces one of its worst wheat harvests in 10 years as drought takes its toll, industry officials said on Wednesday. "The wheat harvest has just begun. We are still awaiting early field reports, but an expected average yield of 3.39 tonnes per hectare can only be wishful thinking," Vukosav Sakovic, head of the Yugoslav Grains Fund, told Reuters. Industry sources also saw the drought affecting spring crops, including maize, sunflower, soybeans and sugar beet.



Troubled Times



Slovakia

Slovakia Approves Extra Money to Cover Drought Damages

Associated Press, June 21, 2000

The Slovak government on Wednesday decided to give 5.9 billion crowns (dlrs 253 million) to the agriculture sector, which has been hurt by severely dry weather, the prime minister told reporters. The agricultural sector which has been slow in recovering from the collapse of communism 10 years ago is now facing a "terrible" drought which will decrease production by up to 60 percent, officials said. The agricultural ministry estimates damages after more than two months without significant rain and poor irrigation at 11.4 billion crowns (dlrs 265 million). Slovakia expects to import wheat this year to satisfy its domestic demands.



Troubled Times



South Africa

Diplodia Hits S. Africa Maize Crop Hard

Reuters, July 19, 2000

Less than 50 percent of South Africa's white maize harvest will be of top grade quality after wet weather caused an outbreak of a fungal infection known as diplodia, RMD Financial Services said in a report. A diplodia infection, aggravated by wet weather, rots the base of the maize cob and causes quality problems in the kernels.



Troubled Times



Sudan

World Food Program warns of starvation in Sudan if aid not forthcoming

Associated Press, April 27, 2000

KHARTOUM, Sudan- Nearly two million Sudanese would face starvation if their food stocks were not replenished by June, the World Food Program warned Thursday. The U.N. agency said in a press release that its food supplies for Sudan were due to run out "at precisely the time they are needed most, at the peak of the hunger season which lasts from April until October." About 1.7 million people depend on the agency's food as they have been left hungry by drought, crop failures, floods and displacement caused by Sudan's 17-year civil war. The most critical shortages are in southern Sudan, where most of the fighting takes place. In January, the agency appealed for dlr 58 million to supply 100,000 tons of food to Sudan's hungry until the end of the year. However, that appeal netted only about 18 percent of the required aid, the agency said.

International aid efforts for Sudan have been hindered by the civil war in which rebels from the predominantly Christian and animist south are seeking autonomy from the Muslim and Arab north. Nearly 2 million people have died in the fighting and famines. Rebels and pro-government forces have repeatedly launched attacks against aid groups working in the south. In February, four crew and support staff on a U.N. leased plane were kidnapped by pro-government militia who accused them of ferrying rebels aboard the aircraft. The incident led to the suspension of aid flights. The Sudan People's Liberation Movement, which leads the insurrection, demanded that aid groups sign agreements on food distribution by March 1 or leave the region. While 24 groups complied, another 11 organizations -including CARE, Oxfam, World Vision and Save The Children - withdrew staff and suspended their programs. The withdrawal of the 11 groups, which administered about 75 percent of the country's humanitarian aid, affected about dlr 30 million worth of aid and an estimated 1.5 million Sudanese.



Troubled Times



Syria

Rain Prayers for Syria

Discovery Earth Alert, Nov. 30, 1999

Special Moslem prayers will be conducted in drought-stricken Syria on Friday to ask for rain, the state media reported on Monday. A severe continuing drought in Syria this year has had a serious effect on the country's agriculture, slashing grain production and diminishing exports of cereal crops. The country's President Hafez al-Assad called for the rain prayers, known in Arabic as "istisqa'a," to be held at the Ommayad mosque in the city of Damascus. Moslems participating in the prayers have been asked by the Ministry of Religious Endowments to fast three days before reciting the prayers and to denounce "all sins and wrongdoings for the sake of the nation." The istisqa'a are recited in times of drought in several other Middle Eastern Arab countries as well.



Troubled Times



Tajikistan

Tajikistan Facing Disaster as Crops Fail / Tajikistan faces Serious Food Crisis, FAO Says

Associated Press / Reuters, July 20, 2000 / July 27, 2000

Tajikistan's harvest likely will be 30 percent of what it was last year as the country faces its worst drought for 75 years, according to a United Nations assessment team. "Almost all rain-fed crops have failed, while the irrigated crops have been seriously affected in many areas," said the Office for the Coordination of Humanitarian Affairs in a statement. FAO/WFP estimated Tajikistan's 2000 total cereal output at 236,000 tonnes, down 47 percent from 1999. This is the third consecutive year since 1997 that output has declined, but this year's drop has been the largest.



Troubled Times



Tanzania

Tanzania Faces Food Shortage as Rain Fails

Reuters, June 16, 2000

Tanzania said on Friday that it was facing a serious food shortage after its seasonal rains failed. Agriculture Minister William Kusila told Reuters Tanzania had a maize shortfall of around 680,000 tonnes after drought hit the 1999/2000 harvest. "According to our preliminary survey, what is evident is that there is a serious food shortage especially along the central corridor," Kusila said. "The amount is about 680,000 tonnes. About 10 regions out of 20 in the mainland are affected." Kusila attributed the shortage to the total failure of the seasonal October-December short rains and only sporadic rainfall during the more important March-May long rainy season.



Troubled Times



Thailand

Flood Damage in Thailand

Food and Agriculture Organization (FAO), September 22, 2000

Flood waters in north and north-eastern Thailand, began receding in the last few days as rains eased, but left a number of people dead, thousands displaced and extensive damage to property in their aftermath. Official estimates indicate that some 836 of around 2 000 sub-districts in the country were affected, whilst the economic damage was put at about US\$30 million. Around 645 000 hectares of crops were damaged or destroyed in over 24 provinces. Flood damage to rice in lower areas may, however, be offset by the beneficial effects of additional rain on higher ground. In view of recent events, overall rice prospects in 2000/01 remain uncertain.



Troubled Times



Uganda

Uganda Famine

Associated Press, Feb. 14, 2000

Famine in northeastern Uganda has claimed 138 lives since October, when the region's single annual harvest failed because of drought, a newspaper said Monday. Another 2,000 inhabitants of the Moroto district, 480 kilometers (300 miles) northeast of Kampala, have fled west to neighboring regions in search of work following the crop failure, said the independent Monitor newspaper. The district is inhabited mostly by the livestock -herding Karamojong tribe, who plant crops once a year to supplement their income. "Karamojong have a single cultivation season, March to September, but did not harvest any food in 1999 after a long drought that ... destroyed the crops," district official Aloysius Aloka told the newspaper. Lack of grazing pastures and increased frequency of cattle rustling, especially between the Karimojong and warrior pastoralist tribes across the border in western Kenya, have further diminished food security in the region, he said. The U.N. World Food Program has begun distributing food to the most vulnerable people in the area, said WFP regional head Burkard Oberle, who described the situation as critical.

Sabiny Eating Leaves

New Vision (Uganda), July 2, 2000

Over nine thousand people are facing starvation in Binyiny sub-county, in Kapchorwa [Uganda]. The LC III chairman Erifazi Cheptoris told state minister for Disaster Preparedness, Jane Frances Kuka, and LC V vice Chairman Sam Ngirio that the starving people now eat bean leaves. "Recently drought struck the sub-county affecting maize, the chief staple food crop. Most crops withered and we are expecting a very poor harvest," Cheptoris said.



Troubled Times



Ukraine

Potato Crop: Pigs Rejoice, Peasants Grieve

Kyiv Post, September 6, 1999

Many of Ukraine's poverty-stricken citizens depend on their vegetable plots to provide extra, cheap food during the winter. But the weather this year has not been kind. Nipped by frost early in the spring, and then baked by a long, hot summer, this year's potatoes are coming out of the ground pea-sized. The overall yield is down. According to Ukragroconsult, an independent agriculture sector consultancy, Ukraine's official potato crop in 1998 was 15.34 million tons. Although final figures for this year are not yet available, the company estimates farmers will bring in at most 13.8 million tons this year, and most likely a lot less. ... In the cities, the shorter supply of potatoes is already having an impact on prices in the markets. While last year a kilo of good-sized potatoes cost 60 kopeks (20 cents), today the cheapest are 90 kopeks a kilo (20 cents), and most are Hr 1.50 (33 cents) per kilo - a hefty rise, even taking into account the inflationary period this summer.

Bad Weather Threatens Ukraine 2000 Grain Crop

Reuters, Feb. 14, 2000

Agriculture Minister Ivan Kyrylenko told reporters at the weekend that hard-up Soviet-era collective farms were extremely vulnerable to changes in the weather, and even minor frosts or a drought might cut the crop significantly. ... "Unfortunately, our outlook for 2000 is not favourable." He did not give a revised crop forecast for the 1999/2000 season. The ministry said last month farms would be able to harvest 26 to 28 million tonnes of grain and might even reach 35 million tonnes if the weather was good. Ukraine harvested 24.37 million tonnes of grain last year, the lowest crop since 1945. "Our optimistic forecast is 24-26 million tonnes of grain this season, but we are ready to cut it at any moment," said Serhiy Feofilov, director of UkrAgroConsult agricultural consultancy. Officials, who blamed the meagre 1999 crop on bad weather, are now worried by a possible repeat of last year's troubles and weather experts share their concerns. ... Analysts and officials say a large area sown to winter crops had been already hit by bad weather and about 1.5 million hectares needed to be resown. Farmers sowed a total of 7.9 million hectares to winter crop last autumn.

Rainstorms in Ukraine Cut Power Across the Country

Associated Press, July 15, 2000

Heavy rainstorms and strong winds battered Ukraine over the past two days and left about 1,000 villages in eight Ukrainian regions without electricity, emergency officials said Saturday. Rainstorms severely damaged crops, flooded houses and caused several landslides in western Ukraine. Last week, rain and hail cut electricity supplies to more than 800 Ukrainian settlements, damaged thousands of houses and public buildings and destroyed crops in six western regions.



Troubled Times



United Kingdom

UK Wheat Prices Ease on Quality Fears, Harvest Slow

Reuters, July 27, 2000

British wheat drifted lower as rain increased fears that much of the crop may be of only feed quality, and traders were keeping their eyes on the weather which was likely to cause further delays in harvesting. Whitlock said the weather continued to cause concern over wheat, the development of which was two to three weeks behind. New fungicidal chemicals were being used on about 70 percent of the area. He said the moist weather also increased the likelihood of diseases, and there were already indications of some damage. One trader said that there were also indications of disappointing yield and quality for winter barley, but it was too early to give an accurate overall picture.



Troubled Times



Uruguay

FAO Reports Crop Damage from Drought in Uruguay

Food and Agriculture Organization of the U.N., June 2, 2000

Normal rains have resumed in various parts of the country following months of a severe drought which affected the main 1999/2000 cereal crops. Harvesting of maize, sorghum and paddy, were recently completed and output is provisionally estimated at extremely low levels. The important paddy crop has also declined from last year's well above-average level, but production is still slightly above average.



Troubled Times



Uzbekistan

Uzbekistan Seeks Emergency Foreign Aid Amid Drought

Associated Press, September 13, 2000

Uzbekistan's government has appealed for international aid to cope with a drought that has destroyed crops and drastically reduced supplies of safe drinking water, officials said Wednesday. The damage to the Central Asian nation's small, shaky economy is estimated at 14.5 billion som (dlrs 49.8 million), the Economics Ministry press service said. It did not say how much aid the country is seeking or from whom. The worst-hit area is the autonomous province of Karalpakia on the Aral Sea. Water levels in the man-made Tuyamyun lake, the region's only source of drinking water, are down 75 percent compared to last year, the ministry said. The drought has killed all of Karalpakia's rice fields, which need large amounts of water to survive, and many other crops, the press service said. With clean drinking water in short supply, health officials have warned that diseases may spread.



Troubled Times



Vietnam

FAO Reports on Vietnam Floods

Food and Agriculture Organization (FAO), September 22, 2000

In Viet Nam, the worst flooding in 40 years in the Mekong Delta has resulted in 43 deaths and large scale displacement of people, whilst many homes have been destroyed and some areas are facing serious food shortages. In addition some 100 000 hectares of rice have been damaged or destroyed, whilst the economic cost so far is put at US\$26 million. The worst affected areas are Long An, Dong Thap and An Giang which border Cambodia. The estimated death toll so far in these areas is 25, whilst up to 400 000 people have had to be evacuated. Earlier in the first dekad of September, tropical storms also resulted in crop damage in central parts, whilst heavy rain along coastal areas of the Red River Delta, delayed harvesting of "10th" month rice.



Troubled Times



Yugoslavia

Key Yugoslav Wheat Area Harvests 52 Pct of Crop

Reuters, June 28, 2000

Around 52 percent of the total 327,000 hectares under wheat in Yugoslavia's key producing region of Vojvodina has been harvested so far, state news agency Tanjug reported on Wednesday. Months of bad weather, with floods followed by drought and high temperatures, as well as shortages of fertiliser and poor machinery were expected to make this year's harvest one of the worst in the past 10 years. Optimistic forecasts put average wheat yield at 3.0 tonnes per ha, while pessimists see yields at 2.0 tonnes, both well below average yields of some 4.2 tonnes in the early 1990s.



Troubled Times



Asia

Tropical Storms, Typhoons and Monsoon Floods

Seriously Jeopardise Food Prospects and Supplies in Asia and Bring Misery to Millions
Food and Agriculture Organization (FAO), September 22, 2000

A combination of heavy monsoon rains, tropical storms, typhoons and floods have seriously affected a number of countries in Asia including China, India, Bangladesh, Nepal, Cambodia, Thailand, Viet Nam and Laos. In addition to enormous economic damage, hundreds of people have been killed and hundreds of thousands have had to be evacuated. As monsoon rains are due to continue for some time, in parts, there are concerns that the situation could worsen considerably. Serious food shortages are reported from a number of areas, whilst the risk of disease is increasing fast. Humanitarian relief operations are underway but are being impeded by lack of access to many areas due to high flood waters.

In India, following serious drought earlier in the year which affected a number of western and southern states, severe floods during the monsoon season have devastated many parts of the country, killing several hundred people, displacing thousands and destroying crops. As a result of the disruption to agriculture, marketing and communications, the food supply situation in some states is extremely tight. The latest floods occurred in the country's most populous state, Uttar Pradesh, where weeks of heavy rains caused floods displacing thousands of people. Although water levels in the major rivers and tributaries have begun receding, an estimated 40 000 people remain homeless. The floods are estimated to have killed 306 people and damaged or destroyed nearly 200 000 hectares of crops. In mid-September, there were also renewed floods in parts of West Bengal which had also been affected earlier in the monsoon season. Reports indicate that the worst affected districts were Birbhum, Burdwan, Murshidabad and Malda, whilst major rivers and tributaries are flowing well above danger levels. Several dams and barrages in the state are also above danger levels and are having to release large volumes of water. Around 600 000 people have been evacuated to safer locations.

Elsewhere, at the end of August, in the southern state of Andhra Pradesh thousands of people had to be evacuated due to rising river levels following the heaviest rainfall in decades. An estimated 142 people were killed by the floods, whilst losses in property and crops were put at US\$168 million. Monsoon floods earlier in the season, also killed several hundred people and destroyed crops in the northern state of Himachal Pradesh and the north eastern states of Bihar, West Bengal and Assam. The state of Assam was the worst affected, where some 3 000 villages were submerged, and an estimated 2.5 million people made homeless. Except for Himachal Pradesh, the remaining flood-affected states are all important rice producers, accounting for some 52 percent of total kharif or monsoon rice production. Due to flood damage and erratic rainfall in parts, overall rice prospects remain uncertain. Although the outlook in major rice surplus states of Punjab, Haryana and most parts of Uttar Pradesh remains favourable, recent rainfall in Bihar, Madhya Pradesh, West Bengal and Orissa, where the rice crop is mostly rainfed, has been erratic. In addition, the floods in Andhra Pradesh have reduced prospects of a bumper monsoon crop there. As result, aggregate 2000/01 rice production may be affected and be lower than the 90 million tonnes forecast earlier. Milled rice production in 1999/2000 was a record 88.25 million tonnes, of which 75.6 million tonnes (86 percent) was from the main monsoon kharif crop and 12.6 million tonnes from the rabi crop.

Elsewhere on the subcontinent, in Bangladesh, in the first dekad of September, some 60 000 people were made homeless and several were killed following floods on Sandwip Island, situated 60 miles off the

mainland. The floods were caused by unusually high tidal waves in the Bay of Bengal. Problems of drinking water and food supplies are reported. Heavy monsoon rains, floods and landslides also killed a number of people and displaced several thousand in the worst affected areas in central parts of Nepal. Crops, mainly rice, infrastructure and communication systems were also damaged, with economic cost currently put at around US\$6 million. There are also concerns regarding the food security situation in remote parts of the country, particularly Rukum District, where supplies are declining and access remains difficult for food distribution.

In China, in the first week of September, Typhoon Maria killed 29 people and caused estimated damages of US\$100 million in Guangdong and Hunan provinces and damaged or destroyed an estimated 40 000 hectares of crops. These two provinces are important rice producers and together normally produce some 21 percent of national rice production. The weather situation in the second dekad of September, however, was generally favourable across most of the country, with warm dry weather aiding maturation and harvesting of summer crops, and planting of early winter crops. Harvesting of early rice, first of the three rice crops grown, is complete with production estimated at 37.5 million tonnes of paddy; some 8 percent below last year and the lowest level since the 1980s. In addition, official reports indicate that the intermediate rice crop, affected by drought in parts, will also register a decline compared to last year, while late rice has been affected by typhoon and storm activity, particularly in Fujian, Zhejiang and Guangdong provinces.

Overall paddy production in 2000/01, therefore, is currently forecast at around 186 million tonnes, some 12 million tonnes below 1999/2000. The flood damage comes on top of serious drought earlier which affected summer grain production, particularly in important producing areas in the north. The estimate for 2000 wheat production has been revised down further to 101 million tonnes, compared to 103 million tonnes earlier and 111 million tonnes in June. At this level, production would be some 10 percent lower than average for the last five years and almost 13 million tonnes or 11 percent lower than 1999. In addition, due to adverse dry conditions and to some extent falling acreage, maize production is expected to fall to its lowest level in 6 years to around 103 million tonnes, some 15 percent below average and 25 million tonnes below last year. Lower production will likely result in higher domestic market prices, increased demand for imports and reduced exports. Official reports indicate that this year's drought has been the worst in 20 years, damaging around 31 million hectares of summer and autumn crops.

Along the Mekong River basin, one of the most important rice producing areas in South East Asia, aid agencies report that as many as 4 million people have been affected. In Cambodia, humanitarian and food supply concerns continue to mount with the country facing the highest flood levels in 70 years. Already over 100 people have reportedly been killed by the floods, with more casualties expected as the rains continue. Reports indicate that in the last few days, some 70 000 people along the Mekong river were under threat as flood waters continue to rise, destroying crops and homes. Seventeen of the country's 23 provinces have been affected by floods and more than 250 000 hectares of rice damaged or destroyed. The economic damage to crops alone is officially estimated at around US\$10 million. In recent days, with the floods showing no signs of receding there were fears that the capital, Phnom Penh, may also be flooded. Serious food shortages and escalating food prices are reported in a number of areas. The Government has declared a state of emergency in several provinces and requested international humanitarian assistance for 600 000 of the worst affected people. The country is normally prone to flooding during the rainy season between August and September, though this year flooding started in early July and has been more extensive than normal. In the last serious floods in 1996, 169 people were killed. The International Federation of the Red Cross has issued an appeal for US \$1.6 million to assist flood victims in the country.

The floods will delay ongoing land preparation, transplanting and planting of main wet season rice. Although the target for 2000/01 is 4.2 million tonnes, this now remains uncertain. In contrast to widespread flood damage in the river delta, drought in parts such Kampong Speo province destroyed rice nurseries, further damaging overall prospects. Total 1999/2000 paddy production was estimated at a record 4 million tonnes, some 500 000 tonnes or 14 percent above the previous year. Around 83 percent of paddy

production is from the wet season crop and the remainder from flood recession and dry season production. Rice also accounts for some 84 percent of annual food crop production and is planted on around 90 percent of cropped area, mainly in the Central Mekong Basin and Delta and the Tonle Sap Plain.

Similarly in neighbouring Viet Nam, the worst flooding in 40 years in the Mekong Delta has resulted in 43 deaths and large scale displacement of people, whilst many homes have been destroyed and some areas are facing serious food shortages. In addition some 100 000 hectares of rice have been damaged or destroyed, whilst the economic cost so far is put at US\$26 million. To date, flood water levels in the Mekong River system are all above Alarm Level III, which signifies highly dangerous flood conditions, similar to levels reached during exceptionally disastrous floods in 1961, 1966, 1978 and 1996. The UNDP flood warning centre forecasts that in the next three to five days, upstream flood water levels on the Tien and Hau Rivers will likely reach peak flood levels. The worst affected areas are Long An, Dong Thap and An Giang which border Cambodia. The estimated death toll so far in these areas is 25, whilst up to 400 000 people have had to be evacuated.

Earlier in the first dekad of September, tropical storms also resulted in crop damage in central parts, whilst heavy rain along coastal areas of the Red River Delta, delayed harvesting of "10th" month rice. In northern parts of the country 10th month rice is normally planted in June/July for harvest from the middle of September, whilst in the south, the growing period is longer, with harvesting commencing from late October onwards. Notwithstanding the full extent of any flood damage, current forecasts point to a 10th month paddy crop of around 8.3 million tonnes, slightly down on last year. Paddy production in 1999/2000 was 31.7 million tonnes, of which almost half came from the main winter/spring crop, planted from January to March, for harvest in April to July depending on location. To supplement Government relief efforts, the International Federation of the Red Cross, has appealed for US\$1.5 million to assist 125 000 worst affected people in the Mekong Delta.

Elsewhere, flood waters in north and north-eastern Thailand, began receding in the last few days as rains eased, but left a number of people dead, thousands displaced and extensive damage to property in their aftermath. Official estimates indicate that some 836 of around 2 000 sub-districts in the country were affected, whilst the economic damage was put at about US\$30 million. Around 645 000 hectares of crops were damaged or destroyed in over 24 provinces. Flood damage to rice in lower areas may, however, be offset by the beneficial effects of additional rain on higher ground. In view of recent events, overall rice prospects in 2000/01 remain uncertain. Latest official projections before the floods forecast the main rice crop at around 19.04 million tonnes. In addition, the second rice crop, planted in January to March for harvest in May/June, normally produces around 4.3 million tonnes. The country is the largest rice exporter in the world and has a target to export some 6 million tonnes in 2000. Latest estimates indicate that in Laos some 45 000 hectares of paddy were also damaged by floods in central and southern parts.



Troubled Times



World Drought

Number of Drought Victims Soars Around Globe Reports WFP

UN World Food Programme (WFP), August 8, 2000

The number of people being fed by the UN World Food Programme due to drought has more than quadrupled in the last four years, the food aid organisation said today. WFP reports that more than 100 million people in over 20 countries currently suffer the effects of drought and that the number of affected people the agency now feeds has soared to 16 million this year, from just three million in 1996. "We've seen an incredible increase in drought induced hardship over the last decade," said Francesco Strippoli, WFP's Senior Humanitarian Advisor. "Today, we're literally working in every part of the world to provide emergency food aid to people who have lost their crops or livelihoods due to drought."

The Horn of Africa remains in the grip of a severe drought with more than 16 million people facing severe food shortages. Kenya, alone, is suffering from one of its worst droughts in recorded history. With a national maize requirement estimated at 3.21 million tons, the country will need to import some 1.4 million tons over the next year. The devastating drought in Central Asian countries including Afghanistan and Tajikistan has spread to the Caucasus, where between 55 and 60 percent of crops in Armenia's mountain regions are at risk of damage. Drought is currently plaguing countries in Central America and the Caribbean. Crop losses of maize and beans in Honduras are estimated to be between 80 and 90 percent. The Ministry of Agriculture in Nicaragua reports that the crop losses in the 41 municipalities hardest hit by the drought are 53% of what was planted. In Haiti, drought has destroyed at least 33 percent of the current harvest. Other countries seriously affected by drought include the Middle Eastern countries of Jordan, Syria and Iran.

"The scale of our operations is massive," said Strippoli. "Moving millions of tons of food around the globe and distributing it in often very insecure and volatile areas in time to save lives is our greatest challenge." In comparative terms, over the 1990s, WFP's drought-related emergency operations represented 53 percent of the agency's total responses to natural disasters. The number of drought-related emergencies over this period amounted to 102. This was more than 50 percent higher than food emergencies caused by floods, the next highest percentage. Funding for WFP's drought-related projects for this year alone represent about 20 percent of total emergency requirements. This is an increase of nine percent compared to 1995. Taking into account the steadily increasing global emergency requirements, drought-specific resource requirements have more than doubled in 2000. In three of WFP's most extensive operations in Ethiopia, Kenya and Afghanistan the aid agency is currently spending more than \$352 million to feed some 12 million people.



Troubled Times



Africa

Nearly 20 Million in Eastern Africa Face Severe Food Shortage - UN FAO Warns

Food Assistance Urgently Needed

Food and Agriculture Organization (FAO), August 16, 2000

The number of people facing serious food shortages in eastern Africa has risen to nearly 20 million, up by three million since April this year, according to a report released today by the UN Food and Agriculture Organization (FAO). The August issue of FAO's Food Supply Situation and Crop Prospects in Sub-Saharan Africa says continuing drought has undermined food production in vast areas of eastern Africa, but it also blames war and civil strife for severely limiting farming activities in many areas. The report warns, "large numbers of people will need massive and continued emergency assistance" well into next year.

Overall, in sub-Saharan Africa, the FAO report says 16 countries face exceptional food emergencies. Most of the worst affected countries, including Angola, Burundi, Eritrea, Ethiopia, Sierra Leone, Somalia and Sudan are suffering from the impact of war or civil conflict. Others, like Kenya and Tanzania have been hard hit by drought.

The 16 countries facing food emergencies of varying intensity are: Angola, Burundi, Democratic Republic of Congo, Republic of Congo, Eritrea, Ethiopia, Kenya, Liberia, Madagascar, Mozambique, Rwanda, Sierra Leone, Somalia, Sudan, Tanzania and Uganda.

In Kenya, FAO estimates that nearly 3.3 million people need urgent food aid. Some starvation-related deaths have been reported among children in the hardest hit areas of the country. FAO says livestock farmers are of particular concern because they are facing the failure of the fourth consecutive rainy season. The current drought has aggravated an already severe scarcity of water and pasture, resulting in large livestock losses.

"With the exception of parts of Western Province and Nyanza Province," the report says, "the rest of the country, including the 'bread-basket' Rift Valley Province, has received little or no rainfall, leading to widespread crop failures, as well as large livestock losses." The long drought has drained water reservoirs and the Government has rationed power and water.

In Eritrea, the report says, "the food supply situation gives cause for serious concern." More than 1.5 million people are displaced in Eritrea, including those who fled their homes in May and June this year because of renewed fighting along the border with Ethiopia. This has further aggravated an already precarious food supply situation.

In Ethiopia, large numbers of people are now depending solely on food assistance for survival, because they have lost their livestock and livelihoods due to drought. According to the report, malnutrition is on the increase and a number of starvation-related deaths have been reported.

Serious malnutrition has also been reported in parts of Somalia. FAO cites the loss of livelihoods due to recurring droughts, the long-term effects of civil insecurity and a lack of investment in the economy as underlying causes.

In Sudan, where the food supply situation is stable in general, the report says nearly 2.4 million people, mostly in the south of the country, are depending on food aid due to crop losses and population displacements caused by civil strife. Tens of thousands of refugees have also crossed into Sudan fleeing the border war between Ethiopia and Eritrea.

Some areas in Tanzania have acute food shortages. The Government has declared 13 of 20 mainland regions drought-affected and the FAO report says more than 800,000 people in the country need food assistance.

Serious food supply difficulties persist in the Great Lakes Region where the Democratic Republic of Congo is suffering from an increasingly tense military situation, following greater involvement in the conflict by neighboring countries. In Burundi, insufficient and badly distributed rains during this year's B season have reduced yields of cereal and pulse crops. Large numbers of people still in re-groupment camps are cause for serious concern, according to the report.

Elsewhere in Africa, the picture is considerably brighter. The 2000 cereal crop in southern Africa is expected to be normal, notwithstanding the damage caused by floods and cyclones in some parts. Harvesting of the main cereal crops is almost complete in most countries of the region. Generally, southern Africa's cereal production, mainly maize, is forecast to be above normal and the food supply situation is satisfactory, although continued food assistance is required in areas affected by the recent floods and cyclones, mainly Mozambique and Madagascar. In Angola, however, the food situation of some 2.6 million Internally Displaced Persons is said to be "precarious."

In western Africa, the overall food supply situation is stable following above average or record crops in most countries last season, except in Guinea-Bissau due to the civil strife. National food security stocks have been replenished and markets are well supplied. Cereal prices are mostly stable and often much lower than in previous years. The report says that the early growing conditions in the current season are also favorable, but adds that agricultural activities in Sierra Leone have been disrupted by renewed civil disturbances. As a result, a reduced rice crop is forecast. Sierra Leone and Liberia remain heavily dependent on international food assistance.

Because of reduced harvests in eastern Africa, sub-Saharan Africa's cereal import requirements in 2000 are forecast to increase some 4 percent over last year's high level of imports. According to the report, balance of payments problems in a number of African countries means that a substantial part of the imports will have to come from food aid and additional food aid pledges will be needed to avert a crisis. Logistical support is also badly needed to ensure adequate food distribution.



Troubled Times



Europe

Droughts Wither Eastern and central Europe Crops

Reuters, June 21, 2000

Central and eastern Europe had been expected to deliver bigger harvests this year but the worst drought to hit the area in decades has damaged crops, pushed up prices and hit prospects for exports. Romania has been ravaged by heatwaves which have gripped the country since March. The farm ministry said drought had damaged 2.7 million hectares and destroyed more than 40 percent of output with losses amounting to the equivalent of \$307 million. Drought has affected to a lesser extent Hungary, Poland, Russia and Ukraine and triggered wheat price rises across the region on fears of low supplies. Spells of dry weather in recent weeks forced Serbian farmers to race against time to harvest wheat and prompted Polish and Czech officials to consider wheat imports to meet demand. Official forecasts, which analysts see as optimistic, put Romania's 2000 wheat output at 3.7 million tonnes, barely enough to meet local demand. The ministry ruled out exports.

Traders said it was impossible to find big lots on the local market where prices doubled to four million lei (\$189) a tonne. Russia hopes to bring in up to 69 million tonnes of wheat this year, despite a critical lack of soil moisture in main grain areas, according to Russia's Agriculture Ministry. Serbia said it expected a wheat output of 2.2 million tonnes, the worst harvest of the past 10 years. In Poland, where estimates put the 2000 wheat crop at some 23.2 million tonnes, the government offered cheap credit to farmers and planned extra grain imports to cap surging prices. In Prague, farm ministry spokesman Hugo Roland said the Czech republic might also import wheat if dry weather continued. "Should there be drastic output decline, it is possible that such commodities will have to be imported," he told Reuters. Estimates put losses due to drought at 7.1 billion crowns (\$189 million), the Czech Agriculture Ministry said. Hungarian traders said drought had driven up wheat prices on the Budapest Commodities Exchange to excessively high levels. Last week, the Ministry of Agriculture cut its wheat crop forecast to 3.95 million tonnes from an earlier projection of 4.0 to 4.5 million, but traders said they saw the 2000 output at some three million tonnes.



Troubled Times



Balkans

Drought Bakes Balkans, Ruining Crops, Sending Farmers to Despair

Associated Press, June 15, 2000

Under a blazing Balkan sun, Elena Matei hoes the parched earth around stunted ears of corn, easing out weeds struggling for the same traces of moisture. There hasn't been a drop of rain for two months, the longest drought she has seen in more than 30 years of working the fields in near Draganesti-Vlasca, 37 miles (60 kilometers) southwest of Bucharest. "If it goes on like this, the crop will be ruined, my animals will die and so will we," 57-year-old farmer said. Across the Balkans, weeks of temperatures as high as 40 degrees Celsius (102 Fahrenheit) have blanched and stunted wheat crops and driven already impoverished farmers to deeper despair. Even coastal areas are suffering from the worst dry spell in decades. Governments are scrambling to combat the drought with irrigation. Orthodox priests are pointing fingers at the faithless. "This drought is a consequence of our sins," said Gheorghe Popa, priest at the St. Alexandria Church in Alexandria, mopping his brow. "We have destroyed nature and not respected God's laws."

Romania, which normally produces 4.65 million tons of wheat - roughly a quarter of it for exports - is among the worst hit. The country may have to import up to 500,000 tons of cereals to cover domestic needs, said Agriculture Minister Ioan Muresan. Across the border in Yugoslavia's main republic of Serbia, the situation is similar. "We are only one step away from a humanitarian catastrophe," said Radomir Popovic, an agriculture expert in Belgrade, Yugoslavia. Yugoslavia, whose economy already is in bad shape after a war over its Kosovo province, had hoped to export wheat to help pay its debts. It now faces importing wheat to feed its population. Croatia's fertile Adriatic coastline, which produces citrus fruits, grapes and olives, is suffering its worst drought in 35 years, said Stansilav Stambuk, an agricultural expert in that nation's capital of Zagreb. In Bulgaria, Orthodox clergy from the Dobrich, 320 miles (510 kilometers) northeast of Sofia, said farmers from a nearby village had joined them for open-air prayer for rain and the ancient ritual of offering burnt lambs for sacrifice. Muslims in northeastern Bulgaria held similar rituals. Farther north in Slovakia, impoverished farmers have urged the government to cover costs of water and electricity to irrigate their parched fields.

Irrigation is also a problem in northern Romania, where rivers are flowing at a tenth their usual volume. Most farmers can't afford irrigation and the watering systems constructed under communism have been looted and left to disrepair over the past 10 years. "The irrigation system we used under communism has been destroyed," said farmer Gheorghe Neagoe, 63. His two donkeys haul 600 liters (156 gallons) of water on a cart to his land, which he waters with his wife, Maria, using plastic jugs. "Look at this melon. It should be as big as a man's fist," he said pointing to a dark-green fruit no bigger than a pingpong ball. "I don't think we'll see corn or melons or anything if it doesn't rain," Maria said.



Troubled Times



Civil Unrest

Food at Risk as Water [Drips Away](#)

BBC, July 18, 1999

A US conservation group says the world's impending water shortage could reduce global food supplies by more than 10%. The group, the **Worldwatch Institute**, based in Washington DC, says the shortage could lead not only to hunger but also to civil unrest and war.



Troubled Times



Violence

Two Men Killed for Allegedly Stealing Potatoes

Associated Press, August 3, 1999

Two men allegedly trying to steal potatoes from private vegetable plots were beaten to death outside a central Russian city, a news report said Tuesday (Aug. 30). *ITAR-Tass* reported that the gardens' owners admitted having beaten the men Monday night after catching them with the potatoes in a suburb of Ulyanovsk, a Volga River city 720 kilometers (430 miles) east of Moscow. The report did not say if the killers were arrested. The bodies of the two men were found on a dirt road, twelve fresh potatoes in a sack nearby, the report said. Many Russians rely on vegetables grown from private plots, and thefts can deprive them of their major source of food. Six thieves were killed in vegetable gardens elsewhere in Ulyanovsk last month, *ITAR-Tass* said.



Troubled Times



Wheat

In preparation for food shortages, some wheat history for you: The lowest prices for wheat in this century were in 1931 and 1932 at 33 cents per bushel. In 1933 (first drought year) yields went down to 9.1 bu/acre. In 1934 9.8 bu/acre and in 1935 9.3 bushels per acre. Over the past 3 years, yields averaged 47 bushels per acre! Wheat prices are now the lowest they have been since 1977... History is about to repeat itself. Consensus of fall conditions in wheat country is that we're looking at one of the worst fall condition reports in history. In September, 1999 we will know, but all the conditions are set for another Zeta [Prediction](#) come true, this one with horrific consequences for those who are not ready.

Offered by [John](#).



Troubled Times



Cornbelt

Drought grips the Corn Belt; farmers' fears grow

Associated Press, April 26, 2000

WINTERSET, Iowa - Each day, Jody Milligan decides which is most important: taking a shower, doing the laundry or watering her two horses. Her well is drying up. The same thing is happening to Russell Faux's well. The 71-year-old farmer drives 11 miles (18 kilometers) to Winterset every week or two for 325 gallons (1,230 liters) of water so he and his wife can bathe, cook and water the cattle. "It was bad last year," Milligan said, "but this year it's ridiculous." Drought is choking the American Midwest - particularly the Corn Belt. A severe drought zone extends from Nebraska and Iowa across parts of Missouri, Illinois and Indiana and into Ohio. Since last July, rainfall in the severe drought zone has been six to nine inches (15-23 centimeters) below normal. "You see things greening on the surface, but it's a ticking time bomb below the surface," said Michael Palecki, a climatologist with the Midwestern Regional Climate Center in Champaign, Illinois. While there is enough moisture now at the surface for crops to sprout, the soil is dry a foot or two down. And long-range forecasts suggest it will be drier and warmer than normal through much of the region from May through July, a critical part of the growing season. Little of the nation's corn crop is planted right now, and things could still turn around. But a continued dry spell could mean higher prices for corn and soybeans and financial ruin for farmers. John Dittrich, who irrigates two-thirds of his corn and soybeans near Tilden, Nebraska, is worried about the odds. "It makes Las Vegas look stable," he said. Already, creeks in cow pastures are drying up. Shorelines and tree roots are exposed as rivers recede.

Both Milligan and Faux have shallow wells - which are less than 100 feet (30 meters) and rely on soil moisture rather than deep underground water sources - but they never ran into problems until last summer. Nowadays, Milligan and her husband, Steve, often shower at her pet grooming business in Adel, 30 miles (50 kilometers) from home, to conserve water. If they water horses one day, they put off washing dishes or doing a load of laundry until the next day. In Iowa, the precipitation total from Sept. 1, 1999, to April 1, 2000, was the fourth-lowest since 1873. Other states in the Corn Belt are seeing pretty much the same thing. The dry spell has been compounded by unusually warm weather, which has sucked moisture from the soil. Temperatures in Iowa over the past nine months have shown the biggest shift in 105 years from what is considered normal. Large portions of Texas, Florida and Georgia are also going through a severe drought. Some environmentalists blame global warming. Climatologists cite La Nina, a cooling of the eastern Pacific Ocean around the equator. La Nina tends to bring dry, hot summers to the Midwest. In fact, the last severe drought in the Midwest, in 1988-89, also occurred during a La Nina. The dry spell was one of the costliest natural disasters in U.S. history, with an estimated \$54 billion in crop losses and other damage. This La Nina, however, has continued for an unusual two years. "You'd have to go back decades to find one that's lasted this long," said Douglas Le Comte, a meteorologist with the Climate Prediction Center in Camp Springs, Maryland.



Troubled Times



Hawaii

Hawaii Facing Drought

By Julie Galle, *Weather.com*, March 24, 2000

In the minds of many people, Hawaii is composed of lush, tropical islands, so it may be surprising to learn that part of the state is in the midst of a drought. The wet season is ending with rainfall totals well below normal. That has many ranchers and farmers concerned about the future. Areas hardest hit are in the central and southern portions of the state. Maui, Molokai and Lanai received less than .05 inches of rain so far this year, according to the U.S. *Drought Monitor*. That follows locally heavy rainfall in parts of the country in December, which produced some flooding. The heavy rains eased dry conditions created by lower than average rainfall in November, 1999, but it was not enough to turn around the dry conditions. The relatively dry rainy season is one of many that the region has seen during the past several years. In all of 1998, Honolulu International Airport received only 4.52 inches of rain, compared to an average of nearly 22 inches, according to *The Drought Monitor*. This season's low rainfall is impacting ranchers who do not have access to municipal water systems. They rely on rainfall to replenish drinking water supplies for livestock.

"Right now, we haven't had any reports of crop losses, but we are aware that the ranches are starting to move the herds looking for greener pastures. Some of the smaller ranchers have begun hauling in livestock drinking water from (municipal) systems," said Paul Matsuo, Director of the Division of Agricultural Resource Management and agricultural water specialist at the Hawaii Department of Agriculture. While no crop losses have been reported yet, many sugar cane and macadamia nut producers are hoping for more rain. "It will likely reduce the season's (macadamia) crop, but we don't know how much," said Donald Martin, State Agricultural Statistician for the Hawaii Department of Agriculture. He added, "On the other hand, there are some orchards that are normally in the wetter areas that are benefiting from the dry weather." Martin specifically pointed to flower crops, but orchard crops also include tropical fruits, coffee and nuts. Hawaii may be best known for its pineapple production. State officials say the low rainfall will not impact that crop. Matsuo explained, "Most of the pineapple is grown on the northern islands, and northern islands get more rain than southern islands, generally." He added that pineapple is a long-term crop, so the planting season is not in jeopardy, as is the case with other crops.



Troubled Times



Texas

Fall Won't Fix Texas Drought Damage

Associated Press, September 16, 2000

Dried-up ponds and fast-growing fires. Overworked lawn sprinklers and scorched crops. Legions of grasshoppers and warped house foundations. Products of the relentless drought and heat wave are multiplying in Texas, and the arrival of fall might not change things much. Shorter days, longer nights and cooler temperatures will come, forecasters say, but the bone-dry conditions of this scorching summer aren't likely to leave. "We're moving into fall. And it won't be as warm as it was in the summer," said Skip Ely, a National Weather Service meteorologist. "But it is not at all clear that we're going to be moving into wetter weather." The drought has caused about \$595 million in crop losses, according to the Texas Agricultural Extension Service, and 178 counties have been declared federal agricultural disaster areas. The Extension Service attributes \$192 million in crop losses to grasshoppers, plant-eating pests that have thrived in this summer. "Grasshoppers love this heat," said Beverly Boyd, spokeswoman for the state's agriculture department.

North Texas was rainless for the 77th day Friday, far surpassing the previous no-rain record of 59 days originally set in 1934 and matched in 1950. A total of 268 public water systems in 82 counties statewide have implemented some sort of water restrictions. Because of the wildfire threat, bans on outdoor burning remain in effect for 186 counties. "Our big concern right now is that the weather is cooler, humidity is up and some people want to burn off brush or trash, or are outside camping or using four-wheelers," Texas Forest Service spokeswoman Traci Bowen said Friday. Heavy rains last week did stop fires in southeast Texas, but Bowen said the northeastern quadrant of the state remains tinder dry.



Troubled Times



West

Dry in the Rockies

Associated Press, September 14, 2000

Hot, dry weather has wilted Colorado's wheat harvest, parched pastureland and drained reservoirs, spurring the growth of desperation, fear and despair among ranchers and farmers. They worry their livelihoods could be in the same sort of crisis that has stricken the dry South, especially if the winter doesn't bring heavy snows to replenish the soil and fill rivers and lakes. "I honestly think we're going to squeak out of this year," says Colorado Agriculture Commissioner Don Ament. "But next spring, if we don't get a good snowfall, we are in serious trouble." For John Shawcroft, trouble already is here. "We have some very, very serious situations here in southern Colorado," says the third-generation rancher who is being forced to move his cattle off national forest land weeks ahead of schedule because of drought conditions.

From Montana to New Mexico, the Rocky Mountain region is parched. Ranchers and farmers are struggling as counties across Colorado, Nebraska, Wyoming, Montana and New Mexico seek federal disaster relief. Much of the region's water comes from mountain snow that melts, flows into rivers and lakes and is shipped by pipelines to the high plains. Wells tap underground water formations. Now wells are drying up in some spots and some rivers are low because of last spring's low snowpack. Many farmers along the Front Range who irrigate crops have already depleted their share of water. And later-than-normal summer monsoons are little help for farmers who rely on snow and rain for water. Only the Western Slope's fruit growers are reporting bountiful crops. "It is absolutely, positively the driest I've ever seen it here," says Jim Roberts, 51, who farms near Wray in east-central Colorado. He went nearly two months without rain last spring and recent thunderstorms that soaked parts of the plains have skipped his land. Roberts' wheat harvest in July was only a third of what it should have been, and his corn crop is a loss. He normally would be preparing to plant his next wheat crop in less than a month. "But if it doesn't rain, I don't get to plant," he says.

That's the big concern right now, says Darrell Hanavan, executive director of the Colorado Wheat Administrative Committee. "It's very critical the wheat crop be planted under good moisture conditions because that usually dictates whether the crop is going to be above or below average," he says. Animals have fared no better. For the first time in his ranching career, Shawcroft has chopped up thousands of pounds of potatoes and scattered them through his field for the cows. "It's desperation measures, you might say," he says. When the potatoes run out, Shawcroft and others in the San Luis Valley will have to sell his calves earlier than usual, hoping that beef prices, on the rise after a big slump, don't plummet again. "I hear every day or two of someone wanting to sell," he says. Original predictions pegged this year's winter wheat crop -- planted in September and harvested in July - at 98.7 million bushels, above the 10-year average of 85.9 million. But the total harvest was 70.5 million bushels, worth \$70 million less than initial estimates.



Troubled Times



North Dakota

Ranchers Battle Drought in N. Dakota

Associated Press, September 14, 2000

For the first time in a dozen years, Steven Brooks is hauling water to his cattle. "It's getting worse all the time," the Bowman, N.D., rancher says during a break in his work. "Hopefully, we'll get some moisture soon." Pastures, dam reservoirs, dugouts and creek beds are drying up in southwestern North Dakota and southeastern Montana after a summer of little or no rainfall, and hot weather. "If guys don't have wells, they're getting to be in trouble," says Bill Barnes, manager of the Bowman Auction Market. Rainfall in the state over the Labor Day weekend missed the Bowman area, Brooks says. "We got a few drops, that was all," he says. Many ranchers in the region are weaning their calves early and selling them, putting corn in silage early before the crop dries out and moving cattle off some pastures. The dwindling water supplies for livestock, shriveled hay and feed grain crops and dried-out pastures remind many in the region of the late 1980s, when drought forced some ranchers off the land. "You go out in a field here and there's cracks in the ground you can't see the bottom of," says Clare Messmer, director of the Farm Service Agency office in Dunn County, N.D.

North Dakota Crop Damage from Storms may Rise

Reuters, June 23, 2000

Two rounds of thunderstorms in eastern North Dakota in the fertile Red River Valley area in the last 11 days have caused millions of dollars in crop damage, state officials said Friday. Damage assessments were still under way in 11 counties from Fargo north to the Canadian border, where the leading crops include spring wheat, barley, oats and sugar beets. But a spokeswoman for the North Dakota Department of Agriculture said crop losses in Grand Forks county alone were estimated at roughly \$31 million.



Troubled Times



Midwest

Drought, 100-Degree Temperature Take Toll in US

Reuters, August 30, 2000

Unrelenting triple-digit temperatures were roasting the U.S. Plains states Wednesday, continuing a weather pattern that is devastating crops, threatening livestock and challenging people to find ways to beat the heat. In Kansas City, where the thermometer climbed to at least 100 degrees Fahrenheit every day for more than a week and was forecast to hit 102 Wednesday, health officials pleaded with area residents to refrain from outdoor activity and seek air-conditioning. A 68-year-old man succumbed to the heat in his home that lacked air-conditioning Monday. "It gets hot every summer, but it does not get into triple digits several days in a row like it is now," said Kansas City Health Department deputy director Thomas Maddox. "We are very, very concerned about how hot it is." Indeed, from Nebraska south into Texas and stretching into the Southeast, the extreme heat coupled with extended drought conditions to render devastating consequences.

The agricultural sector has been hit the hardest. Corn, soybeans, sorghum and other autumn crops that were already struggling with an extremely dry summer were virtually wiped out in many areas by the recent heat blast, costing farmers millions of dollars in lost revenues and prompting state requests for federal assistance. Cattle ranchers have no pasture grass left to graze their herds and little grain in the fields to use for feed. Water supplies were being limited in some areas, including in southwest Nebraska where some farmers trying to pump water to crops found their irrigation systems restricted by state officials trying to conserve water. "Literally much of our corn has burned up," said Chris Peterson, spokesman for Nebraska Gov. Mike Johanns. "Cattle are streaming to sale barns because there is nothing to feed them. It's a pretty bad deal." Peterson said 100 municipal water systems across the state were being closely monitored because of dangerously low levels, and fears of wildfires prompted Johanns to deploy National Guard water tankers to western Nebraska to be ready for firefighting.

In Texas, Wednesday was the 38th day this summer and seventh in a row with temperatures of 100 or above. That, combined with the fact that rain has not fallen for a record-breaking 61 days, was devastating the state's farmers. Texas agricultural economists estimated farmers and ranchers had lost some \$595 million. In Oklahoma, where midday temperatures were 101 degrees Wednesday, the toll was estimated at \$400 million to \$600 million, according to state agriculture officials. Oklahoma Gov. Frank Keating declared a disaster-related emergency Tuesday as Oklahoma City broke all-time records for water usage, and hospitals continued to see an influx of people suffering heat-related illnesses. "When you have both hot and dry go hand in hand, the impact is magnified and you've got a double-whammy," said Mark Svoboda, a University of Nebraska climatologist. "You've got problems not just in the agricultural sector but you see such a huge demand on utilities, water and electricity, for people to cool their houses and drink the water." "It's not unusual to see 100-degree temperatures in the summer," he said, "but when it's so dry and the heat comes, we become vulnerable pretty quickly."



Troubled Times



New England

Wet Weather Creates Mess for Crops in Northeast

Associated Press, August 25, 2000

Guillermo Molina winces at the sight of row upon row of brown, withered plants drooping with soft, misshapen tomatoes. "At least when we had a drought last year I could pump water from the pond and keep the crops wet," the head grower for Marino's Lookout Farm said Friday. "This year, it's just been a mess." The unseasonably cold and wet summer weather across the Northeast has left farmers like Molina with fields of near useless crops. In other fields, though, where the fruits and vegetables thrive on extra moisture, farmers are celebrating one of the best years they can remember. "Most farmers I know are calling this the summer of waiting," said Diane Baedeker Petit, spokeswoman for the Massachusetts Department of Food and Agriculture. "We were waiting for things to develop, waiting for the weather to change, waiting for the sun to help things ripen, and waiting to see what the crops would look like," she said. Since June, more than 12 inches of rain has fallen in Massachusetts, according to the National Weather Service. During the same period last year, less than six inches of rain fell.

Jim Wilson is one of the lucky ones. His beets, radishes and carrots have never looked better, he said. "Some things excel in the heat and some things excel in the cool weather," said Wilson, owner of Wilson Farm in Lexington. "It all depends on what you grow." Wild blueberries have grown so rapidly and so well in Maine this year, growers say the region's annual crop will likely reach a record 85 million pounds, well over the annual average for the past five years of 65 million pounds. The rain has also left the peaches and apples of Connecticut large and especially tasty, according to the state's Department of Agriculture. But in Molina's case, dark clouds on the horizon are the worst possible sign. His string beans grew small, and then blackened and withered before they were ripe. His romaine and red leaf lettuce grew stems and seeds through the core before they were ready to be picked. And his tomatoes either didn't grow, or grew so packed with water that they squished and were rotten within days. "We thought we could use some to make our sauce, but even that doesn't work," he said. "When we tried, we just had to cook it and cook it to get rid of the excess water." The Natick farm grows a variety of fruits and vegetables, but usually relies on its tomato crop for about 50 percent of its annual business. "We'll be lucky to sell one-third of that this year," Molina said. "We're not even going to come close to our projections. This is going to be a bad year."

Jerry Frecon, an agricultural agent in southern New Jersey, says growers of squash and peppers have had trouble with soil fungus, which flourishes in damp conditions. In Connecticut, farmers replanted the cucumbers three times at Sugar Hill Farm in Colebrook, but the vegetables still wouldn't grow. Vinny Confreda had trouble even getting that far - many of his Cranston, R.I., fields have been so flooded the fourth-generation farmer couldn't plant his corn. For him, it's been two bad years of extremes. Last year's drought left Confreda's farm looking like a dust bowl. His corn stalks grew to just 18 inches instead of six feet, and his pepper plants wilted before having a chance to ripen. "I keep chugging at it," he said. "I'm hoping my kids will take over to be the fifth generation, but I'm not sure what's going to happen." Molina isn't expecting things to turn around this year. He's already replanted his tomatoes and lettuce once this summer. "I keep on planting and hoping," he said, squishing a deep red plum tomato in his hand. "But this year, it's hard."



Troubled Times



Fisheries

Drought in West Puts Fisheries in Hot Water

Enn.com, July 31, 2000

The hot, dry summer will impact fly fisherman such as Larry Larsen, here trying his luck on the South Fork of the Snake River in Idaho. The heat is on. Wild fish and avid anglers are beginning to feel the effects of this summer's drought in Idaho, Wyoming and Montana. "Lack of water is always a problem for fish," said Kathy Buchner, director of the Wyoming Council of Trout Unlimited. "We are concerned that the drought might add to the problems endangered fish currently face such as habitat degradation and invasive species." Two counties in Wyoming and three in Idaho have declared drought emergencies. About half of Montana's major river stretches are rated moderately to extremely dry. "Fish are undoubtedly beginning to feel the stress caused by low flows, higher water temperatures and competition for space and food," said Larry Peterman, Montana Fish, Wildlife and Parks fisheries division administrator. "Low water conditions in spring and fall can cause spawning failures and increased predation on young fish can impact adult trout numbers in future years. If conditions worsen, we will most likely lose fish to stress from the increased water temperature and decreased oxygen available."

Peterman estimates that a wild trout population seriously impacted by drought may take three years or more to recover. All species, native and resident, will be affected in the state of Idaho, said Tom Rogers, fisheries hatchery supervisor for the Idaho Department of Fish and Game. "As temperatures rise, there are more algae blooms due to nutrient concentration, which decreases the amount of oxygen available in the water," he explained. Especially sensitive to warmer conditions are cold-water species such as rainbow trout and the threatened bull trout. In response to the drought, Rogers said his department is likely to cut back on stocking areas that have lethal water temperatures. If the situation worsens, the department may liberalize fishing limits in areas where the fish are not likely to survive. For species at risk such as the bull trout, which is listed as a threatened species, wildlife officials may salvage surviving fish and relocate them. "The fish are getting really hammered," said Jerry Eder, the manager of Silver Creek Outfitters in Ketchum, Idaho. "They are less aggressive because they are not eating as much." Rainbow trout are especially sensitive to temperature, preferring cold water. Warm water speeds up metabolism, yet more effort is required for the fish to find food, he explained. Their energy is depleted even when they are caught by an angler.

"Fishing is a major part of this economy," Eder noted. "The last few seasons we have seen more pressure on the resources. August is the hottest month of the year and there is talk of closing certain fisheries. I would encourage people to fish in the early morning and early evening." In Montana, fisheries biologists have asked anglers to reduce voluntarily the amount of pressure they place on fisheries. Other recommendations they offer to minimize stress include landing fish quickly once they are hooked, keeping fish in the water as much as possible when handling them, and avoiding contact with the fish's gills. The drying of water sources for irrigation is also expected to have an impact on fisheries. "When you have competition between irrigators who need water for crops and the need for water in streams for fisheries, one side is going to lose," said Dick Larsen of the Idaho Department of Water Resources.



Troubled Times



Southeast

Southeast Suffers Drought Unlike Any in Generation

Associated Press, June 9, 2000

Much of Florida's emerald landscape has turned brown, its wells are being tapped dry and sinkholes have opened up, swallowing parts of houses, streets and back yards. In the Atlanta metropolitan area, the state has imposed tough water-use restrictions for the first time in 12 years. Across the Southeast, farmers are watching their crops wither in the fields, and cattle are being sent to the slaughterhouse now because soon there may be nothing for the animals to eat. The Southeast is in the grip of a drought the likes of which some states have not seen in generations. Robert and Chris Gonzalez used to treasure their pond stocked with fish and waterfowl at their home near Tampa. All they see these days are buzzards circling overhead. "They come for the dead fish," Robert Gonzalez said. "There isn't enough water to keep the fish alive."

The drought extends from South Carolina through Georgia, Alabama, Florida, Gulf Coast Louisiana and parts of West Texas. Along Florida's Gulf Coast, it has been the driest spring since at least 1915, when records were first kept. The drought index in some counties there rivals that of Arizona's deserts, and tourists are being asked to use their towels twice so hotel laundry rooms can save water. Georgia has posted the driest May this year since 1895. Some streams have run dry and rivers are at record lows. In South Carolina, farmers have stopped planting cotton and soybeans. Roy Speir, a farmer in Georgia's Terrell County, said he has lost 130 acres of corn and may lose 300 acres of peanuts. "The leaves on the corn are like paper. It'll just crumble in your hand," Speir said. In Alabama, produce farmer Mike Donnell has seen his crops die in the field and had to feed his prize tomatoes, ruined by dry rot, to the hogs. "Another week and another week would come and the weather people would say it was going to rain on the weekend," Donnell said. "And week after week we would be missed by the rain."

Alabama state officials are preparing to use the National Guard to dispense drinking water in towns where wells are in danger of running dry. Plans are also being made to ask trucking companies to help haul hay from dry, but not critical, northern Alabama into southern Alabama. Agricultural officials in Florida plan to ask the federal government to declare a disaster, allowing farmers to receive relief money. Even if the summer rains begin to fall soon, most of the crops are already destroyed, said Whit Chase of the Florida Agriculture Department. Cattle ranchers are reporting the grass in their pastures is gone. Northern Florida's hay crop is badly damaged, and that will force ranchers to buy hay from other states at much higher prices. Ranchers are culling their herds by selling calves to market early.



Troubled Times



Apple Harvest

Storms Cast Doubt on Apple Harvest

The Associated Press, June 23, 2000

They surveyed their battered orchards and used terms like devastated, worst ever, and hopeless to describe the damage from severe storms. Apple growers in the Hudson Valley region of New York say they will need financial help from the federal government to weather what they say will surely be a dismal year for production. The region's apple industry, one of the largest in the nation, was already complaining about financial obstacles when hailstorms May 18 and June 2 damaged an estimated 2 million bushels of apples. "It was devastating," said Rod Dressel Jr., manager of packing and storage for Dressel Farms in New Paltz. "The Hudson Valley apple crop has been hit pretty hard from north to south." "There's no hope of getting any economic return," added George Lamont, president of the New York State Horticultural Society.



Troubled Times



Ag Disasters

Arkansas

World Wide Ag Network, September 26, 2000

Agriculture Secretary Dan Glickman today announced that farmers in 11 Arkansas counties are eligible for USDA emergency farm loans because of losses to tomato crops caused by low temperatures and excessive rainfall that occurred from March 1 through July 12, 2000.

North Dakota

World Wide Ag Network, September 26, 2000

Agriculture Secretary Dan Glickman has declared 35 North Dakota counties as agriculture disaster areas due to losses caused by wind, severe storms, excessive rain, tornadoes, and other severe weather this spring and summer, making farmers in these areas eligible for low-interest emergency loans. "The weather events in North Dakota have had a devastating effect on many producers," said Glickman. "A mid-summer drought in western North Dakota means less hay to feed livestock while too much rain in the northern and eastern part of the state has hampered crop quality."

Florida

World Wide Ag Network, September 20, 2000

Agriculture Secretary Dan Glickman has named two Florida counties as eligible for Farm Service Agency (FSA) emergency farm loans because of losses caused by high temperatures, drought, and fire.

Nebraska

World Wide Ag Network, September 19, 2000

Agriculture Secretary Dan Glickman today announced that farmers in 13 primary and 37 contiguous counties in Nebraska are eligible for USDA emergency farm loans because of losses caused by severe drought, excessive heat, hail, high winds, lightening, and excessive rain that occurred this summer. "The extreme weather in Nebraska has devastated many crops, including wheat, corn, and pastureland for cattle," said Secretary Glickman. "USDA is providing all the help we can to aid struggling local farmers in Nebraska."

Mississippi

USDA News Release, September 19, 2000

Agriculture Secretary Dan Glickman has declared the entire state of Mississippi as an agriculture disaster area due to drought and excessive heat, making farmers eligible for USDA emergency loans. "The extreme weather has severely impacted soybeans, cotton, other major crops and pasture lands in Mississippi," said Secretary Glickman. "USDA is working to help farmers recover from this serious situation."

Montana

USDA News Release, September 18, 2000

Agriculture Secretary Dan Glickman today announced that farmers and ranchers in all 56 Montana

counties are eligible for emergency farm loans because of losses caused by drought and excessive heat this year. "The same extreme dry, hot weather that has contributed to severe wildfires has caused devastating pasture losses for Montana's cattle ranchers," said Secretary Glickman. "We at USDA are using every tool at our disposal to help."

North Carolina

USDA News Release, September 15, 2000

Deputy Agriculture Secretary Richard Rominger, visiting Raleigh, today announced that farmers in six North Carolina counties are eligible for emergency farm loans because of losses caused by extreme weather this summer. "Some North Carolina farmers suffered severe crop losses due to high winds and hail from two storms in July," Rominger said. "USDA will use all of the tools at our disposal to help farmers affected by these disasters."

Idaho

USDA News Release, September 5, 2000

Agriculture Secretary Dan Glickman has declared eight Idaho counties as agricultural disaster areas due to losses caused by severe and widespread lightning-caused wildland fires. The fires consumed more than 35,000 acres of federal, state, and private land. Farm and ranch buildings and equipment; public and private grazing, forage, and grain crops; and livestock have been destroyed. "Idaho has been hit hard by the fires," said Secretary Glickman. "USDA is providing all the help we can to aid local farmers in Idaho."

Oklahoma

USDA News Release, August 31, 2000

Agriculture Secretary Dan Glickman has named 16 Oklahoma counties as eligible for USDA emergency farm loans because of losses caused by drought, excessive heat, and high winds. Glickman met with Governor Frank Keating this week to discuss the impact of the drought on Oklahoma's farmers and other agriculture issues. This region of the country is especially hard hit by a record period of hot, dry weather, Glickman said. These fields cannot yield nearly what they would normally produce. These loans can help some farmers survive to plant another year, when hopefully the weather will improve.

Texas

USDA News Release, August 25, 2000

On Tuesday, August 29, 2000, Agriculture Secretary Dan Glickman will tour a Boyd, Texas farm that has suffered significant crop damage due to drought. He is expected to be joined by Congressman Charles Stenholm at the farm of Samie Erwin at 2:30 p.m. Glickman has already declared 153 Texas counties either as primary or contiguous agricultural disaster areas, making farmers in those areas eligible for low-interest emergency loans. The Dallas area has now seen nearly 60 consecutive days without moisture.

Michigan

USDA News Release, August 9, 2000

Agriculture Secretary Dan Glickman today declared 41 Michigan counties agricultural disaster areas due to several weather related disasters such as heavy rains, high winds, and hail, making farmers in these counties eligible for emergency low interest loans. "America's farmers are at the mercy of the weather for their livelihoods," Glickman said. "Some who have been hard hit by storms this year may use these loans to stay in business and bounce back next year."

New York

USDA News Release, August 8, 2000

Agriculture Secretary Dan Glickman today declared 35 New York counties agricultural disaster areas due

to severe weather including excessive rain, flooding, high winds and hail, making farmers in these counties eligible for emergency low interest loans. "Farmers in New York have been hit hard this year by the forces of mother nature," said Glickman. "USDA's low interest loans may help provide needed assistance to the state's farmers."

Iowa, Nebraska, Texas, Colorado, Kansas, Missouri, South Dakota, Wyoming

CNN.com, July 22, 2000

Earlier in the day 12 Nebraska counties stretching from the east-central part of the state to the Panhandle, were declared agriculture disaster areas by U.S. Agriculture Secretary Dan Glickman because of drought and severe storms. The same declaration for 13 Iowa counties and one Texas county will make farmers there eligible for emergency low-interest loans, Glickman said. Adjacent counties were also covered by the declaration, meaning areas of Colorado, Iowa, Kansas, Missouri, South Dakota and Wyoming are eligible for the same benefits. "Drought and other natural disasters continue to plague many of America's farmers," Glickman said. "USDA is working to provide needed assistance and emergency loans for farmers during these tough times."

Nebraska

World Wide Ag Network, July 19, 2000

Agriculture Secretary Dan Glickman has declared three Colorado counties as agricultural disaster areas due to drought and one county because of freezing temperatures. This declaration makes farmers in those counties and 15 neighboring counties, including counties in Nebraska, eligible for emergency low-interest loans.

Arizona, Utah, Mexico, Colorado

World Wide Ag Network, July 17, 2000

Agriculture Secretary Dan Glickman has declared seven of Arizona's 15 counties as agricultural disaster areas due to drought, making farmers in those areas and 12 neighboring counties, including counties in Utah, New Mexico and Colorado, eligible for emergency low-interest loans.

Alabama, Florida, Nebraska, and New Mexico

NBCnews.com, June 24, 2000

Agriculture Secretary Dan Glickman declared parts of Alabama, Florida, Nebraska and New Mexico agricultural disaster areas Friday because of a devastating drought. "This has been a devastating year for America's farmers and ranchers following last year's drought and historically low prices," Glickman said. "The USDA (U.S. Department of Agriculture) is responding quickly and in every way we can to help." The disaster declaration covers 64 of Alabama's 67 counties, 41 of Florida's 67 counties, 17 of Nebraska's 93 counties and 27 of New Mexico's 33 counties.



Troubled Times



Citrus Canker

Contagious Canker Threatens Florida's Citrus Industry

Washington Post, March 20, 2000

MIAMI In back yards all over this lush-green city, orange trees have had to be chopped down and burned. South of here, in Florida City and Homestead, about half of the \$20 million lime crop has been lost. And now, the heart of the state's \$8.5 billion citrus industry, in central Florida, is beginning to feel the threat as a highly contagious bacterial disease with no known cure keeps moving north. The disease is called citrus canker; it is so dreaded that state and federal officials have just allotted \$175 million to battle it and assigned nearly a thousand workers to the fight in Dade and Broward counties alone. "Suffice it to say that if left unchecked, this would wipe out the citrus industry," said state agriculture department spokesman Terence McElroy. "It is a huge threat. It is arguably the most devastating citrus disease a citrus region can have." Citrus canker does not affect humans, but it can ruin an orange, lime or grapefruit grove. Although often not visible for several years, it weakens the trees, eventually leaving them unproductive. In later stages, it is characterized by the unsightly brown splotches that cover the fruit and leaves. "It kind of looks like the fruit has acne, like a kid took a brown magic marker and drew polka dots," McElroy said.

Florida's multibillion-dollar citrus crop is the biggest component of the state's agricultural industry, which is second only to tourism in economic importance. The state produces 75 percent of the nation's citrus fruits, and worldwide, is second only to Brazil in citrus production. About 140,000 workers are employed in the Florida citrus industry. This is the third canker outbreak in South Florida in the past 100 years and the most serious. The latest strain came from Asia and was introduced in October 1995 into a backyard garden in Miami, located within a half-mile of Miami International Airport, McElroy said. The disease is spread easily through wind and rain--and through the contaminated tools and equipment used by lawn-care workers. Already, the state has had to cut down 500,000 citrus trees in the Miami and Fort Lauderdale areas, which is far south of the main growing region. About 300,000 of the destroyed trees were in residential neighborhoods and the remaining 200,000 in lime groves. As many as 1.5 million additional trees in the area also need to be cut, McElroy said. "The thing is so contagious that scientists now tell us, if a tree is positively identified as having citrus canker, you must also cut down any other citrus tree within 1,900 feet - more than 600 yards in every direction," he said.

Central Florida citrus growers, who have been nervously charting the disease's movement northward, were dismayed recently to learn that the disease has penetrated the county north of Broward, Palm Beach County. Only a handful of residential trees in Boca Raton, in the southern portion of the county, have been infected, but that is enough to raise the alarm. "It's become a crisis," said Wendy Bourland of the Florida Citrus Mutual, the state's largest citrus organization with about 12,000 growers. "We have a weekly newsletter we publish to our members, and that's all we've talked about for months now." Growers throughout the state have been advised to limit access into and out of their groves, to be mindful of contaminated equipment and to haul fruit only in covered trailers, she said. "It's going to take everything we can to fight this disease," Bourland said. "You can't make it go away once it's arrived except to pull up the trees and burn them."



Troubled Times



Grape Sharpshooter

Deadly Pest Sours Vintners' Grapes

Washington Post, March 27, 2000

NAPA, Calif. In the vineyards that shimmer for miles across this lustrous valley, grape growers are bracing for one of the toughest battles California's huge wine industry has ever waged against a pest. The enemy is the glassy-winged sharpshooter, a tiny but voracious leaf-hopping insect that is making an unwelcome new home in the state. It carries a powerful bacterial disease that slowly but surely chokes the life out of vines. It is on the loose, and no one has much of a clue yet on how it can be stopped. "People are nervous, people are frightened," said Drew Johnson, a viticulturist at Beringer Vineyards near here. "It's very hard to control where a thing like this goes, and it can do terrible damage." Signs of the coming struggle are visible along rustic two-lane Highway 29, which rolls through the fabled heart of hundreds of California's premier wineries in Napa County, about 75 miles north of San Francisco. Long strips of sticky yellow tape that trap insects are being placed along the edge of some vineyards. Grape pickers constantly check vines for evidence of trouble. Plants shipped here from around the state that could carry the pest are being tagged for inspection. And there is growing clamor to take the extreme step of banning from the region any ornamental plants that host the sharpshooter.

It is a fight California's winemakers can hardly afford to lose. The state, which has nearly 1 million acres of vineyards, is among the world's leading wine producers and the source of most of the bottles that Americans drink. Wine is also a vital part of California's economy and tourist industry, generating about \$33 billion a year. And these are boom times: Consumer demand for California wines keeps rising, new vineyards are opening all over the state, and profits are strong. The little insect could change all of that. "Everyone is really mobilizing against this threat," said Joelle Gallagher, executive director of the Napa Valley Grape Growers Association. "Almost our entire economy here is dependent on wine grapes." The vineyards are racing against time. The sharpshooter already is wreaking havoc in a few agricultural corners of Southern California, leaving acres of vines shriveled and useless as if they had been struck by a harsh drought. Winemakers near San Diego now fear for their livelihood, saying that if the insect or the bacterial disease it spreads is not conquered in the next few years, the relatively small industry there could be wiped out. Some vineyard owners already are contemplating turning their ruined fields into golf courses.



Troubled Times



Banana Virus

Banana Virus May Destroy Crop

Discovery Earth Alert, April 24, 2000

An outbreak of banana bunchy top virus may destroy at least half the banana crop on the Hawaiian island of Kauai, the Honolulu *Star-Bulletin* reported Saturday. The virus was discovered last Sunday by farmers in Kauai, and the extent of the disease was not yet known. The virus is spread by aphids that eat the leaves and spread the disease from tree to tree. Banana bunchy top virus cannot affect humans, but is fatal to banana trees. Bananas from trees infected with the virus are safe to eat, according to the *Star-Bulletin*. In 1998, more than 25,000 banana plants in the region were destroyed after an outbreak of the virus. Hawaiian officials had believed that the disease was eliminated from the area.



Troubled Times



Red Tide

Texas red Tide Spreading Along Texas Coast

Associated Press, September 25, 2000

A bloom of toxic red tide algae is spreading along the Texas Gulf Coast, shutting down some oyster fishing and killing millions of fish whose rotting remains are fouling beaches. State environmental officials say it's the largest concentration of red tide since 1986, when more than 22 million fish died in four months. "We do not have an accurate number yet. But we are estimating several million fish have been killed so far," Dave Buzan, spokesman for the Texas Parks and Wildlife Department Kills and Spills Team, told the Corpus Christi Caller-Times. Buzan said there was a major bloom off Matagorda Bay on Sept. 18. "It is so big it can be detected on satellite imagery," he said. High concentrations of the algae called red tide produce a toxin that kills fish by affecting the central nervous system. For humans eating contaminated fish or shellfish, the toxin can cause numbness, dizziness, nausea, fever and muscle paralysis. The most serious cases can result in respiratory arrest and death. In addition, people who swim in affected bodies of water can suffer breathing and eye irritation. Elsewhere along the coast, officials in Houston said Sunday that red tide was spreading from the gulf into Galveston Bay and other inland waterways. Commercial harvesting of oysters in Galveston Bay has been shut down since Sept. 5 because of red tide. State Department of Health officials were reviewing whether similar restrictions need to be issued elsewhere along the coast. Oyster season doesn't open at Corpus Christi until November.



Troubled Times



Soybean Aphid

Aphid's Brief Invasion, Rapid Retreat Frustrate Farmers, Perplex Scientists

Chicago Tribune, August 28, 2000

Glen Volkening had just gotten back from a fishing trip two weeks ago when he noticed something peculiar at his Genoa farm. As he gazed across rolling acres of soybeans glistening in the sun, Volkening knew dull-green soybeans shouldn't glisten. When he walked through his crop to inspect more closely, his pants became coated with a sticky film. "You could slap a 2-by-4 on my leg, and it would hold on," he said. Then he discovered the culprits: Tiny green pests covered each leaf like lice, leaving behind trails of sugary slime. Volkening had become one of hundreds of farmers playing host to yet another unwelcome insect invader from the Far East, never seen in the United States. This month the insects have been found infesting soybean fields from Northern Illinois to parts of Wisconsin, Michigan and Minnesota. "In my 26 years farming here, I never saw anything like these rascals before in my life--and they were everywhere,"

Volkening spent more than \$8,000, almost 3 percent of the sales he expects from harvest, for a crop-duster to spray his land. Scott Pierce of Marengo spent the same amount on his fields. Another farmer in Boone County doled out more than \$10,000. With soybean prices at their lowest levels in 13 years, the spraying is especially hard to bear. "At the time, I thought it had to be done. It was out of control," Pierce said. "But now I'm not sure I made the right decision." Experts tentatively predict the aphid will not have much of an impact on this year's soybean harvest, which is expected to reach a record 3 billion bushels in the fall. The bug seemed to have done the most damage to the weaker, late-planted fields, but it was taken out before it could do too much harm to Illinois' second-largest cash crop, said Bill Hall, agriculture coordinator for the University of Illinois in Boone County. But scientists at U. of I. and the U.S. Agriculture Department are still struggling to uncover the soybean aphid's true nature and threat. Early evidence from a Chinese study indicated that aphids could do extensive damage. In one test, they reduced soybean yields by as much as 28 percent and decreased the crop's height by almost 8 inches. The bug also can carry viral plant diseases. But the research is still too vague to make any conclusions, Steffey said.



Troubled Times



Sudden Death

Soybean Farmers Battle Crop Disease in Midwest

Associated Press, August 24, 2000

It started with a single brown leaf on a soybean plant, but before long Mike Brocksmith had an entire patch of brown in one of his soybean fields. Sudden death syndrome has struck soybean crops across Knox County and throughout the region, cutting yields as much as 20 percent in some fields. "It's sure a wake-up call when your beans start dying in August," Brocksmith, 42, said Friday as he walked about his fields, pointing out stricken plants that could leave him with thousands of dollars in damages. The syndrome is nearly impossible to prevent and harder to kill. "When you see this, it's a done deal," said Chuck Mansfield, an extension agronomist at Purdue University, assessing a spot of damaged leaves in Brocksmith's crop. "It's all over." An estimated 80 percent of Knox County's soybean fields show signs of the fungal disease, said Jerry Nelson, Purdue University extension educator for Knox County, about 50 miles north of Evansville. "It's more widespread in the county than it's ever been, and it's more severe," Nelson said.

Farmers in other southern Indiana counties, western Kentucky and southern Illinois also report damage from the disease, but it's nearly impossible to assess the damage at this point. "We won't know for sure until we harvest it," Nelson said. Sudden death syndrome was first observed in Arkansas in 1971, but was not identified in Indiana until 1985. It also occurs in Illinois, Kentucky, Iowa, Mississippi, Missouri, Ohio, Kansas and Tennessee. "Some years it can be a fairly major problem and some years you'll see very little of it," said Todd Pfeiffer, professor and soybean breeder at the University of Kentucky. The disease is caused by a soilborne fungus that affects the lateral roots of soybean plants. Significant rainfall - such as what was seen in the region in July - can activate the problem. "Mother Nature plays a big, big role in triggering this disease," Mansfield said. Although it's called sudden death, the disease is there long before the symptoms arise. "It's a slow death, but it kind of appears suddenly and keeps creeping across the field," Brocksmith said.



Troubled Times



Grasshopper

To Texas Farmer's Burdens, Add the Grasshopper

New York Times, July 28, 2000

With grasshoppers pinging off the windshield like hailstones, Marvin Schrank mows through row after row of ripe milo maize, swarms of the insects rolling in waves of dust just ahead of his John Deere combine. "Those yellow hoppers have finished with the leaves and gone on to eating the seed," Mr. Schrank said. "They're hurting me now." At the edge of Mr. Schrank's grain field, his brother Alan shakes the branches of a native peach tree and sends dozens of grasshoppers skittering into the blazing afternoon sun. He points to a green peach eaten halfway through to the pit, saying, "Look here what they done." For Texas farmers and ranchers like the Schrank brothers - whose family has worked the same fields near here since the 1890's - a growing season marked by falling commodities prices and relentless drought has in the last few months added yet another burden: a costly infestation of grasshoppers. "It's the worst I've seen in my 31 years of working in Texas," said Cliff Hoelscher, an entomologist with Texas A&M University's Agricultural Extension Service.

Several warm winters in a row, combined with drought in much of Texas for the last three years, have created nearly perfect breeding conditions for the 15 to 20 species of grasshoppers commonly found in the state, Dr. Hoelscher said. "Without a cold winter or a wet spring, the eggs all hatch and all of the young grasshoppers are able to mature," he said. "The bigger they are, the more they'll eat." At least 63 of the 254 counties in Texas have been affected, Dr. Hoelscher said. And reports of infestations have come to his office from New Mexico, Louisiana, Arkansas and Oklahoma. Hardest hit, Dr. Hoelscher said, are farmers and ranchers raising cattle food: leafy green vegetation like hay, grain sorghum and coastal bermuda grass. "They'll move into an area and strip 15 to 20 percent of the available forage away in no time at all," he said. "That's 15 to 20 percent more feed that ranchers have to buy to make up the difference." Though insecticides can help rid an area of the grasshoppers, Dr. Hoelscher said, many of the insects will escape and move to an adjacent unsprayed field. A natural enemy of the grasshoppers, the entomophagous fungus, would help control their numbers, but it only thrives in wet weather. "Wet weather is something we haven't seen a lot of in Texas for the last few years," he said.

Allen Knutson, also an entomologist and a member of Texas A&M's Extension Service, estimated that 21 million acres of pasture and hay fields have been damaged by grasshoppers in the state. "A significant presence of grasshoppers might be 8 to 10 insects per square yard," Dr. Knutson said. "But we're seeing incidents of 30 to 40 grasshoppers per square yard in some fields. And that's causing us real problems." Jeremy Rich, of the Oklahoma Farm Bureau, said his state was also suffering from the invasion of grasshoppers, but had not yet calculated the financial damage. "Some losses will be significant," he said. "I just don't know the numbers yet." In Arkansas, Glenn E. Studebaker, an entomologist with the Cooperative Extension Service at Little Rock, said: "I wouldn't call it a plague of locusts. We have some problem with grasshoppers in southern Arkansas: soybeans in particular and some rice and some pastureland. It's heavier than usual, but nothing like Texas." In Texas, Dr. Knutson said, losses for this year alone have already totaled at least \$190 million in lost crops and treatment costs.



Troubled Times



Cutworm

Lack of Rain Brings Weeds, Insects to Nebraska

Associated Press, July 20, 2000

A Plains drought has dried up soil, stunted corn stalks, helped more weeds grow in cornfields and brought on a particularly destructive corn crop insect. Several farmers have complained that their herbicides are not working as well this year, causing more weeds, said Steve Gramlich, University of Nebraska-Lincoln Cooperative Extension Educator in North Platte. Some western Nebraska farms are being hit hard with the western bean cutworm - an aggressive insect that can destroy corn. For many farmers, the weeds and the onslaught of the cutworm have just added to problems brought on by a drought that has reduced yields and increased costs.

The western bean cutworm, which thrives in dry weather and sandy soils, usually is found in Nebraska west of North Platte. But this year it has shown up in large numbers at least 150 miles further east, near Aurora and north into Plainview. Byron Hoch, who farms near Bertrand, said he had to spray his several thousand acres of corn for the bug for the first time in the 26 years he's been farming. The spraying limited the damage to his crops, but was another cost in a tough year. "We had to throw another unexpected expense at the corn crop," he said. "That western bean cutworm - you can lose a third of a crop in a hurry. It's been a triple whammy this year. Nothing works."



Troubled Times



Pine Beetle

Pine Beetle Epidemic this year in Alabama

MSNBC News, July 3, 2000

This year's drought is not only having an effect on traditional crops such as cotton and corn: now it's threatening to wipe out the state's billion dollar timber and paper industry because of the rise of the Southern Pine Beetle. It's a sight most of us aren't used to seeing, a clump of healthy looking pine trees with a few dead ones in one spot. It's called a beetle spot and it's a sight that's becoming more and more common to Alabama foresters. Steve Guy, Alabama Farmers Federation said, "Southern Pine Beetle populations in the state have reached epidemic proportions. In some counties in the last month, we've had as much as a 500% increase in Southern Pine Beetle attacks." The reason that we've seen such a large increase in the Pine Beetle population is because of the dry weather. The drought actually stresses the pines and that makes them more susceptible to Southern Pine Beetle attacks.

Officials say the worst areas are in Bibb, Tuscaloosa, Jefferson, and Shelby Counties. But nearly every county has seen a dramatic increase in the number of Pine Beetle infestations. Growers say the problem is always worse during extremely dry years and there's really no way to prevent it, all they can do is treat it. Dorothy Reynolds, Forest Landowner said, "When you find beetles, you have to get rid of the trees... and if you find them where there's just a few trees, then it doesn't cost you so much, you've lost a few trees. But if it's gotten so bad that it's several acres, then you do have problems." Foresters will continue to fly over the state this summer. They say it's important to eliminate beetle spots as quickly as possible. If not, 2000 could go down as the year with the worst Pine Beetle epidemic of all time. Urban areas can also experience Pine Beetle infestations.



Troubled Times



Fire Blight

Killer Epidemic Hits Apple Trees in Michigan

Discovery Earth Alert, June 23, 2000

Apple orchards in southwestern Michigan have been left with charred leaves and shriveled fruit in an onslaught of the killer epidemic, fire blight. Al Almy, Michigan Farm Bureau's director of public policy and commodities, said, "The problem here is devastating. It could put some of the very best growers right out of business." The bacterial disease primarily affects apple and pear trees, often striking where leaves or blossoms have been weakened by severe wind or hail. It is spread from tree to tree by insects, destroying the tissue it enters and often traveling down the tree to its root system. Tree leaves are left looking as if they had been hit with a blow torch. Some strains of the blight are reported to have developed a resistance to the antibiotic sprays used by farmers. Growers reported that a hailstorm that hit the region packing heavy winds on May 18 is believed to have triggered the huge outbreak. Experts reported that approximately 300-400 growers will be affected, and more than 27,000 acres of apples infected. Alan Jones, a professor of plant pathology at Michigan State University, said, "This is one of the worst epidemics we have ever seen."



Troubled Times



Fuel Crisis

Fuel Protests Grow as Oil Prices Hit 10-Year High

CNN News, September 19, 2000

Angry protesters in Sweden, Spain and Finland have blocked harbours, rail terminals and fuel depots in the latest outbreak of public unrest over high fuel prices. And in the UK, there were reports of motorists panic buying fuel amid apparently misguided rumours that fresh action over fuel prices were being planned. In Spain, 300 protesting fishermen have been blocking the entrance to a port in the province of Huelva, in southern Spain, while a similar action also closed the eastern port of Castellon. As fishermen began to lift a 24-hour blockade of the port of Barcelona, other protests were expected to intensify in Spain, with demonstrations expected in 34 provinces, including a blockade of Madrid. Spain's national fuel distribution company CLH said access to five of its centres in the cities of Leon, Rota, Cartagena, Burgos and Girona had been blocked by demonstrators. Members of the Spain's two biggest farming associations, ASAJA and COAG, said the demonstrations called for "urgent and effective solutions" to the crisis. Pedro Barato, head of ASAJA, told local radio station Onda Cero: "This is not about taking society prisoner, but about trying to draw attention to our cause. We want to exhaust the possibilities of negotiation (with the government)." But government spokesman Pio Cabanillas said: "This is not the time for demonstrations, however legitimate they may be."

In Sweden, hauliers blocked road traffic to the ports of Stockholm and Malmo, while in Finland the protests continued after lorry drivers' rejected a government offer to cut road taxes. "It's a step in the right direction, but it's not enough. It's really peanuts," said Juha Norppa-Rahkola from the Finnish Trucking Association. In France, where the protests began three weeks ago, Prime Minister Lionel Jospin's Communist partners have called a protest march for Thursday to demand swift cuts in petrol prices. With reports on Tuesday that protests had resumed in Germany - where 300 vehicles disrupted traffic in Hamburg -- and blockades having already taken their toll on France, Belgium, Britain and The Netherlands, it had seemed the action was limited to Europe.

But fuel protests have spread to the Middle East, where convoys of lorry drivers mounted a "go-slow" protest on Tuesday along the main north-south road linking the Israeli ports of Haifa and Ashdod. Israelis are complaining after diesel fuel prices rose more than 13 percent at the weekend in response to rising prices worldwide. Since early 1999, the price of diesel has risen by nearly 100 per cent, and haulage companies say their fuel bill now amounts to 40 per cent of their cost. Prime Minister Ehud Barak said: "If there is a need, I will intervene. I truly hope the truck drivers will overcome the temptation to use the technical ability to clog up the country's arteries." But Gabi Ben-Haroush, chief of the Haulers and Drivers Council, said truckers could widen their protest on Wednesday and the go-slow was only a "warning shot." David Sadeh, deputy chief of Israel's traffic police, said: "We are making preparations for every possibility."

The latest round of protests came as prices for crude oil hit their highest levels in 10 years. In late trading on Monday, U.S. light sweet crude for October delivery rose 93 cents to \$36.85 a barrel on the New York Mercantile Exchange. London's benchmark Brent for November delivery gained 47 cents to \$34.45 a barrel. In a further development, Iraqi President Saddam Hussein has warned fellow OPEC member states to resist pressure from "superpowers" on producers to bring down soaring oil prices and said the current peak in oil prices was a natural result of increasing demand. "The amount of oil they need has started to

alarm them to an extent that they do not want to say how much. That means there is concern over the amount of oil existing in the world," he said. In Britain, where fuel supplies are gradually returning to normal after last week's blockades, the Labour government of Prime Minister Tony Blair has suffered. Gordon Brown, the UK's chancellor, said on Tuesday he would not compromise Britain's current economic stability despite protesters ultimatum of further action unless taxes are cut within two months. Interviewed in The Times newspaper, he said: "We are not going to ... put at risk the stability that we are achieving. It would be a bad principle to make long-term decisions on the basis of short-term revenues that may not be repeated."



Troubled Times



Gasoline

U.S Energy Dept warns of summer gasoline shortage

Reuters, March 9, 2000

WASHINGTON- The U.S. Energy Information Administration (EIA) repeated Thursday its warning that U.S. gasoline stocks are in a precarious position for this summer, and indicated pump prices could average \$1.80 a gallon across the country. "EIA expects to see high refinery utilization rates on top of precariously low gasoline stocks. This combination leaves little room for the unexpected," said John Cook, director of the EIA's petroleum division, in testimony at a congressional hearing. "Unplanned refinery outages, import delays or demand increases can create price surges above levels shown in the EIA forecast." The EIA, the statistical arm of the Energy Department, is currently projecting U.S. retail gasoline prices will peak at \$1.56 per gallon this summer. But price volatility could result in a 20-25 cent per gallon price surge, bringing the average price to \$1.80 "for a time," the agency said.

The EIA made similar projections earlier this week, which ignited new demands in Congress for the Clinton administration to release oil from the Strategic Petroleum Reserve. The president has repeatedly said he prefers to try energy diplomacy with OPEC members first, before selling any crude from the nation's emergency stockpile. U.S. energy prices have soared in recent months due to output curbs from the Organization of Petroleum Exporting Countries and key non-OPEC producers. The rising crude oil prices have sent both home heating oil and gasoline prices soaring to historically high levels. Cook told lawmakers that on top of the current low stock situation in the United States, refineries needed to increase crude inputs by over one million barrels per day in March and April at a time when the world market is short of crude oil. That is virtually certain to trigger more volatility in gasoline prices this spring, he said.



Troubled Times



Oil

President Orders Release of Oil Reserves

Associated Press, September 22, 2000

President Clinton directed the release of 30 million barrels of oil from the government's emergency stockpile Friday. His top energy adviser cited a looming home heating crisis. "We need to make sure that American families are warm this winter," Energy Secretary Bill Richardson said. "This is the right time to do this." Richardson announced the decision only the second time that oil from the reserve has been used in response to an energy emergency a day after Vice President Al Gore called for a drawdown from the reserve. Richardson said that home heating oil inventories were 19% lower than a year ago nationwide and 65% lower in New England, where people rely heavily on oil to heat their homes. Northeast lawmakers have clamored for use of the government oil to rein in oil prices and deal supply shortages. The pressure became more intense in recent weeks as prices peaked at nearly \$38 a barrel. Overall, oil stocks have been tight for months despite some increased worldwide production by the OPEC oil cartel. Oil was last released from the Strategic Petroleum Reserve in 1991 during the Gulf War.



Troubled Times



Natural Gas

Forget Oil - Natural Gas is Skyrocketing

USA TODAY, September 29, 2000

The American Gas Association, which represents gas utilities, has warned that gas prices to consumers could be 15% to 40% higher this winter than last. And while the AGA says there will be plenty of gas, other analysts say stockpiles are sharply lower than their five-year average, a worrisome development if this winter is more severe than forecast. Add to that the fact that 54% of U.S. households heat with natural gas, vs. only about 9% that heat with heating oil, and it would seem odd that politicians have lavished far more attention on heating oil. In an attempt to drive down heating oil prices and build supplies, the White House said last week it will release 30 million barrels of crude from the nation's Strategic Petroleum Reserve. That helped push down the price of crude from about \$37 a barrel last week to \$31.46 Wednesday.

Experts expect no similar move to lower natural gas prices. "We're not talking about gas because, frankly, politics is the art of the possible, and there's no point in pointing out a problem that's impossible to solve," says Bill O'Grady, an energy analyst at A.G. Edwards in St. Louis. Unlike oil, there's no easy way to get extra supplies of natural gas. While it's estimated that Saudi Arabia could produce another 2 million barrels of oil a day, and the U.S. can tap its 571 million-barrel oil reserve, there's virtually nothing similar for natural gas. Most gas supplies come from existing production in the USA and Canada, and with prices at extraordinary levels, producers are running just about flat-out. While it's possible to import liquefied natural gas, experts say it can't come in quantities big enough to make any difference here this winter. That leaves little wiggle room. Jim Osten, chief energy economist for Standard & Poor's DRI, says a tough winter could drive prices even higher as utilities go to the higher-priced spot market for extra supplies. "People are going to yell and scream that their gas prices are too high," says Michael Paslawskyj, vice president of economic research at CIT. "If we have a cold winter, we're going to have a real problem."



Troubled Times



Firewood

Firewood Prices Up in US

Weather.com, September 26, 2000

Using firewood to heat your home this winter may no longer be a bargain, at least not in Vermont. Soaring oil prices are driving up demand for alternative heating systems, such as woodburning stoves and fireplaces. Officials say the recent wet weather also has kept firewood dealers from cutting wood. In short, supply isn't keeping up with demand and prices are going up. Some dealers are reportedly charging as much as \$200 for a cord of wood. That's about double what it used to cost.



Troubled Times



Electricity

Drought has Far Reaching Effects, Price of Power Skyrocketing

Weather.com, July 21, 2000

The scorching, dry weather has had such a stronghold, lakes and rivers are at record lows. That means the reservoirs used to generate hydroelectric power can not supply the energy demanded. As a result, utility companies are struggling to pay for the unanticipated drought-related reliance on power plants fueled by natural gas. "Basically, because of the drought and the lakes being so much lower, we are unable to use our hydro plants as much as we'd like. So we've had to look for other sources, such as natural gas," said Laura Gillig, a spokeswoman for Georgia Power. Low water levels in Georgia have results in a 30 percent reduction in output at 16 of the state's hydroelectric plants. Turning to natural gas isn't a cheap alternative, as rates have been substantially high for the past six months. To cope with the \$98.8 million in unexpected costs, Georgia Power will be billing customers about \$2.70 more each month starting in August. Of course, the demand for power has also soared along with the temperatures. Georgia Power spokesman Tal Wright said the part of the rate increase results from those who have cranked up the air conditioning.

Paying \$2.70 more a month doesn't seem so bad to those living in California, Washington, Oregon and Montana. The price of electricity in the west has climbed to 40 times their normal levels in just a matter of weeks. The spike has been so extreme, some businesses have shut down. When the normal \$35 a megawatt for electricity jumped suddenly to \$625 a megawatt, the Deep Copper Pit closed its doors. Across the west, a growing number of companies in energy-intensive industries like aluminum, paper and mining are being forced to lay off workers. In sunny California, the summer scorcher has pushed power prices to the state limit, threatening bigger bills for consumers. Yesterday's average price per kilowatt was more than 50 percent higher than what San Diego Gas & Electric Co. currently bills customers.

California Power Emergency Escalates

Reuters, September 18, 2000

California's grid operator ordered a Stage 2 power emergency today as the state's latest electricity crisis worsened as sizzling hot weather continued to drive up demand for cooling power. It was the 17th time since May that the Independent System Operator (ISO), which manages most of the state's power grid, ordered a Stage 2. As electricity reserves fell below 5 percent of demand on the system, the ISO directed the state's investor-owned utilities to interrupt the flow of power to industrial customers who pay reduced rates in return for being turned off in emergencies. An ISO spokesman said they were seeking to reduce the load on the system by about 1,800 megawatts (MW) to avoid triggering a Stage 3 alert. Stage 3, the final step in the emergency plan, comes when reserves fall below 1.5 percent, at which point the ISO orders utilities to implement "rotating" blackouts of entire neighborhoods for 1 to 2 hours in order to protect high voltage electrical gear and prevent the collapse of the entire grid. Exacerbating the situation, several unspecified California power plants were reported shut for maintenance and repairs after running hard all summer to keep pace with the booming demand for electricity from the state's 34 million residents. At the same time, the seasonal late-summer drop in water levels on Pacific Northwest rivers, usually a major source of hydroelectricity for the California market, also cut into available supplies from out of state. Relief does not appear to be coming any time soon.



Troubled Times



Year 2000

Apocalypse Now. No, Really. Now!

New York Times Magazine, December 27, 1998

High 54 is an in-the-works survivalism community. The rural retreat is still under construction, but soon hopes to offer amenities like underground living quarters, 24-hour armed security, perimeter guards, wind- and-solar power sources and a barter economy. Potential members are required to arrive with at least a one-year supply of food and at least one rifle and one handgun per family, preferably with 1,000 rounds of ammo per weapon. Gas masks, though not required, are highly recommended.

Another one is Prayer Lake, located near Kingston, Arkansas (population 130), a town about 165 miles (264 kilometers) north of Little Rock, the state capital. Bob Rutz, 67, an engineer and entrepreneur, is another 'builder' on the Y2K survivalism scene. Rutz and his wife, Joan, are constructing Prayer Lake, a 700-acre Christian community in the hills of northwest Arkansas. Rutz hopes 100 families buy three-acre plots and get back to simple ways of living; plowing with mules, reading by kerosene lamps, drinking from springs and wells. 'I look at this as Judgement Day,' he says.

Finally, there is God's Wilderness in Finland, Minnesota (population 80), on Highway 1 and County Road 7, located 65 miles (104 kilometers) northeast of Duluth. This enclave "bills itself as a relocation site for Christians, offering land complete with cabin, well pump, stove, greenhouse, shed and outhouse." David and Johanna Hecker, who own the site say on their Web page that they knew nothing about Y2K worries until they tried to sell some land and got inquiries from people looking for a place to escape.



Troubled Times



NiCad Batteries

Today while at the ham swap meet I observed the effects of Y2K preparation. Generators showed up for sale with signs saying for Y2K. 6 months ago there were many vendors selling cheap NiCad single cell battery surplus, used and new. Now the surplus supply and the used supply has virtually disappeared and there is only new. It was this way last month in July of 1998 when I went to the swap. There was only one vendor left selling [NiCads](#) and [Nickel Metal Hydrides](#).

I can only attribute all this to Y2K or pole shift preparations. Shortages on other items could be just around the corner. There were plenty of sealed lead acid or gel-cells batteries. However, the longer lasting more desirable NiCad have not been present for at least the last several months. I suspect the disaster preparedness stores with their canned and dried food supplies have started to feel the effects of Y2K fever.

Offered by [Mike](#).



Troubled Times



Distillers

Some three weeks ago (September, 1999) I ordered a water distiller. Today the seller notified me that the prices are quickly rising now, as the end of the millennium is nearing. I checked the price of the distiller on the manufacturer's website and it has now doubled in price. I am not sure if prices will continue to rise, stay the same or drop after we enter the new millennium but I think if you buy some items now then you might save yourself a lot of money if the prices keep on rising. Of course, if the prices are just rising due to the millennium hysteria we may find them dropping soon after the millennium party. In that case you won't be saving any money by buying now.

Offered by [Michel](#).



Troubled Times



Maine

Maine Wants to Stockpile for Y2K

by Declan McCullagh, March 18, 1999

If Belinda Gerry has her way - and Y2K goes terribly wrong - the Maine government will hand each resident some 200 pounds of rice and beans next year. The state legislator proposes spending US\$50 million to create a mammoth 13-million-cubic-foot food stash that would feed every Maine resident for months. After the idea was mocked this week by Maine's governor and radio talk show hosts, the legislation's supporters went on the defensive on Thursday. "They'll like rice and beans if there's nothing else to eat," said John Michael, a former state legislator and an advisor to Gerry.

Where will Maine put that mountain of rice and beans? "You put it in the armory or a hangar. You put it wherever you want, really," Michael says. But the magnitude of such a task baffles officials. At current wholesale prices of \$20 per hundred pounds, the rice and beans would fill about 5,600 tractor-trailer trucks. If dumped on a football field, the pile would stretch to 36 stories and weigh 124,000 tons. "I do not have enough vacant armory space at this time to absorb that capacity," said General Earl Adams, who oversees the Maine National Guard. Adams says the sprawling 9,482-acre Loring Air Force base, which was closed by the Pentagon a few years ago and lies in northern Maine, is one possibility. "There are many, many buildings there," he said, in addition to a rail line.

Another problem is maintenance. "It is not a cheap endeavor to store \$50 million of rice and beans," chuckled Steve Kopperud, vice president of the American Feed Industry Association. "The state of Maine might want to look at the costs of storage." Once the stockpile is created - perhaps in those deserted hangars at the Loring Air Force base - experts say that troops must remain vigilant in guarding it from moisture, rot, and vermin. "This is ridiculous," says Steve Portela, general manager of Walton Feed. "If you buy all this food and you stick it in warehouses, you've got to pay for that. And you've got to pay for upkeep since it'll get bugs in the summer."

Then there is the question of where and how Maine would get that much rice and beans in the first place. "That type of order is probably possible. You'd have to get in line with each rice and bean company in America," said Portela, whose own 164-person company has been busier than ever fulfilling Y2K bulk food orders. Portela says he's talked to Alaskan legislators who had similar plans to create a food stash for the state. But once they learned of the hassles involved, they didn't call back. "I've quoted them, and it's never happened," he says. The bill's supporters show no signs of losing their resolve. Maine suffered a severe ice storm in 1998, and they argue that the latest plan is good insurance that the state's population of 1.3 million will stay well-fed in the event of Y2K - or any other disruption. "We are not prepared for disasters in any way," says Michael, who said his girlfriend was forced to check into an emergency shelter during the ice storm. "Every state quite frankly should have two or three months [worth of food stashed away]."

Critics say individuals, not government officials, should be the ones deciding to prepare. "The idea just sound nuts," said Ed Hudgins, director of regulatory studies at the Cato Institute. "It seems like a panic over a threat that may or may not occur. What happens if the disaster doesn't occur?" But if Y2K comes in with a fizzle, not a bang, Maine will keep the rice and beans around, just in case. The bill says the food must be "replaced with a new supply before perishable items become unsuitable for consumption or be

liquidated." And, besides, the bill does say "rice, beans, or other food storable for at least one year." While the measure still seems unlikely to pass -- it would, after all, use two-thirds of the state's fiscal year 2000 budget surplus -- it's headed for a hearing in the legislature on 8 April.

If Gerry prevails, the governor says he'll be ready. "We'd have to work with some of the big chains and supermarkets to figure out how they do it. I really don't know," says Dennis Bailey, a spokesman for governor Angus S. King, Jr. "It would be a big operation. It would be an effort to do it."



Troubled Times



Monitoring

In the November, 1999 ZetaTalk, the Z's warn against [Hoarding](#) food, saying such actions are being monitored. One way our food-buying patterns can be monitored is through these cards that supermarkets issue - they look just like credit cards. Most of us are familiar with them. Before we get a card, we fill out a form with personal information, including our address. Then every time we make a purchase, we get a little discount. My discounts range anywhere from 25 cents up to a dollar or two.

In return, with one swipe of the card, the supermarkets get an immediate, computerized tally of who is buying what. And I wouldn't be surprised if the feds thought up this idea and somehow passed it onto the large supermarket chains, just so they'd have access to these records. As the Zeta's suggest, I'd rather [Grow Food](#) than depend upon stockpiles, but if you don't want Big Brother to know what you're buying, I'd stay away from those "discount" cards.

Offered by [Mike](#).



Troubled Times



Meals Ready-to-Eat

I found these postings below on another list serve. Sounds like Uncle Sam or his dictator, the UN, is getting ready for something big. As a side note, MRE's cost about \$50 US for each case.

Offered by [Clipper](#).

Dear friends,

As some of you know, I live in a poor and working class neighborhood in Kansas city, and am involved with various activities that help poor people become less poor. As part of this, I often take in people who are homeless, or would be if not for a safe harbor. One of my housemates just got a four month temporary job unloading trucks at an underground storage center located near my neighborhood (KC has a lot of underground limestone caves that are used for storage). Anyway, this particular contract is a government contract, and the product being unloaded and stored is MRE's. that is, "meal ready to eat", which I believe is the current incarnation of the old army C rations. How many MRE's are on a truck? All day, 8 hours a day, for four months. That is a lot of meals ready to eat.

Note that I didn't hear this from somebody who heard from somebody, I heard this from somebody in my own household who is unloading the MREs, beginning at 7:30 in the AM. Three things: First, I am comforted to know that this large amount of food is being stored here locally. Second, if you have any fiends or acquaintances who do temporary labor or casual jobs, you might ask around and see if any such operations are going on in your city. Three, somebody is taking this really seriously. MRE's aren't cheap.

Today they unloaded nine trucks, and then were let go early because some additional expected trucks didn't show. It takes two guys about 1-1/2 hours to unload a truck, and each gets \$35. Don't know if this space has been used to store MRE's before, but that's on the list of questions to scope out. It does seem to be a government contract, the supervisors seem sure of that. It has been confirmed that this is new, that is, it isn't the regular cold storage location for Ft. Leonard Wood, etc. One of the other laborers said that each truck had 3500 cases, so today there were nine trucks times 3500 cases equals 31,500 cases. Anybody know how many MRE's are in a case? This would seem to be literally an enormous amount of food, as if there were six MRE's in each case, that would mean 189,000 meals were unloaded today alone, and today was a short day. He was called back to work at 3:30 in the afternoon, but the expected trucks still didn't arrive.

Note that the laborers apparently have to +spc - a certain amount of time sitting around and waiting. Since the contract is for four months, 22 work days a month, and if today's unloading was an average work day, and there are at least six MRE's per case, then we're talking a minimum of 16,632,000 MREs. Any way you look at that, it is a large amount of prepared food, being tucked securely away in a limestone cavern in KCMO. It's three meals a day for 500,000 people for 11 days, and that's the low estimate, since today was deemed a slack day by those doing the labor.

I researched MRE's just this evening to learn more about them. The full meal type MRE comes 12 per case, and the case weighs 17 pounds. So, for doing some math, double the figures you were dealing with. Using Robert's math that would come to 33,264,000 meals - using 22 work days per month, for 4 months, and the light work load experienced by Robert's friend that particular day. Assuming 12 per case, that's 2,772,000 cases at 17 pounds per case equals 47,124,000 pounds of food, or 23,562 tons. That would mean you could feed 500,000 people 3 meals per day for 22.17 days or roughly 100,000 people for just over 3 months (about 111 days actually). These are large numbers indeed and we can all look forward to learning more about this.



Troubled Times



Hot Item

MRE's are getting harder to get, I have called several companies. They can not seem to keep a supply for very long without selling out of many if not most items, even the individual food item packets. Some are taking back orders, some are not. Either the military is buying more than they are saying and/or more people are buying more. As a note, the **SurePakII** MRE's generally contain about 1/3 more calories than the military spec ones and are a better buy for the buck.

Offered by [Steve](#).

MRE's are not getting to be short in supply. In fact, the military has *increased* its purchases of these items in the new fiscal year that began in October.

Offered by [John](#).



Troubled Times



Blood

Frightening US Blood Shortage Delaying Surgery

CNN News, September 19, 2000

The blood supply in the United States has gotten so low that some hospitals are being forced to cancel elective surgeries, officials from the American Red Cross said Tuesday. "Ideally we need at least three days' blood supply," said Dr. Bernadine Healy, president of the organization. "Virtually all our regions are looking at one day or less. This is a critical shortage ... one of the most serious we have ever seen." Both the Red Cross and America's Blood Centers (ABC), which together represent virtually all U.S. blood banks, reported severe shortages. Supplies are often tight at the end of the summer because many places that typically hold blood drives, like schools and universities, have been out of session. But a crisis in September is unusual and alarming, said ABC's Melissa McMillan. "Shortages at this time of the year are uncommon," McMillan said. "It's a bit frightening, to be honest." One problem is an increase in the demand for blood products. More people are undergoing heart surgeries, chemotherapy, organ transplants and other treatments that require large amounts of blood. Just one liver transplant can use 120 units of donated blood, McMillan said.

Elective surgeries have been postponed in Los Angeles, California; Philadelphia, Pennsylvania; and Atlanta, Georgia, the Red Cross said. In one hospital, even organ transplants have been cancelled. "Imagine having to wait for the opportunity to wait for one of these organs," said Dr. Lanne Maes of the Medical University of South Carolina, "and then when one is finally available to you, to have to turn it away because we don't have the blood products. Imagine that happening once - not just once, not just twice, but three times. This is a situation that occurred at our hospital this summer." Healy said 32 of her group's 36 regions were on appeal, which means either they have less than a day's supply of blood available or they simply have inadequate supply to meet hospital demand. Those cities in urgent need include Baltimore, Maryland; Detroit, Michigan; St. Louis, Missouri; Los Angeles and Philadelphia, according to the Red Cross. ABC said there were severe shortages throughout the Northeast. The increase in demand far outpaces the increase in blood donations, Healy said, with donations increasing annually by about 3 percent and demand growing at 6 percent. The Red Cross needs 80,000 units on hand daily, but now has only about 36,000 a day, according to Healy. Healy said many people forget how many procedures require blood. "There is no substitute for blood products, for human blood," she said. When there is a shortage there is nothing else that can take its place." Healy urged people who are eligible to donate. "There are many, many people who meet all of the qualifications to be blood donors and don't give blood," she said.



Troubled Times



England

Cost of a Loaf will Rise by up to 6p after Poor Wheat Harvest

The Times, Jul 23, 2001

The cost of a loaf of bread is likely to soar because of a sharp rise in the price of wheat on world grain markets. Britain's wheat harvest is expected to be sharply lower than last year after bad weather and a reduction in planting. The cost of wheat for autumn delivery to millers is up 30 per cent over last year and bakers expect flour millers to pass the cost on, forcing the bakery industry into a confrontation with food retailers. In the past fortnight alone the world price of wheat has risen by more than a tonne. ... A spokesman for British Bakeries, which makes Hovis, issued a warning that the price of bread was likely to rise. ... A spokesman for the supermarket chain Safeway said: "When this kind of thing happens we try to keep the cost down but eventually we would have to put up the price."

Worldwide wheat production has suddenly shifted from surplus to deficit and structural changes threaten to bring an end to the cheap British sliced loaf. The reason for the sharp rise in prices is a collapse in the area planted by wheat growers in North America and Europe. World wheat consumption has exceeded production for several years and stocks have dwindled. Poor prices have pushed farmers away from wheat towards crops such as maize or soya bean. Gerald Mason, senior economist at the Home-Grown Cereals Authority, said: "American farmers are planting less and less wheat. In Britain our wheat area is the lowest since 1982."



Troubled Times



Midwest

One-fifth of State's Corn, Soybeans Rated Poor or Very Poor

Star Tribune, July 17, 2001

The portion of Minnesota's corn crop rated "poor" or "very poor" doubled during the past week's hot, dry spell. Soybeans also are deteriorating, according to a report released Monday by the Minnesota Agricultural Statistics Service. Meanwhile, nationwide prices for those crops plunged Monday. Soybeans suffered their biggest decline in four months, and corn fell 3 percent. Declines began Friday after weather forecasters revised their predictions, saying some parts of the Midwest might get rain and dropping predictions of 100-degree heat east of the Mississippi River. In Minnesota - where weather forecasts predict little immediate relief from the dry spell - 14 percent of the state's corn is rated poor and 4 percent is rated very poor. Minnesota soybeans also are under stress, with 13 percent rated poor and 5 percent very poor. A week earlier, 11 percent of soybeans were rated either poor or very poor. Several weeks have passed since the state received substantial rain, and farmers are concerned that crop development will be slowed because of the lack of moisture in topsoil, the report said. ... The crop report also indicated the lack of rain has stressed small grains, grasses and pastures. Small grains are being pushed to early maturity. "They are turning ripe before the heads have finished filling," according to the report.

US Corn Yields Threatened by Poor Ear Development

Reuters, August 31, 2001

Concern over the yield potential of the U.S. corn crop heightened this week as poor kernel development was seen in several U.S. Midwest states just weeks away from harvest, crop specialists said. Agronomists said they were seeing an unusually high number of corn ears that were not filling with 1 to 2 inches of the tip barren or bearing only scattered kernels. The poor ear development was probably caused by pollination failure during the silking stage when most of the Midwest was in the midst of a heat wave, crop analysts said. "We have no idea how many fields are affected but it's worse than we've seen in a while," University of Illinois agronomist Emerson Nafziger said. Crop specialists said sub-par corn ear fill has been observed throughout the top-producing states of Iowa, Illinois, Indiana, Minnesota and Ohio. But it was difficult to get a handle on how overall yields would be impacted because damage was so scattered, they said.

As it stands, the latest crop estimates from trade analysts put the 2001 corn crop at around the 9.0 billion bushel mark, lower than the U.S. Department of Agriculture August projection of 9.27 billion bushels. The next USDA crop progress report will be released Sept. 12, based on crop conditions as of Aug. 31. "It's fair to say the problem is more widespread than typical," Purdue University agronomist Bob Nielsen said. Dry fields that experienced the worse damage in Illinois and Indiana were also victims of corn rootworm beetles and Japanese beetles that feed off corn silks during pollination. Some ears of corn have 15 to 20 harvestable kernels per row when a normally developed ear has about 30 to 35 kernels, Nielsen said. For every absent ring of kernels around the cob, there is a yield loss of about five bushels per acre.

Poorly pollinated corn fields in Ohio and Michigan were the direct result of dry conditions in July, sources said. "We had poor pollination in the northwest and north-central part of the state," said Pat Lipps, Ohio State University crop specialist. "Pollination occurred during the third week in July. Those areas had not had rain since the first week in June." Michigan fields in the southern third of the state were parched through most of July and August, Michigan State University agronomist Dale Harpstead said. "Statewide

production could be off 30 percent," Harpstead said. Iowa State University agronomist Dale Farnham said the ear-fill problem makes the crop's potential unclear. "There's such variability in the crop it's hard to say how the overall yield will be impacted," he said.



Troubled Times



El Salvador

Food Crisis in El Salvador

[BBC](#), August 18, 2001

The UN World Food Programme has begun distributing food in El Salvador in response to a growing food crisis caused by the worst drought to hit Central America in recent years. An estimated 1.4 million poor farmers in El Salvador, Honduras, Nicaragua and Guatemala have lost thousands of hectares of basic crops due to nearly three months of drought that began at the height of the planting season. Of those affected, around three quarters of a million people are reported to be in urgent need of food supplies. The WFP has extended its distribution operations into four provinces of eastern El Salvador, where the government declared a state of emergency earlier this month. Around 2,000 tonnes of corn, beans and oil are being handed out to around 20,000 peasant families who are facing a critical situation, having lost their entire year's crops. The UN organisation hopes to deliver to around 1,000 families a day. But officials have admitted that supplies will not last more than a month. With nothing to fall back on until the next harvest at the end of the year, many families are now beginning to sell off their few possessions in order to buy something to eat.

There is concern that the food crisis here could also force farmers to abandon the land and head for the already overcrowded cities. It is the same story across Central America, which is still reeling from a succession of natural disasters, starting with droughts from El Nino in 1997 and floods from Hurricane Mitch a year later. Aid workers have said that food supplies to the needy here in El Salvador have been limited because stocks are already depleted after the massive earthquakes that hit the country in January and February of this year. Some weather forecasters are predicting that sporadic storms may hit the region in the next few days from Tropical Storm Chantal, which is heading for the area. But experts say that any rain now will have come too late to save the first major crop of the year for Central America's rural poor.



Troubled Times



Africa

SADC cereal shortage looms

Africast, August 23, 2001

The Southern African Development Community (SADC) on Wednesday warned of cereal shortages in nine of its 14 member states. "Cereal deficits are expected in Botswana, Lesotho, Malawi, Mozambique, Namibia, Swaziland, Tanzania, Zambia and Zimbabwe," executive secretary Prega Ramsamy said on Wednesday at a media briefing in Botswana. Zambia had launched an international appeal for assistance with maize production which was down 39 percent. Ramsamy said the region had experienced unfavourable weather in most countries. There would be an all-cereals deficit of 3.87-million tons for the 2001/2002 marketing year against a small surplus of 583 000 tons in the 2000/2001 marketing year. "Total domestic cereal availability is estimated at 25.04 million tons to meet requirements estimated at 28.91 million tons," he said. Of the SADC countries, only South Africa would have an all-cereal surplus. Maize would also be in surplus in Mozambique. "An urgent appeal for food assistance for two million people has been launched in Zambia, in the light of a 39 percent fall in maize production," Ramsamy said. "Maize shortfalls are also projected for Lesotho, Swaziland and Zimbabwe."

The SADC members are: Angola, Botswana, the Democratic Republic of the Congo, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, Tanzania, Zambia, Zimbabwe. - Sapa



Troubled Times



Central America

Pan-American Drought

Earthweek, August 31, 2001

A prolonged drought during Central America's usual rainy period has put 1.6 million residents in peril, according to a report by the United Nations World Food Program. The three-month drought has affected Guatemala, El Salvador, Nicaragua and Honduras, and is creating the most dire conditions in the region since the devastation left in the wake of hurricane Mitch in 1998. An estimated 80 percent of the region's grain crop has been lost to the parched conditions. Residents from Nicaragua to Guatemala have been forced to scavenge for mangoes and bananas due to the loss of their bean and corn crops.



Troubled Times



United Nations

Water Shortages & Crop Failures Causing Instability

United Nations, August 28, 2001

Two weeks ago, a United Nations-sponsored World Water Forum in Stockholm suggested that a shortage of drinking water could affect one-third of the world's population by 2025 and spark violent conflicts between those with water and those without. But events since that time suggest that the impact of water on international politics is likely to be sooner and potentially more destabilizing than even the experts at the UN conference predicted. And that possibility is leading ever more countries to take water into consideration as they elaborate their national security policies. At present, the UN conference said, some 450 million people in 29 countries from sub-Saharan Africa through Asia are suffering from severe water problems. Brought on by an unusual drought over the past several years, the problems of these countries in many cases have been exacerbated by crop failures and burgeoning population pressures beyond the capacity of their governments to cope.



Troubled Times



Starvation Denial

It's interesting to note the lack of articles on food shortages in the light of all the climatic changes. I would have expected to see some.

Offered by [Kevin](#).



Troubled Times



Starvation Denial

On the Jan 12, 2000 *Sightings* radio show, ZetaTalk predicted in the [Predictions for 2000](#) that US rescue of starvation overseas would be quietly stopped, and again in the [Prediction for 2001](#) that increasing starvation overseas would increasingly be ignored. By January, 2002 this was apparent.

[Silent Famine](#)

World Press Review (VOL. 49, No. 1), January 2002

Worsening food shortages after a succession of poor harvests caused by severe drought conditions over the past three years have ushered rural populations across a broad swath of Central America to the brink of starvation, regional commentators warn. "In what officials call the worst disaster since Hurricane Mitch in 1998, a summer drought destroyed crops across Central America and left thousands of farmers awash in debt and famine," Megan Feldman reported in the Lima-based *Latinamerica Press* (Nov. 6). "The rains came too late, and farmers can find little work outside their fields since low coffee prices shut down scores of plantations."

Blanche Petrich, correspondent for Mexico City's *La Jornada* (Oct. 3), observed in a series of reports from Guatemala that "what is devastating Central America technically is not a 'famine,' the term that the experts use for the complete absence of foods in a region....From eastern Guatemala, across Honduras and El Salvador and all the way to the Pacific coast of Nicaragua, the starving wander through well-stocked markets and beg alms along the roadside," Petrich reported. About one-quarter of all municipalities in the region currently suffer high rates of "chronic malnutrition," she writes, 60 percent in Guatemala alone.

The United Nations' World Food Program issued an urgent appeal in August for mobilization of emergency grain shipments to Central America to assist an estimated 700,000 people at risk of imminent starvation this winter, but Petrich wrote (Oct. 6) that shipments prior to Sept. 11 had "covered less than one-third of the grain reserves considered as the 'minimum required' to meet the food emergency in Central America." The abrupt refocusing of international assistance programs to address looming food shortages in Afghanistan following the Sept. 11 terrorist attacks are bound to have "a negative impact on the flow of aid to Central America" in the near term, relief specialist Roque Castro told Petrich. But Castro expressed confidence "that if we bring evidence of this crisis to public attention, the emergency that exists here will return to the focus of international attention."

Emergency food assistance may come too late for thousands of campesino households in the Guatemalan interior who lost most or all of their spring plantings of corn, a critical staple in the diet of the rural population. "In most towns it will have a domino effect," Petrich wrote in *La Jornada* (Oct. 3), "because the collapse in campesino savings also left nothing for seed to plant beans or for the winter (corn) cycle. In other words, this is not a short-term food crisis; rather, as virtually all the experts emphasize..., it is only the beginning."

Following torrential rains and widespread flooding in late October that wrought further devastation, *La Prensa* of San Pedro Sula (Nov. 1) cautioned Hondurans that they cannot depend on an outpouring of international support similar to the relief effort mobilized in the wake of Hurricane Mitch three years ago. "Rather than feeling weak and discouraged... and complaining as if to hide our negligence and incapacity, the situation is highly favorable to realize... our human resources that have proved on other occasions to be

equal to our needs," *La Prensa* affirmed.

Prensa Libre of Guatemala City (Oct. 31) observed in an editorial that a public meeting in late October of Guatemalan government ministers with international agency representatives represented a useful first step toward addressing "the pauperization that affects a steadily growing percentage of residents." "What is most important," the paper said, "is to have recognized not only the existence of levels of poverty comparable to those of Bangladesh and Mozambique, but the fact that it is impossible for the country and the government to attack the problem without help."



Troubled Times



South African

Consumers Urged to Buy Now, Stock Up, [Prices Set to Rocket](#)

South African businesses warned consumers yesterday to expect rocketing food prices, higher interest rates and sharp price increases for imported goods because of the plummeting rand. The currency's seemingly unstoppable free-fall since mid-October is already starting to push up prices on a host of basic essentials, and manufacturers and shop owners say there will be more pain to come once the festive season is over. ... Food prices, particularly the staple maize crop, are among the hardest hit. "It's affecting (grain) prices dramatically because of the depreciation of the rand and because of a shortage in the country," said Bully Botma, chairperson of producer group Grain South Africa.



Troubled Times



Malaysia

The Star, Feb 27, 2002

Vegetable Produce Affected by Dry Spell

Consumers may be eating fewer vegetables if the dry spell continues for several more months. Farmers say water pipes and wells are drying up and they are already feeling the "heat" in their frantic attempts to find water sources within their land. This is the second setback faced by vegetable farmers in recent months due to weather conditions; the first being the monsoon season when flash floods destroyed crops worth millions of ringgit. If the current dry spell continues, it will cause their products to wilt and die before they are harvested, said the Malaysian Vegetable Farmers Association. The farmers, whose farms are located in remote areas and far from water sources like rivers and streams, have, began digging up wells to source for water but not many are successful. Association president Liew Chow said had been instances that after hours of digging, water is still not coming out from the wells and whatever water reserve some farms have are depleting fast with no source to replenish.

Liew said the situation would result in a shortage of supply and, unlike during the rainy season where supply could be drawn from less affected areas, there are no alternatives as the dry spell has affected the whole country. "We are not saying that there will be no vegetables at all...there will be but the supply is small," he said. He said the water crisis was not only experienced by farmers in Cameron Highlands, but also those in lowlands in Johor and Selangor.



Troubled Times



Iowa

Recent Warmth a Problem for Gardeners in Iowa

Feb 1, 2002, *Associated Press*

With above normal temperatures for much of this winter and drier than normal conditions, it has been one of the harshest winters in memory - as far as trees and plants are concerned. Last week's record warmth has fooled some plants into thinking it's spring with a few flowers peeking through the ground. "I've been doing this for what seems like a hundred years, and I've never seen a winter like this," said Dean Platt, owner of Platt's Nursery in Waterloo. "It's the driest in my history." The unusually warm winter could spell trouble as many plants or fruit trees begin to bud too early. In some cases, such as apple trees, an entire crop could be lost. ... The colder weather is also needed to keep trees and plants from budding too soon. Apple growers could suffer the biggest losses if the mild winter continues. If trees begin to bud and freezing temperatures return, the crop could be lost, Jauron said.



Troubled Times



Ireland

Key points from the [Irish Independent](#):

- Irish winter temperatures this year were the warmest in a century.
- Sunshine levels have been exceptionally high, and rainfall exceptionally low.
- Greenland has also been affected by late snows and mild temperatures.
- Root vegetables will be of a poorer quality this spring.



Troubled Times



North America

Current Production and Crop Prospects

In the United States, the final official estimate of the 2001 wheat crop is 53.3 million tonnes, some 12 percent down from 2000 and the smallest crop since 1988. The decrease was mostly caused by a reduction in plantings, although average yields also fell somewhat compared to the previous year. According to the USDA Seedings report of 11 January, the winter wheat area for the 2002 harvest has declined again marginally from last year's already low level, to 16.6 million hectares, the smallest area since 1971. Although, the Hard Red Winter wheat area (which accounts for about 70 percent of the total) is estimated to be about 1 percent up from the previous year, this increase is more than offset by reduced plantings of Soft Red Winter and White Winter wheat. Establishment of the crops in many key producing areas was somewhat patchy due to dry conditions at planting time and persisting dryness in these areas could lead to poor development when dormancy breaks in the coming weeks. In Canada, latest estimates put the 2001 wheat output at about 21.3 million tonnes, more than 20 percent down from the previous year as a result of severe drought. Precipitation has remained well below normal in many areas throughout the winter so far and prospects for the size of the 2002 wheat crop (mostly planted in May) remain very uncertain pending the weather in the coming months.

The United States 2001 coarse grains crop is now estimated at 262 million tonnes, almost 5 percent down from the previous year's crop and just below the average of the past five years. Of the total, maize is estimated to account for about 241 million tonnes, compared to 253 million tonnes in 2000. In Canada, output of coarse grains in 2001 was also affected by the drought, falling sharply to 23 million tonnes, about 6 percent down from the previous year's already reduced crop.

A bumper rice crop was harvested in the United States in 2001. USDA's latest estimate has been raised to a new record. Yields, which were boosted by good weather conditions and expanded use of improved varieties, were up by 1.4 percent, while the increase in the area was 8 percent. All of the production gain was in the form of long grain rice, while low prices at planting time resulted in falling production of medium and short grain rice.



Troubled Times



World at Large

Water Shortages Contributing to Shortfall

Excerpt from *World-Policy.ORG* Article, by Lester R. Brown

As Americans prepare to celebrate Thanksgiving and another bountiful harvest, there are signs that the world harvest is falling short as water shortages translate into food shortages. In its November world crop survey, the U.S. Department of Agriculture reports that this year's estimated world grain harvest of 1,841 million tons will fall 54 million tons short of projected consumption of 1,895 million tons. This comes on the heels of a poor crop last year, when world output fell short of use by 34 million tons.



Troubled Times



Cocoa

Cocoa Prices Sweet News for Farmers

[CNN](#), Mar 29, 2002

"During the last couple of seasons, climatic conditions have created a deficit of production over consumption, and we've lost something like a third of the world's stock in the last two seasons, or we will do by the end of this season," says Jonathan Parkman of Credit Lyonnais Rouse. ... The bulk of the beans used for mass-produced chocolate come from the Ivory Coast, where political changes years ago set the producers competing in a free market. "Initially when the system in the Ivory Coast was liberalized, the farmers suffered considerably, their income dropped by at least 50 percent while the cocoa prices crashed at that time," says Parkman. "Now we're seeing a reaction to a shortage."



Troubled Times



Mozambique

Problems Worsen in Mozambique

UN Office for the Coordination of Humanitarian Affairs 2002

[Johannesburg](#), Mar 25, 2002

Mozambique, struggling to cope with the devastating effects of flooding during the 2000 and 2001 rainy seasons, now faces a worsening food security crisis because of a dry spell. The World Food Program (WFP) and government's National Disaster Management Institute (INGC) told IRIN food security in the southern, central and western provinces of Gaza, Inhambane and Tete had worsened. ... Crop assessment missions carried out in May and September 2001 in all provinces, except Cabo Delgado, showed more than one-third of the country's total number of districts produced less food last year than normal. ... Giorgis said: "Last year's floods impacted on food production and this has been compounded by the shortage of rain this year. The rainy season ends officially at the end of this month and there has been no rain in the southern and central parts of the country. There has been some rain in northern parts. "



Troubled Times



US

The New Dust Bowl

Time Magazine, Sep 2, 2002

Cursed by a drought worse than the Okies saw at the height of the Great Depression, the West's farmers are selling their cattle and leaving the plots to blow toward the Rockies. As harvest season arrives, grocery stores will raise prices ...So far this year, according to US Department of Agriculture, wheat production is down 14% from last year, and corn, soybean, and cotton production have also experienced big drops.

Dave Friederickson, president of the National Farmers Union, says that the low harvest yield will almost certainly mean higher grocery-store prices ...



Troubled Times



Australia

Government Officials Predict Major Decline in Nation's Grain Harvest Due to Drought

Associated Press, Sep 10, 2002

Government officials on Tuesday slashed Australia's annual forecast for grain production by 40 percent, blaming a drought gripping the nation's east coast. The Australian Bureau of Agricultural and Resource Economics said the harvest was likely to fall 15 million metric tons to 22.2 million metric tons in 2002. A metric ton is about 2,204.62 pounds. Among the worst-affected grain crops is wheat, one of the country's major sources of export income. The bureau said this year Australian farmers will likely produce just 13.5 million metric tons down from earlier predictions of 20.5 million metric tons. Bureau executive director Brian Fisher said the forecast downgrade was the result of a drought that has gripped much of South Australia, Queensland, Victoria and New South Wales states. "The spreading drought is having a devastating effect on this year's Australian grain crop," Fisher said in a statement. "Rainfall in all major grain-producing regions has been well below the average this season for the period from April to August. With subsoil moisture reserves generally low, many crops will struggle to achieve worthwhile yields," he said. Barley production is expected to fall to 4.6 million metric tons from 7.5 million metric tons, and canola production is expected to be 1 million metric tons, down 600,000 metric tons, the forecaster said.



Troubled Times



Canada

Drought Seen Slashing Canada's Crop Output

Reuters, Aug 23, 2002

One of the worst droughts in memory will slash production of virtually all Canadian crops and total wheat production will plunge by 25 percent to lows not seen for almost 30 years, Statistics Canada said on Friday. "The 2002 crop year will be remembered as one of the worst growing seasons for western Canada. Many producers believe that conditions were the driest ever experienced in the West," Statscan said in its daily bulletin. Statscan estimated total wheat production would fall 25 percent ... Statscan said, "Spring wheat production would be down 36 percent ... Barley would be down 27 percent ... This level of Canadian wheat production is the second successive disappointing crop and having back-to-back major crop shortfalls has created an unprecedented wheat supply crisis in Canada. To further compound the world supply problems, the Australian Wheat Board has significantly cut its wheat production forecast to only 15.5 M tonnes, after stating in April that this year's crop was likely to exceed last season's 24.5 M tonnes. The US wheat crop is also the smallest since 1973 at only 47.5 M tonnes.

There remain many unknowns in the wheat market, but the world could have a reduction of over 65 Million tonnes of grain and oilseed stocks in 2002/03 with wheat declining to a year end stock of just 70 days of usage. This is a very thin cushion, and prices have continued to rise to well over the 4 year highs set last month. The chart below shows the Minneapolis spot market - clearly showing the rise of 49% or \$53 per tonne (over £34/tonne) since the end of June.



Troubled Times



UK and Europe

Prospects for Harvest 2002 - September

Allied Mills, Aug 23, 2002

The prospects of a large UK wheat crop with excellent quality appear to have been severely dented, with harvesting continually delayed by rain showers. Accumulated UK rainfall for the month of July finished at 77mm, 30mm higher than last year, and almost twice the five year average. ... This poor weather has led to widespread reports of sprouting in all areas, but especially concerning are those reports from the Eastern Counties - the breadbasket of the UK, growing over half of the national crop. Quality of breadwheat has deteriorated ... There are also reports of export cargoes of UK Group 1 breadwheat trading to continental and especially German millers, to replace their flood damaged domestic wheat. ... The three weeks of heavy rain across mainland Europe not only produced the record floods we saw on television, but came just as the wheat crop was ready to harvest. Germany has agreed an aid package with the EU Commission for the flood hit farmers, and has lobbied to reduce Intervention support quality standards to help farmers hit by rain damaged crops. The production of wheat in Germany, according to their Agriculture Ministry is down by 8.5% at 20.6 m tonnes, and some trade estimates talk of over half the crop being downgraded to feed quality. Germany is a traditional source of high quality breadmaking wheat not just for the UK, but also to many European and world customers, so this represents a further setback for world quality wheat supplies. As mentioned in the last report, the real focus has however turned to the world wheat scene, where market prices keep rising



Troubled Times



2002 UN Report

World Can't Cope with Famine Says UN

New Zealand [Herald](#), Oct 28, 2002

Global warming is helping to cause an unprecedented series of famines that is pushing the world beyond its ability to cope, says the United Nations. The warning - the starkest yet issued by the UN on how climate change is affecting world food supplies - comes as a second massive famine looms in Africa. The new head of the UN World Food Programme, James Morris, is to announce in London that drought in Ethiopia and the Horn of Africa is precipitating a food shortage as great as the one now afflicting southern Africa. Meanwhile, the UN's Food and Agriculture Organisation is predicting that this year's total world harvest will fall for the fifth year in succession, while the global population continues to grow. Food stocks are falling well below critical levels and prices are soaring. The escalating crises will add urgency to a new round of international negotiations on combating global warming under way in New Delhi. ...

A spokesman said that "global warming is a major contributor" to the changing weather. He added: "There has been a sharp increase in weather-related natural disasters. This is a very, very serious situation." Scientists have long predicted that droughts and floods will increase as global warming takes hold. According to the World Disasters Report, published by the Red Cross, 2000 and 2001 were the two worst years on record for disasters. Since then, more than 360 natural disasters have occurred in the first nine months of this year. Drought has also struck from Australia to Mongolia, Vietnam to Sri Lanka, West Africa to Thailand. Floods affected more than 100 million people in China and more than 40 million in India, and brought the worst inundations yet to Germany, Austria and the Czech Republic. The WFP warns the crises are becoming so frequent that the world community is "running out of the ability to cope". Although emergency food aid almost tripled over the 1990s, it was not enough to meet growing needs. This year the WFP had to suspend help to three million women, children and elderly people in North Korea because it had run out of resources.



Troubled Times



Year 2000

Personally, I think the Y2K issue is greatly exaggerated. If you have a digital micro, you may have to set an incorrect date to make it work. If you have an old PC which you cannot upgrade or you use old software, you may get incorrect dates and your spreadsheet may not work. All of this is easily dealt with through upgrades or new purchases, and the only effect if no upgrade is done is that the one person owning the affected equipment will no longer have an operating PC, micro or whatever.

All chips used in airplanes, lifts etc. will be changed as part of normal maintenance within the magic date. If not, well, then you may get a day or two off after New Years Eve in 1999. If an airplane is affected, it may not be able to take off on January 1, 2000. No big deal, no society crisis. Nor any "smoke in the cockpit" downing. In fact, our current economy "needs" cases like this to keep the industry running.

All major IT users (Fortune 500 organizations etc.) have their Y2K projects well under way. Problems may arise for medium to smaller businesses having bought packaged systems, but without their own systems personnel. If they are already on the edge, they may go out of business. If they are financially healthy, they will already be upgrading or planning their upgrades. In some countries, government bodies may be in trouble. This may however render positive effects to the public. As one example, IRS spokesmen have in private conversations said that they will not be able to get their systems Y2K ready, and that a flat tax will be introduced as of Year 2000.

One negative effect could be that with all the resources being poured into the Y2K projects currently, the IT industry, consultants etc. could get into a smaller recession sometime between 2000 and 2003, when all Y2K projects, cleanup after failed Y2K efforts as well as projects delayed due to the Y2K activities are finalized. Then again, we may have other more pressing issues at hand by that time.

Offered by [Jan](#)



Troubled Times



Proportion

Better to Worry About the Y2K Nuts than Y2K

Reuters, March 11, 1999

Two of Washington's top trouble-shooters for the year 2000 computer problem said Wednesday they are now more concerned about the risk of a public panic than a collapse of the national infrastructure. John Koskinen, chair of President Clinton's Council on Year 2000 Conversion, and Federal Reserve Board Governor Edward Kelley said they were confident the country's power, transportation, communications, and health care systems were not in danger. Both experts said one of their top priorities is averting a "public overreaction" that could prompt a massive run on banks, gas stations, and mutual funds ahead of the new year. "Actions that individually look logical - like filling up your gas tank on December 31, taking US\$1,000 out of the bank, buying twice as many prescription drugs as you usually do, taking 20-30 percent of your IRA money out of the market. A couple hundred million Americans all do that at one time you've got yourself a major problem," Koskinen said.

The chief "real risks" in their assessment are that foreign countries, local US authorities, and small businesses are ill-prepared for computer failures, they told a panel discussion, sponsored by the Media Studies Center in New York. "Our risk for the country is less likely to be a national infrastructure failure and it's more likely to be a failure either of will or information or reporting," Koskinen said. Kelley said the Federal Reserve - the highest US financial institution - doesn't foresee any reason for a surge in demand in cash at year's end. But it plans to have \$50 billion of cash ready to meet consumer withdrawals spurred by fears of bank computer failures. "Probably the most important single element ... is going to be how the public reacts to it," the Fed policymaker said. The public could become "so overly worried about what might happen that there could be created the very type of problem we are working so hard to prevent," he cautioned.

Koskinen said he does not foresee a widespread collapse of the country's power grids, financial system, telecommunications, or transportation systems. "It's important to understand that planes aren't going to fall from the sky. The elevators aren't going to the basement and the pacemakers aren't going to stop," he said.



Troubled Times



Marines

The Government's Secret Y2K Plans

by Jack Anderson and Jan Moller, *Deseret News*, May 3, 1999

The story our government doesn't want you to know was broken not by a major TV network or national newspaper. It was encapsulated instead by a front-page picture, which ran in February on the front page of a small Virginia paper called "The Potomac News." Captioned "Y2K riot training," the photo depicted a Marine private trying to "force herself backward through a line of Marines during a civil unrest exercise at Quantico Marine Corps base" outside Washington. In this case, unfortunately, a picture was not worth a thousand words. In fact, a Quantico spokesman denied the story and says the Marines were not, in fact, preparing for civil unrest. But the reporter (and photographer), Dave Ellis, stands by his story. "They told me what the exercise was about and then asked me not to report it," he told us. "(The Marines) were worried that people would think they were painting helicopters black and training for a huge government crackdown at the millennium."

Such is the great dilemma behind preparation for the phenomenon know as Y2K: No one knows exactly what will happen to our technologically dependent lives when computer dates roll forward from "99" to "00" at midnight on Dec. 31. Yet planning for the worst-case scenario carries the danger of inciting panic and becoming a self-fulfilling prophesy. This might explain why most military folks we talked to claimed no knowledge of any Y2K-specific preparations. But we have learned that the U.S. military is quietly planning a sophisticated social-response network in case civil unrest should erupt. It was confirmed to us recently by Sen. Robert Bennet, R-Utah, who chairs a special Y2K Technology Problem Committee. "This problem is everywhere and nowhere all at once," Bennett told us. "We can only take a snapshot of portions of infrastructure and attempt to provide the most accurate information we can. But there is simply not sufficient time to understand where all the problems are going to surface, so we must be practical and prepare for the worst."

In the worst-case scenario, public alarm spreads rapidly as vital services such as health care, public safety and utilities are temporarily disrupted by computer breakdowns. The stress, of course, is on "temporary." Most experts suggest that people prepare for Y2K like they might prepare for a winter storm. Thomas Barnett, director of the Y2K security project, says his team has been coaching every branch of the military - indeed even the Marines - since last fall, planning drills and simulating Y2K breakdowns. Just this week, Barnett plans to take some military and FBI people to the World Trade Center to develop possible responses to a stock market crash. Later this month, the Federal Emergency Management Agency will also hold a national "table top" simulated scenario drill - similar to the "war games" played out in the military - which will pull together all emergency and military resources. FEMA, along with the National Guard, is responsible for coordinating state and local responses to Y2K problems while the State Department will cover international social problems.

But it is a small agency within the FBI, quietly created by Janet Reno recently, that will be the federal authority for any national Y2K repercussions. The agency, The National Domestic Preparedness Office, is now up and running - and preparing - despite the fact they don't officially exist; Congress has yet to approve its budget.



Troubled Times



Dire Warnings

I've read some sites muttering dire warnings about Y2K. The information in these sites is close to worthless. In the referred page, I saw not one item of vital information, only "trust me - we have a problem" hogwash.

- True, there are a lot of mismanaged companies out there.
- True, big Consulting firms may send out green-beans with only a few weeks of experience.
- True, people may/will panic due to Y2K problems. But these people would panic over anything.
- True, some companies will go bankrupt. With or without the Y2K challenges. (A few more due to the Y2K challenges, but so what.)

The Y2K problem is a reflection of:

1. nearsighted of computer programmers
2. earlier days smaller computers, where each byte of main storage and auxiliary storage was a precious resource
3. unplanned longevity of functioning systems, due partly to
4. primitive systems design and programming techniques, leading to
5. failure rates greater than 70% of all large projects

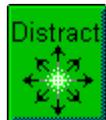
The first mainframes (which means the large, commercial beasts) had 124 KB (1 KB is roughly 1 thousand characters) of main memory, and 3 removable disks which each held 32 MB (1 MB is roughly 1 million characters) of data. It filled a room, needed water cooling etc. As a comparison, my main PC has 144 MB main memory and a 5500 MB (5.5 GB) disk.

Within banking and finance, the Y2K bug is partially fixed already. Pension funds, life insurance etc. all have to calculate risks and premiums for a number of years into the future. When you apply for a loan for your pole shift survival center, the down payment plan will have to deal with dates and payments after Y2K. If the Y2K challenge turns into any kind of serious problems, it will be either because somebody will be using the Y2K situation for their own purposes (Government bodies, organized crime etc.), or due to problems created by unnecessary panicking (emptying stores etc.) I think it is vital to stay focused on the real challenges ahead. Forget Y2K.

Offered by [Jan](#)



Troubled Times



The Fix

The Y2K issue is mainly concerning core systems, those that deal with your bank accounts, insurance policies, pension funds, IRS records etc. For simple systems, you just change the date field from 6 to 8 characters, recompile and test. For complex systems, you may not have the option to change the date field as it may affect millions and millions of database records, requiring large database restructuring. When you have fixed your database, you must fix all interfaces to other systems and perform integration tests with those systems.

The most common method used is therefore to interpret the dates, called windowing. Each line of code that earlier referred directly to a date field will now call a subroutine which interprets that date, using a sliding scale. If the breakpoint is set at 50, a two-digit year 49 is interpreted as 2049 and the two-digit year 50 is interpreted as 1950. For some systems, this is adequate, for some it isn't. The final solution using 4-digit years will be an on-going effort for a long time after January 1, 2000.

Again, because somebody is warning you of a potential threat, do not automatically assume they have your best interests in mind. FUD (Fear, Uncertainty and Doubt) are the best mechanisms to create followers. Think for yourself, and you will identify who is lying!

Offered by [Jan](#)



Troubled Times



Known

Y2K Hoax

by Rapjim@aol.com, January 21, 1999

Few stories have captured the attention of the folks, like the year 2000, millennium bug. It is so well known I can skip the background paragraph that would normally accompany a piece such as this. Not since Joe McCarthy have we had such a groundless excuse for hysteria. According to people on TV and radio talk shows, on January 1, 2000, planes will start falling from the sky as autopilots fail to adjust properly, food will rot in the fields as truck drivers who depend on computer generated reports of where to drive, instead get nothing, Social Security payouts will cease, banks will lose all track of what they owe you in deposits, while charging you an extra hundred years interest on what your loans. The stock market will reset to 1900 levels, and on and on. One such prognosticator, in the name of Bob Brinker, on the radio, tells you that the year 2000 is not a normal leap year and that will cause problems. For the record Bob, the year 2000 is a leap year in the normal sense of leap years being evenly divisible by 4. Century years evenly divisible by 400 *are* leap years. Other century years are not, but we don't have to worry about that until 2100, by which time everybody reading this will be *dead*, so who cares. There is also the notion that certain brands of computer, simply cannot handle the year 2000. This is also bunk as I will explain. Why? Well, first a few facts.

Fact 1. Even PC's do not use the commonly know DDMMYY format for date storage.

Really? What do PC's use? PC's use 2 bytes, or 16 bits to store the number of days since January 1, 1980. Now these two bytes, can have any value from 0 to 65,535 i.e. 2 to the 16th power. Thus, the total number of values storable in 2 bytes is 65,536. If we decide that each value represents one year, we can then store with those 2 bytes every day for a number of years that is 65,636 divided by 365.25. In this case 179. So with two measly bytes, we can now represent all the DDMMYY's for a period of 179 years! Compare that with what you are told, namely that 6 bytes are not enough for more than 100 years. If those 6 bytes used for DDMMYY were used according to the formula I just described, you would be able to store 2 to the 48th power, days. I don't know exactly how big that number is, but I can tell you it dwarfs even the massive federal debt. It would easily store all the days since the beginning of time as we know it. So isn't that something, PC's since their inception have used 2 bytes, and can handle more years than other applications using 6 bytes. For computer guys like myself this is a really big deal, for the rest of you I realize it may be ho-hum. Sorry about that.

Myth: IBM mainframes are incapable of this.

Fact 2: Wrong, IBM mainframes have an 8 byte, 64 bit, system clock.

This clock tracks every fractional nanosecond since January 1, 1900. This clock will be useful longer than anyone reading this will be alive. The notion that computers out there can't handle the year 2000 for technical hardware/system reasons is garbage. Not that it hasn't made lots of latter day Pied Pipers millionaires, but it is still wrong. So now you know. It is only application level software, written by programmers of varying degrees of talent, that have given us this problem to the extent that it exists. By the way, if you use 4 bytes instead of 2 bytes as above, you can track the current day value for over 12 million years. I include a longer explanation at the bottom of this page.

Well if two bytes can handle 179 years, how did we ever get stuck with 6 bytes that could only store 100 years?

One word. Laziness. Ok, that's a little strong, so how about I say they, the programmers, were following the KISS principle. Keep it simple, stupid. Ya see, in order to follow the PC example and use 2 bytes to represent 179 years, you also need a program to convert the 2 bytes into DDMMYY. That takes work, is best written in Assembler for performance reasons, and Assembler is a foreign language to most programmers. It also adds complexity. Sure you get a system you don't have to worry about for 79 years longer, AND drastic savings on CPU and disk costs, but hey, why bother? Most programmers know they will leave for another job, get downsized out, get fired or disabled and so on, so who cares. Anyway, they rationalize, it's a *management* issue.

So what of management? From my experience, in the corporate and public sectors, many low level managers tend to be hacks who could not program, but were otherwise loyal, so they were promoted out of a position where they might do damage, as in foul the whole system up to the point it would not work regardless of what year it was. Senior level managers in the private sector, tend to be good at getting senior level jobs, but illiterate when it comes to data processing design. In the public sector, data processing managers tend to be people who are good at delivering votes to political decision makers. They are skilled indeed, but again, not with anything DP related.

Okay, it's a mess, but planes are still going to crash on January 1, 2000 if something isn't done, right? I have never worked on the software that operates autopilots in airplanes. My guess is that they will work properly regardless of what date is calculated. To assume that the human pilot would not recognize what the error is, given the hype, and then quickly reprogram his box to a date say five years ago, is to attribute to that pilot a level of stupidity, that I hope is not justified. But I could be wrong. Airlines I suppose, to play it safe, could simply check each plane during its regular test flights, by keying in a year 2000 day and seeing if the machine still works as advertised. There is no reason to wait until the year 2000 to do this. The computer has no connection to the physical world except what we program it for.

But wait, you have a better idea that is being ignored, pray tell what is being done with the billions currently being spent on this hoax as you call it? I accept that rewriting programs to store dates in numerical rather than display format will not be attempted by most organizations this late in the game. Unfortunately, most of the money is still being squandered. I have worked as a contractor at four different sites, and in each case, the clients are forming user groups, study groups, they are having meetings, they are drawing up contingency plans, test plans, implementation schedules etc. Every thing conceivable *except* just fixing the problem. Most can't fix the problem because they don't know how the problem effects their installation. They are sure a problem must exist because they have read about it in the newspapers, but they are blind otherwise.

All right smarty pants, what would you do?

Thought you'd never ask. The answer obviously is site dependant, but in general and assuming they have two systems, one for testing and one for production, most places do by the way, I would copy the entire production system to the test system, programs and data, set the test system for June 1, 1999 and start running every transaction and batch program I had. Then I advance the date one month at a time and repeat the cycle up to June 1, 2000. Then I would look at the output. The errors should become immediately obvious. I would make the appropriate changes, recompile everything, recopy from production the data only repeat the one year cycle. Preferably this is being done by 2 to 3 people max. One person working alone would be best but that may be unrealistic. More than 3 invites disaster because you get the "I thought he/she was doing that, not me" syndrome. If there is one employee who knows the system well and is competent, I strongly recommend using that person alone. And for lord's sake, don't use a contractor unless you have to. Even though I am one. There is no way a contractor will be able to learn your system *and* do a good job in the amount of time you want him to. I have never understood how it is an employee will be given months to learn a system before attempting changes. A contractor is expected to have the changes completed at the end of his first week. This year 2000 thing is exactly the *wrong* type of job to hand off to contractors yet that is precisely where most of the money seems to be going.

Ok, run that by me again how it is you can get 179 years out of 2 bytes when the largest companies in this country can only get 100 years out of 6 bytes. I just don't follow you on this and I'm not a programmer. Or I am a programmer and I still don't get it.

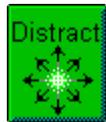
Fasten your seat belts, turn off the TV, here we go. Computers are a combination of 2 basic things, a processor and a memory. I'm guessing most of you already new that. Now imagine if each byte of memory in your Commodore Vic 20 was a string of 8 coins and you had 1 K of memory. How many coins would you have? Well 1 K of memory is 1024 bytes. A byte is 8 bits so we'd have 8192 independently changeable coins (1024 x 8). Why bytes. Why 8? What is so magic about that? Nothing is magic about 8. It's just a compromise. In order to make sense out of all the bits, we have to group them together in such a way that we can look at them and all agree on what they mean. Eight bits to the binary unit (byte) just works out nice. We could define a byte to have 8192 bits. That would be one heck of a byte. If the coins in our example could be set to either head or tails, this one byte could have a range of values equal to 2 to the 8192nd power! If you covered the floor of your garage with 8192 quarters and tried to set them to all the various different combinations of head and tails, you would probably not live long enough to set them all.

Why not use a 4 bit byte then?

If you have 4 bits, you have 16 potential meanings. 0000 0001 0010 all the way to 1111. Trust me 16! Sixteen is good. You get to drive at sixteen and god knows what else, but you have to admit it is limiting. If we separate all our 8192 independently addressable bits into groups of 4, it will get dicey if we want to store values of things that have more than 16 options. Using 4 bit bytes we will get twice as many bytes as with 8 bit bytes, but they are not useful. Especially if we, god forbid, want to make a word processor that allows character storage. There are 26 letters and we can only store 16. That won't sell will it? How about a 5 bit byte 00000 to 11111. That helps a little. Now we can have 32 values, notice it doubles each time you add a bit. The letters? We got 'em covered. What's that? Oh, you want to store some number do you? And you want 2 separate cases for the letters? Oh my, 32 won't do it. How about 6 bit bytes? That would give us 000000 to 111111 Wow? 64 separately assignable values. That just might work. No lower case but hey we can live with that. As an aside, when I worked for USAir, all the airlines used this 64 bit scheme to represent data. It's faster to transmit 6 bit bytes rather than 8 bit bytes and in an age of 300 baud modems that made a difference.



Troubled Times



Global Warming

Yes, the planet is getting warmer like it did some 900 years ago. There were no manmade smoke stacks, no cars, trucks, trains or airplanes then. Could have warmed up as much as 3 F. At least that is what glacier core seem to indicate - the ice at the poles got much thicker. Hmm, we are told by the so called Global Warming pundits that if the earth heats up by 2 degrees that Mother Earth will die, and if we don't give up our autos, standard of living, constitutional rights, the Government will not be able to save the planet. And there are way too many people, that have to be gotten rid of. But we are not told what the "Final Solution" is.

Well, since the 1940's the Ice has gotten some 200 ft thicker. Remember the army airplanes that were lost in the snow during W.W.II, the way that the location was found was from the radio antenna 200 ft tall, buried under the snow and Ice. The rate of melt has not been proven to have increased around the edges. Look up NASA's Volcano watch, 56 are going off on the ocean floor, five expelling into the atmosphere. Think about this, each eruption expels per month enough pollution to equal 170 years of the industrial revolution. So do the math, each month we have 5 industrial revolutions. Why hasn't the earth died? Something to think about.

Offered by [Glen](#).



Troubled Times



Scrutiny

What's Behind Global Warming

NBC News, May 19, 2000

Evidence of global warming has scientists questioning what is causing it and how it will affect our global forecast. From snow in April to record-breaking heat in May, with tornadoes tossed in between, the atmosphere can cook up plenty of surprises. At the National Weather Service, where they have been keeping records since 1869, officials recorded 1999 as the warmest year yet. These logbooks tell a great deal about the past, but just what it means for the future is still uncertain. Last summer, New Yorkers experienced a drought and record-high temperatures. August brought a torrential rainstorm that caused major flooding. One month later, Hurricane Floyd hit, devastating parts of the area with more flooding. Weather is what we experience everyday, including the heat or possible rain. Climate, however, looks at the bigger picture, studying pattern variations from season to season and year to year. That is where meteorologists are really seeing changes.

Dr James O'Brien, a professor at Florida State University, says that what we are experiencing is climate variability. "It's definitely not global warming," O'Brien said. "The real changes in this country are the El Nino and La Nina changes." El Nino and La Nina conditions are when the Pacific Ocean goes through cycles of heating and cooling. These cycles drastically affect weather all over the world, he said. "So natural causes are making it hot and cold, and man's effect with the greenhouse make it slightly warmer. Where we're going we'll just have to wait and see," O'Brien said.

Scientists at GFDL point to changes in the Arctic Sea ice. Northern climates, sub-Arctic areas like Alaska and other Northern climates, could see changes first. Sea level is rising and permafrost is melting. On the East Coast, many areas could be affected. "Anyone who lives here in Alaska knows that the winters are warmer, in fact, warmer by about 10 degrees Fahrenheit over the last 30 years," said Gunter Weller, a professor at the University of Alaska. Scientists say temperatures are certain to rise as a result of global warming, depending on the level of carbon dioxide. In New York, the levels are worse than in other parts of the country. "That means New York City is worse than New Orleans when it comes to summer heat index," said Mahlman. The number of days above 90 degrees a year could rise from 13 days a year to over 30 days a year. This could mean stress to power grids and potentially more blackouts. Eric Williford, at Florida State, says that this global climate could have an effect on future storms. "Will the sea surface warm? That's probably the key ingredient here. If we have warmer oceans, we have more chance for storms and definitely higher potential for larger storms, intense hurricanes," Williford said.



Troubled Times



Climate Pattern

[La Nina's Persistence](#) May Be Part of Larger Climate Pattern

Jet Propulsion Laboratory News Release, Jan. 19, 2000

A giant horseshoe pattern of higher than normal sea-surface heights developing over the last year is beginning to dominate the entire western Pacific and Asiatic oceans, new imagery from the U.S.-French TOPEX/Poseidon satellite shows. Scientists at NASA's Jet Propulsion Laboratory, Pasadena, Calif., studying the new data believe these abnormally warm ocean temperatures, which contrast with a cool La Niña, may be part of a larger, longer-lasting climate pattern. The latest data, taken December 30, 1999 through January 8, 2000, show that this slower-developing condition covers most of the Pacific Ocean and has significant implications for global climate change, especially over North America, said Dr. William Patzert, an oceanographer at JPL. "In contrast with the more spectacular but shorter duration El Niño and La Niña events, this multiple-year trend may be part of a decade-long pattern known as the 'Pacific decadal oscillation,'" Patzert said. "The persistence of these abnormally high and low Pacific sea-surface patterns, along with warmer and colder than average ocean temperatures, tells us there is much more than an isolated La Niña occurring in the Pacific Ocean."

Satellite data from the National Oceanic and Atmospheric Administration clearly illustrate the pattern. Sea-surface temperatures, which directly affect the atmosphere on a daily basis, are available at <http://psbgi1.nesdis.noaa.gov:8080/PSB/EPS/SST/climo.html> and show the same warm and cool water patterns. "These warmer and cooler than normal sea-surface temperatures influence our atmosphere every day, while sea-surface heights are a measure of how much heat is stored in the ocean below," Patzert said. "When you put these two pieces of the climate puzzle together, they will tell us both about what is influencing today's weather and how much heat is being stored in the ocean to fuel future planetary climate events."

The Pacific decadal oscillation waxes and wanes approximately every 20 to 30 years, alternating between its present phase, with a warm horseshoe pattern of higher than normal sea-surface heights connecting the north, west and southern Pacific, in contrast to a cool wedge of lower than normal sea-surface heights in the eastern equatorial Pacific. After that the Pacific switches to the opposite phase, showing a reversal of the warm and cool regions; the horseshoe becomes cool and the wedge warms. The strength of this climate trend is seen in the current TOPEX/Poseidon satellite image, available at http://www.jpl.nasa.gov/el_nino. Sea-surface height is shown relative to normal (green) height and reveals cooler water (blue and purple) measuring between 8 and 24 centimeters (3 and 9 inches) lower than normal along the coast of Central and South America, and stretching out into the equatorial Pacific. The giant horseshoe of warmer water (red and white) dominating the western and mid-latitude Pacific has higher than normal sea-surface heights of between 8 and 24 centimeters (3 and 9 inches). For the past year, warmer waters have been expanding slowly and are now beginning to dominate the western and north Pacific.

Although it is too early to definitively label these basin-wide conditions as a strong, multiple-year Pacific decadal oscillation, the current image suggests that simple labels or explanations such as a continuing La Niña/El Niño climate condition could be misleading, Patzert said. In the coming year, scientists using TOPEX/Poseidon data will continue to monitor the development of these conditions and their implications for climate in the next several years.

The U.S.-French TOPEX/Poseidon mission is managed JPL for the NASA's Earth Science Enterprise, Washington, D.C. JPL is a division of the California Institute of Technology in Pasadena.



Troubled Times



Urbal Sprawl

Urban Growth Changes Climate

National Wildlife Magazine, June/July 2000

Cities can create their own climates, reduce plant growth and alter local weather patterns. Those are conclusions from researchers who have studied urban and suburban sprawl using satellite images of Earth. In one of those studies, NASA researcher Marc Imhoff used satellite data, including images of city lights (above), to study what he calls the “footprints” of urban areas. “One way of looking at the reduced greenness,” he says, “is that the annual photosynthetic productivity in some areas is reduced by as many as 20 days.” Interestingly, Imhoff also found that urban areas have longer growing seasons, likely because of the “heat island” effect that makes a city hotter than surrounding areas. Still, that’s mixed news for plants: The extra heat can impair some plant growth. Atlanta, Georgia, a well-studied heat island, is often 5 to 8 degrees F. warmer in summer than nearby rural areas. Not only that, Atlanta seems to create its own daily low pressure system that produces storms.

Now it turns out another urban product-air pollution-can prevent rainfall. In analyzing satellite images of reflected rain droplets in clouds, Israeli physicist Daniel Rosenfeld found that tiny airborne pollution particles can prevent water in clouds from developing into raindrops or snowflakes. He concludes in a recent paper in the journal *Science*, “Human activity may be altering clouds and natural precipitation on a global scale.”

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Troubled Times



Magnestar Theory

NASA Space Science News, September 29, 1998

Gamma ray flash zaps satellites, illuminates Earth

A powerful flash of gamma rays, strong enough to be detected through a satellite's own shielding and to turn night into day in the Earth's outer atmosphere, has led to confirmation of the existence of super-Magnetized Stars. ... "If the theory holds up, it will mean that there are probably a million old magnetars drifting around our Galaxy, and perhaps as many as 10 to 100 million, because magnetars must have been forming throughout the history of our Galaxy. Most of these stars have now gone inactive and are difficult to detect."

The flash of gamma rays was detected on Aug. 27 by at least seven spacecraft in Earth orbit and in deep space. It capped several months of observations of an object known as SGR 1900+14, a Soft Gamma Repeater located in the constellation Aquila (the eagle) near Sagittarius (the archer). ... Astronomers think the Aug. 27 boomer was caused by an out-of-control magnetic field realigning itself in a manner similar to what happens inside solar flares. While in magnetars their huge magnetic field is capable of cracking a neutron star's rigid surface to bits, it also connects three different mysteries. Each mystery involves neutron stars. A neutron star is created when a massive star explodes in an event called a supernova. The remaining core of the supernova, which has slightly more mass than our own sun but can no longer burn fuel, compresses under gravity into a neutron star about 20 km (12 mi) across.



Troubled Times



Sun's Magnetism

The Mainstream Media Catches On, It's The Sun

BBC News Online Science, June 4, 1999

Global warming may not be caused by humanity's fossil fuel emissions, but could be due to changes in the Sun. Research suggests that the magnetic flux from the Sun more than doubled this century. As solar magnetism is closely linked with sunspot activity and the strength of sunlight reaching Earth, the increase could have produced warming in the global climate. The evidence for an increasingly energetic Sun comes from a new analysis of the magnetic field between the planets, carried out by scientists at the Rutherford Appleton Laboratory, near Oxford, UK.

Solar Wind

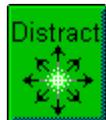
This magnetic field is caused by the Solar Wind, a stream of particles given off by the Sun which fills the solar system. The scientists produce evidence that since 1964 the interplanetary magnetic field has increased in strength by 40%. Evidence from before the space age suggests that the magnetic field is 2.3 times stronger than it was in 1901. Scientists do not doubt that the increased magnetic field results from a more energetic Sun. Their problem is that the effect of these increases on the Earth is unknown.

Not our fault?

The research is published in Nature and in the same journal Professor Eugene Parker, of the Laboratory for Astrophysics and Space Research, University of Chicago, comments that it could explain global warming. He notes that the increased solar activity has occurred in parallel with an increase in carbon dioxide in the Earth's atmosphere. And it may not be a coincidence, he says. Professor Parker suggests that the Sun's increased activity caused the Earth's global temperature to rise and that in turn warmed the oceans. Warmer oceans absorb less carbon dioxide from the atmosphere. So a warmer Earth has more of the so-called greenhouse gases. Humanity's burning of fossil fuels may therefore not be the cause of global warming.



Troubled Times



Magnetic Storms

Ulysses results inspire a big discovery about the Sun's behaviour

ESA Science News, June 3, 1999

The strength of the Sun's magnetic field has doubled during the 20th Century, according to calculations by British scientists. This finding will help to clarify the Sun's contribution to climate change on the Earth. A team at the Rutherford Appleton Laboratory near Oxford has been able to work out the recent history of the Sun's magnetic behaviour, thanks to the unprecedented overview of solar magnetism provided by the ESA-NASA spacecraft Ulysses. "One surprise led to another," says Mike Lockwood, lead author of the new report. "Ulysses found that the radial component of the magnetic field far out from the Sun is equally strong at all solar latitudes. Nobody expected that, but it means we can use historical data from just one place, the Earth, to deduce a surprising change for the whole Sun. The Ulysses result was absolutely crucial."

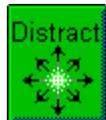
Launched in 1990 and still going strong, Ulysses is the first spacecraft ever to pass over the polar regions of the Sun. It revealed that the solar wind of electric particles is generally much faster than that coming from the Sun's equatorial regions, which supply the solar wind felt in the Earth's vicinity. But the strength of the magnetic field carried by the solar wind remains stubbornly constant. Over the Sun's south pole in 1994, and in a quick transit to the north pole in 1995, Ulysses showed that the solar wind smooths out an expected intensification in the polar regions. Encouraged by this result, Lockwood and his team re-examined a record of magnetic storms on the Earth provoked by the Sun. Called the "aa" index, it comes from simultaneous observations of magnetic events in England and Australia. The Rutherford group found that recent values of the index match very closely the variations in the strength of the solar magnetic field as measured by spacecraft. Since 1964, the magnetic field has intensified by 40 per cent.

As the longest of all records in solar-terrestrial physics, the "aa" index goes back to 1868. Repeated increases and falls correspond roughly with the cycles of sunspots counted on the Sun's visible surface. More remarkable is a rising trend in the index through most of the 20th Century. The Rutherford team deduces from the trend an overall increase in the Sun's magnetic field by a factor of 2.3, since 1901. Eugene Parker of the University of Chicago, the father of solar-wind theory, comments on the result: "It is a historical fact that our capricious climate responds to variations of the Sun's magnetic activity, with substantial warming and cooling with the rise and fall of activity over the centuries." In Parker's opinion the new discovery about solar magnetism should prompt fresh attention to the role of the Sun in contemporary climate change, alongside any effect due to man-made carbon dioxide.

The Rutherford team itself is already using the magnetic data to deduce increases in the Sun's brightness during the 20th Century. Other work in Europe on solar influences on climate includes studies of stratospheric effects (Berlin and Leicester) and of changes in cloud cover apparently associated with variations in cosmic rays, which obey changes in the solar wind (Danish Space Research Institute). The paper, "A doubling of the Sun's coronal magnetic field during the past 100 years" by M. Lockwood, R. Stamper and M.N. Wild, is published in the journal *Nature*, 3 June 1999, vol. 399, pp. 437-9. The comments by E.N. Parker are in the same issue, pp. 416-7.



Troubled Times



Solar Flares

For a scientific approach and explanation with excellent details and vigilance I recommend the Millennium Group. They have been watching the sun very carefully and have reported consistently on all of the anomalies of the sun and the recent comet swarms that have been hitting it. They have blown the whistle several times on NASA, JPL, and SOHO. They have an excellent article concerning Hale-Bopp and articles on astrophysics that shed a different light on how the universe works.

Offered by [Pat](#).



Troubled Times



Sun Spots

Sunspots Could [Wreak Havoc](#) During The Next 18 Months

Canadian Press, Jan. 6, 2000

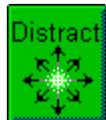
Save those sighs of relief at having survived the Y2K bug, another menace looms: a surge in solar winds that could wreak havoc with pipelines, pagers and power grids. No one is urging a rerun of Y2K hysteria, but the coming peak in the sun's sunspot cycle is getting lots of attention in the scientific world. Some have dubbed it the Year 2001 Problem. Solar winds associated with sunspots can disrupt Earth's magnetic shield, causing problems for many modern technologies, says David Kendall of the Canadian Space Agency. "When the sunspots peak there are more eruptions on the sun, these eruptions are more violent, and there is more material which is ejected into space, and we feel the effects," he said in an interview Wednesday. The solar wind is a stream of electrons, protons and heavy ions, which interact with Earth's magnetic field.

In January 1994, a geomagnetic storm destroyed circuits in the \$286-million Anik E-1 satellite, leaving the craft unable to focus signals on Earth and causing chaos in Canadian TV, radio and data transmissions. On March 13, 1987, a magnetic storm caused the collapse of the Hydro-Quebec power system, leaving six million people without electricity for hours. Many other incidents have been blamed on rough space weather. David Boteler of the Canadian Geological Survey said utilities and corporations are learning from experience and taking precautions, but space weather is difficult to predict. Sunspots - gigantic storms on the solar surface - have been studied almost since the invention of the telescope, but remain poorly understood. The cycle of sunspot activity ranges from nine to 13 years, for an average of 11 years. The current cycle will peak between 2000 and mid-2002.

As technology becomes more sophisticated, vulnerability to electromagnetic disturbances increases. For example, automatic bank machines and pagers rely on satellites. Canada is especially vulnerable because electromagnetic storms affect polar regions most. Such disturbances can dramatically increase the rate of corrosion on northern pipelines. "The increasing technological advances, as well as the movement of populations northward, has dramatically increased the susceptibility of the conduct of human affairs to solar disruptions," says N.C. Gerson of the U.S. National Security Agency, writing in the latest issue of *Physics in Canada*. "In addition to communications, the transport of power via cable or the transport of gas via pipe also tend to be adversely affected." There is an upside to the increase in sunspot action: Canadians can look forward to spectacular displays of the northern lights, caused by interactions of solar plasma and Earth's atmosphere.



Troubled Times



CMEs

Planet Busters, Not!

Space Science News, Dec. 31, 2000

A popular rumor making the rounds on the Internet is that on Jan. 1, 2000, the sun will let loose with a powerful coronal mass ejection (CME) that will zap important communications satellites and short-circuit terrestrial power grids. Not! The sun indeed is becoming more active, but it's nothing new. "The sun's been doing this for a long, long time," said Dr. David Hathaway, solar physics group leader at NASA's Marshall Space Flight Center. And even though the sun is climbing towards the peak of yet another sunspot cycle maximum, "This cycle is a little different from what we've seen, but not out of the ordinary. For us on Earth it's going to be life as usual.

Hathaway was one of several scientists who spoke about the current solar maximum in a panel discussion at the American Geophysical Union's recent annual fall meeting in San Francisco. "The big difference for us is our increasing dependence on technology in general and on space-based technology in particular. Certainly it's not going to wipe out the planet although it may affect a satellite or two. "The story about a powerful CME is gaining wide circulation on the Internet, largely because there are elements of truth to it. The solar cycle is climbing towards maximum. CMEs can generate geomagnetic storms that disrupt or damage satellites. Geomagnetic storms have overloaded the power grid in the American northeast. And then there was the "planet buster" comment offered in jest but taken seriously by a few people. "It looks like this cycle, while bigger than usual, is certainly no record setter," Hathaway continued. "In fact, it keeps looking wimpier than expected."



Troubled Times



Solar Cycle

Coming solar storms could wreak holy havoc on Earth

San Francisco Examiner, December 27, 1998

If you thought San Francisco's mega-blackout was bad, just wait until mid-2000, when our old friend the sun turns against us. Like Norman Bates in "Psycho," the sun goes a little crazy now and then by hurling million-degree fireballs and star-sized, electrically charged clouds toward Earth. Its next celestial fit is likely in mid-2000 - possibly even next summer - and could bring continent-sized power outages, global cell-phone screw-ups and other techno-mishaps that could make the Dec. 8 blackout look like a burned-out refrigerator light bulb. "We're more vulnerable (to such electrical cataclysms) than we used to be because of the increasing interconnection of society," warns solar physicist Don J. Michels of the Naval Research Laboratory in Washington, D.C. He is one of many scientists who study the sun's 11-year bouts of manic-depressive behavior.

Consider the new power grids used by deregulated utilities seeking cheap electric power. The lines extend thousands of miles, linking Canadian hydroelectric dams to Southern California. "The bigger they are, the harder they fall," goes an old saying - and nothing illustrates that better than these super-long power lines, which could go as dead as dried noodles during a big solar "storm." The results? Imagine being stuck in a Muni tunnel for hours or eating melted ice cream from an on-the-blink fridge - all because the sun has just undergone one of its periodic nervous breakdowns. Its next peak of violence - technically known as "solar maximum" - is expected in mid-2000. But the breakdown has already started: "In the last two years, you can easily see an increase in solar activity. The (solar) magnetic field lines are breaking apart," says Steve Hill, a researcher at NASA's Goddard Space Flight Center in Greenbelt, Md.

NASA and the Defense Department are scrambling to launch satellites that can give advance warning of incoming solar storms. The military is especially concerned because of the possible failure of reconnaissance satellites - the ones that watch Saddam Hussein's troops, for example - during a military engagement. Other scientists hope to better understand the sun's structure and behavior by launching satellites such as HESSI, the High Energy Solar Spectroscopic Imager, now being designed at UC-Berkeley. Planned for launch in mid-2000, during Solar Maximum, HESSI will study X-rays and gamma rays from solar flares and "coronal mass ejections," vast clouds of ionized (electrically charged) particles, says Jay Trimble, HESSI integration test manager.

On reaching Earth, the particles warp Earth's magnetic field. The field gyrations induce electrical currents in power lines that can short-circuit them. The longer the line, the greater the electrical surge - so long-distance power lines are especially vulnerable. A consortium of scientific agencies is trying to spread the word about the coming threat from what they call "solar weather." At the American Geophysical Union conference in San Francisco this month, NASA, the National Science Foundation, the Boulder, Colo.-based Space Science Institute and others distributed a slick, colorful brochure that begins: "The Forecast? Look for Storms, Gale-Force Winds, and Plasma Blobs." ("Plasma" refers to clouds of electrons and ionized particles.)

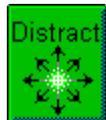
A harbinger of what may come during Solar Maximum occurred in May, when a powerful solar storm tripled and quadrupled electrical currents in the ionosphere, the thick envelope of ionized air overhead, says researcher Daniel Baker of the University of Colorado. The greater the electrical current, the greater

the risk to sensitive electronic gear, communications systems, power lines and other societal infrastructure. The Dec. 8 outage, which afflicted much of the Peninsula and nearly all of San Francisco, was caused by humans, not by the sun. But "that is the kind of thing that makes the concern about solar events seem real," Michels says. "When one substation goes down, it ripples through the whole system." The solar breakdown might come sooner than expected - perhaps as early as the middle of next year, says U.S. Air Force scientist Richard C. Altrock. He expects the solar storms to peak in mid-1999, a year earlier than other forecasts, based on his observations of a solar phenomenon whimsically known as the "Rush to the Poles," he said at the American Geophysical Union meeting.

At a solar observatory in Arizona, Altrock has observed solar gases rich in ionized iron steadily flowing toward the sun's north and south poles. Such flows have preceded the last two solar maximums by an average of 15 to 17 months, he says. The current "rush" began in February 1997, he says, suggesting solar maximum could come as early as the summer of 1999. Whenever the sun reaches maximum violence, he adds, the show is starting: "Already we're starting to (detect) quite large (solar) flares and mass ejections that are impacting our Earth."



Troubled Times



No Big Deal

These events occur every 11 years. The industrialized world has had electric grids for many, many of these periods and there are only a handful of instances where large numbers of households found themselves without power. The electric generation and distribution industry has been improving from it's beginning it's ability to cope with this peak in the sunspot cycle. These events are so relatively insignificant that the vast majority of the population has lived through them every 11 years without ever noticing anything more significant than occasional strange radio and TV reception. Our radios don't burn up, nor do all those AM, FM, short wave, and TV receivers. My computer didn't burn to a crisp or even notice the last event 11 years ago.

What IS different this time around is the extent to which satellites touch our lives. There are a vast number of services we now take for granted that depend on these satellites, like cable TV, pagers, cell phones, and the Internet. Eleven years ago we either didn't have these services or they were mostly provided by wire lines. There is a great danger to satellites from this event; but designers of satellites for the last 10 years have known about the sunspot cycle and have designed in what they believe is necessary to protect the satellites. Sure, there may be some outages and disruptions from time to time; but unless this coming cycle peak is 3 or 4 times stronger than the last two, it isn't that big a deal.

Offered by [Ron](#).



Troubled Times



NASA Admits

Link Between Solar Cycle and Climate is Blowin' in the Wind

Release No. 99-39, *Goddard Space Flight Center*, April 8, 1999

Researchers have found that the variations in the energy given off from the sun effect the Earth's wind patterns and thus the climate of the planet, according to results of a new study published in the April 9 issue of *Science*. For decades, scientists have tried to understand the link between winds and temperature and the sun and its cycles. There were tell-tale signs of a connection. For instance, the Little Ice Age recorded in Europe between 1550 and 1700 happened during a time of very low solar activity. But how the sun and climate were linked continued to elude researchers.

According to Drew Shindell, a climate researcher from NASA's Goddard Institute for Space Studies in New York, NY, and lead author of the new study, a key piece of the puzzle was missing. Previous studies neglected to take into account the effects of increased solar activity on the ozone layer or the complex chemistry of the upper atmosphere where most of the high-energy radiation, including ultra-violet radiation (the kind responsible for creating the ozone layer) gets absorbed. "When we added the upper atmosphere's chemistry into our climate model, we found that during a solar maximum major climate changes occur in North America." The changes, according to Shindell, are caused by stronger westerly winds. Changes also occur in wind speeds and directions all over the Earth's surface. "Solar variability changes the distribution of energy," said Shindell. "Over an 11-year solar cycle, the total amount of energy has not changed very much.

But where the energy goes changes as wind speeds and directions change." During the sun's 11-year cycle, from a solar maximum to a solar minimum, the energy released by the sun changes by only about a tenth of a percent. When the solar cycle is at a maximum, it puts out a larger percentage of high-energy radiation, which increases the amount of ozone in the upper atmosphere. The increased ozone warms the upper atmosphere and the warm air affects winds all the way from the stratosphere (that region of the atmosphere that extends from about 6 to 30 miles high) to the Earth's surface. "The change in wind strength and direction creates different climate patterns around the globe," said Shindell. According to Shindell, the new study also confirms that changing levels of energy from the sun are not a major cause of global warming.

Many scientists have argued that the radiation change in a solar cycle - an increase of two to three tenths of a percent over the 20th century - are not strong enough to account for the observed surface temperature increases. The GISS model agrees that the solar increases do not have the ability to cause large global temperature increases, leading Shindell to conclude that greenhouse gasses are indeed playing the dominant role. The general circulation model used in the study included solar radiation data from NASA's Upper Atmospheric Research Satellite, launched in 1991. With data from UARS, which was used to calculate ozone changes, scientists have good measurements of how much radiation the sun puts out, increasing the accuracy of the new model.



Troubled Times



Tsunami

Scientists: Undersea cracks could trigger Atlantic Tsunami

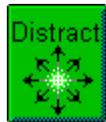
Associated Press, May 2, 2000

Scientists have discovered cracks in the ocean floor off the East Coast that they say could trigger a tsunami, sending 18-foot waves toward the mid-Atlantic states. In this month's issue of the journal *Geology*, the three researchers say they discovered the cracks along a 25-mile section of the continental shelf off the Virginia and North Carolina coasts. Those areas and the lower Chesapeake Bay would be at the highest risk for wave heights similar to the storm surge of a category 4 hurricane, which is characterized by top sustained winds of 131 mph to 155 mph.

Neal Driscoll of the Woods Hole Oceanographic Institution on Cape Cod, Jeffrey Weissel of Columbia University and John Goff of the University of Texas said the recently discovered cracks could mean the continental shelf is unstable. The cracks indicate the sea floor could slide down like an avalanche, triggering giant waves. It's unclear whether the cracks are fossil features or whether they are still active, Driscoll said. The scientists plan an expedition this weekend to gather more information to better determine the risk to the coast. "The threat, if they haven't moved in a long time, might be less," Driscoll said. He said there is evidence that a tsunami, a massive wave caused by an earthquake or volcanic eruption, occurred 16,000 to 18,000 years ago. A tsunami in Papua New Guinea killed 2,000 people in 1998.



Troubled Times



Volcanoes

Scientists Study Threat of Huge Volcanic Eruptions

Reuters, December 15, 2000

Scientists said on Friday they were stepping up research into the global threat posed by massive volcanic eruptions - devastating and inevitable explosions of magma, ash and gas that promise to have severe and lasting impact on the world's climate. "The risk of volcanic eruptions to human populations is not very well defined," William Rose, a geologist at Michigan Technological University, told a news briefing at the American Geophysical Union. "But the probability of very large eruptions is probably significantly higher than that of meteor impact." At a symposium held at the AGU meeting, volcanologists, atmospheric scientists and other specialists have launched an effort to begin modeling the impact of severe volcanic eruptions, which potentially could be many times larger than the worst experienced in recorded human history. The most powerful recent eruption, Philippine volcano Mt Pinatubo, exploded with astonishing force in 1991 killing 800 people and forcing thousands to evacuate. Pinatubo blasted rock and dust 12 miles into the atmosphere - leading to measurable changes in world weather patterns. Other volcanoes have been even more destructive. Tambora, in Indonesia, blew its top in 1815, killing more than 90,000 people and venting so much material into the atmosphere that Europe effectively lost its summer growing season. And historical records indicate that earlier eruptions were many times more powerful than that.

Hans Graf of the Max Planck Institute for Meteorology in Hamburg, Germany, said a drive was underway to establish a clearer understanding of the effects of volcanic explosion on the atmosphere, which range from venting huge amounts of ozone-damaging chlorine and bromine compounds to filling the skies with aerosol droplets that can absorb solar heat. "This leads to dynamic consequences, like the warming of continents," Graf said. While researchers are only beginning to understand the potential lasting impact of volcanic explosions, scientists are growing more confident of their ability to forecast the deadly explosions more accurately. "It's not so much that we expect one technical breakthrough ... there's a confluence of a lot of things going on that should improve our ability to make predictions in the next 10 years," Stanford University geophysicist Paul Segall said. Volcanologists say the increasing use of satellites to monitor volcanic activity on Earth will help to refine measurements indicating the build-up of magma - often the precursor to a volcanic eruption. This satellite observation system, which scientists say may develop into a permanent volcano early warning system covering some 600 potentially active volcanoes around the world, will help deliver earlier and more precise notice of volcanic activity - like the warning delivered before Pinatubo, which enabled the safe evacuation of tens of thousands of residents. "Unlike earthquake prediction, we can actually do something about volcanoes," Segall said.



Troubled Times



Comet Lee

Comet Lee, Possible Connection With CME's

EcoNews Service, June 15, 1999

Remember those dramatic photos of twenty fragments of Comet Shoemaker-Levy 9 crashing into Jupiter in July 16-22, 1994? Well, scientists at the Millennium Group are worried that Comet Lee, a wild card (non-periodic) comet first discovered by Australian Steven Lee on April 16, 1999, may pass uncomfortably close to Earth sometime starting in mid-August, 1999 and continuing through early 2000. At the very least, they say, Comet Lee may cause solar explosions (CMEs) in our solar system, earthquakes, and hurricane - like weather on Earth. At the worst, well, Shoemaker-Levy's comet fragments crashing into Jupiter could be a pictorial warning for Earth if Comet Lee is captured in Earth-moon orbit.

What has Millennium Group scientists James B. Ervin, Jim McCanney, Alexey Dmitriev, Gary D. Goodwin, Ray Ward, Hal Blondell, Don Carros, and Wayne Moody worried is that Comet Lee's behavior is defying all predictive models by NASA's and other's super-computers. Millennium Group scientist James B. Ervin says, "The truth of the matter about [Comet Lee] is that nobody can project its path. I believe there is ample evidence to suggest that it will pass much closer to Earth than originally anticipated. Especially, if Comet Lee is hit by a [solar explosion] during its perihelion passage." Earl L. Crockett, another Millennium Group Scientist, says we may already be experiencing the effects of Comet Lee. "I would personally add that it may in fact already be responsible for the very weird actions we have been seeing from the sun over the last several months; i.e. the appearance that something has been "pulling" energetic charges away from the Sun in the opposite direction of Earth producing large [solar] CME's/flares that for the most part have had little electromagnetic effect here on Earth."

Scientist Jim McCanney adds, "[Comet Lee] is truly a lawless comet, and with the erratic brightening happening it is certain to be far off course every day. This could be a doozy! August is now looking like a time for the first possible trouble." Disturbingly, scientist Ray Ward says tight military security has been mounted around official tracking of Comet Lee, impeding public knowledge and scientific study. "The word is Ultra tight security on Comet Lee. The Military side of NASA is running this show now, so forget any type of cooperation." Ward adds, "Too bad NASA has destroyed the [Comet] Hale-Bopp data that we could really use to help provide the correction factors needed on Comet Lee." Comet Hale-Bopp's closest Earth approach was on March 22, 1997.

According to McCanney, planetary alignments in mid-August and September 1999 may make Comet Lee particularly hazardous. "The big key here is the upcoming planetary alignments and that it will be the electrical plasma alignments not gravity that will be the potential harm givers. Most critical is the September 6, 1999 alignment of Venus, and Earth with the new Moon. I have even considered that if the comet orbit is "hooked" enough we could see a close enough encounter that the Earth and moon could capture this thing as a permanent new member of the earth moon system, or worse; at it would flip out into a future collision course with us again and again like Venus did to Mars some 4000 years ago." Researchers have raised concern about the potentially catastrophic effects of two other space events in mid-August, 1999, which may be compounded by Comet Lee. One is the Solar Eclipse of August 11, 1999. The other is the Earth flyby of the Cassini spacecraft on August 18, 1999, carrying 72 pounds of plutonium, equivalent to over 50% of all the radiation released since the beginning of nuclear testing.



Troubled Times



Neutron Star

Hubble observes fast-moving [Neutron Star](#)

CNN.com, November 9, 2000

What's as big as Manhattan Island, 10 trillion times denser than steel and 100 times faster than a supersonic jet? That would be the runaway neutron star RX J185635-3754, the closest of its type ever observed. Its trajectory was caught in three Hubble snapshots taken in 1996 and 1999. A neutron star is the super-dense remnant of a collapsed star, composed entirely of neutrons. This particular one is the product of a stellar explosion that would have been visible to our distant ancestors in 1 million B.C., astronomers with the Space Telescope Science Institute said Thursday. Now located 200 light-years away in the southern constellation Corona Australis, it will swing by Earth at a safe distance of 170 light-years in about 300,000 years, astronomers said in a statement. A light-year is the distance traveled by light in a full year (about 6 trillion miles).

"The scientific importance of this object lies in the fact that the neutron star is isolated," said Frederick M. Walter of the State University of New York. "Because this is the closest and brightest of the few known isolated neutron stars, it is the easiest to study and is an excellent test bed for nuclear astrophysical theories." From an earthly perspective, RX J185635-3754 travels across the sky a distance equal to the diameter of the moon every 5,400 years. Although this apparent motion may seem slow, it is actually one of the fastest moving stars in the sky, astronomers said. The Hubble results have been accepted for publication in the *Astrophysical Journal*. The Hubble Space Telescope a joint project of NASA and the European Space Agency.



Troubled Times



Denied by JPL

To: Mitch Battros
Sent: Tuesday, June 15, 1999 7:53 AM
From: Charles S. Morris <csms@encke.jpl.nasa.gov> JPL
Subject: Earth Changes TV/Breaking News - Comet Lee, Possible Connection With CME's

The Truth About Comet Lee

There have been some wild statements made about Comet Lee [officially known as C/1999H1 (Lee)]. These are simply bogus, false statements by people who must have some agenda other than the truth. Given below is the truth...

- o Comet Lee's orbit is not erratic. It is well-known. The comet will not hit the Earth or come any place close to it. The closest it will come to the Earth is about 77 million miles (the Sun is 93 million miles from Earth) at the end of September 1999. An orbital diagram is posted below...see for yourself.

- o Comet Lee (or any comet) will not cause coronal mass ejections. And Comet Lee's orbit is not affected by them.

- o The comet is not expected to become bright. It is not abnormally bright nor is it brightening at an unusual rate. In fact, it is not expected to become a naked-eye object. It is currently near its peak brightness.

It seems every time we have a modestly bright comet, someone or group or tabloid will claim that the comet is a threat to the Earth, has a spaceship traveling next to it or some other nonsense. They get on the radio and call themselves "scientists." To them, those of us that provide legitimate information on comets are obviously part of some grand conspiracy. If you are one that believes the nonsense that these people promote, that is certainly your right. However, remember their predictions. When they do not come true...and none of them came true with Comet Hale-Bopp...perhaps next time you will not be so willing to believe the pseudo-scientific predictions they make.

Charles S. Morris - JPL
<csms@encke.jpl.nasa.gov>

Comet Observation Home Page
<http://encke.jpl.nasa.gov/index.html>



Troubled Times



C/1997 K2

Astronomers Find [Fleeting Comet](#)

By Maia Weinstock, *Space.com*, May 18, 2000

In the spring and early summer of 1997, stargazers were treated to a beautiful sky show with the passing of wispy-tailed Comet Hale-Bopp. But scientists now say that while all eyes were on this dazzling sight, another near-Earth comet slipped quietly through the sky unnoticed. Astronomers analyzing archived data from the European Space Agency/NASA Solar and Heliospheric Observatory (SOHO) spacecraft have recently reported the presence of a never-before-detected comet, which flew close to Earth in 1997. The comet, temporarily dubbed C/1997 K2, was apparently brighter than every comet discovered by astronomers in the six months preceding its appearance, adding to the mystery of how such a prominent comet may have zoomed past Earth unseen.

"To say we were surprised would be a bit of an understatement," said Finnish astronomer Teemu Mäkinen, lead author of a paper in this week's *Nature*, which describes the new comet discovery. "It sounded quite unlikely [to us] that a comet of such magnitude could elude both professionals and amateurs alike." Despite its brightness, Comet K2 would not have been visible to the naked eye. Yet even "inexpensive amateur equipment would have sufficed" for stargazers to see the comet, said Mäkinen. "I believe that many amateurs were lured by the spectacular display of the concurrent Comet Hale-Bopp," he explained. Professional astronomers could have easily spotted the comet, since the equipment they use is much more powerful than the average telescope. So here's the question: how did they miss it? The combination of vast expanses of space and limited resources with which to scan them are the most likely reasons, experts say.

A SWAN full-sky map at Lyman- α wavelengths, taken in 1996. Here, Comet Hyakutake can be seen as the bright white spot in the upper right part of the map. A similar map cued scientists in to a 1997 near-Earth comet, which went unseen while the comet was bright. "Our records are patchy, especially at high latitudes," said Mäkinen. "It was probably missed by dedicated surveys because of its trajectory, which went through the southern ecliptic pole." Though it slipped by unnoticed by human eyes, evidence for the K2 comet was captured by SOHO's Solar Wind Anisotropies (SWAN) instrument from May to July of 1997. The SWAN instrument is not dedicated to comet discovery. Rather, it was designed to observe emissions of hydrogen around the sun at ultraviolet wavelengths. But these emissions, known as Lyman- α emissions, are also given off in high quantities by comets. As a result, though its resolution is relatively poor, the instrument is also sensitive to comets.

The discovery of Comet K 2 raises an interesting question: How prepared are we to track near-Earth objects, including comets and asteroids. If we missed this comet, some experts ask, what are the chances that we'll miss a comet that's heading straight for Earth? A great deal of work has taken place to locate and categorize near-Earth objects like comets and asteroids. Although it may sound like science fiction, scientists say that the threat of comet impacts on Earth is very real. To highlight the threat of such an impact, Massachusetts Institute of Technology professor Richard P. Binzel even created a scale to measure the probability that a given object will hit Earth and cause it harm. Called the Torino scale, this method of measurement highlights the fact that Earth's current environmental balance is precarious, and it and the life that depends on it could be devastated in one swift blow.

So what are the chances of a comet hitting Earth, or of astronomers missing a potentially dangerous oncoming object. No one really knows. What astronomers do know, however, is that better funding for continual sky scans would help them map all comets that streak through the solar system. "It is just a matter of prioritization. Do we want to use limited resources on preventing something that is likely to happen every day and cause moderate casualties - like traffic accidents - or something that will happen once in 30 million years but has potential for wiping out all of humankind?" asked Mäkinen. "In such situations, unfortunately, myopia is usually bliss."



Troubled Times



Near Earth Asteroids

1998 OX4: Third Asteroid with a Non-Zero Impact Probability Found

from Benny J Peiser <b.j.peiser@livjm.ac.uk>

As a result of recent discussions at the IMPACT workshop in Turin, it has become clear that the rapid increase in NEO discoveries, which is expected in the next decade, will inevitably lead to significant numbers of PHAs with non-zero impact probabilities such as asteroids 1997XF11 and 1999 AN10. In contrast to XF11 and AN10, however, the vast majority of these PHAs will no longer be newsworthy due to their minuscule chances of actual impact (in the next century or so). The calculations of their orbital dynamics will be made routinely, and particularly interesting objects will be continuously monitored. Consequently, public interest will only arise in exceptional cases which prove to have *significant* impact risks (< 1:1000?, or in the event of the detection of a Tunguska-sized object). That this coolness is almost the norm already was evident when, at the last day of the IMPACT workshop, Andrea Milani presented new results he and his team (Steven Chesley and Giovanni Valsecchi) obtained from calculating the impact probabilities for asteroid 1998 OX4.

Asteroid 1998 OX4 was discovered by the SPACEWATCH search programme operated by the University of Arizona on Kitt Peak on July 26 1998. Since this PHA (size c. 300-600m) approaches the Earth fairly close several times during the next 100 years or so, the [Minor Planet Centre](#) has placed the NEO on its list of Potentially Hazardous Asteroids. Andrea Milani and his colleagues have now analysed all dangerous encounters asteroid 1998 OX4 will make with the Earth in the next 50 years and found that there is a tiny chance of an impact in January 2046. Yet, the probability of such an encounter is, once again, extremely small (1:100.000.000) and thus of actual interest only to the NEO search community which will have to monitor the object in the future. Unfortunately, this PHA has been lost (which raises the important questions of how to avoid such losses in the future!) and might only be recovered sometime in the year 2000 or 2004.

Andrea Milani tells me that the details of their calculations will be posted on the [NEODys](#) home page in the next few days.

Benny J Peiser



Troubled Times



QW20007

Earth-approaching [Space Rock](#) found by Accident

BBC News, July 10, 2000

A new member of the family of asteroids that can pass close to the Earth has been discovered. The space rock was found by accident on 2 July by astronomer Leonard Amburgey of Fitchburg, Massachusetts. He typed in the wrong celestial co-ordinates into his computer-controlled telescope and stumbled across the 3-km (1.8 miles) sized object. The asteroid has been given the temporary designation 2000 NM by the Minor Planet Center in Cambridge, Massachusetts. It poses no threat to Earth. Astronomers say this is the brightest near-Earth asteroid to be discovered in the past year. However, they are concerned that it was found by accident and was missed by the half dozen professional minor-planet surveys currently in operation. At the moment, it is about 22 million km (13 million miles) from Earth. It crosses inside the Earth's orbit at the end of July, on its way to its closest approach to the Sun in late August. Since the asteroid's discovery, a variety of telescopes from around the world have been collecting data on it. Astronomers hope that by looking for variations in its brightness they may get some idea of how fast the space rock is spinning. An accurate estimation of its orbit would also help them determine if it is likely to pass close to the Earth in the future. A collision, however, has been ruled out.

Asteroid gives Earth a Cosmic 'Close Shave'

By Mark Henderson, *The Times Newspapers Ltd.*, Sept. 5, 2000

The Earth has had a cosmic near miss with an asteroid one third of a mile wide, leading to new calls for an international task force to devise ways of preventing a devastating impact. The 2000 QW7 asteroid, which originated in the belt between Mars and Jupiter, passed within 2.4 million miles of the Earth on Friday morning, astronomers said yesterday. It was detected at Cornell University's Arecibo Observatory in Puerto Rico, six days before it hurtled past the Earth. The asteroid was only twelve times further away than the moon when it reached the nearest point to earth on its orbit - a close shave in cosmic terms. Lembit Opik, the Liberal Democrat MP who has campaigned for international co-operation to counter the dangers of asteroids, said that the Earth had had a very narrow escape. "It is as if someone had thrown a marble at you across a tennis court and missed your head by the width of your hand," he said. "It is all very well saying it didn't hit us, but if it had been 2.4 million miles this way, which is peanuts, we wouldn't be here talking about it today."

The near miss underlined the need for international co-operation to share information on the extent of asteroid threats and to work out means by which dangerous asteroids could be destroyed or diverted, he said. Astronomers said that the discovery of 2000 QW7 was highly significant as it offered an exceptional opportunity to study a potentially hazardous asteroid (PHA) at close quarters. "This is a very important object," said Eleanor Helin, principal investigator at Nasa's Near Earth Asteroid Tracking system (Neat), on Maui, Hawaii. "It's so bright that astronomers can track it now and through to the end of the year. It's a bit of a mystery why we haven't seen this one before." Asteroids are classified as PHAs if they are larger than a couple of hundred metres across, and have orbits within 4.65 million miles of the Earth. Gravitational nudges by the Earth, Mars or Jupiter could alter their orbits, and set them on a collision course with our planet.



Troubled Times



2001 PM9

New Asteroid Discovered - Possible Collision Path With Earth

[Sightings](#), August 19, 2001

It will make a relatively close pass to within .089AU on May 10, 2003. The first possible impact date calculated and the one with the highest probability of occurring is set for June 17, 2005. If it misses Earth on that pass there are another 28 possible impact dates calculated between 2005 and 2079.

[Constitution Society](#), August 18, 2001

Sorry to be the one to break this news, but a new Earth Impactor Asteroid has just been announced by NEODys, and this one...

1. Is very big
2. Is on the same order of magnitude of impact probability as 2001AV43
3. Will possibly impact the Earth in the very near future!

Let me introduce you to Asteroid 2001PM9.

- Discovered on August 11, 2001 and observed up until August 16th. Its orbit was computed and posted today.
- It's Absolute Magnitude suggests it is anywhere from 530m to 1.2km in diameter...that's up to nearly 3/4 of a mile in diameter!
- It will make a relatively close pass to within .089AU on May 10, 2003.

The first possible impact date calculated and the one with the highest probability of occurring is set for June 17, 2005. If it misses Earth on that pass there are another 28 possible impact dates calculated between 2005 and 2079. Dear Readers, following are some facts that ought to set you right back in your chair, grow you some grey hairs - or cause a certain amount of lost sleep. If 2001PM9 impacts the Earth...

1. It will be the kind of impact event that only happens once every 25,000 to 500,000 years.
2. It will impact with a force of somewhere between 100,000 to 800,000 Megatons
3. It will be somewhere between a "Large Sub-Global Event" to a "Nominal Global Effect Threshold" Event.
4. It is estimated that an impact of this order would result in the loss of anywhere between 500,000 and 1.5 Billion lives (depending on exactly where it hit).

Ladies and Gentlemen, if and when 2001PM9 impacts the Earth...

- If it hits in the Ocean tsunamis could reach "global scale".
- If it hits land it could completely destroy an area the size of California
- Could raise enough dust to affect the climate and freeze crops.
- Create a crater up to 30 km in diameter (18 miles around).
- Cause ozone layer destruction on a global scale.

If you worried a little about 1998OX4 and 2001AV43...be very concerned about this one. We really need

to push the button on this one (get the word out and get a lot more information). ... Here is the NEODys pages: [NEODys](#)



Troubled Times



Threat

Will A Killer Asteroid Hit The Earth?

Time Magazine, April 10, 2000, by Leon Jaroff

Eventually, yes. But we don't have to take it lying down. Already astronomers are scanning the skies and preparing to defend the planet. When it comes to asteroids' wreaking disaster on Earth, the real question is not if, but when. Two hundred or so large craters and a geological record stretching over billions of years provide ample evidence that, time and again, explosive impacts by asteroids or comets have devastated large parts of the planet, wiped out species and threatened the very existence of terrestrial life.

Astronomers are all too aware that more large hulks are out there, hurtling through space, some of them ultimately destined to collide with Earth. As scary as this seems, disaster is not inevitable. For after nearly 4 billion years of life on Earth, a species has evolved that can prevent the next catastrophic encounter--if it has the will to do so. That species is us. Why worry? After all, the most notorious impact of them all, the one that caused the extinction of the dinosaurs, occurred 65 million years ago. Really ancient history.

Yet if you want to get contemporary--on a geological scale, of course - it was only 49,000 years ago that an iron asteroid blasted out Arizona's three-quarter-mile-wide Meteor Crater, almost certainly killing any living creatures for hundreds of miles around. As recently as 1908, a small rocky asteroid or chunk of a comet exploded five miles above the Tunguska region of Siberia, felling trees, starting fires and killing wildlife over an area of more than 1,000 sq. mi. Had the blast, now estimated at tens of megatons, occurred over New York City or London, hundreds of thousands would have died. And what about near misses? As recently as 1996, an asteroid about a third of a mile wide passed within 280,000 miles of Earth--a hairbreadth by astronomical standards. It was the largest object ever observed to pass that close and, had it hit, would have caused an explosion in the 5,000-to-12,000-megaton range. What was particularly unnerving about this flyby is that the asteroid was discovered only four days before it hurtled past Earth. All the more reason for a detection system that will discover asteroids early, plot their paths and predict, many years in advance, whether they will eventually threaten Earth.

The good news is that just such a detection system, after a slow start, is rapidly gearing up. Four small groups of dedicated astronomers in Arizona and California, totaling fewer than the number of employees at an average fast-food restaurant and using mostly off-the-shelf equipment for their telescopes, have been mapping the heavens and steadily adding to the number of known near-Earth objects (NEOs). NEOs are asteroids or occasional comets that periodically intersect or come close to Earth's orbit. If a neo cuts through our orbital path at the same time that Earth happens by, it's curtains for a metropolitan area, a region or even global civilization, depending on the size of the interloper. In 1997 the asteroid-hunting pioneers were joined by a precocious upstart, a joint Air Force-M.I.T. Lincoln Laboratory group supported by generous Pentagon funding. Using an Air Force satellite-spotting telescope in New Mexico and a camera equipped with an advanced M.I.T.-designed charge-coupled device, the totally automated, computerized operation quickly began discovering more asteroids and comets, large and small, than all the other groups combined. Getting further into the spirit of the game, the Air Force has deployed a second asteroid-hunting scope, is lending another to astronomers and musing, unofficially, about launching a fleet of microsattellites for even better asteroid detection.

What to do if an Earth-bound comet or asteroid is discovered? Early detection, preferably many years in advance, would enable us to send out exploratory spacecraft to determine the nature of the interloper,

much like the spacecraft near's current investigation of the asteroid Eros. Scientists at the Los Alamos and Lawrence Livermore national laboratories are already dreaming up a variety of ingenious defenses against an incoming asteroid. Depending on its mass and composition, they would use tailor-made nuclear explosions to pulverize a small asteroid or deflect a larger one. Given enough time, and under the proper circumstances, less drastic measures would be needed. Some schemes call for conventional explosives alone, or anchoring a rocket motor or a solar sail on an asteroid to alter its orbit enough to allow it to safely bypass Earth.

At the beginning of 2000, only about half the estimated 500 to 1,000 near-Earth asteroids six-tenths of a mile across or larger - big enough to cause a global catastrophe - had been detected. One of the unknowns could even now be on a collision course with Earth. The sudden appearance of long-period comets, usually larger and with better than twice the impact velocity of asteroids, presents an even greater menace. Such objects (comet Hale-Bopp was one) are usually not spotted until they begin to flare somewhere out near the orbit of Jupiter or closer, only a few to 18 months before they pass Earth's orbit. That doesn't leave much time for defensive measures. Then, too, only a tiny fraction of the more numerous and smaller NEOs, some of them potential city killers and tsunami producers, are yet known. Someday in the foreseeable future, the first thing that strollers out for an evening walk might see would be a sudden glow on the horizon. Then, in short order, they would feel the ground shake, hear a thunderous roar and be incinerated by an onrushing blast of superheated air. All the more reason to identify and track every single near-Earth object and prevent a nasty surprise.

The Odds Against Us

The smallest ones usually explode harmlessly in the atmosphere; a big one could wipe out the human race.

Size Once Every

- 5 to 6 miles across 100 million years
- 6/10 mile 500,000 years
- 1,000 ft. 50,000 years
- 350 ft. several thousand years
- 200 ft. (Tunguska) 200 years
- 60 ft. 100 years
- 35 ft. 10 years
- 15 ft. several months

ZetaTalk: [Near Earth Objects](#)



Troubled Times



Britain

Britain appoints Team to save World from Asteroids

Yahoo Daily News, Jan. 4, 2000, London

Britain's Science Minister Lord Sainsbury on Tuesday named a three-man task force to study the risks of the Earth being destroyed by a giant asteroid. The team is tasked with making proposals to the British National Space Centre on how the country can best contribute to international efforts to protect the planet from a strike from space. The task force will be chaired by Harry Atkinson, 70, a past chairman of the European Space Agency's Council. The other members were named as Crispin Tickell, 69, an environmental expert and diplomat who was Britain's permanent representative to the United Nations between 1987 and 1990, and David Williams, a 62-year-old professor of astronomy at University College, London, who formerly worked for NASA. They are due to report by mid-2000. Lord Sainsbury said: "The risk of an asteroid or comet causing substantial damage is extremely remote. "This is not something that people should lie awake at night worrying about but we cannot ignore the risk, however remote, and a case can be made for monitoring the situation on an international basis. "I hope that the setting up of this task force will help the UK play a full and prominent role in international discussions on this important issue."

Of the known asteroids and comets, which scientists have dubbed near Earth objects, none is believed to pose a significant risk to the planet in the near future, according to government data. However, over the past millions of years the Earth has been hit by objects of sufficient size to cause serious damage, including an impact about 65 million years ago which is believed to have wiped out the dinosaurs.



Troubled Times



Russia

Asteroid Could End World Monday

By Kevin O'Flynn, *The Moscow Times*, December 16, 2000

Russian scientists warned this week that life as we know it could end as early as Monday, if any one of the massive asteroids whizzing through the cosmos should happen to be making a beeline for Earth. "There is a threat to humanity," said Vadim Simonenko, deputy head of the Institute of Technical Physics. Simonenko was among the impressive array of experts attending a news conference with a title straight from a 1950s B-movie: "Asteroid Danger: How to Save the Earth From Cosmic Catastrophe." The conference, held Thursday at the House of Journalists, brought together astronomers, physicists and nuclear experts to urge global cooperation in saving the world from a devastating asteroid collision that could leave millions dead or even wipe out civilization entirely. With asteroids measuring up to 10 kilometers in diameter and traveling at speeds of up to 20,000 kilometers an hour, Earth would stand little chance if it was hit by a big one. The Thursday gathering (including Simonenko, whose institute is a part of the Russian Nuclear Center) called for the organization of a world body to scour space for incoming objects and destroy any potentially dangerous flying objects with nuclear missiles. In the case that preemptive measures fail, the citizens of the world should be prepared to relocate to the moon, the scientists added.

"After a collision with one of these asteroids, there'll be only fragments left of Earth," said Alexander Bagrov, senior scientist at the Institute of Astronomy. Bagrov added that current technology allows experts to detect incoming objects no earlier than three days ahead of time < hence the suggestion that the day of reckoning may come as early as Monday. Bagrov, a tall, thin balding man with a moonlike face, led the rallying cry of the doom-mongers, telling grim tales of other planets done in by asteroids. Five billion years ago, he said, the planet Phaeton (located between Mars and Jupiter, the area where the orbit of most asteroids lie) exploded into millions of bits after being hit by an asteroid 1,000 meters wide. "And [Phaeton] was many times bigger than Earth," Bagrov warned. "After a collision with one of these asteroids there'd be only fragments left of Earth." The asteroid that destroyed Phaeton also went on to cause the demise of life on Mars, when one of the fragments of the shattered planet whacked into Mars, causing it to sink into a grim nuclear winter that killed all life forms and turned it the bright red color it is today. The only trace of life left on Mars is a "face with tears on its cheek" visible on the planet's surface, Bagrov said.

Comets and asteroids have been slamming into Earth since time began. A huge asteroid that hit the planet 65 million years ago is believed to have killed off the dinosaurs. But it has only been in the last 10 to 20 years that scientists have started to seriously consider the threat that asteroids, comets and other so-called NEOs, or Near Earth Objects, potentially pose to contemporary civilization. "Ten years ago it was thought fantastic," Simonenko said of the concept that life on Earth could be wiped out by a NEO hit. Everything changed, however, when an American scientist proved that a huge crater in the state of Arizona was caused by a meteorite and not, as previously thought, by volcanic activity. Scientists now agree that there are millions of asteroids out there that have a chance of hitting the Earth. If an object of more than 10 kilometers in diameter hits the Earth then there's not much chance of anyone surviving, according to a British task force that earlier this year published research on NEOs. Luckily, the chance of that happening is about once every hundred million years, the research said. More dangerous are smaller objects of one kilometer or more which could destroy cities, change the climate and cause huge tidal waves all over the

Earth.

There are roughly 1,000 such asteroids, roughly half of which have been identified as unlikely to strike the Earth. An ongoing project at NASA hopes to identify an additional 40 percent of the asteroids within the next decade. Even smaller objects (those under a kilometer) would still cause devastation equivalent to a number of nuclear bombs, but few of these have been detected. Russia has already been hit by two large asteroids in the last 100 years. In 1908 an asteroid crashed into Tunguska, a remote area of Siberia, causing devastation across an area the size of London. Nearly 40 years later another asteroid hit Sikote-Alin, also in Siberia, smashing more than a hundred craters into the land. If one of these asteroids had hit a city then millions of people would have died. Alone, Russia has little funding to devote to NEO studies. According to Anatoly Zaitsev, the head engineer at the Scientific Production Association, a manufacturer of satellites, an international body is needed to track all flying objects and act quickly with nuclear missiles if needed. Zaitsev said that there is also a need to discuss the practical and moral problems associated with NEO vigilance. Do you really want to tell the citizens of Perm that a meteorite is headed for their town square, he wondered, pointing to the rash of suicides and general panic caused two years ago in the United States when the Hale-Bopp comet came unusually close to Earth. If the big one does come, Zaitsev added, people should be prepared to evacuate the planet, potentially relocating to the moon. But how will we choose who goes, someone asked. "Ah, that's the problem," Zaitsev said.



Troubled Times



Desensitization

So 2001 PM9 will make 30 passes within the next 80 years? How many passes have we survived already? The recent fervor over asteroid impacts makes me shake my head. Has our danger increased simply because we can now see and identify lots of these rocks?

Offered by [Michael](#).

Asteroid No Threat, Despite Rumors of Earth Impact

[Space.COM](#), August 23, 2001

A newly discovered asteroid whose orbit around the Sun had only been tentatively investigated was rumored last weekend to be on a collision course with Earth. As with similar cases in recent years, further scientific observations showed the asteroid, called 2001 PM9, poses no threat. But before these additional observations could be made, the initial data collected on the space rock was released on a public Web site called NEODyS, which is run by scientists who hunt for and study potentially hazardous asteroids. The site is intended to inform other astronomers of newly found asteroids, in part so that additional observations can be made. However, when 2001 PM9 was announced on NEODyS (Near Earth Objects Dynamic Site) on Friday, Aug. 17, it included odds of a possible impact in 2005 and 2007 that were better than 1-in-a-million. Slim, but not none. By early this week, the odds had been revised to none. Yet over the weekend, a handful of other Web sites disseminated the earlier information, some adding personal fears to their reports.

On a Web site called The Hot Sheets, a visitor posted details of the asteroid that included this warning: "Dear Readers, following are some facts that ought to set you right back in your chair, grow you some grey hairs - or cause a certain amount of lost sleep." Not the first time. While not widely published in the popular press, the case of 2001 PM9 mirrors other instances in which the public was warned of possible Earth impacts that later turned out to be no threat at all. The first and most infamous was asteroid 1997 XF11, which in 1998 was said to be on a course that might hit the planet in 2040. Most major news organizations reported the threat, which scientists later withdrew. The scenario was repeated in 1999, when asteroid 1999 AN10 was said to have a small chance to hit Earth in 2039. The release of that data, and subsequent publication by some media outlets, was criticized by researchers who still had a 1997 XF11 hangover and worried that their credibility was being eroded. NEODyS was created by a group of researchers at the University of Pisa in Italy - the same researchers who published the initial data about 1999 AN10. One goal was to provide better communication between scientists regarding asteroids, so that asteroid scares could be avoided.

But anyone can access the information, and other NEO (Near Earth Object) organizations also reported the initial 2001 PM9 data. The first reports of 2001 PM9 were disseminated by NASA's Jet Propulsion Laboratory (JPL) and another research group called Spaceguard Foundation. However, Donald Yeomans at JPL said his organization did nothing wrong. Though data on 2001 PM9 first appeared on JPL's Potentially Hazardous Asteroid list on Aug. 13, Yeomans said it was a "routine posting of orbital data and certainly not an announcement of any type of threat." No impact probabilities were listed on the JPL site, he said. "At no time did JPL formally or informally release any announcement about asteroid 2001 PM9," Yeomans said. "Our activities were restricted to requesting new data, soliciting archival data and working to compute updated orbits so the results could show, as quickly as possible, that this object was not a

threat. We were rather proud that these activities took place so rapidly that by last Friday, the computations showed no real threat. That is exactly how things are supposed to work."

Brian Marsden is director of the International Astronomical Union's Minor Planet Center, which serves as the ultimate clearinghouse for data and names of asteroids and other small objects in the solar system. Marsden said scientists' ability to properly deal with early asteroid data has not improved since 1998, and the problem stems from how information is communicated. "This is not to say that NEODyS, or any other professionals working in the area, is doing bad science," Marsden said in comments today on a newsletter called CCNet, which provides a forum for discussing asteroid hazards. "It is very clear, however, that our community continues to flounder in the way such information is made public." Marsden was particularly critical of the fact that after the risk was found to be nil, a "risk page" about the asteroid was removed from the NEODyS site, rather than being updated to reflect the change. "Illogical though it may seem to us, some people tend to assume that such removal means that the object has in fact become more dangerous, not less, and that the astronomers are involved in a cover-up," Marsden said. "A simple posting to confirm that the object is no longer dangerous would work wonders."

Benny Peiser, a researcher at Liverpool John Moores University and the moderator of CCNet, said, "I wonder how many more asteroid scares it will take before the NEO community will heed the recurring calls for adjustment and make a determined effort to resolve this thorny issue." Efforts have been made. In 1999, the NEO community developed the Torino scale, a hazard index structured something like the Richter Scale for earthquake magnitude. The Torino scale was intended to improve definitions and communications between scientists, as well as their ability to communicate potential threats to the press and the public. But so far the Torino scale has been nearly nonexistent as far as the public is concerned.

According to scientists at NASA's Jet Propulsion Laboratory, there are currently 315 known "potentially hazardous asteroids," or PHAs. Each appears to be on a course that will one day bring it close to Earth's orbit, but scientists stress that none of them are known to be on a collision course with the planet. Many other asteroids that might be listed as PHAs are thought to be out there but not yet found. An asteroid capable of global disaster would have to be more than a quarter-mile wide, researchers say. Asteroids that large strike Earth only once every 1,000 centuries on average, according to NASA officials. Other estimates range widely, reflecting the fact that researchers don't know how many asteroids are out there, let alone how many might eventually cross the path of Earth. Smaller asteroids that are believed to strike Earth every 1,000 to 10,000 years could destroy a city or cause devastating tsunamis. Scientists have in recent years called on governments to begin making plans for how to defend the planet against such impacts.



Troubled Times



Pending Disasters

Beware: the Next Giant Asteroid Belt is Overdue

By Nicholas Rufford, *The Sunday Times* (Britain), July 23, 2000

A group of scientists known in government circles as "The X Files committee" has warned that the Earth is overdue for an asteroid strike serious enough to wipe out 10% of its population. Lord Sainsbury, the science minister, is studying the report by the Near Earth Objects Taskforce and is expected to announce its findings within days. It calls for international co-operation to track asteroids and comets likely to cross the Earth's orbit. The report says the risk of death is about the same as from an aircraft crash and similar to a terrestrial accident such as a nuclear reactor meltdown. Although strikes are rare, the damage inflicted by a single hit could be enormous. If an asteroid 1km wide landed in the Atlantic Ocean, it would destroy most European coastal cities and swamp parts of Britain in a tidal wave. If it struck land, it could kill millions and throw up a dust cloud that could create an artificial winter lasting years. An asteroid of that size is likely to hit Earth once every 100,000 years. According to the taskforce there has been no strike for at least that time.

Scientists at the government's atomic weapons establishment at Aldermaston are devising ways to attack asteroids with nuclear weapons to deflect them. Britain is expected to collaborate with its European partners to devise a system whereby a series of warheads could be launched if necessary. Dr Nigel Holloway, a senior weapons scientist at Aldermaston who advised the taskforce, said there was growing acceptance in government of the need for countermeasures. "For a 1-2km asteroid you would use warheads equal to about 100,000 Hiroshimas," he said. "There are disadvantages of trying to do it with one big shot because some of these asteroids are rather fragile. What you don't want to end up with is buckshot, because you have no hope of deflecting that. So you make a device to 'flash' the asteroid on one side with an intense burst of neutron radiation and blow some of the surface off to achieve deflection." According to well-placed scientific sources, Nasa has already started investigating how to detonate such a nuclear warhead with a £150m "Near-Earth Asteroid" probe.

Lembit Opik, Liberal Democrat MP for Montgomeryshire, whose grandfather was an astronomer specialising in cosmic impacts, said: "It is not a question of whether an extinction-level event will occur, it is when. Each of us is 750 times more likely to be killed by an asteroid strike than to win the national lottery this weekend." A 50-metre-wide asteroid that exploded in the air above Siberia in 1908 destroyed vast areas of forest and caused a dust cloud 10km high that affected the climate for years. A similar event over central London could kill 7m people and lay waste to an area extending outwards as far as the M25. Dr Harry Atkinson, who chaired the taskforce, declined to comment on the findings. The warnings in the report are uncannily similar to the plots of two recent Hollywood films, *Armageddon* and *Deep Impact*. When he set up the committee, Sainsbury said: "We cannot ignore the risk, however remote, and a case can be made for monitoring the situation on an international basis."



Troubled Times



Devastation

Report Calls for More Asteroid Protection

Reuters, September 18, 2000

It wiped out the dinosaurs 65 millions years ago and only happens every 100,000 years, but British scientists said Monday it is now time to take steps to protect Earth from a major asteroid strike. "These impacts are of low frequency but high consequences," said Professor David Williams, a former president of the Royal Astronomical Society. "The risk is very real, very tiny and we need to do something about it," he told a news conference. Williams and other members of the Task Force on Near-Earth Objects have urged Britain to spearhead an international effort to monitor comets and asteroids to reduce the risk of a devastating collision. In a report released Monday, the task force appointed by Science Minister Lord Sainsbury in January listed a series of recommendations to reduce the odds of a collision that could kill millions of people. "No known asteroid or comet is likely to hit Earth in the next 50 years but there are many we do not know about," said Dr Harry Atkinson, who led the task force.

The heart of the proposed early warning system is a new telescope to be built in the southern hemisphere to survey smaller objects than those usually observed by other telescopes. The telescope would cost an estimated \$21 million and the entire project, which involves the use of other telescopes, space missions, monitoring and an asteroid defense center, could run into billions. Lord Sainsbury said: "This is such an obviously international situation that it very much one where the international community should work together."

Near-Earth objects can range from pebble size to a something resembling a mountain. The bigger the object the smaller the risk there is of it colliding with Earth. Hollywood blockbusters "Deep Impact" and "Armageddon" have raised public awareness of the dangers of near-miss encounters. The British proposal wants to make sure it never happens. A collision with a large asteroid 0.6 miles in diameter could kill a quarter of the world's population. The warning system would allow scientists to monitor asteroids and if a collision is likely populations could be evacuated or the object could be deflected with a missile. The U.S. space agency NASA is already monitoring the skies for objects greater than one kilometer in diameter. Congress wants NASA to detect at least 90 percent of all near-Earth objects that size within 10 years. The British proposal will search the skies for smaller but potentially dangerous objects. Scientific evidence suggests a huge asteroid wiped out the dinosaurs. Experts believe that up to 10,000 football-sized asteroids hit Earth every year but most go unnoticed.



Troubled Times



Plate Shifts

Scientists Suspect Undersea Landslide caused Deadly New Guinea Tsunami

By Bruce Dunford, *Associated Press*, July 18, 2000

Scientists suspect that an earthquake-triggered tsunami that killed more than 2,000 people in Papua New Guinea two years ago on Monday was bolstered by an undersea landslide. It's a danger that also exists for the U.S. East Coast and Southern California. It appears the deadly wave in the South Pacific was the result of an undersea landslide or slump caused by the earthquake whose 7.1 magnitude is considered relatively too weak to generate a major tsunami, said Eddie Bernard, director of the National Oceanic and Atmospheric Administration's Pacific Marine Environmental Laboratory in Seattle. The tsunami that swept ashore along six miles of coastline and destroyed four villages was too big and too late to have been the direct result of the earthquake, he said in a telephone interview Monday. An international team of scientists using surveys and manned submersibles to explore the offshore area found evidence of oceanfloor landslides in August 1998. "They could see an absence of sediments and exposed rocks that would be evidence of a landslide, but there was no previous surveys of the area so it's only speculation about when it occurred," Bernard said. "But they are pretty sure it was a recent event." The team was able to determine that the first wave hit the shore 10 minutes later than would a tsunami generated solely by the earthquake, he said. The biggest wave was more than 40 feet high, according to witnesses.

Earlier this year, U.S. Geological Survey researchers found evidence of a similar land formation off the Southern California Coast. "These discoveries are drawing our attention to other causes of tsunamis, besides the traditional tectonic earthquake," Bernard said. "The more we learn about possible causes, the better we can know when to issue warnings." Offshore areas most prone to landslides are those where eons of runoff sediments from rivers have created terraces built of loose materials, he said. When it breaks loose, the material drops with the speed of a snow avalanche, displacing the water below and leaving a void the water fills with a bump that spawns the localized tsunami, Bernard said. There's no way of knowing what magnitude earthquake will set off a landslide, he said. "It doesn't have to be a big one. It doesn't have to knock you down, but it could still trigger one of these events," Bernard said. "Probably the safe thing to do is to head for higher ground anytime you feel an earthquake." University of Southern California civil engineering professor Costas Synolakis, who headed the National Science Foundation team to Papua New Guinea, has been preparing a computer model to determine which parts of the Southern California coast would be most susceptible to a tsunami. Tsunamis move at 500 to 600 mph (800 to 950 kph) in deep ocean waters but slow down and get taller as they reach shallow offshore waters.



Troubled Times



Earthquakes

Earthquakes Threaten Major Cities Across the U.S

By Randolph Schmid, *Associated Press*, September 20, 2000

While California faces the nation's greatest earthquake risk, a government report says the threat of severe damage from these tremors crosses the nation. New York and Boston in the East and Memphis, Tennessee, and St. Louis in the middle are among the places at risk for damage and loss caused by quakes. Federal Emergency Management Agency Director James Lee Witt said that while the chance of being in an earthquake remained fairly constant over the years, the risk of damage has increased substantially. "That's because of the increase of urban development in high seismic hazard areas and the vulnerability of older buildings, which were not built to adequate seismic code," he said. In addition to California metropolitan areas, cities facing the highest potential losses include Seattle; Portland, Oregon; New York; Salt Lake City; St. Louis; Tacoma, Washington; Las Vegas; Anchorage, Alaska; Boston; Reno, Nevada; Memphis, Tennessee; Charleston, South Carolina; Albuquerque; Newark, New Jersey; Honolulu and Atlanta, according to the report being released Wednesday at the National Earthquake Risk Management Conference in Seattle.

Still, the report anticipates that the vast majority of future damage will be in California because of that state's combination of high seismic hazard and high economic exposure. That combination also applies to Seattle and Portland, according to the study. In recent years, earthquakes have become most closely associated with California because of the widely reported damaging tremors there. But two temblors that vie for recognition as the most powerful quakes felt in North America struck elsewhere. One rocked the New Madrid Fault in Missouri, near its border with Tennessee, in a series of quakes in 1811-12, while the second devastated the Anchorage, Alaska area in 1964. The New Madrid quake reportedly caused the Mississippi River to flow backward for a time but there were few people or buildings in the area at the time. Today the same quake could severely damage the area from St. Louis to Memphis.



Troubled Times



Rogue Planet

[Hubble Image](#) of so-called 'Rogue' Planet is actually a Star

CNN.com, April 7, 2000

A distant object discovered two years ago and thought to be a planet is not a planet at all. It is actually a star, according to astronomers. The Hubble Space Telescope image was originally thought to show the only planet ever directly observed outside our solar system. Astronomers now say the object is too hot to be a planet, and therefore must be a star. "Astronomers now believe it is more likely that the strange object is a background star whose light has been dimmed and reddened by interstellar dust, giving the illusion that it is in the vicinity of the double star system in which it was initially believed to have been a planet," NASA said in a statement Thursday. NASA released the image of the object called, "TMR-1C," to much fanfare in 1998, hailing it as the first extra-solar planet ever photographed. It showed a glowing dot at the end of a massive stream of gas, stretching back to a binary star in the constellation Taurus. A binary star is a pair of stars that closely orbit each other. Though Taurus is 450 light years away, the object was large enough to be photographed by the Hubble, meaning it would have to be many times larger than the size of Jupiter (really the size of a small star). A light year is a measure of distance, about 6 trillion miles.

Astronomer Susan Terebey of the Extrasolar Research Corp. in Pasadena, CA, who analysed TMR-1C, announced at a NASA press conference in 1998 that she thought the object was a hot proto-planet that for some reason had been expelled from its star system and was shooting out into intersellar space all by itself. She did say at the time that scientists needed to make further observations to confirm her theory. Now, in a paper on her re-evaluation of the object being published in the May *Astronomical Journal*, Terebey states, "The new data do not lend weight to the protoplanet interpretation, and the results remain consistent with the explanation that TMR-1C may be a background star."

NASA endorsed the new findings. Astronomers have detected over thirty extra solar planets, using what they call the "wobble" method. In this technique, the researchers do not look for the planets themselves, but rather stars that are wobbling due to the gravitational pull of an orbiting planet. The reassessment of TMR 1-C has no bearing on the planetary status of the last extra solar planets found using the wobble method. Astronomer Susan Terebey of the Extrasolar Research Corp., Pasadena, California, who analysed TMR-1C, announced at a NASA press conference in 1998 that she thought the object was a hot proto-planet that for some reason had been expelled from its star system and was shooting out into intersellar space all by itself. But she said that scientists needed to make further observations to confirm her theory. Now, in a paper to be published in the May *Astronomical Journal*, Terebey states, "The new data do not lend weight to the protoplanet interpretation and the results remain consistent with the explanation that TMR-1C may be a background star."



Troubled Times



Orion

[Rogue Planet find makes Astronomers Ponder Theory](#)

Reuters, October 6, 2000

[Audio](#) from NPR's *All Things Considered*

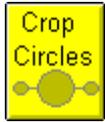
Eighteen rogue planets that seem to have broken all the rules about being born from a central, controlling sun may force a rethink about how planets form, astronomers said Thursday. They said they found a planet-rich region - near a star in the constellation Orion - where stars, brown dwarfs and large, gassy planet-sized objects all exist without the discipline of a solar system. Instead of orbiting neatly around a central star, they drift along in a loose collaboration, the team of Spanish, American and German researchers report. "They look like giant gas balls," Maria Rosa Zapatero-Osorio of the California Institute of Technology in Pasadena (Caltech) and of the Instituto de Astrofísica de Canarias in Tenerife, Spain, who worked on the study, said in a telephone interview. The stars nearby are relatively young - just one million to five million years old, as opposed to the sun which is more than five billion years old and the Earth, which is 4.5 billion years old. The planets are also young, Zapatero-Osorio said. "They are still contracting, collapsing because of their own gravity. With time, they will look like Jupiter and Saturn."

With one exception. Jupiter and Saturn obediently orbit the sun, and are believed to have formed from the same swirling disk of gas and dust that formed the entire solar system. The gas giants in Orion do not seem to have formed that way. "The formation of young, free-floating, planetary-mass objects like these is difficult to explain by our current models of how planets form," Zapatero-Osorio said. "We think they originated in a similar way to stars and brown dwarfs - a big cloud broke down into small pieces. Some were large enough to produce stars, while other fragments were very small and they yielded the objects we discovered in the cluster." But, she added, "Perhaps these objects were ejected from their orbits from their original birthplaces around the stars." The cluster looked at by the international team lies in the constellation Orion - one of the best-known constellations to amateur star-watchers - near a star to the southeast of Orion's "belt." "Only on very clear nights we can see this star. There are many other stars in cluster but because they are at 1,200 light-years they are not so visible to our eye," Zapatero-Osorio said. Light travels 186,000 miles (300,000 km) per second, and a light-year is the distance it travels in a year. "It's an area that has a high concentration of stars, and they are homogeneously distributed within the cluster - one star, one brown dwarf, one planetary mass body, one star, one brown dwarf, one planetary mass body and so on," Zapatero-Osorio said. They are not linked to one another in an orbit, but do move together as a cluster, she said.

She said there are hundreds more planet-like objects in the cluster but her team concentrated on a single, small area for their report, to be published in Friday's issue of the journal *Science*. Zapatero-Osorio said she is applying to use Hawaii's giant Keck telescope to look for even smaller objects in the cluster. Usually, researchers predict that a planet exists by looking for its gravitational effects on a nearby sun. Most planets outside our solar system are far too dim to see using visible light. But Zapatero-Osorio's team actually saw the objects they describe. They used spectrometers, which measure both visible and non-visible energy, and found they seem to be made of matter that resembles the stuff found in known planets. Many stars in our own galaxy, the Milky Way, may have formed in a similar manner to the Orion stars, she said. So there could be similar, hard-to-see planets floating around free near the solar system.



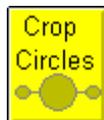
Troubled Times



Crop Circles



Troubled Times



Canadian

Canadian Crop Circle Summary Report 1999

Circles Phenomenon Research Canada, Dec. 29, 1999

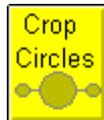
By Paul Anderson, Director

Unexplained "crop circles", circular and other geometric patterns of flattened field crops, continued to be reported across Canada in 1999, as well as a number of other countries, including England, the Czech Republic, Germany, Holland, the USA, Israel and elsewhere. This past year's "circle season" in Canada, from July to October, saw developments in the phenomenon on a number of fronts, including the number of reported formations (20, up from 14 in 1998 and 2 in 1997), size and complexity (ranging from the common small simple circles to formations two to three hundred feet in size, some more elaborate than in past years) and many associated anomalies, notably stalk nodes from some formations with very significant stretching, swelling and expulsion cavities as compared to normal control samples, as well as numerous electrical equipment malfunctions and failures in and around some formations. Formations were reported in six provinces - British Columbia (1), Alberta (4), Saskatchewan (10), Ontario (3), Quebec (1) and Prince Edward Island (1).

Many excellent firsthand reports came in this year, from farmers in whose fields the circles were found, thanks to the efforts of a growing network of CPR-Canada coordinators, field investigators, researchers and other assistants, as well as a reporting hotline and growing publicity in various media, etc. As in past years, most formations were reported near the end of the harvesting season, in late August and September, simply because that is when most of them are initially discovered by farmers as they are combining their fields, literally stumbling across them as it were. Relating to this is the fact that circles in Canada have appeared virtually across the entire country, which geographically is of course much larger an area than England (where it is easier to discover and document new formations almost as soon as they appear, often by pilots, as most formations there tend to be found within a fifty or so mile radius of the Stonehenge / Avebury area). Therefore, a significant number of formations in this country probably never get reported at all, and in fact we know of several cases in the past where formations were found but not initially reported to anyone, then only found about weeks, months or even a year or two later. As mentioned above, thanks to a growing network, hotline, etc., that situation is now beginning to improve.



Troubled Times



Russian Officials

Something struck me, when reading this this crop-circle story carried by *Reuters*. Russian officials are quoted as directly *saying* that aliens have come to earth, ostensibly to collect soil samples. This is the first time I've ever heard of a major world power coming right out and assuming/admitting an alien presence. This is significant!

Offered by [Mike](#).

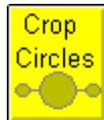
Russian Crop Circles Show Aliens Returned

Reuters, Jul 13, 2001

Russian officials said on Friday that strange circles found in a remote southern field showed aliens had returned to collect Earth soil, four years after first dropping by, Itar-Tass news agency reported. The five concentric circles of wheat, flattened in a clockwise direction, were discovered in a field outside Maikop in the Krasnodar region. The ears of the wheat were undamaged. Tass said similar circles had appeared four years ago. "Officials of the region's Emergency Situations Department say this suggests the beings had come back for more soil samples," Tass said. Britain witnessed a spate of so-called crop circles in the late 1990s, most of which were attributed to pranksters



Troubled Times



Complexity

Gigantic United Kingdom Crop Circle Pictogram

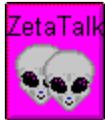
MUFON Skywatch Investigations, June 18, 1999

Stuart Dike and Andreas Müller and the International Crop Circle Archive report a huge crop circle has been found near Alton Barnes, Wiltshire on the June 12, 1999. The first formation closer to the hill is a staggering 700 feet in length, with a mixture of different styles from season's past. It is basically a combination of the very first pictograms from the early nineties with different components from the designs that stirred the world, back in those heady days. The formation is close to Knapp Hill, and has amazing amount of different sections, including the famous Boxes, which were seen on the very early formations, plus Key designs, and an unusual Celtic Cross design placed in the central section of the overall pattern.

Images and a video shot of the East Field by Peter Sorensen, copyright 1999, can be observed at the web site. Editor's Note: The sheer size of the pictograms provides convincing evidence they were not made by human endeavors. Seven hundred feet of intricate pictograms should prove once and for all the reality of the phenomenon based on their complexity, huge size and a possible message. It would require dozens if not hundreds to hoax a site this large and complex. The logical conclusion is that this pictogram crop circle was made by an unknown intelligence.



Troubled Times



Clear Trend

I decided to look and see what kind of data was out there on crop circle frequency and came across a site listing frequency. I am hoping to find more info as well. I got the following figures by running searches on that data base, year by year, on crop circle appearances. I have made some assumptions since my search would only pull up 50 items at the most. At the bottom of the search results it states that you are seeing only 50 (or less) of the total matches for search parameters. I have assumed that the total matches mentioned are the total for the year. With that in mind here are my figures:

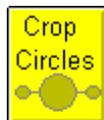
3 '60-'63	1 '70	1 '80	77 '90	194 '00
2 '64	5 '71	2 '81	65 '91	123 '01 YTD
4 '65	1 '72	4 '82	226 '92	by Aug 17, 2001
8 '66	5 '73	2 '83	96 '93	
1 '67	4 '75	5 '84	178 '94	
4 '68	4 '76	3 '85	144 '95	
8 '69	9 '77	8 '86	185 '96	
	9 '78	23 '87	118 '97	
	1 '79	14 '89	185 '98	
			210 '99	

Interesting. Granted, Nancy's prediction was made in 1995 when the occurrences already appeared to be on the rise, but this site is the only one that I can find that lists the circles by year and it APPEARS to be established in 1997 (I reserve the right to be wrong!) Inconclusive, yet provocative!

Offered by [Kevin](#).



Troubled Times



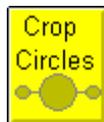
Stunning

The creators of the 'Crop Circle Connector' site are calling this the [Greatest](#) crop circle to ever form so far. It appeared this week [August 17, 2001].

Offered by [Mike](#).



Troubled Times



Mathematics

Excerpts from a [Science News](#) article titled **Math in the Fields**, from the *New Age Journal*, June '97

Whoever or whatever is creating crop circles in southern England is apparently a whiz at math. Several years ago, mathematician/astronomer Gerald S. Hawkins, author of "*Stonehenge Decoded*" and now retired from **Boston University**, noticed that some of the most visually striking of these crop-circle patterns expressed specific numerical relationships among the areas of various circles, triangles, and other shapes that make up the patterns.

Hawkins found that he could use the principles of Euclidean geometry to prove four theorems derived from the relationships depicted in these patterns. In one case, for example, an equilateral triangle fitted snugly between an outer and an inner circle. It turns out that the area of the outer circle is precisely four times that of the inner circle. Three other patterns also displayed exact numerical relationships involving diatonic ratios, the simple whole-number ratios that determine a scale of musical notes. "These designs demonstrate the remarkable mathematical ability of their creators," Hawkins comments.

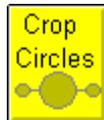
Hawkins also discovered a fifth, more general theorem, from which he could derive the other four. "This theorem involves concentric circles which touch the sides of a triangle, and as the [triangle] changes shape, it generates the special crop-circle geometries," he says. Different triangles give different sets of circles. An equilateral triangle produces one of the observed crop-circle patterns; three isosceles triangles generate the other crop-circle geometries.

Curiously, Hawkins could find no reference to such a theorem in the works of Euclid or in any other book that he consulted. He challenged readers of *Science News* and *The Mathematics Teacher* to come up with his unpublished theorem, given only the four variations. No one reported success. And then, during the crop circle season of 1996, among the dozens of circles surreptitiously laid down in the wheat fields of England, at least one pattern fit Hawkins' theorem. "The crop-circle makers showed knowledge of this fifth theorem," Hawkins reports.

Those responsible for this old-fashioned type of mathematical ingenuity remain unknown. Their handiwork reveals an astonishing ability to enter fields undetected, bend living plants without cracking stalks, and trace out complex, precise patterns demonstrating an uncommon facility with Euclidean geometry. (JG)



Troubled Times



Astrophysicist

Crop Pictograms in the United Kingdom

By Alan Holt, M.S. Physical Science (astrophysics)

In July of this year (2000) I had the opportunity to visit the United Kingdom for a couple weeks. The primary purpose for my trip was to spend some time with my companion Hildi who lives in Glastonbury, England. Since I knew the timing of my visit would allow me to see and hopefully visit some "crop circles" I did a little exploration of web sites before I left. I was absolutely amazed at the patterns which I saw, and was wondering why these developments hadn't surfaced in the general press in the U.S. After my visit and discussions with various people in the UK, it is now clear to me that crop "circles" or pictograms have suffered the same fate that UFOs and other phenomena have which do not fit the current paradigm. Upon arriving in London on July 20, I was picked up by my companion and a friend and on the way back to Glastonbury we stopped at the Barge Inn. The Barge Inn is located along one of the many canals crisscrossing England, and is a meeting place and informal headquarters for crop "circle" researchers and visitors. Photos of the latest crop "circles" are tacked up on a bulletin board.

Outside looking toward nearby hills a simple crop "circle" could be seen. After getting something to eat, we went up to the circle and entered it. The plants on the floor of the circle were woven into a basket like pattern. Unlike the few hoaxed or manmade "circles", the stalks of the plants were not broken but looked like they had suddenly decided to bend down and grow in a horizontal direction. My assessment after visiting several crop pictograms, is that the man-made "circles" are relatively few, which are composed of simple forms having very poor geometric precision compared to the amazing pictograms. There are other factors which clearly delineate a man-made circle from the absolutely amazing pictograms, which can be learned from the web sites, and several books. I would recommend the book *Crop Circles: The Greatest Mystery of Modern Times* by Lucy Pringle, 1999, Harper Collins Publishers, ISBN 07225 3855 3, \$27.00. I had an opportunity to talk with Lucy at the Glastonbury Crop Circle Conference held in July 28 -30 during my visit. She personally flies out over the fields and takes photos. Since I have for many years used enhanced intuitive capabilities to pick up additional information, I did sit in the crop circle near the Barge Inn and picked up some interesting impressions pertaining to the future. In addition, I put out the thought, somewhat as a test but really a request, that I would like to see a crop pictogram appear which could provide me some insight into the direction I should pursue in my advanced transport/field physics research activities.

We then went on to Glastonbury, to London, and then back to Glastonbury. Eight days later, we went back out into crop circle country and again visited the Barge Inn. On the bulletin board, was an astounding new pictogram. The pictogram was shaped like a bar magnet, with magnetic field lines coming out of the north and south poles. The pictogram had appeared on July 22 two days after my arrival in the England (and my first visit to the Barge Inn). We determined its location, visited the pattern and spent a lot of time exploring it. The precision and intricacy of the pattern was stunning. Even the farmer whose field the pattern had appeared in was overwhelmed by this pictogram. He indicated that there had been other patterns in his field before, but he had still harbored some doubts concerning who or what had made them. But with the appearance of this pictogram, he knows now that this is a true mystery. From his perspective there is *no* possibility that this was made by humans or our technology, and I agree with him. While in the pattern, I recalled the thought which I had sent out for a pictogram to appear which could provide some direction for my research activities. I have to conclude that whatever intelligence is responsible for these

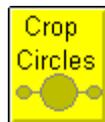
patterns, it has connections with or links with our human consciousness.

There is truly an astounding phenomena unfolding in England and elsewhere in the world. Its very unfortunate that the unscientific thinking, and perhaps deliberate disinformation, of a few individuals have been picked up and accepted by a naive press world-wide. As a result millions of people have been deprived of the opportunity to experience a consciousness expanding phenomena. It is our civilization's loss; but fortunately the apparently successful attempt to ridicule or "debunk" crop circles will do nothing to stop what may be a major transformation ahead for humanity. From my perspective, there is also a warning or "be prepared" message coming through the crop pictograms as well. We have not been very good stewards of the planet on which we are living. We have recklessly depleted resources; contaminated water, air and Earth; threatened the foundation of Earth's viability with the use and testing of nuclear weapons (and perhaps other exotic technology) and continue to waste at least one-half of what we produce (especially here in the U.S.). The Earth can compensate for some of our mistakes, but it too goes through transformations. If our care of our planet is not dramatically improved soon, we may not have many more years to enjoy the beauty and nurturing environment which even now the Earth still provides (the year 2012 could be a turning point).

Alan Holt is currently a project manager for NASA's International Space Station: The above does not necessarily reflect the views of NASA and are the sole views of Alan Holt.



Troubled Times



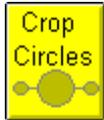
Magnetic Fields

Of late [1999] there has been an increase in Crop Circle activity in the UK. One field in Alton Barnes, Wiltshire now boasts five designs with one of the largest ever recorded in the UK. Researchers are now making their annual visits to the areas involved. The news reports them as hoaxes as per usual and I cannot deny that some are indeed just that. However experts are now researching the increased magnetic fields surrounding genuine circles and are being financed by a Us Billionaire Laurance Rockefeller to the tune of 1 million pounds. The [BBC](#) give details.

Offered by [Brian](#).



Troubled Times



Crop Circle Analysis

The Discovery of Thirteen Short-Lived Radionuclides in Soil Samples from an English Crop Circle

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In this paper we report the discovery of thirteen short-lived radionuclides (radioactive isotopes) in soil samples taken from an English crop circle. We will explain the significance of this discovery, rule out several mundane explanations for it (including hoax), and propose that the radionuclides were created by bombardment of the soil with deuterium nuclei (also called "deuterons.") We will also consider whether the radionuclides present a health hazard and conclude that they probably do not.

A note on terminology: we shall use the terms "isotope", "radioactive isotope", and "radionuclide" more or less interchangeably. Not all isotopes are radioactive, of course, but the ones we are discussing are. The term "radionuclide" simply means an atom whose nucleus is unstable and thus radioactive.

I. The Experimental Results

The oval-shaped crop circle (Photo 1) was formed the night of July 31 / August 1, 1991, near the town of Beckhampton. [1] On August 5th, we gathered two soil samples inside it and took a control several dozen feet away. Their emissions of alpha and beta particles were measured with a Tennelec/Nucleus LB4000-8 gas flow counter on August 18th. Their emissions proved to be markedly elevated, compared to the control. One sample (1A) yielded alpha emissions 198% above the control, and beta emissions 48% above the control. The other sample (1B) yielded alpha emissions 45% above the control, and beta emissions 57% above the control. [2]

We hypothesized that these anomalies were too large to ascribe to normal soil variation. This was supported by the fact that two controls from another formation in the area (formed August 9/10, SU 076 679) yielded alpha and beta counts within 2% and 4% of each other. By contrast, the two samples from within the formation yielded alpha and beta counts 22% to 45% higher than the averaged controls. In light of our subsequent discovery of short-lived radionuclides in the Beckhampton oval, we think it reasonable to believe that the samples' emissions were not due to normal soil variation.

Our next step was to identify the specific radioactive isotopes responsible for the elevated emissions. Thus we sent the samples to another lab for gamma spectroscopy, which was performed on August 26th. Analysis of the output revealed the presence of thirteen unusual and short-lived radionuclides in the samples. Two were found in all three samples. Eleven were in either 1A or 1B but not in the control. We list these eleven radionuclides in Table 1.

(An explanatory note: the number following each isotope's name indicates its atomic weight, i.e. the combined number of protons and neutrons in the nucleus. It is necessary to specify the atomic weight to distinguish different isotopes of the same element from each other. For example, uranium-235 and uranium-238 are different isotopes of uranium, and have different nuclear properties, though they remain chemically identical. Most elements have many isotopes, some

of which are common and long-lived, some of which are rare and short-lived. The ones listed in Table 1 fall in the latter category.)

Table 1. Radionuclides in Samples 1A and 1B But Not In The Control

Radionuclide	Abbrev.	Present in 1A	Present in 1B	Half-life
Lead-203	Pb-203	Probably*	No	12.17 days
Europium- 146	Eu-146	Yes	No	14.6 days
Tellurium-119m	Te-119m	Yes	No	4.7 days
Iodine-126	I-126	Yes	No	13.02 days
Bismuth-205	Bi-205	Yes	No	15.31 days
Vanadium-48	V- 48	Probably	No	16.1 days
Protactinium- 230	Pa-230	Yes	Yes	17.4 days
Ytterbium-169	Yb-169	Yes	No	32 days
Yttrium-88	Y-88	Yes	Probably	106.6 days
Rhodium-102	Rh- 102	Yes	No	2.9 days
Rhodium- 102m	Rh-102m**	Probably	No	207 days

* "Probably" indicates identification somewhat short of certainty, due to low activity.

** "m" means "metastable." Rh-102m has the same number of protons and neutrons as Rh-102, but its nucleus has a different physical configuration. The two isotopes have different half- lives but, for our practical purposes, the same ancestors and decay products. We thus treat them as a single isotope.

It is of crucial importance that none of the radionuclides in Table 1 appeared to be in the control, since it helps rule out many mundane explanations. The control did have long-lived, naturally occurring radionuclides such as uranium-238 and radium-226, and long-lived artificial radionuclides from Chernobyl such as cesium-137. But all three samples contained these radionuclides, unsurprisingly.

But the presence of the short-lived radionuclides is surprising. To understand why, the reader should consider their halflives (see Table 1.) "Half-life" refers to the amount of time it takes for half of a given amount of an element to decay into some other substance. For example, it would take 17.4 days for half of a given amount of protactinium-230 to decay. After twice that time, only 25% of the original amount would be left, and so on. Therefore, any amount of protactinium-230 will diminish to undetectable levels in a matter of weeks. By contrast, naturally occurring uranium-238 has a half-life of over four and a half billion years. It thus can be naturally occurring whereas Pa-230 cannot be. Should scientists want to study short-lived isotopes, they must synthesize them in cyclotrons or experimental nuclear reactors; they can't just refine them from soil or ores. Finding them in apparently ordinary soil from rural England is almost as surprising as finding cut diamonds would be. It is radically out of line with normal expectations.

Before going on with our discussion, we want to reassure readers that the presence of the short-lived isotopes does not appear to present any health threat. Even though the samples emitted higher percentages of radiation than the control, their total emissions were far below the danger threshold. This is because the radionuclides were present in such low concentrations that they could only be detected by exquisitely sensitive equipment. The absolute quantities of the radionuclides were so low that one would probably be exposed to more radioactivity by eating a banana (which contains the natural radionuclide potassium-40) than by spending 24 hours in a fairly new crop circle.

Readers should also consider the fact that none of the leading researchers of the phenomenon have contracted cancer or other radiation-induced illnesses, despite having spent many hundreds of hours in crop circles over a decade of study. Not only that, it is far from clear that radiation anomalies are a general property of crop circles. Of the six we examined for elevated alpha/beta emissions, only two exhibited significant increases. Two others exhibited apparently significantly lower emissions, and the last two exhibited no significant differences. [3] Research in 1992 could reveal that only a certain percentage of apparently genuine crop circles exhibit radiation anomalies at all. This would further reduce cause for concern.

To return to our discussion, where could the radionuclides have come from? Let us first consider (and reject) eight mundane explanations. Actually, the absence of the radionuclides in the controls automatically rules out most of these explanations, but for thoroughness's sake, we will consider them anyway.

1. We have already established that they cannot be naturally occurring radionuclides, due to their short half-lives.
2. Contamination from the sample vials is unlikely. We used washed-out plastic pharmaceutical jars. These could have caused some small degree of chemical contamination, but not radioactive contamination.
3. Technologically unsophisticated hoaxers are out of the question, since no amount of foot-stomping will form radioactive isotopes in soil. It is not energetic enough by many orders of magnitude; it would be like trying to compress coal into diamonds by jumping on it.
4. Atomic tests and Chernobyl are untenable as sources, since these events happened years, not days, ago. But to be absolutely sure, we checked Table 1 against inventories of the emissions from Chernobyl, atomic bomb tests, and nuclear installations. None of the radionuclides in Table 1 were found in any of the inventories. Furthermore, we compared Table 1 to the decay products of each radionuclide in the inventories, and found no matches. We therefore feel reasonably confident that human-made radionuclides are not responsible for the anomalies. [4]
5. Likewise, we have ruled out radionuclides which are the products of bombardment by cosmic rays. We checked an inventory of cosmogenic radionuclides, and none of them were or could have decayed into anything in Table 1. [5]
6. Since the soil samples traveled by air, we felt it necessary to consider the effect of airport bomb detectors. The sample set under discussion was airmailed. The other (the one with two controls) was packed in a carry-on bag. But we can rule out bomb detectors simply because any detector would have affected the controls as well. In any case, airmail is not screened, and X-ray machines are not energetic enough to create those isotopes. They can't even fog ordinary film.
7. What about thermal neutron activators? These are experimental devices being tested in several English airports. They bombard checked luggage with neutrons from californium-252 in order to activate and detect the nitrogen in plastic explosives. But many of the radionuclides, such as Y-88, Bi- 205, and V-48, cannot be made by neutron activation. Thus even a TNA device could not have made all of the radionuclides, even if by some miracle the samples had gone through one. [6]
8. We believe we can rule out deliberate "planting" of radionuclides in crop circles by determined hoaxers using hospital low-level radioactive waste. First, hospital waste simply does not consist of such radionuclides. Hospitals typically use extremely short-lived isotopes like technetium-99m (half-life: six hours) to minimize their patients' exposure to radiation. They are generated from somewhat longer-lived long-lived radionuclides like molybdenum-99, which has a half-life of 2.9 days. (Hospitals typically receive lead- encased shipments of molybdenum-99 three times a week.) In hospital parlance, the longer-lived isotopes function as "cows" producing short-lived radionuclides which are "milked" when needed. Hospital "cows" include none of, and produce none of, the radionuclides in Table 1. [7] Second, we think it unlikely that hoaxers would have been able to pour or spray any contaminated solution over the many thousands of square feet inside a large crop circle. Third, most of Table 1's radionuclides are very difficult and expensive to obtain. One must usually get a license from the government to buy them, which takes months, then commission a cyclotron to manufacture them, which costs a great deal of money. Fourth and finally, any such heroic effort for any given formation would almost certainly be wasted, since only a handful have been tested for radiation.

Thus we have ruled out natural radionuclides, cosmogenic radionuclides, sample jar contamination, atmospheric nuclear tests, Chernobyl, airport X-ray detectors, TNA detectors, and contamination with hospital waste by hoaxers.

We must now consider some less mundane possibilities.

II. The Origin of the Radionuclides

Broadly speaking, there are two ways the radionuclides could have got into the ground. One way is contamination, which would consist of pouring or spraying a solution or dust containing the radionuclides onto the ground. We think contamination unlikely for the same reasons a hoax is unlikely: the difficulty of making the radionuclides prior to placing them in the area, and the almost equal difficulty of applying the contaminated material over a large but sharply delimited area.

The other way is activation. Activation is the process of bombarding atomic nuclei with energetic subatomic particles. The nuclei capture the particles and are thus transformed into different nuclei. If the number of neutrons in the nuclei change, they become different isotopes of the same element. If the number of protons change, they become different elements altogether. For example, it is theoretically possible to change lead into gold by activating it with the right mixture of particles. The only obstacle, aside from its difficulty, is the fact that it would cost more than an ounce of gold to produce an ounce of gold.

There are many different kinds of activation: activation by alpha particles, activation by protons, activation by deuterons, and so on. Each kind will have different effects on a given atomic nucleus. But despite this complexity, activation enables us to produce an elegant hypothesis about what happened to the soil. We have discovered that the radionuclides in Table 1 have one and only one common denominator, and that is activation of naturally occurring elements with deuterium nuclei (deuterons.) In a moment we shall undertake to prove this, but first it may be helpful to explain just what deuterium nuclei are and what they can do.

Deuterium is an isotope of hydrogen. Its nucleus is composed of a proton and a neutron. (The rest of the atom consists of an electron, which is easily stripped off to leave the ionized, bare nucleus.) Since ordinary hydrogen's nucleus contains only a proton, deuterium's extra neutron entitles it to be called "heavy hydrogen." Deuterium is not a particularly rare isotope, since it exists in small quantities in ordinary water. It is a useful one, however, since it is used to control neutron emissions in fission reactors, and constitutes much of the fuel in fusion reactors. Of course, knowing these basic facts still tells us nothing about where these deuterium nuclei (we shall henceforth use the term "deuterons") came from. They could have come from any number of sources, including ones not yet known. At the moment, we think it more useful simply to assert that they existed than to speculate about their origin.

In any case, the deuterons we hypothesize are remarkable not because they are rare, for they are not, but because they are highly energetic. Most deuterium particles found in nature are relatively unenergetic, such as the ones in ordinary water. An unenergetic, that is, a slow-moving, deuteron cannot penetrate and alter atomic nuclei, just as a bullet casually tossed at a television set will not penetrate it. An energetic deuteron is a different story. A deuteron accelerated to high speeds can penetrate an atomic nucleus and "activate" it, i.e. convert it into a different isotope or even a different element. Like a bullet fired from a gun, it can radically alter the objects it strikes. But the energies would have to be large. We think that to activate atomic nuclei, deuterons would have to possess energies exceeding one mega-electron-volt (MeV). That means, roughly speaking, that each deuteron would have to be accelerated by an electrical field possessing a total potential of not less than one million volts, which is a considerable amount of energy.

In this paper, we make no real attempt to figure out what could have generated energies of that scale, nor do we analyze whether such energies could arise naturally on planetary surfaces. For the moment, our goal is only to convince readers that the energies existed. To do that, we need to show that deuteron activation is indeed the most plausible route of production of the radionuclides in Table 1. For if deuterons that energetic existed, then so did the energies. We will do this by accounting for each radionuclide in terms of deuteron activation. The following discussion will be fairly long and technical, but we think it necessary to defend our thesis in some detail, since it is so unusual and surprising. The nontechnical reader can skim the discussion without trying to understand all of its details; the important thing to understand is that we are showing that all the radionuclides very likely came from a common source. To put it another way, we are showing that there is considerable internal consistency to the data. If we can do this, it will help prove that we have discovered something significant about the actual physical mechanism which created this particular crop circle. To be specific, it appears to have emitted quantities of deuterons, which converted stable isotopes in the

soil into unstable, radioactive ones.

We shall forthwith account for each radionuclide in terms of deuteron activation. Let us start with the easiest four to explain, protactinium-230, iodine-126, rhodium-102, and rhodium-102m. These four radionuclides have one thing in common: they can only be made by activation. (To say the same thing another way, none are ever generated by radioactive decay.) What atoms could have been activated to make them, then? There are several possibilities for each radionuclide (see Table 2.) The nontechnical reader should not be intimidated by this table. It simply lists each radionuclide in the first column, and each of its possible atomic parents in the second column, along with what would have had to activate them in parentheses. For example, protactinium-230 can be formed by three different activation reactions: a proton impacting a thorium-232 nucleus, a deuteron impacting a thorium-232 nucleus, or a deuteron impacting a thorium-230 nucleus. [8]

Table 2. Radionuclides Which Are Not Decay Products, And Possible Activation Parents For Them

Radionuclide	Possible Activation Parents (activating particle in parentheses)			
Pa-230	Th- 232(proton)	Th-232(deuteron)	Th-230(deuteron)	
Rh-102	Ru-101(deuteron)	Ru-102(proton)	Ru- 102(deuteron)	
Rh-102m	Pd- 104(deuteron)	Rh-103(neutron)	Rh-103(deuteron)	Rh- 103(gamma)
I-126	Sb-123(alpha)	Te- 125(deuteron)	Te-126(deuteron)	I-127(gamma)

Note that all four radionuclides have one, and only one, common denominator: deuteron activation. While this does not rule out the other kinds of activation, it does allow the hypothesis that only one kind was involved. Let us therefore focus on the parents which can be deuteron-activated. Table 3 is Table 2 with the non-deuteron-activated parents left out. It also asks an important question: are the remaining possible parents naturally occurring? In fact all of them are, which significantly enhances our hypothesis.

Table 3. Hypothesized Activation Parents Of Pa-230, Rh-102, Rh-102m, and I-126, Assuming Deuteron Activation

Radionuclide	Hypothesized Activation Parents	Naturally Occurring? (% of All Naturally Occurring Element
Pa-230	Th-232	Yes (100%)
	Th-230	Yes (decay product of U-234; extremely rare)
Rh- 102	Ru-101	Yes (17.1%)
	Ru- 102	Yes (31.6%)
Rh-102m	Pd-104	Yes (11.0%)
	Rh-103	(100.0%)
I-126	Te- 125	Yes (7.0%)
	Te-126	Yes (18.7%)

The percentages denote how much of that element is constituted by that particular isotope. Most naturally elements are composed of more than one isotope of that element.

Now let us consider another two radionuclides from Table 1, yttrium-88 and europium-146. These are more complicated cases because

they could have been made by decay or activation. Let us first consider the possibility of decay. Yttrium- 88 has one decay parent, zirconium-88. Zirconium-88 has a half-life of 83.4 days, which means that some of it should have been left in the sample if it was the source of the yttrium-88. However, the gamma spectroscope detected no zirconium-88; we can thus rule out decay. Something must have been activated, then, and there is only one candidate: strontium-88 (82.6% of all naturally occurring strontium.) Strontium-88 can be made into yttrium-88 either by deuteron or proton activation. We infer the common denominator of deuteron activation.

The europium-146 presents a case like yttrium-88's. One of its decay parents, gadolinium-146 (half-life: 4.6 days) was not found in the sample. Its other decay parent is terbium-150, but since only .05% of it decays into europium-146, a fairly large amount of this rare element would have had to be present in order to be converted into detectable quantities of Eu-146. Activation is again the more likely possibility. It turns out that europium-146 can be made by proton activation of samarium-147 (15.1% of all naturally occurring samarium), or by deuteron activation of samarium-144 (3.1%.) [9] Our reasoning is summed up in Table 4:

Table 4. Radionuclides with Parents Not Present, And Activation Possibilities

Radionuclide	Decay Parents	Activation Parents	Deuteron-Activated Parents Naturally
Y-88	Zr-88 (none)	Sr-88(proton) Sr- 88(deuteron)	Yes (82.6%)
Eu-146	Gd-146 (none) Tb-150 (only 0.05% decays into Eu-146, hence unlikely)	Sm-147(proton) Sm-144(deuteron)	Yes (3.1%)

Let us move on to consider five more of Table 1's radionuclides, namely bismuth-205, vanadium-48, tellurium-119m, ytterbium-169, and lead-203. These have more than one possible decay parent. None of these possible decay parents were detected, however. There are two reasons for this. One is that most of the decay parents have such short half-lives that they would not have been detectable by the time the samples were counted. The other is that there probably were never any of those decay ancestors in the sample to begin with, for all of the radionuclides can be much more easily accounted for by activation.

Consider the bismuth-205 first. It has two possible decay parents, astatine-209 (half-life: 5.41 hours) and polonium-205 (half-life: 1.8 hours.) Since 99.86% of polonium-205 decays into bismuth-205 whereas only 4.1% of astatine-209 does, the polonium is the more probable decay parent. But polonium-205 is still not a very probable parent, partly because it cannot be made by deuteron activation, and partly because its parents can only be made by activation methods which are far more exotic than the kinds we have been discussing. On the other hand, bismuth-205 can be made by deuteron activation of lead-206, which constitutes 25% of all naturally occurring lead. Thus deuteron bombardment of the soil almost certainly would have produced some bismuth-205.

Take the vanadium-48 next. Its only decay parent is chromium-48 (half-life: 21.56 hours), but it cannot be made by deuteron activation. On the other hand, vanadium-48 can be made by deuteron activation of titanium-48 or chromium-50. The former constitutes 73.7% of all naturally occurring titanium, and the latter constitutes 4.35% of all naturally occurring chromium.

To keep this paper from growing too tedious, we will not discuss the tellurium-119m, the ytterbium-169, and the lead-203. However, our reasoning for them is similar to the two radionuclides just discussed above, and is summed up along with them in Table 5.

Table 5. Radionuclides with Short-Lived (And Not Present) Decay Parents, And Activation Possibilities

(NPDA="not producible by deuteron activation")

Radionuclide	Decay Parents	Activation Parents	Deuteron-Activated Parents Naturally Occurring?
Bi-205	Po-205(NPDA)	Pb-206(deuteron)	Yes (25%)
	At-209(NPDA)		
V-48	Cr-48(NPDA)	Ti-48(deuteron)	Yes (73.7%)
		Cr-50(deuteron)	Yes (4.35%)
		Sc-45(alpha)	
		Ti-48(proton)	
Te-119m	I-119(NPDA)	Sb-121(deuteron)	Yes (57.3%)
		Sb-121(proton)	
		Sn-116(alpha)	
Yb-169	Lu-169(NPDA)	Tm-169(deuteron)	Yes (100%)
		Yb-168(neutron)	
Pb-203	Bi-203(NPDA)	Tl-203(deuteron)	Yes (29.5%)

This concludes our discussion of the 11 radionuclides of Table 1. We sum up our analysis in Table 6, which shows how we accounted for the radionuclides as producible by deuteron activation of naturally occurring stable elements in the soil.

Table 6. Summary. Most Likely Parents of the Radionuclides in Table 1 (Assuming Deuteron Activation)

Radionuclide	Present in Control?	Believed Activation Parent(s)	Are Activation Parent(s) Naturally Occurring?
Lead-203	No	Tl- 203	Yes
Europium-146	No	Sm- 144	Yes
Tellurium-119m	No	Sb-121	Yes
Iodine-126	No	Te-125, Te- 126	Yes
Bismuth-205	No	Pb-206	Yes
Vanadium-48	No	Ti-48, Cr- 50	Yes
Protactinium-230	No	Th-230, Th-232	Yes
Ytterbium-169	No	Tm-169	Yes
Yttrium-88	No	Sr-88	Yes

Rhodium-102	No	Ru-101, Ru-102	Yes
Rhodium-102m		Probably	Yes

Our analysis was not quite exhaustive. We cut through a maze of isotopic parents in the belief that the simplest solution was the most likely to be correct. We could be wrong: some of these radionuclides could theoretically be end-products of a cascade of decayings of extremely exotic and short-lived isotopes. Or proton activation could have produced some of the radionuclides while deuteron activation produced the others. But we think these possibilities unlikely. The former requires much greater complexity to arrive at the same result; the latter would probably have produced radionuclides which could only be made by proton activation, yet we have found none.

III. Loose Ends

No item of exploratory scientific research can answer all questions and settle all difficulties. Ours is no exception. Let us discuss what loose ends need to be cleared up with further research. (Nontechnical readers may wish to skip this section, since it is not central to our analysis.) The first loose end is the existence of two unusual radionuclides in all three samples, including the control. They are listed in Table 7.

Table 7. Radionuclides Present in 1A, 1B, And The Control

Radionuclide	Present in 1A?	Present in 1B?	Present in Control?	Half-life
Gold-194	Yes	Yes	Yes	1.65 Days
Thallium-202	Yes	Yes	Yes	12.2 Days

The gold-194 is puzzling, since it has such a short half-life - less than two days. Either enormous quantities of it were initially present when the samples were collected, in which case the field would have been extremely radioactive, or something long-lived is continuously generating it by decay. The latter seems the likelier case. Gold-194 can be generated by the decay of mercury-194, which has a half-life of 520 years. The mercury-194 could have been created by a two-step activation process, whereupon the deuterons activated platinum-194 (32.9% of all natural platinum) to create gold-194, which was itself activated to make the mercury-194. The deuteron stream would have to last long enough, and be intense enough, to activate isotopes which had just been created by that same stream.

Assuming this is plausible, how do we explain the presence of the gold-194 in the control? Consider the fact that the mercury-194 has a half-life of 520 years. If the field had had crop circles in earlier years, the mercury-194 could have been spread around the field by wind, erosion, and plowing.

There are other possibilities, of course: the Chernobyl tables could be incomplete, or a nearby reactor might have emitted some mercury-194. Further research is needed to clear up the question.

Our analysis is similar for the other radionuclide, thallium-202.

- It does not appear to be a product of Chernobyl or atomic tests. Its only decay parent is lead-202, which has a half-life of 53,000 years.
-
- Lead-202 can be made by deuteron activation of thallium-203 (29.5% of all naturally occurring thallium.) Thus the thallium-202 could also be a remnant from earlier crop circles in the area, or an unlisted product of nuclear reactors.

The second loose end is why none of the hypothesized parents are abundant elements. If trace elements like titanium and samarium were activated, it seems that abundant elements like silicon and oxygen should have been also. To answer this question, we took each element which composes more than 1% of the earth's crust and found its most likely deuteron-activation products. It turns out that they are either stable, in which case they would not have been

detected by our instruments, or they have such short half- lives that they would have decayed off before testing, as Table 8 shows.

Table 8. Most Likely Deuteron Activation Products of Elements Which Compose More Than 1% Of The Earth's Crust

Element	Abundance in Crust	Most Likely Product	Product's Half-Life
Oxygen-16	46.6%	Flourine-17	1.075 minutes
Silicon-28	27.72%	Phosphorus-29	2.5 minutes
Aluminum-27	8.13%	Silicon-29	Stable
Iron-56	5%	Cobalt-58	9.15 hours
Calcium-40	3.63%	Scandium-42	1.027 minutes
Sodium-23	2.83%	Magnesium-25	Stable
Potassium-39	2.59%	Calcium-41	Stable*
Magnesium-24	2.09%	Aluminum-26	6.3 seconds

* Calcium-41 has a half-life of 1.03×10^5 years. It is thus not truly stable. But it does not emit gamma rays, so it would not have been detected by our instruments.

The iron-56 deserves further scrutiny. Deuteron activation of iron-56 can also produce the radionuclides manganese-54 (half-life: 312 days) and cobalt-57 (half-life: 72 days.) But these would require levels of energy perhaps higher than required to generate most of the observed radionuclides. Our data did show peaks in the region of manganese-54, but not at sufficient resolution to permit positive identification. Clearly, in 1992 we will have to look carefully for activation products of the soil's abundant elements. Prompt testing will greatly facilitate the search.

Table 8 shows something else: the soil could well be dangerously radioactive for a short time after the formation is made. Since elements like silicon and oxygen (which exists as oxides bound up in the soil) are so abundant, their activation products would also be abundant. They would emit a large aggregate quantity of radiation, albeit for only a few minutes or hours. Out of simple prudence, then, fulltime researchers who enter a crop circle the morning after it is made should carry a sensitive survey meter (a Geiger counter is one kind of survey meter, though we would use other kinds) or an electrostatic film badge. Given the low amounts of radiation we think we are dealing with, these tools will have to be highly sensitive, and their users will have to be well trained; anything less would risk yielding nothing but false negatives. These instruments should reveal no cause for alarm, but if they do, we shall adopt more cautious sampling procedures.

Additional loose ends derive from the fact that the size of our sample set is too small to show that short- lived radionuclides are part and parcel of the crop circle phenomenon. However, we think our findings are so suggestive that further research is emphatically warranted. If one takes a single bucket of rock from a mine and finds gold in it, one is well justified in doing further digging.

We also need to take more controls in 1992. For this paper, two or three would have been better than one. Even so, the radionuclides are so unusual that finding them anywhere is cause for interest. The difference between our samples and single control is qualitative in an absolute, not a statistical, sense. The case would warrant further investigation even without a control.

In addition, our interpretation of the data from the gamma spectrometer needs to be confirmed by similar findings from independent laboratories. Spectroscopic data is extremely complex, and its interpretation is inevitably a matter of

judgment. But our interpretation of the data has convinced several of our associates in Oak Ridge. We believe it will stand; and we would be glad to show the raw data to those who wish to examine it for themselves.

IV. Where Might The Deuterons Have Come From?

So far, our hypothesis of a stream of deuterons suggests a possible physical concomitant of whatever flattens the plants, but it provides almost no clues as to the actual cause of the phenomenon.

We can only speculate on several possibilities.

One possible cause is the naturally occurring "plasma vortex" hypothesized by some meteorologists. [10] The question is: is this hypothetical (and never experimentally detected) plasma vortex theoretically capable of generating the requisite number and density of deuterons? Obviously, this is a question requiring very detailed analysis, which we lack the expertise to perform. While we doubt that the lower atmosphere can naturally generate deuterons with energies sufficient to activate atomic nuclei, the possibility cannot be ignored.

If our research in 1992 demonstrates the presence of short-lived radionuclides in many crop circles, the meteorologists will have the burden of proving that their hypothesized plasma vortex can produce them. Also, since the radionuclides have appeared in at least one complex formation, the meteorologists would have the additional burden of proving that their plasma vortices can produce such shapes. So far, they have proven neither assertion. In fact, they have given up on the latter one. For example, Terence Meaden has recently asserted, "It is obvious that most, perhaps all, complex sets of circles seen in Britain in recent years have been made byhoaxers." [11] Our data suggests otherwise.

The only other cause we can think of is a deliberately directed stream of deuterons. It would be worthwhile to calculate the energy required for such a stream, given the radionuclides observed, their concentration, and the size of the area in which they are found. The ballpark figures might help us evaluate theories of intentional manufacture.

However, hypothesizing a stream of deuterons still does not explain how the plants are actually flattened. The deuterons could not exert enough force to press the plants to the ground, for if they did, the plants would also be burned to a crisp. However, perhaps they heat the plants to some extent. Since it appears from W.C. Levensgood's observations of plant cells that the plants are strongly but briefly heated, it might be possible to compare calculations of the heat experienced by the plants with the heat theoretically generated by the deuteron stream. [12] Perhaps the deuterons heat the plants just enough to make them pliable, while some other force bends them to the ground in the intricate patterns often observed. [13] Or perhaps the deuterons are not directly necessary to the flattening process at all, but are merely a concomitant of the overall physical process.

V. Conclusion

Our results point suggestively toward some radioactive source which exposes the soil to a stream of energetic deuterium nuclei. To test this hypothesis, we hope to perform these same tests on multiple crop circles next summer. 1992's radiological research program should include the following aspects:

- Locating of financing for research, both from American and English sources
- Use of survey meters and film badges to test for health hazards and possibly to identify formations most deserving of detailed analysis
- Harvesting of multiple samples and controls from each crop circle
- Harvesting of samples across circle-less fields, to assess soil homogeneity
- Enlistment of U.K. labs with radiological equipment or, failing that, transportation of equipment from the U.S., or mailing samples overnight back to the U.S.
- Obtaining permits where needed for soil and plant importation
- Coordination with daily aerial surveillance, in order to sample crop circles promptly after they are made
- Regularization of sampling techniques
- Training, where needed, in the methods of analysis; and
- Improvement of the network for exchanging information.
- The trail has grown hot, literally as well as figuratively. We must follow it wherever it may lead.

Acknowledgements

The authors wish to thank the following people for their help and advice: Kevin Folta, Tsahi Gozani, Conrad Knight, Jurgen Kronig, W.C. Levengood, David Chioni Moore, Chris Rutkowski, Dennis Stacy, and George Wingfield. The secondary author's fieldwork in England was supported by a grant from the Fund for UFO Research.

Captions (Photo not included in file)

Photo 1. The "fish" or "long oval" formation near Beckhampton. According to John F. Langrish, it was formed on July 31 / August 1, 1991, at SU 0865 6810. Photo courtesy of Jurgen Kronig.

Notes

[1] According to John Langrish, the Beckhampton oval's location was SU 0865 6810. (Eight-figure Ordnance survey references are accurate to 10 meters.) The date given in the text differs from the one given in a preproduction version of Michael Chorost's report, *The Summer 1991 Crop Circles* (Fund for UFO Research, in press.) The change was made due to more authoritative data supplied by Langrish.

[2] Variations above 10% were considered significant. The data and statistics may be obtained from the secondary author at North American Circle, P.O. Box 61144, Durham, North Carolina, 27715-1144 USA.

[3] The six cases are discussed at length in *The Summer 1991 Crop Circles: The Data Emerges* (Fund for UFO Research, Mt. Rainier, MD, in press.) A condensed version of the report was printed in the *Mufon UFO Journal*, October 1991, pp. 3-15.

[4] The inventory of Chernobyl emissions is in "**Cleanup of Large Areas Contaminated As A Result Of A Nuclear Accident**," *Technical Reports Series* no. 300, International Atomic Energy Agency, Vienna, 1989, p. 104. The inventory of widely distributed human-made radonuclides is in **Environmental Radiation Measurements**, *National Council on Radiation Protection and Measurements Report* no. 50, Washington, D.C., 1976, pp. 12-14.

[5] "**Environmental Radiation Measurements**" (see note 4), 11.

[6] We checked these facts with the primary designer of the device, Dr. Tsahi Gozani of SAIC in California.

[7] We checked these facts with Conrad Knight, a Radiation Safety officer at Duke University Medical Center.

[8] All of the decay/activation parents and products cited were obtained from Edgardo Browne and Richard B. Firestone's "**Table of Radioactive Isotopes**." New York: John Wiley and Sons, 1986.

[9] The Browne and Firestone reference does not show a deuteron activation which yields Eu-146, but another reference, the *Gerhard Erdtmann* one, does. We believe that one is accurate, because Eu-146 should be producible from a Sm-144 (d, nothing) reaction. Again, we infer deuteron activation. (Gerhard Erdtmann, "**The Gamma Rays of the Radonuclides: Tables for Applied Gamma-Ray Spectrometry**." New York: Verlag Chemie, 1979.)

[10] See, for example, "*Circles From the Sky*", ed. Terence Meaden. Souvenir Press, 1991.

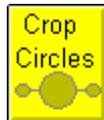
[11] "**Analysis and Interpretation of the Luminous-Tube Phenomenon**." Terence Meaden. *Journal of Meteorology* v. 16 no. 162 (October 1991): 276-278.

[12] See Chorost, *The Summer 1991 Crop Circles*, Section IIIB (see note 3.)

[13] See, for example, Stanley Morcom's "*Field Work: The Pictogram at East/West Kennett Long Barrows*." *The Circular* vol 2 no. 1 (March 1991): 10-13. Also *Circular Evidence* (Delgado and Andrews, Bloomsbury, 1989), pp. 121-131, and *Circles From The Sky*, pp. 46, 153-158.



Troubled Times



Not Man-Made

Why I Still Believe that Aliens Created Crop Circles

By Colin Wilson

The mystery of crop circles is now solved according to Colin Andrews, the electrical engineer whose investigations first made the British public aware of this bizarre phenomenon. In 1989, his book *Circular Evidence* (co-authored with Pat Delgano) became an unexpected bestseller, partly because it contained dozens of beautiful photographs of crop circles taken from the air. In conclusion, the authors admitted that there was a strong possibility that crop circles were connected with flying saucers, which had often been seen in fields where circles had appeared. Now, it seems, Andrews has changed his mind. After 11 years of research, funded by the Rockefeller Foundation, he has come to the conclusion that the circles are 'simply formed by the earth's magnetic field.' This magnetism somehow 'electrocutes' the wheat, causing it to lie down in a neat circle. But what about the elaborate patterns that have been appearing during the past few years: the triangles, concentric circles, the exotic spirals, or even the enormous key shapes? These, say Andrews, are all fakes, made by hoaxers who use short planks to flatten the corn and create the patterns. Only one fifth of all the crop formations - the perfect circles - are, he says, genuine.

If he is correct, millions of people are going to be disappointed. In the past 20 years, crop circles have become one of the earth's great mysteries - like the lost city of Atlantis, the Loch Ness monster and the curse of Tutankhamen. They seem to hint that we are living in a stranger and more mysterious universe than scientists and cynics believe, and that tomorrow our lives might be transformed by some discovery that will astound us all. I believe that our instinct is right. Scientists seem to be possessed by an urge to short-change us, and to reduce all mysteries to the level of the commonplace. And I am pretty certain that, whatever the final explanation of crop circles, it is not going to be commonplace. There is one simple and obvious objection to Andrews' theory about earth magnetism. If crop circles really are caused by some form of electricity, then why have they appeared only in the past 20 years or so? England, Canada, America, Australia, have been full of gigantic cornfields for centuries, and there have always been chroniclers to record strange events. Why do we not hear about crop circles in the time of Chaucer or Shakespeare? Because, I am fairly certain, they did not exist. Whatever is happening began in the mid-20th century. On September 1, 1974, long before anyone had heard of the crop circle phenomenon, a Canadian farmer named Edwin Fuhr, who lived near Langenburg, Saskatchewan, was driving his tractor in a field of rapeseed when he saw a round, shiny disc, about 11-ft across, whirling above the crop and causing it to sway. Then he saw four more in different parts of the field. For 15 minutes he sat frozen with fear, until suddenly the discs took off, rising in a kind of grey vapour. There in the rapeseed were five circles, 11ft across. Hoards of journalists rushed to photograph and report on them.

Other circles began to be reported: from Manitoba, Canada, from Victoria and Queensland, Australia, from Ibiuna, Brazil from New Zealand, the Soviet Union, France and Switzerland. It was not until 1980 that the first crop circles were reported in England. A Wiltshire farmer, John Scull, found three of them, each 60ft wide, in his oat field near the famous White Horse land-mark at Uffington. A meteorologist named Terence Meaden lost no time in providing a commonsense explanation. The circles, he said, were by summer whirlwinds. But Farmer Scull's circles would have needed three whirlwinds, each 60ft across. In fact, they would have to have been tornadoes. In August the following year, crop circles near the Cheesefoot Head beauty spot in Hampshire refuted Meaden's theory. There were three of them, one 60ft across, and the other two, placed symmetrically on either side of it, 25ft across. They were far too neat to

have been made by a whirlwind - it was as if some gigantic pastry cook had leaned down from the sky with one of those metal cutters for stamping out biscuits. And the corn around them had not been broken or trampled. So it went on for year after year, with the British Press growing more and more excited. Then in 1991, two Southampton artists named Doug Bower and Dave Chorley announced that they had made all the crop circles, using a short plank. They obligingly demonstrated their technique for photographers by making a pattern like a dumbbell in an hour and a half. But they also trampled down the wheat, and left broken stalks all over the place. Genuine circles had bent stalks that were unbroken, and no trampled wheat. And although Doug and Dave claimed they had made all the British Crop circles, even they admitted they had not travelled to Canada, Australia or the Soviet Union.

Again and again, observers noticed odd phenomena associated with the circles. In June 1990, six observers at Wansdyke, near Silbury Hill in Wiltshire, heard a high pitched trilling and saw 'black rods jumping up and down' among the wheat; next day there were crop circles. A radio ham in Devon had his listening spoilt in June 1991 by a series of high-pitched blips and clicks; the next day, a 70ft circle was found nearby. Astronomer, Gerald Hawkins was so fascinated by Colin Andrews' book that he began to study the precise measurements of all the circles in it. He soon noticed that these circles - often with patterns inside them - had been constructed very precisely according to the geometry of Euclid, the Greek mathematician who lived around 300BC and compiled what was the standard text on geometry until the 19th century. So if the 'circle makers' were hoaxers, they must also be first-class geometers too. Then Hawkins noticed something even odder - that a large number of the circles also had complex musical ratios, rather like the simple fractional relationship that exists between the pitch of different notes on a keyboard.

None of the circles made by Doug and Dave, or other self-confessed hoaxers, had been made with this musical code. As a scientist, Hawkins was naturally cautious in announcing his conclusions. But he admitted to me that he believed that these complex patterns were made by extra-human intelligence. Their purpose was not to convince the whole human race of the reality of extra-terrestrials, but simply to convince a few intelligent scientists and philosophers that there are intelligences apart from our own, and that they are attempting a breakthrough in communication. When I started to study crop circles and UFOs in the mid-nineties, I was convinced that they were due either to hoaxers or to over-heated imaginations. It took less than six months to leave me in no doubt: that something or someone is trying to communicate with us, but with the exaggerated caution of beings trying to get us slowly and gradually accustomed to the idea. That is why I am convinced that Colin Andrews will fail in his attempt to provide a neat and down-to-earth explanation of crop circles. So far the circle makers have managed to keep one step ahead of the 'explainers', and they I strongly suspect that they will continue to do so.



Troubled Times



20,000 Images

NASA makes 20,000 images of Mars available on Internet

Associated Press, May 23, 2000

NASA has made more than 20,000 images of Mars available as a Web-based photo album. The pictures taken by the orbiting Mars Global Surveyor constitute the single largest one-time release of images for any planet in the history of solar system exploration, the National Aeronautics and Space Administration's Jet Propulsion Laboratory said Monday. The archive covers one Mars year, 687 Earth days, beginning in September 1997 and extending through August 1999. The release allows anyone with Internet access to explore Mars in much the same way as planetary researchers do, said Ken Edgett, staff scientist at Malin Space Science Systems, a San Diego firm that operates Surveyor's camera. "They can experience them the same way that Mars Global Surveyor scientists do - one at a time, no captions or explanations, just 'Here it is. What does it show me?'" Edgett said in a statement. Mars Global Surveyor was launched on Nov. 7, 1996, and arrived at Mars on Sept. 12, 1997. It has completed more than 5,000 orbits of the Red Planet.



Troubled Times



Van Flandern

Washington, January 8, 1998 00:07 a.m. EST
by Michael Woods, *Toledo Blade*

The mysterious "Face on Mars" is not an optical illusion or a natural feature on the Red Planet, a scientist reported Wednesday at a major astronomical conference. Dr. Tom Van Flandern reached the conclusion after new studies of the Cydonia region, where strange-looking landforms have excited science fiction and life-on-other-worlds buffs for decades. His report, presented at the 191st national meeting of the American Astronomical Society (AAS), attracted unusual attention because sharp new images of the "Face" may soon be available.

The National Aeronautics and Space Administration Global Surveyor spacecraft, now orbiting Mars, is scheduled to begin imaging in 1999. Global Surveyor's camera is capable of making images with 30 times the resolution, or sharpness, of the Viking cameras. It can distinguish objects as small as 4.6 feet across, and will try to image the "Face." Van Flandern holds a doctorate in astronomy from Yale University. Until 1991, he was chief of the celestial mechanics branch at the U. S. Naval Observatory, a respected astronomy facility. He then founded Meta Research, an organization based here, that fosters research on topics that conflict with mainstream theories in astronomy.

The "Face on Mars," he explained, certainly fits that bill. Some people claim that images of the Cydonia region, taken in the 1970s from the Viking spacecraft, show a gigantic human face, a pyramid, and other structures left by some ancient extra-terrestrial civilization. In the eyes of some, the "Face" bears a striking resemblance to the "death masks" that ancient Egyptians used to adorn the sarcophagus of King Tut and other rulers. Indeed, some hint that the "Face" may be part of an immense tomb on the Red Planet. Believers have come up with all kinds of intricate mathematical relationships between the Face and several associated landforms that supposedly prove the structures are artificial. Conspiracy theories, charging NASA and the military with a cover-up, also abound.

"The conventional view is that this is all nonsense," says Dr. Michael C. Malin. He is chief investigator for the Mars Global Surveyor Orbiter Camera. Cydonia, he explained, is a desert-like region that has undergone the same kinds of weathering that carve weird landforms in terrestrial deserts. He regards the features at Cydonia as strictly natural, the result of Martian weathering and erosion. Van Flandern said his study undermines the main argument against an artificial origin for the "Face:" Its apparently random orientation on the Martian surface. "No apparent purpose is served by a face monument looking upward toward space if it is not oriented right-side up and in an attention getting location with respect to the surface of the planet," he said.

On Earth, one such location, visible for great distances from space, might be right on the equator, he indicated. Van Flandern analyzed data from previous studies showing that the Martian north and south poles occupied a different position in the past. A meteor impact or other cataclysmic event relocated the poles to their current position millions of years ago. He concluded that the "Face" originally was in a much different location. "It was a great shock to me to discover that the Cydonia area was right on the old Martian equator," he said.

Further analysis showed that the "Face" is oriented perpendicular to that old equator. The bridge of its "nose" is oriented almost exactly north-to-south. "This has only about a 1 percent probability

of occurring by chance," Dr. Van Flandern said. "The weight of existing evidence appears to have shifted in favor of an artificial origin of the Cydonia complex." Van Flandern predicted that the Mars Global Surveyor's high-resolution cameras will finally determine whether the "Face" is a natural geologic structure, or something constructed by an earlier civilization. Almost as an afterthought, he observed to a standing room only audience of about 400 astronomers, "I suggest that in view of these test results we prepare ourselves for a cultural shock certainly unrivaled in recent times."



Troubled Times



Bauval and Hancock

The Mysterious Structures That May Upstage NASA's Evidence of Martian Life

by Robert Bauval and Graham Hancock

(August 17-19, 1996 from the *Daily Mail* - London)

Could advanced life forms have existed on the Red Planet millions of years ago? Robert Bauval and bestselling author Graham Hancock, whose book, *Fingerprints of the Gods*, was the publishing phenomenon of last year, believe there is evidence to support this. Monumental structures on the planet's surface have mystified scientists for 20 years. Are they the result of natural processes... or the remains of a great civilization? Decide for yourself.

The sensational announcement that a fist-sized meteorite from Mars contains signs of life has so far been accepted by scientists as evidence that only "incredibly primitive" organisms may once have existed on the planet. Yet it could mean far more. The meteorite, billions of years old, is thought to have landed in Antarctica about 13,000 years ago after being "splashed off" the surface of Mars by a cosmic collision - probably with a comet - at least 15 million years ago. We know from our experience on Earth that life is always evolving to higher species. During the thousands of millions of years after that rock and its fossils formed on Mars there was ample time for incredibly primitive organisms to have become much more complex - perhaps even forms capable of developing a civilization. After all, the Earth and Mars are not thought to be much older than 4.5 billion years and the first incontrovertible evidence of life here - bacteria and algae - does not appear in the fossil record until 3.1 billion years ago. From those primitive organisms, we evolved. So why should precisely the same sort of processes not have taken place on Mars?

What raises the stakes in such speculation is the existence of remarkable evidence that complex artificial structures - monuments, gigantic edifices - may have been built on Mars at some remote date. These structures, detected in NASA video images sent back by the Viking Orbiter in 1976, have never been photographed since but have become the focus of a widening controversy over the past 20 years. Because they include several enormous pyramids and a massive sphinx-like face, an apparently lunatic fringe argues that they must be the work of intelligent and technologically advanced beings. A civilization, in other words. Scientists have officially opposed this view, asserting that the structures are not structures at all but tandem geological patterns. Increasingly, however, even the most orthodox academics have begun to sound less sure.

Earlier this year, for example, several months before the discovery of signs of life in a Martian meteorite, Professor Carl Sagan, of Cornell University in the U.S., made a significant admission. The "Face on Mars," he said, was "probably sculpted by slow geological processes over millions of years". Nevertheless, he also said: "I could be wrong. It's hard to be sure about a world we've seen so little of in extreme close-up." Sagan urged that forthcoming American and Russian missions to Mars should make a special effort "to look much more closely at the pyramids and at what some people call the "Face" and the "City." "These features merit closer attention. More detailed photographs of the 'Face' would surely settle issues of symmetry and help resolve the debate between geology and monumental structure."



Troubled Times



Coherent Shapes

The Mysterious Structures That May Upstage NASA's Evidence of Martian Life

by Robert Bauval and Graham Hancock

(August 17-19, 1996 from the *Daily Mail* - London)

The "Face on Mars" was identified on Viking frame 35A72 by Dr. Tobias Owen, who is now professor of astronomy at the University of Hawaii. The same frame, covering approximately 34 by 31 miles - also shows many other features that could be artificial. These cluster around latitude 40 degrees north in the region of Mars known to astronomers as Cydonia, and were photographed from an altitude of more than 1,000 miles with relatively poor resolution. A casual glance reveals only a jumble of hills, craters and escarpments. Gradually, however, as though a veil is being lifted, the blurred scene begins to feel organized and structured - too intelligent to be the result of random natural processes. Although the scale is grander, it looks the way some archaeological sites on Earth might look if photographed from 1,000 miles up. The more closely you examine it, the more it is apparent that it really could be an ensemble of enormous ruined monuments on the surface of Mars.

For a long while after the 1976 Viking photographs, NASA and other scientific authorities continued to disseminate what one researcher calls "the bogus claim that the 'Face' is a trick of light and shadow". This notion began to be challenged seriously only when Vincent Di Pietro, a computer scientist and former NASA consultant, discovered another image of the "Face" on frame 70A13. This second image, which had been acquired 35 Martian days later than the first one and under different lighting conditions, made possible comparative views and detailed measurements of the "Face." Complete with its distinctive sphinx-like headdress, it is now known to be almost 1.6 miles long from crown to chin, 1.2 miles wide and just under 2,000 ft.. high. Image analysts say the bilateral symmetry of the "Face," which has a natural, almost human appearance, is most unlikely to have come about by chance. This impression is confirmed by other characteristics that have subsequently been identified under computer enhancement. These include 'teeth' in the mouth, bilaterally crossed lines above the eyes, and regular lateral stripes on the headpiece - suggestive, to some researchers at least, of the headdress of ancient Egyptian pharaohs. According to Dr. Mark Carlotto, an expert in image processing, all "these features appear in both the Viking images, and are coherent shapes structurally integral to the object. Thus they could not have been caused by random interference or artifacts of the image restoration and enhancement process."



Troubled Times



Pyramids and Towers

The Mysterious Structures That May Upstage NASA's Evidence of Martian Life

by Robert Bauval and Graham Hancock

(August 17-19, 1996 from the *Daily Mail* - London)

The same is also true for the "D&M Pyramid" (named after Di Pietro and his associate Gregory Molenaar, also a former NASA contractor, who discovered it). This five-sided structure stands about ten miles from the "Face" and, like the Great Pyramid of Egypt, is aligned virtually north-south towards the spin axis of the planet. Its shortest side is a mile, its long axis extends to almost two miles and it is half a mile high. Commenting on the proximity of the "Face" and the "D&M Pyramid," American researcher Richard Hoagland asks a pointed question: "What are the odds against two terrestrial-like monuments on such an alien planet and in essentially the same location?" Hoagland has made his own detailed study of Frame 35A72 and has identified additional, possibly artificial, features. These include the so called "Fort," with its two distinctive straight edges, and the "City," which he describes as "a remarkably rectilinear arrangement of massive structures interspersed with several smaller pyramids." Hoagland also points out another striking fact about the "City:" it seems to have been sited in such a way that the inhabitants would have enjoyed a perfect, almost ceremonial, view of the "Face." The impression of a great ritual center, shrouded under the dust of ages, is enhanced by other features of Cydonia, such as the Tholus, a massive mound similar to Britain's Silbury Hill, and the "City Square," a grouping of four mounds centered on a fifth, smaller mound. This configuration, so suggestive of cross hairs, turns out to be located at the exact lateral center of the "City."

In addition, a group of British researchers based in Glasgow has recently identified what looks like a massive four-sided pyramid, the so called "NK Pyramid," 25 miles west of the "Face" and on the same latitude (40.8 degrees north) as the "D&M Pyramid." In the same general area is a feature called the "Bowl," approached by a tapered ram that has been likened to the stairway of a Mexican pyramid. "Looking at the whole of Cydonia," says Chris O'Kane of the Mars Project UK, "my gut feeling is that these structures have to be artificial." O'Kane's hunch is strengthened by the fact that "many of the structures are non-fractal." In plain English this means that their contours have been scanned and assessed as artificial by highly sophisticated computers. "What we have, therefore," sums up O'Kane, "is an improbable assortment of anomalies. They have alignments, they're grouped, and they're non-fractal." Nor is Cydonia the only site on Mars to have yielded photographic evidence of unusual and apparently artificial structures. Pyramids have been identified elsewhere, notably in the region known as Elysium, on the opposite side of the planet where, as early as 1971, NASA's Mariner 9 spacecraft photographed a group of mile-high three-sided structures. Other Martian features that are decidedly non-fractal include a straight line more than three miles long defined by a row of small pyramids, extensive rhomboidal enclosures in the south polar region, and a weird, castle-like edifice rising to a steeple more than 2,000 ft. high.



Troubled Times



War or Flood

The Mysterious Structures That May Upstage NASA's Evidence of Martian Life

by Robert Bauval and Graham Hancock

(August 17-19, 1996 from the *Daily Mail* - London)

If there was a civilization on Mars capable of creating such monuments, then what might have happened to it? Since extensive damage typical of explosive penetration is apparent on some of the structures, notably the "D&M Pyramid," more than one researcher has suggested that the Martians might have destroyed themselves in a suicidal war. A geological cataclysm is another possibility. Analysis of the Martian meteorite suggests the Red Planet was warm and wet - an environment that is likely to have been hospitable to life. Today, it is permanently frozen. The change may have been caused by a very large and rapid slippage of Mars's outer crust, a phenomenon which has also been cited as a possible cause of the cataclysmic end of Earth's last Ice Age 13,000 years ago. Evidence reported in *Scientific American* in 1985 confirms that Mars did at some unknown stage in its history, suffer a catastrophic crustal displacement. If this had happened during the planet's warm and wet phase, any civilization present at that time would almost certainly have been wiped out in the ensuing global floods and earthquakes, leaving behind only whatever scattered ruins and monuments were massive and stable enough to survive.

The pyramids and the sphinx on Mars seem to fit the bill. And if they are artificial, then the implications for our idea of ourselves and our place in the universe are shattering. One top priority in President Bill Clinton's recently announced program of intensified Mars exploration should be a mission to find out for sure, particularly so since NASA has hitherto refused to include Cydonia in the list of more than 150 sites of scientific interest that it recognizes officially on Mars. Similarly, investigators would be unwise to ignore the fact that there is a region very like Cydonia on Earth - Egypt's famous Giza plateau -- which has its own distinctive pyramids and Sphinx. Associated with these ancient monuments is a tradition that they were built by an antediluvian race as repositories for scrolls and books of past ages, and intended "to prevent the ancient wisdom from being lost in the Flood." Could that flood have been the cataclysmic 400 ft. rise in sea levels that we know took place 13,000 years ago at the end of the last Ice Age? And could there be some sort of bizarre interplanetary connection, not yet understood, between the story of civilization on Earth and on Mars?



Troubled Times



Orion Connection

The Orion Enigma

by Bill Stanley and Woodlock

Is monumentation on the Martian surface depicting the constellation of Orion evidence of an Egypt, Mars, Orion connection? In the months since their startling discovery, independent researchers Bill Stanley and Woodlock struggled daily with the prospect of introducing their find on the Internet. After much deliberation, they are presenting now, a preliminary evaluation of anomalous structures on the Red Planet. The mathematical probability of landforms on the Martian surface (imaged by the Mars Global Surveyor spacecraft) randomly duplicating the positions of numerous stars in Orion and adjacent constellations seemed to be astronomical. Several years back, author and Egyptologist Robert Bauval noticed a correlation between the stars in the "belt" of Orion and the orientation of the Giza Pyramids in Egypt. His theories were recently detailed in his best-selling book, *The Orion Mystery*. Is it possible an ancient trail-head of clues on the Giza Plateau, in fact lead to an even more profound mystery ... on Mars - a path mankind was destined to follow?

A Position Statement Regarding The So-Called 'Wider Plan' Of The Star-Pyramid Correlation Theory

By Robert Bauval, July 24, 1998

I am the author of *The Orion Mystery* (co-authored with Adrian Gilbert) and the author of *Keeper of Genesis* (co-authored with Graham Hancock). Some critical questions have recently been raised in connection with the so-called "wider plan" of the Orion-Pyramids correlation theory presented in the above mentioned books for which I would like to formally and publicly state my present position on this matter. The core of the Orion-Pyramids correlation theory, which I started to develop in 1983, was based on the pattern of the three stars forming the Belt Of Orion, namely Al Nitak, Alnilam and Mintaka (Zeta, Epsilon and Delta Orionis). This theory was presented during 1983 to 1986 to various eminent Egyptologists and other academics, including Dr. I.E.S. Edwards, Dr. T.G.H. James, Dr. Jaromir Malek, Dr. Cathleen Keller and others. It was subsequently submitted to Dr. Alessandra Nibbi, editor of the Oxford journal *Discussion In Egyptology* in 1988 and published in Vol. 13, 1989, pp. 7-18 under the title *A Master Plan For The Three Pyramids Of Giza Based On the Configuration Of The Three Stars Of The Belt Of Orion*. In this article I conclude that "A Master Plan with intent to correlate the great pyramids of Giza with the pattern of the Belt of Orion appears very likely indeed. A question which must follow is: does this master plan include a wider correlation between the geomorphic of the sky landscape about Orion (three belt stars) and the landscape about the Giza necropolis? Raising this question is justified, for the Pyramid Texts indeed confront us with complete celestial topography onto which actual terrestrial natural and man-made features are imagined to exist."

In the same article I bring to attention that "it is worth noting, therefore, that the relative position of the Belt of Orion to the Milky Way also correlates to the relative position of the Giza pyramids to the Nile." The DE vol.13 article does not mention other pyramids or other natural features in the so-called 'wider' plan hypothesis other than the Nile River adjacent to the Giza region. Much later, in 1994, in my book *The Orion Mystery* (first published by William Heinemann in February 1994) I suggested that the pyramid of Zawyat Al Aryan and the pyramid of Abu Ruwash were representing stars in the constellation of Orion, namely Bellatrix and Saiph, and that the two pyramids of Dahshur correlated to two stars in the Taurus-Hyades constellation, namely Aldebaran and Epsilon Tauri. These supplementary correlation to the core

theory of Giza Pyramids/Orion's Belt theory became known as the 'wider plan' when Prof. Vivian Davies, curator of the Egyptian Antiquities Department at the British Museum coined the phrase on the BBC2 Everyman Special documentary *The Great Pyramid: Gateway To The Stars* (based on *The Orion Mystery*). Prof. Davies, too, stated that he did not agree with this 'wider plan' because he had great difficulty in considering the possibility that the ancient Egyptians could mark the position of stars on the ground over distances of several kilometres. This was a fair and reasonable comment which was also reiterated by Dr. Jaromir Malek, Director of the Griffith Institute at the Ashmolean Museum in his review of *The Orion Mystery* (see DE vol. 30, 1994, pp. 101-114).

It must be pointed out that the 'wider plan' hypothesis does not in any way alter the core element of the Orion-pyramid correlation theory presented in DE 13, 1989, namely that the three large Pyramids of Giza and their relative position to the meridian axis of the Nile correlate with the three stars of Orion's belt and their relative position to the meridian axis of the Milky Way. This Giza/Orion's belt correlation is strongly buttressed by the various passages in the Pyramid Texts (viz. PT 802, 820 etc..) and, of course, the alignment of the southern shaft of the King's Chamber in the Cheops pyramid with Orion's belt (precessed to the epoch c.2500 BC).

There is much doubt among Egyptologists, even today, as to whether the 'unfinished' pyramid of Zawyat Al Aryan belonged to the IV Dynasty or to the III Dynasty. The 'pyramid' itself, as seen today, is but a large underground infrastructure cut into the natural rock and leaves much doubt over its originally intended dimensions or, indeed, whether the project was 'abandoned' before beginning the superstructure with quarried limestone blocks. As for the Abu Ruwash pyramid, most Egyptologists seem to agree that it belonged to the IV Dynasty king, Djedefre (a son of Cheops), although very little remains of the superstructure of this pyramid, and it, too, may have remained 'unfinished'. It is also noteworthy that towards the end of the IVth Dynasty, the king Shepseskaf departed from the classical pyramid structure completely and opted to construct a structure of a quite different nature in the shape of a giant mastaba. All this, and the positional discrepancy first pointed out by Dr. Jaromir Malek in 1994 of these two pyramids in relation to the Giza/Orion's belt datum compels me now to discard them as part of the overall star correlation plan instigated at Giza or assume, at best, the possibility that the 'unfinished' state of these pyramids reflects their 'inaccurate' astronomical positioning relative to Giza.

As for the two Dahshur pyramids, these are known with a reasonable degree of certainty to have belonged to the pharaoh Snefru, father of Cheops. I maintain my view that these two pyramids strongly appear to represent the two principal stars of the Taurus-Hyades constellation, although not necessarily tied to the datum or node of Giza. Here at Dahshur the same applies as Giza, notably the meridian 'misalignment' of the two Dahshur pyramids (a similar clue as the misalignment of the Menkaure pyramid at Giza) and their relative position to the axis of the Nile river. Other textual clues are discussed in great detail in *The Orion Mystery* chap. 8).



Troubled Times



Press Conference

The following IRC session was taken by Keith B. Morgan of ABC news, for the benefit of Hoagland fans who were listening on the #Art_Bell channel.

Session Start: Thu Mar 21 06:10:01 1996

- [6:15] Richard Hoagland is at the podium and has invited the press to come up and view the giant photos and murals of the lunar landscape that has been made.
- [6:16] Richard Hoagland is explaining to the press about the initiation of the investigation of the Viking images, which began his journey.
- [6:17] RCH (Richard Hoagland) is discussing the high sun angle of the Face on Mars.
- [6:18] Mars is still being discussed. Wait.
- [6:19] The geometric placement of the city at cydonia on Mars is being described with the concomitant geometrical constant relationships.
- [6:19] The message of the mathematical layout of the artifacts on Mars is being described.
- [6:20] We have a full try of slides of the data from Mars that must be given as a segue to the lunar data.
- [6:21] RCH is explaining that the artifacts on Mars were layed out in a geometrical symmetry as a language to anyone who happened to find them in the future.
- [6:22] RCH is discussing the significance of the 19.5 latitude and its relationship to hyperdimensional physics.
- [6:23] RCH is discussing the great dark spot on Neptune and how he and his colleagues predicted that Voyager would see this based on the great spots
- [6:24] on Jupiter at 19.5, sunspots at 19.5,Uranus's great spot at 19.5.
- [6:24] RCH is explaining how the lunar project is an extension of the Mars data.
- [6:26] RCH is explaining that the mathematics at Giza is the same math that is found at the cydonia region of Mar.
- [6:27] Is the tetrahedral mathematics apparent on the lunar plane--yes.
- [6:27] RCH is now introducing Marving Czarnik - our retired aerospace engineer.
- [6:28] Mr. Czarnik is at the podium.
- [6:28] He was formerly with Grumman.
- [6:29] Mr. Czarnik has formed a group independent of Hoagland's group looking into the anomalies on the Moon.
- [6:29] He is concerned about the value of the monies spent since the founding of the NASA.
- [6:30] He is concerned about how more money is spent to preserve entertainment motion pictures than is spent on preserving the lunar photos at NSSDC.
- [6:31] Mr. Czarnik is concerned about how he could have participated in sending men to the moon without knowing what is on the moon.
- [6:32] Mr. Czarnik claims he has accepted Hoagland's challenge to verify his finding.
- [6:32] He has reviewed Hoagland's work by ordering the same prints and negatives from the NSSDC.
- [6:33] Washington University has been one of the archives that he has ordered from.
- [6:33] He has focused on the Shard, the Crystal Palace and other objects, but they believed that the Shard is the most interesting
- [6:34] because it does not have to be enhanced.
- [6:34] Czarnik is now presenting a slide show.
- [6:34] His first image is the distance shot of the Shard.
- [6:34] It is protruding above the surface of the Moon.
- [6:35] His findings have revealed that the Shadow underneath the Shard is not a shadow at all but an object.
- [6:36] He has multiple images from NASA of this image.

- [6:36] He has correlated some of the comments that the astronauts have made in describing the lunar surface.
- [6:37] And has had lengthy conversations with Mr. Shabaz the chief trainer of the astronauts.
- [6:37] Czarnik is now discussing the Brookings report.
- [6:38] Hoagland is back at the podium.
- [6:39] RCH is describing the Shard as having been photographed from 250 miles away.
- [6:39] RCH is about to introduce the next speaker.
- [6:40] He has on screen the triangular shadow of the crater Ukert.
- [6:41] There are technical difficulties, please wait.
- [6:42] RCH is at podium and speaking.
- [6:43] The next speaker is Ken Johnston, formerly with NASA, currently with Boeing.
- [6:44] Mr. Johnston is at the podium.
- [6:44] He is giving his background.
- [6:44] In 1966, he left the Marines and was a consultant and test pilot with Grumman.
- [6:45] He amassed 3,000 hours as a spacepilot himself.
- [6:45] He was the test command pilot, at the JohnsonSpace Center.
- [6:48] Mr. Johnston describing photos that he saw while he was in charge of the photo archive at the Johnson Space Centre.
- [6:50] He is describing a viewing of the one of the films taken by the astronauts on Apollo footage with plumage that was removed from this film within 24 hours--mysteriously.
- [6:50] He was at Johnston through all the missions.
- [6:52] This is not working, I am signing off shortly.
- [6:54] Johnston is showing letters verifying that he gave Hoagland the photos of Apollo 14 that he has here at the conference.
- [6:55] The next speaker is Ron Nicks a geologist (formerly with Battelle Institute).
- [6:58] As prelude to Mr. Nicks, Hoagland is discussing an Earth-based photo of the Moon.
- [6:58] In the center of the Moon, there is a 16 mile diameter crater with an equilateral triangle, which links Mars to the Moon.
- [6:58] The Shard is being discussed again at an important frame from Lunar Orbiter 4.
- [6:58] Behind the Shard is what is called the Cube, it is over seven miles high.
- [6:59] Seven miles sounds outrageous by terrestrial standards, however in the 1930s mile high Earth constructed buildings were being discussed as being possible.
- [7:00] Surveyor 6 photo of the "brilliant beads" is being described for the press.
- [7:00] Photo enhancing reveals geometric structure in the solar light being cast with the sun being 1 hours below the horizon.
- [7:01] With the sun below the horizon, there should be no patterns visible in the corona.
- [7:02] Apollo frame 4822 is being shown.
- [7:02] Hoagland is discussing the haze around the landscape as not being an artifact of the processing.
- [7:03] pause.
- [7:10] Why is the material so reflective and diverse. How can you account for the hazing.
- [7:10] pause
- [7:11] Why after so many years and so much money, why are there no answers to the persistent claims of anomalies. As a geologist,
- [7:12] he can not come up with a geometric model for these objects.
- [7:12] Clear to the horizon where the detail is, the sky should be clear, but it is hazy.
- [7:14] Mr. Nicks is excited about the possibility of these objects being artificial and is calling for more work to be done with a review of the old NASA data bases with 1990s technology (with scanners and photo optic software).
- [7:15] Hoagland is describing Cernan and Stafford's Apollo photos taken with the Hassleblad photos of frame AS10-32- 4822.
- [7:16] The frame 4822 is blanked out in the NASA catalogs, which encouraged Hoagland and his associates to order this frame.
- [7:17] Near Manileus there is a retilinear feature hanging 9 miles above the surface of the Moon which is being shown to the press.
- [7:18] A large fragment of glass Hoagland calls the Castle.
- [7:19] Hoagland is showing the frame and how the sun is coming up on the right, but the photo is very dark where the

Sun is, which is highly improbable without something blocking the view.

[7:20] Alex Cook, a student and amateur astronomer is one of the MarsMission associates who ordered the 4822 frame from NASA's blacked out catalog.

[7:20] He ordered 4822 from NSSDC at Goddard.

[7:21] He received a negative from NSSDC and took it to the lab at his college to process.

[7:22] He is giving the frame numbers from apollo 1.

[7:22] correction apollo 10

[7:23] He found that on order 4822 several times that he received more than one version of it.

[7:23] He subsequently found a confirming photo of the Castle on AS10-32-4822.

[7:24] This print was taken a second or two after the first frame analyzed by Hoagland.

[7:24] He discovered that there are 10 different versions of 4822 in NASA's catalog.

[7:25] Hoagland is now describing the city Square on 4822.

[7:25] He is now showing the press what is called the "crystal palace", just above the Square.

[7:27] Hoagland is digressing to discuss the strange case of the 10 separate versions of AS10-32-4822. NASA seems to be underreporting in its catalog the number and designations of its images.

[7:29] There are vast fields of reflective material which is catching sunlight as the command module is flying by and the astronauts are photographing the landscape.

[7:30] The crystal palace is a sun-glint over a mile wide. What geological model do we have for this if it is purely natural?

[7:30] Hoagland is showing the press how the shadows on 4822, which should be pitch black, are in fact light grey.

[7:31] What is the geological model of light grey shadowing without atmosphere to scatter light?

[7:32] Hoagland is describing some of the cabelling on the surface of the Moon.

[7:33] For those who think it is a scratch, how do three scratches make the same curve and know where it is on the surface.

[7:33] Hoagland is showing the hazing on 4822 when the contrast is simply turned up.

[7:34] Hoagland is showing the difference between an objected and a scratch.

[7:35] When the structures are enhanced, geometric markings, layerings and cells show up (way above the pixel level).

[7:35] Hoagland is showing the top of the Castle with cabelling aligned at the top of the object.

[7:37] Hoagland is showing the top of the enhanced version of the Castle, showing the layering and cellular structure inside the Castle.

[7:37] This frame was given to Hoagland by someone inside NASA.

[7:38] When Hoagland took the leaked photo to NSSDC, he was told that the image original had disappeared from the NSSDC library.

[7:39] Brian Moore, Ph.D., lunar construction techniques, Moore space, Inc., is at the podium.

[7:39] Dr. Moore worked at Kennedy Space Center for two years.

[7:40] Dr. Moore is giving his background, both educational and professional.

[7:40] Dr. Moore has also examined some of the prints that Hoagland has been looking at for verification.

[7:42] Moore verifies that he has seen the same geometric patterns show up on these frames.

[7:42] He is here to encourage further research of the old NASA databases.

[7:43] He does not have the geologic background to verify or disprove, but verifies that he has seen all of the images and there are anomalies on the photos that beg to be explained.

[7:44] Robert Fiertek, architect, Fiertek Design is at the podium.

[7:44] Fiertek's interest spans 9 years in the anomalies of both the Moon and Mars.

[7:45] He began with Mars.

[7:46] He is showing the press the catenary shapes visible in 4822.

[7:48] Fiertek is explaining how the special formulation of film used for photographing the lunar landscape.

[7:48] For a grey landscape with a black sky only black and white should be necessary.

[7:49] The Astronauts on the apollo 14 mission, used color film. Color frames are now being shown.

[7:50] The color was used for infrared photography, on photos being show of a grey surface and black sky, why.

[7:50] Fiertek is showing a black and white image called the battleship.

[7:51] He is now showing an image of the Clementine mission.

[7:52] This infrared image shows geometry over the same area of Sinus Medii that the old photos of 4822 did.

[7:53] Fiertek is explaining how false color was added to show the various regions, densities and mineral content.

[7:55] Fiertek is showing his architectural geometric overlays between the Ukert and Triesnecker craters from the

Clementine image, over the same area as 4822.

[7:56] Fiertek is showing the rectilinear alignments in the blow ups of Triesnecker.

[7:57] He has done CAD programs to draw architectural overlays of the Clementine image in order to rectify it with 4822 and there is correspondence.

[7:58] Fiertek is discussing how we know this material is glass.

[7:59] His CAD program took 27 hours to generate the same rectilinear patterns as the analog enhancements.

[8:01] In other words, the computer program is generating perfect replicas of the gridwork which seems to be rectilinear and gridlike to the eye.

[8:02] Hoagland is back at the podium and is changing slide trays- pause.

[8:02] Hoagland is being asked why the astronauts have remained silent about this.

[8:04] Hoagland is reminding the press that the Brookings report warned of the destruction of civilization if we were to find artifacts on the Moon or Mars.

[8:04] Back to the astronauts.

[8:04] He doesn't know why the astronauts have remained silent.

[8:05] Sara McLendon is asking about who constructed these artifacts.

[8:06] Another journalist is wondering why the SETI programme appears to search for extraterrestrial life, yet ignores this data.

Session Close: Thu Mar 21 08:12:40 1996



Troubled Times



Press Release

Former NASA scientists, engineers and other researchers, under the aegis of The Mars Mission - a grassroots space research and policy group of specialists and citizens -- will hold a major press briefing, Thursday, March 21, 1996 at the **National Press Club** in Washington DC In the planned two- hour event, beginning at 9:00 AM, detailed scientific analysis of possible ancient artificial structures - found on hundreds of archived NASA and Soviet lunar photographs, and thousands of feet of original motion picture film - will be presented, using state-of-the-art computer and video graphic systems. This material - some of it held in a university archive outside NASA for almost a quarter of a century - is part of a continuing Mars Mission investigation into possible "suppressed" NASA solar system findings, based on a highly controversial warning contained in a 36-year-old government report:

The **Mars Mission's** major scientific and political conclusions, to be illustrated with extensive NASA and Soviet lunar photography at the press briefing: These official mission films - analyzed over a period of four years, via scientific techniques and computer technologies literally unavailable even to NASA 30 years ago (when the original photographs were taken) - now provide compelling scientific evidence for the presence of ancient artificial structures on the Moon. Further, it is now apparent that the entire purpose of President John F. Kennedy's sudden, all-out Apollo Program to land Americans on the Moon within ten years was to send American astronauts directly to these ruins, to record them on film, and to bring back physical evidence (including manufactured artifacts) for analysis on Earth.

According to Richard C. Hoagland, head of the Mars Mission and 1993 winner of the International Angstrom Medal for Excellence in Science, who began this intensive examination of NASA and Soviet lunar photography four years ago as part of the research organization's on-going "Mars" investigation, the answer to the question, "Why a **NASA** cover-up of such extraordinary information?" is simple, if not tragic: "Look at that *New York Times* headline; would you reveal the very thing that the best and the brightest' NASA could assemble at the dawn of the Space Age warned could literally collapse civilization': namely, hard physical ruins left by a race of obviously superior beings' -- and in our proverbial back yard,' to boot?! We are 30 years behind where we would have been - if NASA had been allowed to tell us what they found, at the time these photographs were taken. Imagine the future we would be living now, the discoveries, the scientific and environmental advances the world would be sharing, if fear, coupled with blind and misplaced adherence to authority hadn't intervened . . ."

Hoagland hints that, in addition to the remarkable imaging data on the artifacts, at the press briefing there could be some major political surprises: "We have evidence that some of the astronauts themselves have attempted to change this 30-year-old policy. But, because they are 'good soldiers', their efforts have been behind the scenes. We are considering presenting this evidence as well. "It's time for this President to bite the bullet,' to open NASA's files on all of this, and come clean." For reasons of security, participants in the press briefing - some of whom currently work on "black projects" for major aerospace companies under direct contract to the US government - will not be revealed, until shortly before the briefing on the 21st; however, the list of participants does currently include geologists, former NASA engineers, photographic experts, lunar construction engineers, architects, and investigative reporters. Extensive documentation, including hardcopy imaging of specific NASA astronauts "amid the ruins," will be handed out on Thursday.



Troubled Times



NASA Coverup

From **Enterprise Mission**

In mid-1993, Professor Stanley V. McDaniel was seeking additional documentation for his then on-going study, "The McDaniel Report", into NASA's "new imaging and data policy" surrounding its upcoming return to Mars, called "Mars Observer." Professor McDaniel, former Chairman of the Philosophy Department of Sonoma State University, was in the process of concluding a year-long, outside academic investigation into reasons for "a less-than-enthusiastic" NASA reaction to its scientific and ethical responsibilities relating to the discovery in 1976 of a series of "anomalous objects" on Mars - located in the Cydonia region of the planet. McDaniel found NASA's abrupt break with over 30 years of prior history of space photography - refusing on this mission to guarantee, even as the unmanned Mars Observer approached Mars, any new high-resolution images or "live" television of the Cydonia region itself - increasingly "suspicious."

New Cydonia imagery from Mars Observer - the first NASA opportunity following the original Viking mission in 1976, on which the "Face on Mars" was found - could have definitively confirmed or eliminated the 17-year claim of "artifacts on Mars" as a viable scientific hypothesis. In the final stages of his study, McDaniel asked Richard C. Hoagland for some assistance in locating difficult-to-find historical NASA documents and research papers, relating to its "SETI" project - the Search for Extraterrestrial Intelligence; Hoagland advised McDaniel of the long-rumored existence of an official NASA "report" - supposedly commissioned by the space agency in its early years - relating to prospective NASA censorship of SETI evidence ... if it ever was discovered. Hoagland then consulted with a former police detective, Don Ecker who, after calling in a couple of "favors," not only confirmed the existence of this highly controversial study -- but came up with the actual title: "Proposed Studies on the Implications of Peaceful Space Activities for Human Affairs."

Hoagland then called upon another friend, Lee Clinton who, after considerable effort, tracked down an actual copy of the several-hundred-page NASA Study in a Federal Archive - in Little Rock, Arkansas. Clinton made several copies of the full Study, and duly forwarded sets of the complete document to Hoagland and McDaniel - who featured it in his final Report, as strongly indicating a long-standing potential NASA policy of "cover-up" on this specific issue. What is [Presented Here](#) is an abridged copy of this crucial NASA study - dealing only with the section specifically referencing "implications of the discovery of extraterrestrial life." The full study - almost 300 pages, covering the full range of NASA's projected space program for the early 1960's, complete with over 400 citations of additional documents, further studies, research reports and background data on a wide variety of projected NASA interests - is available from The Enterprise Mission.

The Enterprise Mission

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Welcome, then, to "the Brookings Report" - which increasingly seems to have played a crucial role in determining official NASA policy (if not that of other branches of the Federal government) on the controversial subject of "solar system artifacts" ... for more than thirty years. In order to offer genuine

authenticity of this document, these are scanned GIF images of the actual report.

- Title Page of Brookings Report
- Committee Members
- Letter of Submittal from Chairman, Overton Brooks
- Letter of Submission to NASA
- Letter of Submission Pg 1 from Robert Calkins, President
- Letter of Submission Pg 2 from Robert Calkins, President
- Brookings Report (Page 215)
- Mentions Possibility of Artifacts
- Suggests Society "Disintegration" Potential
- Brookings Report (Page 216)
- Suggests More Social Studies Needed
- Suggests the Consideration of Withholding
- Footnotes (Page 225)
- Electrifying to Fundamentalists
- Devastation of Scientists and Engineers
- Footnotes (Page 226)
- Avoidance of Questions



Troubled Times



Brookings Report

Dateline: *The New York Times*, Thursday, December 15, 1960

Mankind is Warned to Prepare For Discovery of Life in Space

Brookings Institution Report Says Earth's Civilization Might Topple if Faced by a Race of Superior Beings

Washington. Dec 14 (UPI) -- Discovery of life on other worlds could cause the earth's civilization to collapse, a Federal report said today.

This warning was contained in a research report given to the National Aeronautical and Space Administration with the recommendation that the world prepare itself mentally for the eventuality. The report, prepared by the Brookings Institution, said "while the discovery of intelligent life in other parts of the universe is not likely in the immediate future, it could nevertheless, happen at any time." Discovery of Intelligent beings on other planets could lead to an all-out effort by earth to contact them, or it could lead to sweeping changes or even the downfall of civilization, the report said. Even on earth, it added, "societies sure of their own place have disintegrated when confronted by a superior society, and others have survived even though changed."

Responding to Crisis

"Clearly, the better we can come to understanding the factors involved in responding to such crisis the better prepared we may be." The agency's 100-page report, prepared at a cost of \$86,000 was for the space agency's committee on beings-in-space studies. The members, headed by Donald M. Michael also recommended further study of other space activities, including the symptomatic and propaganda effects and the implications of communications and weather satellites. On the question of life in outer space, the report said that if intelligent or super-intelligent beings were discovered in the next twenty years they would probably be found by radio communications with other solar systems.

Evidence of such existence "might also be found in artifacts left on the moon or other planets," it said. An attempt already has been made to contact outer space. Government scientist at Greenbank, West Virginia used radio astronomy in an effort to pick up signals that might have been beamed by intelligent beings. They concentrated on a star about fifteen light years away. Signals were sent from Greenbank were of a kind that would show to anyone receiving on other planets that they were man-made and not natural phenomena.



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Negative

Message-ID: <352A7E0D.6FED@riolink.com>

From: sofield@riolink.com

Newsgroups: sci.astro

Subject: Reversed NASA images from Mars !!!

Images of Mars released by NASA is a [Negative](#) (reversed) Images of actual photos. (I found out about it 12 hours ago). Using Graphic program I made "reverse" of the "Negative image of 'Face on Mars'" and one can see completely different picture, very much the same as photo taken in late 70s. On "negative" photo which was released by NASA, the "large sunken area" which looks like "eye" - actually is a "butte" of eyebrow. On "real" photo- after perform "negative of negative image" - one can clear see eyes, nose and mouth on photo.

Regards,
Alexander Krivenyshev
New Mexico, USA



Troubled Times



Van Flandern

From: "orion" <mbender@proto.com>
Subject: Re: Face on Mars & No Room for doubt
Date: 15 Apr 1998 19:04:16 GMT
Message-ID: <01bd68a1\$75aae7c0\$f68048cc@markbend>

This quote came from: <http://www.enterprisemission.com/carlotto.html>

In my considered opinion, there is no longer room for reasonable doubt of the artificial origin of the face mesa, and I've never concluded 'no room for reasonable doubt' about *anything* in my 35-year scientific career...

Dr. Thomas Van Flandern
April, 1998

Also, I heard Dr. Van Flandern re-state it last night on a radio interview with Art Bell, in no uncertain terms. He was adamant that the face was 1 billion to 100 billion to 1 against its being a natural construct, since there was no evidence in self-replicating patterns, i.e. fractals, and much evidence for rectilinearity, i.e. "right-angles" Orion.



Troubled Times



Clinton's Speech

Excerpts from President Clinton's speech at the White House on the **Search for Life on Mars Conference**, August 7, 1996, 1:34 PM.

I would like to make some comments about today's announcement by NASA.

This is the product of years of exploration, and months of intensive study by some of the world's most distinguished scientists. Like all discoveries, this one will and should continue to be reviewed, examined and scrutinized. It must be confirmed by other scientists. But clearly the fact that something of this magnitude is being explored is another vindication of American's space program, and our continuing support for it, even in these tough financial times.

I am determined that the American space program will put its full intellectual power and technological prowess behind the search for further evidence of life on Mars. First, I have asked Administrator Goldin to ensure that this finding is subject to a methodical process of further peer review and validation. Second, I have asked the Vice-President to convene at the White House, before the end of the year, a bi-partisan space summit on the future of American's space program. The significant purpose of this summit will be to discuss how America should pursue answers to the scientific questions raised by this finding. Third, we are committed to the aggressive plan we have put in place for robotic exploration of Mars. America's next unmanned mission to Mars is scheduled to lift off from the Kennedy Space Center in November. It will be followed by a second mission in December. I should tell you that the first mission is scheduled to land on Mars, on July 4, 1997--Independence Day.

It is well worth contemplating how we reached this moment of discovery. More than 4 billion years ago this piece of rock was formed as a part of the original crust of Mars. After billions of years it broke from the surface and began a 16 million year journey through space that would end here on Earth. It arrived in a meteor shower 13,000 years ago. Then in 1984, an American scientist on an annual U.S. Government mission to search for meteors on Antarctica, picked it up and took it to be studied. Appropriately, it was the first rock to be picked up that year (rock No. 84001). **Today, rock 84001 speaks to us across all those billions of years and millions of miles. It speaks of the possibility of life.** If this discovery is confirmed it will surely be one of the most stunning insights into our universe that science has ever uncovered. Its implications are as far-reaching and awe-inspiring as can be imagined. Even as it promises answers to some of our oldest questions it poses still others even more fundamental. We will continue to listen closely to what it has to say, as we continue the search for answers and for knowledge that is as old as the humanity itself but essential to our people's future.



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Pathfinder

Los Angeles Times reported on October 9, 1997, in a story titled **Mars Keeps Looking More Like Earth**, that the Pathfinder adds weight to evidence of Mar's being a warm, wet history capable of supporting life.

The Red Planet has a layered structure, much like Earth. Closeup photos taken by the rover before a recent communications breakdown show signs that some martian rocks consist of smaller pebbles cemented together over time. The pebbles' roundish shapes suggest that they were carried by flowing water, and pockmarks, or sockets, in the rocks appear to be places where pebbles were dislodged.



Troubled Times



Water

News Service

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HOLD FOR EMBARGO: THURSDAY, DEC. 4, 1997 at 4 p.m. EST

Pathfinder photographs provide geological support for the important role that liquid water has played on Mars, scientists report today

ITHACA, N.Y. -- After studying more than 9,500 images taken during the acclaimed Mars Pathfinder mission, scientists report in today's journal *Science* (Dec. 5) that surface photographs provide strong geological and geochemical evidence that fluid water was once present on the red planet. "We now have geological evidence from the Martian surface supporting theories based on previous pictures of Mars from orbit that water played an important part in Martian geological history," said James F. Bell, Cornell senior research associate in astronomy and a member of the Mars Pathfinder imaging team. Bell, along with lead author P. H. Smith of the University of Arizona; Robert J. Sullivan Jr., Cornell research associate in planetary science; and 23 other scientists authored the paper, "Results from the Mars Pathfinder Camera." The report is part of a complete Mars Pathfinder mission report published in *Science*.

During the first 30 days of the Mars Pathfinder mission, the Imager for Mars Pathfinder (IMP) returned 9,669 pictures of the surface. These pictures appear to confirm that a giant flood left stones, cobbles and rocks throughout Ares Vallis, the Pathfinder landing site. In addition to finding evidence of water, the scientists confirmed that the soils are rich in iron, and that suspended iron-rich dust particles permeate the Martian atmosphere.

Bolstering their evidence for once-present water, the imaging team found evidence for a mineral known as maghemite -- a very magnetic iron oxide. Bell explained that maghemite forms in water-rich environments on Earth and could likely be formed the same way on Mars. Bell explained that reddish rocks like Barnacle Bill, Yogi and Whale rock show evidence of extensive oxidation on their surfaces. He said the oxidation - or the rusting of the iron - is possible only if water existed on the surface at some time and played an important role in the geology and geochemistry of the planet.

But, where did all the water go? "That's the golden question. No one knows," said Bell, explaining that several theories about the disappearing water exist, such as evaporation into space, or seepage into sub-surface ice deposits or liquid aquifers, or storage at the Martian poles. Bell said that robotic missions to Mars early in the next century, including a Cornell-led rover mission to be launched in 2001, will attempt to determine the water's whereabouts, as well as to determine whether the Martian environment may once have been more conducive to life.

Mars Pathfinder's camera also revealed that Mars' atmosphere is more dusty and dynamic than expected, Bell explained. Surprisingly, the scientists found wispy, blue clouds, possibly composed of carbon dioxide (dry ice), traveling through Mars' salmon-colored sky. White cirrus-like clouds, made of icy water vapor, also circulate throughout the thin Martian atmosphere. "We were surprised to see such variations in the

clouds, particularly since Mars has such a thin atmosphere," Bell said. "We figured the atmosphere would be the same everyday, but there is a lot of real weather occurring there. It's a small atmosphere, but a vigorous one."

Looking at Martian rocks like Yogi, Barnacle Bill and Scooby Doo reveals that the rocks have been sitting on the planet's surface for billions of years, enduring a slow-motion sandblasting from a usually weak, dusty Martian wind. To carve rock with such a weak wind force requires a vast amount of time, Bell explained. "The slow, persistent weathering and erosion of the rocks is like water torture to the max," he said. "Mars really is an ancient world. We're still trying to sort it all out."



Troubled Times



Wash in Water

Organization: [Jet Propulsion Laboratory](#)

Contact: Diane Ainsworth

For Immediate Release, June 29, 1998

Water History, Rock Composition Among Latest Findings a Year After Mars Pathfinder

A year after the landing of Mars Pathfinder, mission scientists say that data from the spacecraft paint two strikingly different pictures of the role of water on the red planet, and yield surprising conclusions about the composition of rocks at the landing site. "Many of the things that we said last summer during the excitement after the landing have held up well," said Dr. Matthew Golombek, Pathfinder project scientist at NASA's Jet Propulsion Laboratory (JPL), Pasadena, CA. "But we have now had more time to study the data and are coming up with some new conclusions." Similar to on-going science results from NASA's Mars Global Surveyor spacecraft currently in orbit around Mars, **Pathfinder data suggest that the planet may have been awash in water** three billion to 4.5 billion years ago. The immediate vicinity of the Pathfinder landing site, however, appears to have been dry and unchanged for the past two billion years.

Several clues from Pathfinder data point to a wet and warm early history on Mars, according to Golombek. Magnetized dust particles and the possible presence of rocks that are conglomerates of smaller rocks, pebbles and soil suggest **copious water in the distant past**. In addition, the bulk of the landing site appears to have been deposited by large volumes of water, and the hills on the horizon known as Twin Peaks appear to be **streamlined islands shaped by water**. But Pathfinder images also suggest that the landing site is essentially unchanged since **catastrophic flooding sent rocks tumbling across the plain** two billion years ago. "Since then this locale has been dry and static," he said.



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Ancient Channels

Peek under [Mars' Surface](#) reveals Ancient Channels

By Richard Stenger, *CNN News*, March 10, 2000

Peering under the surface of Mars with new laser-assisted techniques, NASA scientists have uncovered evidence of wide, ancient channels that could have formed from the flow of enormous volumes of water, the space agency announced Friday. NASA also unveiled dramatic video simulations of the surface of the red planet, taking viewers on a breathtaking ride over features like the Valles Marineris, a chasm as long as the United States, and the north polar cap, which holds as much water as the Great Lakes. "It's just a spectacular, otherworldly landscape," NASA scientist Jim Garvin told CNN. "We are seeing the real Mars, making science fiction science fact."

When Mars was young, enormous water flows could have created the extensive underground channels revealed in images of the martian interior derived from Mars Global Surveyor data, NASA researchers said. "It's like seeing the human body with an MRI (Magnetic Resonance Image). Without drilling into the surface, we can see beneath what we see from space," said Garvin, who works for NASA's Goddard Space Flight Center in Greenbelt, Maryland. The new data from the orbiter suggest that at some point in the planet's history, the flat northern lowlands suffered blistering heat, experienced rapid cooling, then drowned under floods that formed an ocean.

The planet "was in a tremendous state of upheaval," Garvin said. Channels beneath the northern lowlands could have flowed from Valles Marineris and the Chryse and Kasei Valles regions, NASA scientists said. The researchers used gravity and elevation measurements from MGS to spot the features, about 125 miles (200 km) wide and more than 1,000 miles (1,600 km) long. Water flowing on the surface or underground in channels and later buried by sediments could explain the appearance of the features. Their large size suggests that part or parts of the northern lowlands rapidly filled with water. Cutaway of the martian interior generated from data gathered by Mars Global Surveyor. Blues indicate thin areas of crust, while reds and whites indicate thicker areas. The prospect of large amounts of past water excites planetary scientists, who wonder if the red planet ever was alive. "The ancient water courses, we believe, may have flowed into a possible ocean, a harbinger of a time in Mars' past that could have had life," Garvin said.



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Lakebeds

Sedimentary rock on Mars suggests large, Ancient [Lake Beds](#)

CNN.com, December 4, 2000

Scientists looking at satellite images of Mars have detected evidence of sedimentary rock dating back billions of years, suggesting that the planet once teemed with large lakes. If Mars harbored life in its early history, fossils might be found within such sedimentary rock layers, according to planetary researchers. NASA plans to send numerous rovers and satellites to Mars this decade to search for signs of water or life. But the agency might have to wait for the next generation of spacecraft before it can search the newly discovered sites. The outcrops, some several kilometers thick, are situated inside steep gullies, inside craters and between craters, locations too dangerous for the current slate of NASA probes to visit. "Such locations are inaccessible to presently conceived lander/rover missions, which are dictated by engineering constraints rather than science objectives," said Michael Malin and Kenneth Edgett in a recent correspondence to the *American Geophysical Union*.

Hundreds of Layers

Malin and Edgett, authors of the new report, are conducting an extensive study of high-resolution images taken by the Mars Global Surveyor, which has orbited the red planet since 1997. The two created a scientific stir in June when they announced the discovery of visual evidence of recent water flow near the surface of Mars. According to their study, to be published in the December 8 issue of *Science*, Mars has numerous layered geologic outcrops that date back at least 3.5 billion years, early in the planet's geologist history. The prevalence of such outcrops in basins and craters suggest that water carried the sediments into the depressions and formed lakes inside them, they said. "Some of the images of these outcrops show hundreds and hundreds of identically thick layers, which is almost impossible to have without water," Malin said in a statement. Malin and Edgett acknowledge that many questions remain. Mars has no traces of gullies or streams through which water might have transported the sediments. They speculate that erosion might have wiped out signs of such channels. Malin likened the geologic history of Mars to a jigsaw puzzle. "In the center of the puzzle, we have these layered rocks, which are good evidence of an extremely dynamic environment," Malin said. "On either side of this well-developed puzzle piece, we have mysteries. In any case, Mars sedimentary rocks suggest a very active early history for the planet."

Other Explanations

They also allow that other processes might be responsible for the sedimentary layering. Periods of high atmospheric pressure, caused by fluctuations in carbon dioxide levels, could have increased the ability of the air to carry surface dust. Mars scientists James Head III of Brown University greeted the new report with excitement. "I think they've made a compelling case that sedimentation took place," he said. "One of the interesting things about this new (Mars Global Surveyor) data - it's kind of like looking at Mars under the microscope. You can see things you couldn't possibly see before." "Seeing layers is really important. It means we can get to a new level of discussion about the origins of these things," said Brown, who last December said Surveyor images landforms that resembled ancient coastlines. "If conditions might have been appropriate for life, these are important candidate sites to look for fossils," Head added. On Earth, sedimentary rock layers are prime locations to find the fossil remains of ancient life forms. Other red planet researchers were not so enthusiastic.

"Maybe there are more details about what has been shown before, but there is nothing strikingly new

to the Mars science community," said Kenneth Tanaka of the U.S. Geologic Survey. "The question is, what is the source of that layering. There are different ways you can get sedimentary layers. What they seem to prefer is to say that it was done by water. But they also say it might be dry sources," said Tanaka, who has proposed that carbon dioxide, not water, could have shaped geologic features on Mars. "Was it water, carbonated water or something even more exotic?" he said.



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Warm Water

Douglas Isbell

Headquarters, Washington, DC May 27, 1998

(Phone: 202/358-1547)

Diane Ainsworth

Jet Propulsion Laboratory, Pasadena, CA

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Release 98-90

Surveyor Data Reveal More Evidence of Abundant Water, Thermal Activity in Mars' Past

Among many results, the Thermal Emission Spectrometer instrument team, led by Dr. Philip Christensen of Arizona State University, Tempe, has discovered the first clear evidence of an ancient hydrothermal system. **This finding implies that water was stable at or near the surface and that a thicker atmosphere existed in Mars' early history.** Measurements from the spectrometer show a remarkable accumulation of the mineral hematite, well-crystallized grains of ferric (iron) oxide that typically originate from thermal activity and standing bodies of water. This deposit is localized near the Martian equator, in an area approximately 300 miles (500 kilometers) in diameter.

Fine-grained hematite, with tiny particles no larger than specks of dust, generally forms by the weathering of iron-bearing minerals during oxidation, or rusting, which can occur in an atmosphere at low temperatures. The material has been previously detected on Mars in more dispersed concentrations and is widely thought to be an important component of the materials that give Mars its red color. **The presence of a singular deposit of hematite on Mars is intriguing, however, because it typically forms by crystal growth from hot, iron-rich fluids.**



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Mission Failures

Excerpts from a December 1, 1996 article in the *San Francisco Chronicle* called **NASA nervous about Mars launch.**

“One near-miss, one miss, and now it’s our turn,” said Curtis Cleven, launch operations manager for Mars Pathfinder, which holds the first-ever Martian rover. ... The near-miss was the failure of a solar wing to properly extend on NASA’s Global Surveyor, launched Nov. 7 and now en route to the Red Planet. Engineers insist they can work around the problem. The complete miss was the Russian probe, which failed shortly after liftoff and fell from orbit two weeks ago, bringing worries that plutonium on board might contaminate Earth upon re-entry. ... Russian space official still aren’t sure - or aren’t saying - why the spacecraft never made it out of orbit and plunged through the atmosphere shortly after its Nov 16 launch.

Excerpts from a December 1, 1996 article in the *San Francisco Chronicle* called **NASA scraps astronauts’ spacewalk as too risky.**

NASA decided Saturday it wasn’t worth the risk to let astronauts try to pry open a jammed space shuttle hatch, and canceled all spacewalks for Columbia’s mission. Mission control was concerned that astronauts Tamara Jernigan and Thomas Jones might not have been able to close the hatch with a tight seal after their spacewalk if they forced it open. Without a decent seal, the chamber between the crew cabin and the open cargo bay could not be repressurized, and the space-walkers would be stuck outside the cabin with a dwindling supply of oxygen. ...

Engineers are perplexed as to why the handle on the hatch would not swing into the unlock position. On Friday, they suspected the door might be out of alignment and that the astronauts might be able to shove it back in place. But the situation could not be duplicated with equipment on the ground. The latest best guess: some sort of jam in the gear mechanism to which the handle is attached. That would be unfixable in orbit. Besides wanting to avoid further damage, NASA opted against brute force so engineers could inspect the jammed hatch, as is, after the flight.



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Battling Average

NASA's press-kit for the *Mars Polar Lander* has an overview of Mars missions, here's what I derived from that:

30 missions total:

16 USSR / Russia

13 USA

1 Japan

Results:

16 Failed (11 USSR, 5 USA)

12 Successful (7 USA, 5 USSR)

2 In progress (1 USA, 1 Japan (in orbit round sun with propulsion problem))

First mission: 1960 USSR

First USA Mission: 1964 (Mariner 3)

First Successful Mission: 1964 (USA, Mariner 4)

First Successful USSR Mission: 1971 (Mars 3)

First Successful Lander: 1971 USSR (Mars 3)

First Successful USA Lander: 1975 (Viking 1)

Offered by [Michel](#).



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Moon Ice

Evidence of Water/Atmosphere on Moon

By Jim Marrs, Author of *Alien Agenda and Crossfire*

Until well into the 20th century, many scientists, as well as speculative authors, believed the Moon to be inhabited by intelligent creatures living on an arable, water-filled world. Yet, by mid-century, the tightly controlled corporate mass media and, hence, a woefully ignorant public, subscribed to a picture of our Moon as a dead and airless world. Selective reporting of the findings of the six Apollo Moon landings and sequestered information that might contradict the "official" position solidified this portrait. For example, we all know that the U.S. military has orbiting cameras powerful enough to read the license plate of a car stuck in traffic on the San Diego Freeway. Yet, nearly all the publicly available photos of the Moon are low-resolution shots. Where is our expensive and, hence, government-controlled, high-resolution technology when it comes to strange and enticing areas of the Moon and Mars? Virtually no high-resolution photos of the Moon have been released since 1948. Is this evidence of a coverup? But why? With all of the interest in the Moon early last century, why would NASA and high-level government officials want to deny the public this news? What if the Moon is more than the useless, desolate place, as described by sci-fi writers of the previous century? We'll tackle the initial mind-boggling statements one at a time, as follows.

Water on the Moon was finally acknowledged in November 1996, when the Clementine mission revealed near-pure water ice at the Moon's southern pole. The finding was confirmed on March 5, 1998, when NASA officials announced that the Lunar Prospector had discovered ice at both of the Moon's poles. It was estimated the total volume of ice might top 6.6 billion tons. If we knew that water was there in 1996 and 1998, it is reasonable to think they knew this prior to the Apollo missions, as the Moon had been extensively photographed and monitored by the earlier Pioneer, Ranger, Surveyor, and Soviet Luna missions? The idea of some sort of atmosphere on the Moon has been accepted by many people, except official NASA spokesmen, for years. In the late 1950s, two imminent scientists, Morris K. Jessup and V.A. Firsoff, presented compelling evidence of a lunar atmosphere along with the probability of regional water and vegetation. It was well known before the beginning of the 20th century that stars did not suddenly vanish as Moon passed between them and the earth. Instead, they "occulted," or twinkled, indicating a thin, but present atmosphere. Furthermore, the lunar atmosphere provides enough friction for small meteors to burn, causing brief flashes visible on Earth. Mists, clouds, and other types of sprays have been viewed on the Moon ever since the telescope was invented. On March 7, 1971, instruments left behind by Apollo missions recorded a "wind" of water passing over the lunar surface. This water vapor cloud lasted 14 hours and covered an area of some 100 square miles. While lunar scientists thought this event proved the existence of water on the Moon, NASA officials were quick to speculate that the liquid came from a ruptured Apollo descent stage tank which contained less than 100 pounds of water. No one thought to ask how the water, no matter where it came from, spread across the Moon's surface if there is no atmosphere and hence, no wind.

Author William L. Brian II noted that during Apollo 12, astronaut Alan Bean commented that an aluminum strip used in a solar wind test seemed to have wrapped itself around a pole, indicating wind. Mission Control quickly countered that it was a trick caused by thermal radiation. Brian also described film of Apollo 14 showing that as astronauts first planted the American flag, it began to billow as if from some breeze. The camera was quickly trained elsewhere and subsequent missions used a wire frame to

keep their flags stiff and immobile. So, apparently there is water and an atmosphere on the Moon. But why keep it secret? Anyone over age 40 recalls that prior to Apollo 11, the media was full of stories about how the U.S. intended to extensively colonize the Moon. The purpose was to prevent the Soviets from gaining a space base, where they could mine for costly precious minerals and create a springboard for the exploration of Mars. But none of this happened. We were told that there was nothing on the Moon worth returning for -- no water, no atmosphere, nothing. And we stopped going, even though we still had more Apollo spacecraft already paid for and ready to launch.



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Moon Cities

Ingo Swann Views Activities on Moon

By Jim Marrs, Author of *Alien Agenda* and *Crossfire*

Remote viewing is the term coined by New York City scientist Ingo Swann, and used by the CIA and U.S. Army to describe a psychic method of acquiring information on persons, places, and things by means other than the normal five senses. Swann, who helped develop this technology at Stanford Research Institute, was also one of its most able practitioners. According to his 1998 book *Penetration*, Swann was discreetly approached in 1975 by a super-secret group within the federal government, who operated almost like the fabled Men in Black. He was taken to a secret underground base, where he was asked to perform remote viewing. Although never informed of his target, Swann quickly realized he was viewing objects and activities on our Moon. He saw "towers, machinery, lights of different colors, strange-looking buildings. Bridges, a lot of domes, things like saucers with windows ... stored next to crater sides, sometimes in caves, sometimes in what looked like airfield hangars. Long, tube-like things, machinery, tractor-like things going up and down hills, straight roads extending some miles, obelisks which had no apparent function ... large platforms on domes, large cross-like structures." His mind was boggled at the sight of lights and activity on the Moon's dark side - rows of tall stadium-like light stands providing a greenish illumination, large structures, big as a 40-story building, and naked workers.

"I saw some kind of people busy at work on something I could not figure out. The place was dark. The 'air' was filled with a fine dust, and there was some kind of illumination - like a dark lime-green fog or mist. The thing about them was that they either were human or looked exactly like us, but they were all males as I could well see, since they were all butt-ass naked. I had absolutely no idea why. They seemed to be digging into a hillside or a cliff," Swann recalled. He could not comprehend what he was seeing, but Swann knew one thing for certain - whoever was in charge up there was not friendly to us and had warned us off the Moon! Now before we rush to conclude that Ingo may have played fast and freely with the truth in his account, understand that he was an integral part of one of the most sensitive and classified government scientific programs of the past 30 years. Everyone involved, including Swann, was subjected to the most strenuous mental and psychological testing. The CIA, Army, and DIA continually funded the top-secret remote viewing program for more than a quarter of a century, through five separate administrations, both Democratic and Republican. Furthermore, the Army and DIA used military-trained remote viewers in operational missions to spy on the Soviets and others. Remote viewing, when applied by trained practitioners using tested methodologies, must not be discredited. Then there's the matter of Swann's feedback, a small gesture on the part of the secret government agency to let him know his viewing was on the right track. His feedback was to open a Pandora's Box regarding UFOs and alien activity on the Moon.



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Moon UFO's

Strange Sightings on the Moon

By Jim Marrs, Author of *Alien Agenda* and *Crossfire*

Most compelling is a NASA blowup (NASA, VII Gassendi S 2.4) which shows two rounded objects leaving tracks across the lunar landscape. The larger object leaves behind irregular track marks, while the smaller object appears to have rolled up the side of a moon crater, then moved down the crater and out onto flat ground, leaving behind a slightly curved track. Also fascinating are other photos. NASA No. 16-18918, which clearly shows a large oval object jutting out over the lip of a large moon crater, and No. 16-19265, which seems to show a large circular/domed object nestled next to 10 regularly-spaced objects, in what appears to be a partially underground hangar. In 1968, a year before U.S. astronauts landed on the moon, NASA published Technical Report R-277, titled *Chronological Catalogue of Reported Lunar Events*, which lists more than 570 moon anomalies from 1540 to 1967. Some of the more intriguing events in this study include: - A "star" was seen within the body of a crescent moon "directly between the points of her horns" on March 5, 1587. - During March and April of 1787, Britain's Sir Frederick William Herschel, pioneer of the reflecting telescope and discoverer of Uranus, claimed to have sighted three "bright spots," four "volcanoes," and lights moving "above the moon." - In July 1821, a German astronomer reported sighting "brilliant flashing light spots." His was one of numerous reports of flashing or blinking lights seen on the moon. - In February 1877, a line or streak of light was seen stretching across the crater Eudoxus. This light was observed for about an hour, ruling out the possibility that it was merely a meteorite striking the lunar surface with a flash. - Two streaks of medium intensity light were recorded on June 14, 1940, in the crater Plato, a location where reports of lights have numbered in the thousands. - A "black cloud surrounded by violet color" was seen in the Sea of Tranquility by Canadian astronomers on September 11, 1967.

New York *Herald Tribune* science editor John J. O'Neill on July 29, 1953, claimed to have seen a 12-mile-long "bridge" straddling Mare Crisium. After reporting his find to the Association of Lunar and Planetary Observers, O'Neill was scorned by astronomers. However, a month later, the "bridge" was confirmed by British astronomer Dr. H.P. Wilkens, who told the BBC, "It looks artificial. It's almost incredible that such a thing could have been formed in the first instance, or if it was formed, could have lasted during the ages in which the moon has been in existence." Further confirmation came from Patrick Moore of the British Astronomical Association, who declared the "bridge" had "popped up" almost overnight. Such Lunar Transient Phenomena (LTP) are well known among veteran astronomers. Bright and blinking lights, colorful displays, clouds, or mists have been reported in many lunar craters, especially those of Aristarchus, Plato, Eratosthenes, Biela, Rabbi Levi, and Posidonius. Then there are the numerous NASA photos of UFOs both on and near the moon. A 1972 16mm film taken from Apollo 16 (NASA File Roll 9361) clearly depicts a spherical craft with a domed top, flying far over the moon's cratered surface. Just as amazing are photos of gigantic cigar-shaped objects traversing the moon's face in NASA No. 16-19238 and 11-37-5438. A Lunar Orbiter IV photo (No. LO IV 89-H-3) depicts a large, cigar-shaped object reflecting light while sitting on the surface near the crater Romer. One thing seems clear - the moon is far from being a dead world. Something is happening on our moon, something so profound that, despite our capability for further exploration, we are prevented from returning.



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Sightings

Reuters news service reposted on June 23, 1996 that sightings are on the increase worldwide.

UFO sightings around the world have risen by more than 200 percent during the past year, a Brazilian expert said at a conference in **Chile**. Ademar Gevaerd, editor of *UFO Magazine*, was quoted in the Chilean daily *La Tercera* as saying Friday "there are places where there has been a 400 percent rise. This means a true wave of UFO's (Unidentified Flying Objects) visiting Earth, and I have more than 100 slides to prove it." The conference, organized by *La Tercera* and the **Group of UFO Researchers**, opened Friday and is expected to close on Sunday.



Troubled Times



Aliens in Brazil

Excerpts from *The Wall Street Journal*, June 28, 1996 front page article by Matt Moffett.

Aliens Land in Brazil in Desperate Need of a Good Shower

The incident that made this town a hot spot in the intergalactic search for intelligent life started quite innocently. On a Saturday afternoon stroll in January, a trio of young women decided to take a shortcut home through a vacant lot. In a clump of weeds, the three said, they encountered a creature like nothing they had seen before. "It wasn't a man or an animal - it was something different," said one of the women, Katia Andrade. The being had oily, brown skin and rubbery limbs, she said. Three rounded protrusions sprouted from its oversized head. Standing out in a different way was the creature's odor: One ghastly whiff weakened the knees. As for the stranger's demeanor, the women unanimously, if tactlessly, agreed: It was "muddle-headed." When the creature wagged its big noggin dizzily in their direction, the three women ran off.

Word of this encounter, spreading rapidly through the coffee bars where **Varginha's** [Brazil] 12,000 inhabitants trade gossip, would soon meld in the public imagination with other unusual occurrences: sightings of a peculiar cigar-shaped flying object, a mustering of troops and vehicles at a nearby infantry base and a peculiar bustle at the municipal hospital. Goaded by self-styled UFO savants and a ravenous national media, residents rather matter-of-factly embraced a stupefying conclusion: Several aliens from a wayward space ship had been captured and brutalized by troops from the Brazilian army.

Bristling denials from the military, which once compiled a lengthy record of abuses against the terrestrial population, have only served to inflame public suspicion. The upshot: The army and the now famous space aliens find themselves locked in a pitched battle for the hearts and minds of this provincial community. Doltish and malodorous though these space celebrities might be, mere men in uniform are proving no match for the first creatures of any kind from Varginha to land on a national magazine cover. "For extraterrestrials they may not be much, but they are the biggest thing we've ever had in Varginha," says a young woman named Nilda, scanning the nighttime sky from a downtown park bench. Had the armed forces not interfered, she says, locals might have scrubbed the visitors up, taught them the language, in sum, made something of them. "But they never had a chance," Nilda says with a sigh. Her anger at the military's alleged inhospitality sparked a tiff with her boyfriend, a private in the infantry. ...

An armed-forces news conference marking "Victory Day" in World War II degenerated into a shouting match between a general and a television reporter pressing him about the extraterrestrials. An official briefing to debunk UFO conspiracies was overshadowed by an auto mechanic's claim to have seen yet another weird cylindrical aircraft, a cosmic encounter he re-enacted with the aid of an aluminum coffee thermos. To some extent the army is paying for past sins. During an oppressive 20-year dictatorship ending in 1985, the Brazilian military eliminated any number of earthbound political enemies by "disappearing" them. If the army was capable of liquidating human beings without a trace, locals ask, why couldn't it carry such a "dirty war" to outer space? ...

To date, Brazil's leading television magazine has done three programs here. A two-hour nationally televised documentary on Varginha pulled in so many viewers on a recent Saturday night that it was repeated in its entirety the following weekend. ... With an eye toward promoting Varginha, city fathers are thinking of building a park in the creature's honor. **Deputy Mayor Paulo Vitor Freire** says: "We would

never have imagined that so many international organizations take interest in cases like ours.” Yes, Varginha, there is a support group known as Abductees Anonymous and a research organization called Operation Right to Know. **Stanton Friedman**, a Canada-based UFO expert, says Varginha has the makings of a “cosmic Watergate.”



Troubled Times



Past Century

A Century of UFOs

UFO Roundup, Vol 4, No 36

December 30, 1999

And now *UFO Roundup* presents a historical chronology of UFO and alien sightings during the Twentieth Century. These are not the most important sightings of each year, but they are significant. Here's the UFO history of our century year by year:

1900 - Teenager Miranda McKay and three other girls, plus their Scottish chaperone from Appleyard College boarding school, disappear at Hanging Rock, near Melbourne, Australia.

1901 - An unusual substance, "smelling like glue" falls from a clear sky at Sart, Belgium.

1902 - Unusual sky booms heard over Boschof, Oranjevrystaat, South Africa.

1903 - Large alien seven feet tall with long hair, horns and huge bulging eyes appears and is chased away by coal miners in Iola, Kansas, USA.

1904 - Three luminous UFOs are seen by the crew aboard the USS Supply, which is on a cruise off the shore of northern California, USA.

1905 - "Buzzing" UFO descends from heavy overcast and flies over Portland, Oregon, USA.

1906 - "Mystery meteor" performs weird aerial maneuvers over Syracuse, New York, USA.

1907 - "Torpedo-shaped" UFO explodes over downtown Burlington, Vermont, USA. Seen by Bishop John S. Michaud, former governor Alexander Woodbury, A.A. Buell and others.

1908 - Spherical black UFO with a brilliant spotlight hovers and flies over Bridgewater, Massachusetts, USA. Seen by John E. Flynn, Philip S. Prohett and others.

1909 - Cigar-shaped UFO appears repeatedly over Dunedin and smaller towns along the South Island's Otago coast in New Zealand.

1910 - Large cigar-shaped UFO hovers over Huntsville, Alabama and Chattanooga, Tennessee, USA, playing its bright spotlight over both cities.

1911 - "Mystery airship" flies under the Brooklyn Bridge in New York City, USA.

1912 - "Mysterious airships" hover over cities and towns in Kent, UK.

1913 - Large cigar-shaped UFO flies slowly over Milwaukee and Sheboygan, Wisconsin, USA, flashing its bright spotlight over streets and buildings, and then retreats back out into Lake Michigan.

1914 - Three luminous UFOs fly low over Benton Harbor, Michigan, USA.

1915 - A cigar-shaped craft, thought to be a German Zeppelin, is seen over Andenes, Norway.

1916 - Norwegian fishermen working nets north of Svalbard (Spitzbergen) Island see a "dark Zeppelin" moving quickly over the Arctic pack ice, heading for the North Pole.

1917 - Minister and family use a telescope to watch a silver UFO shaped like a wagon wheel near Salida, Colorado, USA.

1918 - Luminous cruciform UFO seen hovering over Lismore, N.S.W., Australia.

1919 - Two British soldiers see several orange spherical UFOs hovering over Salisbury Plain near Figeldean, Wiltshire, UK.

1920 - Fishermen see a blue egg-shaped UFO touch down near Mount Pleasant, Iowa, USA.

1921 - Bright circular UFOs seen above a cloud overcast at night in Killingly, Connecticut, USA.

1922 - Twin girls aged 8 see a daylight disc UFO near Davenport, Iowa, USA.

1923 - A UFO explodes in mid-air over Quetta, Pakistan. Flaming debris rains down, destroying a few buildings. The fire lasts for hours, leaving only melted slag and "thin wires."

1925 - Mysterious fireball explodes just outside Chevy Chase, Maryland, USA.

1926 - Nicholas Roerich sees a daylight disc UFO in a clear blue sky in northern China.

1927 - While flying near Scottsbluff, Nebraska, USA, pilot Barney Oldfield finds his biplane flanked by "flying manhole covers."

1930 - Small humanoid alien shows up at a farm in Mandurah, W.A., Australia, asking for water. Shot to death by terrified farmer.

1931 - On a flight from Australia to New Zealand in his Tiger Moth biplane, Sir Francis Chichester encounters and chases a teardrop-shaped UFO over the Tasman Sea.

1932 - Death of Charles Fort, the father of ufology.

1933 - Small disc hovers behind a house in Nambour, Queensland, Australia. It's grabbed by a boy, who suffers itching and blistering on his hands as a result of grabbing the object.

1934 - During a winter blizzard, mysterious engine noises are heard above the clouds in New York City, USA.

1938 - "Mysterious lights" hover over Tabor, Quebec, Canada.

1939 - Bright green UFO hovers over Juminda, Estonia for an hour, then disappears.

1940 - "Fiery cartwheel" UFO is seen ascending from a hilltop in Bata, Hungary.

1941 - German aviatrix Hannah Reisch sees a UFO speeding by at an altitude of 20,000

meters (66,000 feet) while flight-testing a forerunner of the Messerschmitt 163 Komet.

1942 - "Battle of Los Angeles." U.S. Army gunners fire at a UFO squadron passing over L.A. and Burbank, California, USA.

1943 - Spanish troops of the Division Azul see a washtub-shaped UFO hovering nearby during a battle in Russia.

1944 - First appearance of the "foo fighters" over France and Belgium, the UFOs of World War II.

1945 - Three Japanese Zeroes engage two daylight discs in a dogfight over Wonsan, North Korea. One Zero is shot down, and the UFOs flee into space.

1946 - A cylinder-shaped UFO crashes in Lake Kolmjarv in Sweden during the "ghost rockets" flap of that year.

1947 - A UFO crashes in Roswell, New Mexico, USA. Three aliens are killed, and the survivor is captured by the U.S. Army.

1948 - Capt. Thomas Mantell's F-51 Mustang is shot down by a UFO over Franklin, Kentucky.

1949 - U.S. Navy scientists use a theodolite to observe a daylight disc UFO near Arrey, New Mexico, USA.

1950 - Airliner Northwest 2501 is shot down by a UFO over Lake Michigan.

1951 - U.S. Army platoon fires armor-piercing bullets at a hovering bell-shaped UFO in Chorwon, South Korea.

1952 - "Battle of Washington D.C." A UFO fleet buzzes the USA's capital city and then flees before U.S. Air Force jets arrive.

1953 - Lt. Felix Moncla's F-86 Sabre jet is captured by a UFO over Lake Superior, hauled aboard by a tractor beam. Lt. Moncla is still MIA.

1954 - Two truck drivers get into a fistfight with small humanoid aliens at a roadside cafe between Caracas and Petare, Venezuela.

1955 - After sighting a UFO, a family is besieged by over 20 small big-eared aliens at their farmhouse in Kelly, Kentucky, USA.

1956 - A Royal Canadian Air Force F-100 fighter is captured by a UFO over Lake Huron.

1957 - Several cigar-shaped UFOs are seen by residents of Levelland, Texas, USA.

1958 - Uruguayan Air Force pilot engages a daylight disc UFO in a dogfight over Pan de Azucar, near Salto, Uruguay. The UFO uses a microwave beam to disable the plane.

1959 - Rev. W.B. Gill and his parishioners at Boianai mission, Papua New Guinea are astounded when a flat saucer hovers overhead and four aliens wave to them.

1960 - Czech military officers observe a UFO with their binoculars at Brno, Czech Republic.

1961 - Betty and Barney Hill are abducted aboard a UFO while driving just south of Littleton, New Hampshire, USA. First publicized abduction and first appearance of the Zeta Reticulans.

1962 - UFO explodes over a South Atlantic beach in Ubatuba, Sao Paulo state, Brazil. Molten slag is recovered.

1963 - Four children see a UFO land just outside Saskatoon, Saskatchewan, Canada. An alien nine feet (2.7 meters) tall and wearing a white monk's hood beckons to them.

1964 - Patrolman Lonnie Zamora sees a UFO and aliens on the ground in Utah, USA.

1965 - UFO blacks out a U.S. military base at Nha Trang, Vietnam and is seen by hundreds of American soldiers.

1966 - College coeds at the dorm in Ann Arbor, Michigan have repeated sightings of UFOs.

1967 - Patrolman Herbert Schirmer sees a UFO take off from Ashland, Nebraska, USA. Later, under hypnosis, he describes an abduction experience. First of the "silent contactees."

1968 - Children see a landed UFO and an alien at St. Stanislas de Koska, Quebec, Canada.

1969 - Eleven witnesses see a daylight disc UFO hover over a farm in Anolaima, Colombia.

1970 - Two skiers see a UFO descend and emit a beam of light in Imjarvi, Finland.

1971 - UFOs with stubby side wings are seen over a tea plantation in Hewaheta, Sri Lanka.

1972 - Two flying humanoid aliens seen by a crowd in the plaza at Ixtalapa, Mexico.

1973 - Charles Hickson and Calvin Parker are captured by alien robots and taken aboard a saucer in Pascagoula, Mississippi, USA.

1974 - A UFO crashes at Llandderfel, Wales. The British Army recovers two dead aliens.

1975 - Travis Walton is hauled aboard a UFO by a tractor beam near Snowflake, Arizona, USA. He is missing for five days and then returns with an amazing abduction story.

1976 - F4 fighter jets of the Iranian Air Force battle UFOs over Tehran, capital of Iran.

1977 - A small alien wearing a green uniform and a helmet with blinking red and white lights on it is seen by several people in Quebradillas, Puerto Rico.

1978 - Pilot Frederick M. Valentich encounters a UFO while flying across the Bass Strait from Melbourne to Hobart, Tasmania. Valentich describes the UFO in a frantic radio call, which is suddenly cut off. Pilot and plane are still missing.

1979 - Newsman videotapes luminous UFOs over Keikoura, New Zealand.

1980 - Woman motorist abducted from her car and taken aboard a UFO in Pudasjarvi, Finland.

1981 - Peruvian fighter jet gets into a dogfight with a UFO over Chosica, Peru.

1982 - Brilliantly-illuminated UFO hovers over Mount Senohara in Japan.

1983 - Large V-shaped UFOs seen over Newburgh, New York, USA.

1986 - Pilot for Japan Air Lines sees a giant UFO over Anchorage, Alaska, USA.

1987 - Reddish-orange UFOs fly over Meishan, Sichuan province, China.

1988 - Family in their car chased down the highway by a UFO in South Australia.

1989 - UFO lands at a park in Voronezh, Russia. Four aliens 3 meters (10 feet) tall emerge from the craft, causing a panicky crowd of onlookers to flee.

1995 - UFO crashes near Boyle, Ireland. Crew of five aliens are captured by a NATO task force and Irish Gardai (police).

1996 - UFO crashes just north of Varginha, Minas Gerais state, Brazil. The seven surviving aliens are captured by the Brazilian Army.

1997 - "Battle of Phoenix." Giant triangular UFO seen over Phoenix and other cities in central Arizona, USA.

1998 - Three Japanese fighter jets shot down by UFOs over the ocean off northern Japan.

1999 - Exploding UFO levels huge patch of jungle west of Sao Felix do Xingu, Para state, Brazil.



Troubled Times



Traces

ZetaTalk: [Visitor Traces](#)

[Alien Skulls](#)

Article originally published in the first edition of *The 'X' Chronicles* Newspaper
UFO Digest, May 1999

The movie *Stargate* has become a popular video cassette rental. Its feature film release was met with disappointing reviews, however, a sort of cult following has ensued as people have started discovering the movie by word of mouth. It deals with a touchy subject... Aliens that visited Earth thousands of years ago. I learned about the film from the company that was producing a CD ROM about the movie called *The Secrets of Stargate*. The associate producer of the CD ROM, Joel Mills, had learned that I had in my possession photographs that could prove that the movie *Stargate* was based on historical fact. They wanted to include copies of the photographs of the "unusual giant skulls" that my wife (Bea) and I had collected over the past five years. It seems that the movie deals with the theory that extra terrestrials had used humans as slaves to mine metal in Egypt thousands of years ago. Mills felt these giant skulls were proof that the ancient pharaohs the the same elongated skulls hidden under their crown head-dress, and that, in fact, the *Coneheads* of Saturday Night Live are based on fact, not fiction. I pointed out to him that Egypt's King Akhenaton and his daughters were proud of their distinct features (elongated skulls) and the true facts of this royal family are shrouded in controversy. Some historians point out that the giant skulls of this family are a deformity caused by inbreeding. Others discount this and claim that it is the art style of the Armana period. The secret society known as the Rosicrucians place King Akhenaton on their highest pedestal by reconstructing his statue and main temple at their head office in San Jose, California.

Mills also asked permission to use photographs of giant skulls that I had obtained while filming at the Nasca lines in Peru. Although *Stargate* did not deal with a Peruvian connection, he felt the world needed to see the photographs to understand that ancient skulls of extraordinary dimensions could be found at other major archaeological sites around the world, in particular, the Nasca Line and the ruins of Peru.... in the shadows of the Cheops pyramids in Egypt... and the ancient Mayan ruins of Central America... The Triangle of the Ancient Gods. I was happy to send him the photos but warned him that the photos would probably be too controversial fo the general public. He seemed surprised at this comment and wondered why he hadn't seen pictures like this before. The complicated answer took a great deal of time to explain! I will try to encapsulate this answer and relate to you a brief history of these unusual skulls. I first came across drawings of the skulls in a book by Ignatius Donnelly called *Atlantis, The Antedeluvian World*. The author tries to prove that at one time there existed a Continent in the middle of the Atlantic Ocean that sank into the sea. Before it sank, the rulers left for Egypt, Mexico and Peru and became rulers of these countries.

He found information about these skulls hidden in the Library of Congress in Washington. I had learned from the Peruvian government that these unusual skulls could be found in many museums in Peru and excavations were uncovering them even now near the Nasca Plateau. I had read Erich Von Daniken's *Chariots of the Gods?* and remembered his theories of ancient astronauts landing in this desert area. A few years ago, we were invited to film and photograph these skulls and other discoveries that Peruvian archaeologists are currently unearthing. These skulls are so numerous in the area of the Nasca desert that youcan find small makeshift museums in the backyards of the locals. They dug up their ancestors so you

can view their remains for a small fee. Some skulls show the evidence of ancient brain surgery that prove their ancestors possessed certain abilities that modern science has just recently discovered. Stunned, we wondered why we had not seen photographs of these skulls before. Our guides explained their church leaders feel these skulls are the work fo the devil, the offspring of the fallen angels in the Bible.

In Mexico we found the same types of skulls in a museum in Merida, a city close to the ruins of Palenque. Lord Shield Pascal had the same elongated skull, an image which is found engraved on his tomb. Erich Von Daniken has described the drawings as Pascal sitting in a rocket ship. The conquering Spaniards found the natives deforming their heads to make them appear more "god like" and the priests declared them devil worshippers. Mean while in Egypt, King Akhenaton was also regarded as a heretic and all information about this king was obliterated until just recently. These finding prove that the rulers of these advanced societies all shared the common bond of huge skulls and brains that probably provided them with superior intelligence. This information has been shared by secret societies and religious leaders for hundreds of years and up until now they had decided to keep these secrets for themselves. All who first see the pictures feel... "They show proof of beings from another world." It seems that these conclusions were deemed to be too shocking for the average person and that these skulls were to be dismissed as deformities and hidden far from public view. That is, until President Fujimori took power in Peru. He had decided to allow the skulls to be photographed and has brought them to the attention of the world.

Resistance to publishing the photographs has remained, and there appears to be a world wide cover-up of the skulls true origins. The only answers seems to be that public knowledge of "Fallen Angels" or ancient astronauts would disrupt society and the world's religions. I told Joel Mills he would probably face the same struggle to get the photos published in the CD ROM, just as we have encountered with the various news media. He felt sure that the time was here and now to wake up the world, and that the movie *Stargate* was just the beginning. I wished him luck and success with the idea and sent him all the material I had in my possession to document the facts he needed. Several months passed and then one day he phoned to tell me he had left the CD ROM production team and that none of the skull photographs would be included in *The Secrets of Stargate*. After several run-ins with executives in Hollywood, the pictures wee deemed to be unsuitable for inclusion in *The Secrets of Stargate*. He was much happier with his new job promoting a public speaker that teaches the history and wisdom of ancient Egypt and again asked for permission to use the photographs, but this time for private presentations only. He had learned first hand about the powers that have kept these pictures hidden from the public.

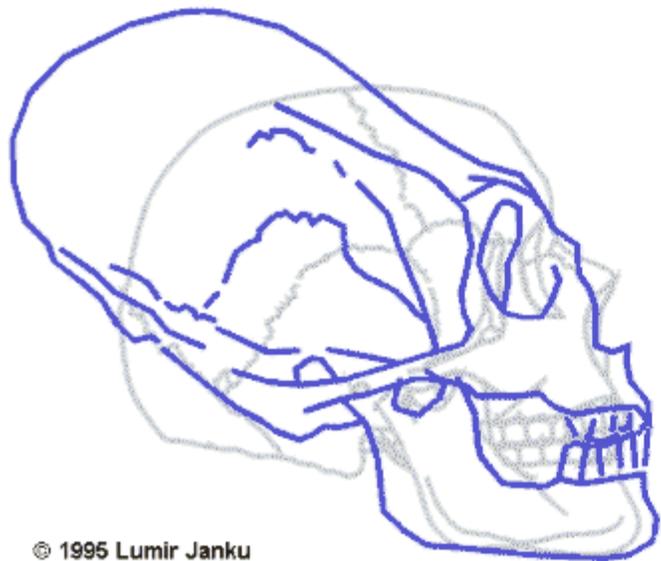


Troubled Times



Skulls

These graphics and photos, created by **Lumir Janku** and **Robert Connolly** in 1995 and 1996 and included in their CD-ROM *The Search for Ancient Wisdom*, distributed by Cambrix (800) 992-8781, demonstrate that hominoid skulls discovered in Mexico and Peru are *not* of terrestrial origin.



© 1995 Lumir Janku

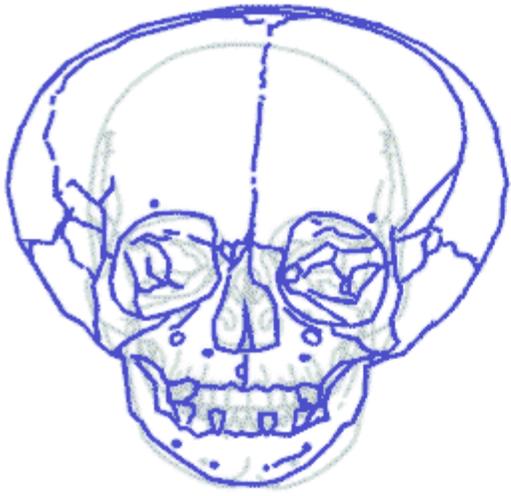


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Troubled Times



Skeletons

Skeletons, from *Kent.com*

Human skulls with horns were discovered in a burial mound at Sayre, Bradford County, Pennsylvania, in the 1880's. Horny projections extended two inches above the eye-brows, and the skeletons were seven feet tall, but other than that were anatomically normal. It was estimated they were buried around AD 1200. Some of the bones were sent to the American Investigating Museum in Philadelphia, where they seem to have disappeared.

In 1837, a number of tiny human skeletons from 3 to 4 1/2 feet tall were found buried in tiny wooden coffins near Coshocton, Ohio. There were no artifacts found, but the number of graves led one observer to note that they "must have been tenants of a considerable city."

Seven skeletons were found in a burial mound near Clearwater Minnesota, in 1888. They had double rows of teeth in the upper and lower jaws and had been buried in a sitting position, facing the lake. The foreheads were unusually low and sloping, with prominent brows.

In 1911, miners began digging guano from a cave 22 miles southwest of Lovelock, Nevada. Soon, a mummy was found, a 6 1/2 foot tall person with "distinctly red" hair. According to the ancient legends of the local Paiute Indians, a tribe of red-haired giants, the Si-te-cahs, were once the mortal enemy of the indians in the area, who had joined forces to drive the redheads out. Measuring the femurs of some of the skeletons recovered, researches decided that they belonged to people between 6 and 10 feet tall. Others, however, have stated that the tallest is no more than 5'11, which is still considerable height for the time and place, but hardly a giant. Also, they point out, taking a black-haired mummy from a dark cave often causes the hair to turn red. It is unclear if this happened in Lovelock or not.



Troubled Times



DNA Analysis

No Human DNA In ET Fingerprints On Window

[Australia](#), September 25, 2000

An ultra-high strangeness DNA mystery emerged in Australia when fingerprints found on a mirror were tested for their DNA content and found not to contain human DNA at all. This case developed after a woman who had found a cross delicately scratched on her arm contacted Australian UFO researcher Barry Taylor. The cross was offered as evidence, along with some strange prints preserved on a bedroom mirror. Taylor initiated a full DNA sampling of the prints with the assistance of Phenomena Research Australia. This sampling revealed an unusually high level of bacteria and the presence of canine DNA. However, the prints do not resemble dog prints, and there appears to be no possibility that the family dog could have made them without disturbing the area around the mirror, which was cluttered with household objects.

This is an unusual case for three reasons: 1-there has been an effort made to engage in proper scientific analysis of the evidence; 2-the prints involved have the appearance of other prints found by UFO witnesses on mirrors and glass doors; 3-the high level of bacteria found in the prints is not normally observed in prints from any animal. For illustrations and more information, go to Barry Taylor's website.



Troubled Times



Betty/Barney Hill

The Zeta Reticuli Incident

Astronomy, December, 1974

A faint pair of stars, 220 trillion miles away, has been tentatively identified as the "home base" of intelligent extraterrestrials who allegedly visited Earth in 1961. This hypothesis is based on a strange, almost bizarre series of events mixing astronomical research with hypnosis, amnesia, and alien humanoid creatures. The two stars are known as Zeta 1 and Zeta 2 Reticuli, or together as simply Zeta Reticuli. They are each fifth magnitude stars - barely visible to the unaided eye - located in the obscure southern constellation Reticulum. This southerly sky location makes Zeta Reticuli invisible to observers north of Mexico City's latitude. The weird circumstances that we have dubbed "The Zeta Reticuli Incident" sound like they come straight from the UFO pages in one of those tabloids sold in every supermarket. But this is much more than a retelling of a famous UFO incident; it's an astronomical detective story that at times hovers on that hazy line that separates science from fiction. It all started this way:

The date is Sept. 19, 1961. A middle aged New Hampshire couple, Betty and Barney Hill, are driving home from a short vacation in Canada. It's dark, with the moon and stars illuminating the wooded landscape along U.S. Route 3 in central New Hampshire. The Hills' curiosity is aroused when a bright "star" seems to move in an irregular pattern. They stop the car for a better view. The object moves closer, and its disklike shape becomes evident. Barney grabs his binoculars from the car seat and steps out. He walks into a field to get a closer look, focuses the binoculars, and sees the object plainly. It has windows - and behind the windows, looking directly at him are... humanoid creatures! Terrified, Barney stumbles back to the car, throws it into first gear and roars off. But for some reason he turns down a side road where five of the humanoids are standing on the road. Apparently unable to control their actions, Betty and Barney are easily taken back to the ship by the humanoids. While inside they are physically examined, and one of the humanoids communicates to Betty. After the examination she asks him where they are from. In response he shows her a three-dimensional map with various sized dots and lines on it. "Where are you on the map?" the humanoid asks Betty. She doesn't know, so the subject is dropped. Betty and Barney are returned unharmed to their car. They are told they will forget the abduction portion of the incident. The ship rises, and then hurtles out of sight. The couple continue their journey home oblivious of the abduction.

But the Hills are troubled by unexplained dreams and anxiety about two hours of their trip that they can't account for. Betty, a social worker, asks advice from a psychiatrist friend. He suggests that the memory of that time will be gradually restored over the next few months - but it never is. Two years after the incident, the couple are still bothered by the missing two hours, and Barney's ulcers are acting up. A Boston psychiatrist, Benjamin Simon, is recommended, and after several months of weekly hypnosis sessions the bizarre events of that night in 1961 are revealed. A short time later a UFO group leaks a distorted version of the story to the press and the whole thing blows up. The Hills reluctantly disclose the entire story. Can we take this dramatic scenario seriously? Did this incredible contact with aliens actually occur or is it some kind of hallucination that affected both Barney and Betty Hill? The complete account of the psychiatric examination from which the details of the event emerged is related in John G. Fuller's 'The Interrupted Journey' (Dial Press, 1966), where we read that after the extensive psychiatric examination, Simon concluded that the Hills were not fabricating the story. The most likely possibilities seem to be: (a) the experience actually happened, or (b) some perceptive and illusory misinterpretations occurred in

relationship to some real event. There are other cases of alleged abductions by extraterrestrial humanoids. The unique aspect of the Hills' abduction is that they remembered virtually nothing of the incident.

Intrigued by the Hills' experience, J. Allen Hynek, chairman of the department of astronomy at Northwestern University, decided to investigate. Hynek described how the Hills recalled the details of their encounter in his book, 'The UFO Experience' (Henry Regnery Company, 1972): "Under repeated hypnosis they independently revealed what had supposedly happened. The two stories agreed in considerable detail, although neither Betty nor Barney was privy to what the other had said under hypnosis until much later. Under hypnosis they stated that they had been taken separately aboard the craft, treated well by the occupants - rather as humans might treat experimental animals - and then released after having been given the hypnotic suggestion that they would remember nothing of that particular experience. The method of their release supposedly accounted for the amnesia, which was apparently broken only by counterhypnosis." A number of scientists, including Hynek, have discussed this incident at length with Barney and Betty Hill and have questioned them under hypnosis. They concur with Simon's belief that there seems to be no evidence of outright fabrication or lying. One would also wonder what Betty, who has a master's degree in social work and is a supervisor in the New Hampshire Welfare Department, and Barney, who was on the governor of New Hampshire's Civil Rights Commission, would have to gain by a hoax? Although the Hills didn't, several people have lost their jobs after being associated with similarly unusual publicity.

Stanton T. Friedman, a nuclear physicist and the nation's only space scientist devoting full time to researching the UFO phenomenon, has spent many hours in conversation with the Hills. "By no stretch of the imagination could anyone who knows them conclude that they were nuts," he emphasizes. So the experience remains a fascinating story despite the absence of proof that it actually happened. Anyway - that's where things were in 1966 when Marjorie Fish, an Ohio schoolteacher, amateur astronomer and member of Mensa, became involved. She wondered if the objects shown on the map that Betty Hill allegedly observed inside the vehicle might represent some actual pattern of celestial objects. To get more information about the map she decided to visit Betty Hill in the summer of 1969. (Barney Hill died in early 1969.) Here is Ms. Fish's account of that meeting: "On Aug.4, 1969, Betty Hill discussed the star map with me. Betty explained that she drew the map in 1964 under posthypnotic suggestion. It was to be drawn only if she could remember it accurately, and she was not to pay attention to what she was drawing - which puts it in the realm of automatic drawing. This is a way of getting at repressed or forgotten material and can result in unusual accuracy. She made two erasures showing her conscious mind took control part of the time. "Betty described the map as three-dimensional, like looking through a window. The stars were tinted and glowed. The map material was flat and thin (not a model), and there were no noticeable lenticular lines like one of our three-dimensional processes. (It sounds very much like a reflective hologram.) Betty did not shift her position while viewing it, so we cannot tell if it would give the same three-dimensional view from all positions or if it would be completely three-dimensional. Betty estimated the map was approximately three feet wide and two feet high with the pattern covering most of the map. She was standing about three feet away from it. She said there were many other stars on the map but she only (apparently) was able to specifically recall the prominent ones connected by lines and a small distinctive triangle off to the left. There was no concentration of stars to indicate the Milky Way (galactic plane) suggesting that if it represented reality, it probably only contained local stars. There were no grid lines."



Troubled Times



Zeta Reticuli

Pattern Recognition & Zeta Reticuli

by Carl Sagan & Steven Soter

Astronomy, December, 1974

"The Zeta Reticuli Incident" is very provocative. It claims that a map, allegedly shown on board a landed extraterrestrial spacecraft to Betty Hill in 1961, later drawn by her from memory and published in 1966, corresponds well to similar maps of the closest stars resembling the sun based on stellar positions in the 1969 *Gliese Catalog of Nearby Stars*. The comparison maps were made by Marjorie Fish using a three dimensional physical model and later by a group of Ohio State University students using a presumably more accurate (i.e., less subjective) computer generated projection. The argument rests on how well the maps agree and on the statistical significance of the comparison. Figure 1 [not available here] show the Hill map and the Ohio State computer map with connecting lines as given in the *Astronomy* article. The inclusion of these lines (said to represent trade or navigation routes) to establish a resemblance between the maps is what a lawyer would call "leading the witness". We could just as well have drawn lines as in the bottom of Figure 1 to lead the other way. A less biased comparison of the two data sets, without connecting lines as in Figure 2, shows little similarity. Any residual resemblance is enhanced by there being the same number of points in each map, and can be accounted for by the manner in which these points were selected. The computer star map includes the sun and 14 stars selected from a list of the 46 nearest stars similar to the sun, derived from the Gliese catalog. It is not clear what criteria were used to select precisely these 14 stars from the list, other than the desire to find a resemblance to the Hill map. However, we can always pick and choose from a large random data set some subset that resembles a preconceived pattern. If we are free also to select the vantage point (from all possible directions for viewing the projection of a three dimensional pattern), it is a simple matter to optimize the desired resemblance. Of course such a resemblance in the case of selection from a random set is a contrivance - an example of the statistical fallacy known as "the enumeration of favorable circumstances".

The presence of such a fallacy in this case appears even more likely when we examine the original Hill drawing, published in *The Interrupted Journey* by John Fuller. In addition to the prominent points that Betty Hill connected by lines, her map also includes a number of apparently random dots scattered about - evidently to represent the presence of background stars but not meant to suggest actual positions. However, three of these dots appear in the version of the Hill map used in the comparison, while the others are absent. Thus some selection was made even from the original Hill map, although not to the same extent as from the Gliese catalog. This allow even greater freedom to contrive a resemblance. Finally, we learn from *The Interrupted Journey* that Betty Hill first thought she saw a remarkable similarity between her UFO star map and a map of the constellation Pegasus published in the *New York Times* in 1965 to show the position of the quasar CTA-102. How many star maps, derived from the Gliese catalog or elsewhere, have been compared with Betty Hill's before a supposed agreement was found? If we suppress information on such comparisons we also overestimate the significance of the result.

The argument on "The Zeta Reticuli Incident" demonstrates only that if we set out to find a pattern correlation between two nearly random data sets by selecting at will certain elements from each and ignoring others, we will always be successful. The argument cannot serve even to suggest a verification of the Hill story - which in any case is well known to be riddled with internal and external contradictions, and which is amenable to interpretations which do not invoke extraterrestrial intelligence. Those of us

concerned with the possibility of extraterrestrial intelligence must take care to demand adequately rigorous standards of evidence. It is all too easy, as the old Chinese proverb says, for the imprisoned maiden to mistake the beating of her own heart for the hoof beats of her rescuer's horse.

Steven Soter is a research associate working under the advisement of Carl Sagan, director of Cornell University's laboratory for Planetary Studies.



Troubled Times



Travis Walton

The Travis Walton UFO Abduction Case

By Geoff Price

On November 5th, 1975, one of the more persistently controversial UFO events in history took place in northeastern Arizona. A work team consisting of seven individuals reported encountering a reflective, luminous object the shape of a flattened disc hovering close to their truck on a remote dirt road in the Apache-Sitgreaves National Forest. According to the crew, one of their members, Travis Walton, exited the truck and approached the object on foot, at which time he was allegedly struck by a brilliant bluish light or flash and hurled to the ground some distance away. In fear, the other crew members fled the scene, returning after a short period of time to find no trace of the UFO, or of Walton. The driver of the truck was Mike Rogers, the crew foreman and a personal friend of Walton's. While fleeing the scene, Rogers reported looking back and seeing a luminous object lift out of the forest and speed rapidly toward the horizon. He, along with the other five witnesses, would eventually be subjected to polygraph (lie detection) examinations regarding the event, the successful outcomes of which catapulted the case into the national spotlight.

Walton turned up five days later, confused and distraught but with fleeting memories of alien and exotic human entities. He was also subsequently subjected to a number of controversial polygraph examinations. As the first seriously investigated UFO event to involve the disappearance of an individual in conjunction with a UFO sighting, the Walton incident put the honesty of UFO claimants, as well as the validity of lie detection evidence, squarely in the spotlight. A total of thirteen polygraph examinations have been conducted in association with the case, tests which have been the subject of considerable discussion and acrimonious debate.



Troubled Times



Arizona Mothership

SearchNet's IUFO reports on an article in *USA Today*, June 20, 1997, by Richard Price

PHOENIX, Ariz.

Something happened in-the skies over Arizona the night of March 13. No one is sure what it was but thousands saw it dozens videotaped it and people all over the state are haunted by it still.

"I'll never be the same," Bill Greiner, 51, a cement truck driver, says. He was hauling a load down a mountain north of Phoenix when he saw two brilliantly lit orbs, shaped like spinning tops. "Before this, if anybody'd told me they saw a UFO, I would've said, 'Yeah, and I believe in the tooth fairy.'"

"Now I've got a whole new view. I may be just a dumb truck driver, but I've seen something that don't belong here."

So what did Greiner and every- body else see? That question has rat- tied around this state for three months. Officials at **Luke Air Force Base** in nearby Glendale are bombarded with calls for an investigation, even though the US. government is officially out of the UFO business.

The subject surfaces constantly on talk shows. And the army of people demanding answers has grown to the point that a Phoenix city council- woman has launched an inquiry.

It could have been a hoax. It could have been an illusion. It could have been almost anything. But the events of March 13 may add up to the most contentious and confounding UFO report since the so-called UFO age was launched 50 years ago by the legendary crash of a "spaceship" outside Roswell, N.M.

The sightings come at a time when interest in UFOs borders on a national obsession, saturating the movie industry, television and literature. A Poll this month by CNN and Time magazine- found that 22% of adult Americans believe intelligent beings from other planets have been in con- tact with human beings.

A Gallup poll last September found that 72% of Americans think there is life on other planets. And 71% said they think the U.S. government knows more about UFOs than it's telling.

"The fact is that more people are seriously interested in UFOs now than they ever have," Don Ecker, research director and news editor at **UFO Magazine**, says. "Convincing the government may be an exercise in futility, but it's not hard to find believers on the streets."

Summary of Rest of Article

The incident over Arizona was the most dramatic I've Seen" Peter Davenport **National UFO Reporting Center**. He says most reports are "hog Wash" but not this one. "What we have here" he says with conviction, "is the real thing, They are here".

First report came from retired police officer from Paulen, 60 miles north of Phoenix. Calls came in from Wickenburg,, Glendale, Phoenix, Scottsdale and Tempe Arizona.

Event lasted 106 minutes. Some saw orbs while others saw triangles. By far the most common description and one captures on video Was that of a V shaped object.

Witnesses agree that

1. It was enormous. The most conservative estimate describes it as three football fields long. Computer analysis puts it at 6,000 feet, or more than a mile.
2. It made no sound.
3. It moved slowly over Phoenix, cruising at 30 mph. Several times it hovered in place in the sky.

"We could see the outline of a mass behind the lights, but you couldn't exactly see the mass" Dana Valentine said, "It was more like a gray distortion of the night sky, wavy. I don't know what it was, but I know it's not a technology the public has heard of before."

Tim Ley says "It was astonishing and a little frightening. It was so big and so strange. You couldn't actually see the object. All you could see was the outline, as though something were blocking out the stars The lights looked like gas. There was a distortion on the surface. Also the light did not spill out or shine. I've never seen a light like that.

Hundreds seek explanation according to Jim Delatosa and Mcihael aTanner, partners who own **Village Labs**.



Troubled Times



Phoenix Lights

I have been asked to post our sighting report on March 13, 1997. Here it is....

I awoke from a brief nap in my recliner and leaned over to tell my wife that I was going to bed. I glanced to the clock on the television, it was 8:30 pm. As I walked down the hallway to the master bedroom, I noticed the bedroom window was open. The weather was most pleasant this March 13 evening, temp. 75 degrees, clear and no wind. (Jim Schnebelt Fox 10 weather) Typical Arizona spring evening.

As I pulled the window closed, my eyes were attracted to the three huge, bright white lights angled down and very low to the ground. "Plane crash!" I thought. These lights were way too low and angled in a way nothing I know of could pull out of. I ran down the hallway, grabbed my glasses off the bar and yelled to my wife, of 25 years, "get outside right now!" Without hesitation she followed me out the back arcadia door to the edge of our patio. (I have timed this since and it took app. 8-10 sec)

Standing at the edge of our patio, facing west, and looking north, confusion struck me. For there was no plane crash, but coming from the north and heading south was one, single structure that looked like a giant boomerrang. (the description of boomerrang, chevron (best), and V shaped object all apply). This object stuck out like a sore thumb in the evening sky due to the fact we were looking north towards the Phoenix metro area, and the city lights gave us a grey background in which to view this huge black V shaped object. It was so low to the surface we could not believe it. I remember saying, "what the hell is that?" The huge V shaped craft was moving slowly to the south.

At this point, still northwest of us, we both saw a 737 in landing approach pass over the object. The plane was coming in from the west heading east. The V shaped craft was heading south from the north. As the plane passed over the 737, I said, "did you see that! Why didn't the plane get the hell out of there?" But it didn't. The pilot nor the planes computers saw nothing. (Just like the radars at Sky Harbor and Luke AFB. Nothing was detected.)

I would like to explain more on this incident. We live app. 23 miles ESE of Sky Harbor in Phoenix. Planes coming in to land (most of the time) will come out by us, bank to the north (left), proceed for app. 10-12 miles, bank left again (west) and land at Sky Harbor. This is normal landing pattern. I have talked to airline pilots, tower operators, and investigators about the altitude of planes coming in to land at Sky Harbor, at the point of the first bank north where we live. The altitude.. 1200'. The massive V shaped craft we saw was under 1200' altitude! As the huge V shaped craft proceeded south, it was almost in front of us, when my eyes followed the left wing to it's end.

We live 1/2 mile south of Chandler Blvd. The end of the wing was well past that and at least half way to Ray Rd. (1 1/2 miles north!) I remember saying to my wife, "that son-of-a-bitch is a mile long! As it passed in front of us all we could see is the left wing. That's how low it was. At arm's length the object was at least 30"+ long. I reported it was app. 1 1/2 mile west of us, going down Alma School Rd. But the closest part of the huge V, the end of the left wing was much closer. Maybe within a 1/2 mile. One thing that I remember the most is how this craft "floated" app. 30-40 mph. There was no visual means of propulsion and absolutely no noise. The altitude and speed of the craft never changed.

On March 13, 1997, at app.8:31 pm mst., there was a bright bottom quarter moon setting in the western horizon. I said to the wife, "we're gonna get more detail, look, it's going right into the light of the moon."

But instead of greater detail of this huge V shaped craft, what we saw still amazes us. As the front of the V shaped craft entered the light of the moon, this black chevron shaped object became translucent in bright light! We could still see the bottom quarter moon thru the object, but instead of bright white, it (moon) was a dingy yellow. As the V shaped craft exited the bright moon, it became a solid black object again. We watched as the entire craft passed thru this. Seeing a solid object going into and coming out of, was black. But as the craft passed between us and the bright, white moon, it was translucent.

(Something about bright objects... witnesses who had this pass over their heads claim that as the craft passed between bright stars, it was like looking thru...water) By the time the end (left wing still) was passing thru the light of the moon, the front of the craft was disappearing into the night sky to our south. It never changed course, speed, or altitude. Just faded off into the night sky to the south of us. During the whole sighting we never moved our feet. We never considered getting a camera. We never thought of yelling for a neighbor. There was no question in our minds that what we saw was not of this Earth. Our total sighting was app. 1 minute and 45 seconds. Hope this is what you were looking for. You may post this if you wish.

Mike Fortson
Chandler, Az.



Troubled Times



RAF Chase

UFO Roundup, Volume 3, Number 18, May 3, 1998

Editor: Joseph Trainor

British Newspapers Say RAF, Dutch Air Force Chased Giant UFO

The London newspapers *Daily Telegraph* and *Daily Mail* reported this week that jet interceptors of the Royal Air Force and the Netherlands Air Force had pursued a giant triangular UFO over the North Sea. According to the *Daily Mail*, the phased-array radar network at RAF Fylingdales in North Yorkshire picked up an "unusual craft (that was) tracked flying in a zigzag pattern at 17,000 miles per hour (27,200 kilometers per hour) over the North Sea." An RAF fighter squadron was sent to intercept the object. The Netherlands Air Force "also tracked the UFO but the two (Dutch) F-16 fighters scrambled to intercept the object were unable to keep up" with it. The UFO dodged the Dutch fighters, increasing its speed to 24,000 miles per hour (38,400 kilometers per hour), and shot away to the northeast, heading for the Atlantic Ocean. "RAF officials were said to be baffled by the object ...

'It was definitely under control, judging by the various manoeuvres executed,' said a spokesman. 'It appeared to be triangular and was around the size of a battleship (about 900 feet long) (273 meters--J.T.).'" According to the *Daily Telegraph*, "Tapes to be shown to British and American experts are said to show objects that change shape and in mid-air and a battleship-sized aircraft traveling at 33 times the speed of sound." The presentation of the radar tapes will be made in June at the Space Symposium to be held at the Air Warfare Center at RAF Cranwell in Lincolnshire. The newspaper articles appeared on Monday, April 27, 1998. The RAF Press Office denied that a joint air operation against a giant UFO had taken place, adding, "Yes, there is a conference at the Air Warfare Center at RAF Cranwell in June, but this is to discuss military strategies in outer space - not UFOs."

The *Daily Telegraph* said Wednesday, April 29, that it stands by its story and its "RAF source." According to Graham W. Birdsall, editor of the UK's *UFO Magazine*, the "RAF source" is Philip Burden, a former Ministry of Defence employee who served as editor of the in-house RAF publication *RAF News* ten years ago. (See the *Daily Telegraph* for April 27, 1998, "**RAF Spots Speeding UFOs with New Radar**," and the *Daily Mail* for April 27, 1998, "**24,000 MPH UFO Buzzes Britain**." Many thanks to Errol Bruce-Knapp, Graham W. Birdsall and Dave Clarke of BUFORA for making the newspaper articles available.)

Later, also from *UFO Roundup*

Dutch UFOlogists Dispute Story of North Sea Chase

Andy Denne of the Netherlands UFO group A.U.R.A. reported, "We have checked our source in the Dutch air force, and we can be rather sure by now that the F-16s sent to intercept never even took off." "We also double-checked with the Dutch military defense radar station at Nieuw-Millingen. They also assured us nothing was visible on radar." A.U.R.A. members and other Dutch ufologists telephoned the Air Traffic Control center at Schipol International Airport in Amsterdam. Radar operators there "saw nothing on their radars during the past couple of months." "So our conclusion is that there was no North Sea UFO, at least as described by the British press," Denne reported. "Especially since the Dutch air force is not as tight-lipped as their British and American colleagues."



Troubled Times



Orange Fireballs

Orange Fireballs Appear Nightly in New South Wales

UFO Roundup, January 18, 1999

On Thursday, January 6, 1999, Margaret W. and her family watched as a squadron of five orange fireballs flew over their home in South Cessnock, New South Wales, Australia, a town located 180 kilometers (108 miles) north of Sydney. Amazingly, the UFO flyover repeated itself the following night, and the night after that. By Monday, January 11, 1999, the flights, with anywhere from two to five "orange fireballs" had passed over South Cessnock. "We have been seeing these orange fireballs in flight going over our house for the past six days." Margaret "said she had got her son a telescope for Christmas, and they had observed the lights through it.

Red, fiery orange spheres with flames coming out of the back of the objects. They had four lights in front. Lights were cloudy and white in colour. The objects were disc-shaped." She added that "they came from the east," i.e. the Pacific Ocean, "and went west. She stated that her neighbour came out and had a look and went back inside to call RAAF Williamstown, to see if they had any planes in the area. They said no." Each object "was about the size of a 20-cent piece held at arm's length." (Many thanks to Diane Harrison of UFO Australian Research Network for this report.)



Troubled Times



Finland

UFOlogists Look into Air Battle in Finland

UFO Roundup, January 5, 1999

Ufologists in Finland are looking into a reported air battle between a Finnish jet fighter and a squadron of five UFOs. According to Lars Osterman, the dogfight took place on March 31, 1997 in northern Finland. Local researchers learned of it when the pilot, whose name has been kept under wraps, phoned a radio talk show and reportedly said he was "having trouble dealing with" the experience. According to Osterman, the fighter was an F-18A Hornet of the Suomen Ilmavoimat (Finnish Air Force--J.T.), which was posted to the Lapin Lennosto (Far North Air Department) air base at Rovaniemi, 400 kilometers (240 miles) north of Helsinki.

The F-18 took off on "a routine 960-kilometer patrol of the border" with Russia. As the jet flew over the frozen tundra southeast of Lake Inarijärvi, the pilot spotted three discoid UFOs flying in a northeasterly direction. Going in for a closer look, the pilot saw that "there seemed to be five saucers, instead of just three." He then radioed Rovaniemi and advised them of the situation. Lapin Lennosto Flight Control ordered him to intercept the objects. The five UFOs, described by the pilot as "glowing orange objects," veered sharply to the northwest. The F-18 pursued them to Ivalo, a city 200 kilometers (120 miles) north of Rovaniemi. From there, the F-18 chased the saucers west to Inari, 40 kilometers (24 miles) to the northwest. Then the saucers darted eastward, high above Lake Inarijärvi.

The pilot told Flight Control that the UFOs were breaking formation and requested permission to fire at them. Flight Control responded, "Permission granted. Fire at will." The pilot got behind one glowing saucer and lined it up with the reticule on his windshield "heads up" display. But instead of picking up the "target acquisition tone" in his earphones, he heard the raucous honk of an alarm. All at once, the targeting computer went off-line. The "heads up" display disappeared. The F-18's firing system for the 20mm cannon was also down. Instantly the pilot hit the "arming" switch for his air-to-air missiles. The red Malfunction light began blinking on the dashboard.

According to Osterman, the saucers regrouped and flew away to the east "at Mach 4 or 5. They had an orange glow around them." None of the F-18's flight control systems were affected, and the pilot returned safely to Rovaniemi. "They tested the computers for days afterward but could find nothing wrong with them," he added. The saucers crossed the border and were last seen heading for Talvikula in Russia. (Email Interview)



Troubled Times



Air Force One

InfoBeat, 01:47 PM ET 06/05/98

Clinton's plane briefly disappears from radar

New York (*Reuters*) - President Clinton's plane disappeared briefly from air traffic control radar screens Friday but there was never any danger to those on board Air Force One, aviation officials said. A spokesman for the Federal Aviation Administration (FAA) said there was an apparent malfunction of radar at the Gibbsboro facility in southern New Jersey. "The Gibbsboro radar experienced a difficulty when Air Force One was in that airspace between Washington and Bedford, Massachusetts," FAA spokesman Jim Peters said. Clinton flew from Washington for an appearance at the Massachusetts Institute of Technology in Cambridge near Boston Friday morning.

The FAA said in a statement in Washington that the Gibbsboro, New Jersey, **radar lost track of Air Force One for 36 seconds** at 8:11 a.m. EDT. "Preliminary information indicates that for three sweeps of the radar (36 seconds) complete information on Air Force One was not available," the statement said. "Safety was not compromised and communications were maintained with the aircraft at all times. The matter is under investigation." CBS News radio quoted air traffic control union officials as saying that controllers twice lost track of Air Force One, but the FAA confirmed only one incident. The CBS News report said that one of those instances was over New York's La Guardia airport, where a near mid-air collision in April prompted the FAA to announce Thursday that it was ordering additional training for 10,000 air traffic controllers.

Officials said the Air Force One incident was unrelated to the delays of flights at three major New York area airports Friday morning after a computer software problem at a Long Island air traffic control center. The FAA said the software was reinstalled and the problem was repaired by 7:30 a.m. EDT. By Friday afternoon flights at Newark International Airport in New Jersey, and La Guardia and John F. Kennedy International airports in New York were back on schedule, airport officials said. The FAA said computerized information about aircraft was lost from screens at a Long Island control center during software testing but at no time were controllers out of contact with planes.



Troubled Times



FBI Files

Book charts FBI-UFO connection

By Sally Suddock. June 5, 2000

In his own commentary on the book sent to UFO subscriber lists on the Web last week, Maccabee offered a sneak preview of some of the facts he learned in the process of researching and writing UFOs and the FBI: The Secret History of the Government Cover-Up. Among them:

- July 10, 1947, Air Force Intelligence asked the FBI to interview witnesses (of alien landing at Roswell). The Air Force was worried that some sighting reports might come from communist sympathizers.
- The FBI officially investigated during the late summer of 1947. The FBI interviewed a dozen and a half or so witnesses and found no evidence of communist sympathizers, but did find unexplainable sightings. Many of these interviews and sighting reports were filed under "Security Matter - X". ... so these are the "Real X Files."
- Air Force Intelligence supplied the FBI with secret UFO-related information from the summer of 1947 until the middle of the 1950's. Some of this information did not appear in the files of Project Blue Book (1952-1969) which include the files of Project Sign (1948) and Project Grudge (1949-1951), or in the Air Force .
- Information supplied to the FBI during the years 1949-1950 indicated that the Air Force treated the subject seriously even though the Air Force publicly stated that the sightings could all be explained and that there was no threat to the United States.
- In January 1949 an Air Force Colonel at Oak Ridge, Tennessee, who directed the project to create and atomic powered aircraft, told the FBI that saucers were real and were weapons of the Soviet Union.
- In 1949 and 1950 the FBI was told by the Air Force intelligence that the saucer project had been ended. But then the FBI received further requests for sighting information which proved that the Air Force was still investigating. The confusion of the Air Force investigators over whether or not saucers were weapons of another nation or something else is evident in the FBI file.
- 1949 and 1950 numerous "green fireballs" were observed flying over restricted military installations in New Mexico and Texas. These military installations were associated with the construction and storage of atomic weapons. The security agencies were very worried that these "fireballs" were Soviet missiles. The Air Force reports also indicate a "disc shaped variation" also reported by Air Force security personnel. The local FBI agents reported numerous times to headquarters (Hoover) about these sightings. In 1950 the AF project set up to investigate these sightings (Project Twinkle) obtained "photographic proof" of saucer reality. This proof is presented publicly for the first time in this book.
- On July 29, 1952, a week after saucers appeared over Washington, DC, the FBI was told by Air Force Intelligence that roughly 3 percent of the sightings could not be explained and that it was "not entirely impossible" that some saucers were "ships from another planet." On the same day the General in charge of Air Force Intelligence (General Samford) held a press conference and told the American public that sightings were all explainable as natural phenomena such as mirages and "temperature inversions" (affecting radar).
- In October, 1952, the FBI was told that some AF officers were "seriously considering the possibility of interplanetary ships."

- The FBI file has a memorandum which indicates that when Jimmy Carter became President he did query government agencies about their UFO activities, as he had promised before the election.

Maccabee says that, while the FBI does not now investigate sightings, it's "placed on the web the roughly 1600 pages of UFO files (at www.foia.fbi.gov and check for "foipa" documents.) These are not arranged in any order so if you are looking for a particular item you may have to search through all 16 files of 5 Mbytes each." Or, a better solution for investigating the pattern of the Federal Bureau of Investigation's UFO activity might be Maccabee's book.



Troubled Times



Mass Sightings

In 1954, eclipse watchers aboard a BOAC stratocruiser, en route from the US to Britain, got more than they bargained for when they spied UFOs through the portholes. The sighting was reported upon landing in London and the captain interviewed by a reporter from the [BBC](#). Watch this classic 1954 report from the BBC archives.

Captain James Howard told how he, along with his entire crew and some of the passengers, watched the phenomena for a total of 18 minutes. Captain James Howard: UFO was being intelligently handled He described several small objects, which disappeared and reappeared at will, and one large one, which was able to change its shape, although "it was always black in silhouette and there was a clear edge to it". Eventually, this object disappeared as well. When pressed about the reality of what he had witnessed, Captain Howard remained firm: "There is no question that this was not an illusion... and that it was being intelligently handled".

More recently during the eclipse of 1991, video photographers all over Mexico found that, while attempting to catch the cosmic event on film, they had caught something else they could not explain. In the days following the eclipse, a wave of videos were sent in to the main TV station, showing what appeared to be UFOs in the sky. Indeed, these sightings are now claimed to be among the best examples of UFOs caught on film.



Troubled Times



Mexico Sightings

Mexico a magnet for UFOs, experts say

5 December 1997

ACAPULCO, Mexico (Reuters) - Mexico has long faced resentment in the United States for exporting illegal aliens, but since 1991 the country has faced its own alien invasion -- by extraterrestrials, that is. That is the claim of UFO experts who are gathering in this Pacific resort city for the **Second World UFO Congress**, which started Friday and runs through Sunday.

The first congress was held here 20 years ago and featured a lecture by the late astrophysicist **Carl Sagan**. No one at this convention can match his scientific credentials, but some UFO proponents here, such as nuclear physicist and author **Stanton Friedman**, take a scientific approach. Organizers said the convention returned to Mexico in large part because over the past six years the ancient land of the Aztecs and Mayans has become a frequent stopping place for extraterrestrials.

It all stems from the eclipse of the sun on July 11, 1991, according to **Jaime Maussan**, Mexico's leading "ufologist" who conducts a television program on the phenomenon. That was the most highly watched eclipse of the century, and of all the countries in the world, Mexico had about the best vantage point. Reports of UFO sightings during the eclipse poured in from around the country. "We can only speculate" as to the reason why they chose Mexico, Maussan told Reuters. "It could be because of the Mexican people themselves, for their characteristics, for their acceptance, their lack of fear. "The only thing for sure is that something strange is happening in the skies of Mexico," he said.

It is not just Mexicans who attest to the trend. Another true believer is **Wendelle Stevens**, 74, a retired **U.S. Air Force** colonel sometimes called the "grandfather of world ufology." "This is the biggest wave in the world developing here now, starting in 1991 and continuing until this year," Stevens told Reuters. "It's the biggest wave of all time." There is a steady flow of UFO sightings in Mexico, where radio and television shows regularly feature witnesses who produce videos and photographs of flying saucers and other vessels. "There was a triangular object seen flying over Mexico City just two weeks ago," Maussan said. "Another one was seen flying over the skyscrapers about three months ago."



Troubled Times



Popo Visit

[UFOs Photographed Over Erupting Mexico Volcano!](#)

By Santiago Yturria, December 21, 2000

The long awaited eruption of Mexico's colossal volcano Popocatepetl (a name that means "Smoking Mountain" in old nahuatl language) that took place last Monday, Dec. 18, brought not only fear and uncertainty but also an unexpected event captured by mere accident. Today the main headlines of local newspapers, Milenio and Extramex, present a photograph of an unknown luminous object flying over the erupting volcano Popocatepetl located near Mexico City and Puebla. The spectacular photograph, taken by reporter Alfonso Reyes last Tuesday, Dec. 19, at 6:10 AM while making a report of the violent awakening, presented a bright luminous object that contrasted with the black clouds of smoke emanating from the volcano crater. The photo was taken in a 20 second exposure time with a 24 mm angular lens according to Mr. Reyes's testimony. However, he didn't actually see the flying object and it wasn't until the development of the film that he discovered what the camera had captured. Because of the long exposure time, the camera captured the luminous object descending and then making a quick turn in the direction of the crater. The possibility of a meteor was discarded due to the described trajectory of the object and also no airplane or helicopter was present in that place for obvious reasons.

This is not the first time that strange unknown objects have been seen flying over this volcano. In June 29, 1999 the surveillance camera of the CENAPRED, the government agency for disasters prevention, was monitoring Mount Popo taking pictures at regular time intervals. At 1:20PM the camera captured a strange disk shape dark object very near the volcano's crater emerging among the smoke clouds. No explanation was given by the agency at the time but researchers continued gathering photographic and video evidence of the object's continued presence over the smoking volcano. Certainly the photograph taken by Alfonso Reyes deserves a serious and dedicated analysis. Meanwhile, this event as well as the others still remain unexplained.



Troubled Times



China Boom

U.F.O. Boom Doesn't Worry Officials

Beijing Journal, Jan. 11, 2000

The last few months have been a boom time for U.F.O. enthusiasts in China. Just before the start of the year 2000, there were dozens of sightings. Strange shining objects were observed scooting through the sky by hundreds of people, from former airport workers to college deans. "Warning Wuhan! Warning Dalian! Warning Xian! Jiangsu! Beijing! Shanghai!" exulted the Jiangsu U.F.O. Research Society's Web site. "Frequent U.F.O. visits have enveloped all of China." Buoyed in part by the sightings, the ranks of the research societies in major Chinese cities devoted to unidentified flying objects have grown to more than 40,000 members. More important still, the normally conservative official news media have been lavishing attention on U.F.O. news, with documentaries on the main government television station, CCTV-1, and credulous newspaper articles. "The level of interest and acceptance is definitely rising," said Sun Shili, a retired Foreign Ministry official who is president of the Beijing U.F.O. Research Society. "Because of the frequent sightings recently in Beijing, Shanghai and other cities that have had many witnesses, even the media - which are very serious and careful - have been paying attention."

Of course, in many ways it would seem a most awkward time for fleets of extraterrestrials to be buzzing China, what with the government jailing leaders of the Falun Gong spiritual movement and a few other groups, also associated with the traditional Chinese practice of qigong exercises, for "superstitious" and "anti-scientific" behavior. But so far, at least, the government has decided to tolerate the U.F.O. craze even if it does not financially support it. Wildly popular and politically unthreatening, U.F.O. research is the kind of unorthodox pursuit that is allowed in China today. Anyway, government officials and citizens alike tend to view U.F.O. research as science or at least possibly scientific. And officials of U.F.O. societies are determined to keep it that way. "The study of U.F.O.'s is fundamentally different from other things like Falun Gong and qigong, which have come under criticism lately," said Jin Fan, an engineer who heads the Dalian U.F.O. Research Society in northeast China. "This is a purely scientific field, whereas Falun Gong deals with cults and superstition."

Indeed, a large portion of China's U.F.O. enthusiasts are scientists and engineers, not the sci-fi buffs or apocalyptic stargazers who are the stereotype in the United States. Many of China's U.F.O. research societies require a college degree and published research for membership. The Chinese Air Force attends important U.F.O. meetings. "If our conditions for membership weren't so strict, we'd have millions of members by now," said Mr. Sun, a cheerful intellectual in a gray sweater and striped tie, who seems to embody the movement - a bit offbeat, yes, but also scholarly, serious and strictly establishment. In his cluttered Beijing study, he proudly displays old photographs of himself interpreting for Chairman Mao and a more recent vintage Alien Collection set containing models of a Nordic alien and of those reportedly found in Roswell, N.M., for example. Applauding the Chinese government's "enlightened and practical attitude," Mr. Sun said: "In the U.S., scholars investigating this are under pressure and have been derided. But in China the academic discussion is quite free, so in this area American academics are quite jealous of us." The cluster of dozens of sightings in the last four months has given China's enthusiasts new grist for discussions. Most episodes involved glowing orange-yellow objects that were reported to have lingered in the late-afternoon or night sky for more than 15 minutes before disappearing in an instant. In a country where camcorders and cameras are now common household equipment, many were captured on film, and the images found their way into newspapers and onto television.



Troubled Times



Shanghai

South China Morning Post

Saturday, December 4, 1999

UFO sighting one for Shanghai's X-Files

X-file: witnesss said the UFO (circled) hovered over Shanghai for 90 minutes, but nothing showed up on local radar.

JOSEPHINE MA

The usually staid state media in Shanghai carried reports yesterday that an unidentified flying object had been sighted in the city. In a front-page story, with colour photographs of an object resembling a meteor, the *Wenhui Daily* said the UFO was spotted over western Shanghai on Thursday afternoon. The paper said one of its reporters dashed to the 43rd floor of a building after receiving a call from a reader about the sighting. The reporter claimed he saw an illuminated object which remained stationary in the sky for about 10 minutes before it disappeared. Two Shanghai television channels broadcast footage of an object darting through the sky with a flaming orange tail, saying nearly 100 people saw it. A former researcher at the Shanghai Observatory, Professor Jiang Xiaoyuan, was among the witnesses but he could not offer any explanation.

The UFO hovered over Shanghai for 1.5 hours, reports said. The city's aviation bureau and Hongqiao airport said their radar did not detect anything. The *Shanghai Daily* also reported the incident in a story headlined "UFO darts across the city's skyline". The paper ran its story on the same page as an advertisement for the X-Files movie, which is based on the television series about two American Federal Bureau of Investigation agents who probe unexplained phenomena. The paper's Web site also listed incidents of UFO reports from different parts of the mainland throughout the year.



Troubled Times



Beijing

China Reports Sudden Surge In UFO Sightings

Agence France Presse, Dec 10, 1999

China is undergoing a sudden surge in unidentified flying object (UFO) sightings, always with the same description, the normally staid official press said Monday. The *Beijing Youth Daily* published an article on the sightings Monday with a photo of two airborne oblong luminous objects taken the night before by China's central broadcaster. The newspaper said the photo, which resembles a pair of missiles, was taken above the district of **Changping**, north of Beijing. In another article, illustrated with a similar photo taken above the capital, the newspaper carried witnesses accounts of UFO sightings on November 14 and December 11, both late in the afternoon. Shanghai's press weighed in last week, reporting - with a photo - on two local UFO sightings on the same date at the beginning of the month, at roughly the same place and time. "It was oblong, yellow, with a shiny pointed top and a white tail,' one of the witnesses, identified only as "Mrs Yang," told the *Liberation Daily*.

An aviation expert who saw video footage of one of the sightings was quoted as saying the object was neither an airplane nor a meteorological phenomenon, but an "artificial flying object." The *Beijing Youth Daily* theorized the sightings could have been illusions created by fumes from the engines of jets taking off at dusk.



Troubled Times



Jianjiao Encounter

UFO Roundup, November, 1998

Chinese Jet Fighter Pursues a UFO

On Monday, October 19, 1998, four military radar stations in Hebei province, China, reported the presence of an unidentified blip hovering above a military flight training school in Changzhou. Once authorities determined that the intruder was not a military or civilian flight, Colonel Li, the base commander, ordered a Jianjiao 6 jet fighter to take off and intercept the UFO. At least 140 people on the ground saw the object. To observers at the base, the UFO first appeared to be "a small star" and then grew larger and larger, perhaps as it descended to a lower altitude, the report said. They described an object with a mushroom-shaped dome on top and a flat bottom covered with bright, continually-rotating lights.

The crew of the Jianjiao 6 interceptor consisted of a pilot and a radar officer. The two officers said "the object clearly resembled depictions they had seen in foreign science fiction films. When they got within 4,000 meters (13,200 feet) of the UFO over Qing county, it abruptly shot upward, easily evading subsequent attempts to get closer. It appeared to be toying with the fighter by repeatedly outdistancing it and then reappearing right above it, the report said. The pilot requested permission to fire on the UFO with the plane's automatic 20mm cannon. He was denied permission to shoot by ground control and was told to continue to pursue and observe the object. The pilot broke off pursuit at an altitude of 12,000 meters (39,600 feet) when the jet began running low on fuel. The UFO then disappeared before two more modern (Chinese fighter) planes could arrive in the area.

Changzhou is 150 kilometers (90 miles) northwest of Shanghai. (See the Hong Kong Standard for November 4, 1998. The story apparently first ran in the Hebei Daily around October 22 and was picked up by the Chinese weekly newsmagazine Baokhan Wenzhai. Many thanks to Errol Bruce-Knapp and Andy Denne of A.U.R.A. for forwarding the article.)



Troubled Times



UFO Chase

Wisconsin Air National Guard F-16 Crashes Chasing UFO?

CAUS, Dec 17, 1999

CAUS thanks George Filer (Majorstar@aol.com) Filer's Files #49 -- 1999 for this report:

Bill McNeff, the **MUFON** Minnesota State Director reports that on September 13, 1999, a fighter aircraft thought to be from the 128th Fighter Wing (ANG) had crashed chasing a UFO at 2:15 AM. This was in the paper one day and then it was not mentioned again, *Wisconsin State Journal* 09/07/99 afternoon edition (*Capital Times*). (rough copied for speed) (API). The ANG was making unannounced low level flyby's and it (they) seemed to be chasing 6 little balls of light. This is not the first time either. Four previous nights they have been awakening folks in the middle of the night. However, the Control Tower at **Truax Field** denies any flight activity. Well today the proof is not in they're hands, one of their F-16's did in-fact go down south of Mt. Horeb for no apparent reason.

The Guard unit blames the crash on mechanical failure. Witnesses describe a shoot out between the jets and the objects. One of the lights turned a different color and emitted a ray type of glow and took out the F-16 #WNG46-5607 piloted by **Col. Ralph Emmit** the Wing Commander. He was unavailable for comment and still is in University of Wisconsin Hospital being treated for nonlife threatening injuries. The **Air National Guard** has not officially commented on this matter and the NTSB was not present at the crash site. Editor's Note: We're attempting to investigate the report further for clarification. Thanks to NUFORC and Bill McNeff MUFON Minnesota.



Troubled Times



Illinois

Police officers in St. Clair County report seeing early-morning UFO

The Post-Dispatch, January 9, 2000

In the past few days, Millstadt police Officer Craig Stevens has slept little, taken countless phone messages from national experts and heard all of the little green men jokes his fellow officers can muster. It's amusing - to a point, he said. "It's not like I'm the only one who saw it and I'm Joe Blow from the local bar who just stepped out drunk, you know?" Stevens, of Highland, and at least three other officers from the Lebanon, Shiloh and Dupo police departments said they saw something in the sky early Wednesday - something that looked like a UFO.

Shaped like an arrowhead, sprinkled with dimmer lights all over its surface and three brighter lights on its tail, the thing made its northeast-to-southwest flight across the Metro East area about 4 a.m. The first report came in to Highland police from the owner of a miniature golf course. He was driving into Lebanon, so the police contacted Lebanon authorities. The officer there guffawed at the dispatcher. But he spotted the thing heading toward Shiloh, and he sped through traffic lights to try to catch up with it. It reached Shiloh, where an officer there spotted it.

Stevens, sitting in his patrol car in Millstadt on his overnight shift, heard the radio chatter and drove to the north end of town. He scanned the sky but saw only airplane lights. Then he looked west. "Wow," he thought, jumping out of the car. "This thing's huge!" He said it moved slowly, like a blimp, about 1,000 feet off the ground. It was about two stories high and about three times as long. In addition to the three lights in the back, dimmer lights sprinkled the entire surface, almost, as he described it, like a "starfield camouflage."

He grabbed his Polaroid camera and snapped a shot. The object headed toward Dupo, and Stevens radioed dispatch. The dispatcher radioed back, reporting an officer there spotted it too. The Polaroid didn't develop well in the cold, and the image only shows the three bright lights. At the station, Stevens made an unofficial police report and sketched a likeness of what he saw. "It's been driving me nuts since I've seen it," he said. "I haven't been able to sleep for the last day and a half." He's searched the Internet for a likeness of the object but can only find a picture of a "Stealth Blimp" on the Popular Mechanics Web site. It looked like an experimental military ship, he said.

The only calls that Scott Air Force Base received about the object were from the media, a spokeswoman said Saturday. And the military base's control tower was closed at that hour. Stevens has also fielded calls from the media, science institutes, UFO experts, and a former FBI man who had "a hundred questions." One expert was adamant that people spotted a similar ship in California the day after Christmas. He and the Lebanon officer went on Art Bell's nationally broadcast radio show. Stevens said he is taking the attention, and his sighting, in stride. "It didn't scare me; it was cool. I'll never forget it," he said.



Troubled Times



Police

St.Louis Police Officer Puts Report Online

Millstadt Police Department

On January 5, 2000 at approximately 4:28am I, Officer Craig A. Stevens was on Patrol in the Village of Millstadt. I was monitoring radio traffic when I heard a report via CENCOM, that the Highland Police Department had a report of a large object flying in the air. CENCOM dispatched Lebanon P.D. to respond. I heard Lebanon state, is the guy 10-55. Later I heard Lebanon state that he observed the object, and that it headed in the direction of Shiloh, and to have Shiloh P.D. be on the look out for it. I then heard that Shiloh had spotted the object. I drove to the east end of town to see if I could observe the object.

Then I drove to the north end of town, in the Liederkrantz Park parking lot. While I was sitting there I observed a very large flying object coming from a southward direction. The object was flying very low from 500 to 1000 ft., and was flying very slowly. The object was making no noise. I could only hear a very low decibel buzzing sound. Then the object began banking to the north east direction, and continued to cruise away from me toward the area of Dupo. I contacted dispatch, and advised them that I had spotted the object. I exited the patrol car, and took the Polaroid camera from the trunk, and attempted to take a picture. The camera was very cold. The temp was only approximately 18 to 20 degrees outside, and the picture did not seem to exit the camera properly. I heard Dupo P.D. advise CENCOM that they quite possibly observed the object, but it was at a very high altitude. I returned to the station, and drew a rough sketch of the object, typed a report of my observations.



Troubled Times



Russian Official

More on that story from the BBC. Note that there were eye witnesses and an "official" quoted on TV. "Vasily Belchenko, security council deputy secretary, was inclined to believe them."

Offered by [Gino](#).

Crop Circles Mystify Russian Farmers

[BBC](#), June 24, 2000

Locals say these Circles are UFO Landing Sites

The overnight appearance of crop circles in a field in southern Russia has puzzled farmers, with witnesses saying aliens landed there. Russian Public TV reported that a farmer from the village of Yuzhnoye, Stavropol Territory called in local officials "to record an act of vandalism" after finding that his field of ripe barley had seemingly been ruined.



Officials believe Alien Landing Reports

Closer examination revealed four distinct circles - one 20 metres in diameter in the centre and three outer ones 5-7m in diameter each. The barley had been smoothed down "as if by hand" in a clockwise direction. Representatives of the Stavropol security council arrived on the scene and suppressed all reports of what happened. They found no traces of radiation or chemicals, and human intervention was ruled out.

UFO Landing

Officials found eyewitnesses in a neighbouring village who said they had seen a UFO landing in the field. Vasily Belchenko, security council deputy secretary, was inclined to believe them. "Aliens" took crop samples from the field. "There is no doubt that it was not man-made, that somebody was playing a practical joke," he said. "An unknown object definitely landed there. "It obviously used an unknown landing principle. "Eyewitnesses say that the landing was very quick and the take-off was immediate," he added. "It all happened in a few seconds."



Soil Samples

The TV suggested that the UFO had come to the field to take a sample of the soil. A 20-cm-deep cylindrical hole with polished walls was found right in the centre of the large circle. The farmers are still wondering why aliens needed their earth. BBC Monitoring, based in Caversham in southern England, selects and translates information from radio, television, press, news agencies and the internet from 150 countries in more than 70 languages.



Troubled Times



New Jersey

Strange Lights

ABC News, July 17, 2001

Something dazzled the people of New Jersey this weekend. Something bright, high in the sky. "It was one of the most amazing things I've ever seen," said eyewitness Joe Malvasio. "They were just hovering, and then they just disappeared. One at a time, each one started to fade until they were gone." Some witnesses thought the phenomenon may have been a sign of an alien presence. Others called it a miracle. But no one knows just what it was — all they can do is attempt to describe it. "I saw 16 golden-orange colored lights, several in a V-type formation," said Lt. Daniel Tarrant of the Carteret Police Department. "Others were scattered around the V."

At Least 15 Report Lights to Police

At least 15 people contacted Tarrant's department to report the strange lights. But Tarrant and other police officials are at a loss to explain just what it was hovering in their skies. Most callers described the same scenario: golden-orange lights moving quietly, some say beautifully, across the night sky over the Arthur Kill river. They described how the lights flickered and how they seemed to vanish into the night, one-by-one. Some drivers even pulled off the New Jersey Turnpike for a better look. But even more amazing is the explanation: there is none, not as of yet. According to the Associated Press, nearby Newark Airport reported no unusual flight patterns, and a National Weather Service meteorologist could find nothing in the weather to explain the lights.

Peaceful, Easy Feeling

"It's really amazing," said Veronica Bagley, whose family captured the lights on video. Paulette Holmes said whatever it was, she was unafraid. "I wasn't alarmed because it was peaceful," she said. Patty Ercallino, another witness, took it a step further. "Very peaceful, very serene, very beautiful," she said. "I think we witnessed some type of miracle."



Troubled Times



Peru

Huge UFO Slowly Passes Over, [Dazzles Lima](#)

Taped By TV News, from Deuce, translation By Scott Corrales 3-10-00

LIMA (IPRI-03.10.00) - During the early morning hours of this March 10th, a UFO made a slow flyby of the city of Lima at a very low altitude for about 15 minutes, allowing many local residents to witness its unhurried passing. Some witnesses claimed having seen small spheres emerge from the object at a given point, drifting away aimlessly. Dozens of witnesses phoned the news media and several minutes of video footage were secured by camera operators from Panamericana Television (Lima Channel 5). The news has been spread all over the country through the second edition (noontime) of the "24 Horas" (24 Hours) news program on Panamericana TV. The following is a transcript of the broadcast: Voice of Valia Barak, anchorwoman on the "24 Horas" set: "A strange object crossed the skies over Lima early this morning. Thousands of citizens witnessed the phenomenon..." Voice of Viviana Coehlllo, on site reporter, with camera image by Juan C. Amoretti: "This was the object observed by many at 1:30 a.m.. Strange movments and plays of light were seen in the heavens over the city of Lima, drawing the attention of hundreds of onlookers..." (A group of four lights in a triangular arrangement can be seen, moving with uncharacteristic slowness over the rooftops). Eyewitness (an anonymous young woman engaged in nocturnal street sweeping for the municipal authorities): "It was a big ship with yellow and red lights...and ten little ships came out..." Voice of Viviana Cohello: "

A considerable number of phone calls from El Callao, Los Olivos, San martin de Porres and Villa El Slavador congested the switchboards of Radio Programas del Peru (RPP). The common denominator was the unidentified flying object that flew over our capital." Eyewitness Bruno Guzman, journalist: "It is quite startling to go from receiving the claims, phone calls, and eyewitness accounts to become a participant in this environment, this spectacle we've just seen. We can't quite explain properly or scientifically what happened this morning. Around one o'clock in the morning we began receiving calls from the public; later we peered out the 7th floor window; later we climbed up on the rooftop, and we've been able to attest to the lights [being reported], these points of color that changed intermittently from blue, red to white light, moving strangely."



Troubled Times



Malaysia

It's UFO, claim Kampung folk

Star Publications (Malaysia) Bhd., March 6, 2000

TANAH MERAH, KELANTAN: A large object emitting rays of light was reported to have landed on a piece of marshland here three days ago, holding some 1,000 people of Kampung Gobek in a state of high suspense. The residents said yesterday they saw the shining object land at 3am. "The lights from the object came in intervals, similar to lightning, but there was no sign of rain," Mohamad Mat Diah, 51, said. "The light from the object was very bright and the rays bathed the inside of my house. "I suspected something was happening outside and looked out and saw the object hovering over the marshland for several minutes," he added.

Mohamad said at daybreak he went over to the area some 100m from his house and saw a 'Y' shaped depression measuring 15m by 5m which could have been caused by the unidentified flying object (UFO). Near the depression was another crescent shaped 3m deep hollow and three holes, one metre apart and each one metre in diameter, he said. "I was accompanied to the area by two others who initially were afraid to come with me," he said. Another resident Saupi Salleh, 28, said he was awakened by the bright light. "I clearly saw the light from the object," he said. "I thought it was lightning but when it prevailed I realised it was something else." He went to see the depression and concluded it must have been a heavy object. Many residents were seen inspecting the landing site of the UFO. - Bernama



Troubled Times



New Zealand

New Zealand Wild Night Lights Mystery

Press Co, December 30, 1999

UFO fever is threatening to break out after a rash of calls to police about fast-moving, coloured lights in the sky north of the city. Police received six calls over two hours from several different areas north of Auckland on Saturday night but have been unable to explain the lights. One caller said the lights moved 400 metres in less than two seconds while two others said they moved up and down in the sky very fast. Inspector Barry Smalley of the police northern communications centre said there was something in the sky but no-one knew quite what. "There's something there. Because of the path it was travelling it may have been something coming through the atmosphere. "It's another mystery. We'll have to get Mulder and Scully (from the television show, The X-Files) on to it." The first call to police was at 9.38pm, 20 minutes after the first sighting from Raglan of what appeared to be a green flare when looking in the direction of Auckland. The flare died before it hit the sea. Further reports had the lights moving north. The last sighting was about 11.36pm from Tinopai, in Northland, where resident reported "huge lights" over the hills due north. The lights were reported to have moved about 400 metres in two seconds. Two more strange lights were reported "going straight up and down sky, intensely light and intensely red" looking across the Kaipara Harbour. The lights were reported to be dancing about in the sky.



Troubled Times



Pakistan

Pakistan UFO Mystery Remains Unsolved

The Times of India, September 1, 2000

The guessing game still goes on regarding the mysterious objects that flew brightly in the skies of Baluchistan and neighbouring Afghanistan. It was a rocket, a missile, an extra-terrestrial body are the three views given by different people about the unidentified flying object (UFO) that landed in the hilly areas of Baluchistan and Afghanistan on August 15, 21 and 28. The areas where these objects fell are very difficult to approach, says Abdul Faiz claiming he saw one of them coming from West and going towards the country's Punjab province. He told IANS that it was "something very bright... it was as high as the nearby TV booster." Faiz, who works in a government department in Islamabad, was on holiday at his village near Qila Abdullah bordering Afghanistan. "It straight went into and probably crashed." He said he heard no sound of blast or anything else. Official sources say that they have not found any clue to the objects. They said an aerial reconnaissance was also carried out in Loralai, Barkhan and Kohlu, the places where the UFOs were sighted and where some of them reportedly fell. A helicopter was sent to carry out the task but it returned empty handed. Many wondered whether the U.S. had carried out another cruise missile attack on Saudi renegade Osama bin Laden's hideouts. "This wasn't the case...It is something else," a spokesman of Afghanistan embassy in Islamabad said.

He said that in Afghanistan many people saw it flying over their heads but nobody has seen the wreckage of the objects. He said the people who had seen the objects said they made no noise unlike the cruise missiles and were brightly lit. "They said the objects were flying towards Pakistan. Thus it became obvious that there was no fresh U.S. missile attack on Afghanistan," he added. An Afghan embassy spokesman said that it is possible that they were seen elsewhere in Afghanistan as well. But the poor means of communication could delay such information reaching the media. He, however, refuted some of the reports appearing in Pakistani newspapers that said the Taliban (Afghanistan's ruling regime) had fired the missiles on the bases of the opposition Northern Alliance, and that they must have missed their target and fallen at different places in Pakistan. "No missile had been fired by Taliban in these days," the spokesman said. "We are also worried and trying to find out reality," he said.

Newspaper reports said the UFOs were seen by Colonel Asmatullah, the military secretary of the Baluchistan governor. He said he saw them sailing over the Koh-i-Murdar mountain which overlooks Quetta. Baluchistan Home Secretary Major (Retd) Shahryar Khan Mahsud said he was using every means to unearth the mystery of the flying objects. "We would have dismissed it as a gossip if a few persons had seen them at a few places. But we are being told of sightings in several places in northern and central Baluchistan." However, when contacted by IANS, a spokesman of the Inter-Services Public Relations (ISPR) ruled out the possibility of any attack on any part of Afghanistan. "There was no veracity in such reports, the spokesman said. Though, the newspaper reports said the wreckage of the UFOs were found in the Baluchistan area bordering Punjab, it was not confirmed by officials." "We don't believe on these reports. Nothing has been found. I sent a team to the place identified in one of the newspapers but people living nearby said that they have not seen any such thing," a senior Dera Ghazi Khan district official told IANS. Reports said the wreckage of the first object, which was seen flying over Fort Munro, near Dera Ghazi Khan, on the night of August 15, was found near Tomali village. The second object was seen on the 27th. However, the exact place of its landing is not yet confirmed.



Troubled Times



South Korea

Glowing UFOs Seen Over South Korea/NE China

Agence France Presse/ CNI News, December 31, 1995

A doughnut-shaped "flying saucer" glowed for an hour over a provincial city park Saturday night, attracting a crowd of awed onlookers and cameramen, news reports said on Sunday, Dec 31. The strange object emitted a wave of luminous red light from its center and moved slowly and soundlessly over a hilly park in the southern city of Taegu, Yonhap news agency said. Television and radio stations were swamped with telephone calls by witnesses who claimed it was an unidentified flying object (UFO), Yonhap said. An air force surveillance team in the city also saw the glowing saucer through binoculars but failed to detect it on a radar screen, it said. Many people in the city were reported to have photographed the saucer.

CNI News correspondent Rebecca Schatte reported that the NBC-TV affiliate in Houston, Texas, ran video footage of the Korean UFO incident on January 3. Meanwhile, according to a report in the Scottish Sunday Mail of Dec 31, pilots of four aircraft also reported recent UFO sightings over northeast China. The captain of an internal flight to Beijing on December 4 radioed that he could see "a white oval object travelling at about 550 mph." He later reported that it "turned green and followed the aeroplane's flight path." Within minutes, the captain of another airliner reported seeing the same thing, and two others spotted red or yellow UFOs.



Troubled Times



Turkey

British Government is after UFO's

Translation from "Sabah" Turkish daily, Jun 5, 2000

Offered by Phillipe

British government defense ministry secret services secretariat has published the UFO reports to parliament. In the report it has stated that there are interesting occurrences of UFO's between July 1998 and July 1999. One of the most interesting event was detection of a strange light by a radar on 15th February 1999. A very large subject having 5 km length and 3 km width was traveling towards Belfast at a speed of 5,000 km/hour. The subject disappeared from the radar screen after 2 minutes it had been detected. Couple days after this incident, a pilot flying over North Sea saw a very bright flying ball. Three other pilots flying at the region had confirmed this incident by reporting the same observations. Although, the airport traffic controls did not detect this one but a meteorologist had seen a very fast object on his radar.



Troubled Times



Astronaut Admissions

Astronaut Says Aliens Have Landed

Las Vegas SUN/ Associated Press, October 13, 1997

Former astronaut **Edgar Mitchell** is among those who believe aliens have crash-landed on Earth. Mitchell, who in 1971 became the sixth man to walk on the moon, wants congressional hearings into what he calls a secret U.S. government that knows all about it. He believes some military and other planes use technology derived from alien spacecraft that have been captured and dissected. "When I went to the moon 26 years ago, it was conventional wisdom, religiously and philosophically, that we were still the biological center of the universe," Mitchell told a spiritual gathering called the **Prophets Conference** on Saturday. "Few, if any, thinking, knowledgeable people accept that theory anymore."

MUFON Skywatch Investigations

July 30, 1999

Audio tapes of a genuine UFO Alert at Edwards Air Force base and studied by the Foreign Technology Division at Wright Patterson Air Force Base, are now available for distribution to the public. Lunar Astronaut Dr. Edgar Mitchell was at Edwards the night the UFO chase occurred. The 6th person to walk on the moon said, "The night it happened I investigated it myself and this was a real event." Sam Sherman's audio documentary tape called the Edwards Air Force Base Encounter on the night of October 7, 1965, uses the actual voice recordings provided by the Air Force. During this event 12 high tech luminous UFOs invade secure air space and came down low over the runways at Edwards AFB. Tower operator Sgt. Chuck Sorrels spotted them and notified the Air Defense Command. Sgt. Sorrels is heard on the original tapes and in a new segment where he verifies the event as it is heard on the archival recordings. The UFOs are described and a decision is made to launch F-106 fighter interceptors.



Troubled Times



Aerospace Engineers

Clark C. McClelland, UFO Researcher, Aerospace Engineer, and
ScO, [Space Shuttle Fleet](#)

If you don't believe in the existence of Unidentified Flying Objects, consider the phenomenon from my point of view. I am an insider and a trained aerospace engineer with over 53 years experience in the fields of space science and UFO research. Consider this expose from the standpoint of someone who played a major part in helping to fulfill President Kennedy's commitment of landing American men on the moon and returning them safely to earth. Then - change your mind. Those who choose to ignore the truth can remain in a blissful dreamworld until reality hits the proverbial fan. The truth is fast approaching. The information in *The Stargate Chronicles* won't let you be caught by surprise.

The truth may be new, but the facts and evidence are ancient. Some of the earliest stones in recorded history display strange objects in the ancient skies of earth. These objects weren't birds or simple artistic renderings of the sun and stars. They were foreign and of unearthly origin, and were most probably UFOs used by the creators of the Human Race. I know what that statement sounds like to UFO skeptics and followers alike, but I ask both sides to please reserve your judgment until the whole story is told. If, in fact, the whole story can ever be told. Some of that is up to Them.

The *Holy Bible*, best-selling book of all ages, has numerous events recorded by writers of the gospel telling of unique aerial objects that defy imagination. The **Book of Ezekiel** describes one such object as "a wheel within a wheel." Was Ezekiel describing a modern-day flying saucer? Are all these ancient records to be discounted, disregarded as fanciful misinterpretations of ordinary phenomena? Pure fantasy? Or is there a grain of some greater truth within these records? I know there is. My story reveals astounding cosmic facts that indicate this planet has been and is being visited by forms of intelligence far more advanced than our own, coming from somewhere among the stars.



Troubled Times



NASA Cuts

Shuttle TV: Is What We See What NASA Gets?

Space.COM, Dec 27, 1999

Within hours of reaching orbit, STS-103 began beaming familiar video scenes of space back to Earth and into the homes of thousands of space enthusiasts with access to the "NASA TV" program. But for televised pictures as clear as these, some observers have cast a lot of lingering doubt over whether NASA is cutting off transmissions of specific aspects of space flight that "the government doesn't want us to see." On the shuttle's first pass across Florida, the shuttle transmitted scenes of the payload bay doors opening that clearly showed a few flickering dots drifting up and out of the payload bay. Two orbits later, crossing Mexico by night, the shuttle used its low-light B&W camera to send images of city lights, lightning bursts and stars rising from behind Earth. "We don't censor anything," insisted Rob Navias at the Johnson Space Center in Houston. Navias, who bears the title "Associate Director for Public Affairs for Mission Operations and Television," knows by heart the 1958 NASA charter which requires real-time release into the public domain, "for the full and open dissemination of the conduct of human spaceflight." "Their button would have been in my control room ... There is no such button." Calvin Avery, television specialist

Where are the cuts?

Just how these transmissions reach the public is a fascinating story all in itself. Let's follow the signal and see where along the way there might be opportunities to delay it, mask it or cut it off, and who would have to be involved. Although the shuttle can send TV images directly to two ground sites (one at Cape Canaveral and the other at Goldstone, California), the vast majority of video transmissions are bounced from relay satellites in 24-hour orbits (the "Tracking and Data Relay Satellite System", or TDRSS) down to the main NASA receiving site at White Sands, New Mexico. The raw signal is then relayed to the NASA Johnson Space Center in Houston for processing and release. That relay, currently via transponder 5 of the GE2 commercial satellite, can indeed be scrambled to prevent public viewing. That used to be done for all Defense Department missions, but there haven't been any for years. It is still done for private medical conferences and for relaying proprietary science data (NASA grants exclusive use of raw results to the 'Principal Investigators' for one year).

Breaking the encryption

But apparently it's not always encoded. "I've been watching transponder 5 for at least the last six or seven shuttle missions," space artist Rick Sternbach told space.com. However, there's a trick to it: the view is often "muxed" (multiplexed) with alternating frames of engineering data which makes the raw video feed look bizarre. "It's an every-other-frame deal", Sternbach explained, "so you can freeze the image on any good VCR and study parts of the shuttle and launch complex you probably haven't ever seen before." He was particularly amused by one pre-launch survey of the shuttle where the camera stopped on a dark spot on an SRB, zoomed in and focused on "a roly-poly bug" for about ten minutes.

No fingers on the button

How about the issue of a "tape delay", often suggested as a means of reviewing and censoring undesirable scenes of sudden disaster ... or naked frolics ... or even flying saucers out the window?

Radio call-in talk shows routinely implement a 10-12 second delay so the moderator can punch a button to stop unexpected profanity from being broadcast. Does NASA do the same? James Hartsfield is a public affairs officer at the Johnson Space Center who regularly takes his turn manning the PAO console in Mission Control. "There's no delay -- it's immediate," he told space.com. You can even test this at home, as I did on a space station docking mission last spring. Get an accurate timepiece near the TV and watch the television transmissions for particular discrete events, such as docking or undocking. Log the time the event appeared to occur, and then later compare it to the officially announced time. When I did this check with the shuttle docking, the televised time was within a few seconds - I couldn't estimate any more accurately - of the actual event. There was no measurable lag at all.

The images are cooked!

Calvin Avery is a television specialist who used to work in the control room in Houston that processed the incoming pictures, and he agreed they were practically instantaneous. But, he revealed to space.com, the images are manipulated by specialists there. "Flight crews used to review our recorded video and told us the scenes were not as vivid as seen in space," Avery told space.com. "So in the control room we'd push up the blue, push up the red to greater levels than in the downlink." He described how these color adjustments were made to ensure that white objects - the shuttle skin, or a space-walking astronaut's suit - were truly white, and that the images as released were as realistic as possible. Both officials and workers agreed that "what NASA gets is what the public sees." Ray Castillo, the executive producer of NASA TV at NASA Headquarters in Washington, DC, agrees: "For our purpose, which is news dissemination, there is absolutely no reason why we'd want to hold it up in any way." Avery, who now directs a video operations center at Rice University, agrees that there is no censorship of shuttle video (as he pointed out to space.com, the television workers are contract employees with no security clearances). "Their button would have been in my control room," he told me. "There is no such button."



Troubled Times



Mars Probe

Jim Marrs On [Alien Sabotage](#)

Extracted from *X Factor* magazine, UK, No 85, May 2000

Jim Marrs believes that human efforts to launch weapons systems in space may have been sabotaged by alien forces. This ET intervention, he claims, has been behind the loss of several US and Russian exploratory probes in recent years. One example of this, Marrs argues, involved the ill-fated Phobos 2, a Russian probe that malfunctioned as it orbited Mars in 1989. 'Right up to the point of termination' says Marrs, 'it took photographs, one of which shows a disc-shaped object rushing towards it. Similarly, when film of NASA's Titan 4 launch in 1993 was analysed, it showed a small bright light approaching just before the rocket exploded.' Intriguingly, according to Marrs, remote viewers who 'observed' NASA's Titan 4 and Mars 96 missions stated that they saw a prism-like object rise from the surface of Mars, meet the probes and 'scan' them with some kind of energy beam causing both to malfunction. 'It seems we can fight among ourselves,' concludes Marrs, 'but taking our hatred and prejudices into space is somehow forbidden.' In his book *Alien Agenda*, Jim Marrs draws on numerous eyewitness accounts and highly classified CIA documents to expose the sustained government secrecy surrounding the UFO phenomenon. Among the astronauts who have spoken out about the UFO phenomenon is Apollo 14 pilot Edgar Mitchell. As Jim Marrs points out, Mitchell has since claimed that several military aircraft have been modelled on recovered alien craft.



Troubled Times



NASA Contractor

From: UFOLAWYER1@aol.com

Date sent: Tue, 29 Dec 1998 01:10:05 EST

To: CAUSupdates@caus.org

Subject: [CAUS updates] - Our Military's Ability to Detect and Identify UFOs

Dear CAUS Members:

On this Tuesday, CAUS again shares with you some very interesting comments by CAUS' favorite NASA contractor, Robert A.M. Stephens:

Gersten: Robert...can you tell us something about our military's ability to detect and identify UFOs?

Stephens: When something untoward enters into the tracking field of NORAD/Fence, it then begins a series of tracking logarithms to track speed, location, altitude, departure angle, mass, heat, and inherent velocity. From there it runs a test for itself to confirm that whatever it is is not something we have in space. From there a management program kicks in called, 'Intruder Assessment.' If a series of democratic protocols weighs out then the next step is to start a series of visual confirmations with our own air assets. Stealth 117A and or SR-71 are dispatched to attempt intercept. From there the 'Fence' protocols go through a series of 'what is' formats until the intruding element is either confirmed to be something from us or an unknown. Unknowns are called a 'Gray.'

Also when it appears conventional ground based air assets have failed to acquire craft for confirmation due to vehicle exhibiting phasing or some other type of eluding of recon aircraft, they (NORAD) move any one of three Kehole deep-look satellites into position in high Earth Orbit to watch the bogey.

Gersten: Am I understanding you correctly that 8 individual objects were detected by Norad/Fence over Phoenix on March 13, 1997?

Stephens: Yes.

Gersten: If so, for what period of time did Norad/Fence track these objects?

Stephens: Until they left Earth's space after slowly drifting at 20-60 knots SSE into Mexico

Gersten: What was the time period?

Stephens: First registered anomaly: 2030 MST Last registered anomaly: 0140 MST

Gersten: Was there a description of the objects?

Stephens: Yes. 'V' shaped and triangular.

Gersten: Did any one of three Kehole deep-look satellites in high Earth Orbit reveal any further

information about these objects?

Stephens: Yes, by those assets as Silver Veil and Keyhole and other.

Gersten: There were reports from AF informants that these objects were also in the area for several days prior to the 13th. Can this be confirmed?

Stephens: No. They first appeared for registration at 2030 MST, 3-17-1997

Gersten: Do you have any knowledge about the MSTI-3 imaging satellite? The story is that the MSTI-3 was "disabled" on March 13, 1997, (date of the Phoenix lights) by an incoming alien craft. It's last set of photos would be quite interesting. Would he have access to those last pictures taken by MSTI-3 or knowledge of them?

Stephens: No. The MSTI-3 satellite as referenced misfired because of a failed APU sensor. Later fixed. The association of that and the Phoenix incident were unrelated since both events were so distance in relative being of one another. Too, MSTI was fixed by the night of the 17th, at least marginally.

Gersten: Besides NORAD/Fence, is there any other Agency that detects these intruders when in our airspace?

Stephens: No.

Gersten: Is there ever photographs taken of these intruders?

Stephens: No. Attempts are made, on rare occasions. Results are fleeting or negative at best.

Gersten: Is there a defensive or offensive strategy by our military in regard to these intruders?

Stephens: No. I will say this now since I divulged this on the Toronto Radio show Sunday night. The actions of the government (way above NASA), act, respond, interact, manage information, disseminate information, handle intelligence, seek intel, divulge data, delude intelligence, avert attention, in anything and everything regarding the intruder enigma under the exact formulae and protocol as the U. S. Government did during World War 2. I am not suggesting anything here. But from a warfare background for which I hail from, the comparison needs to be considered that we, 'The government' at higher levels, is on some type of war footing.

Too, our only true compelling evidence related to this from a purely civilian standpoint is the nomenclature used in the intruder interface with our humanity. That being:

1. In not one encounter interview in any form is the word 'Invited' used.
2. The only word, and exclusively used throughout, is 'abducted'.
3. Thus, in any other understood venue, this is the most sinister violation of our humanity. In any other form, if an opposing nation were to do exactly what the intruder enigma is doing to us, I leave to your rational thought what our response as a collective nation would be.

This brings us back to the question is there a 'defense' to this, then. No. And this might explain why the perceived secrecy is the way it is.

Gersten: Is there any explanation for the dramatic increase to 100-200 a day over the past few years?

Stephens: No.

Gersten: What is the Office of Intruder Assessment?

Stephens: It is a top secret enclave as part of the USAF, formed during WW2, to deal with any form of stealth into our air space from any source. The USAF-OIA was formed 4-9-1942.

Gersten: What is the source of your information that 'those within government that are abducted and 'debriefed' after the event, mostly in the military?'

Stephens: Data from the results of garnered information from OIA by units of the Navy SEALs during strategic assessment studies at the Inshore Undersea Warfare Institute, 1975, 1977, 1978, Norfolk.

Once again CAUS thanks Robert A. M. Stephens for his cooperation.

Hope everyone has an intuitive Tuesday and of CAUS... watch the skies!

Peter A. Gersten, Director

Be sure to visit the CAUS web site at <http://caus.org>
To join this mailing list, go to <http://caus.org/feedback.htm>



Troubled Times



NOAA Satellite

NOAA Satellite Picks Up Giant UFO in Earth Orbit

Filer's Files #49-1999, Dec 9, 1999

MUFON *Skywatch Investigations*

The **National Oceanic and Atmospheric Administration** (NOAA) has several Geosynchronous Orbiting Environmental Satellites (GOES) in orbit watching the Earth's weather and environment. On November 21, 1999, at 14:45Z hours our satellites caught an amazing photo of a UFO at an estimated hundred miles above the Earth off the coast of the state of Washington. Russel Kirchner phoned to inform me that he had obtained the satellite photos and was sending them for all to see. The **University of Colorado** also keeps these photos on file for reference. One of the satellites is designed to pick up water vapor or clouds from space.

When Russel caught sight of the UFO in the display he zoomed in and could see the steam coming off a UFO. It was the type we identify as a large Mother Ship. We discussed the possibility of the object image being caused by a computer error. Similar photos taken on June 8, 1995, over South America have also been widely distributed. Philip Imbrogno studied this case and NOAA explained the image was a "moon shadow UFO." This excuse will not hold in the latest photos. This UFO was present for only a few minutes and is not seen in images taken prior or afterwards. The UFO has structure, windows, and radiates heat in the infrared spectrum. Thanks to Russel Kirchner.



Troubled Times



MUFON Report

Jetliners Encounter UFO's Over New Jersey

Courtesy [UFO Roundup](#)

On Monday night, November 17, 1997, ham radio operator John N. Gonzalez, N2IXW, picked up a UFO report while listening to radio traffic on the air. According to a **MUFON** report, Gonzalez heard the conversation between the tower at Newark, N.J. airport and Flight 262 on 118.300 MHz. Two other unidentified air crews also joined in the conversation.

Here is a transcript:

JET #2: "Watch out! The two (UFOs) are coming up to you."

FLIGHT 262: "Well, Captain, the two up here are coming down to meet with you."

TOWER: "Flight 262, what is your status?"

FLIGHT 262: "We have 236 souls onboard and fifty thousand (pounds) of fuel. I think these damn things are going to hit us. We are over Morristown just in case there is a collision with them. (pause) They have taken off towards the northeast. And, by the way, towards the northeast, it also looks like a meteor or space debris is coming down."

(Editor's Note: Monday night, November 17, was the tail end of the annual Leonid meteor shower.)

TOWER: "Do you wish to report a UFO sighting?"

FLIGHT 262: (Pause) No, we have nothing to report."

JET #2: "We heard you. I am making sure the passengers are all right. And, no, I have nothing to report, either."

JET#3: "You guys have seen more than your share of UFOs. I know I have."

TOWER: "Who are you? Please identify yourself." (There was no response) "Flight 262, go to the emergency frequency. We will meet with the both of you there."



Troubled Times



NUFORC

[National UFO Reporting Center](#)

Beginning at approximately 2125 hrs. (PDT) on Wednesday, 23SEP98, the National UFO Reporting Center began receiving reports of unusual blue/green fireballs at a rate that we rarely have experienced in the past. The "blitz" of sighting reports has abated somewhat, but continues to some degree, and is being accompanied by other reports of disc, spheres, "blimps," and other anomalous objects. Many of the reports have been submitted by seemingly responsible, sober minded individuals, e.g. commercial pilots, members of law enforcement, academicians, astronomers, firemen, physicians, etc., who report that their report(s) address their first suspected sighting of a UFO.

Also, a significant percentage of the reports suggest objects that appear to be grossly inconsistent with meteoritic events, with re-entering space "junk," with aircraft, aurora borealis, or any other more mundane or "pedestrian" explanation. We just recently posted several hundred of those reports we have received via the standardized report form found on our homepage. We will attempt to process as soon as possible the many other reports we have taken over the telephone, and via other means.



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ABC News

ABC news has a section online with video, images, and links that cover a few Ufology aspects that are sparking interest in the main stream Scientific Community? Do you think something on a global scale will happen soon? Asteroid impact? Middle East World War III? Alien life publicly announced? Something is coming, but what, I do not know...

Jason Martell - July, 2001

<http://www.xfacts.com>

ABC New : Chinese Report UFO Sightings



Troubled Times



'96 Power Outage

A massive power outage hit the western half of the US on the day of the Independence Day movie's initial West Coast screenings, July 2, 1996. The *Drudge Report* stated that 17 states were affected. The **HALNET Internet Services** said of the this massive power outage:

Nils Olvesen, N5WVS
HAL-PC Internet Services (HALNET)

To the best of anyone's knowlege, have there been any reports of UFO sightings anywhere in the Western U.S. on the night of the massive power blackout? Insofar as what I have been able to ascertain by listening to radio and TV news reports, there was no mention of any sightings, although the cause of the electromechanical breakdown and subsequent restoration of power remains a mystery. (The actual parts which failed have been idenfied, but the reason(s) for their failure seems to be unknown.)

A little historical background may be in order here:

On the evening of November 9, 1965, at approximately 5:00 P.M., a main circuit breaker at the hydroelectric power station at St. Catherine's, **Ontario** tripped open for no apparent reason. This caused a cascading power surge and resulting failure in all of the main power stations and substations along the grid serving the Northeastern U.S. and southeastern Ontario, resulting in one of the greatest blackouts in U.S history, leaving over 30 million customers in the dark for over 12 hours. Just prior to and during the cascading power failure, there were many reports of UFO's streaking to the east from Ohio and western New York State, and were seen hovering over the main power distribution stations in the lower **Hudson Valley** area which service the New York City area and Long Island. The UFO's then reportedly streaked off at great speed toward the east, and were not seen again. New York City was in the dark from 5:28 P.M. until 5:30 A.M. the next morning (I know this; I lived through it). All investigations conducted to attempt to explain why this breaker, which cost \$2.50, tripped open were unsuccessful in pinpointing a cause. The part was examined extensively, and it was determined that there was nothing wrong with it; it was functioning properly.

On July 13, 1977, a similar situation ocured when a substation serving **New York City** and **Long Island** suddenly failed just after 9:00 P.M. This substation, located in Buchanan, N.Y., in Rockland County, distributed power to the New York City and Long Island areas from one of the nuclear reactors at the Indian Point nuclear power station. This time, almost 24 hours elaped until power was fully restored. Subsequent investigations blamed the entire failure on lightning storms which were in the vicinity of Buchanan that evening. The report stated that 3 bolts of lightning were responsible for knocking out all of the power for New York City and Long Island, which of course, seemed quite preposterous. Upon further investigation, again there were reports of UFO sightings in the Buchanan and Indian Point areas just prior to the massive power failure.

Many investigation of many power blackouts and disruptions throught the world have revealed the nearby presence of UFO's. Remember, UFO's are reported to interfere with electrical and elecronic devices on the ground (e.g. automobiles which stall when a UFO passes over the car or is nearby), and after they leave the immediate vicinity, those devices suddenly and inexplicably resume normal operation as though nothing happened!

UFO's were sighted at the time of the July 2, 1996 power outage:

My local radio station reported that an employee at an unknown power substation (obviously on the west coast) saw two UFO-like disks in the sky around the time of the outage.

Jack Grimes

lbmgmd@epix.net

A power outage of this scope has not been witnessed since the mid 1960's, when many recall that UFO's were also sighted:

Seconds before the outage, a cargo plane pilot spotted what he described as a ball of fire above a main power line between **Syracuse** and **Niagara Falls, NY**. Also, several years after the outage occurred, the Adam Beck Power Plant admitted that "hundreds of phone calls" had been made reporting unidentified flying objects above the power plant on the night that the outage happened. Originally, this was denied by the power plant. You may recall that the Adam Beck Power Plant was identified as "the cause" for the outage...a "faulty relay" supposedly. So IMHO, I think it is quite reasonable for people to question whether or not there was an "unidentified flying object" activity in the vicinity. Certainly, this current power outage strikes incredible similarities to the outage of 1965 in the northeast.

Cathy Zylka



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Second '96 Outage

In an article called **Power Outage Darkens West**, Matt Drudge reported that a second massive power outage had occurred on August 10, 1996.

- 3:48 PM PT the electricity snapped.
- Over 15 million without power
- A massive power outage has struck a widespread area of California, with reports of lost electricity coming in from as far as the Mexican border to Oregon and as far east as Nevada, New Mexico and Texas.
- Power has been cut from San Diego to Bend, Oregon and east to Tucson, Arizona and to the Texas panhandle.
- The outage appeared to be intermittent, affecting some areas, with others getting power back quickly.
- This marks the second massive power outage in as many months. The source of the electrical breakdown is not known.

Comments on the Internet regarding this second outage show that like the first massive power outage, this one did not have a believable explanation, nor did the outage affect only the US.

- 10 Aug 96: Power is back on in Phoenix for many. Some never lost it and some still waiting.
- 10 Aug 96: CNN on-line reports 5 western states affected, some areas flickered, some still without power at 8 PM... **New Mexico, Arizona, Nevada, Cal, and Oregon**. Power service spokesman, I believe from, Las Vegas, says that it is *probably* weather related, read too much AC, but not weather caused.
- 11 Aug 96: Major power companies on the west coast are reporting that a fire in CA took out *a single communications line* which caused blackouts in six states. Power was out for ten hours or more in some areas.
- 12 Aug 96: Our Australia news network, the last I heard of it, did not report the cause of the power outage in USA. Coincidentally, **Malaysia** was reported to have suffered a blackout (the biggest of its kind) to the *whole* country (Both Peninsular and eastern islands!) just last Saturday. That outage lasted more than 12 hrs and officials are still investigating the incident with assistance from an external consultant party.
- 12 Aug 96 The power outage did affect **Vancouver**, WA as a blackout in some areas. In **Portland**, we had a serious brownout, lights went real dim, fans would not turn. The explanation I heard was that down in another state somewhere I forget, the weather was so hot that the lines expanded and sagged low enough to touch the tops of the trees, which caused a short. The part I don't buy is that part where the lines could expand and sag that much, because I know they know how to prevent that.
- 13 Aug 96: Writing in from Fresno, CA. The scuttlebutt here is that the overall instability in the Pacific Intertie is nowhere near being cured or stabilized. We might expect another large power outage or few because of the high heat and any grid anomaly (such as a squirrel, forest fire or windstorm shorting the line during high demand). Central California is facing 2 more days of 110 degree heat (10 degrees above normal).

An explanation of sorts was given by California's PG&E, as reported by the *San Francisco Chronical* on August 27, 1996.

Two million Pacific Gas and Electric Co. customers would have been spared from the August 10 blackout if employees of an out-of-state power supplier had recognized and flagged the early signs of impending trouble, state regulators were told yesterday. ... The utility company was never warned that major transmission lines of the Pacific Intertie network had shorted out in Oregon, causing "islands" of outages in California and eight other western states. ... The circumstances of the August 10 outage are still being investigated. It appears, however, that the blackout was caused by a series of events.

Operators of the system got their first warning at 2:06 PM when a 500,000-volt transmission line in northern Oregon shorted out after sagging into a tree. About 46 minutes later, another 500,000-volt line went down for the same reason. ... About an hour later, two more high-voltage lines were shorted, again by lines sagging into trees, this time combining to "trip" a large power plant and cause the loss of 860 megawatts of power in 73 seconds. The rapid power loss caused the Intertie line to shut down, prompting automatic sensors to break transmission circuits at the Oregon-California border and other key points throughout the West.

[An] emergency meeting of the California Public Utilities Commission, [was] called to explore the reliability of the high-voltage transmission network, which serves 59 million people in 14 western states, two Canadian provinces and parts of northern Mexico.



Troubled Times



Murchison Meteorite

Possible Microfossils Found in Murchison Meteorite

posted on the Usenets by Ron Baalke <baalke@kelvin.jpl.nasa.gov>, July 31, 1997

At the SPIE conference being held at San Diego this week, Richard Hoover from **Marshall Space Flight Center** presented a paper claiming he has found possible microfossils in the Murchison meteorite. Murchison is a CM2 (carbonaceous chondrite meteorite) that fell in Australia in 1969. It is interesting to note that Murchison is a non-Martian meteorite. Richard Hoover is the chairman of the "Instruments, Methods and Missions for the Investigation of Extraterrestrial Microorganisms" program at the SPIE conference. Below is the abstract of Hoover's paper.

Ron Baalke

Meteorites, Microfossils, and Exobiology

Richard B. Hoover

Marshall Space Flight Center, Alabama

The discovery of possible evidence of biogenic activity and putative microfossils in the SNC meteorite ALH84001 has profound implications. The existence of complex organic chemicals, biomarkers and possible nanofossils or microfossils in ALH84001 may result in a paradigm shift concerning attitudes relevant to the possibility of extraterrestrial microbial life. Much research by many groups is currently underway to obtain additional data on biomarkers, chemical fossils, and nanofossils in this and other SNC meteorites. These results strongly reveal the need for more in depth examination of prior results and future studies of SNC meteorites and carbonaceous chondrites.

New methods are also being explored to understand and minimize the effects of terrestrial background and to obtain more definitive proof of extant or ancient extraterrestrial microbial life. This paper will review prior observations of possible biogenic chemicals and microfossils in meteorites. Images of possible nanofossils and microfossils that have been recently obtained with the Field Emission and Environmental Scanning Electron Microscopes on uncoated, freshly broken, interior surfaces of the Murchison CM2 carbonaceous chondrite will be presented. Some of the exobiological and exopaleontological implications of recent discoveries concerning terrestrial extremophiles will be considered.



Troubled Times



Primordial Soup

Astronomers find complex organic molecules in space

Associated Press, Jan. 13, 2000

A primordial soup of complex organic chemicals that could be the precursors of life is cooked up very quickly after the birth of stars, new research suggests. "Life could have had an easier time starting than we thought before," astronomer Sun Kwok said Wednesday at a national meeting of the American Astronomical Society. Kwok, of the University of Calgary, Canada, said a study by the Infrared Space Observatory showed that large organic molecules evolve within only a few thousand years from chemicals in the cloud-like envelope surrounding some stars. The conclusion is based on the infrared spectra readings of short-lived, carbon-rich stars that are engulfed in clouds of gas and dust. Kwok said the clouds are rich in some of the most advanced organic molecules ever detected in outer space. "There is no doubt now that such complex molecules exist and the stars are able to make them with no difficulty," said Kwok. Such chemicals would eventually be ejected into interstellar space, he said, which makes it possible that they could end up on planets such as Earth where, under the right conditions, life could have evolved. Among the chemicals detected was acetylene, a building block for benzene and other aromatic molecules that, in turn, can form complex hydrocarbons, the chemical stuff of life. Kwok said it is possible that amino acids could be manufactured around stars, but this molecule, essential to life, cannot be detected by the current generation of space telescopes.



Troubled Times



Europa Studies

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For Immediate Release: October 10, 1997

University of Hawai'i planetary scientist reports finding "ingredients for life" on Jupiter's moons. Planetary scientist **Thomas B. McCord** of the **Hawai'i Institute for Geophysics and Planetology** says findings from instruments onboard the Galileo spacecraft suggest that Jupiter's moon Europa may have all three of the ingredients scientists believe are required for life: an energy source and liquid water (which Europa was already thought to have) and, McCord's team now believes, organic molecules. "This doesn't mean there is life on Europa," says McCord, who is the lead author of a study published today in the journal *Science*, "but Europa may have all three of the ingredients."

The **Galileo** mapping spectrometer instrument detected combinations of oxygen, carbon, sulfur, hydrogen and nitrogen on the surfaces of **Callisto** and **Ganymede**, two of Jupiter's moons. This makes it highly likely, McCord says, that similar compounds existed on **Europa**, but it is the only one of four **Jupiter** moons that is also believed to have liquid water. The satellite-based instrument measures the wavelength of solar radiation reflected off the moons' surfaces. The wavelength of the reflected light is different for each kind of molecule, so scientists can make deductions about what kinds of chemicals are present on the moon surfaces. One of the wavelength patterns - or "signatures" - detected by Galileo indicates that tholins may be present on the Jupiter moons. McCord describes tholins as a "pre-biotic material" - organic molecules that need to be present for life to form.

The possibility that life has existed or will exist on other planets excites the public imagination, and national and international news organizations have been calling McCord since the *Science* article was released this morning. He stresses that these latest findings do not prove the existence of life on Jupiter's moons, but they do suggest that life there might be more likely than had been previously supposed.



Troubled Times



Life on Mars

From: Dr. Richard X. Frager <smqueen@cyberhighway.net>

Newsgroups: sci.skeptic,sci.astro,sci.space.policy,alt.paranet.ufo,alt.alien.research,alt.alien.visitors

Date: 15. julij 1997 20:50

Subject: **National Science Foundation to admit to Extraterrestrial Life/Life on Mars Verified**

LE: Let's talk about the public disclosure that you feel will happen.

Richard Boylan: The administration, last August 7th, started getting into high gear to get the public ready for public disclosure of UFO reality by its announcement of life on Mars due to the Mars rock having a lifeform evidence on it. Six days later the government announced that conditions exist for life on Jupiter's moon, **Europa**. A month and a half later British scientists said they found another Martian rock with life signs on it dating 600,000 years ago, which is only yesterday in geologic time. The conditions of Mars' atmosphere and temperature 600,000 years ago are the same as they still are today. In other words, not only is life ancient, but life is current on Mars. **Carl Sagan**, who said no more than he was allowed to say, said in his last article in *Planetary Science* magazine before he died, that we should not be surprised that, when we get to Mars, we find life and not just microbial life, but evidence that intelligent life has been there.

There have been public forums for both scientists and the public in Washington, DC, this past fall and the topic has been on life in the Universe, extraterrestrial life. Interesting enough theologians have been brought together to share in this information. My source who talks with the top UFO expert in the CIA said that the think-tank analysts in government feel that the two populations that will have the most trouble accepting a public announcement of UFO reality are academic scientists and fundamentalists religionists. So, there is a concerted effort to bring together scientists, through the **National Science Foundation**, telling them it is now legitimate to study UFO topics, as well as to influence major theologians, through the **National Council of Churches**, to calmly discuss extraterrestrial life, saying that God is big enough, basically, to have created worlds with many life forms.



Troubled Times



Clinton's Speech

Excerpts from President Clinton's speech at the White House on the **Search for Life on Mars Conference**, August 7, 1996, 1:34 PM.

I would like to make some comments about today's announcement by NASA.

This is the product of years of exploration, and months of intensive study by some of the world's most distinguished scientists. Like all discoveries, this one will and should continue to be reviewed, examined and scrutinized. It must be confirmed by other scientists. But clearly the fact that something of this magnitude is being explored is another vindication of American's space program, and our continuing support for it, even in these tough financial times.

I am determined that the American space program will put its full intellectual power and technological prowess behind the search for further evidence of life on Mars. First, I have asked Administrator Goldin to ensure that this finding is subject to a methodical process of further peer review and validation. Second, I have asked the Vice-President to convene at the White House, before the end of the year, a bi-partisan space summit on the future of American's space program. The significant purpose of this summit will be to discuss how America should pursue answers to the scientific questions raised by this finding. Third, we are committed to the aggressive plan we have put in place for robotic exploration of Mars. America's next unmanned mission to Mars is scheduled to lift off from the Kennedy Space Center in November. It will be followed by a second mission in December. I should tell you that the first mission is scheduled to land on Mars, on July 4, 1997 - Independence Day.

It is well worth contemplating how we reached this moment of discovery. More than 4 billion years ago this piece of rock was formed as a part of the original crust of Mars. After billions of years it broke from the surface and began a 16 million year journey through space that would end here on Earth. It arrived in a meteor shower 13,000 years ago. Then in 1984, an American scientist on an annual U.S. Government mission to search for meteors on Antarctica, picked it up and took it to be studied. Appropriately, it was the first rock to be picked up that year (rock No. 84001). **Today, rock 84001 speaks to us across all those billions of years and millions of miles. It speaks of the possibility of life.** If this discovery is confirmed it will surely be one of the most stunning insights into our universe that science has ever uncovered. Its implications are as far-reaching and awe-inspiring as can be imagined. Even as it promises answers to some of our oldest questions it poses still others even more fundamental. We will continue to listen closely to what it has to say, as we continue the search for answers and for knowledge that is as old as the humanity itself but essential to our people's future.



Troubled Times



Admitted

When A President [Sees A UFO](#)

From Jim Hickman, Jan. 24, 2000

"I want you to find the answers to two questions for me. One, who killed JFK. And, two, are there UFOs?", from *Friends in High Places*, by Webster Hubbell, Clinton's associate attorney general. Hubbell revealed that the President made the UFOs a priority when he appointed him. " He continues: "Clinton was dead serious. I had looked into both but he wasn't satisfied with the answers."- William Jefferson Clinton
Update: Even President Clinton is talking about Roswell these days. During a recent visit to Northern Ireland, Clinton's somber plea for peace turned to UFOs when answering a young boy's question. "No, as far as I know, an alien spacecraft did not crash in Roswell, New Mexico, in 1947," the president said... "If the United States Air Force did recover alien bodies, they didn't tell me about it, either, and I want to know."- Oct. 1999. The Latest Clinton Quote: Nov. 7, 1999 "If we were being attacked by space aliens we wouldn't be playing these kinds of games," Clinton told educators visiting Washington D.C.

"I was in a plane last week when I looked out the window and saw this white light. It was zigzagging around." "I went up to the pilot and said, "Have you ever seen anything like that?" He was shocked and he said, "Nope." And I said to him: "Let's follow it!" "We followed it for several minutes. It was a bright white light." "We followed it to Bakersfield, and all of a sudden to our utter amazement it went straight up into the heavens." "When I got off the plane I told Nancy all about it. But we didn't file a report on the object because for a long time they considered you a nut if you saw a UFO..." Ronald Reagan, 1974

"I don't laugh at people any more when they say they've seen UFOs," Carter said at a Southern Governors Conference a few years ago. "I've seen one myself." "It was the darndest thing I've ever seen. It was big, it was very bright, it changed colors and it was about the size of the moon.. We watched it for ten minutes, but none of us could figure out what it was. One thing's for sure, I'll never make fun of people who say they've seen unidentified objects in the sky. I think it was a light beckoning me to run in the California primary." "If I become President, I'll make every piece of information that this country has about UFO sightings available to the public."James Earl Carter The world is still waiting...

"The American public deserves a better explanation than that thus far given by the U. S. Air Force, I strongly recommend that there be a committee investigation of the UFO phenomena. I think we owe it to the people to establish credibility regarding UFOs and to produce the greatest possible enlightenment on this subject." Gerald R. Ford. Gerald Ford never again addressed the issue of UFOs.



Troubled Times



Vatican Admission

Vatican Admits on National Television that Extraterrestrial Contact is Real

Monsignor Corrado Balducci, a Vatican theologian insider close to the Pope has gone on national Italian television five times in recent months to proclaim that extraterrestrial contact is a real phenomenon. The prelate announced that the **Vatican** is receiving much information about extraterrestrials and their contacts with humans from its Nuncios (embassies) in various countries, such as **Mexico, Chile and Venezuela**. Monsignor Balducci said that he is on a Vatican commission looking into extraterrestrial encounters, and how to cope with the emerging general realization of extraterrestrial contact.

Balducci provided the Catholic Church's analysis of extraterrestrials, emphasizing that extraterrestrial encounters "are *not* demonic, they are *not* due to psychological impairment, they are *not* a case of entity attachment, but these encounters deserve to be studied carefully." Since Monsignor Balducci is a Vatican expert exorcist, and since the **Catholic Church** has historically demonized many new phenomena that were poorly understood, his proclaiming the Vatican's non-censure of these encounters is all the more remarkable.

Balducci revealed to a visiting American clinical professional from the **Academy of Clinical Close Encounter Therapists**, that the Vatican is closely following this phenomenon. Parallel information from MJ-12 scientist **Dr. Michael Wolf** suggests that the Vatican is concerned that it will have a major doctrinal updating situation on its hands when extraterrestrial contact becomes authoritatively announced by world governments over the next several years.

Forwarded by Richard Boylan, Ph.D.

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Troubled Times



CSETI Interview

CSETI Visits the Vatican

By Sally Suddock, October 4, 2000

The director of the Center for the Study of Extraterrestrial Intelligence has returned from a trip to Rome, reporting that one of the Vatican's upper-level officials has agreed that governments should disclose the presence of intelligent ET beings. CSETI director Dr. Steven Greer said he met with Msr. Padre Corrado Balducci in his home outside of Rome Sept. 23, "for what I consider a rather historic event," said Paola Harris, a journalist who accompanied Greer and cameraman Peter Sorenson to the meeting. "Padre Balducci agreed to be interviewed and filmed as part of a major Greer's worldwide disclosure project. This project included the filming of military witnesses, commercial pilots and scientists and other involved parties in Italy who were directly involved with the UFO phenomenon," writes Harris of the meeting. "Of course there must be something between us and the angels" Padre Balducci told the group. "If there are other beings, they are surely more evolved than we are. We are at the bottom of the ladder for our ability to 'see good but do evil'." "Since all of Christianity is based on witness testimony, we must realize how important testimony is. It would be a tragedy if we began to be suspicious of all the people who report that they experienced something unusual like seeing crafts in the sky because there are some very credible witnesses who have seen these and come forward," the Vatican official told the group. Harris said he agreed with CSETI's disclosure initiative, including requests to President Clinton that government confirmation of ET presence be disclosed.

"Most interesting to me was a question that Steven posed concerning whether the work of the Devil was included in this phenomenon and it was appropriate that Padre Balducci should answer since his specialty was demonologist for the Holy See," wrote Harris, quoting Balducci as saying that "the devil does not need UFOs to manifest. Neither is most witnesses suffering from disillusion as they have no reason to invent such a thing." It's the third time this year that Catholic leadership has openly discussed UFOs and their implications for the presence of intelligent life beyond Earth. In April (Cosmiverse, May 8, 2000), Hebrew scholar Zecharia Sitchin met with Msr. Balducci to discuss the commonalities in Judaism and Christianity and the possibility of intelligent life beyond Earth. The two met during a conference in Bellaria, Italy that explored "The Mystery of Human Existence." "Extraterrestrials could exist on other planets; they can be more advanced than we; and materially, Man could have been fashioned from a pre-existing sentient being," the Vatican official told Sitchin.

And in June, an Argentinean Jesuit priest told an international conference in Rome that he believes "extraterrestrials exist and are our brothers." Jose Funes also is an astrophysicist and said he thinks the odds are in favor of extraterrestrial life because of the multitude of stars in multiple galaxies. "In a typical galaxy there can exist a multiplicity of planets similar to our Earth, and with living beings like ourselves. If it is as I believe, they must be considered our brothers in creation," said Funes. He made the comments during a Vatican Observatory conference in which more than 250 discussed the theological implications of the galaxies in the universe. (Cosmiverse, June 19, 2000). While traditional modern governments are loathe to acknowledge life beyond Earth, the Vatican, it appears, is becoming increasingly willing to publicly discuss the topic. The Msr. Balducci's meeting in September with Greer and CSETI, however, is reported to be the first such discussion of a Vatican official with a ufologist organization. More details and photos from the September meeting can be found at their Website.



Troubled Times



UFOlogists

UFO Theorists gain Support Abroad, but Repression at Home

By Leslie Kean, *Boston Globe*, May 21, 2000, pg. E3

Last month's release of the first detailed satellite images of Area 51, the top-secret US Air Force test site in Nevada, prompted a Web site meltdown as people from across the nation logged on in search of clues about unidentified flying objects. "The interest has been really phenomenal," said David Mountain, marketing director for Aerial Images Inc., which posted the high-resolution photographs of Area 51 on the Internet. But those hoping to see signs that captured UFOs are stored at the site (as some aficionados have suggested) were destined to be disappointed. Most of Area 51's operations occur underground, making photos meaningless. Anyone looking for fresh information on UFOs would have better luck trying a new, but less publicized, source: a study by the French military, just translated into an approved English edition. High-level officials - including retired generals from the French Institute of Higher Studies for National Defense, a government-financed strategic planning agency - recently took a giant step in openly challenging skepticism about UFOs.

In a report based on a three-year study, they concluded that "numerous manifestations observed by reliable witnesses could be the work of craft of extraterrestrial origin" and that, in fact, the best explanation is "the extraterrestrial hypothesis." Although not categorically proven, "strong presumptions exist in its favor and if it is correct, it is loaded with significant consequences." The French group reached that conclusion after examining nearly 500 international aeronautical sightings and radar/visual cases, and previously undisclosed pilots' reports. They drew on data from official sources, government authorities, and the air forces of other countries. The findings are contained in a 90-page report titled '*UFOs and Defense: What Should We Prepare For?*' "The number of sightings, which are completely unexplained despite the abundance and quality of data from them, is growing throughout the world," the team declared. The authors note that about 5 percent of sightings on which there is solid documentation cannot be easily attributed to earthly sources, such as secret military exercises. This 5 percent seem "to be completely unknown flying machines with exceptional performances that are guided by a natural or artificial intelligence," they say. Science has developed plausible models for travel from another solar system and for technology that could be used to propel the vehicles, the report points out. It assures readers that UFOs have demonstrated no hostile acts, "although intimidation maneuvers have been confirmed."

Given the widespread skepticism about UFOs, many will quickly dismiss the generals' "extraterrestrial hypothesis." But it is less easy to do so once the authors' credentials are considered. The study's originators are four-star General Bernard Norlain, former commander of the French Tactical Air Force and military counselor to the prime minister; General Denis Letty, an air force fighter pilot; and Andre Lebeau, former head of the National Center for Space Studies, the French equivalent of NASA. They formed a 12-member "Committee for In-depth Studies," abbreviated as COMETA, which authored the report. Other contributors included a three-star admiral, the national chief of police, and the head of a government agency studying the subject, as well as scientists and weapons engineers. Not only does the group stand by its findings, it is urging international action. The writers recommend that France establish "sectorial cooperation agreements with interested European and foreign countries" on the matter of UFOs. They suggest that the European Union undertake diplomatic action with the United States "exerting useful pressure to clarify this crucial issue which must fall within the scope of political and strategic alliances."

Why might the United States be interested - albeit, privately - in a subject often met with ridicule, or considered the domain of the irrational? For one thing, declassified US government documents show that unexplained objects with extraordinary technical capabilities pose challenges to military activity around the globe. For example, US fighter jets have attempted to pursue UFOs, according to North American Aerospace Defense Command logs and Air Force documents. Iranian and Peruvian air force planes attempted to shoot down unidentified craft in 1976 and 1980. Belgium F-16s armed with missiles pursued a UFO in 1990. Further, the French report says that there have been "visits above secret installations and missile bases" and "military aircraft shadowed" in the United States. Edgar Mitchell, the Apollo 14 astronaut who was the sixth man to walk on the moon, is one of many supporters of international cooperation on UFOs. Of the French report, he says, "It's significant that individuals of some standing in the government, military, and intelligence community in France came forth with this." Mitchell, who holds a doctorate from MIT in aeronautics and astronautics, is convinced "at a confidence level above 90 percent, that there is reality to all of this." He says, "People have been digging through the files and investigating for years now. The files are quite convincing. The only thing that's lacking is the official stamp." Mitchell joins five-star Admiral Lord Hill-Norton, the former head of the British Ministry of Defense, in calling for congressional fact-finding hearings into the UFO question.

Although Congress seems disinclined to pursue the matter, the public's interest in UFOs is undiminished. A ballot initiative underway in Missouri, certified by the secretary of state in March, urges Congress to convene hearings. The initiative states that "the Federal Government's handling of the UFO issue has contributed to the public cynicism toward, and general mistrust of, government." US Naval Reserve Commander Willard H. Miller has long been communicating this same concern to high level federal officials. With over 30 years in Navy and joint interagency operations with the Defense Department, Miller has participated in a series of previously undisclosed briefings for Pentagon brass about military policy regarding UFOs. Like many, Miller says he worries that the military's lack of preparation for encounters with unexplained craft could provoke dangerous confrontation when, and if, such an encounter occurs; "precipitous military decisions," he warns, "may lead to unnecessary confusion, misapplication of forces, or possible catastrophic consequences." And he says he is not alone in his concerns. "There are those in high places in the government who share a growing interest in this subject," Miller reports.

If the US military is concerned about UFOs, it is not saying so publicly. Indeed, the French report chastises the United States for what it calls an "impressive repressive arsenal" on the subject, including a policy of disinformation and military regulations prohibiting public disclosure of UFO sightings. Air Force Regulation 200-2, "Unidentified Flying Objects Reporting," for example, prohibits the release to the public and the media of any data about "those objects which are not explainable." An even more restrictive procedure is outlined in the Joint Army Navy Air Force Publication 146, which threatens to prosecute anyone under its jurisdiction - including pilots, civilian agencies, merchant marine captains, and even some fishing vessels - for disclosing reports of sightings relevant to US security. Although researchers have been able to obtain some information through the Freedom of Information Act, many UFO documents remain classified. In earlier decades, issues that remain pertinent today were openly discussed. In 1960, for example, US Representative Leonard G. Wolf of Iowa entered an "urgent warning" from R.E. Hillenkoetter, a former CIA director and Navy vice admiral, into the Congressional Record that "certain dangers are linked with unidentified flying objects." Wolf cited General L.M. Chassin, NATO coordinator of Allied Air Service, warning that "If we persist in refusing to recognize the existence of the UFOs, we will end up, one fine day, by mistaking them for the guided missiles of an enemy - and the worst will be upon us." These concerns were taken seriously enough to be incorporated into the 1971 US-Soviet "Agreement on Measures to Reduce the Outbreak of Nuclear War."

The French report may open the door for nations to be more forthcoming once again. Chile, for example, is openly addressing its own concerns about air safety and UFOs. The now retired chief of the Chilean Air Force has formed a committee with civil aviation specialists to study recent near-collisions of UFOs and civilian airliners. As the international conversation about UFOs unfolds, sightings continue, as they have for decades. Perhaps the most notable recent US sighting took place in March 1997. Hundreds of people across Arizona reported seeing huge triangular objects, hovering silently in the night sky - a sighting that,

as the state's US Senator John McCain noted recently, has "never been fully explained." As recently as Jan. 5, four policemen at different locations in St. Claire County, Illinois, witnessed a huge, brightly lighted, triangular craft flying and hovering at 1,000 feet. One officer reported witnessing extreme rapid motion by the craft that cannot be explained in conventional terms. Nearby Scott Air Force base and the Federal Aviation Administration purport to know nothing.

The Defense Department maintains it can find no information acknowledging the existence of the triangular objects. In response to a suit by curious Arizonans, it provided details of its search to US District Court Judge Stephen M. McNamee of Phoenix. On March 30, McNamee concluded that "a reasonable search was conducted" even though no information was obtained, and he dismissed the case. There is one government agency in the country that has taken steps to prepare for a UFO encounter. The Fire Officer's Guide to Disaster Control, second edition - used by the Federal Emergency Management Agency and taught at the seven universities offering degrees in fire science - warns of "UFO hazards," such as electrical fields that cause blackouts, force fields, and physiological effects. "Do not stand under a UFO that is hovering at low altitudes," the book warns. "Do not touch or attempt to touch a UFO that has landed." The text leaves little room for skepticism.

John E. Mack, professor of psychiatry at Harvard University and a Pulitzer Prize-winning author, stopped being skeptical a long time ago. "No culture from the beginning of time, no culture from anywhere on the planet, has ever voided the idea of all other intelligent life other than ourselves," he told a UFO conference at the New York Hall of Science two weeks ago. "That's arrogance."



Troubled Times



NASA Law

From: zontal@earthlink.net (TAL)

To: cydonia@aztec.asu.edu (Roger Scherrer), mchristo@mindspring.com (Michael Christol), garmar1914@webtv.net (MARK HARP)

Subject: **ABDUCTEES to be put in prison ?**

Date: Mon, 24 Nov

EXTRA-TERRESTRIAL EXPOSURE LAW Already Passed by Congress

On October 5, 1982, Dr. Brain T. Clifford of the Pentagon announced at a press conference ("The Star", New York, Oct. 5, 1982) that contact between U.S. citizens and extra-terrestrials or their vehicles is strictly illegal. **According to a law already on the books: (Title 14, Section 1211 of the Code of Federal Regulations, adopted on July 16, 1969, before the Apollo moon shots), anyone guilty of such contact automatically becomes a wanted criminal to be jailed for one year and fined \$5,000.** The NASA administrator is empowered to determine with or without a hearing that a person or object has been "extraterrestrially exposed" and impose an indeterminate quarantine under armed guard, which could not be broken even by court order. There is no limit placed on the number of individuals who could thus be arbitrarily quarantined. The definition of "extraterrestrial exposure" is left entirely up to NASA administrator, who is thus endowed with total dictatorial power to be exercised at his slightest caprice, which is completely contrary to the Constitution.

According to Dr. Clifford, whose commanding officers have been assuring the public for the last 39 years that UFO's are nothing more than hoaxes and delusions to be dismissed with a condescending smile: "This is really no joke, it's a very serious matter." This legislation was buried in the 1,211th subsection of the 14th section of a batch of regulations very few members of government probably bothered to read in its entirety, the proverbial needle in the haystack, and was slipped onto the books without public debate. Thus from one day to the next we learn that, without having informed the public, in its infinite wisdom, the government of the United States has created a whole new criminal class: UFO contactees. The lame excuse offered by NASA as a sugar coating for this bitter pill is that extra-terrestrials might have a virus that could wipe out the human race. This is certainly one of the many possibilities inherent in such contact, but just as certainly not the only one, and in itself not a valid reason to make all contact illegal or to declare contactees criminals to be jailed and fined immediately.

It appears the primary effect of such a law would not be to prevent contact, it would be to silence witnesses. If enforced, the law would prevent publication of contactee reports except under cover of anonymity, and unleash a modern inquisition in the Land of the Free. However, it is unenforceable, so obviously absurd and unfair that the public will refuse to accept it. The citizens of the United States will greet it with a resounding Bronx cheer and laugh it out of court, forcing it to be repealed. It should be replaced by clearly worded legislation, not open to interpretation in a multitude of different ways, humanely relevant to the contingency of E.T. contact, debated and passed by Congress openly instead of slipped through "under the table" without the public being informed. According to NASA spokesman Fletcher Reel, the law as it stands is not immediately applicable, but in case of need could quickly be made applicable. What this means is that it is ambiguously worded, so that it can be interpreted either one way or the other, as the government desires.

It is certainly not a coincidence that Dr. Clifford held his press conference during the period when the popularity of the film E.T. was at its peak. As E.T. portrayed a type of extraterrestrial that was benevolent and lovable, the inference is that the press conference was intended to discourage attempts to communicate or fraternize with UFO occupants. However, instead of having the intended effect, it backfired, causing public furor. There may be some relationship between this fiasco and the next semi-officially endorsed attempt to deal with the subject of extra-terrestrials, the TV film V, which was featured with repeat performances and maximum publicity by major networks worldwide. The aliens portrayed in V are the most horrifying and repulsive nightmares imaginable, who are defeated thanks largely to a CIA hit man specializing in covert operations, the tough guy with the heart of gold who with the aid of the handsome hero saves the human race. This is obvious and transparent propaganda, designed to do what the government's widespread use of dis-information, and Dr. Clifford's press conference about the absurd lemon of a law already on the books failed to do: squelch attempts to communicate or fraternize with UFO occupants.

One way to avoid widespread panic at the announcement of the news that we are under surveillance by nonhuman intelligent beings with a technology far more sophisticated than our own is to point out that this situation is nothing new, but has literally been going on for millennia. If the "flying dragons" mentioned in the I Ching intended to attack and destroy us, they could easily have carried out this objective long ago. Along with this article, the text of the E.T Law will be presented. However, there are several points that I wish to make: 1211.101 Applicability. The provisions of this part apply to all NASA manned and unmanned space missions... I could dismiss this whole controversy as a tempest in a teacup if the above passage contained the word "only", so as to read: "The provisions of this part apply only to all NASA manned and unmanned space missions..." However, it does not contain that one little word which would have made such a big difference.

If the government was suddenly faced with the accomplished fact of an undeniable overt ET visitation, this regulation could therefore, be construed as being applicable to all space missions, NASA or non NASA, whether of terrestrial or extra-terrestrial origin. As it stands, this law is applicable to UFO contact. The meaning would have to be stretched, but the built-in loophole does exist. 1211.102 Definitions. (b) (2): Touched directly or been in close proximity to (or been exposed indirectly to)... Even without involved in a UFO close encounter would become eligible for indefinite quarantine under armed guard according to the above. By including indirect exposure, the NASA administrator is empowered to make the definition mean just about anything he wants it to. An example of indirect exposure is given, but an example is not a definition. Unless indirect exposure is defined precisely, it can mean almost anything. The possibility is not specifically ruled out that other types of indirect exposure than the example given might be considered valid grounds to "quarantine" a citizen or group of citizens.

In my opinion, it is vital that we challenge the validity of his law, for if it is allowed to stand unchallenged, UFO contactees and researchers may all meet behind barbed wire and armed guards somewhere in Alaska. I strongly urge everyone who reads the E.T. Law, [Title 14, Section 1211](#) of the Code of Federal Regulations (at the end of this article), to clip it out, and send it on to your congressman, with a demand penciled in, to repeal this absurd and potentially lethal law. We must use reason, and transcend fear in order to make this planet a place where all may live in peace and harmony, as One.



Troubled Times



Title 14, Section 1211

1211.100 Title 14 - Aeronautics and Space

Part 1211 - Extra-terrestrial Exposure

1211.100 - Scope

This part establishes: (a) NASA policy, responsibility and authority to guard the Earth against any harmful contamination or adverse changes in its environment resulting from personnel, spacecraft and other property returning to the Earth after landing on or coming within the atmospheric envelope of a celestial body; and (b) security requirements, restrictions and safeguards that are necessary in the interest of national security.

1211.101 - Applicability

The provisions of this part to all NASA manned and unmanned space missions which land or come within the atmospheric envelope of a celestial body and return to the Earth.

1211.102 - Definitions

(a) "NASA" and the "Administrator" mean, respectively the National Aeronautics and Space Administration and the administrator of the National Aeronautics and Space Administration or his authorized representative.

(b) "Extra-terrestrially exposed" means the state of condition of any person, property, animal or other form of life or matter whatever, who or which has:

(1) Touched directly or come within the atmospheric envelope or any other celestial body; or

(2) Touched directly or been in close proximity to (or been exposed indirectly to) any person, property, animal or other form of life or matter who or which has been extra-terrestrially exposed by virtue of paragraph (b)(1) of this section. For example, if person or thing "A" touches the surface of the Moon, and on "A's" return to Earth, "B" touches "A" and, subsequently, "C" touches "B", all of these - "A" through "C" inclusive - would be extra-terrestrially exposed ("A" and "B" directly; "C" indirectly).

(c) "Quarantine" means the detention, examination and decontamination of any persons, property, animal or other form of life or matter whatever that is extra-terrestrially exposed, and includes the apprehension or seizure of such person, property, animal or other form of life or matter whatever.

(d) "Quarantine period" means a period of consecutive calendar days as may be established in accordance with 1211.104 (a). (a) Administrative actions. The Administrator or his designee .. shall in his discretion:

(1) Determine the beginning and duration of a quarantine period with respect to any space mission; the quarantine period as it applies to various life forms will be announced.

(2) Designate in writing quarantine officers to exercise quarantine authority.

(3) Determine that a particular person, property, animal, or other form of life or matter whatever is extra-terrestrially exposed and quarantine such person, property, animal, or other form of life or matter whatever. The quarantine may be based only on a determination , with or without the benefit of a hearing, that there is probable cause to believe that such person,

property, animal or other form of life or matter whatever is extraterrestrially exposed.

(4) Determine within the United States or within vessels or vehicles of the United States the place, boundaries, and rules of operation of necessary quarantine stations.

(5) Provide for guard services by contract or otherwise, as many be necessary, to maintain security and inviolability of quarantine stations and quarantined persons, property animals or other form of life or matter whatever.

(6) Provide for the subsistence, health and welfare of persons quarantined under the provisions of this part.

(7) Hold such hearings at such times, in such manner and for such purposes as may be desirable or necessary under this part, including hearings for the purpose of creating a record for use in making any determination under this part for the purpose of reviewing any such determination.

(b) (3) During any period of announced quarantine, no person shall enter or depart from the limits of the quarantine station without permission of the cognizant NASA officer. During such period, the posted perimeter of a quarantine station shall be secured by armed guard ..

(b) (4) Any person who enters the limits of any quarantine station during the quarantine period shall be deemed to have consented to the quarantine of his person if it is determined that he is or has become extra-terrestrially exposed.

(b) (5) At the earliest practicable time, each person who is quarantined by NASA shall be given a reasonable opportunity to communicate by telephone with legal counsel or other persons of his choice. 1211.107 Court or other process

(a) NASA officers and employees are prohibited from discharging from the limits of a quarantine station any quarantined person, property, animal or other form of life or matter whatever during order or other request, order or demand an announced quarantine period in compliance with a subpoena, show cause or any court or other authority without the prior approval of the General Counsel and the Administrator.

(b) Where approval to discharge a quarantined person, property, animal or other form of life or matter whatever in compliance with such a request, order or demand of any court or other authority is not given, the person to whom it is directed shall, if possible, appear in court or before the other authority and respectfully state his inability to comply, relying for his action on this 1211.107. 1211.108 Violations. Whoever willfully violates, attempts to violate, or conspires to violate any provision of this part or any regulation or order issued under this part or who enters or departs from the limits of a quarantine station in disregard of the quarantine rules or regulations or without permission of the NASA quarantine officer shall be fined not more that \$5,000 or imprisoned not more than 1 year, or both.



Troubled Times



Case Studies

From: "Todd J. Jumper" <enoch144@eagle-net.org>
To: <wclark59@bv.net>
Subject: **My Close Encounters**
Date: Thu, 18 Dec 1997 17:37:15 -0000

Hello to all of you at CE-4 research group! Recently I came across a file called "CNI - Bible on abduction." through a UFO mailing list. I would like to comment on the fact that it is correct that alien abductions are very similar to demonic possession, may it even be safe to say that these "grey" beings are tied into the spiritual/demonic realm? My conclusions point to "yes" I am an alien abductee and a Christian. During my encounters I was able to stop the greys from abducting me by calling out for Jesus Christ - in which on various times an angel showed up and rescued me from the greys while I was fully conscious. Other abductees out there who call the greys "space brothers" or love the greys, I feel they are controlled and deceived - but if they enjoy getting anal probes that's their fancy. They feel that perhaps the greys created the angel also, but this would not make sense. A kingdom divided against itself is sure to fail. Anyway, as I way saying I am a Christian and have been protected during my encounters with the "grey" aliens. I was on the Sightings Radio show on October 24. www.sightings.com The host of the show claimed that the information I gave was a "new wrinkle" in the UFO / abduction research and shed some light on things. I have written down most of my experiences on my personal website and my story will be printed in a magazine which is due out on December 31. I hope my story can aid you in your research. Here is the URL to my site <http://eagle-net.org/mce/>

Sincerely
Todd Jumper

To: wclark59@bv.net
Date: Sat, 23 Aug 1997 17:50:44 -0400
Subject: **Re: Great Article**,
From: [censored]

Hi Wes, thanks for the nice reply to my e-mail. My interest in UFO,s goes back to the summer of 1962 ,when I had 3 sightings all less than 50 yards from me. First two sightings were witnessed by others- the last sighting was almost a CE4 - I was alone at Ft Devens Mass. around midnight. It wasn't until the early 70's that the concept of ufos being of the spiritual world was put to me by a young minister just out of college. For the last 25 years of studying the UFO question and bible prophecy, I am completely sold that we are not dealing with aliens from outer space but, rather fallen angels confined to the earth until the day of judgement.

From: [censored]
Date: Sun, 17 Aug 1997 08:56:28 -0400
To: wclark59@bv.net

I just want to thank you for your article in the Florida Today. For the last 5 years something strange has happened to me that seems to be similar to what you have written. It started in 1992 when me and my husband started dating. We had moved in together and had a nice little 1 bedroom apartment. One night he had woken me up and told me that something woke him, He heard a humming noise, He couldn't move or

speaking or yell out and he happened to be looking at the end of the bed when he saw a tiny man in red. He said the little man's eyes were glowing and he thought it was the devil. I have to admit that I thought he was crazy but he was so scared. After that it never happened to him again but instead has happened to me ever since. I have never seen anything because my eyes have been closed everytime. What happens to me is something will purposely wake me up with a loud humming noise. Right then I cannot move or yell or anything for about 10-15 seconds. I know its evil whatever it is because I can feel its presence.

There has been other times that I have tried so hard to scream or yell that I have broken the force. But then it seems like it stays away for a couple of months and comes back stronger. One time scared me so bad that when I was trying to fight it and trying to yell that when I did, a monstrous growl came out of my mouth. My husband only heard mine but I know that it wasn't. For the longest time I was scared to tell anyone. The only ones who knew were my husband, my mother, my sister and brother. I was afraid that if I told anyone else they would think I was crazy or "dreaming". I know I was not dreaming but I had no idea what was happening. I was so scared. I knew I wasn't crazy but I wanted help so badly. I started to go back to church and when I did, it happened more frequently. Then one day a couple from my church came to my house to visit and I had never met them before. I finally got enough courage to tell them about it. He knew exactly what I was talking about and called it "Spiritual Warfare". I was so relieved to know that someone did in fact actually believe me and knew exactly what it was. He explained it as demons but also told me it was called Demon Oppression. That I could not become possessed because I had been Baptised. Boy that was a relief to know. I would like to know if you have heard of any stories similar to this. It would bring more relief to know that I am not the only one this has happened to. Thank you very much for taking the time and reading this.

From: [censored]

To: <wclark59@bv.net

Subject: **aliens**

Date: Sun, 17 Aug 1997 13:30:15 -0000

I just read a synopsis of your ideas from Florida Today's Space Online dated August 17, 1997. I find your theories very exciting and interesting. I have a personal stake in this, as I have been hearing voices for the last two years. Originally, they claimed they came to save me, and rescue me. And they say Jesus died for you. Now, one thing you must understand, is that I turned my back on religion and the church in 1980, after my parents were divorced. So for me to be told that I am being rescued by Jesus or angels or whatever is fantastic to me and I don't know why they would rescue me. After awhile, I began to feel things all over my body, and they seem interested in my semen for some reason. I must tell you, that I have been since diagnosed as a schizophrenic. But couldn't my hearing of the voices be real (they sure seem real!). I never believed in god after my parents, and yet now I do, and I can hear the voices battle for my control in my head (when I don't take my medicine). To the best I'm able to ascertain, I'm in some kind of zoo, and there are experiments being done to me. This all began two years ago. The voices say the rapture is coming, and they want to rescue me from what is going to happen. Not having read the bible more than the first couple of chapters, I do not know from what they are trying to rescue me (other than the apocalypse). I am interested in exploring all possibilities, so I'd like your input in this thing. Like I said, I have been diagnosed as a schizophrenic. I hear and feel things. But maybe the voices are real.

From: [censored]

To: wclark59@bv.net

Date: Sat, 06 Sep 1997 18:03:10 PDT

to ce4,

This experience happened to me in the fall of 1987 in San Francisco, CA in the Nob Hill section. The experience was first noticed when one afternoon I arrived home (home was an apt shared with 2 others) I heard a sound (woo woo woo) like vibration, the sound slowly dissipated and I mentioned it to my roommates—and I figured that was the end of it. The following night I wake up—I am leaning on my elbow and I look across my futon and the clock says 3am—an interesting time of the morning for me for

sometime. All the sudden I feel a fear coming over me then I am paralyzed can't move trying to yell for my roommate - facial muscles can move, barely can speak, not enough to be audible, then the sound comes (woo woo woo) and I blackout. Next morning I wake up to feeling violated, this feeling lasted for days like being raped - While going to work I'm walking thru the embarcadero and I notice a book hard back - and it has this face on it alien looking - so I go into the bookstore and look at it says true story. This book was communion. I bought it and was amazed when I read about his abduction experience I got chills all over. I can't say that this has happened to me again. if you have any information for me I would appreciate it cause I really don't know what happened to me on that early morning, one thing I know it wasn't a pleasurable experience

From: [censored]

To: <wclark59@bv.net

Subject: **deception!**

Date: Fri, 13 Feb 1998 05:10:10 -0500

Glory be to God the Father and Jesus Christ our Saviour ! I say this with real heartfelt sincerity and relief. I have had experience three encounters two of which were demonic attack (alien abduction). Calling on Jesus did halt the attack. I also know of another person who was in a similar situation but I have since lost his email address but could probably get in touch with him. I have often thought that this alien abduction was demonic but the alien slant had me intrigued I have really been interested in the alien story since the 3rd occurrence. After replying to a post about "scary dream" in one of the Christian newsgroups I started thinking...that if this thing was as common as the media seems to indicate then there should at least be a handful of Christians out there who've had similar experiences. I would be grateful for any correspondence.

From: [censored]

To: <wclark59@bv.net

Subject: **Need to Talk**

Date: Fri, 9 Jan 1998 12:06:42 -0600

Dear Mr. Clark,

I saw a page about the CE-4 Research Group and am interested and want to know more. I'm a Christian and feel like I had a strange experience or two myself. I also feel I overcame 'them' by faith in Jesus. I would like to talk/ write to you about it and to know what you think regarding it. I hesitate to send it E-mail. I fear one of my children might rummage through deleted messages sent and find it. (It really had ME stressed out for a while, and when I eventually talked to my husband about it, he said it gave him the creeps. He was anxious about it, too. I don't want my kids getting scared for me or for themselves. It just isn't necessary.)

From: [censored]

Date: Fri, 23 Jan 1998 02:17:31 EST

To: wclark59@bv.net

Subject: **abduction**

found your information on the stopping alien abduction by the calling on of a higher power. i too have had a similar experience. i do not consider myself a "christian", however i do have belief in spirituality. i was abducted 2 years ago by what are considered the grays. i now know that this has been happening to me since early childhood. i am at this time 40 years of age. their purpose i am unclear of and do not have memories of what specifically was and had happened during these experiences. 2 years ago i was abducted from my bed and recall with vivid memory of the beginning of the abduction. the fear was incredible and i knew who they were and that their purpose was not positive. i related this experience to a "friend" of my physical abilities. I was told by her that if and when it happened again that i should ask it if it was of the "light". a couple of months later it did happen. through the fear that gripped me i asked it if it were of the "light". it screamed as if in pain and backed off instantly to observe me from a distance to take in what

happened. i swear that all i tell is the truth. these experiences were as real as you reading this email this very moment. there is much much more to the specifics of my experiences and i wish not to get any more involved than what i tell you now. i saw your info on the net and wanted to relate this to you. it is the truth

From: [censored]
To: <wclark59@bv.net
Subject: **abductions**
Date: Mon, 16 Feb 1998 13:47:20 -0800

Dear Sirs,

I read a little bit about your CE-4 research project and I was wondering if it were possible to discuss a little bit with you about some experiences I have been having. A lot of things have happened lately but my first memory was when I was eleven. I have been searching the internet for a long time in hopes of finding some kind of support service but they appear to be few and far between and they also appear to be pro alien. I have serious doubts about alien motives and do not want to set myself up for deception. I'm a mother of seven children, six boys and one little girl. My husband and I are not church goers per-se' but we do study Torah, the Bible, the Kabbalah and other ancient, religious writings on our own and with our children. We are seriously considering converting to Judaism which is why these experiences are very disturbing to me. I'm not sure what's going on. I do believe that SOMETHING is going on. I have nobody to explain it to me or tell what I should do. I'm extremely worried about my children. I feel helpless to protect them and I don't understand why, when my beliefs are and convictions are so strong, these entities are still continuing to stay around me and my family. I realize your your very busy but if you could give me any input at all I would greatly appreciate it. Thanks for your time.

Date: Sat, 06 Sep 1997 23:13:43 -0700
From: [censored]
To: wclark59@bv.net
Subject: **Florida Today Article**

Gentlemen -

Recently I read the Florida Today account of your research. I'm especially interested in the "religious component" that you seem to be discovering in some ufo abduction cases. Back about 1973 my wife had a strange experience in the middle of the night. At the time we knew nothing about UFO abductions, so we had no category in which to place it other than extremely "lucid nightmare." It has many of the abduction "components." The point is that she stopped the entities and the whole experience with the name of "Jesus." I would very much appreciate knowing of any other information (such as case histories) that continue to confirm your findings. It's vital to get this information out.



Troubled Times



Just Say No

Spiritual warfare? Some look to Bible for answers to alien abductions!

By Rita Elkins *Florida Today*

June 7, 1998

Cape Canaveral, Fla. - Imagine that alien abduction experiences and demons are equally real. Hey, we said it'd be tough. But you were halfway there watching the recent movie, "*Fire in the Sky*," right? One more step and you're in the strange and trendy world of UFOlogy theology, where extraterrestrials could be even scarier than you think. Odd as it sounds, the spiritual life of aliens is being taken seriously in wide-ranging discussions among religious leaders. Magazine articles, books and even evangelists are engaging in Bible-based speculations about the nature and intention of entities that allegedly kidnap, paralyze, physically abuse and sometimes sexually molest victims - many of whom, more strangely still, come to believe the experience was worthwhile.

Religious leaders are alarmed about a growing train of thought that "wants us to reject traditional Judeo-Christian ideas about God" in favor of benign "Space Brothers" who will save humanity from itself, writes journalist William M. Alnor in his book, "*UFOs in the New Age*" (Baker, Grand Rapids, Mich.). Alnor concludes this new belief is a set-up for apocalyptic deceptions predicted in the Bible's *Book of Revelation*. He's not alone. "The similarity between the abduction experience and demonic possession is very, very close," says Joe Jordan of Cocoa, Brevard/Volusia state director for the **Mutual UFO Network (MUFON)**, a widely respected clearinghouse for UFO-related research. "These (alien contact) experiences these people are having are real. It does exist. But you just need to understand what's doing it."

Jordan and his partner, **Wes Clark**, have begun a research group called **CE-4** (close encounters of the fourth kind, i.e. abductions), dedicated to studying alleged alien abductions. Its 15 members also belong to MUFON, but "nothing we do is necessarily sanctioned by them," says Clark, a quality control engineer at Kennedy Space Center. MUFON principals did not respond to inquiries about CE-4's unusual hypothesis, summarized by Jordan: "This whole thing is spiritual warfare. And the method the enemy's using is deception. Strong deception." In other words, entities really are abducting people against their will. Only, they're not aliens from other planets. They're demons from the pit of hell.

Stop in the name of ... Joe Jordan is addressing a "**New Millenium Symposium**" in Titusville. With his intense brown eyes and shoulder-length hair, he mingles easily with New Age folks who paid \$44 to study pyramids, Mayan dreamspells, Lakota prophecies, and to hear Jordan's talk about "UFO Abductions." Jordan, who works in product development and engineering for Sea Ray Boats, speaks calmly, his voice firm, with good grammar and diction. Kooks don't get to be state directors with science-oriented **MUFON**, for whom he has chased lights for seven years. Last year he focused on CE-4 research, and encountered a Central Florida abductee whose otherwise-typical experience had one unique aspect. "They had stopped the experience while it was happening. In all the time I've been researching, I'd never heard that before." Jordan punches buttons on a tape recorder. A nameless, 30-something man with an intelligent-sounding voice, slightly Southern, tells his story.

Calmly, at first. There were strange lights in a nearby woods at bedtime, barking dogs. He is up and down a few times, yelling at the dogs while his wife sleeps soundly. Then, lying down again ... "I couldn't move ... gray fog. I couldn't see anything, but it was like someone was there." He felt himself lifted off the bed.

"I was terrified, so helpless ... screaming inside, but I couldn't get it out." The voice is less calm now, but still certain, not hesitant. "I thought I was having a satanic experience, that the devil had gotten hold of me and had shoved a pole up my rectum and was holding me up in the air ... so helpless. I couldn't do anything." A non-religious person, he'd been to church with his wife a few times. "I said, 'Jesus, Jesus, help me,' or, 'Jesus, Jesus, Jesus!' And when I did, there was a feeling or a sound or something. That either my words that I had thought, or the words that I had tried to say or whatever, hurt whatever was holding me up in the air on this pole. "And I felt like it was withdrawn, and I fell. I hit the bed, because it was like I was thrown back in the bed. I really can't tell what it was. But when I did, my wife woke up and asked why I was jumping on the bed."

Yeah, but ... Relentless anonymity is a given in abduction research. Nobody in their right mind wants family, friends and co-workers to know they've had their personal space violated against their will by strange-looking creatures whose existence isn't even proven. So they can't give names. But Jordan and Clark swear they have three verifiable cases in which apparent abduction experiences were halted by believers who called on the name of Jesus. And Jordan says as many as 400 cases may be documentable nationwide. "It makes you wonder: If these beings are extra-terrestrial at all, why would they respond to that name?" Jordan asks. "We think we found the answer in the Bible, in Mark 16:17 where Jesus said, 'In my name, they shall cast out demons.' That seems to be exactly what we came across."

Three major researchers told Jordan, off the record, that they had similar cases. But "they were afraid for their credibility," he says. "They felt they already had put their credentials out far enough dealing with extra-terrestrials." Other "so-called researchers (are) sitting on this information," Jordan says. "There's something wrong there. They're just as bad as the people they say have conspiracies in other ways." Why would anyone suppress such research findings? Jordan, who became a Christian last year, says most UFOlogists share his former New Age beliefs, which dismiss Christianity and Judaism. "These people go from one thing to another looking for development of a higher consciousness," he says. Anyplace but in traditional religion.

Stranger still: An estimated 40 percent of Americans say they believe aliens have visited Earth. More than a million people worldwide claim CE-4 experiences. Still, mainstream Christianity mostly sidestepped the issue - until March's mass suicide at Heaven's Gate showed just how misleading some alien link-thinking could be. Suddenly, the religious press is full of articles about UFOs. The May cover story in Central Florida's "*Discovery Christian*" newspaper focused on UFOlogy theology, interviewing Berkeley-trained scientist and Christian author **John Weldon**. That was reprinted from Rutherford Institute's nationally-distributed October newsletter.

Even Jewish believers are connecting UFO experiences with the *Torah*, or Jewish Bible. "Many serious people who have been studying UFOs around the world have reached the consensus that the Bible is a convincing UFO story," said journalist **Barry Charnish**, quoted in a chapter titled "*UFOs in the Holy Land*" from "Sightings: UFOs", by television writer **Susan Michaels** (Simon & Schuster, New York, due out in September). July's *Charisma* magazine, a 200,000-plus circulation monthly, featured Christian evangelist and author Paul McGuire's article, "Alien Invaders." McGuire cites the evolution of popular New Age author Whitley Streiber's interests - from his first alien contacts in "*Communion*", "*Transformation*" and "*Breakthrough*" to his latest titles, "*The Secret School: Preparations for Contact*" and "*Evenings with Demons*" - as an example of a progressive deception.

Indeed, **Streiber** fans often comment - albeit positively - on their favorite author's change. From experiencing his first alien encounters as terrifying and torturous, he began to seek them out and welcome them, finally advocating them as a religious experience. That, say religious leaders, indicates a deceptive entity is at work. "Both the seemingly benign and the hostile entities ... will play an increasing role in preparing a segment of humanity for the reception of the Antichrist," writes bestselling author David Allen Lewis and Robert Shreckhise in "UFO End-Time Delusion." And the cover of "The Agenda, The Real Reason They're Here" gives this premise: "In the near future, God will evacuate millions of people from the horrors to follow. Aliens will take the credit" for the Rapture (when Christians will be supernaturally

airlifted to heaven), writes B.

Fox, a **MUFON** researcher who resides in-of all places-Roswell, New Mexico. Back in Titusville at the CE-4 office in Wes Clark's home, Joe Jordan and Clark continue to study, research and solicit abductees through the Internet and with classified ads in MUFON's UFO Journal. "The one thing we can offer people in this field, that nobody else elsewhere is offering, is hope. Hope that they can stop this experience," Jordan says. "We're still researchers. It's not conclusive. But this is what we have so far." To contact CE-4 Research Group, call 631-4393 or via wclark59@bv.net e-mail.



Troubled Times



Sturrock Panel

Sturrock Panel

by [Bob Durant](#)

Public opinion polls show that over 50% of adult Americans think UFOs are "real," over 70% think the government is hiding information about UFOs, and 40 % think that the government is concealing information proving the existence of UFOs, presumably hardware or bodies. Only one out of three are skeptics. Those are extraordinary numbers. They mean that more Americans believe in UFOs than the number who voted for Reagan or Bush or Clinton. Roman Catholics are the largest religious denomination in the U.S., and the UFO "believers" outnumber them two to one. Fundamentalist Christians comprise about 10% of the population, and exert a huge influence on the Congress. UFO "believers" outnumber them by five to one.



Troubled Times



Life Poll

Life Magazine, March 2000 pg.46-56
Searching for Extraterrestrial Life

Life Magazine Exclusive Poll

1. Do you think there is intelligent life somewhere in the universe, other than on Earth, or not?

Yes	54%
No	32%
Not Sure.....	14%

2. Do you think intelligent beings from other planets have ever visited Earth, or don't you think so?

Yes	30%
No	54%
Not Sure.....	16%

3. Do you think the U.S. government is withholding information from the public about the existence of UFOs, or don't you think so?

Yes	49%
No	40%
Not Sure.....	1%

4. In your opinion, are UFOs real or just the product of people's imagination?

Real.....	43%
Imaginary.....	42%
Not Sure.....	15%

5. Have you or anyone you know ever seen a UFO, or haven't you?

Yes, personally.....	6%
Yes, someone I know...	13%
No	79%
Not Sure.....	2%

6. Have you or anyone you know ever had an encounter with beings from another planet, or haven't you?

Yes, personally.....	1%
Yes, someone I know....	6%
No.....	92%
Not Sure.....	2%

7. If beings from another planet asked you to come aboard their spacecraft, would you go, or wouldn't you?

Yes	21%
No	74%
Not Sure.....	5%

8. In your opinion, should the U.S. government support scientific observation in search of intelligent life on other planets, or shouldn't it?

Yes.....54%
No.....41%
Not Sure.....5%

(Life Poll by Yankelovich Partners, Survey of 1564 adults, age 18 or older, conducted January 12-13, 2000. Margin of Error: plus or minus 2.5 percent.) Note: "Not Sure" is a volunteered response.



Troubled Times



Falun Gong

Extraterrestrials May Cause Revolution in China

MUFON Skywatch Investigations

July 30, 1999

The largest political group in China outside the Communist Party is the Falun Gong that attempts to improve a person's health through exercise, mediation, and contact with unseen extraterrestrial forces. The group has up to 70 million members, and is considered the most serious threat to communist rule since the 1989 pro-democracy protests. Falun Gong doctrines draw on a belief in extraterrestrial forces, martial arts, Buddhism, Taoism, high moral standards, and traditional values. This belief system results in members who are seldom sick, and so they rarely use Chinese medical facilities. On April 25, ten thousand Falun Gong members conducted a silent protest against government harassment outside the Beijing compound where President Jiang Zemin lives. Additional silent protests were carried out in more than 30 Chinese cities allegedly coordinated over the Internet by sect founder Li Hongzhi, who lives in New York.

Coupled with the NATO bombing of the Chinese Embassy in Yugoslavia the Communist government is extremely worried. Thousands of Falun Gong members are being arrested and put in prison while millions of their books are being burned. Old Chinese legends talk of fiery dragons on which the sons of Heaven rode. Although China has asked the United Nations in recent years to join them in studying UFOs, this spreading belief in extraterrestrials terrifies the government. The threat of a civil uprising against Communism in China is more likely than is generally realized. China is attempting to stop further trouble by issuing an arrest order for the popular Li Hongzhi the leader of Falun Gong. A significant sign from heaven, such as UFO sightings could set off spectacular events in China. Revolutions have been won by extraordinary things.



Troubled Times



Philippine Astronomers

Philippine Astronomers Publish Results Of UFO Investigations

By Jeannette Andrade, *The Manila Times*, September 14, 2000

Now it can be told. A team from the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) has admitted actively participating in the investigation of what is known as close encounters of the third kind. UFOs or unidentified flying objects, in particular. Elmer Escosia, team leader, said they opted to reveal what they have learned so far instead of keeping the files to themselves. "Our files and records are open to the public so anyone can read our reports, if they like," Escosia told *The Manila Times*. The team, he said, is composed of eight members under PAGASA's astronomy division, which was assigned to investigate UFO sightings in the country. According to Escosia, they were able to explain most of the UFO sightings from all over the country which were reported to PAGASA. But until now, he admitted, they were stumped and found no logical explanation for three such sightings.

The first was in 1984, or 16 years ago, when children insisted that they saw "bulbous-headed non-human beings" alight from a large disc-shaped "spacecraft" which landed in Ormoc City in Southern Leyte. It was impossible not to believe the children's testimonies since they gave the same descriptions, Escosia said. He added they sent the description of the "aliens" to their counterparts in the US who appeared to be similarly stumped. The two other inexplicable sightings were in Las Pi-as and Muntinlupa City in 1997 and the latest on May 10 this year. In 1997, Escosia said, at least 40 people reported that they saw 13 odd-shaped flying objects that were clearly visible in the following subdivisions: Uranium St., Pilar Village, Las Pi-as; Dona Josefa, also in Las Pi-as; and Heroes Hill, Muntinlupa. The eyewitnesses described the UFOs as transparent and hollow at the middle, closely resembling a school of jellyfish minus their tentacles.



Troubled Times



French Government

Delivered to the government, and which has just been published in August, 1999 (the **COMETA** report). They have revisited the whole UFO issue, and what they address in their conclusions is just incredible. To make a long story short:

1. they conclude UFOs are most likely a real extraterrestrial phenomenon
2. under this assumption, that it seems the aliens want to show themselves in order to make us progressively aware of their existence
3. that the US might already have contact or have had and they wonder why they keep the secret
4. that the French defense must reconsider the issue as a potential threat, before the actual alien intentions are known

And many many other interesting things, just as if they were understanding things but are pretending they are still wondering (talking about the life forms, the mother ships and stuff). Imagine that this report has been commissioned by the President and is now public, and that the most serious French radio has broadcast an interview of the military! I can't believe that such a step has been made for the Awakening, and that now I will laugh at those who laughed at me since I have the defense on my side.

Offered by [Véronique](#).



Troubled Times



COMETA Report

From: JONIFERRIS <jferris@mindspring.com>

Stunning High Level French Government Report On UFOs And Defense

From *CNI News*, Vol 5 No 11, 8-1-99

Note - Our thanks to Michael Lindemann for permission to bring this report to you

[CNI News thanks our French colleague and correspondent Gildas Bourdais (GBourdais@aol.com) for providing this exclusive report on the historic new UFO assessment from France. The following text has been approved for publication by members of COMETA, the "Committee for In-depth Studies" which produced the UFO report. Requests for translation and publication rights to the full report should be addressed to Mr Michel Algrin, 25 boulevard saint-Germain, 75005 Paris, France.]

By Gildas Bourdais

On July 16, 1999, a document was published in France called "UFOs and Defense -- What Must We Be Prepared For?" ("Les OVNI et la Defense. A quoi doit-on se preparer?") This ninety-page report is the result of an in depth study of UFOs covering many aspects of the subject, especially questions of defense.

The study was carried out over several years by an independent group of former "auditors" at the Institute of Higher Studies for National Defense, or IHEDN ("Institut des hautes etudes de defense nationale"), and by qualified experts from various fields. [NOTE: Many participants in IHEDN defense-study programs are known as auditors. - ed.]

Before its public release, it was sent to French President of the Republic Jacques Chirac, and to Prime minister Lionel Jospin.

The report is prefaced by General Bernard Norlain of the Air Force, former Director of IHEDN, and begins with a preamble by Andre Lebeau, former President of the National Center for Space Studies ("Centre national d'etudes spatiales" or CNES), the French equivalent of NASA. The group itself, collective author of the report, is called "COMETA," which stands for "Committee for In-depth Studies," and is presided over by General Denis Letty of the Air Force, former auditor (FA) of IHEDN.

A non-exhaustive list of COMETA members is given at the beginning of the report. It includes General Bruno Lemoine of the Air Force (FA of IHEDN); Admiral Marc Merlo (FA of IHEDN); Michel Algrin, Doctor in Political Sciences, attorney at law (FA of IHEDN); General Pierre Bescond, engineer for armaments (FA of IHEDN); Denis Blancher, Chief National Police superintendant at the Ministry of the Interior; Christian Marchal, chief engineer of the national "corps des Mines", Research Director at the "National Office of Aeronautical Research" (ONERA); General Alain Orszag, Ph.D. in physics, engineer for armaments.

The committee also expresses its gratitude to outside contributors, including Jean-Jacques Velasco, head of SEPRA at CNES; Francois Louange, President of Fleximage, specialist of

photo analysis; General Joseph Domange of the Air Force, general delegate of the Association of auditors at IHEDN.

General Norlain tells in a short preface how this committee was created. General Letty came to see him in March 1995, when Norlain was Director of IHEDN, to discuss his project of a committee on UFOs. Norlain assured him of his interest and directed him to the Association of Auditors (AA) of IHEDN, which in turn gave its support. It is interesting to recall here that, twenty years ago, it was a report of that same Association which led to the creation of GEPAN, the first unit for UFO study, at CNES.

As a result, several members of the committee come from the Association of Auditors of IHEDN, joined by other experts. Most of them hold, or have held, important functions in defense, industry, teaching, research, or various central administrations. General Norlain expresses hope that this report will help develop new efforts nationally, and an indispensable international cooperation.

General Letty, as president of COMETA, points to the main theme of the report, which is that the accumulation of well documented observations compels us now to consider all hypotheses as to the origin of UFOs, especially extraterrestrial hypotheses.

The committee then presents the contents of the study. In the first part, they discuss some remarkable UFO cases, both French and foreign. In the second part, they describe the present organization of research in France and abroad, and studies made by scientists worldwide which may bring partial explanations in accordance with known laws of physics. The main global explanations are then reviewed, from secret aircraft to extraterrestrial manifestations. The third part examines measures to be taken regarding defense, from information to pilots, both civilian and military, to strategic, political and religious consequences, should the extraterrestrial hypothesis be confirmed.



Troubled Times



Facts

From: JONIFERRIS <jferris@mindspring.com>

Stunning High Level French Government Report On UFOs And Defense

From *CNI News*, Vol 5 No 11, 8-1-99

Note - Our thanks to Michael Lindemann for permission to bring this report to you

Many of the cases selected are well known by most researchers, and need only to be mentioned here. [NOTE: a further description of the following cases is presented in a separate article below - ed.] They are:

Testimonies of French pilots: M. Giraud, pilot of Mirage IV (1977); Colonel Bosc, fighter pilot (1976); Air France flight AF 3532 (Jan 1994).

Aeronautical cases worldwide: Lakenheath, UK (1956); RB-47, USA (1957); Teheran, Iran (1976); San Carlos de Bariloche, Argentina (1995).

Observations from the ground: Tananarive, Madagascar (1954); observation of a saucer near the ground by a French pilot, J.-P. Fartek (1979); close range observation over a missile site at Kapustin Yar, Russia (1989).

Close encounters in France: Valensole, encounter of Maurice Masse (1965); Cussac, Cantal (1967); Trans-en-Provence (1981) ; Nancy (so-called case of the Amaranth, 1982).

Counter-examples of elucidated phenomena (two cases).

Although the selection is limited, it seems sufficient to convince an uninformed but open minded reader of the reality of UFOs.



Troubled Times



Knowledge

From: JONIFERRIS <jferris@mindspring.com>

Stunning High Level French Government Report On UFOs And Defense

From *CNI News*, Vol 5 No 11, 8-1-99

Note - Our thanks to Michael Lindemann for permission to bring this report to you

The second part, entitled "the present state of knowledge" ("Le point des connaissances"), surveys the organization of official UFO research in France, from the first introductions given to the "gendarmerie" in 1974 for the reaction of reports, to the creation of GEPAN in 1977, its organization and its results: collection of more than 3,000 reports from the gendarmerie, case studies and statistical analyses. It then surveys agreements passed by GEPAN and, later, SEPR, with the air force and the army, civilian aviation and other organs, such as civilian and military laboratories for the analysis of samples and photographs.

Regarding the methods and results, we are reminded of some famous cases (Trans-en-Provence, l'Amarante), and emphasis is directed to the catalogues of cases, notably of pilots (Weinstein catalogue), and "radar/visual", world wide. A historical note appears here with a quotation of the famous letter of General Twining, of September 1947, asserting the reality of UFOs. [The reference is to a then-secret memorandum sent by U.S. General Nathan Twining to General George Schulgen, in which Twining states: "The phenomenon reported is something real and not visionary or fictitious... There are objects probably approximating the shape of a disk, of such appreciable size as to appear to be as large as man-made aircraft..." Twining notes the impressive aerial performance of these objects, their apparent metallic structure, and other characteristics often associated with UFO reports - ed.]

The following chapter, called "hypotheses and attempts at modeling" ("OVNI: hypotheses, essais de modelisation"), discusses some models and hypotheses which are under study in several countries. Partial simulations have already been made for UFO propulsion, based on observations of aspects such as speed, movement and accelerations, engine failure of nearby vehicles, paralysis of witnesses, etc. One model is MHD [magneto-hydrodynamic] propulsion, already tested successfully in water, and which might be achieved in the atmosphere with superconducting circuits in a few decades. Other studies are briefly mentioned, regarding both atmospheric and space propulsion, such as particle beams, antigravity, reliance on planetary and stellar impulsion. The failure of land vehicle engines may be explained by microwave radiations. In fact, high power hyperfrequency generators are under study in France and other countries. One application is microwave weapons. Particle beams, for instance proton beams, which ionize the air and become therefore visible, might explain the observation of luminous beams. Microwaves might explain body paralysis.

In the same chapter are next studied "global hypotheses." The authors regard hoaxes as rare and easily detected. Some non-scientific hypotheses are put aside, such as conspiracies and manipulations by powerful secret groups, parapsychic phenomena and collective hallucinations. The hypothesis of secret [human] weapons is also regarded as very improbable. We are then left with various extraterrestrial hypotheses. One version has been developed in France by astronomers Jean-Claude Ribes and Guy Monnet, based on the concept of "space islands" of American physicist O'Neill, and it is compatible with present day physics.

The organization of UFO research in the United States, Great Britain and Russia is surveyed rapidly. In the United States, the media and the polls show a marked interest and concern of the public, but the official position, especially of the Air Force, is still one of denial, more precisely that there is no threat to national security. Actually, declassified documents, released under FOIA, show another story, one of surveillance of nuclear installations by UFOs [this has occurred repeatedly in both the US and Russia - ed.] and the continued study of UFOs by the military and intelligence agencies.

The report stresses the importance in the United States of private, independant associations. It mentions the "UFO Briefing Document" [subtitled "Best Available Evidence" - ed.] sent in 1995 to a thousand personalities worldwide, and the Sturrock workshop in 1997, both sponsored by Laurance Rockefeller. The "Briefing Document" has obviously been welcomed by the authors of the COMETA report. The committee also notes the public emergence of alleged insiders such as Colonel Philip Corso, and considers that his testimony may be partly significant as to the real situation in that country, in spite of many critics.

The report describes briefly the situation in Great Britain, with a special mention of Nick Pope [civilian employee at Ministry of Defence, author of two books on UFOs - ed.], and poses the question of the possible existence of secret studies pursued jointly with American services. It mentions as well research in Russia, and the release of some information, notably by the KGB in 1991.



Troubled Times



Defense

From: JONIFERRIS <jferris@mindspring.com>

Stunning High Level French Government Report On UFOs And Defense

From *CNI News*, Vol 5 No 11, 8-1-99

Note - Our thanks to Michael Lindemann for permission to bring this report to you

The third part, "UFOs and Defense" ("Les OVNI et la defense"), states that, if it is true that no hostile UFO action has been proved yet, at least some actions of "intimidation" have been recorded in France (case of the Mirage IV for instance). Since the extraterrestrial origin of UFOs cannot be ruled out, it is therefore necessary to study the consequences of that hypothesis not only at the strategic level but also at political, religious and media/public information levels.

The first chapter of Part III is devoted to prospective strategies ("Prospectives strategiques") and it begins with fundamental questions: "What if extraterrestrials? What intentions and what strategy can we deduce from their behavior?"

Such questions open a more controversial part of the report. Possible motivations of extraterrestrial visitors are explored here, such as protection of planet Earth against the dangers of nuclear war, suggested for instance by repeated flying over nuclear missile sites.

The committee then ponders the possible repercussions on the behavior, official or not, of different nation-states, and focuses on the possibility of secret, privileged contacts which might be "attributed to the United States". The attitude of the U.S. is seen as "most strange" since the 1947 wave and the Roswell event. Since that time, a policy of increasing secrecy seems to have been applied, which might be explained by the protection at all cost of military technological superiority to be acquired from the study of UFOs.

Next, the report tackles the question: "What measures must we take now?" At the least, whatever the nature of UFOs, they impose "critical vigilance", in particular regarding the risk of "destabilizing manipulations". A kind of "cosmic vigilance" should be applied by the elites, nationally and internationally, in order to prevent any shocking surprise, erroneous interpretation and hostile manipulation.

Nationally, COMETA urges the strengthening of SEPRA, and recommends the creation of a cell at the highest level of government, entrusted with the development of hypotheses, strategy, and preparation of cooperation agreements with European and other foreign countries. A further step would be that European states and the European Union undertake diplomatic action toward the United States within the framework of political and strategic alliances.

A key question of the report is: "What situations must we be prepared for?" It mentions such situations as: extraterrestrial moves for official contact; discovery of a [UFO/alien] base within the territory of Europe; invasion (deemed improbable) and localised or massive attack; manipulation or deliberate disinformation aiming at destabilizing other states.

COMETA devotes special attention to "aeronautical implications", with detailed recommendations aimed at various personnels, such as air staffs, controllers, weathermen and engineers. It also makes

recommendations at the scientific and technical levels,> aimed at developing research with potential benefits for defense and industry.

The report further explores the political and religious implications of UFOs, using as a model the perspective of our own exploration of space: how would we do it, and how would we handle contacts with less advanced civilizations?

Such an approach is not new to well-informed readers of the abundant ufological literature, but it has a special value here, being treated seriously at such a level. The media/publicity implications are not forgotten, with the problems of disinformation, fear of ridicule, and manipulation by certain groups.

In its conclusion, COMETA claims that the physical reality of UFOs, under control of intelligent beings, is "quasi certain". Only one hypothesis takes into account the available data: the hypothesis of extraterrestrial visitors. This hypothesis is of course unproved, but has far-reaching consequences. The goals of these alleged visitors remain unknown but must be the subject of speculations and prospective scenarios.

In its final recommendations, the COMETA report stresses again the need to: 1) inform all decision-makers and persons in positions of responsibility; 2) reinforce means of investigation and study at SEPR; 3) have UFO detection taken into account by agencies engaged in space surveillance; 4) create a strategic cell [for UFO study/analysis] at the highest state level; 5) undertake diplomatic action toward the United States for cooperation on this "capital question"; 6) study measures which might be necessary in case of emergencies.

Finally, this document is accompanied by seven interesting annexes: 1) Radar detection in France 2) Observations by astronomers 3) Life in the Universe 4) Colonization of space 5) The Roswell case - The disinformation (a text which will be criticized by some readers and welcomed by others, including myself) 6) Antiquity of the UFO phenomenon and elements for a chronology [of UFO events] 7) Reflection on various psychological, sociological and political aspects of the UFO phenomenon



Troubled Times



Cases

From: JONIFERRIS <jferris@mindspring.com>

Stunning High Level French Government Report On UFOs And Defense

From *CNI News*, Vol 5 No 11, 8-1-99

Note - Our thanks to Michael Lindemann for permission to bring this report to you

The authors of the new French UFO report selected a small but impressive sample of UFO cases to illustrate the seriousness of the subject. Many of these cases will be familiar to experienced ufologists, but not necessarily to all readers of *CNI News*. Here is a brief description of most of the cases highlighted in the COMETA report:

Testimony of French pilot M. Giraud, March 7, 1977: Giraud and his navigator were flying a Mirage IV jet at night near Dijon, France when they saw a bright light rapidly closing. The light tailed them at a distance of 1500 meters though they made evasive turns. They radioed a military radar site, but the UFO did not show on radar.

Testimony of French fighter pilot Colonel Claude Bosc, March 3, 1976: On a night training flight in a T-33, Bosc saw a bright light approach at high speed on a collision course. His jet was then enveloped in green phosphorescent light for several seconds. Radar showed nothing, but two other pilots saw the encounter from a distance.

Air France flight 3532, Jan 28, 1994: Pilot and copilot of an Airbus 320-111 flying in daylight near Paris at 39,000 feet reported seeing a very large disc-like craft about 30 miles away and slightly below them. Military radar confirmed presence of an object about 250 meters in diameter. The object was observed visually and on radar for about 50 seconds, then suddenly disappeared.

Lakenheath RAF, UK, Aug 13, 1956: Extraordinary UFO events occurred over a span of six hours, involving very clear radar tracks of more than a dozen objects sometimes traveling over 4,000 miles per hour, sometimes slower than 100 mph. Jets were scrambled and encountered UFO traffic but could not identify it.

RB-47 case, USA, July 17, 1957: "Arguably the most important UFO case in history," says veteran researcher Jerome Clark. Flight crew of an RB-47 reconnaissance jet engaged a UFO for nearly two hours over Mississippi, Louisiana and Texas. The UFO was simultaneously tracked visually and by ground and air radar, and a signal from the UFO was tracked as well.

Teheran, Iran, Sept 18, 1976: Two F-4 jets of the Iranian Air Force separately engaged a brilliant, fast-moving UFO, tracking visually and on radar. On approaching the UFO, the jets' onboard weapons and control functions repeatedly failed, forcing retreat. A second UFO object was seen to separate from the main UFO and appeared to land.

San Carlos de Bariloche, Argentina, Aug 1, 1995: A commercial jet on approach to Bariloche airport reported a UFO flying alongside. During the plane's descent, the airport experienced a total electrical blackout, forcing the pilot to abort the landing and circle around for a second

attempt. Meanwhile the UFO flew upward and disappeared from view.

Tananarive, Madagascar, Aug 16, 1954: A brilliant green fireball was observed crossing the sky, trailing flames. As it approached, multiple witnesses said it resembled a metallic oval object as big as a DC-4 aircraft. As it passed overhead at low altitude, the city experienced a major electrical blackout.

Kapustin Yar, Russia, July 28-29, 1989: Military personnel reported a clearly visible disc-shaped UFO hovering low over an army missile base and shining a beam of light down on a weapons depot. The sighting lasted over 90 minutes. A similar report occurred later the same night at another nearby base.

Valensole, Basses Alps, France, July 1, 1965: Farmer Maurice Masse encountered a landed UFO and two small humanoids in his lavender field at about 6 am. On approach, he became paralyzed but remained conscious while the beings boarded the craft and flew away. Masse suffered massive fatigue for several weeks, and nothing but stunted weeds grew in the landing area for years after. This case was extensively investigated by French authorities.

Trans-en-Provence, France, January 8, 1981: A disc-shaped metallic UFO was observed by farmer Renato Niccolai to briefly land in his alfalfa field at about 5 pm, then lift off and fly away. Investigation showed that a very heavy object - weighing possibly 4 to 5 tons - had compressed the soil in the landing area, and plants were obviously affected.

Cussac, France, Aug 29, 1967: Two children reportedly saw a sphere-shaped UFO and "four little devils" on the ground. The humanoid beings were observed to levitate before quickly entering the UFO and flying away. The UFO was said to make a soft whistling sound and smelled of sulphur.

Nancy, France, Oct 21, 1982: A scientist (who remains anonymous) observed a small disc-shaped object hovering silently just above his garden in the early afternoon. The object remained for about 20 minutes before suddenly flying away at high speed. Amaranth plants in the garden were obviously affected; analysis suggested the presence of a powerful electrical field.



Troubled Times



Joe Firmage

CEO Quits Job Over UFO Views

San Francisco Chronicle, January 9, 1999

Joe Firmage - the Fox Mulder of Silicon Valley- resigned yesterday from the firm he founded so he could promote his belief that many of today's high-tech advancements, including semiconductors, fiber optics and lasers, came from aliens. Firmage is the 28-year-old founder of USWeb, a high-profile Internet consulting firm that merged recently with the Net marketing firm CKS to form a 1,950-person public company worth \$2.1 billion. Clients of Santa Clara-based USWeb/CKS include Apple Computer, Levi Strauss and Harley-Davidson.

In November, shortly before the merger, Firmage was pressured to step down as CEO of USWeb and take the lesser title of chief strategist because of his campaign to prove the existence of UFOs. Yesterday, Firmage said he resigned as chief strategist because he believed that continuing publicity, including this article, would damage the company's reputation. "I want to ensure the company is not impacted in any negative way," Firmage said. "I do not want to put myself in a position of compromising its day-to-day perception. I was not pressured" to resign. Robert Shaw, CEO of USWeb/CKS, said, "Given the market exposure associated with his outside interests, Joe suggested that we would all be better served if he didn't have an official role with the company. Joe is a visionary and he should be quite proud of what he accomplished. This move should demonstrate to the public and the employees that he's always put the interests of the company first."

Firmage said he is willing to risk his career to further publicize his theories, one of which is that many high-tech advancements can be traced to a purported alien spaceship crash in Roswell, N.M., in 1947. According to Firmage, government officials recovered materials from the spacecraft and reverse-engineered them to develop many of today's high-tech breakthroughs. Like Mulder, the intrepid, erudite government agent on *The X-Files*, Firmage also believes that the truth is being covered up by the military-industrial complex. Firmage has published his many ideas in a 600-page manifesto, titled *The Truth*, on his Web site. "This is certainly the most important news event in 2,000 years," he said.

Firmage said his theories grew out of a year's worth of research on government documents and an alleged personal encounter with an other-worldly being. In a chapter from his manifesto, titled *My Contact*, Firmage recounts an incident that he said occurred one morning at his Los Gatos home, shortly before USWeb went public in 1997. "A remarkable being, clothed in brilliant white light, appeared hovering over my bed in my room," Firmage writes. "He looked rather annoyed, and asked: 'Why have you called me here?' "I answered with a moment's pause: 'I want to travel in space.' This was always my lifelong dream, and it naturally came out in a state of semi-waking thought. "He chuckled skeptically, paused, and asked: 'Why should you be granted such an opportunity?' "I responded without hesitation, in the only way I could have responded given my life to that time: 'Because I'm willing to die for it!'"

Nothing in Firmage's background would suggest any out-of-the-ordinary beliefs. Clean-cut, polite and articulate, he was raised in a modest Salt Lake City home and attended the University of Utah as a physics major. Although fascinated by science fiction as a teenager, he also described himself as "a skeptical scientist." By the age of 18, he had founded his first company, Serious, a pioneer in object-oriented programming tools. That company was sold to Novell in 1993 for \$24 million, and Firmage became

Novell's vice president of networking strategy until 1995. He co-founded USWeb in December 1995.

Firmage's online book contends that extraterrestrials, or "teachers," have randomly appeared on Earth for several thousand years to "nudge" human beings toward radical scientific advancements. The Web site also contains about 100 pages of new documents from a source Firmage calls the "Deep Throat of Cyberspace." One of the documents is a purported 1947 memo from President Harry S. Truman to Secretary of Defense James Forrestal that sets up a top-secret U.S. government operation called "Majestic Twelve" to investigate extraterrestrials. Subsequent documents tacitly acknowledge a series of spaceship crashes from 1947 to 1953. In addition, the site includes an alleged June 1947 letter from Albert Einstein and Robert Oppenheimer to high-tech visionary Vannevar Bush dishing up advice on how scientists should handle aliens, and a Nov. 12, 1963, note from President John F. Kennedy to a CIA operative about "UFO intelligence files." Kennedy was assassinated 10 days later in Dallas. Dr. Robert Wood, a retired aerospace engineer and longtime McDonnell Douglas executive living in Newport Beach, said he has studied the controversial documents and believes that they are real.



Troubled Times



Roswell Disinfo

History Channel
235 East 45th St.
New York, NY 10017
USA

December 21, 1999
Subject: **December 13, 1999 program Roswell: Secrets Revealed**

Dear History Channel

As the nuclear physicist who began the civilian investigation of the Roswell Incident back in the 1970s, who has co-authored a book "*Crash at Corona: The Definitive Story of the Roswell Incident*" and numerous papers about Roswell, and, of course, was the first to talk to many of the key witnesses (almost all of whom you somehow missed), I naturally viewed the subject program with great interest, especially since I was in Roswell on December 13... I must congratulate you on providing a Masterpiece of Misrepresentation. A splendid example of propaganda, excellent for teaching purposes. You demonstrated the primary rules such as selective choice of data, false reasoning, positive and negative name calling. You also demonstrated the 4 basic rules of UFO debunkery:

1. What the public doesn't know, we are not going to tell them
2. Don't bother us with the facts, our minds are made up.
3. If we can't attack the data, we will attack the people; it is much easier.
4. Do one's research by proclamation, rather than investigation. It is much easier and most people won't know the difference.

I have discussed the 2 Air Force reports in my enclosed papers "*The Roswell Incident, the USAF, and the NY Times*" (28 pages) and my Review of "*The Roswell Report: Case Closed.*" You seem to have blindly accepted any comment from a noisy negativist and didn't bother with the work of professionals such as myself. Let me give some specific examples, although I found that I can't get a copy of the show for 4-6 weeks to give precise quotes.

A. How do you dare to show a small heap of wreckage? In my first conversation with **Major Jesse Marcel**, the Intelligence Officer for the **509th Composite Bomb Group**, in 1978, he described wreckage strewn out over an area 3/4 of a mile long. The *Roswell Daily Record* cover-up article of July 9, 1947, stated the wreckage covered an area 200 yards in diameter. Your depiction was at most a few yards across. If that is all there had been, rancher Mack Brazel would have taken it all in his truck to the Sheriff's office and there would have been no reason for Major Marcel and **Captain Cavitt** to have followed him on the long rough journey back to the **Foster Ranch** operated by Mack.. You have blindly accepted a fairly recent statement by Cavitt to Colonel Weaver about him recalling it was just a balloon covering an area only 20' square and easily fitting in one vehicle. Apparently Cavitt wasn't told it was supposed to be a **MOGUL** balloon which included 23 standard helium filled neoprene balloons (at 20' intervals) and a whole bunch of radar reflectors, sonobuoys, ballast tanks, etc all strung together. Some small pile. Of course Cavitt hadn't remembered that simple fact when asked many times by many people for the previous 15 years, even denying that he had been on the base at the time.

B. Dr. C.B. Moore, whom I have met, himself strongly claimed that neoprene out in the sun for weeks would be totally degraded. Did he forget that little detail?. A June 4 or June 14 launching could not possibly have survived so well until early July. You also neglected to mention that many of the July 8 newspaper articles claimed the wreckage was found "last week". But Rancher Brazel had been in the area just a few days earlier and could never have left that mountain of garbage where the sheep could ingest it. Mack had of course previously found 2 balloons. The newspaper of July 9 quotes him saying he was sure what he found wasn't any weather balloon.

Colonel Weaver left this quote out of his recital of the article.

C. Too bad you couldn't mention that the 509th was the most elite military group in the world with hand picked officers and men, and high security. They had dropped the atomic bombs on Hiroshima and Nagasaki, and the two tested in the Pacific in July, 1946, in **Operation Crossroads**. You noted the July 9, 1947, press release and then stated nobody knows why it was issued. Why didn't you bother to ask **Walter Haut** who issued it? He still lives in Roswell and has been interviewed hundreds of times. His story hasn't changed since I first spoke to him more than 20 years ago. Incidentally he also had been a bombardier on 30 raids over Japan and dropped the instrument package over one of the Crossroads tests.. He issued the press release because he was ordered to do so by **Colonel William Blanchard**, Commander of the 509th and of Roswell Army Air Field. Before suggesting he must have been incompetent, as have some who haven't done their homework, I should add he was a member of the **West Point All Star** class of 1938, became a 4 star general by the time he was 48 and was Vice Chief of Staff of the USAF when he died of a massive heart attack at the Pentagon in 1966. There was, of course, a lengthy obituary in the NY times. Doesn't sound much like he was thought to be incompetent, does it?

It was stated that Blanchard retracted the press release 4 hours later. This is nonsense. Blanchard's boss, **General Roger Ramey** in Fort Worth, Texas, (Blanchard was in Roswell) issued a new story after being informed by his Chief of Staff, **Colonel Thomas J. DuBose** that Ramey's boss, **General Clements McMullen**, had given orders to cover up the story. I heard that first hand from retired General DuBose whose testimony is available on film. He was a West Pointer as well and had 18,000 hours as a pilot and set up the **USAF Search and Rescue** command. No slouch at all.

D. Why do you show only the *Roswell Daily Record*? After all there were front page headline stories in the *Chicago Daily News*, the *Sacramento Bee*, the *Los Angeles Herald Express*, the *Spokane Chronicle*, etc all evening papers for July 8. The West coast papers in general had done a lot of checking before publishing detailed articles. Too bad you did none.

E. Where did the comment come from about bodies cold to touch?

F. The notion that **Pilot Kittinger** was the red haired officer is more absurdity. After all he wasn't at the Roswell hospital until 1959. I was the first to hear 2 independent stories about a nasty red haired officer and a black seargeant.. Both events taking place in 1947. Has the air force invented time travel? There is no other way to get crash test dummies, all of whom were the height and weight of pilots, back to 1947 from 1953 at the earliest or to get Kittinger to the Roswell hospital in 1947. This is flat out fiction.

G. Why did you not talk to others still alive who had first hand involvement such as Jesse A. Marcel Jr. , a medical doctor, who handled wreckage, has served on military aircraft accident investigative teams and was a pilot? Or **Loretta Proctor**, neighbor of Mack Brazel, who handled wreckage? or Mack Brazel's son Bill who found strange (thin strong memory material) wreckage out in the pasture? How about the sheriff's two daughters? All this testimony has been readily available for many years

H.One of the first things **Major Jesse Marcel** told me is that there was nothing conventional to be found on the debris field.. No wires, no vacuum tubes, no rivets. He was very familiar with aircraft and aircraft wreckage and balloons and radar reflectors and rockets. The notion that he wouldn't have recognized

balloon wreckage or radar reflectors is frankly absurd.. You are also implying that Blanchard, who had also served in the Pacific, would have ordered the press release and the B-29 flight with the wreckage brought back from the ranch and Marcel to **Fort Worth** is equally absurd, if all there was was totally conventional stuff. You know of any materials such as the I-beam like pieces with strange symbols that couldn't be cut, burned, or broken? Or memory metals that were like foil but couldn't be cut and, when folded over and over, would unfold on their own? Why couldn't the USAF find any of that toymaker tape in the pictures taken in Ramey's office?

I. Brazel didn't make his discovery on July 5. It was earlier. He did go to the store-pool hall in Corona on the 5th which is when, not having electricity or a phone or a radio, he first heard about all the saucer sightings and a reward and was told he ought to go to the Sheriff in Roswell which he did on the 6th NOT on the 7th as you claimed.. You made it sound as though **Sherif Wilcox** looked in the phone book to find a nearby Air Base. There was a standing arrangement that anything that might effect the military would be reported to Roswell Army Air Field. There was no other base in the area.

J. I have met with **Dr. Schirmer, Dr. Moore, Mr. Gildenberg**. They haven't investigated the case. They have made proclamation after proclamation about 2nd and third hand testimony. Why use the term "conspiracy theorist" so many times without ever justifying it? Who are these theorists? I began the investigation and have always provided evidence for the claims that I make which is more than can be said for your trio. They have actually created a conspiracy theory namely that a bunch of stupid UFO researchers and lying witnesses have created a fantastic story for fun and profit. This, of course, ignores the fact that loads of testimony was obtained by us serious researchers long before the cameras started rolling. My phone bills used to run several hundred dollars a month.

By the way, I do know something about security having worked as a nuclear physicist on a wide variety of highly classified advanced nuclear and space system programs for such companies as **General Electric, General Motors, Westinghouse, TRW Systems, McDonnell Douglas, and Aerojet General Nucleonics**.. I have also been to 19 different government document archives.

Just how much experience with security has **Dr. Schirmer** had?

K. What was this nonsense about a 1956 plane crash somehow confusing **Glenn Dennis** about bodies at the base in 1947? A few years ago I went with Glenn to the Ballard funeral home. We reviewed records with full permission of the operator there who obviously respected Glenn. There were a number of military plane crashes for which he handled the bodies even after bad fires. That was his job. No possible way such a crash could have confused him. Yet another false conspiracy theory from your trio.

L. At one point early on in the program the word UFO was used. Sorry. It was not used until after 1951. Several times when showing balloons and talking about Mogul you showed tear drop shaped polyethylene balloons. Round standard Neoprene balloons were used for all MOGUL launches before July ... The same kind that Mack had retrieved. And that rapidly diisintegrate in the sun.

In summary then, the History Channel has presented myth and propaganda in the guise of truth.

You have supplied misrepresentation instead of investigative journalism. You should be ashamed and should apologize to your audience. It seems to me you have also violated FCC rules with regard to fairness, honesty, and accuracy in so doing. My colleagues and I would be happy to debate your trio of amateurs any time. I would suggest that they do their homework first.

Cordially,
Stanton T. Friedman <fsphys@brunnet.net>



Troubled Times



Missouri Initiative

Missouri OKs UFO initiative

Cosmiverse, March 29, 2000

In what may be a first for the UFO disclosure movement, the State of Missouri has approved a ballot initiative to crack government secrecy. The Missouri secretary of state has certified ballot petition language that would ask voter approval of a proclamation to urge congressional action for "ending the government cover up of the UFO experience." Organizers of the Missouri initiative, the local affiliate of the Mutual UFO Network (MUFON), say they have until May 7 to gather 75,000 signatures to place the question on the fall general election ballot. Bruce Widaman, who's spearheading the effort, termed it "a grassroots means for empowering the voters to legislate statutory change." To meet the state's May 7 deadlines, he said, "we have to round up at least 500 signature-gathering volunteers."

The group is setting up a donations banking account at MUFON headquarters in Texas (<http://www.mufon.com>) to help support the project. Missouri is one of 16 states with a full initiative process. Widaman said the group hopes that other states will follow Missouri's lead in what he called "the Year of UFO Awareness." The other 15 states that could send a stronger message to Congress through the initiative process, he said, are Alaska, Arizona, Arkansas, California, Colorado, Idaho, Montana, Nebraska, North Dakota, Oklahoma, Oregon, South Dakota, Utah, Washington, and Wyoming. The MUFON Network's George Filer reported Tuesday that numerous UFO researchers worldwide view this initiative as a formal means for gaining (and expressing) the sense of the electorate on a vital public issue: "If indeed the Earth is being visited by alien spacecraft, then we have a right to know and the government has the duty to tell," Widaman said.



Troubled Times



2001 Predictions

In January, 2001 ZetaTalk stated their [2001 Predictions](#), and by June, 2001 a close match was noted:

An overall phrase to describe 2001 will be that things are getting shaky. Earthquakes increasing in frequency and intensity, and storm damage continues so that insurance companies will begin to falter and fail if not bolstered by government intervention. The weather is becoming more erratic so that any attempt to pretend that crop shortages are not occurring, worldwide, is no longer possible. Food prices will rise or there will be shortages in the stores, unless governments step in with price freezes and forced disbursal of goods to the populace. Starvation, already occurring in many countries, will increase, but the starving will have less of a voice as time goes on, and be increasingly ignored.

The most powerful volcanic eruption in 1200 years has occurred in Mexico, freak snow falls follow record high temperatures in North Carolina while 4 million people starve to death in Kenya. Not to mention more earthquakes occurring in El Salvador, Japan, Canada and China. Oh, I almost forgot, the world's glaciers are now all in retreat at ever increasing rates. In the mean time disastrous drought grips Afghanistan, New Zealand, India, Pakistan and North Korea. Iowa is declared a disaster area after flooding while Israel and Jordan quickly cycle through heatwave/sandstorm/flooding. And of course there's the sun, with the recent observation of the [largest solar flare](#) on record and its ever increasing [energy output](#).

Economic impacts are beginning to bump into each other, one causing the other, so that the economic result is beyond a recession and threatening to become a worldwide depression. The economic drain from disasters affects individuals and their ability to work, villages and cities and their ability to provide services, and corporations that are dependent upon customers. Disasters can result in increased opportunity, but only if a source of aid is available, and when aid is withdrawn, or not provided, disasters become an economic drain. Aid between countries is being cut off, with little fanfare in the donor countries so the populace will not become alarmed. Businesses dependent upon their investments in Third World countries will then fail, once again creating a shaky economic environment.

Although financial markets have had a rebound after Greenspan dropped interest rates, this could just be a blip before the economy crashes hard.

When the response of a given government is less than what the populace has come to expect, there will be protests or riots, depending upon the culture. Strong arm tactics will increase, jailing the protesters and creating curfews or travel restrictions.

Protests occur around the world against the centralisation of wealth/power and the forces of globalisation, while people in Asia rise up in open protest against their governments.

Since a common tactic to distract a restless populace is an outside threat, governments of many countries will saber-rattle, pointing the finger elsewhere and making threats and demands. This will not lead to war, as none of these countries would gain by war, in that the whole world is affected by the economic and crop disasters. There is no prize. So the demands made, one country upon another, to correct what is seen as a cause elsewhere, will be loud, but not followed by actions other than those of a paper dragon variety - all noise, but no substance.

There appears to be a US led, international push on to establish a [missile defence shield](#), again.



Troubled Times



AIDS

Prior to July, 1995 Zetataalk stated that the [Origin of AIDS](#), while deliberately [Perpetrated](#), was through the ingestion of infected blood due to dietary customs in Africa, not immunization. On February 5, 1999, headline news announced that the origin of HIV was from chimps hunted for food.

*Science Friday, **Origin of HIV**, February 5, 1999*

Scientists announced this week that they may have finally traced HIV-1, the virus that causes AIDS in humans, back to another species of primate - a subspecies of chimpanzee. While researchers have long suspected that some African primate was the source of the virus, this is the first time that they've been able to narrow it down to a specific species. The scientists, based at the University of Alabama at Birmingham, compared several different strains of a related virus, known as SIV (for Simian Immunodeficiency Virus), and found that the strains most closely related to HIV all came from one type of chimpanzee, Pan troglodytes troglodytes. They also found that this chimp's natural habitat overlaps the area in Africa where HIV was first detected in humans.

The variety of chimpanzee that the scientists have identified as the source is hunted for food in this region. The researchers speculate that the first transmission to humans could have come through infected blood which was passed between species while humans were hunting or dressing the chimps. On this segment of Science Friday, we'll talk about the finding and what it means, both for AIDS researchers and for people trying to protect the endangered African chimpanzee population.



Troubled Times



Air Force One Flyover

On [May 2, 2009](#) on the live chat, the Zetas said the Air Force flyover incident had been done to embarrass Obama, and had been done by a hold over from prior administrations.

Much has been made of this incident because even the official explanation does not make sense. Why have a photo op of an Air Force One plane flying over Ground Zero? Why would the Obama administration even desire this? We have stated that there are many enemies of Obama plotting against him. The whole campaign to get him dismissed as President because of a supposed birth certificate issue is one such campaign. This is still being pressed, but will as we have stated, fail on the merits. There are those within the Republican party who are furious that Obama won and is installed as President. Cheney is livid over having been removed from power. There are individuals within the federal government who can be expected to cooperate with efforts to diminish and at the very least embarrass Obama. This flyover was not at Obama's directives, nor any directive at those close to him in the White House. Those responsible will be dealt with, behind the scenes. Unfortunately, more of this nonsense can be anticipated.

ZetaTalk: [GLP Live Chat](#), written May 2, 2009

Days later information came out revealing that a military holdover from prior administrations had ordered the flyover, and failed to inform White House staff. His resignation was accepted.

White House aide resigns over N.Y. flyover

May 8, 2009

<http://www.reuters.com/article/marketsNews/idUSN0849435120090508>

A White House military aide who authorized an Air Force flyover of New York that caused panic among some people in the city resigned. Louis Caldera said in a resignation letter to President Barack Obama that the controversy over the mission - a photo shoot of a jumbo jet used as Air Force One with the Statue of Liberty in the background - made it impossible for him to lead the White House Military Office. The flight over lower Manhattan for a photo shoot scared some New Yorkers who remembered the Sept. 11 attacks in 2001 involving hijacked airliners that destroyed the World Trade Center. Some people panicked and evacuated office buildings when the planes flew over. Caldera had approved the mission. His resignation came on the same day Defense Secretary Robert Gates said in a letter to Senator John McCain that the photo shoot cost U.S. taxpayers as much as \$357,000. White House spokesman Robert Gibbs said Obama had accepted the resignation. Obama had been described as furious when the incident occurred on April 27 and demanded a review. Caldera did not notify relevant White House officials about the flyover in advance. "When asked why he failed to do so, he did not offer a coherent explanation. He stated that it was not a conscious decision - he did not intend not to notify them," it said. "Instead, he suggested that it may have been an oversight."



Troubled Times

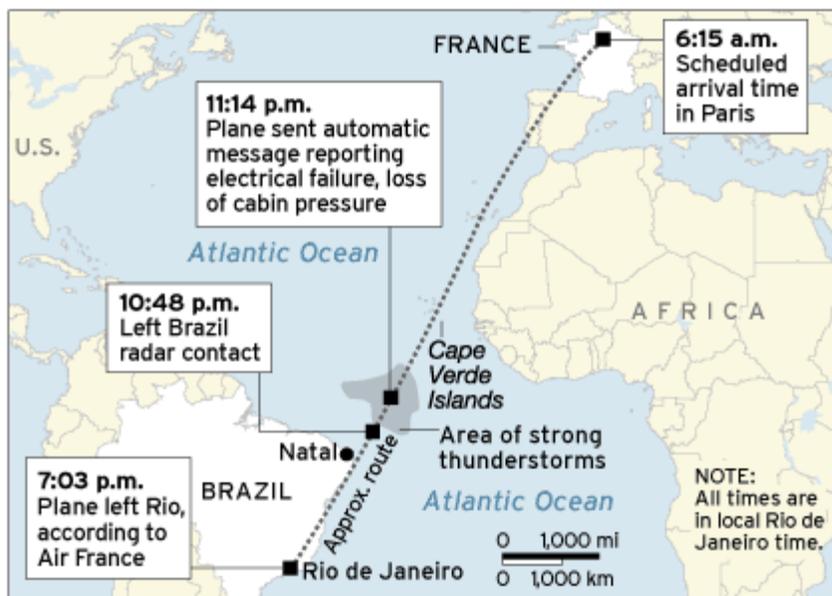


Air France 447

In 2009 when Air France 447 first went down over the Atlantic, the Zetas stated that this was due to electro-magnetic interference caused by Planet X. The plane was over the Atlantic Rift, which the Zetas describe as a surface magnet, at the time.

We have repeatedly warned that electromagnetic disturbances could be anticipated as the charged tail of Planet X turned toward the Earth. We have stressed, repeatedly, that man can expect problems with their satellites and electrical grids due to the charged tail of Planet X wafting increasingly in the direction of Earth. Air France 447 hit a tripple whammy, however, in that it was in a storm and over the Atlantic Rift, which as we have stated is a surface magnet, responsible for the twice-a-day global shudders that appear on the live seismographs.

ZetaTalk: [Air France 447](#), written June 3, 2009



SOURCES: National Oceanic and Atmospheric Administration; Weather Underground; ESRI; Air France; Brazilian military

AP

As we have stated, this Atlantic Rift is itself a magnet as the tearing occurred during prior pole shifts and cooling magma was quickly aligned with the reforming poles, and thus becomes a third magnet encouraged to align with the Earth's core and Planet X during their encounters.

ZetaTalk: [Earth Wobble](#), written July 17, 2004

News articles at the time described a total failure of the electrical systems, but it took two years before the flight recorders could be recovered and the full story known. Air France 447 had sent an automated message indicating that a total electrical failure, of all systems, had occurred. But despite the black box recorders indicating that bizarre electrical problems beset the plane, Popular Mechanics prefers to blame pilot error.

What Happened to Flight 447?

June 1, 2009

<http://www.reuters.com/article/2009/06/02/us-airline-crash>

Four hours into the flight the plane encountered heavy turbulence. Fifteen minutes later, now a long way out to sea, it transmitted an automated signal indicating the plane was in serious trouble. A succession of a dozen technical messages showed that several electrical systems had broken down, most ominously the pressurization system - a totally unprecedented situation in the plane. A succession of a dozen technical messages (showed that) several electrical systems had broken down.

Brazil finds debris from Air France jet in Atlantic

June 2, 2009

<http://www.reuters.com/article/2009/06/02/us-france-plane-idUSTRE5501PB20090602?sp=true>

Authorities remained baffled by how a storm could have caused the modern plane built to withstand severe weather and operated by three experienced pilots to crash without even sending a distress signal.

What Really Happened Aboard Air France 447

December 6, 2011

<http://www.popularmechanics.com/technology/aviation/crashes/what-really-happened>

Two years after the Airbus 330 plunged into the Atlantic Ocean, Air France 447's flight-data recorders finally turned up. For more than two years, the disappearance of Air France Flight 447 over the mid-Atlantic in the early hours of June 1, 2009, remained one of aviation's great mysteries. How could a technologically state-of-the art airliner simply vanish? ... At 1h51m, the cockpit becomes illuminated by a strange electrical phenomenon. ... The two copilots discuss the unusually elevated external temperature, which has prevented them from climbing to their desired altitude. ... Suddenly, a strange aroma, like an electrical transformer, floods the cockpit, and the temperature suddenly increases. ... Just then an alarm sounds for 2.2 seconds, indicating that the autopilot is disconnecting. ... Note, however, that the plane has suffered no mechanical malfunction. The word "Stall!" will blare through the cockpit 75 times.



Troubled Times



Airplane Crashes

On May 4, 2002, the Zetas predicted increasing aircraft problems with [Microbursts](#) as well as magnetic instruments and GPS guidance systems.

Weather irregularities will continue in the manner we have described since 1995, with increasing swings and extremes. In that weather irregularities are smoothed, by nature, by increased atmospheric activity or ocean currents, temperature extremes will not occur. Rather, oscillating extremes, similar to what the world has already experienced, will occur. Sudden shift to cold weather, sudden unseasonably warm weather, and the like. Atmospheric disturbances, beyond those usually encountered and thus watched for by pilots, are occurring. Even prior to the year before the shift, what is called micro-bursts were being increasingly reported and downed planes blamed on this. If the weather is moving to extremes, this equates to hotter air masses, colder drafts, and sudden wind equalizing these air masses. Beyond these problems, airplanes use satellites to guide them, magnetic orientation to guide them, and these likewise will either fail on occasion or given invalid readings.

ZetaTalk: [2002 Quickening](#), written May 4, 2002

Small plane crashes were on the increase by Oct 25, 2004, and by Aug 24, 2005, a record number of large airliners were going down suddenly, either due to bad weather or inexplicably due to unexplained decompression at high altitudes.

Plane Crash in Peru Kills 41 **AP News, Aug 24, 2005**

A Peruvian airliner split in two after an emergency landing during a fierce storm, killing at least 41 people. It was the world's fifth major airline accident this month. The crash was the world's fifth airliner accident this month. Last week, 152 people died when a Colombian-registered West Caribbean charter went down in Venezuela. Two days earlier, 121 people died when a Cyprus-registered Helios Airways Boeing plunged into the mountains north of Athens. Sixteen people were believed to have died Aug. 6 when a plane operated by Tunisia's Tuninter crashed off Sicily. In Toronto, all 309 people survived aboard an Air France Airbus A340 that overshot the runway on Aug. 2.

Signs of the Times #1215

Virginia Crews recover all 10 bodies at Hendrick crash site [Oct 25] '10 people killed in the crash of a Hendrick Motorsports plane that was carrying family and friends of one of NASCAR's top syndicates. Investigators will try to piece together what happened from the wreckage, radar data and communications between the pilot and the airport.' [and from another] Small Planes Crash in Missouri [Oct 26] 'A small private plane crashed while approaching the airport here, killing two of three people aboard. The cause was not known.' [and from another] Marion, WI [Oct 26] 'A small airplane crashed in the woods in the central Wisconsin town of Marion.' [and from another] Pilot dead in Leominster plane crash [Oct 27] <http://www.boston.com/> 'Plane crashed into a shop shortly after it took off from Fitchburg Municipal Airport.' [and from another] Arlington Hts. Pilot not hurt in Crash [Oct 27] 'Engine trouble at about 1,600 feet in the air.' [and from another] Investigators examining cockpit voice recorder San Diego area crash [Oct 24] 'Federal Aviation Administration are trying to determine what caused the jet to crash into the mountain shortly taking off from Brown

Field on Sunday.’ [and from another] Los Alamos Couple Hurt In Utah Plane Crash [Oct 26] ‘Witnesses say visibility was very poor, but investigators still haven’t determined the exact cause of the crash.’ [and from another] Atlanta Students Witness Plane Crash [Oct 27] ‘Most students were still in a state of shock after the plane met its fiery end, moments after it was seen spinning out of control.’ [and from another] Fatal Kansas Plane Crash [Oct 27] ‘The cause of the crash remains under investigation.’ [and from another] Plane crash in Glenwood, SC under investigation [Oct 26] ‘Pilot tried to make a second landing attempt after he flew past the airport.’ [and from another] Small Plane Crash in Aiken County Kills Pilot [Oct 25] ‘Pilot was preparing to land when the plane crashed.’ [and from another] Deadly Plane Crash Still Under Investigation [Oct 25] ‘National Transportation Safety Board investigators were still working Monday to determine what led to a deadly plane crash near the Crawford County town of Chester last week.’ [and from another] 3 killed in Florida air ambulance crash [Oct 20] <http://www.chron.com/> ‘There was no distress call then and no further communication with the helicopter.’ [Note: this represents 13 small plane crashes within a week that were reported in the news, in the US alone. The worldwide average is less than one a day. Something is up.]



Troubled Times



Albinos

In June, 1996 ZetaTalk stated that albinos such as the [White Buffalo](#) would be on the increase. There have been increasing reports of such occurrences in wildlife, starting in [China](#), then [Australia](#) and [North America](#). Since 2002, [White Moose](#) have been on the increase. In 2007, a [Pink Dolphin](#) was sighted, and in 2008, a [Pink Fawn](#) and a [White Orca](#) photographed.

Prior to 1994 there has been only one report of a white buffalo birth (1933 in Montana). Since 1994 there have been more births according to [Looking Horse](#). Excerpt from *Lincoln Journal Star* article:

Looking Horse remembers the birth of Miracle, a white buffalo calf born Aug. 20, 1994, in Janesville, Wis. He was among thousands who made pilgrimages to see the calf. "It was something I thought I would never see in my life," he said. "It was just something I heard about when I was growing up." Three more - in North Dakota, Michigan and South Dakota - were born within four years of Miracle's birth, Looking Horse said. Two of those animals, the Michigan calf and Medicine Wheel, have since died, he added. Looking Horse said he's also heard of a white buffalo in Wyoming, but he's never seen that animal.

I did some investigating and found the results interesting. You can check them out at the links I posted below.

<http://www.fromthestars.com/page86.html>

<http://www.homestead.com/WhiteBuffaloMiracle/>

Offered by [Slugga](#).



Troubled Times



Animal Illness

On Mar 15, 1999 ZetaTalk stated in the [1999 Predictions](#) increased illness would be experienced in animal populations as the 12th Planet approached. On Jan 20, 2000 it was reported that infectious diseases were on the increase worldwide among wildlife.

Infectious disease on the rise among wildlife

Associated Press, Jan 20, 2000

Crowded living conditions, moving to new places and eating unusual foods can spread disease - among wild animals, too. A new study warns that when it comes to the globalization of the planet, animals face a lot of the same hazards as people, including so-called emerging infectious diseases. "We call it pathogen pollution," said Peter Daszak of the University of Georgia, lead author of a paper appearing in today's edition of the journal *Science*. These diseases can cause local extinctions among wild animals and in some cases could even lead to total extinction of a species, he said. And diseases of wildlife not only threaten the future of the animals, but also may form a reservoir of germs that could harm people and domestic animals, his team warns. Indeed, this type of transmission may have been a factor in the emergence of the virus that causes AIDS as well as the newer Marburg and Ebola viruses, the paper notes.

The international transport of livestock and current agricultural practice have helped spread rinderpest in Africa and mad cow disease in Europe, for example. And even the seemingly most innocent act can pose problems. "Recent analysis suggests that 15,000 tons of peanuts are fed annually to United Kingdom garden birds. This form of provisioning has led to the emergence of infection by salmonella and E coli in Britain ... because of the high density and diversity of birds at feeding stations," the scientists reported. Similar reports have occurred in the United States. Bringing animals together in zoos and wild animal parks in an effort to conserve them may also cause problems, the study notes. For example, researchers have determined that a type of herpes virus that is harmless to African elephants can be fatal to their Asian cousins. And zoo animals in the United Kingdom have been exposed to food contaminated with the agent that causes mad cow disease. They reported that that exposure to the agent, called BSE, has been found in 58 zoo animals of 17 species.



Troubled Times



Annunaki Gold

On [October 15, 1995](#) the Zetas stated that the myths about El Dorado (xxx) were based on the Annunaki need for gold to put into the atmosphere of their home planet, in order to reflect heat and light back to the planet and prevent it from escaping.

Where mankind uses Gold for adornment or as a medium of exchange, the visitors from the 12th Planet were collecting Gold for survival. Their home planet, on its long orbit out in space, is subjected to atmospheric abrasion the Earth and the other planets on more sedate orbits around the Sun do not suffer. Consider the rapid path past the Sun made by the 12th Planet, when acting like a comet. It moves from one side of the Solar System to the other in 3 months, a fast track indeed. The 12th Planet losses atmosphere here and there, on a regular basis, and where this can be rebuild from its copious oceans, being basically a water planet, certain elements become depleted. Molecules in the atmosphere, containing Gold, are necessary to retain the heat and light the planet generates, to keep the heat and light, essentially, bouncing back to the surface, as without these Gold based molecules the planet dims and cools.

ZetaTalk: [El Dorado](#), written Oct 15, 1995

In 2004 an article published in Physical Review Letters reported the ZetaTalk assertion of the light reflectivity of gold (nano) particles in the Planet X atmosphere.

Detection and Spectroscopy of Gold Nanoparticles Using Supercontinuum White Light Confocal Microscopy

Physical Review Letters, Volume 93, Number 3, Week Ending July 2004

<http://www.nano-optics.ethz.ch/publications/lindfors.pdf>

In conclusion, we have succeeded in detecting individual gold nanoparticles below 10 nm using a fully optical technique. Furthermore, by using a focusable supercontinuum white-light source, we have recorded for the first time plasmon spectra of these particles.



Troubled Times



Antarctic Ice Fractures

On Nov 27, 2004 the Zetas described the Earth wobble that had begun in 2004 as a result of Planet X pushing daily at the magnetic N Pole of Earth.

The polar wobble that began in November is the first sign of the Earth's participation in the slow 270° Roll that Planet X does to position itself, magnetically, above the Ecliptic rather than below the Ecliptic. It is caused, as we explained, by the magnetic N. Pole of Earth avoiding any exposure to the emerging N. Pole of Planet X. As the Earth normally rotates around its geographic N. Pole, the magnetic N. Pole is exposed for half the day, and then hidden for the other half of the day. This initially results in a Drunken Lurch to push the magnetic N. Pole out of view, a twice a day polar wobble, but rapidly evolves into twirl. This is due to the magnetic N. Pole being either to the right or left of the geographic N. Pole as the globe turns, responding to the emerging hose of magnetic particles from the N. Pole of Planet X as it turns about, in place.

ZetaTalk [Twirling into Darkness](#), written Nov 27, 2004

Where the Figure 8 of the daily wobble was documented by [observation](#) of the position of constellations and the Azimuth of sunrise and sunset locations, there are other indicators of the increasing force of the daily polar wobble. For instance the twice daily fracture quakes in the Antarctica ice. Note that per the Zetas Planet X arrived into the inner solar system in 2003, and these twice daily ice quakes have been occurring *since* 2003.

Something's Shaking in Antarctica

June 4, 2008

<http://sciencenow.sciencemag.org/cgi/content/full/2008/604/3>

Scientists have discovered massive, slow-motion "ice quakes" trembling twice a day through the West Antarctic Ice Sheet, an Alaska-sized swath of Antarctica. Detective work has traced the source of the shaking to the Whillans Ice Stream, a glacier 100 kilometers across and 1 kilometer thick, which flows from the ice sheet's interior. It may seem strange that magnitude-7 quakes went unnoticed for so long--a temblor of similar size leveled entire towns and killed at least 15,000 in Turkey in 1999--but people standing on the Whillans Ice Stream never notice the shaking. Finding the causes of ice quakes--which also occur in Greenland--could lead to better understanding glacial movement and improved models of how glaciers will respond to climate change, says Robert Bindshadler, a glaciologist at NASA Goddard Space Flight Center in Greenbelt, Maryland, who first reported the twice-daily surges of the Whillans Ice Stream in 2003. "What has come from these discoveries is a realization that glaciers have other modes of behavior than we have thought of previously," says Göran Ekström, a seismologist with Columbia University.



Troubled Times



Anthrax Attack

On [Nov 15, 2001](#) the Zetas commented on the Anthrax attack, and implied that the CIA and Russians were involved.

Where is this leading, and who has designed and implemented such an insidious attack? If those who have sworn a Jihad against the US had done so years ago, then why the delay between then and now? Would Anthrax alone not have brought some satisfaction, even before the hijacking of planes to be used as bombs was arranged? And why the constant talk of Smallpox, if only a handful of germs in a couple highly guarded facilities exist? Once again, the hand mailing Anthrax may be those who do not fear to die, in a Jihad against the hated US, but those supplying them are a complex of countries who formerly called the US a friend, but had been stunned to find treaties such as the treasured arms reduction treaty treated like toilet paper in a plan to make the US the biggest gun on the globe. The US and the former Soviet Union are the only two countries holding Smallpox reserves. Then who is it the US fears in a potential Smallpox spread - itself? The leaders of the US are telling you who they think is involved in the Anthrax assault.

ZetaTalk: [Anthrax](#), written Nov 15, 2001

Despite word that the strain of Anthrax used against Democratic senators was traced to a CIA lab in Utah, the FBI spent years targeting Dr. Steven Hatfield from a government lab in Maryland. Hatfield, however, won his case against the FBI and was awarded a \$5.8 million dollar settlement. The FBI then selected another target, who was driven to suicide before a grand jury could rule on the evidence - Dr. Bruce Ivins. But were either of these men guilty, or are the guilty being allowed to go free? The villain? A Russian defector looking for corporate profits. Since he is a CIA asset, and used a CIA lab during his deed, he won't be prosecuted.

2001 Anthrax Mailings Case Revisited: Russian Defector was Lead Suspect

November 26, 2007

http://miami.indymedia.org/news/2007/11/9800_comment.php

Three veteran investigators have independently narrowed the field of anthrax mailings suspects to a single Russian defector affiliated with two heavily implicated defense contractors and the Central Intelligence Agency (CIA). Kanatjan Alibekov, alias "Ken Alibek," the President of Hadron Advanced Biosystems, should be re-interrogated by the FBI, according to three researchers who arrived at this conclusion independently. They say Stephen Hatfield - the military virologist cited by FBI officials in recent weeks as a chief subject was not likely involved in the mailings at all. Their compiled evidence is largely public knowledge. Dr. Alibekov was the first Deputy Director of Biopreparat-the Soviet Union's leading biological weapons testing center. He oversaw military anthrax production for nearly 20 years, and was personally responsible for 32,000 employees at 40 facilities when he suddenly defected to the United States in 1992 to begin working for the CIA. According to interviews, Dr. Alibekov allegedly defected to help stop the biological weapons race, not for monetary reward. Yet, his activities in America indicate otherwise.

The three independent investigators each cite economic and political motives for the targeted anthrax mailings. Given the high grade and technical difficulty in producing and handling this grade of anthrax, they reasoned, "white collar criminals" with access to military or pharmaceutical labs most likely acted on behalf of those who benefited most from the attacks and ensuing fright. Hadron and its affiliates, including DynCorp and BMI, lead the pack of corporate and institutional suspects, the investigators say. Logically, the three investigators reasoned, the media was initially targeted to sway public opinion in support of government orders worth billions of dollars for hyped

vaccines and drugs, much of which benefited Hadron, DynCorp, BMI and their directors. DynCorp was the major military and intelligence provider awarded \$322 million to develop, produce, and store anthrax and smallpox vaccines for the nation. BMI, a leading defense and energy industry contractor, directed the US military's Joint Vaccine Acquisitions Program. Bioport, LLC became a leading beneficiary. This British-controlled anthrax vaccine maker in Lansing, Michigan was sanctioned repeatedly by federal officials and members of congress for unethical business practices, violating health and safety guidelines, and vaccine contaminations that some researchers say may have triggered the mysterious Gulf War illness. Corporate profiteering was firmly secured after the mailings to Capitol Hill, the investigators say. The specific targeting of Senators Patrick Leahy (D-Vt.) and Majority Leader Tom Daschle (D-S.D.), traditionally strong drug and military industry adversaries, reinforced their suspicions.



Troubled Times



Area 51

On August, 1995 ZetaTalk stated that space ships sighted at [Area 51](#) had been loaned to the military, but the secrets of how they operated withheld from the military, and in September, 1995 that [Bob Lazar](#) was telling a true tale in this regard. Documented interviews with Bob Lazar, below, support these statements.

Bob Lazar Interview on Area 51 Activities

Extracted from *KLAS-TV special report on UFOs*

Las Vegas, Nevada, November 11, 1989

Lazar's story is by any standard, fantastic. He says he's telling it in order to protect himself. He said he was hired to work in area called S-4 which is a few miles south of Groom Lake. At S-4, he says, are flying saucers, anti-matter reactors and other working examples of technology that is seemingly beyond human capabilities.

Lazar: "Right. This stuff came from somewhere else. I know it is hard to believe, but it is there and I saw it. I know what the current state-of-the-art is in physics and it it can't be done."

Checking out Lazar's credentials proved to be a difficult task. He says he holds degrees in physics and electronics, but the schools that we contacted say they've never heard of him. He says he also worked as a physicist at Los Alamos National Labs where he worked with one of the world's largest particle beam accelerators, a half-mile long 'behemoth' capable of generating seven-hundred million volts. Los Alamos officials told us they have no record of Robert Lazar ever working there. They were either mistaken or were lying. A 1982 phone book from the Lab lists Lazar right there among the other scientists and technicians. A 1982 news clipping from the Los Alamos newspaper profiled Lazar and his interest in jet cars. It, too, mentioned his employment at the Lab as a physicist. We called Los Alamos again, and an exasperated official told us he still had no records on Lazar. EG&G, which is where Lazar says he was interviewed for the job at S-4, also has no record. It's as if someone has made him disappear.

Lazar: "Well, they're trying to make me look non-existent to the places that I called...."

Interviewer: "Explain. Called where?" Lazar: "Well, the schools that I went to; the hospital that I was born at; past jobs, and nothing comes up with my name on it."

He smiles, but out of futility, knowing the whole thing must sound ridiculous. According to Lazar, his employer was the United States Navy. He says he and other government employees would gather near EG&G, fly to Groom Lake, then a very few people would get into a bus with blacked out or no windows and drive to S-4.

Interviewer: "You get off the bus, what do you see?"

Lazar: "A very interesting building. Its got a slope of probably about 30 degrees which are hangar doors, and it has textured paint on it, but it looks like sand. It's made to look like the side of the mountain that it is in, whether it's to disguise it from satellite photographs or what...."

He says he was never told exactly what he would be working on, but figured it had something to do with advanced propulsion. On his first day he was told to read a series of briefings, and immediately realized how advanced the propulsion really was.

Lazar: "The power source is an anti-matter reactor. They run gravity amplifiers. There is actually two parts to the drive mechanism. It's a bizarre technology. There is no physical hookups between any of the systems in there. They use gravity as a wave using wave guides that look like microwaves."

It took awhile, Lazar says, before he actually saw one of the flying disks, however there were hints everywhere.

Lazar: "Right. They had a poster, and it looked like a commercial poster, like it was lithographed, like you could buy it at K-Mart or someplace, but they were all over the place and it had the disk that I coined the term 'the floor model' which lifted off the ground about 3 feet out at the area, in the Dry Lakes area, and the caption on it said 'They're here.' These posters were all over the place."

Later, he got to see the real thing.

Lazar: "When I was led in, it was the first time that I saw the 'floor model' in the hangar sitting down, and I was told they could have walked me in the front door but they purposely wanted to walk me by it. I was told not to say anything and to keep my eyes forward and walk past the disk to the office area. And I did. And as we went by it, I just kinda stuck my hands on it, just to run it alongside the thing and uh ... After that I got to see actually lift off the ground and operate."

Interviewer: "You actually got to see more than one?"

Lazar: "Yeah. The hangars are all connected together. There are large bay doors between each one. There were nine total that I saw, each one being different. Like they had the assortment pack."

Security at S-4 was oppressive Lazar said, and his superiors used fear and intimidation almost as a brainwashing tool.

Lazar: "They did everything but physically hurt me."

Interviewer: "They put a gun to your head?"

Lazar: "Yeah."

Interviewer: "You mean they actually put a gun to your head?"

Lazar: "They did that even in the original security briefing. Guards there with M-16s. Guys there slamming their fingers into my chest, screaming into my ear, they were pointing weapons at me. Like I said, it's not a good place to work."

Lazar says he has no intention of going on any UFO lecture circuit. He is not looking to do any additional interviews. In fact, he was not too crazy about doing this one. He did it after certain unfavorable things started happening in his life, and he did it because he feels that whoever is running the show up at S-4 is perpetrating a fraud on the American people and the scientific community.



Troubled Times



Assassinations

In April, 1996 ZetaTalk stated that [Silencing Methods](#) included killing Commerce Secretary Ron Brown and disguising the assassination in a plane crash; in December, 1997, the [Drudge Report](#) stated that on autopsy, [Ron Brown](#) was found to have been killed by a bullet to the head, and this fact covered up, and the [Conspiracy Archive](#) states the many reasons.



Troubled Times



Asteroid Threat

The Zetas predicted that asteroid swarms would be used as an excuse by the establishment to explain the debris in the tail of Planet X. Since Planet X arrived in the inner solar system in 2003, debris in the tail of Planet X has resulted in numerous fireballs. At first, NASA explained this as space junk, but when pieces of the meteor were located, the approach by those effecting the cover-up over the presence of Planet X was to limit the news reporting of fireball activity. Nevertheless, when fireballs screamed across several states or provinces, their presence was hard to deny. In October, 2009 NASA began to claim these fireballs as "asteroids", or rogue "near earth objects" instead, claiming they were unaware of the trajectory until the last minute. This was a radical shift in explaining the debris in the tail of Planet X, but a shift that was anticipated by the Zetas in their 2003 prediction.

We anticipate NASA will explain the Planet X complex as any number of things, or rather their lackeys, who will natter the word on every Internet or media source that allows their nattering - asteroid bunch, passing comet [C2002/X5], unusual comet [C2002/V1], Mars closest pass in many eons, or whatever.

ZetaTalk: [NEAT V1](#), written February 22, 2003

Just what do you supposed is causing surprise asteroids these days, which sling too close to the Earth and are announced only at the last minute? Can you not put two and two together? How is it that NASA fails to realize their new orbits until it is almost upon them? Perturbations, and other disturbances they do not take into account.

ZetaTalk: [Live Chat](#), written October 17, 2009

Earlier such debris was called space junk, until this excuse was overused and the public beginning to raise a suspicious eyebrow. Then the increase in fireballs was noted by the public. We have often stated that the debris in Planet X, the moon swirls, are likely to be called an asteroid swarm when they become noticed. They are getting the public ready for such an excuse.

ZetaTalk: [Live Chat](#), written November 14, 2009

NASA claimed that fireballs occurring on October 8, November 6, and November 18 were all "asteroids".

Asteroid Explosion Over Indonesia Raises Fears About Earth's defences

October 27, 2009

<http://www.telegraph.co.uk/science/space/6444895/Asteroid-explosion-over-Indonesia-raises-fears-about-Earths-defences.html>

The asteroid was around 20 meters across and hit the Earth's atmosphere at 45,000 mph. On 8 October, the rock crashed into the atmosphere above South Sulawesi, Indonesia. The blast was heard by monitoring stations 10,000 miles away, according to a report by scientists at the University of Western Ontario. Scientists are concerned that it was not spotted by any telescopes, and that had it been larger it could have caused a disaster.

Asteroid Passes Just 8,700miles from Earth - with Only 15 Hours Warning

November 11, 2009

<http://www.dailymail.co.uk/sciencetech/article-1226672/Asteroid-scrapes-past-Earth-just-8-700miles-away--15-hours-warning.html>

Although no one noticed at the time, the Earth was almost hit by an asteroid. The previously undiscovered asteroid came within 8,700 miles of Earth but astronomers noticed it only 15 hours

before it made its closest approach. To put it in perspective the Moon is a distance of 250,000 miles, which is nearly 30 times further away from our planet. But before you head for the nuclear bunkers you will be relieved to learn the tumbling rock was only 23ft across. Similar sized objects pass by this close to Earth about twice a year and impact on the planet about once every five years. Astronomers believe the object, called 2009 VA, would have almost completely burned up while entering Earth's atmosphere, causing a brilliant fireball in the sky but no major damage to the surface. The asteroid was discovered by the Catalina Sky Survey on November 6, 2009. It was then identified by the Minor Planet Centre in Cambridge, Massachusetts as a near Earth object. Nasa's Near Earth Object Programme plotted the orbit of the object and determined that although it would fly extremely close to our planet it wouldn't hit us. It was the third-closest known (non-impacting) Earth approach on record for a cataloged asteroid.

Western "Fireball" May Have Been Small Asteroid

November 18, 2009

http://weblogs.marylandweather.com/2009/11/western_fireball_may_have_been.html

A brilliant meteor that startled residents across parts of Idaho and northern Utah may have been a small asteroid. It exploded in the atmosphere with a force equal to a thousand tons of TNT. Spaceweather.com reports: "Witnesses in Colorado, Utah, Idaho and elsewhere say the fireball "turned night into day" and "shook the ground" when it exploded just after midnight Mountain Standard Time. Researchers who are analyzing infrasound recordings of the blast say the fireball was not a Leonid. It was probably a small asteroid, now scattered in fragments across the countryside. Efforts are underway to measure the trajectory of the asteroid and guide meteorite recovery efforts." Security camera footage of the event shows a flash that brightened the sky so much that a street light operated by a light sensor winked out for a time before the sky grew dark again. If this was a small asteroid (or a big space rock of some sort) entering the atmosphere, it would be second one in recent weeks to make news.



Troubled Times



Atlantic Rift

On [Jul 15, 1995](#) ZetaTalk described how the Atlantic would stretch during the coming pole shift, and the Pacific compress. On [Apr 5, 2003](#) ZetaTalk stated that pre-shift quakes, ongoing now, are also pulling the Atlantic apart.

The Atlantic will widen and the Pacific will shorten. Where the Pacific effect will cause sudden and violent subduction of several plates, which are already subducting, in the Atlantic the effect will be the opposite. A gulf will appear, with plates torn apart and the softer magma under the plates exposed to the cold Atlantic water. Where this will harden the magma, and establish new plate surface, there will be less support for the abridging plates, those that attach however remotely to the shorelines of the Americas, Europe, and Africa. These non-supported plates will sink, somewhat, bringing their formerly above-water land masses down under the water in many places. As an instance, Europe and in particular the western islands of Britain and Ireland will find itself more affected than some other parts of the globe.

ZetaTalk: [Sinking Atlantic](#), written Jul 15, 1995

Stretching along the Atlantic has been recorded during 2002, when rail derailments, exploding buildings, and sudden sinking of land occurred. In the Pacific, compression has resulted in increasing volcanic activity along the ring of fire, but also in movement of the continents in the direction we have predicted they would move during the shift! Stretching results in quakes, as the plates underneath, in layers like flaky pie crust, release. Stretching results in land not supporting prior buildings or roads or bridges, which suddenly collapse. Stretching also results in volcanoes oozing more lava, or if the skin of the Earth thins, an explosion. This could occur in all those areas we have listed as expected to rip greatly: Red Sea, African Rift, etc.

ZetaTalk: [Pre-Shift Quakes](#), written Apr 5, 2003

In July 27, 2006 *Nature* magazine published an article detailing new findings that the rift was spreading, and filling in with new lava! The rift was called a detachment zone. This is, at the current time, an active process!

<http://www.terraily.com/>

Slippery Stretching Explains Ocean Floor Formation

Jul 31, 2006

*For the first time, scientists have found regions of the earth's crust which are stretching apart to form new sea floor; their findings are published in *Nature* today (27 July). Most new ocean floor is made when undersea volcanic activity splits the crust and molten rock fills the gaps. However some new ocean floor develops when rock stretches along gently inclined tectonic faults called detachment faults. The new research suggests the significance of this stretching process as a way of creating new sea floor has been underestimated. No active examples of these detachment faults had been seen - until now.*

Detachment faults are characterised by their curved surfaces, like corrugated iron roofs, and by swarms of tiny earthquakes. Because the distinctive shape of the faults as they emerge, it was possible to show that along 80 kilometres of the Mid-Atlantic Ridge all of the new crust along one side was being formed through a chain of linked detachment faults each at a different stage of evolution, which was highly unexpected. After a while, each fault becomes inactive, and is replaced by a newly-emerging fault. The initial signs are that detachment faulting is far commoner along many hundreds of kilometres of the Mid-Atlantic Ridge than anyone had supposed before. Published

today (27 July) in Nature.



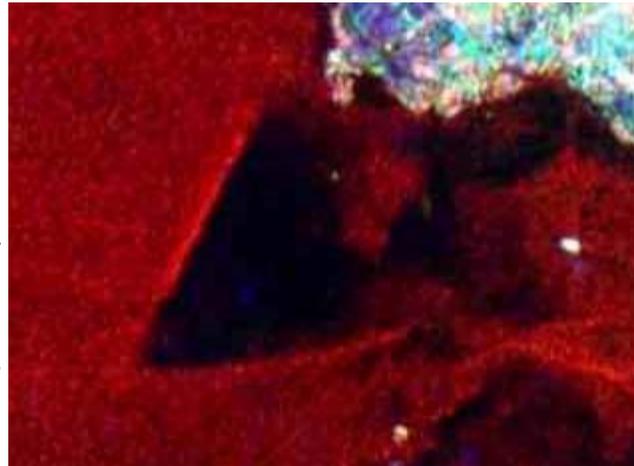
Troubled Times



Atlantis

Signs of the Times #1093

Image of the Portuguese Coast [Aug 31] <http://ovni.do.sapo.pt/>
 'International the Space Station, for the North American astronauts, thousand of photographs of the Portuguese coast, ... next to Lisbon, more properly in the deep of the ocean,... the existence of a formation extremely anómala, apparently of geologic origin. This formation is recent ... a time at the last glaciation that raised the level of the oceans, thousand of years. ... Perfectly made by one object of great dimensions and weighing thousand of tons. Here it is one of the images caught for a satellite of the North American Air Force, equipped with radar and equipment infra-red ray.' [and from another source]



Atlantis was land near the current continent of Europe, which was pulled into the Atlantic during the continental rip that accompanies violent pole shifts and thus disappeared dramatically under the sea. This demise was assisted by extraterrestrials, who took advantage of the natural cataclysm to adjust the balance in spiritual orientation influencing developing human spirits, in line with a determination by the Council of Worlds that such an adjustment was needed. Atlantis had been essentially invaded by the giant hominoids from the 12th Planet, who prior to the quarantine that is now in effect were considered simply another hominoid race within your Solar System. Interactions between humans and these hominoids were allowed to proceed without interference, but increasing slavery of humans by these giant hominoids was tripping the balance so that humans were less and less free to choose their orientation based on their true feelings and increasingly influenced by feelings of helplessness. Thus, an adjustment was required. [Note: per the Zetas, Atlantis was off Europe in the Atlantic, not the Carribean, and was deliberately sunk. Zetas RIGHT Again!]



Troubled Times



Attack on America

Shortly after September 11, 2001, ZetaTalk stated that the [Attack on America](#) was aided by the British, who wanted to undercut the US Stock Market and the US government's financial position, predicting that the World Trade Center devastation had devastated JP Morgan. This was posted within days of the attack on the tt-watch mailing list and [sci.astro Usenet](#). Increasingly, over the next few months, reports of [JP Morgan's](#) developing problems were reported.

I checked this web site, and it looks like a Central Bank warning. Remember what the zetas said at the beginning on 911, they mentioned JP Morgan, is this what they suggested?

Offered by [Ruby](#).

From: Central Bank Oversight & Monitor Committee
Sent: Wednesday, November 21, 2001 6:03 PM
Subject: JP Morgan in Early Stages of Crashing

To: Central Bankers, Secretariats, Governors, and Concerned Others

Sirs:

As we've been reporting JP Morgan is the key player in the financial derivative markets. What we could be seeing right now are the early tremors going through their common stock, reflecting in part a plunging US bond market, and massive debt repudiation by Enron and Dynegy.

The entire derivative pyramid will come down around this institution and other players having extreme risk exposure. The US Federal Reserve will be powerless to prevent this unraveling. To attempt a remedy would be to threaten the recovery of the entire world economy, and the political institutions of same.

As you can clearly see the Relative Strength Index (RSI) and Moving Average Convergence/Divergence (MACD) are sounding the alarm bells for the collapse of JP Morgan.

Be certain your institutions are not caught in the vortex with nearly all your foreign reserves in US dollars.

Sincerely,
CBOM

These types of committees do in fact exist, though they are neither powerful or high profile. I found a European entity (European Central Bank Monitor Committee); I would be surprised if such a committee did not have a U.S. or other G7 counterparts (the challenge is finding them.) Confidence in JP's stock can be parlayed into a nice return on the long side as well (off 40% from their 2000 highs).

Offered by [Michael](#).



Troubled Times



Australian Artifacts

On October 15, 1996 ZetaTalk stated that artifacts in [Australia](#) were similar to Egyptian and Chinese pyramids, the handiwork of the giant hominoids from the 12th Planet. The May/June, 1998 issue of *Science Frontiers* documents the atypical nature and age of these artifacts, and *Exposure Magazine* documented the relationship to [Egyptian](#) artifacts.

Aliens, Mystery Races, or Aborigines?

[Science Frontiers](#), No. 117 May/June, 1998

Some of Australia's rock art - the Wandjina paintings - depicts humanoids in fulllength gowns with strange halos encircling their heads. Those favoring the "ancient astronaut" theory assure us that the Wandjina figures are those of alien visitors! The so-called Bradshaw paintings don't fit in the "alien" category but they are so interesting that we choose to reproduce on here. It raises three problems: (1) The slim, flowing human figures remind on more of the Tassili rock art found in Africa's Sahara rather than that of the Australian Aborigines; (2) The objects at the left are enigmatic and technical-looking; and (3) The symbols (?) at the top are undeciphered.

The article at hand from *Antiquity* does not attempt to interpet the Bradshaw art. Instead, it discusses the social factors that mold the interpretation of the Wandjina and Bradshaw paintings. When Europeans first saw these painting they were certain that their "advanced style" was far beyond the capabilities of the Aborigines (colonial prejudice). They must, therefore, be the work of "preAborigines." Today's Aborigines will have none of this condescension . "They" were the original settlers of Australia, and as such they have bona fide land and title claims. Any recognition of "pre-Aborigines" would undercut these claims.

McNiven, Ian J., and Russell, Lynette; **Strange Paintings' and 'Mystery races' Kimberly Rock-Art, Diffusionism and Colonialist Constructions of Australia's Aboriginal Past**, *Antiquity*, 71:801, 1997.



Troubled Times



Autism

On [May 11, 2002](#) and again on Dec 14, 2005 the Zetas stated that the rise in autism was not due to vaccinations but an adjustment to the increasing tensions in the world due to the Earth changes and the pending pole shift.

Why the upsurge in autism in recent years, in parallel with the mercury in vaccines? Where the evidence against pharmaceutical companies and the government agencies leaned on to exclude any data that would pave the way for litigation against them in no way makes them heroes, here the link is not failsafe. If the vaccine melts the brain of a child, then why have all such children so vaccinated between 1989 and 2003 been so affected? What else has been on the rise since 1989? Beaching whales; mad cow disease and the wildlife equivalent, a wasting disease; dead fish washing up on beaches; the red tide, an algae bloom; flesh eating bacteria; chronic fatigue syndrome; depression among adults; suicide among children; adults and teens going postal and murdering their families and then themselves.

ZetaTalk: [Autism Rise](#), written May 11, 2002

On May 4, 2006 Reuters reported that Autism was indeed on the increased, steadily so, rising between 1996 and 1998, and stating of the vaccine link that 'studies in several countries have discounted such a link.' Autism is on the rise even where vaccinations are not occurring.

US Survey Shows Autism Very Common

May 4, 2006

<http://today.reuters.com/>

The first national surveys of autism show the condition is very common among U.S. children - with up to one in every 175 with the disorder, the U.S. Centers for Disease Control and Prevention said on Thursday. The 1996 Metropolitan Atlanta Developmental Disabilities Surveillance Program survey showed autism had been diagnosed in 3.4 per 1,000 of the 3- to 10-year-olds included, or one in every 296. The 1998 Brick Township, New Jersey survey showed a rate of 6.7 per 1,000 children of the same age, or one in every 166. None of the surveys pointed to a cause for autism -- a matter of deep controversy in the United States. Some groups have accused the CDC of covering up data that would link autism with vaccines, although studies in several countries have discounted such a link. Both surveys indicated that boys were nearly four times more likely to have been diagnosed with autism than girls. Both surveys indicated that Hispanic children were less likely to have an autism diagnosis.

On January 1, 2008 results showed that autism has increased steadily even as mercury in vaccinations has dropped, a reverse of what was expected.

Research Reaffirms: No Vaccine-Autism Link

January 1, 2008

<http://abcnews.go.com/Health/story?id=4099059&page=1>

A new study may be the latest nail in the coffin of a theory that draws a link between the mercury-containing vaccine additive thimerosal and autism. The research is the latest to contradict concerns over childhood vaccinations as a possible cause of autism -- concerns that have gained publicity in the past decade as the number of children diagnosed with the disorder climbs steadily in the United States. Because vaccinations are mandatory for all children at a certain age, some parents and doctors believe that the mercury once found in many childhood vaccines may contribute to the

development of autism. However, so far a number of large scientific studies have shown no association between thimerosal and autism. And the most recent research to nullify this association, published Monday in the journal Archives of General Psychiatry, reveals that the prevalence of autism for children ages 3 to 12 continued to increase in California even after 2001 -- when all but trace levels of mercury had been removed from most childhood vaccines.

In July 1999, the U.S. Public Health Service implemented a precautionary measure removing thimerosal -- which contains 49.6 percent ethylmercury -- from all childhood vaccines. To determine whether reduced exposure to thimerosal led to a decrease in autism cases, researchers at the California Department of Public Health analyzed data from the California Department of Developmental Services on the prevalence by age and birth cohort of children with autism between 1995 and 2007. But instead of finding a decrease in autism following the elimination of thimerosal from most vaccines, researchers found that for each quarter from 1995 to the end of 2003, the prevalence of autism in children between the ages of 3 and 5 years increased from 0.6 to 2.9 per 1,000 births. From 2004 to 2007, when exposure to thimerosal from childhood vaccinations vastly declined, the prevalence of autism in children between the ages of 3 and 5 years increased from 3.0 to 4.1 per 1,000 births. The findings bolster the position that has been steadfastly held by the Institute of Medicine, and many doctors worldwide, that no link can be established between thimerosal and autism. Some researchers say that the absence of a link has already been demonstrated in Denmark, where thimerosal was removed from all vaccines in 1992. Despite this move, autism rates in that country continued to rise until 2004.

Yet another 2008 article states that genetic links to autism have been noted.

Chromosome Abnormality Linked to Autism

Jan 9, 2008

<http://www.businessweek.com/technology/content/jan2008/>

The abnormalities were linked with certainty to only 1% of autism cases. Using a very large genome scan, the researchers also discovered that the genetic abnormalities-either a deletion or a duplication of a section of chromosome 16-were not directly inherited from either parent. Instead they developed spontaneously during the embryonic stage of development, possibly due to interplay of various genetic factors inherited from the parents. Autism spectrum disorder, as it is formally known, is a profound developmental disease that affects speech, behavior, and cognition. Doctors know the disease runs in families-90% of cases may be genetic-but the genetic pathways have been extremely difficult to identify, likely because more than one is the culprit. Only in 10% of cases can it be linked to specific and well-known genetic anomalies, such as fragile-X syndrome.



Troubled Times



Bank Freeze

In December, 1999 ZetaTalk stated that a [Financial Freeze](#) would occur to keep banks from failing, whereby withdrawals or hours would be limited.

When the markets start to tumble, they will tumble rapidly and may move in many directions. There may be financial freezes maintained, such that the financial status quo at a given point in time and the cash value of moneys of different countries are not allowed to float freely. It's essentially like stopping an elevator from moving up or down. It simply doesn't move after that point in time. Black markets of course will develop, but they develop somewhat slowly, not overnight. So this kind of enforced freeze, in essence a martial law of the financial field, can be maintained for many months, even years, and be somewhat effective. This is a likely outcome. This is already happening on the stock market where a run on a stock is stopped by a closure of the stock markets. They cease the trading until some time has passed, and this is a forerunner of what is to come.

ZetaTalk [Financial Freeze](#), written Dec 15, 1999

After the housing bubble burst in the summer of 2007, the first evidence that this was afoot hit the press.

Transfer Limits have Potential to Block run on Bank

Nov 17, 2007

<http://www.jsmineset.com/>

Most funds coming in and out of banks today go by ITT bank wire system. The funds, when confirmed as received, are immediately good money. This clearly restricts such transfers in my opinion. Up to now bank wires have never had a limit in or out of a major institution. Without relying on the above account agreement, or the above institution, my read on this is to put in place a tool to prevent an electronic run on an institution such as the one which recently occurred in Great Britain. If you have \$1,000,000 in such an account and such an agreement governs it, it would take you 100 months to withdraw the funds.

Annual Purchase Limit For Savings Bonds Set at \$5,000

December 3, 2007

http://www.treasurydirect.gov/news/pressroom/pressroom_reducedpurchaselimit.htm

The annual limitation on purchases of United States Savings Bonds will be set at \$5,000 per Social Security Number, effective January 1, 2008. The limit applies separately to Series EE and Series I savings bonds, and separately to bonds issued in paper or electronic form. Under the new rules, an individual can buy a maximum of \$5,000 worth of electronic and paper bonds of each series in a single calendar year, or a total of \$20,000, in single ownership form. If paper bonds are issued in co-ownership form, the limit applies to the first-named co-owner. All limits are based on the issue price of the securities.

Trouble Indicator?

December 18, 2007

<http://urbansurvival.com/week.htm>

Citibank and other money center banks have imposed limits on customer's abilities to use free IIS (inter-institutional) wire transfers of more than \$2,500 per month for overnight wires, and no more than \$10,000 per month for 3-day wires.

Travelers Cheques & Foreign Currency

December 15, 2007

There is a maximum order size of \$1000.00 that can be purchased within a 14-day period.



Troubled Times



Bank Supports

In November, 1999 ZetaTalk stated that [Bank Supports](#) would be used to prevent a market crash or public awareness of instability, as long as possible. By September, 2000 evidence of this worldwide support effort among central banks supporting the Euro was reported. On March 23, 2006 the M3 indicator was changed to hide the source of the funds being dropped into the Treasury. This was to allow the US to begin printing money like a banana republic, as the Bush debt had no other way to continue to be funded. Thus technically the public could not tell if the M3 funds were from the House of Rothchild, bonds purchased by China, the US printing press, or the Wanta funds.

Major Central Banks Intervene to Shore up Ailing Euro

Associated Press, September 22, 2000

The European Central Bank and its U.S. and Japanese counterparts jointly intervened in the currency markets Friday in an attempt to shore up the ailing euro, the ECB announced. The ECB, the Federal Reserve and the Bank of Japan acted because they were worried that the persistent weakness of the 11-nation European currency could hurt the global economy, the statement said. "On the initiative of the European Central Bank, monetary authorities of the United States and Japan joined with the European Central Bank in concerted intervention in exchange markets because of their shared concern about the potential implications of recent movements in the euro exchange rates for the world economy," the statement said. An ECB spokesman refused to give figures for what amount of euros the central banks bought or any other details of the intervention.

Federal Reserve Money Supply Report Is About To Fall Into The Abyss.

Dec 1, 2005

When Iran starts trading in petroeuros, the Fed will stop telling us how much money they're printing. In a little-noticed decision a few weeks ago, the Federal Reserve Board said it would stop publishing its weekly M3 money supply number as of next March, although it will continue to publish M0, M1, and M2. M3 is the broadest measure of how much money is circulating in the U.S. at any one time. Unlike M2, M3 is the big stuff, the super-size deposits. They know what's coming—massive amounts of dollar creation to fund the worsening trade and federal government budget deficits. The Fed, central banks, and other groups are informally known as the Plunge Protection Team. The reason the Fed will stop publishing weekly M3 totals is so that the Plunge Protection Team can hide its market manipulative equity-buying activities. The PPT is poised to buy stocks and do it secretly to stop the higher-than-normal probability that the market could crash. Because of the M3 numbers. We could see there was too much money being created. M3 was being pumped at three times the rate of growth of the Gross Domestic Product. Investors will be left more in the dark as to any secret rigging of the stock market. Is the economy closer to the brink than anyone realizes? Or is it politically expedient to goose markets? Do they see a catastrophe coming that will require hyperinflation to bail the US out? Maybe. Making large stock purchases secretly can be enough to spark a rally, and when the buying gets heavy, the PPT can get out at a nice profit before the market resumes a slide.



Troubled Times



Barter System

In early December, 2001 ZetaTalk stated that a [Barter System](#) would begin to replace currency, due to currency instability. By February, 2002 this was reported in Argentina. By February 2, 2009 the rapid increase in the barter system, worldwide, was being reported.

Russian Maverick Backs Barter to Combat Crisis

February 2, 2009

<http://www.guardian.co.uk/business/feedarticle/8338519>

A maverick Russian businessman who blew his fortune on a failed presidential bid is convinced barter is back in vogue.

German Sterligov says his scheme to trade products online, unveiled as Russia faces its first recession in a decade, has already grabbed the interest of Uzbek cotton merchants, St Petersburg car dealers and leading truck maker Kamaz.

Barter is New Medium of Exchange as Credit and Payment Systems Collapse

February 2, 2009

<http://www.naturalnews.com/025500.html>

In just the past week several pillars of the Fortune 500 have declared more than 75,000 layoffs worldwide. This is an indication that the global economic and credit crisis is getting worse, not better. Yet Americans remain optimistic that the crisis will blow over soon. Part of this optimism is based on their continuing ability to get what they want using a credit card, or paper money that carries no intrinsic worth. In other parts of the world this no longer works. High food prices and the credit crunch have forced some countries to revert to the ancient practice of bartering, a practice that is also seeing a revival in America correlated to the financial crisis. A recent article from the Financial Times reports countries from Malaysia to Morocco say they have reverted to the ancient practice of bartering for food, making deals to import commodities ranging from rice to olive oil.

Signs of return to the barter system are already appearing in the US. Caught in the grip of the credit crisis, small business owners are resorting to the barter system as a way to keep their precious cash in reserve. Frozen capital markets mean little new money is finding its way to Main Street. Loans to small businesses have fallen by 30 percent from pre-crisis levels, so cash is prized. Barter exchanges may be one of the few businesses to thrive in today's environment. According to a recent New York Times article, barter exchanges range from publicly traded entities like International Monetary Systems and Itex Corporation to smaller companies like U-Exchange.com. Membership and transactions are growing at a rapid rate, with one exchange reporting a 70 percent increase in business since the beginning of the credit crisis. In the past, bartering involved the simple exchange of goods between one person and another. Today multiple parties can meet through online exchanges and accumulate credits that can be used against future transactions. Participants from around the world can participate. Hundreds of exchanges are available online. Bartering in the U.S. is estimated to generate more than \$3 billion in business, and this figure does not include direct bartering between corporations. Some of the barter exchanges even offer credit to members who have been turned away by traditional lenders.

Websites like SwapThing.com offer swaps for \$1. They have millions of items listed ranging from antiques and electronics to comic books. Sites like these make bartering seem like fun, something

the kids might enjoy. Even on the individual to individual level bartering is on the increase. Watches, baseball cards, cupcakes and cookies, artwork, a journal entry, a bike and a dog were all accepted in a single day as barter for dentistry in Tupelo, Mississippi. In St. Louis, out of work contractors are eager to barter for basic goods and services that include legal counsel. A New York attorney has offered to prepare simple wills and healthcare proxies in exchange for getting his floors sanded and his house painted.

Barter has Replaced the Cash Economy for many Argentines

Time, by Peter Katel

Buenos Aires, the "Paris of Latin America," these days looks decidedly Third World. Of course the broad boulevards, late 19th-century buildings and teeming cafes downtown may suggest European gentility. But ten miles away, in the working-class suburb of Quilmes, merchants are hawking everything from homemade turnovers to new and used clothes, custom carpentry, haircuts and fresh produce. The shell of the old Bernalesa metal works has been turned into a massive market, whose four-foot aisles are so jammed that thousands of men, women and children can barely make their way over the dirt floor, past rickety stands of unpainted, unfinished wood — this in a country where shopping used to mean going to the supermarket, or the mall. ... Street protests have toppled four presidents in two weeks, but Argentina's 21st-century Great Depression is deepening. And it's driving tens of thousands of people to the "National Barter Network," centered at Bernalesa. Last month alone, the network expanded from a half-million to 640,000 families. Here, and at 600 other markets, they're trading goods and services for credits, which can then be used to purchase other goods and services. "If you don't have any money, this is the only way to survive," says Irma Gonzalez, 46, a who lost her legal secretary job three months ago and is planning a barter-market clothing business. ... Some municipal governments, including the town of Gonzales Chaves in Buenos Aires province, are accepting eggs and chickens as tax payments, using them to feed poor families. The future? "Argentina can become one big barter club," says chemist Horacio Covas, a barter network co-founder. Indeed, the only economy that's growing in Argentina right now is the prehistoric one.



Troubled Times



Bee Colony Collapse

On [Feb 17, 2007](#) the Zetas were asked about Bee Colony Collapse, spreading across the US and appearing in other countries.

Mystery Killer Silencing Honeybees

Feb 5, 2007

Something is killing the nation's honeybees. While a few crops, such as corn and wheat, are pollinated by the wind, most need bees. Without these insects, crop yields would fall dramatically. Agronomists estimate Americans owe one in three bites of food to bees. As dead or dying insects are collected, dissected and tested, several possibilities are emerging. The most recent mite problem - the varroa mite - compromises a bee's immune system, so a virus might be the new culprit. Or it could be a new fungal pathogen. Honeybees are not natives. Last fall, workers transported managed hives - about 450 per tractor-trailer - to California from colder areas such as the Great Lakes and the Dakotas. Now, hives are coming from Texas, Florida, Maryland and Pennsylvania. In all, about half the country's managed hives are needed for the mass pollination.

The Zetas stated that it was depressed immune systems, and the fact that man moves colonies around to pollinate fields, a practice that encourages the spread of infection from one hive to another.

We mentioned at the start of ZetaTalk that increasing illness would occur, in wildlife as well as humans, as the time of the passage approached. This has certainly occurred, with weakened immune systems due to emanations from the Earth core as it swirls about in response to having a giant magnet, Planet X, nearby, or due to migrating opportunistic germs as the erratic weather allows migration into new territories where resistance to these germs has not built up, or due to simply due to depression as the stress of the Earth changes takes it toll. For wildlife, which includes insects, worry is not a factor as they don't watch the nightly news or the stock market trends. Recently, we have explained that waves of nausea and vertigo, experienced by humans and reported at the start of 2007, was due to the effects of gases in the tail of Planet X which is increasingly wafting over the Earth, as well as magnetic variations as the Earth's magnetic field becomes erratic. For bees, several factors are affecting their ability to thrive. Their immune systems have been compromised by a mite, which is passed among the hives of the nation by the practice of hauling hives about for polination, cross country. This spread the mite, and is spreading several microbes too. The failure of the honey bee population to thrive is entirely a man-made problem. The answer is to isolate healthy hives, which will probably be done too late to affect the crops dependent upon these pollinators. Man has largely killed off the natural pollinators who could replace the honey bee by pesticides. Thus, in the short term, there will be crop shortages, another of our long ago predictions.

ZetaTalk: [GodlikeProductionLive](#), written Feb 17, 2007

By Jun 10, 2007 the studies were reporting their results. Depressed immune systems, allowing pathogens to flourish in bee colonies.

Suddenly, the Bees are Simply Vanishing

June 10 2007

<http://www.latimes.com/news/science/la-sci-bees10jun10.0.1027860.story?page=3>

Several researchers, including entomologist Diana Cox-Foster of Penn State and Dr. W. Ian Lipkin, a virologist at Columbia University, have been sifting through bees that have been ground up,

looking for viruses and bacteria. The large number of pathogens suggested, she said, that the bees' immune systems had been suppressed, allowing the proliferation of infections. The idea that a pathogen is involved is supported by recent experiments conducted by VanEngelsdorp and USDA entomologist Jeffrey S. Pettis. One of the unusual features of the disorder is that the predators of abandoned beehives, such as hive beetles and wax moths, refuse to venture into infected hives for weeks or longer.

To test this idea, VanEngelsdorp and Pettis set up 200 beehive boxes with new, healthy bees from Australia and placed them in the care of Hackenberg. Fifty of the hives were irradiated to kill potential pathogens. Fifty were fumigated with concentrated acetic acid, a hive cleanser commonly used in Canada. Fifty were filled with honey frames that had been taken from Hackenberg's colonies before the collapse, and the last 50 were hives that had been abandoned that winter. When VanEngelsdorp visited the colonies at the beginning of May, bees in the untouched hive were clearly struggling, filling only about a quarter of a frame. Bees living on the reused honeycomb were alive but not thriving. A hive that had been fumigated with acetic acid was better. When he popped open an irradiated hive, bees were crawling everywhere. This does imply there is something biological. If it is a pathogen or a parasite, honeybees are poorly equipped to deal with it, said entomologist May Berenbaum of the University of Illinois at Urbana-Champaign. The honeybee genome has only half as many genes to detoxify poisons and to fight off infections as do other insects.



Troubled Times



Bigfoot

Prior to July, 1995 ZetaTalk stated that [Bigfoot](#) exists but is quarantined from man, and is thus elusive. On December 22, 1999 *Field and Stream* magazine confirmed Bigfoot's existence, and the *Fortean Times* has documented its elusiveness.

Bigfoot May Exist

[Field and Stream Magazine](#), Dec 22, 1999

Eerily similar tracks are found miles and years apart. Police officer Jimmy Chilcutt of Conroe, Texas and Dr. Jeff Meldrum, an anatomy and anthropology professor at Idaho State University, share a passion. They examine the prints left by hands and feet to reveal the identity of unseen visitors. But while the testimony of fingerprint expert Chilcutt can prove a person guilty in a court of law, Meldrum's assertions that certain footprints constitute evidence of the legendary Bigfoot's existence raises eyebrows of scientist colleagues. Meldrum hopes some skeptics will change their minds after hearing what Chilcutt has to say about the footprint castings Meldrum has collected from the Pacific Northwest. "The ridge detail (finger pattern) on the casts is neither man nor ape," says Chilcutt. "Is it possible to have faked it? Sure. But (the faker) would have had to have an intimate knowledge of primate footprints and that didn't exist at the time the castings were made."

Chilcutt initiated the study of primate fingerprints in the mid 1990's working on a hunch that the identifying ridge patterns (the articles, loops and whorls made by folds in the skin) would someday help forensic specialists catch criminals. He explains that it would be helpful if criminologists could identify the race of a person by his fingerprints. But research in that direction has been inconclusive, Chilcutt believes, because the races have interbred so much. Primates, however, have undiluted gene pools. To date, Chilcutt has more than 1,000 fingerprints of lemurs, monkeys, and apes in his computer data bank. When he heard about Bigfoot castings in Meldrum's laboratory, he was intrigued but skeptical. "What I do is catch bad guys in Conroe, Texas," Chilcutt says. "I didn't care one way or the other if Bigfoot existed."

But a casting made near Walla Walla, Washington in 1984 piqued his interest. Not only did the ridge pattern run vertically along the edges of the foot, then angle across underneath the toes - a pattern different from humans and apes, which have ridges running horizontally and at an angle across the foot pad, respectively - but the imprints showed splits in the feet where the ridges did not realign perfectly when the skin had healed. Chilcutt got a second jolt when he found a northern California casting made in 1967. The pattern was similar to that on the Walla Walla casting, although made from a smaller animal. For them to be fake, Chilcutt believes the same person would have had to fabricate both footprints, 17 years and several hundred miles apart. That seemed unlikely to Chilcutt, especially after he tried to duplicate the casting and failed. The fingerprints expert has become a believer. "I can assure you," he says, "there's an animal up in the Pacific Northwest that we have never seen."



Troubled Times



Big Bang and Black Holes

Prior to July, 1995, ZetaTalk stated that [Big Bangs](#) were a local event, combined with [Black Holes](#) as a renewal agent in the Universe. During the 2001 sci.astro debates, it was pointed out that an article in the May, 2001 *Smithsonian Magazine* pointed to just that.

And thus the process of worlds forming and evolving begins again, in a small part of the Universe.

ZetaTalk: [Black Holes](#), written July 15, 1995

During the 2001 sci.astro debates, it was pointed out that an article in the May, 2001 *Smithsonian Magazine* pointed to just that.

*In the article in the magazine (and reproduced in miniature on the web) is a computer and artistic rendering of the data from the current sky surveys. What stunned me so when I look at the picture (and I highly recommend the actual magazine, the *.gif loses a lot in shrinkage) is how clearly a "bubble" universe comes across. The galaxies are all located on the surface of imaginary bubbles (rendered in the picture) and the great wall just happens to be at the collision of a number of bubbles. Some bubbles are large, some are small. (Small is of course, relative, all of these structures are so large it is hard to truly comprehend). In other words, the repeating pattern of "local big bangs" model, as proposed by the Zetas, fits incredibly well with the picture we see. At the center of each bubble (a long time ago) was that enormous black hole they mention.*

Zetas, Black Holes, and Cosmology, June 5, 2001

The Zetas also stated that Black Holes spurt out matter, and that the Big Bang is not all at once.

Neither Albert Einstein or Stephen Hawkins are correct in their theories on the origin of the Universe, although there are portions of both theories that contain some element of truth. The Universe is not inert, subject to pressures that cause it to explode or compress back into black holes. ... Following a Big Bang, particular matter forms along the following lines. First, the explosion of matter from a Black Hole, which has grown monstrously large in the eons leading up to a particular Big Bang, is not even. No explosions are even, and all affect different parts of the matter they are affecting at different rates and times. Thus, particular matter coming out of a Big Bang is not even, all the same composition.

ZetaTalk: [Big Bang](#), written July 15, 1995

During the time it takes for galaxies to form from a Big Bang, matter is fluid for a long enough time for the motion in the center to affect and establish the motion throughout. This takes the form of individual or local dramas, here and there, but the synchronized spin of galaxies stands as a mute witness to the fluidity of the spurt coming out of a Big Bang.

ZetaTalk: [Follows After](#), written 2001

On November 30, 2009 an article in xx describes the recent observation of a black hold spurting out matter to form stars nearby, a new concept for human scientists.

[Black Hole Caught Zapping Galaxy into Existence!](#)

November 30, 2009

<http://spacefellowship.com/2009/11/30/black-hole-caught-zapping-galaxy-into-existence/>

These observations have provided a surprising new take on the system. While no trace of stars is

revealed around the black hole, its companion galaxy is extremely rich in bright and very young stars. It is forming stars at a rate equivalent to about 350 Suns per year, one hundred times more than rates for typical galaxies in the local Universe. Earlier observations had shown that the companion galaxy is, in fact, under fire: the quasar is spewing a jet of highly energetic particles towards its companion, accompanied by a stream of fast-moving gas. The injection of matter and energy into the galaxy indicates that the quasar itself might be inducing the formation of stars.



Troubled Times



Billy Meier

Prior to July, 1995 ZetaTalk stated that [Billy Meier](#) was a genuine contactee, who took to exaggerating. On Dec 29, 1999, Billy Meier's son stated that opinions differed even within his own family.

Billy Meier's Son, Methusalem, Speaks Out For The First Time
An Interview With *MAGAZIN 2000 Plus*, Dec 29, 1999

Methusalem, your parents are divorced, and your mother is inflaming public opinions against your father. What persuaded you to take sides in this "War of the Roses?"

Actually I am of the opinion that the divorce is purely a personal matter between my parents and is none of my business, and I should not interfere. After all, my relationship with both parents is not affected by the divorce. But when I read Luc Bürigin's interview with my mother, I was extremely upset and was forced to change my mind in this regard. Once again my mother is up to her old foul play. She is telling Bürigin things for which I have proof that they are not true. She is lying when she says my father has been cheating people for years and that she has helped him in the process. I can testify to the fact that she, too, had numerous sightings at different times of the day and night.

Cross your heart ...what do you think today of your father's UFO contacts, now that you have moved out of your parents' home? And: Did you ever have your own doubts?

My opinion of my father's contacts has never wavered over the years. I am just as convinced now as I ever was that his contacts are real, and this is a logical consequence resulting from my own experiences. After all, even as a small child I already had opportunities to attend sightings, at which my mother and occasionally also my brother and sister were present. These sightings have always stayed in my memory because they were so impressive for us all. I actually never had any doubts although I have extensively and intensively pondered Papi's contacts, which seems to me only natural. After all, I had to associate everything I experienced and heard with my surroundings, and for this reason I inevitably probed everything I was experiencing and hearing.

Have you ever experienced or seen anything that would indicate that you father wanted to deceive others?

No. I have neither experienced anything like this nor were there indications that he had faked something. It is not his nature to fabricate anything for other people or to cheat them. I am certain that my father is telling the truth in regard to his contacts, and this also coincides with my own experiences.

What do you personally tell those people who accuse your father of being a fraud?

There is an old saying one can learn how to lie from hearsay. This applies to most of those people who call my father a fraud. Very few of them have ever convinced themselves of the situation by going to the actual locations or delving seriously into these matters. And if they have actually done so, they often showed their jealousy because they couldn't handle the fact

that another person can experience something that didn't happen to them. My father withdrew from the public eye over the years partially because of my mother [Kalliope Meier] but also to give her a chance at playing top fiddle. By letting her have her way in this manner, he was able to satisfy her urge to be "top dog." In keeping with his character, he certainly didn't mind this at all, because by doing so he could avoid some people fawning over him since they looked on him as the great master, a guru or something special. However, he finds such idolization repugnant and extremely unwelcome. For this reason he continues his life withdrawn from the public.



Troubled Times



Bin Laden

During the [Mar 16, 2002](#) Live ZetaTalk IRC Session, the Zetas stated:

(NancyL) ZT: The War on Terrorism is a loss, Bin Laden not only not dead but his network hardly damaged, as renewed activity on the terrorists part will soon reveal.

On Jun 18, 2007 US Intel admitted as much.

Bin Laden lays low, protected in Pakistan

Jun 18, 2007

[http://www.examiner.com/a-](http://www.examiner.com/a-786435~Bin_Laden_lays_low_protected_by_network_in%20%20Pakistan.html)

[786435~Bin_Laden_lays_low_protected_by_network_in%20%20Pakistan.html](http://www.examiner.com/a-786435~Bin_Laden_lays_low_protected_by_network_in%20%20Pakistan.html)

Al Qaeda leader Osama bin Laden has surrounded himself in a protective network of Islamic supporters in the vast tribal areas of western Pakistan, complicating the hunt for America's most wanted criminal, U.S. intelligence officials say. The United States has firm evidence bin Laden is alive based on interrogations of captured al Qaeda members and intercepted communications in which known terrorists talk about him, a military intelligence source told The Examiner. The source said the United States has picked up no credible information that bin Laden is dead. Over five years ago, bin Laden crossed the border from Afghanistan's Tora Bora mountain region to find refuge among like-minded tribal leaders in Pakistan. Bin Laden's voice has not been picked up in any communication intercept since he was heard by the United States on a short-range radio in Tora Bora.



Troubled Times



Bird Flu Pandemic

On Apr 16, 2005 the Zetas stated that a pandemic from the H5N1 strain of bird flu, caused by human to human transmission, would not occur as the Earth changes would interfere with travel and make a pandemic improbable.

To those who fear being poisoned or contained in camps, we would point to the Earth changes, which will overtake those in power long before any planned pandemic can be initiated. Germs will be contained by disaster.

ZetaTalk: [Pandemic Threats](#), written Apr 16, 2005

On May 23, 2006 scientists confirmed that even though human to human transmission had most certainly occurred, no pandemic had resulted.

Seven Indonesian Bird Flu Cases Linked to Patients

[Bloomberg](#) May 23, 2006

All seven people infected with bird flu in a cluster of Indonesian cases can be linked to other patients, according to disease trackers investigating possible human-to-human transmission of the H5N1 virus. A team of international experts has been unable to find animals that might have infected the people, the World Health Organization said in a statement today. In one case, a 10-year-old boy who caught the virus from his aunt may have passed it to his father, the first time officials have seen evidence of a three-person chain of infection, an agency spokeswoman said. Six of the seven people have died. Almost all of the 218 cases of H5N1 infections confirmed by the WHO since late 2003 can be traced to direct contact with sick or dead birds. Strong evidence of human-to-human transmission may prompt the global health agency to convene a panel of experts and consider raising the pandemic alert level, said Maria Cheng, an agency spokeswoman.

The 32-year-old father in the cluster of cases on the island of Sumatra was `closely involved in caring for his son, and this contact is considered a possible source of infection. Three others, including the sole survivor in the group, spent a night in a small room with the boy's aunt, who later died and was buried before health officials could conduct tests for the H5N1 virus. All confirmed cases in the cluster can be directly linked to close and prolonged exposure to a patient during a phase of severe illness. While investigators have been unable to rule out human-to-human transmission in the Sumatran cluster, they continue to search for other explanations for how the infections arose. Health experts are concerned that if H5N1 gains the ability to spread easily among people, it may set off a lethal global outbreak of flu. While some flu pandemics are relatively mild, the 1918 Spanish flu pandemic killed an estimated 50 million people worldwide.

*So far, studies of the Sumatran outbreak and genetic analyses of the virus don't indicate the virus has undergone major changes. Scientists at WHO-affiliated labs in the U.S. and Hong Kong found no evidence that the Indonesian strain of H5N1 has gained genes from pigs or humans that might change its power or spreading ability. Health officials earlier found strong evidence of direct human-to-human spread of H5N1 in Thailand in 2004. Scientists reported in the Jan. 27, 2005, issue of the *New England Journal of Medicine* that the H5N1 virus probably spread from an 11-year-old girl in Thailand to her aunt and mother, killing the mother and daughter. People who had more casual contact with the girl didn't become infected. In the Sumatran cluster, close, direct contact with a severely ill person was also needed for spread. Preliminary findings from the*

investigation indicate that the woman who died, considered to be the initial case, was coughing frequently while the three others spent the night in the same room. One of the three, a second brother, is the sole survivor. The other two, her sons, died.



Troubled Times



Blaming the Sun

In [July, 1998](#) and again on [June 1, 2002](#) ZetaTalk stated that the Sun and Solar Flares will be used as an excuse for the increasingly erratic weather as Planet X approaches.

Alarms about solar flares are exaggerations. Solar flares will increase as the time of the passage approaches, but are in and of themselves not devastating. They, like the earthquakes that are on the increase, will increase in number, and plague electronic communications, but have little effect on the tides, growing seasons, or the weather. Those who would shield the populace from the truth of the [approach of Planet X] will say otherwise, declaring that this is the cause of the increase in deep earthquakes, the chronic El Nino, and magnetic diffusion. It is not. It is just yet another symptom of the approach of the rogue planet that causes the Earth such devastation during its periodic passage.

ZetaTalk: [False Alarms](#), written Jan 15, 1998

Solar Flares, an extended or anomalous solar cycle, has been planned for decades to be used as a distraction and excuse during this time. Solar flares are not anything man on the face of earth can recognize, thus can be made up freely as disinfo. Trust NASA, as they have the Hubble and probes and satellites, and will tell you what has occurred. Of course, they lie. What does all this mean? It means that any reason for the current weather, satellite failure, magnetic diffusion, or heating core along with volcanic and quake increases, are to be blamed on the Sun. Thus, you have confusion about the role of the Sun lately, such that it is surmised to be about to cause a pole shift, magnetic in nature, that will cause most of humanity to die off.

ZetaTalk: [Solar Flares](#), written Jun 1, 2002

On July 22, 1999, NASA and in particular their lapdog Mitch Battros stated just that, and by July 18, 2004 blaming the Sun was in full swing. But by June 11, 2008 [sunspot activity](#) had slowed to a halt, just when activity was expected to rise into the solar maximum - the reverse of what NASA had been spouting. Yet the plans to use this as an excuse for electromagnetic interference from the tail of Planet X had not been dropped, as an [article published March 29, 2009](#) by New Scientist shows.

The Sunspot Enigma: The Sun is "Dead"-What Does it Mean for Earth?

June 11, 2008

http://www.dailygalaxy.com/my_weblog/2008/06/the-sunspot-mys.html

Dark spots, some as large as 50,000 miles in diameter, typically move across the surface of the sun, contracting and expanding as they go. These strange and powerful phenomena are known as sunspots, but now they are all gone. Not even solar physicists know why it's happening and what this odd solar silence might be indicating for our future. Although periods of inactivity are normal for the sun, this current period has gone on much longer than usual and scientists are starting to worry. The sun usually operates on an 11-year cycle with maximum activity occurring in the middle of the cycle. The last cycle reached its peak in 2001 and is believed to be just ending now. The next cycle is just beginning and is expected to reach its peak sometime around 2012. But so far nothing is happening.

Scientists Find Less Blustery Than Before

September 23, 2008

<http://www.newsdaily.com/stories/tre48mc69-us-solar-science/>

The sun's winds are less blustery than they used to be. The data show the solar wind, a steady stream of charged sub-atomic particles emitted by the sun and blowing at 1 million mph (1.6 million kph), has dwindled to its lowest level in at least 50 years, reducing its strength as a shield against potentially harmful galactic cosmic radiation. The solar wind inflates a massive protective bubble, called the heliosphere, around the solar system. But measurements from the spacecraft Ulysses show the wind's pressure has dropped 20 percent since the mid-1990s. At the same time, the electron temperature of the solar wind has declined 13 percent.

The Truth about Global Warming - it's the Sun that's to Blame

July 18, 2004

<http://www.telegraph.co.uk/>

Global warming has finally been explained: the Earth is getting hotter because the Sun is burning more brightly than at any time during the past 1,000 years, according to new research. A study by Swiss and German scientists suggests that increasing radiation from the sun is responsible for recent global climate changes. Dr Sami Solanki, the director of the renowned Max Planck Institute for Solar System Research in Gottingen, Germany, who led the research, said: "The Sun has been at its strongest over the past 60 years and may now be affecting global temperatures. The Sun is in a changed state. It is brighter than it was a few hundred years ago and this brightening started relatively recently - in the last 100 to 150 years." Dr Solanki said that the brighter Sun and higher levels of "greenhouse gases", such as carbon dioxide, both contributed to the change in the Earth's temperature but it was impossible to say which had the greater impact.

Average global temperatures have increased by about 0.2 deg Celsius over the past 20 years and are widely believed to be responsible for new extremes in weather patterns. After pressure from environmentalists, politicians agreed the Kyoto Protocol in 1997, promising to limit greenhouse gas emissions between 2008 and 2012. Britain ratified the protocol in 2002 and said it would cut emissions by 12.5 per cent from 1990 levels. Globally, 1997, 1998 and 2002 were the hottest years since worldwide weather records were first collated in 1860. Most scientists agree that greenhouse gases from fossil fuels have contributed to the warming of the planet in the past few decades but have questioned whether a brighter Sun is also responsible for rising temperatures. To determine the Sun's role in global warming, Dr Solanki's research team measured magnetic zones on the Sun's surface known as sunspots, which are believed to intensify the Sun's energy output.

The team studied sunspot data going back several hundred years. They found that a dearth of sunspots signalled a cold period - which could last up to 50 years - but that over the past century their numbers had increased as the Earth's climate grew steadily warmer. The scientists also compared data from ice samples collected during an expedition to Greenland in 1991. The most recent samples contained the lowest recorded levels of beryllium 10 for more than 1,000 years. Beryllium 10 is a particle created by cosmic rays that decreases in the Earth's atmosphere as the magnetic energy from the Sun increases. Scientists can currently trace beryllium 10 levels back 1,150 years. Dr Solanki does not know what is causing the Sun to burn brighter now or how long this cycle would last. He says that the increased solar brightness over the past 20 years has not been enough to cause the observed climate changes but believes that the impact of more intense sunshine on the ozone layer and on cloud cover could be affecting the climate more than the sunlight itself.

It's The Sun, Behind The Cause Of Escalating Weather

July 22, 1999, by Mitch Battros (ECTV)

Dr. David Hathaway of NASA's Marshall Space Flight Center states " explosions from the sun travel through space and hit the Earth, causing the magnetic field to wobble and shake,". This latest NASA report also confirms my research which suggests it is the Sun's effect on Earth's Magnetic Field, which in turn, effects our jet streams and weather patterns. Also, there are some researchers which state the Magnetic Shift actually has a centrifugal force effect on the core of the Earth, causing the waters to warm. This phenomenon would also cause the sharp increase in volcanic

activity and even earthquakes.

NASA, Seasons of the Sun, 07/22/99

Most people think of the sun as a featureless, unchanging ball of light. But the Sun actually has seasons, or cycles of activity and relative inactivity. Right now, we are approaching the maximum activity phase of the current solar cycle. The Sun is daily exhibiting hundreds of sunspots, as well as many flares and coronal mass ejections. We feel the effects of an active Sun here on Earth - radio communications, power distribution, orbiting spacecraft and even the weather are all affected. Sunspots are relatively cool areas on the Sun that appear as dark blotches. Scientists count the number of sunspots to measure the intensity of a solar cycle, and to determine how long the cycle lasts. If scientists were able to predict sunspot activity, not only would we know ahead of time what the Sun will do, but we might gain a better understanding of how the Sun operates.



Troubled Times



Booms

On June 15, 1996 ZetaTalk stated that [Booms](#) would become more common and occur even inland as the 12th Planet approached. By March 15, 1999 these mystery booms were being reported, followed by reports from [Ohio](#), [Georgia](#), [Atlanta](#) and [Alabama](#).

Mysterious Booms (Dec. 1997 - Jan. 1999)

Paranormal.About.com, March 15, 1999

In January, 1999, a loud boom at 12:15 a.m. disturbed the residents of Colorado Springs and Denver. Some witnesses said the noise was accompanied by a flash of light in the sky. There was no electrical storm. Although it could have been a sonic boom, the military denied any military activity in the area.

On January 10, 1999, dozens of people in Fairfield, Ohio reported a stunning, explosive sound. No cause was ever discovered.

Thousands of homes were rattled by two huge, mysterious booms 30 miles southeast of Los Angeles just before 10 p.m. in May of 1998. Residents described the sounds as explosions, earthquake noises, and thuds. The two booms occurred about five minutes apart.

Two very loud skyquakes startled hundreds of people on the beaches of Ocean City, Md. on July 30, 1998. No planes were in sight, and the sounds seemed to be coming from some miles offshore.

A mysterious boom reverberated through Narragansett Bay, R.I. on August 1, 1998 at 9:30 p.m. Investigating officials could not find the source of the noise.

On Sept. 16, 1997, the campus of the University of North Carolina at Chapel Hill was rocked by a boom that shook the ground and registered 1.1 on the Richter scale. Readings from ground-monitoring equipment showed that the energy did not come from the air, ruling out a sonic boom.

On December 17, 1997, a huge aerial blast rattled windows and blew open storm doors in Rogersville, Mo., a town 13 miles east of Springfield. Again, the Air Force denied the possibility of a sonic boom caused by one of its aircraft.



Troubled Times



Brazilian Roswell

On July 15, 1996 ZetaTalk stated that an incident in [Varginha, Brazil](#) was designed by the aliens who allowed the crash to occur to be similar to the Roswell incident, to further the Awakening. Subsequent reports coming forth from Brazil document the similarity of the two incidents.

Brazil Goes Nuts Over Aliens

Fortean Times, Issue 90

As the Chupacabras phenomenon goes into decline, the hottest UFO story of the moment from South America is the rumour that a number of aliens have been recovered from a crashed UFO by military authorities in Brazil followed by a bungled cover-up. Different accounts have proliferated (mainly through the Internet) but details are emerging of an event that might well match the Roswell case in its complexity, scale and importance. John Carpenter, director of MUFON Southwest and a founding member of ISCNI told FT that he was impressed by what he has learned so far. "There are at least 35 first-hand witnesses to the presence of the strange beings. This includes audiotaped interviews with several military participants. There is the possibility of a UFO crash, but there is little doubt about the existence of five or six strange beings resembling a cross between the Little Greys and the Chupacabras. Some were shot or died, others captured alive," he said.

According to a press release dated 9 June - issued by A. J. Gevaerd, editor of a UFO magazine and president of the Brazilian Center for Flying Saucer Research - the story begins on the afternoon of 20 January this year near the city of Varginha, in the Central Brazilian state of Minas Gerais, when three young girls observed a strange creature in a field near their home. From a few meters away, they saw the creature squatting behind an old garage, apparently gasping in pain. When it made a slight movement, they fled as though from the devil. Although the girls saw no UFO, an elderly couple did claim later to have seen, earlier that morning, a grey, submarine-like object that silently skimmed the ground. The girls - two sisters and a friend - were interviewed by Dr Ubiraja Franco Rodrigues and Vitorio Pacaccini, two veteran ufologists who happened to live in the vicinity. They were quickly convinced by the description given by the unsophisticated witnesses that it was extraterrestrial. Its hairless body was not more than five feet tall and dark brown, as though it had oil on its skin. It had two large, red, pupil-less eyes, a small mouth and nose and a big, brown head with three rather rounded horns. It also smelled; the mother of the sisters testifying to the strange odour that still lingered at the site when she visited it.

Rodrigues and Pacaccini located other residents of Varginha who had seen strange beings in the area and, at the same time, unusually intense military activity. A military informant told them that the town Fire Department had been asked, early that morning, to capture a strange animal. On seeing it, they called the nearest army base, the Escola Sargentos de Armas in the neighbouring city of Tres Coracoes. Using nets, the unknown creature was finally caught, placed in a box and driven away on an army truck. The commander, Lieutenant Colonel Olimpio Wanderley Santos, then declared it a "secret operation". Nevertheless, the investigators were able to gather testimony from several military personnel. They spoke of the capture of a second creature - possibly the one seen by the girls - later that night. This second creature, apparently similar to the first, was taken to the Regional General Hospital of Varginha for a few hours before being transferred to the better equipped Humanitas Hospital. After two days, according to the story, the creature died and was removed at night by 'S2' military intelligence officers. Anyone who saw the creature, it seems, was warned not to talk, especially to the press and UFO researchers.

The intrepid investigators somehow learned that the aliens (dead or alive) were taken to a military facility in Campinas in the state of Sao Paulo, about 200 miles from Varginha. It is also alleged that one was autopsied at the University of Campinas by Dr Badan Palhares, a distinguished pathologist who came to the world's attention, about 10 years ago, for his autopsy on the infamous Nazi doctor Mengele. Inevitably, Palhares and other named authorities have strenuously denied any involvement in such an affair. Press and TV journalists have joined ufologists in a six-month-long hunt for information about the fate of the two aliens, giving full scope for conspiracy theorists and resulting in regular revisions of the number of witnesses and their stories, including the number of aliens. The latest version claims that five ETs were flushed out of hiding in the Jardim Andere, a park on the north side of Varginha.



Troubled Times



Brown Dwarf

On July, 1995 ZetaTalk described Planet X as a smoldering brown dwarf that sustained life despite a long trek out in space away from the Sun, because it emitted heat and light from its molten core.

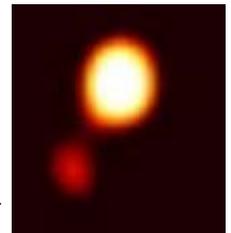
The 12th Planet has both heat and light, generated from within its core. Life on the 12th Planet, which is inhabited by a large hominoid indistinguishable from humans other than by its size, experiences continuous day. Life that has evolved there does not sleep, but rests. The light is diffused in the atmosphere, and returns to the land surface, but emerges from the core to interact with the atmosphere only via the surface of the deep oceans, which cover the majority of the planet's surface. You may equate this to volcanic activity, where the Earth has numerous places both above ground and under the oceans that ooze molten lava. Just so the 12th Planet has places where the molten and churning substance in its core escapes to the surface.

ZetaTalk: [12th Planet Glow](#) written July 15, 1995

Human scientists seem to have no description for such a traveling planet. A brown dwarf must be gaseous and a failed sun, therefore much larger than Jupiter. No planet sized object, a solid object, could emit light and heat. But cracks in the human argument started to appear.

Brown Dwarf Spotted Close to Star May 22, 2002

Astronomers using adaptive optics technology on the Gemini North Telescope have observed a brown dwarf orbiting a low-mass star at a distance comparable to just three times the distance between the Earth and Sun. This is the closest separation distance ever found for this type of binary system using direct imaging. The record-breaking find is just one of a dozen lightweight binary systems observed in the study. Together, they provide a new perspective on the formation of stellar systems and how smaller bodies in the Universe (including large planets) might form. With an estimated mass of 38-70 times the mass of Jupiter, the newly identified brown dwarf is located just three times the Sun-Earth distance (or 3.0 Astronomical Units) from its parent star.'



And now, after over a decade of ridicule, human scientists are admitting that the Zetas were right all along!

Starless Planets May be Habitable After All 20 February 2011

<http://www.newscientist.com/article/mg20928005.200-starless-planets-may-be-habitable-after-all.html>

Liquid water may survive on free-floating planets that have no star to warm them. If they also support life, they could act as stepping stones to spread life around the galaxy. Gravitational tussles with other planets or passing stars can eject planets from their solar systems. But even in the cold of space, these wayward worlds could stay warm, thanks to the decay of radioactive elements in their rocky cores. Dorian Abbot and Eric Switzer of the University of Chicago calculate that rocky planets with a similar mass to Earth could remain warm enough to keep water liquid under thick, insulating ice sheets for over a billion years. A planet with the same fraction of water as Earth could keep a subsurface ocean liquid if it was 3.5 times Earth's mass. But a planet with 10 times Earth's water concentration could do this if it weighed just one-third as much as Earth, they say (arxiv.org/abs/1102.1108). "It's a really interesting idea," says Lisa Kaltenegger of the Harvard-

Smithsonian Center for Astrophysics. "But we would have to land on [a planet] and burrow down to see if life is possible."



Troubled Times



Bush Clone

On Sep 27, 2007 the Zetas revealed that George W. Bush was a clone, one of 14 zygote multiples created at conception, with only two at present operational. One is acting as president in the White House, the other with the Puppet Master in Europe. On Oct 13, 2007 on the live chat, the Zeta provided more details regarding how a switch to the European clone might occur suddenly. Yet another clone is imprisoned near Denver, broken down by cocaine and booze.

President Bush and his look-alikes, the biological identical twins who were raised in secure settings as a back-up, have been assured since birth that they would rule the world during the end times. It is no accident that Herbert Bush headed the CIA in the 1970's, and was selected as Reagan's vice president. The Bush family had plans. The Bush clones, who were in fact identical twins as the zygote was split and implanted into Barbara and several surrogate mothers, show the serious intent, as should the brother in the public eye develop a fatal illness or go insane or refuse to be directed by the cabal planning to rule the world, they could substitute another brother. At present there are only two brothers alive and operational - one in the White House, and the other living with the Puppet Master. The development of the Diebold voting machine, with software holes that allow totals to be manipulated from a remote location, was part of this grand Bush plan. The invasion of Iraq to gain the Middle East oil was another such part of the Bush plan, and is the reason George Herbert Bush left Saddam in place so he would have to be removed at a later date.

ZetaTalk: [Bush on the Bottle](#), written Sep 27, 2007

There were 14 brothers altogether who were born. One of the brothers, who developed a health problem so does not have the physical appearance of the current clone acting as President, records the weekly radio show. There were 3 living clones who could act as President in 2000, but the one acting as the public face during the early years of the presidency was so damaged by cocaine and booze that he was considered out of control, and is secreted away, imprisoned, in case they need a body in which case he would be killed. Another clone was approached by the Puppet Master's agents and agreed to work with him. He is in Europe and could be substituted for the clone acting as the US President at any time.

ZetaTalk: [GodlikeProductionLive](#), written Sep 29, 2007

The Bush clone is indistinguishable from the one currently in the White House. Any haircut or tan or scratch can be replicated in the clone residing with the Puppet Master, and this is done steadily so a replacement could occur at any moment if need be. We are in communication with the Puppet Master, and Nancy acts as interpreter on occasion. We, the Service-to-Other Zetas, have teleporting abilities whereby someone can just suddenly appear in a room. We would not be telling you this if the Council of Worlds had not allowed an exception to the Rule of Non-Interference in the affairs of man. If it is deemed better for mankind to have a clone switch, instead of a breakdown in the current clone in the White House with a sudden need to assassinate Cheney, then the switch would be made.

ZetaTalk: [GodlikeProductionLive](#), written Oct 13, 2007

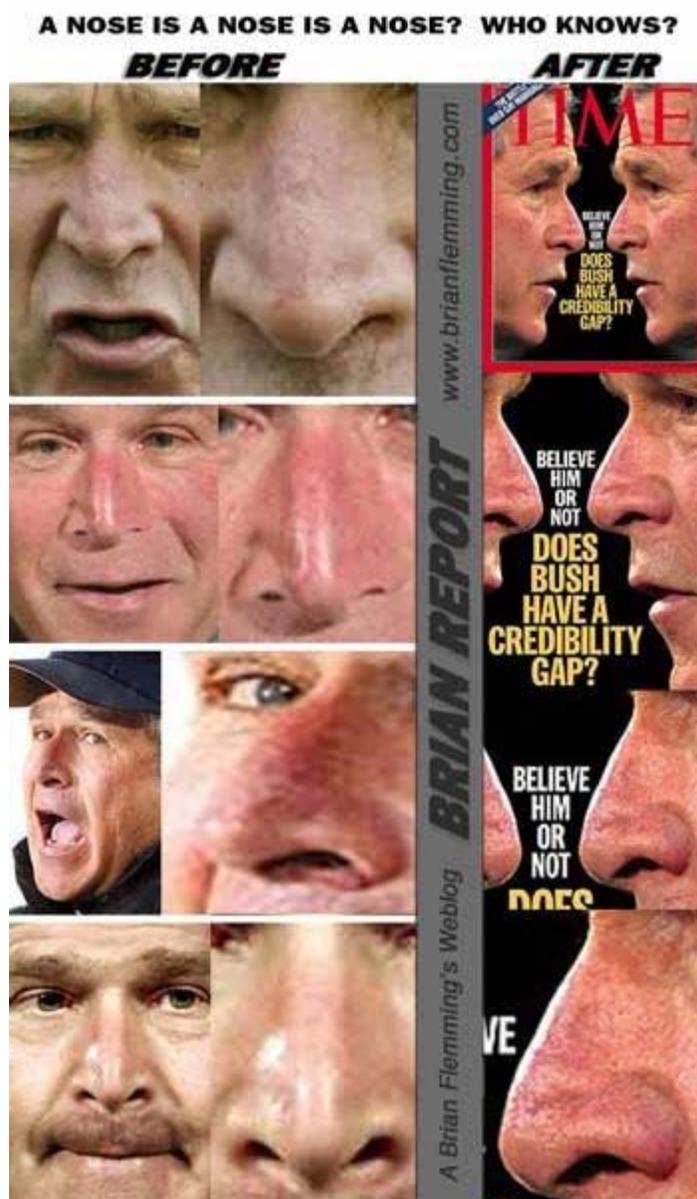
The current clone is much more comfortable with press conferences than the clone in place after the 2000 election. By the 2004 election, this first clone was in a type of prison, near Denver. He was the one who had an affair with Ashe. Laura Bush, of course, is much in the know about this, as she must appear with them all.

ZetaTalk: [GodlikeProductionLive](#), written Oct 20, 2007

Is there any proof of this? After the 2004 elections there was [buzz on the Internet](#) about an apparent nose job, as the President's nose appeared slightly different than before. This rumor even hit the [David Letterman](#) talk show.

George W. Bush Nose Job?

February 09, 2004



http://www.slumdance.com/blogs/brian_flemming/archives/000631.html

The President Bush pictures above are undoctored. The nose? Not so sure. The political significance of this possible nose job? Zero.

A careful analysis of photos during the Bush presidency reveal more than a broken nose, slightly pulling to the left hand side of Bush's face in Clone1, the president from 2000 to the 2004 elections in the Fall of 2003. They reveal that Clone 2, the current president, has an anxious expression. Clone 1 is a party boy, finally becoming unstable due to cocaine and alcohol use, and didn't like giving press conferences. During his reign, there was a period of 17 months without press conferences held by Bush. Clone 2 is comfortable with press conferences, and gives them frequently. The fact that he is a worry wort can be seen in his health problems, as he was stricken with the nervous shits, even caught writing Condi a note about having to rush to the bathroom, and appears to be taking tranquilizers. The photo tour can be seen on the [Zeta Report 14](#) video.



Troubled Times



Bush Insanity

On Sep 1, 2007 the Zetas stated that the rigidity Bush exhibited and his statements that he was working in concert with God were signs that Bush was losing it, a signs of insanity. Again on Sep 27, 2007 the Zetas stated that George W. Bush was increasingly delusional.

The Bush supposed resiliency is misunderstood, as it is the rigidity of the weak, an inability to change course. Thus, even when losing on all fronts, he persists and insists on "staying the course". Iraq is lost, the surge an exercise in yet more failure, yet he will insist this be presented as a success when the September report is due. He has been caught at illegal wiretapping but has not stopped this activity even while bantering with Congress about changing the law. He has attempted to incite war with Iran numerous times and to declare martial law numerous times, always being blocked by either the US military or the federal agencies which are wise to his agenda and countering it, yet in his heart he holds out hope of achieving these goals, somehow. This is the mind of someone who is not connected with reality, as evidenced by his assertion that he speaks to God, and is acting in concert with God by doing what he has been doing. Go into the mental institutions and see how many of the patients, in their need to feel special and in control of their lives, declare the same!

ZetaTalk: [GodlikeProductionLive](#), written Sep 1, 2007

At present, the Bush twin in the White House is clinging to a delusional hope that somehow their repeated attempts to declare martial law will eventually succeed so he can be president for life, and that their repeated attempts to engage Iran in warfare will succeed. Meanwhile, he comforts himself with alcohol when he can secure it. Bush will continue to realize that his status has slipped from king of the world during the end times to despised pretender to the throne. He will become even more isolated, morose, and delusional.

ZetaTalk: [Bush on the Bottle](#), written Sep 27, 2007

On Sep 23, 2007 Nancy produced a video, the [Zeta Report 11](#), on this matter, called the *Madness of King George*, predicting that increasing mention of Bush's sanity would be made by the media. On Oct 25, 2007, the LA Times featured an editorial frankly calling for removal of Bush for insane. And on Oct 30, 2007, Kuchinich openly called for this type of an examination.

Straitjacket Bush

October 25, 2007

<http://www.latimes.com/news/opinion/commentary/>

Liberals, put it behind you. George W. Bush and Dick Cheney shouldn't be treated like criminals who deserve punishment. They should be treated like psychotics who need treatment. Because they've clearly gone mad. Exhibit A: We're in the middle of a disastrous war in Iraq, the military and political situation in Afghanistan is steadily worsening, and the administration's interrogation and detention tactics have inflamed anti-Americanism and fueled extremist movements around the globe. Sane people, confronting such a situation, do their best to tamp down tensions, rebuild shattered alliances, find common ground with hostile parties and give our military a little breathing space. But crazy people? They look around and decide it's a great time to start another war. But all this creates a conundrum. What's a constitutional democracy to do when the president and vice president lose their marbles? Impeachment's not the solution to psychosis, no matter how flagrant. But despite their impressive foresight in other areas, the framers unaccountably neglected to include

an involuntary civil commitment procedure in the Constitution. Still, don't lose hope. By enlisting the aid of mental health professionals and the court system, Congress can act to remedy that constitutional oversight. The goal: Get Bush and Cheney committed to an appropriate inpatient facility, where they can get the treatment they so desperately need. In Washington, the appropriate statutory law is already in place: If a "court or jury finds that [a] person is mentally ill and . . . is likely to injure himself or other persons if allowed to remain at liberty, the court may order his hospitalization."

Kucinich: Is it Time to Question Bush's Mental Health?

October 30, 2007

http://rawstory.com/news/2007/Kucinich_questions_Bushs_mental_health_1030.html

Ohio Congressman Dennis Kucinich, a dark horse contender for the the Democratic presidential nomination, questioned President Bush's mental health on Tuesday. "I seriously believe we have to start asking questions about his mental health," Kucinich told The Inquirer's editorial board.

"There's something wrong. He does not seem to understand his words have real impact." Kucinich was referring to President Bush's warning of dire consequences if Iran acquires nuclear weapons during a press conference earlier this month. Bush said that he had told world leaders the country must be prevented from achieving nuclear capability "if you're interested in avoiding World War III."



Troubled Times



Bush Decapitation

After the 2004 election, stolen by vote fraud, the Zetas predicted on Nov 3, 2004 that the Puppet Master would [decapitate](#) the Bush administration, in punishment for not allowing Kerry to win as he had wanted. Kerry was to bring the US Military back under a Commander in Chief, as they were in revolt against Bush.

The Puppet Master is not pleased, and will enact revenge, and the Puppet Master has more cards that can be imagined. The mess Bush has made rests like a turd on the front steps of the White House. The spiral down into an increasingly hostile and resentful populace, a rebelling bureaucracy, and worldwide disgust will only accelerate. The US will find itself without cooperation when reaching out for help to other countries in their endeavors while the Puppet Master enacts financial revenge, punishing the US to weaken Bush and Cheney.

ZetaTalk: [Diebold Wins](#), written Nov 3, 2004

Since the 2004 election, leaks such as the Downing Street Memo (a leak), discovering the missing 2003 Cheney memos in the archives (a leak to Fitzgerald), the Katrina video showing Bush being briefed, the Abramoff photos with Bush (reportedly for sale by Abramoff), and the NSA Spying scandal (previously ongoing but secret), the Pentagon hiring journalists in Iraq, additional Abu Grabi torture photos released in Australia, and details about the UAE port deal (Homeland Security objected) have pulled Bush Co down. He is now not only a lame duck, he is a dead duck!

Americans Pessimistic on War as President Launches New Push

[CNN](#), Mar 14, 2006

WASHINGTON (CNN) -- Growing dissatisfaction with the war in Iraq has driven President Bush's approval rating to a new low of 36 percent, according to a CNN/USA Today/Gallup poll released Monday. Only 38 percent said they believe the nearly 3-year-old war was going well for the United States, down from 46 percent in January, while 60 percent said they believed the war was going poorly. Nearly half of those polled said they believe Democrats would do a better job of managing the war. Sixty percent of those surveyed in the latest poll said they disapproved of his performance in office. With congressional elections approaching, public discontent with the war appeared to be taking a toll on Bush's fellow Republicans. Only 32 percent polled over the weekend said they thought Bush had a clear plan for handling the situation in Iraq, while 67 percent said he did not. Democrats held a strong lead over the GOP, 53-38 percent, when asked which party would better manage the economy. The latest poll found 51 percent of Americans believed the administration deliberately misled the public about whether Iraq had weapons of mass destruction, while 46 percent disagreed.

Bush Approval Falls to 33%, Congress Earns Rare Praise, Dubai Ports Fallout

[Pew Research](#), March 15, 2006

In a Word...Incompetent. President Bush's declining image also is reflected in the single-word descriptions people use to describe their impression of the president. Three years ago, positive one-word descriptions of Bush far outnumbered negative ones. Over the past two years, the positive-negative balance has been roughly equal. But the one-word characterizations have turned decidedly negative since last July. Currently, 48% use a negative word to describe Bush compared with just 28% who use a positive term, and 10% who use neutral language. The changing impressions of the president can best be viewed by tracking over time how often words come up in these top-of-the-mind associations. Until now, the most frequently offered word to describe the president was

"honest," but this comes up far less often today than in the past. Other positive traits such as "integrity" are also cited less, and virtually no respondent used superlatives such as "excellent" or "great" terms that came up fairly often in previous surveys. The single word most frequently associated with George W. Bush today is "incompetent," and close behind are two other increasingly mentioned descriptors: "idiot" and "liar." All three are mentioned far more often today than a year ago.

And by 2007, talk of impeachment was on every tongue!

Much of US Favors Bush Impeachment: Poll

July 6, 2007

<http://www.prisonplanet.com/articles/july2007/060707impeachment.htm>

Nearly half of the US public wants President George W. Bush to face impeachment, and even more favor that fate for Vice President Dick Cheney, according to a poll. The survey by the American Research Group found that 45 percent support the US House of Representatives beginning impeachment proceedings against Bush, with 46 percent opposed, and a 54-40 split in favor when it comes to Cheney.



Troubled Times



Cataclysm Masks

In January, 1998 ZetaTalk stated that the [Solar Flares](#) would be used as a cover-up for the approaching cataclysms, and again in July, 1998 included the sun in a list of [False Alarms](#) the government would use. On Dec 14, 1999 these false claims reached an extreme with a claim that the Solar Wind had disappeared for 3 days, and later news reports cast doubts on the sun as a culprit.

Space Weather Oddity Sends Solar Particles Straight to Earth

Reported by [Space.COM](#), Dec 14, 1999

During the nearly three-day disappearance of the solar wind, that pressure was about 1 percent of normal, prompting the now-unconstrained magnetosphere to balloon outward to a volume never before measured. Typically, the magnetosphere extends 40,000 miles (64,375 kilometers) into space from the Earth on the side facing the sun; on May 11, it reached nearly 235,000 miles (378,195 kilometers) - about as far as the moon. Although physicists have dubbed the events "The Day the Solar Wind Disappeared," they still do not have an explanation for what caused it. Observations made of the sun itself during that period show no evidence of unusual activity. "We basically haven't found any smoking guns back at the sun," said David Webb, a Boston College research physicist.

Ocean is Warming, study finds

By John Roach, *ENN News*, March 24, 2000

The world ocean has experienced a net warming of 0.11 degrees Fahrenheit from the sea surface through about 10,000 feet of depth over the past 35-45 years. The upper 1,000 feet has warmed by 0.56 degrees Fahrenheit. "Although these may seem like small changes, it represents a large change in the heat content of the ocean," said Sydney Levitus, an oceanographer with the National Oceanographic and Atmospheric Administration. "Water is very effective at absorbing heat without undergoing much of a temperature change." The finding, reported in today's issue of *Science*, answers the question of why the Earth's atmosphere has not warmed as much as climate model simulations have predicted, a point made repeatedly by critics of global warming.

"The response of climate modelers has been that part of the warming due to increasing greenhouse gases could be expected to be found in the ocean," said Levitus. "Our results support the predictions of the climate modelers and suggest that the models do have the correct sensitivity to increasing greenhouse gases." The ocean warming itself is not conclusive evidence of global warming due to human-induced emissions of greenhouse gases. Combined with lower atmosphere and sea surface warming over the past 100 years and the thinning and retreat of Arctic sea ice during the past 35 to 45 years, however, builds a strong case for anthropogenic global warming. "I have followed the greenhouse gas debate and part of the scientific literature on the subject. During the past year I have come to believe that part of the warming we observe in the Earth's climate system is due to increased greenhouse gases," said Levitus.

Don't blame the Sun, Researchers Claim

[New Scientist](#) issue: May 6, 2000

Greenhouse effect sceptics may have lost their final excuse. The Sun has been dethroned as the dominant source of climate change, leaving the finger of blame pointing at humans. A correlation between the sunspot cycle and temperatures in the northern hemisphere seemed to account for most of the warming

seen up until 1985. But new results reveal that for the past 15 years something other than the Sun - probably greenhouse emissions - has pushed temperatures higher. In 1991, Knud Lassen of the Danish Meteorological Institute in Copenhagen and his colleague Eigil Friis-Christensen found a strong correlation between the length of the solar cycle and temperature changes throughout the northern hemisphere. Initially, they used sunspot and temperature measurements from 1861 to 1989, but later found that climate records dating back four centuries supported their findings. The mysterious - and unexplained - relationship appeared to account for nearly 80 per cent of the measured temperature changes over this period. Now Lassen and astrophysicist Peter Thejll have updated the research and found that while the solar cycle still accounts for about half the temperature rise since 1900, it fails to explain a rise of 0.4 C since 1980. "The curves diverge after 1980," says Thejll, "and it's a startlingly large deviation. Something else is acting on the climate."



Troubled Times



Cattle Mutilations

Prior to July, 1995 ZetaTalk stated that [Cattle Mutilations](#) were done to by human hand, but assisted by aliens - a combined team intent on terrifying humanity about the alien presence. A historical overview of Mutilations supports this.

Cattle Mutilation, from *Paranormal.About.COM*

Cattle Mutilation Phenomena refers to thousands of cases in North America where cattle have been found mutilated under abnormal circumstances. The cows are found dead (although the cause of death is undetermined), exsanguinated (all their blood has been removed), and have had certain organs surgically removed from their bodies. Often their reproductive and rectal organs have been removed. Abnormally high radiation levels have been detected near the dead animals when they are found, and scavengers will not touch the carcass. There are no footprints leading to or from the cows. There is evidence (clamp marks on the animals' legs) that the cattle were taken from their habitats and mutilated elsewhere. Sightings of UFOs and strange, unmarked, black helicopters coincide with most cattle mutilation cases.

The phenomena began in the Fall of 1973, when farmers in Minnesota and Kansas reported mutilated cattle. The circumstances surrounding the deaths were different then anything the local police had ever investigated. At this time, the blame for the mutilations was placed on Satanic cults. Soon, reports of cattle mutilations spread throughout the Midwest United States and even into Canada. Paranoia and speculation about the deaths ran rampant. By the late 1970s, four main theories about the mutilation cases had emerged:

1. The blame was to be placed on Satanic cults and ritual sacrifices.
2. The deaths were a result of intelligence agency secret projects involving chemical weapons testing.
3. Mass hysteria had blown simple cow deaths out of proportion.
4. Extraterrestrial experiments were to blame.

Police agencies in Alberta, Idaho, Montana, and Iowa did link some mutilation cases to satanic cults. However, police investigating this theory found little supporting evidence and often ran into dead ends.

Evidence has been found to support this theory. Black, unmarked, helicopters with tinted windows and powerful searchlights are often seen during a cattle mutilation wave. Evidence at the scene of a mutilation suggest that the cattle were taken elsewhere by air, mutilated, and then dropped back near to where they were taken. A number of mutilations revealed that the cows may have died from a simple cattle virus, but nothing experimental. It is very unlikely that all the mutilations were simple deaths blown out of proportion. There is much evidence to support the fact that these incidents were indeed extraordinary. The U.S. Government has expended thousands of dollars to investigation agencies to look into this phenomena. The fourth hypothesis is very interesting and has much supporting evidence. UFOs are usually seen in the vicinity of cattle mutilations, and cattle are deathly afraid of them (i.e. they have been noted as stampeding and bellowing when in the presence of a UFO). Cattle mutilations often occur in UFO Hotspots such as Northern New Mexico, and near Area 51, Nevada. Two separate alien abductees have reported, under regressive hypnosis, seeing cattle taken into the alien craft and mutilated.

The cattle mutilation phenomena claimed the lives of over 10,000 head of cattle by 1979. Areas such as

New Mexico had been especially 'hit' hard. It is a phenomena that has haunted and terrified ranchers, investigators, and many others all over North America. The purpose of these grotesque and strange occurrences still remains a mystery. Colorado, Wyoming, Texas, Alabama, Puerto Rico, Canada, and as far away as South America, have been home to such mutilations. Speculation that it is the work of secret US government groups or (paramilitary or spy) Satanic cults therefore seem too far fetched. Surely the US government would have their own stock of cows for an experiment of this nature. Satanic cults would need to have enormous resources to carry out this type of operation throughout the world. Ranchers have witnessed strange, unmarked black helicopters fly over their herds where they will later find mutilated cattle. Some have even witnessed strange lights in the night sky previous to finding bodies. There are those who believe that the mutilations are occurring as a random radiation test by extraterrestrial visitors whose purpose is to safeguard humanity against nuclear annihilation.

Rancher C. E. Potts found one of his prize bulls alongside of the road one summer afternoon in 1990 ,late July. "We were passing down this road, and there was a thunderstorm a coming up behind us. We smelled this animal as we come by. We came back to check on it, and found it was mutilated. We examined it and its sexual organs was taken out. Its eyes were taken out, and its eyelashes were taken out. Well, there wasn't no predators. Not a predator bothered it since it was dead even. Couldn't have been killed by a predator cause all the surgical work was done by an expert. I really didn't think anything of it till it come home to me. Now I know it was bound to have been mutilated cause anyone who could see good could tell it was, Mr. Potts remembered. Also observed is the additional removal of at least one (1) eyeball, the utters on the female are most always removed and the sexual organs on both sexes are also most always removed. All organ removal and incisions are done with surgical precision, and in some cases the evidence of cauterization along the incision lines has led investigators to believe the use of some sort of high heat cutting device has been administered, suggesting the strong possibility of a laser. Bones were also clearly cut with no bone fragments around the cut. UFOs and strange "Black"unmarked helicopters have been linked with these mutilations since they have been sighted at the same time in the same area where the mutilated bovines have been found. Equally disturbing, is the fact that there has *never* been a conviction of any human accused of committing such a cruel and hideous act. Some may ask, "If done by UFOs, why would they be interested in cattle ?" And the answer to that may lie in the fact that cattle blood is so similar to humans that it is regularly used in the lab to create human blood plasma. Indicating the aliens may be studying the cattle, to find out more about us!

Various incisions would also be found on the body that were so clear cut that they would have had to have been done with some sort of laser technology that we didn't have when the mutilations started (before 1970). Bones were also clearly cut with no bone fragments around the cut. The bodies would be missing various parts which had also shown to have been removed with accurate precision. UFOs have been linked with these mutilations since they have been sighted at the same time in the same area where the mutilated bodies have been found. Mutilations are differentiated from accidental or predatory death for several reasons. Chief among them is the manner in which the flesh has been removed from the body. Cauterization (the fusing of tissue and blood vessels by heat or chemical means) seems to be typical of mutilations. Unlike animal attack, the flesh, adjoining the area where it has been removed, is smooth and clean as if cut with a searing or laser scalpel. As well, the areas chosen for removal are quite strange. Mainly the sexual, anterior digestive tract and sensory organs are affected.(No predator differentiates so precisely). Still, no tracks of any kind can be found around the mutilation site, except, sometimes, tripod marks. Also, no carrion eaters will touch the mutilated cow even though it has plenty of flesh still left to be eaten.



Troubled Times



Cell Evolution

On Jan 6, 2006 the Zetas stated that the evolution of life required that the cell be present before DNA could develop, as it needed that protection, a nest.

Life, whether it evolves naturally or is seeding to expedite the process, does not develop in a day. It develops in steps and stages. One stage is in place before the next step can be taken. DNA supports the ability of life to replicate itself and carry forward the dictates of biological function. Since man comes late to examining his own beginnings, he cannot determine if DNA arrived before the cell, or the cell was in place before the DNA. The assumption is that DNA came first, links forming in some kind of primordial soup, and the cell developed later as a protective device. Now, they know otherwise. DNA in a soup would be subject to assault, continually, and thus not perpetuate itself with any certainty. Life does not develop in chaos, but rather where a soup with rich ingredients exist. The cell body does not dissipate without DNA, as human scientists know. It feeds, and continues. It does this without assistance, as long as the soup it finds itself in allowed growth. Death of a cell occurs only when it is attacked, exposed to attack, so that the molecular functions that allowed it to form and retain form are disrupted. The evidence dropped to Earth was encased in an asteroid chunk that protected the molecular composition of these cells from the formerly life bearing planets in the Asteroid Belt. They thus had no reason to die. But as the shape clearly presents, this was a stage of life prior to DNA insertion, the next stage. DNA naturally forming in primordial pools needs a nest, a shelter. With cells about, it can migrate through the skin of a cell to interior chambers, which it does today. Is this not what the virus does, when infecting a cell? Is this not what RNA does when it travels between cells, communicating?

ZetaTalk: [Space Dust, Alive?](#), written Jan 6, 2006

On October 6, 2007 breaking news declared that scientists had "created life" by stripping down DNA strands and inserting them into an existing cell. It was not possible for the DNA to be kept alive *without* the cell.

I am Creating Artificial Life, Declares US Gene Pioneer

October 6 2007

<http://www.guardian.co.uk/science/2007/oct/06/genetics.climatechange>

Craig Venter, the controversial DNA researcher involved in the race to decipher the human genetic code, has built a synthetic chromosome out of laboratory chemicals and is poised to announce the creation of the first new artificial life form on Earth. A team of 20 top scientists assembled by Mr Venter, led by the Nobel laureate Hamilton Smith, has already constructed a synthetic chromosome, a feat of virtuoso bio-engineering never previously achieved. Using lab-made chemicals, they have painstakingly stitched together a chromosome that is 381 genes long and contains 580,000 base pairs of genetic code. It is then transplanted into a living bacterial cell and in the final stage of the process it is expected to take control of the cell and in effect become a new life form. The new life form will depend for its ability to replicate itself and metabolise on the molecular machinery of the cell into which it has been injected.



Troubled Times



Centrifugal Force

On Jan 15, 1997 ZetaTalk stated that planetary or solar rotation did not occur because of [Centrifugal Force](#), but due to attraction and repulsion of various components in the core. On March 31, 2000 the Associated Press reported science findings supporting that Zeta statement.

Researchers find that layers of sun rotate at different speeds

Associated Press, March 31, 2000

Parallel layers of gas deep within the sun rotate at different speeds, an action that may explain the formation of sunspots and solar flares, new research shows. Using data collected from a sun-watching satellite and from six solar observatories on Earth, Stanford University scientists spotted two layers of gas deep within the sun that slow or speed up in an opposite, but synchronized pattern. "It's not what we expected at all," Stanford research physicist Jesper Schou said in a statement. "It comes totally out of the blue." The researchers said that the difference in rotation rate occurs above and below at a subsurface layer known as the tachocline which separates two major gas areas of the sun, the convection zone near the surface and the radiative zone, which includes the core.

Based on four years of data, the scientists found that the convection zone, just above the tachocline, increased its rotation speed by about 60 feet (18 meters) a second from July 1996 to Feb. 1997. It then slowed and returned to its original speed over the following eight months. At the same time, the radiative zone showed exactly the opposite behavior, slowing down, and then speeding up. The cycle repeated itself every 16 months, or 1.3 years, at the solar equator, but it recurred only every 12 months in the midlatitudes of the sun. Unlike the Earth, the sun is made of gas. This allows parts of the solar sphere to spin at different rates. The puzzling cycle may be related to the forces that create the sun's massive magnetic field and the 11-year cycle of sunspots, but researchers aren't sure. Sunspots are solar storms that shoot out magnetic pulses and ionized particles that, if aimed at Earth, can interrupt communications and power systems.



Troubled Times



Chemtrails

In [2000](#) and [2001](#) the Zetas explained that chemtrails were an experiment by the wealthy to determine how well poisoning a migrating populace from the air might work. The ultimate agenda was to eliminate hordes after the pole shift, and to use the military to do so. But when the military discovered this, they rebelled.

Contraails are an experiment of the wealthy and powerful, to see how much deliberate infection of the wandering masses might slow them down. This has been allowed, where practiced, because the experiment was couched in terms of crowd control. Those allowing this to continue, the military and national security groups, were assured that only temporary illness would occur. However, the intent of the elite was scarcely temporary illness. Imagine elite groups settling into North Carolina estates, or in valleys in Utah, or in Wyoming. Why would they want masses of the lower class, starving and angry, invading their communities? There would certainly not be food or supplies enough to go around, and these elite do not think of the populace as anything on an equal basis to themselves. Their logic is that if these starving hordes are to die anyway, the sooner the better!

ZetaTalk: [Contrail Plan](#), written Dec 15, 2001

Beginning in the year 2000, the patterns of chemtrails had created an alarm in the populace to the extent that public outcry was becoming organized and vociferous. Rally's were being held, petitions signed, and documentation on harm to children and other vulnerable segments of the population showing that the tests being run were not as harmless as claimed. Those in the government aware of the chemtrail tests had been assured that no harm would come to the populace - a slight increase in flu symptoms, a few days lost at work or school, but all in all, relatively minor complaints. That the threshold putting a sick child or oldster from the sick bed into the coffin was occurring set those among the wealthy and powerful elite at odds with each other, and behind the scenes wars over allowing the chemtrail tests to continue broke out, unseen to the public eye but nonetheless fierce.

ZetaTalk: [Contraails](#), written Aug 15, 2000

Recently photos ohave been leaked to the public showing that small planes, not military plans, are used to spread contraails. This is indeed a project carried out by the wealthy.



Per the Zetas, this project now is being conducted to fog up the skies so the Planet X complex cannot be seen by the public.

We have mentioned that chemtrails originally had the purpose of testing how well humans in the flight path could resist various microbes and chemicals that would sicken them. The point was to delay them as they attempted to migrate toward enclaves of the wealthy, for instance, to sicken those leaving LA and trying to reach Utah. Behind these tests was a more sinister purpose, to poison and kill the migrants. When the US military discovered the plan, being openly discussed at times in the back rooms of the White House, they rebelled and refused to have any part of chemtrail activity in the future. Where the campaign was being conducted by the wealthy, their plan was to use the US military when the time came, and without the cooperation of the US military, this plan could not succeed. Thereafter, chemtrails were used to fog up the view of Planet X. In some cases, tests were done to determine where the drift would go, where the chemtrails were pushed by the prevailing westerlies. Since sunrise and sunset are the danger times when Planet X might be sighted, these are the main fogging target times.

ZetaTalk: [Godlike Chat](#), dec 22, 2007



Troubled Times



China as Investor

On [June 9, 2007](#) the Zetas described the interrelationship between China's investments in US bonds, the dropping dollar, the trade imbalance, the large number of dollar's China holds, the US demands that China free their yuan from the dollar, and the recent accusations by the US that goods from China are not safe. The Zetas emphasized the primary weapon China holds - dumping the US dollars they hold.

China is a great worry for the Bush White House, not at all in control, the sleeping dragon awakened. China has been buying immense amounts of US bonds, and holds an immense amount of US dollars as a result. If they stopped buying these bonds, even at the reduced rate they have assumed, or started dumping dollars, they would devastate the US in a dropping dollar. Where this makes US manufactured goods cheaper worldwide, it makes US stocks and bonds worthless, and panic would set in. As China is squeezed, it will stop buying US bonds, forcing the US to print money faster, higher inflation.

ZetaTalk: [GodlikProduction Live](#), written June 9, 2007

On Aug 8, 2007 China threatened to dump its dollars in response to Congress making noises about trade sanctions on Chinese goods. As China was squeezed, they did indeed threaten to use one of the two means to devastate the US, as the Zetas had predicted.

China Threatens 'Nuclear Option' of Dollar Sales

Aug 8, 2007

<http://www.telegraph.co.uk/money/main.jhtml?xml=/money/2007/08/07/bcnchina107a.xml>

The Chinese government has begun a concerted campaign of economic threats against the United States, hinting that it may liquidate its vast holding of US treasuries if Washington imposes trade sanctions to force a yuan revaluation. Two officials at leading Communist Party bodies have given interviews in recent days warning - for the first time - that Beijing may use its \$1.33 trillion of foreign reserves as a political weapon to counter pressure from the US Congress. Shifts in Chinese policy are often announced through key think tanks and academies. Described as China's "nuclear option" in the state media, such action could trigger a dollar crash at a time when the US currency is already breaking down through historic support levels. It would also cause a spike in US bond yields, hammering the US housing market and perhaps tipping the economy into recession. It is estimated that China holds over \$900 billion in a mix of US bonds.



Troubled Times



China Threats

On the Jan 12, 2000 *Sightings* radio show, ZetaTalk stated that [China](#) saber rattling was not serious, but a distraction. On Feb 22, 2000 the *Washington Times* confirmed no immediate plans for war.

Pentagon study finds China preparing for war with U.S.

The Washington Times, Feb 22, 2000

Strategic writings by China's military and party leaders show that China is making plans for war, according to a new Pentagon study. Some 600 translations of internal Chinese writings by 200 authors reveal China's strategy to defeat a superior foe, using both military and nonmilitary means, such as propaganda, deception and covert action. They also reveal the extreme distrust of the United States by China's military and party leaders. Chinese generals state that the United States intentionally bombed the Chinese Embassy in Belgrade, Yugoslavia, last May as part of a long-term strategy to prompt an arms race that will cause China's collapse. The Chinese statements from the mid-1990s through last year discuss issues normally couched in secrecy inside China.

They appear in the book "*China Debates the Future Security Environment*," published last month for the Pentagon's Office of Net Assessment, the unit in charge of long-range planning. The translations were edited by Michael Pillsbury, a defense policy planner in the Reagan administration who is fluent in Chinese. The official Chinese views from Communist Party and military officials contradict other claims by the Beijing government that China poses no threat to the United States or other nations. Chinese strategists plan to use a combination of Marxist-Leninist doctrine and ancient Chinese tactics against the United States, which is compared in Chinese military writings as a "hegemon" on a par with Nazi Germany. Gen. Li Jijun, described as one of China's most distinguished military authors, states that the United States engineered the collapse of the Soviet Union and the Iraqi invasion of Kuwait as a "strategic misdirection" or deception. Other Chinese authors state the United States is working covertly to "dismember" western China, namely Tibet and Xinjiang.

The report is a public document, but the Pentagon is limiting its distribution, presumably because of its stark disclosures of Chinese military thinking. According to the book, the late Chinese leader Deng Xiaoping set the current military strategy for dealing with the world's only superpower in the slogan "bide our time and build up our capabilities." A key debate among Chinese military and party writers is how rapidly the United States will decline, a view based on the Marxist ideas on the collapse of capitalism. The book quotes Gen. Xiong Guankai, the Chinese deputy chief of staff for intelligence, who finished three days of Pentagon meetings last week, as one of China's hard-line theorists. "Any efforts for seeking hegemony and world domination can only result in accumulating contradictions and fermenting war," Gen. Xiong was quoted as saying in a speech at Harvard University.

Chinese plans also discuss means of taking out U.S. aircraft-carrier battle groups. Chinese writer Ying Nan says the groups have numerous vulnerabilities. The United States sent two such groups to waters near Taiwan in 1996 in response to Chinese military exercises aimed at the island. Mr. Ying stated that weaker Chinese forces could defeat the huge carriers because the groups are hard to conceal from radar, are less effective in bad weather and are hampered by shallow water or when operating close to the coast. Carriers also are vulnerable to repeated attacks with precision weapons fired from unmanned aircraft and to electronic warfare from small ships, offshore islands and aerial balloons that can "create confusion in the

electromagnetic environment," he stated. Carrier battle groups also can be defeated by advanced submarines and by attacks on their support ships because the carriers' anti-submarine capabilities are "relatively poor," Mr. Ying states. Mr. Ying also cited the carriers' elevators, catapult launchers and arrester wires as "extremely vulnerable" to precision strikes that would make the ships useless. Chinese military strategists also draw upon the 1991 Persian Gulf war. Chinese tactics - pre-emptive attacks before allied forces had massed, covert attacks inside Saudi Arabia and operations to split the U.S.-led coalition - could have won for Iraq, they wrote.

China now seeks to avoid head-on confrontation until around 2030, when the Chinese expect U.S. power to decline significantly. However, a war between China and the United States could erupt over Taiwan, according to the Chinese authors. Strategist Gao Hen wrote a U.S. defense of Taiwan would cause a major war of "global and historic implications." China also plans electronic attacks on computer networks. "We can make the enemy's command centers not work by changing their data system," wrote Maj. Gen. Pan Junfeng. "We can cause the enemy's headquarters to make incorrect judgments by sending disinformation."



Troubled Times



Crane Collapse

On Nov 27, 2004 the Zetas described the Earth wobble that had begun in 2004 as a result of Planet X pushing daily at the magnetic N Pole of Earth.

The polar wobble that began in November is the first sign of the Earth's participation in the slow 270° Roll that Planet X does to position itself, magnetically, above the Ecliptic rather than below the Ecliptic. It is caused, as we explained, by the magnetic N. Pole of Earth avoiding any exposure to the emerging N. Pole of Planet X. As the Earth normally rotates around its geographic N. Pole, the magnetic N. Pole is exposed for half the day, and then hidden for the other half of the day. This initially results in a Drunken Lurch to push the magnetic N. Pole out of view, a twice a day polar wobble, but rapidly evolves into twirl. This is due to the magnetic N. Pole being either to the right or left of the geographic N. Pole as the globe turns, responding to the emerging hose of magnetic particles from the N. Pole of Planet X as it turns about, in place.

ZetaTalk [Twirling into Darkness](#), written Nov 27, 2004

Where the Figure 8 of the daily wobble was documented by [observation](#) of the position of constellations and the Azimuth of sunrise and sunset locations, there are other indicators of the increasing force of the daily polar wobble. For instance, crane collapse.

NYC Crane Collapses into Street, Kills 2 Workers

May 30, 2008

A construction crane snapped and smashed into an apartment building with a thunderous roar Friday, killing two workers in the city's second such tragedy in 2 1/2 months and renewing fears about the safety of hundreds of cranes towering over the New York skyline. The collapse happened despite stepped-up inspections and a shake-up in the city Buildings Department after the earlier accident, which killed seven people in March. The 200-foot crane fell apart on Manhattan's Upper East Side, where contractors were building a 32-story luxury condo complex, about 12 stories high. The turntable popped off - even though there are 16 bolts that hold it down. It could be an issue with the bolts. The turntable is a piece of equipment that helps the crane rotate. If an operator tries to lift a load that is too heavy, too fast, it could pull the rig over or cause it to sway dangerously. Stopping short while swinging a very heavy load could cause the same problem, as could having a big load suddenly drop off the end of the crane.

Three Injured, Two Critically, in Black Thunder Crane Accident

May 31, 2008

<http://www.casperstartribune.net/articles/2008/05/31/>

The world's largest crane in handling capacity collapsed Saturday near Wright, sending three injured people - two critically - to hospitals and blocking a rail line at the Black Thunder coal mine. The 2.7 million-pound crane, owned and operated by the Kennewick, Wash.-based Lampson International, was moved to the site in April. The accident occurred at 12:20 pm. The mine will be shut down while agency officials conduct an investigation.

Per the Zetas, cranes are particularly susceptible to a sudden sway in the Earth, as they are not prepared to tip sideways during operation.

Birds, and airplanes in flight can adjust when buffeted about by wind currents by lowering their wings or flaps, tilting upward or downward, and increasing speed. This works unless the bird or plane does not have the air space to maneuver and crashes into the ground before an adjustment is possible. Fish, seals and submarines in the oceans likewise have many maneuvers to reposition themselves when encountering unexpected currents. Losing balance, even being tipped upside down, is not fatal as long as there is room to maneuver. Cranes are different, as being secured at the base they lack maneuverability. Cranes are structured to be able to off-set the weight of the load by the weight of the crane's ballast. This operation assumes that both the load and the ballast can rely upon the crane's center to be solidly secure.

The Earth is currently experiencing a daily wobble, as has been much discussed. What this does to planes in the air is create more air currents. What this does to fish in the sea is create more erratic tides. But what this does to cranes is off-set the delicate balance that is at the heart of crane operation. Unlike the birds in the sky or the fish in the sea, the crane cannot maneuver to rebalance itself once it starts to tip sideways. Gravity takes over, and pulls the crane to the side, an angle the crane is not prepared to expect. Cranes expect the load and ballast to be the issue, and if the ballast is not sufficient to lift the load, the load simply does not lift. Once the load is in the air, the crane can swing round to the side, slowly, but the movement does not change the essential dynamics of crane operations - that the sum weight of the load and ballast are focused down onto the crane base, with no side to side stress on this base.

A tightrope walker can adjust to a stepping error or gust of wind by shifting the pole the walker carries. But if the wind is too strong, or the misstep too great, balance is lost. The Earth wobble is like a gust of wind for a crane, in that the base is moved, suddenly, to one side, leaving the load and ballast off-center. This is a stress the crane was not designed to sustain, and bolts and cables snap. Our analysis will be ridiculed, as those who do not want to realize that the Earth is in the grip of an approaching planet that will literally turn their lives upside down resist this realization. But an analysis will show that in all other cases there is room to maneuver. Elevators allow for sway in the car as wind can cause a tall building to sway. Cars and trucks on the road have no more stress during such a wobble than they would experience rounding curves in the road. Bridges have flex points that allow the bridge to expand or contract in the cold. Only cranes require that their base not be buffeted, by anything, during operation.

ZetaTalk: Crane Accidents, written June 7, 2008



Troubled Times



Crash at Kecksburg

On June 15, 1996 ZetaTalk stated that the [Crash at Kecksburg](#) was a genuine UFO, but one the military was attempting to fly. A December, 1998 report, below, verifies the military's involvement.

The Kecksburg, PA UFO Crash Incident

By Stan Gordon, Dec. 9, 1998

It was 33 years ago today, that an event occurred about 40 miles from Pittsburgh in a rural area of western Pennsylvania, that even now remains controversial for some, and mysterious to others. At the time many people saw a brilliant object moving across the sky. The news media focused on a young boy, who while playing outside, said he saw an object fall from the sky into some nearby woods. The media pursued his story since there were numerous accounts from others, that an aerial object was seen over a large area including many reports from the greater Pittsburgh area. Besides the police authorities, various newspapers, and radio and tv stations around Pittsburgh, had their phone lines jammed with calls about the object in the sky. Coincidentally, author Frank Edwards, who had written some popular books on UFO's, was a guest on a KDKA radio talk show in Pittsburgh that evening, hosted by the late Mike Levine.

During my years of investigation into the matter, other witnesses who saw the object go down into the woods that day have been located. It has been stated that moments after the object fell, blue smoke rose up among the trees, but dissipated quickly. Many people say that the military, including members of the Army and Air Force, began to arrive in the area around the village of Kecksburg within a few hours after the reported landing. During the evening, reporters from numerous media sources went to Kecksburg to investigate the event. The area around the alleged impact site was cordoned off, and a search for the object was conducted in the woods. Neither civilians nor reporters were able to get near the spot where the object had reportedly fallen. Hundreds of spectators looked on from a narrow country road which circled around the area, unaware that the object appears to have fallen on the opposite side of the woods.

As time passed that evening, many people left disappointed that they couldn't see the object. A few curious folks tried to sneak down into the woods, and later told me that they were tuned back by the military. Late that night, others say they observed a military flatbed tractor-trailer truck, carrying a large tarpaulin covered object, leaving the area at a high rate of speed. Reporters are among the many witnesses who verify that they saw military personnel in the Kecksburg area that night. The front page of the Greensburg, PA *Tribune-Review* county edition dated December 10, 1965, ran the headlines "Unidentified Flying Object Falls Near Kecksburg" and "Army Ropes Off Area." The city edition of the same paper however, on the same day ran the headline "Searchers Fail To Find Object." Officially, no object was found in the woods by searchers. It was suggested that the most likely explanation was that the brilliant object in the sky was a meteor. But word that something was removed from the site by the military that night, quickly circulated around the county.

The Kecksburg incident remained a topic for area radio talk shows for years as it does today. As the years passed, I would receive various accounts from sources who claimed knowledge of the event. Many of those involved with the incident even today, wish to remain anonymous. Others have gone public and stand by their accounts. Some have faced personal attacks and ridicule. Many important witnesses have passed away. What we now know is that there are individuals who say that they went down into the woods that December day in 1965, before the military arrived, and came across upon a large metallic acorn

shaped object partially buried in the ground.

The device was large enough for a man to stand inside of it. The object was a bronze-gold color, and appeared to be one solid piece of metal, displaying no rivets or seams. At the back of the acorn shape was what witness Jim Romansky calls the bumper area. Upon this area were unusual markings that Romansky says looked similar to ancient Egyptian hieroglyphics. Romansky who has been a machinist for many years, says the object itself, looked as though it had been made from liquid metal and poured into a big mold. Since the object was impacted in the ground, the bottom portion was not visible, but what could be seen appeared well intact. The late John Murphy, was the new director of WHJB radio in Greensburg at the time, and is believed to have been the first reporter on the scene. His former wife says that she was in radio contact with him from the site that day, and that he told her that he went down into the woods and saw the object. Various informants have approached me with information. Some of these were people who had military or government affiliation and wish not to be identified at this time. Some information is expected to be revealed in the future, when these sources feel that they are safe to disclose what they know.

I have also received anonymous tips that pointed me in the right direction which helped to uncover other details. Before Unsolved Mysteries broadcast their story about Kecksburg in 1990, I was contacted by a former Air Force security policeman who told me that he was among the unit that guarded the object from PA, when it arrived in the early morning hours of December 10, 1965 at Lockbourne Air Force near Columbus, Ohio. He remembers extreme security measures at the time, and says that the object was only at the base for a short time, and then continued on to Wright-Patterson Air Force base near Dayton, Ohio. We later learned that the object was allegedly sealed up inside a building at that base. After years of searching for government documents relating to this event, the only official record located was in the Air Force Project Blue Book files. Included in the report it was stated "A further call was made to the Oakdale Radar site in Pennsylvania. A three man team has been dispatched to Acme [Some residents not far from the site have an Acme mailing address] to investigate and pick up an object that started a fire." While the report shows a lot of interest from various agencies concerning the aerial object, the report also indicates that the search found nothing. I have learned a lot about the Kecksburg case over the years, yet there remain many unanswered questions. I surely don't have all of the answers. Based on the accounts of multitudes of eyewitnesses which I have interviewed, I am convinced that an object did fall from the sky and apparently was removed by the military. Other witnesses say they saw NASA personnel at the scene that night also involved in the search.



Troubled Times



Crop Circles

Prior to July 15, 1995 ZetaTalk stated that [Crop Circles](#) were created by aliens, and would increase in frequency as the pole shift time approached. In the summer of 1998, the *UFO*BC Quarterly* confirmed the non-human hand in their making, and on Dec 29, 1999 increased frequency in [Canada](#) reported. By 2001, a [Clear Trend](#) was apparent.

Crop Formations and the Secrets of Deception

*UFO*BC Quarterly* - Summer 98

Sisyphos is a character in Greek mythology who was condemned for eternity to an endless struggle of rolling a large rock up a mountain only to have it come crashing down again. Serious researchers of unusual phenomena should be able to relate to this tale. Toil for years, gather solid evidence and then have it dashed by a mindless act. Repeat this scenario over and over. The producer's of **NBC's** recent documentary "*Unmasked: Exploring the Secrets of Deception*" are the latest in an endless series of 'mindless acts' plaguing the research scene. Instead of taking the time to carefully examine and weigh all evidence, they simply took the easy route and swallowed the claims of the hoaxer, - that crop formations are not the results of an unknown force but a clever human fraud. But then, would one expect a balanced view from a program entitled "...the Secrets of Deception"?

To be sure, the 300' diameter formation Rod Dickinson, John Lundberg and Wil Russell made in a field of wheat in New Zealand is impressive. They apparently made it at night in just under 6 hours using only simple tools. Through time lapse photography one can see the formation being created in leaps and bounds, circle by circle. However, there are things wrong here, things that may have escaped the average viewer. Here are just a few points.

(a) The documentary's main premise, - the ability of humans to create crop formations, has never been a point of contention. Anyone with a plank and a piece of string can do it! What we do contest however are the unsubstantiated claims of a few hoaxers to having made nearly every single formation ever discovered (over 5000 at this point). We dispute their claims by virtue of sheer numbers, quality, complexity, lack of damage, presence of diatonic ratios, sacred geometry, sacred numbers as well as the circumstances of the formation's arrival. We likewise dispute their claims by virtue of scientific evidence, such as the findings of Dr. W.C. Levensgood and others.

(b) It is a known fact that the vast majority of formations appear at night. A survey taken one year (1992) showed that two thirds came on nights when it was raining, wet and heavily overcast. The producers of "Deception" would have us believe the three hoaxers were working in total darkness. Nothing could be further from the truth. Not only was it 2/3rds full moon that night but there were spot lights hanging from cranes in order to make filming easier. Compare this virtual daylight to nights when you can't see 5 feet in front of you.

(c) It was claimed that the only equipment they used was a ball of string, a measuring tape and a wooden plank. Compare this to the mind-boggling array of equipment dragged into the fields by contestants in a hoaxing contest held some years ago. Also, I would defy them to explain how they inscribed the fairly complex pattern from a piece of paper onto the field with only a piece of string. Michael Glickman once asked an architectural firm what it would

take to reproduce the Windmill Hill formation (1000' diameter and made of 200 circles). After studying it for a few days, their estimate was one of many days work and thousands of dollars in costs.

(d) Very little detail of the ground lay was shown. An aerial photo paints a pretty picture but tells little about possible origins. Anyone who ever accepted a counterfeit \$20 bill can tell you they would not have been duped had they inspected it closer. So too with crop formations. Careful inspection is required in order to determine authenticity. Damage to crop, soil compaction, complex weaving, footprints, various anomalies in the way the crop is laying, fluidity of the lay, spilled seeds, etc. are all signs one must look for. To suggest that three men running around for six hours stomping crop with planks is enough to create the strange effects we often see, yet not cause damage, is a bit much to believe. We have seen other man made formations with substantial damage. It is a coincidence virtually no ground details were shown? It is also a coincidence the field was harvested and the formation destroyed before anyone could inspect it?

(e) The center of the inner circle was not shown. This, by their own admission was the pivot point from which the whole formation was laid out. Some years ago, Arthur Clarke had a formation made in England. The center of that one was completely trashed because this is where one had to stand with rope in hand while some at the other end of the rope measured out the rest of the formation. Funny, Clarke didn't show the severely damaged center on his program either.

(f) The circle makers admitted they knew nothing of diatonics and sacred numbers and made no effort to include these in their designs. How is it then that a great many formations show these? Dr. Gerald Hawking, an astronomer and mathematician, determined the chance of diatonic ratios he found in many formations were thousands to one. Diatonics relate to the ratios of musical scales to each other and are far more complex than what was suggested on the program.

(g) Like other hoax claimants, these three can not explain the high incidence of electronic failures and camera malfunctions within crop formations. These failures have not been reported in man made formations.

(h) One of the most important omissions of the program is that these hoaxers, as well as others, readily admit there is a real crop circle phenomenon. They have all had extremely strange experiences in the fields while in the act of making a formation. On a few occasions, they found that the design they were about to hoax was already in the field. Besides the shortcomings of "Secrets of Deception", it is important also to consider the nature and motivation of the hoaxers. Although they like to portray themselves as fun-loving pranksters, they are not. These hoaxers are, first and foremost, vandals who sneak into unsuspecting farmer's fields under cover of darkness and, if we are to believe all their claims, have caused around a million dollars worth of damage over the years. Little wonder there is a price on their heads. Nor should they be accepted as artists expressing their talents in a unique manner. Anyone wishing to express their artistic talent in farm fields need only make a deal with the farmers and then charge admission to their works of art. Sneaking around at night like burglars and car thieves is unacceptable behavior.

Why would anyone choose to be a hoaxer, - a deceiver? The very nature of hoaxing means inflicting pain and embarrassment on others. British forensic psychologist Dr. Mike Berry says, "Most hoax offenders are lonely, inadequate people who crave attention, however negative, and who will pay little regard to the consequences of their actions. If you lead a boring life and feel you have no control over what happens to you, hoaxing is away of adding excitement in much the same way as joy-riding or drugs. It is also a very repeatable offense, which means you can go on getting a buzz from it until you are caught." Clearly, we

are not dealing with a savory element of society. While there is little doubt they have varying talents of arguable limits, they contribute absolutely nothing to the field of research. Their very presence is an impediment. Let them cast their dark shadows elsewhere and allow us to continue on a level playing field. This dispute however, will likely continue for some time to come.



Troubled Times



Crop Circle Video

On Jan 15, 1997, ZetaTalk stated that a [Crop Circle Video](#) taken while a circle was being created was not a [Fake](#), though loudly pronounced to be so. Later analysis by CAUS organization in Dec, 1999 showed video *not* to be a fake but genuine.

Oliver's Castle Video Revisited

Stunning Oliver's Castle Crop Circle Video Withstands Closest Analysis
CAUS, Dec 14, 1999

I assume most of you are familiar with the "Oliver Castle" video. The new information is to be found at the beginning of the film, in the first few seconds when the camera pulls back to show both of the fields and the hedgerows, before you see the two luminosities or balls of light enter the foreground from the right. By using computer enhancement (each frame 1/30th of a second), the analysis shows what appears to be a large luminosity (800 feet from camera) descend from the sky and change to a classic "flying saucer" shape as it disappears behind the large tree (20 feet across) at the left end of the far hedgerow at the top of the screen. This UFO cannot be seen on your TV, but after watching the analysis, I noticed a flash of light on the left side of the tree when the film is advanced frame by frame on a standard TV.

At this point the edge of the flat disc-like shape with a bulge in the middle, is seen poking out of the left side of the tree on the hedgerow, appearing to be solid and casting a shadow. This is not a "burmark," as it is below the scan line on the edge of the tape. Then you see a flash of light and ejection of a gas-like substance, out of which appears another ball of light or luminosity. This luminosity then races across the far field in and out of the crops and reappears as it crosses the first hedgerow to enter the foreground as the other two luminosities are exiting the screen to the top right. These two balls of light which have just flown around and over the "snowflake" design as it formed in the field, appear to return to the area where the large tree is hiding the UFO.

Then as this ball of light enters the front field to make its way around the "snowflake" design, it appears to divide itself into two balls of light, in much the same way that the UFO captured on tape by Chris Martin (UK) is seen to split into two pieces and continue flying, as shown by Russel Callaghan in the film from Graham Birdsall's UFO Magazine, called "Hard Evidence-Vol.4". These two luminosities then fly around the "snowflake" design and also appear to return to the large tree at the far left end of the second hedgerow at the top of the screen where the UFO is seen hovering. So what this analysis suggests is that a UFO descended into the area and hid behind a large tree at the second hedgerow from the crop field where the "snowflake" formation appeared. Then it discharged two luminosities which first appeared on the "Oliver Castle" video, then discharged another ball of light which followed the other two and split itself into two luminosities on the second flyover around the "snowflake" design.

So here's the big question! If this "Oliver Castle" video was hoaxed on a computer, why add in luminosities that could *not* be seen on a standard TV system? Skeptics would argue that this analysis presented by the producers is the result of "computer artifacts", or simply put, just a case of looking too hard. Additional verification of this computer enhancement by independent labs would strengthen the case that there's more to this video than meets the unaided and untrained eye! ... Therefore, if this footage is indeed hoaxed, as many crop circle researchers claim, then whoever made it went to a great deal of trouble creating and animating objects which could not be seen on a standard television.

Here is a brief summary of our findings:

1. The enhanced frames are consistent with the picture quality attained from a domestic camcorder.
2. No evidence of 3-dimensional computer animation was detected on the video. The crop formation was considered 'genuine' by several experienced researchers.
3. No strings or wires were detected.
4. The 'flying saucer' object cannot be seen on a standard TV set.
5. The luminosities or balls of light are no larger than a medium-sized beach ball. They travel at around 100 feet per second.



Troubled Times



Crop Failures

In May, 1995 ZetaTalk stated that [Crop Failure](#) would occur due to erratic weather giving the wrong signals to plants, where they would think spring had come early, causing worldwide crop failures.

As we described earlier, going into the cataclysms the weather will become unpredictable, with torrential rainstorms where not expected, and droughts likewise where not expected. Extremes of temperature will be experienced. Unusually warm winters, where the trees and shrubs will start to bud, thinking spring, and then be subjected to frost. Similarly, frosts will come late in the spring, almost into summer, killing the buds which have already put forth their tender shoots. During the years coming close to the time of the reappearance of Planet X, the giant comet, all parts of the world will experience extremes. Of course, leading up to the cataclysms, not all produce will fail. Greenhouse crops will come through. Backyard gardens, tendered carefully by watchful eyes, will survive. But the large cash crops that supply crowded population centers will find little to market, and the prices will go up accordingly.

ZetaTalk: [Crop Failure](#), written July 15, 1995

Lands used to regular rains, now suffering droughts, may find these droughts turning their land into deserts. Rain forests may fear being washed away as rain comes not only more often but with a greater load of water. Drought or deluge, there will be few places on Earth not affected by one of these extremes, and all of this affects the success of crops.

ZetaTalk: [Weather Extremes](#), written July 29, 2005

Starting in [January 1998](#), reports of such crop failures began coming in, but as the [Shortage](#) TOPIC shows, this did indeed [increase exponentially](#) in 2000. By late [2002, a UN Report](#) documented the extent as worldwide, devastating, and due to weather related problems and reports in [2003 and 2004](#) showed this not abating. Worldwide, food stores are shrinking. In [2006](#), heat waves and drought affecting the US and Canada and Australia, and heat in Europe, devastated crops and livestock. By 2007, the fact that food stocks were depleted was admitted. By 2008, the price of grains was forcing starvation on almost half the world's population. In 2009, Global Research reported that crops around the world were expected to be decimated by 30-40% in some cases, the major food producing countries the worst hit by drought.

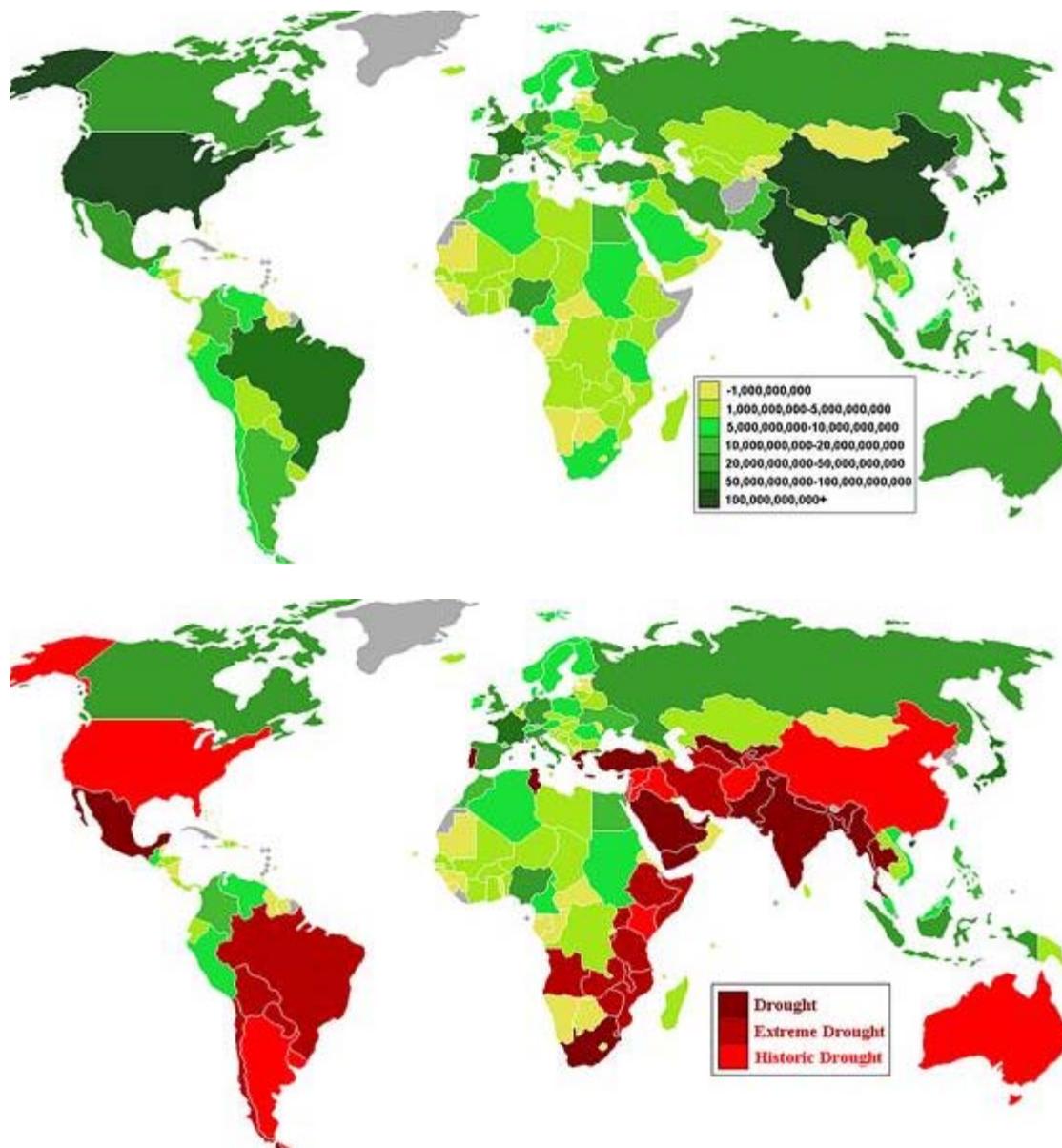
2009

Catastrophic Fall in 2009 Global Food Production

February 10, 2009

<http://www.globalresearch.ca/index.php?context=viewArticle&code=DEC20090210&articleId=12252>

To understand the depth of the food Catastrophe that faces the world this year, consider the graphic below depicting countries by USD value of their agricultural output, as of 2006. Now, consider the same graphic with the countries experiencing droughts highlighted. The countries that make up two thirds of the world's agricultural output are experiencing drought conditions. Whether you watch a video of the drought in China, Australia, Africa, South America, or the US, the scene will be the same: misery, ruined crop, and dying cattle.



The drought in Northern China, the worst in 50 years, is worsening, and summer harvest is now threatened. The area of affected crops has expanded to 161 million mu (was 141 million last week), and 4.37 million people and 2.1 million livestock are facing drinking water shortage. The scarcity of rain in some parts of the north and central provinces is the worst in recorded history. The drought which started in November threatens over half the wheat crop in eight provinces - Hebei, Shanxi, Anhui, Jiangsu, Henan, Shandong, Shaanxi and Gansu. China produces 18% of the world's grain each year.

Australia has been experiencing an unrelenting drought since 2004, and 41 percent of Australia's agriculture continues to suffer from the worst drought in 117 years of record-keeping. The drought has been so severe that rivers stopped flowing, lakes turned toxic, and farmers abandoned their land in frustration. The Murray River stopped flowing at its terminal point, and its mouth has closed up. Australia's lower lakes are evaporating, and they are now a meter (3.2 feet) below sea level. If these lakes evaporate any further, the soil and the mud system below the water is going to be exposed to the air. The mud will then acidify, releasing sulfuric acid and a whole range of heavy metals. After this occurs, those lower lake systems will essentially become a toxic swamp which will never be able to be recovered. The Australian government's only options to prevent this are to allow salt water in, creating a dead sea, or to pray for rain.

California is facing its worst drought in recorded history . The drought is predicted to be the most severe in modern times, worse than those in 1977 and 1991. Thousands of acres of row crops already have been fallowed, with more to follow. The snowpack in the Northern Sierra, home to some of the state's most important reservoirs, proved to be just 49 percent of average. Water agencies throughout the state are scrambling to adopt conservation mandates.

The Texan drought is reaching historic proportion . Dry conditions near Austin and San Antonio have been exceeded only once before - the drought of 1917 - 18. 88 percent of Texas is experiencing abnormally dry conditions, and 18 percent of the state is in either extreme or exceptional drought conditions. The drought areas have been expanding almost every month. Conditions in Texas are so bad cattle are keeling over in parched pastures and dying. Lack of rainfall has left pastures barren, and cattle producers have resorted to feeding animals hay. Irreversible damage has been done to winter wheat crops in Texas. Both short and long-term forecasts don't call for much rain at all, which means the Texas drought is set to get worse.

The worst drought in half a century has turned Argentina's once-fertile soil to dust and pushed the country into a state of emergency. Cow carcasses litter the prairie fields, and sun-scorched soy plants wither under the South American summer sun. Argentina's food production is set to go down a minimum of 50 percent, maybe more. The country's wheat yield for 2009 will be 8.7 million metric tons, down from 16.3 million in 2008. Concern with domestic shortages (domestic wheat consumption being approximately 6.7 million metric ton), Argentina has granted no new export applications since mid January . Brazil has cut its outlook for the crops and will do so again after assessing damage to plants from desiccation in drought-stricken regions. Brazil is the world's second-biggest exporter of soybeans and third-largest for corn.

2008

Jump in Rice Price Fuels Fears of Unrest

March 27 2008 18:30

http://www.ft.com/cms/s/0/d6f1cd74-fc29-11dc-9229-000077b07658.html?nclick_check=1

Rice prices jumped 30 per cent to an all-time high on Thursday, raising fears of fresh outbreaks of social unrest across Asia where the grain is a staple food for more than 2.5bn people. The increase came after Egypt, a leading exporter, imposed a formal ban on selling rice abroad to keep local prices down, and the Philippines announced plans for a major purchase of the grain in the international market to boost supplies. Global rice stocks are at their lowest since 1976. While prices of wheat, corn and other agricultural commodities have surged since late 2006, the increase in rice prices only started in January. The Philippines, the world's largest buyer of the grain, said on Thursday it wanted to purchase 500,000 tonnes after it failed to buy a similar amount earlier this month. It is struggling to import 1.8m-2.1m tonnes to cover a production shortfall and on Thursday confirmed it would tap emergency stocks maintained by Vietnam and Thailand. Rice is also a staple in Africa, particularly for small countries such as Cameroon, Burkina Faso and Senegal that have already suffered social unrest because of high food prices. Thai rice, a global benchmark, was quoted on Thursday at \$760 a tonne, up about 30 per cent from the previous daily quote of about \$580 a tonne, according to Reuters data. Some traders, however, said the daily jump was not as steep, adding that Thai rice had already traded at about \$700 a tonne this week.

High Food Prices May Force Aid Rationing

February 24 2008

<http://www.ft.com/cms/s/0/451604c4-e30b-11dc-803f-0000779fd2ac.html>

The United Nation's agency responsible for relieving hunger is drawing up plans to ration food aid in response to the spiralling cost of agricultural commodities. The World Food Programme is holding crisis talks to decide what aid to halt if new donations do not arrive in the short term. WFP officials hope the cuts can be avoided, but warned that the agency's budget requirements were rising by several million dollars a week because of climbing food prices. The WFP crisis talks come as the

body sees the emergence of a "new area of hunger" in developing countries where even middle-class, urban people are being "priced out of the food market" because of rising food prices. The warning suggests that the price jump in agricultural commodities - such as wheat, corn, rice and soyabeans - is having a wider impact than thought, hitting countries that have previously largely escaped hunger. In response to increasing food prices, Egypt has widened its food rationing system for the first time in two decades while Pakistan has reintroduced a ration card system that was abandoned in the mid-1980s. Countries such as China and Russia are imposing price controls while others, such as Argentina and Vietnam, are enforcing foreign sales taxes or export bans. Importing countries are lowering their tariffs.

2007

Riots and Hunger Feared as Demand for Grain Sends Food Costs Soaring

Dec 5, 2007

<http://www.guardian.co.uk/china/story/0,,2221372,00.html>

The risks of food riots and malnutrition will surge in the next two years as the global supply of grain comes under more pressure than at any time in 50 years, according to one of the world's leading agricultural researchers. "Demand is running away. The world has been consuming more than it produces for five years now. Stocks of grain - of rice, wheat and maize - are down at levels not seen since the early 80s," said von Braun, whose organization is the world's largest alliance of agricultural researchers, economists, and policy experts. So far, crises have been averted because states have eaten into national stocks, but this could be set to change because China, in particular, has run down its supplies. Added to this are the pressures caused by global warming, which have been blamed for the droughts that damaged crops in Australia this year.

World Food Stocks Dwindling Rapidly, UN Warns

December 17, 2007

<http://www.ihf.com/articles/2007/12/17/europe/food.php>

In an "unforeseen and unprecedented" shift, the world food supply is dwindling rapidly and food prices are soaring to historic levels, the top food and agriculture official of the United Nations warned. The changes created "a very serious risk that fewer people will be able to get food," particularly in the developing world, said Jacques Diouf, head of the UN Food and Agriculture Organization. Reserves of cereals are severely depleted, FAO records show. World wheat stores declined 11 percent this year, to the lowest level since 1980. That corresponds to 12 weeks of the world's total consumption - much less than the average of 18 weeks consumption in storage during the period 2000-2005. There are only 8 weeks of corn left, down from 11 weeks in the earlier period.

2006

California Heat Kills 25,000 Cattle

Jul 27, 2006

<http://www.breitbart.com/news/2006/07/27/060727234618.ryu821kk.html>

A heat wave baking California since mid July has killed 25,000 cattle and 700,000 fowl, prompting emergency measures and crippling the sector for months to come. Central California between Bakersfield and Redding is home to approximately 2.5 million cattle. Roughly 25,000 died because of the triple-digit temperatures since July 14. Milk production in central California is also down. Tulare-based Land O' Lakes Creamery normally produces 1.6 million gallons (6.0 million liters) of milk daily. The company has been reporting losses of 400,000 gallons (1.1 million liters) a day.

Heatwave Hits Vegetable Supplies

July 28, 2006

<http://news.bbc.co.uk/2/hi/business/5223836.stm>

High temperatures mean vegetables are maturing faster than farmers can pick and package them,

an agricultural body has warned. The extreme heat has struck down crops across Europe. In Poland and Hungary some crops are expected to be 40% below normal yields, the Association of European Fruit and Vegetable Processing Industries warned. It said the very hot weather was creating a short picking season. In the UK the Processed Vegetable Growers' Association (PVGA) predicted that yields of peas, broad beans, cauliflower and spinach could drop by 20%.

Dakotas at 'Epicenter' of U.S. Drought

Jul 29, 2006

http://www.huffingtonpost.com/2006/07/29/dakotas-at-the-epicenter-_n_26066.html

Fields of wheat, durum and barley in the Dakotas this dry summer will never end up as pasta, bread or beer. What is left of the stifled crops has been salvaged to feed livestock struggling on pastures where hot winds blow clouds of dirt from dried-out ponds. More than 60 percent of the United States now has abnormally dry or drought conditions, stretching from Georgia to Arizona and across the north through the Dakotas, Minnesota, Montana and Wisconsin, said Mark Svoboda, a climatologist for the National Drought Mitigation Center at the University of Nebraska at Lincoln.

Perth Rainfall hits Record Low

Aug 1, 2006

<http://www.abc.net.au/news/newsitems/200608/s1702187.htm>

The latest figures from the weather bureau in Western Australia confirm Perth is having its driest year on record. The state's capital has recorded only 215.6 millimetres of rain for the seven months to July. The previous record low for the same period was 304.5 millimetres in 1940. Bureau spokesman Neil Bennett says so far this year the rainfall is more than 300 millimetres below average.

1998

Springfield, Ill. Jan. 5, 1998 (UPI)

Illinois agriculture officials say unusually mild weather with soaking rains may send the wrong message on winter wheat dormancy.



Troubled Times



Dark Matter

Prior to July, 1995 ZetaTalk stated that a massive amount of tiny matter, not [Dark Matter](#), was the largest component in the Universe. On January 6, 1999, the AAS presented evidence that dark matter galaxies, called Ghost Galaxies, outnumber and outweigh luminous galaxies, and on April 6, 2000 the *Associated Press* confirmed that the tiny matter conclusion was being adopted by scientists.

Ghost Galaxies

American Astronomical Society, January 6, 1999

Astronomers suggest that there may be a large number of dark galaxies. In fact, galaxies made almost entirely of dark matter may outnumber luminous galaxies like our Milky Way.

This conclusion is based on a study of dark matter properties in 43 galaxies ranging from the most luminous spirals to the faintest galaxies known. It shows that dark matter properties correlate with luminosity and that it is normal for the smallest galaxies, which contain just a faint scatter of stars, to have high densities of dark matter. These galaxies look gossamer, but they are like cannonballs: they contain a much higher density of dark matter than do giant galaxies. Almost-dark galaxies like these are the most common ones known. Darker galaxies - ones with too few stars to be discovered - may be more common still.

These results are being presented today at the 193rd Meeting of the American Astronomical Society in Austin, Texas, by John Kormendy of the University of Hawaii and Kenneth C. Freeman of the Australian National University and Mount Stromlo Observatory.

Scientists beginning to shed light on dark matter

By Matthew Fordahl, *Associated Press*, April 6, 2000

The invisible and so far unidentified dark matter that accounts for 90 percent of the universe could soon be brought to light as scientists develop sensitive detectors capable of sniffing out tiny particles predicted by theory but not yet proven to exist. Teams of researchers are racing to build the devices even though they might be hunting for something that occurs only in the minds of theoretical physicists. If so, a generation of theories can be tossed out. But if the weakly interacting massive particles - WIMPs - are detected, the finding could solve fundamental mysteries of the universe: how it formed after the Big Bang, the nature of its structure and whether it will all end in a Big Crunch. "It will certainly be one of the great discoveries in the history of science," said physicist Joel Primack of the University of California, Santa Cruz. "It will be a window on a completely different aspect of the universe."

Astronomers have known for 70 years that visible matter is only a small part of the universe. Something that exerts a strong gravitational tug, for instance, causes the outer stars of a spiral galaxy to revolve faster than they should, given what is visible. Other dark matter possibilities have been ruled out. Dead stars, large planets and black holes, once thought to be leading candidates, are now considered unlikely. Weighty but ghostly WIMPs are currently the prime suspects. Physicists theorize that the tiny particles originated during the Big Bang, but they only interact weakly with the protons and neutrons of the visible universe. If real, 10 trillion WIMPs may be zipping through every 2 pounds of matter here on Earth every second. A dozen experiments worldwide are based on the assumption that occasionally a WIMP might

smack into normal matter. But the challenge has been to differentiate them from other particles that zip through the cosmos.



Troubled Times



Deflecting Asteroids

In June, 1996 ZetaTalk stated that [Deflecting Asteroids](#) with nukes would be ineffectual.

Does mankind now have the means to deflect such large, rapidly moving objects? Such a deflection would require a precisely placed explosive device of sufficient strength to vaporize the asteroid. Disintegration would be required because deflection is not possible in space. A nuclear explosion set off on the surface of an object in space would have minimal effect, as the explosion can expand in all directions at once. Nuclear explosions on the Earth's surface are an irresistible force meeting an immovable object - the Earth! Where the explosion can expand up or outward into the atmosphere there is only air turbulence. The portion of the explosion that is on the land side, or in the case of an underground explosion is encapsulated, is between a rock and a hot expanding place. The explosion is forced into the rock strata by the continuously expanding center of the explosion. Solid rock vaporized by nuclear explosions on the Earth's surface does not equate to the damage that would be done by one or even many nuclear devices on the surface of an asteroid. All parts of the explosion move rapidly out into space, and thus the asteroid is safely away before the nuke really gets going. A firecracker. A gnat. A sneeze. And the asteroid proceeds on its way, having only momentarily stepped aside to avoid mankind's silly experiment.

ZetaTalk: [Deflecting Asteroids](#), written on Jul 15, 1996.

In June, 1998 a computer model on nuking asteroids showed this to be the case.

CCNet DIGEST 4 June 1998

Nukes May Not be Enough to Save earth from Asteroids

From *Press Agency News* <http://www.pa.press.net>

By John von Radowitz, Science Correspondent, *PA NEWS*

It would be far from easy to save the Earth from an incoming asteroid if the crisis depicted in the action film *Deep Impact* ever became reality, a study showed today. It had previously been thought that nuclear blasts could be used to deflect or break up an asteroid on collision course with Earth. But scientists have found that some types of asteroid could soak up a powerful nuclear explosion with little or no effect. Astronomer Erik Asphaug, a researcher associate at the University of California, Santa Cruz, used computer simulations to study the effects of powerful impacts on asteroids with different internal structures. And he and his colleagues found that the outcome of blasting an asteroid depends entirely on its structure.

Many asteroids are not single rocks, but are aggregates of debris left over from previous collisions. They might consist of a few large fragments held together by gravity or "rubble piles" consisting of numerous smaller pieces. The new study, published today in the journal *Nature*, shows that the porous nature of such asteroids would dampen down shock waves from a nuclear explosion, limiting its effects to a localised area. "It's lot more difficult to nudge these asteroids around than we had thought," said Asphaug. "More work needs to be done before we can decide whether nuclear warheads provide a viable deterrent."

The researchers created a computer model of an asteroid one mile across based on radar images of a near-Earth asteroid called Castalina. They gave the peanut-shaped body three different internal structures: solid rock, a pair of solid rocks in close contact, and a rubble pile with pore space taking up 50% of its volume. For each of these, an impact by a house-sized

rock travelling at five kilometres per second was simulated. This is equivalent to the energy produced by the atom bomb dropped on Hiroshima. **In the rubble pile model, the impact shock wave died out quickly leaving a large crater in one spot, without disturbances to the rest of the asteroid. At the opposite extreme, a solid rock asteroid may shatter into many smaller pieces when blasted. The pieces form a family of smaller asteroids, or come together to form a rubble pile.**

To predict the effect of a nuclear explosion on any particular asteroid, scientists would need to understand the object's internal structure, said Asphaug. There are hundreds of thousands of asteroids in near-Earth space which if they struck the planet would have as big an impact as the largest thermonuclear device ever exploded. Although the likelihood of one of these asteroids hitting the Earth was small, the consequences would be disastrous. Asphaug said: "Asteroids are not an imminent threat, and I am far more concerned about what human beings are doing to the planet. But in case we ever identified an asteroid or comet on a collision course, it would be best to know our enemy so that we can get it before it gets us."



Troubled Times



Deformed Frogs

In October, 1996 ZetaTalk stated that the recent spate of [Deformed Frogs](#) indicate they are sensitive to emanations from the Earth's core cause by the 12th Planet's approach; in May, 1998 an article explains that scientists cannot find a conventional explanation.

Where Have All the Frogs Gone?

Scientists Gather in Search of the Answer

7:12 a.m. ET (1112 GMT) May 27, 1998

By Amanda Onion, *Fox News*

In recent years, biologists have slogged to swamps and streams to listen for frogs, and they have come back with some ominous reports: The cacophony of noise that once originated from thousands of nightcallers has dwindled to a scattering of lonely croaks. "It's been a case of silent streams," said John Wilkinson, international coordinator for the Declining Amphibian Populations Task Force, a group that monitors the worldwide decline in frog populations. "Where there were thousands of frogs all calling away, the next year there are none except dead, bloated bodies."

Since the late 1980s, the number of frogs has dropped precipitously worldwide in a trend that has biologists stumped. Of the more than 4,000 current frog species, more than 200 are approaching dangerously low numbers. Particularly mysterious is the fact that the most severe declines are occurring in pristine environments like Yosemite National Park, Kings Canyon and nature preserves in Costa Rica, Canada and Australia. **Habitat disruption - the usual culprit in species decline - appears irrelevant here. So what is to blame?**

The fact that that question remains unanswered as frogs continue to vanish has prompted a group of top U.S. officials to zero in on the frog issue. Representatives from the Department of the Interior, the National Institute of Health, the Department of Agriculture and the Environmental Protection Agency, among others, will be in attendance as herpetologists (amphibian specialists) from around the world gather in Washington D.C. on Thursday and Friday to compare notes about the declines and possible causes. Most importantly, the scientists hope to convey that the frogs' problem could become our problem and merits more research money.

"Frogs don't have scales, feathers or fur, so they're like little sponges," explained Karen Lips, a herpetologist from St. Lawrence University. "If a frog is sitting in the water, it absorbs whatever is in the water or in the air. If it's on the land, it's going to pick up moisture in the soil and whatever is in the soil. If there's acid rain, frogs are going to be hit first." The thin-skinned nature of the slippery amphibian has earned it the distinction of being the "canary in the coal mine" of impending environmental doom. In other words, if chemical pollutants or abnormal increases in ultraviolet radiation or a proliferation of an infectious bacteria is threatening life on Earth, the frogs will be the first to feel it.

The first major sign that frogs were feeling it was the sudden disappearance of the golden toad in 1989. Famous for its bright orange skin that glowed like a night light in the dense tropical forests of Costa Rica, this tourist attraction vanished from view in a mere two years. "It was

just like, 'Hey no one's seen the golden toad this year,'" recalled Lips. "It was hard to figure out what had happened because people just sort of noticed over time. Then it was too late." Two years later, following up on a hunch that whatever killed the golden toad and other frog species in Costa Rica was moving northward, Lips traveled to Panama to check in on frog populations there and stumbled upon a horrifying scene: frog corpses everywhere.

"The bodies looked totally fine, their eyes were open and they looked plump and healthy," she said. "But when we grabbed them they were either frozen dead, or they were so sick they couldn't move at all." In her study, published a year later, Lips suggested that whatever was killing the frogs in Panama and Costa Rica could also be responsible for the widespread frog declines in Australia, northern California, the central United States and Canada. Pathologists have studied samples of the dead frogs for nearly a year and plan to publish their findings in the next month.

In the meantime, biologists have collected their own theories about what may be killing the frogs. Knowing that the deaths were caused principally by disease and have affected mostly adult amphibians living at high altitudes, scientists have concluded that a particular fungus or bacteria present in the soil or water is infecting and killing the frogs. But that theory leaves many questions unanswered. "Animals have been getting diseases since life evolved," said Cynthia Carey, a biology professor at the University of Colorado at Boulder. "Somehow they're playing a more pronounced role now than ever before." Carey, who has been focusing on the frog problem for eight years, suggests pollutants such as acid rain or man-made chemicals may have weakened frogs' immune systems, making them more vulnerable to disease. Another possibility is certain fungi or bacteria living underground is thriving under changed environmental conditions.

Acid rain is known to increase the acidity in soil, which in turn affects the population mix of bacteria and fungi living underground. It could be that a change in pH levels alone could spur the proliferation of certain nasty, frog-infecting fungi. These are the kinds of theories that biologists will bring to the table Thursday in an effort to solve the mystery of the declining frog populations and to generate new research funding. As Carey points out, new funding is crucial not only to support current research but also to rally new scientists to the cause. "Biologists can't solve this problem alone," she said. "We need money to lure scientists from other disciplines. We need immunologists, climatologists and microbiologists to solve this problem."

It could be that whatever is killing the frogs is a fluke virus or protozoan that targets only this amphibious group of animals. But that's unlikely. In fact, this week the Worldwatch Institute, a nonprofit environmental watchdog group, made the dismal announcement that about one in four vertebrate species surveyed are threatened with extinction. The frog has proven to be a hearty survivor in the past with some species dating as far back as the Jurassic period. But as Wilkinson pointed out, frogs must now deal with a fellow species, one that is perhaps even more threatening to them than the dinosaur. "When frogs were evolving into what they are now, there weren't any humans around," he said. "That is a big difference."



Troubled Times



Devil's Triangle

Prior to July, 1995 ZetaTalk reported that the [Devil's Triangle](#) problems, as well as a site off Japan and in the Great Lakes, were subject to density switching. On Jan 18, 2000 the Navy reported human error or magnetic irregularities responsible for all Devil's Triangle problems, but a [Sailor's Tale](#) documents the density switching nature that the Zetas reported.

Department of the Navy - Naval Historical Center
805 Kidder Breese SE - Washington Navy Yard
Washington DC 20374-5060

The Bermuda Triangle, 18 January 2000

1. US Coast Guard and US Navy. "*Bermuda Triangle Fact Sheet.*" (below)
2. US Navy. "*The Bermuda Triangle: A Selective Bibliography.*"
3. Rosenberg, Howard, "*Exorcising the Devil's Triangle,*" Sealift 24, No. 6, (June 1974) 11-15
4. Loss of Flight 19 FAQ
5. USS Cyclops history

Bermuda Triangle Fact Sheet

Prepared by the U.S. Coast Guard Headquarters and the Naval Historical Center

The U. S. Board of Geographic Names does not recognize the Bermuda Triangle as an official name and does not maintain an official file on the area. The "Bermuda or Devil's Triangle" is an imaginary area located off the southeastern Atlantic coast of the United States, which is noted for a high incidence of unexplained losses of ships, small boats, and aircraft. The apexes of the triangle are generally accepted to be Bermuda, Miami, Fla., and San Juan, Puerto Rico. In the past, extensive, but futile Coast Guard searches prompted by search and rescue cases such as the disappearances of an entire squadron of TBM Avengers shortly after take off from Fort Lauderdale, Fla., or the traceless sinking of USS Cyclops and Marine Sulphur Queen have lent credence to the popular belief in the mystery and the supernatural qualities of the "Bermuda Triangle."

Countless theories attempting to explain the many disappearances have been offered throughout the history of the area. The most practical seem to be environmental and those citing human error. The majority of disappearances can be attributed to the area's unique environmental features. First, the "Devil's Triangle" is one of the two places on earth that a magnetic compass does point towards true north. Normally it points toward magnetic north. The difference between the two is known as compass variation. The amount of variation changes by as much as 20 degrees as one circumnavigates the earth. If this compass variation or error is not compensated for, a navigator could find himself far off course and in deep trouble. An area called the "Devil's Sea" by Japanese and Filipino seamen, located off the east coast of Japan, also exhibits the same magnetic characteristics. It is also known for its mysterious disappearances.

Another environmental factor is the character of the Gulf Stream. It is extremely swift and turbulent and can quickly erase any evidence of a disaster. The unpredictable Caribbean-Atlantic weather pattern also plays its role. Sudden local thunder storms and water spouts often spell disaster for pilots and mariners.

Finally, the topography of the ocean floor varies from extensive shoals around the islands to some of the deepest marine trenches in the world. With the interaction of the strong currents over the many reefs the topography is in a state of constant flux and development of new navigational hazards is swift. Not to be underestimated is the human error factor. A large number of pleasure boats travel the waters between Florida's Gold Coast and the Bahamas. All too often, crossings are attempted with too small a boat, insufficient knowledge of the area's hazards, and a lack of good seamanship. The Coast Guard is not impressed with supernatural explanations of disasters at sea. It has been their experience that the combined forces of nature and unpredictability of mankind outdo even the most far fetched science fiction many times each year.

We know of no maps that delineate the boundaries of the Bermuda Triangle. However, there are general area maps available through the Distribution Control Department, U.S. Naval Oceanographic Office, Washington, D.C. 20390. Of particular interest to students if mysterious happenings may be the "Aeromagnetic Charts of the U.S. Coastal Region," H.O. Series 17507, 15 sheets. Numbers 9 through 15 cover the "Bermuda Triangle."

Interest in the "Bermuda Triangle" can be traced to (1) the cover article in the August 1968 *Argosy*, "The Spreading Mystery of the Bermuda Triangle", (2) the answer to a letter to the editor of the January 1969 *Playboy*, and (3) an article in August 4, 1968 I, "Limbo of Lost Ships", by Leslie Lieber. Also, many newspapers carried a December 22, 1967 *National Geographic Society* news release which was derived largely from Vincent Gaddis' *Invisible Horizons: True Mysteries of the Sea* (Chilton Books, Philadelphia, 1965. OCLC# 681276) Chapter 13, "The Triangle of Death", in Mr. Gaddis' book, presents the most comprehensive account of the mysteries of the Bermuda Triangle. Gaddis describes nine of the more intriguing mysteries and provides copious notes and references. Much of the chapter is reprinted from an article by Mr. Gaddis, "The Deadly Bermuda Triangle", in the February 1964 *Argosy*. The article elicited a large and enthusiastic response from the magazine's readers. Perhaps the most interesting letter, which appeared in the May 1964 *Argosy's* "Back Talk" section, recounts a mysterious and frightening incident in an aircraft flying over the area in 1944.



Troubled Times



Dinosaurs

On Feb 2, 2002 the Zetas stated that [Dinosaurs](#) were not killed due to a meteor strike. Most recent scientific evidence supports a slow dieoff, consistent with the Zeta explanation. On Jan 6, 2008 the argument connecting the dinosaur dieoff over millions of years with the ascent of disease carrying insects was made.

Meteorite Not Responsible for Dinosaurs' Extinction

Nov 17, 2004

A study conducted by researchers from the University of Princeton has revealed that dinosaurs that roamed the Earth some millions of years before mankind's evolution on this watery planet, did not get extinct due to the great meteorite impact earlier believed to be the sole cause of their extinction. According to ABC online, geologists carrying on excavations at the Chicxulub crater have claimed that dinosaurs suffered in two stages rather than one catastrophic impact at Chicxulub crater, the latter according to the experts having taken place nearly hundreds or thousands of years too early for their extinction, as much as 300,000 years before the mass die-off. The latest study presented at the annual meeting of the Geological Society of America, in effect completely pours water over the previous theory that the meteorite impact at the crater was the "smoking gun" for the annihilation of nearly 70% of living species at the Cretaceous-Tertiary (or the K-T) boundary, 65 million years ago.

Did mozzies, not a meteor, do for the dinosaurs?

January 6, 2008

<http://www.dailymail.co.uk/pages/live/articles/technology/technology.html?>

Disease-carrying mosquitoes could have killed off dinosaurs instead of a cataclysmic comet. The theory goes that dinosaurs were wiped out after an asteroid smashed into the Earth 65million years ago. But now it has been suggested they were sent into eternity by an equally catastrophic but somewhat smaller threat - biting insects. Disease spread by mosquitoes, mites and ticks was probably the major factor that finished off the reptiles, say scientists.



Troubled Times



Discovery Shuttle

On July 1, 2006 the Zetas were asked on the GodlikeProduction Live Radio show why there was such a press to get the Discovery up to the ISS. They stated this was to transport triangulation information on the position of Planet X, and that NASA would be warned that the Discovery could be taken down as the Columbia was, if such transport was done with the information not shared with the common man.

Since the last shuttle to go up went up and down with no loss of life they have become braver and want to return to carrying information about what they observe on the ISS about the position of Planet X, triangulating up there as they are. This is information as we have stated that is not transmitted back to Earth in case it gets intercepted and decoded and thus runs round the internet as evidence of peculiar behavior by the major powers, US and Russia and the like, and the whole Planet X cover-up splits wide open like a rotten melon. So they must bring this back by shuttle and they are taking another chance. ... We and other benign aliens are trying to send a signal that they should worry about the safety of the shuttle and not attempt to bring this information back.

ZetaTalk: [GodlikeProduction Live](#), written Jul 1, 1996

The next day, on July 2, a crack in the foam was discovered, and upon takeoff on July 4, several pieces fell off! Certainly a clear warning as the Columbia supposedly disintegrated due to loss of a piece of foam! Then, while in space, a fuel leak was discovered.

New problem found on Discovery

Crack found in fuel tank foam - could further delay launch

[MSNBC](#) July 2, 2006

NASA managers were deciding Monday whether to call off a scheduled Fourth of July space shuttle launch after a 5-inch-long crack was found in the foam of Discovery's external fuel tank. The crack was spotted during an overnight inspection. The inspectors found a crack one-eighth of an inch deep in the foam on a bracket near the top of the external fuel tank.

Independence Day liftoff for Discovery

[CNN](#), July 4, 2006

Pieces of foam came off the external fuel tank when the shuttle lifted off. NASA officials did not yet have information about its significance.

Safe landing for space shuttle Discovery

[New Scientist](#), July 17, 2006

The safe landing followed 13 busy days in space for its six crew members, whose mission has left International Space Station (ISS) ready for renewed construction. ... One of three Auxiliary Power Units (APUs) in Discovery's rear compartment had a small leak - about six drops per hour. The APUs power the hydraulic pump, which controls some of the systems needed for landing, such as the rudder/speed brake and the wing flaps.

When the Discovery returned home safely a week later, the Zetas were asked if they had given up on shuttling information back on the shuttle. The answer, yes!

Indeed, they were given so many warnings - not only all the pieces of foam falling off, but the fuel line

breach. To happen on a shuttle that had been inspected and re-inspected with great care before this trip, they knew that this degree of so-called accidents was a sign that they were being warned. You're going to blow up. You're going to have fuel line explosions. You're going to overheat and that, combined with the fuel line explosion, is going to blow you up. So don't do it. Don't bring the information back on the shuttle. We have warned you. And they reverted to sending transmissions from the ISS back to Earth. This opens the possibility of these transmissions being intercepted and someone being assisted in decoding the message and it getting out on the internet.

ZetaTalk: [GodlikeProduction Live](#), written Jul 22, 1996



Troubled Times



Dogon Tribe

On Aug 15, 1995 ZetaTalk stated that the [Dogon Tribe](#) in Africa had encountered and learned astronomy from the giant hominoids of the 12th Planet in the past. On Nov 15, 1999 this history was posted on the web, through [Skeptics](#) persist.

Did the Dogon tribe of Mali learn astronomy from Extraterrestrials?

The year was 1947. The French anthropologist Marcel Griaule had been studying African culture for 19 years, and had been living among and studying the Dogon tribe of French West Africa for 16 of those years. The Dogon live in a place called Bandiagara, in what is today the nation of Mali, between the fabled city of Timbuctou and the city of Ougadougou. Bandiagara is quite isolated, although Timbuctou was once a mighty trading center on the Trans-Saharan trade routes. By the beginning of the twentieth century, all of this area had become a French possession known as French West Africa.

Secret knowledge

That year, Griaule was approached by some of the Dogon elders who said that they wished to tell him some of the secret knowledge of their tribe. Griaule had been among them for sixteen years and they had come to accept and respect him. The elders had decided that he could be trusted with their secret knowledge, the knowledge that even most of the Dogon people did not know. This knowledge had been passed down in the oral traditions of the Dogon for centuries. It is common for the peoples of Africa to transmit their tribal lore and their history from generation to generation by this method of oral transmission, as you might recall from Roots.

The Dogon elders proceeded to tell Griaule the story of how the universe was created according to their secret mythology. They told him how the Nommo, creatures that were half-human and half-fish, began civilization on the Earth. Griaule was told of the Sigi ceremony which is held every sixty years and which represents the renewal of the universe. He was shown four hundred-year-old masks that were used in the Sigi rites.

Perhaps the most interesting thing that the elders told Griaule was their cosmology. They told him of their knowledge that the moon is dry and barren, that Saturn - the star of limiting place - has rings around it and that Jupiter - dana tolo - has four large moons. They knew that the Milky Way is a spiral galaxy of stars, and that the planets move in elliptical orbits around the Sun.

The Dogon have a special reverence for Sirius. The elders told Griaule that Sirius is not just one star, but three. The one we see, sigi tolo (Sirius A) is just the largest and brightest. It is orbited by a smaller star, po tolo (Sirius B) which is named after a tiny grain that is also called Digitaria. They believe that this tiny star is the heaviest thing in the universe and that it is made of a metal called sagala. This tiny star orbits sigi tolo every fifty years, in an elliptical orbit. The third star in the system is called emme ya, the sun of women. It is four times lighter in weight than po tolo, and it travels in the same direction around sigi tolo, but in a larger orbit. It moves much more quickly through space, so that it takes the same amount of time to complete an orbit around sigi tolo. Emme ya has a satellite or planet of its own, called the Goatherd or the star of women. There are drawings on the four-hundred-year old sigui mask that represent this cosmology.

Griaule's paper on the Dogon, written with his colleague Germaine Dieterlen, was published in 1950. It was called *A Sudanese Sirius System*. Griaule died an untimely death from a heart attack in Paris in 1956 and the Dogon in far away Mali held a funeral ceremony for him that showed their high esteem for this man. In 1965 a book about the Dogon by Griaule and Dieterlen was published. It was called *Le Renard Pale*, or *The Pale Fox*.

Robert Temple and The Sirius Mystery

In 1966, Robert Temple, a fellow of the Royal Astronomical Society and the author of several books, happened to read some of the Griaule material on *Dogon Cosmology*, and in 1968 he obtained an English translation of *Le Renard Pale*. He became interested in the question of how the isolated Dogon could have known for hundreds of years that Sirius, one of the brightest stars in the sky, has an invisible companion, Sirius B. Sirius B, a type of star called a white dwarf, is so small that it cannot be seen without a telescope. It was completely unknown to astronomers until 1862, when the American astronomer Alvan Clark managed to see it for the first time. Sirius B, like all white dwarf stars, is composed of densely packed matter that, if it is not the heaviest matter in the universe, is very close to it. It was not discovered until around 1926 that white dwarves are so heavy that a cubic meter of one may weigh as much as 20,000 tons. It was also discovered that Sirius B orbits Sirius A in an elliptical orbit that takes 50 years to complete. Sirius B was finally photographed in 1970.

How did the Dogon know about Sirius B, when they had no telescopes? How, for that matter, did they know that Saturn has rings, that the moon is dry and barren, and that Jupiter has four large moons? These four moons of Jupiter are called Galilean, because Galileo was the first to see them when he pointed his telescope at Jupiter. The moons of Jupiter and Saturn's rings are only visible through a telescope. As Temple read Griaule's material on the Dogon, he found that their mythology traced their origins back to the Nommo, the human-fish creatures from their creation myths. Temple related these creatures to Oannes of Sumerian mythology who was also a half-fish, half-human creature who brought civilization to an ancient people. Further, Temple found links with Egyptian and Greek mythology. He wrote a book about his interpretation of the Dogon beliefs, called *The Sirius Mystery*, which was published in the 1970s. In the book, Temple contends that the Nommo were extraterrestrials who came to Earth from a planet in the Sirius system. They visited the Dogon, the Babylonians, and possibly the Egyptians, and the astronomical knowledge of the Dogon came from this contact.

Finally, in 1995, French astronomers Daniel Benest and J.L. Duvent published a study in *Astronomy and Astrophysics* that proposed that certain perturbations seemed to exist in the Sirius system that could be explained by the existence of a third star in the system. They proposed that this third member is a small red dwarf star that would be Sirius C. If so, then this would verify yet another part of the Dogon beliefs, the belief in the third Sirian sun called emme ya.



Troubled Times



Domino Quakes

On Mar 15, 1999 ZetaTalk stated in the [1999 Predictions](#) that domino quakes would begin, where tightly locked plates would bump one another. By June, 2000 *Reuters* had noted this. [Domino Quakes](#) were evident following the Aug 17, 1999 Turkey 7.4 quake, where the [Prior Year](#) were random. By the Nov 3, 2002 Alaska 7.9 quake, a [Pre-Shift Adjustment](#) pattern was evident.

Quakes Strike Asia But Are They Linked?

By Jason Szep, *Reuters*, June 9, 2000

The earth moved in Asia Thursday as powerful aftershocks rocked the west coast of Indonesia's Sumatra island, and a series of earthquakes jolted China, Myanmar and Japan. Experts said last Sunday's quake in Indonesia's Bengkulu province, measuring 7.9 on the Richter scale, may have led to a shift in the huge tectonic plates deep under Asia's seas, prompting the burst of seismic activity this week. Japan was rocked by three fairly strong earthquakes this week, while China and Myanmar were each hit by two. Nearly all measured above five on the open-ended Richter scale. "It is not unusual to have a sequence of activity on a single seismic belt, some of it can be quite intense," said C.M. Tam of the Hong Kong Observatory, referring to the circum Pacific belt stretching from New Zealand across a wide swathe of East Asia.

Bengkulu's earthquake, which killed at least 120 people, injured some 1,300 and damaged thousands of homes and buildings, has spawned around 400 aftershocks, seismologists said. The Bengkulu earthquake, which appears to have occurred after a rupture between two key plates - the Pacific and Indian plates - may have triggered a chain reaction of seismic activity along the circum Pacific and Eurasia belts, the seismologists said. Professor Ding Jianhai of China's State Seismological Bureau said the Sumatra, Myanmar and China quakes all occurred along the Eurasia seismic belt stretching from the Mediterranean sea through the Himalayas to Indonesia. He described the belt as "very active" and said he believed all the tremors were related. "According to our estimates, there are about average 18 earthquakes at more than seven on the Richter scale globally in a year, mainly in two belts, the Euroasia belt and the belt around the Pacific," he said. Aftershocks from the Bengkulu quake included a major tremor measuring 6.2 early Thursday, but most experts expect the aftershocks and other regional seismic activity to wind down steadily.

An official at Japan's Meteorological Agency said Japan has experienced about 20-30 tremors since Sunday's quake in Bengkulu, although he could not say for sure if they were linked to the Sumatran earthquake. "I think they are connected, but it is difficult to say for sure," he told Reuters. Japan's latest tremor struck Thursday at 9:32 a.m. (0032 GMT) on the island of Kyushu, and measured 4.9 on the Richter scale. There were no reports of damage or casualties. Wednesday, a tremor measuring 5.8 hit central Japan, injuring three people but causing no serious damage to buildings. Saturday, another earthquake measuring 5.8 swayed buildings in metropolitan Tokyo, but caused no damage. Japan sits atop the juncture of three tectonic plates, or pieces of the earth's crust. Those three plates - referred to by geologists as the Asian, Pacific and Philippine plates - have been at the heart of recent seismic activity. Katsuyuki Abe, professor at Tokyo University's Earthquake Research Institute, however, said linking quakes in Indonesia and Japan was difficult because they were so far apart.



Troubled Times



Dr. Reed

On the Dec 10, 1998 appearance on the *Sightings* radio show, ZetaTalk stated that photos of [Alien Bodies](#) and specifically those photographed by [Dr. Reed](#) would prove to be false, and later these were documented by *Set Lab* and articles on [Sightings](#) to indeed be fake.

Photo of Obelisk taken in Washington State. The creature below came out and killed Dr. Reed's dog. Reed said that it was cool to the touch. Picture of Alien laying on a thermal blanket. Picture of alien taken by Dr. Reed after he struck the being in the head. Though this one case has gone through some questioning it still gives you the eeby jeeby's.



Troubled Times



Early Man

Signs of the Times #1218

Scientists Find Prehistoric Dwarf Skeleton

Oct 27, 2004

*In a breathtaking discovery, scientists working on a remote Indonesian island say they have uncovered the bones of a human dwarf species marooned for eons while modern man rapidly colonized the rest of the planet. One tiny specimen, an adult female measuring about 3 feet tall, is described as "the most extreme" figure to be included in the extended human family. Certainly, she is the shortest. This hobbit-sized creature appears to have lived as recently as 18,000 years ago on the island of Flores, a kind of tropical Lost World populated by giant lizards and miniature elephants. She is the best example of a trove of fragmented bones that account for as many as seven of these primitive individuals. Scientists have named the new species *Homo floresiensis*, or Flores Man. The specimens' ages range from 95,000 to 12,000 years old. The discovery has astonished anthropologists unlike any in recent memory. Flores Man is a totally new creature that was fundamentally different from modern humans. Yet it lived until the threshold of recorded human history, probably crossing paths with the ancestors of today's islanders. "This finding really does rewrite our knowledge of human evolution," said Chris Stringer, who directs human origins studies at the Natural History Museum in London. "And to have them present less than 20,000 years ago is frankly astonishing."*



*Flores Man was hardly formidable. His grapefruit-sized brain was about a quarter the size of the brain of our species, *Homo sapiens*. It is closer in size to the brains of transitional prehuman species in Africa more than 3 million years ago. Yet evidence suggests Flores Man made stone tools, lit fires and organized group hunts for meat. Just how this primitive, remnant species managed to hang on is unclear. Geologic evidence suggests a massive volcanic eruption sealed its fate some 12,000 years ago, along with other unusual species on the island. Still, researchers say the perseverance of Flores Man smashes the conventional wisdom that modern humans began to systematically crowd out other upright-walking species 160,000 years ago and have dominated the planet alone for tens of thousands of years. And it demonstrates that Africa, the acknowledged cradle of humanity, does not hold all the answers to persistent questions of how -- and where -- we came to be. "It is arguably the most significant discovery concerning our own genus in my lifetime," said anthropologist Bernard Wood of George Washington University, who reviewed the research independently. Discoveries simply "don't get any better than that," proclaimed Robert Foley and Marta Mirazon Lahr of Cambridge University in a written analysis.*

*To others, the specimen's baffling combination of slight dimensions and coarse features bears almost no meaningful resemblance either to modern humans or to our large, archaic cousins. They suggest that Flores Man doesn't belong in the genus *Homo* at all, even if it was a recent contemporary. But they are unsure how to classify the species. "I don't think anybody can pigeonhole this into the very simple-minded theories of what is human," anthropologist Jeffery Schwartz of the University of Pittsburgh. "There is no biological reason to call it *Homo*. We have to rethink what it is." Details of the discovery appear in Thursday's issue of the journal *Nature*. Researchers from Australia and Indonesia found the partial skeleton 13 months ago in a shallow limestone cave known as Liang Bua. The cave, which extends into a hillside for about 130 feet, has been the subject of scientific analysis since 1964. The female skeleton and fragments from the six other individuals are being stored in a laboratory in Jakarta, Indonesia. The cave,*

which now is surrounded by coffee farms, is fenced off and patrolled by guards. Near the skeleton were stone tools and animal remains, including teeth from a young stegodon, or prehistoric dwarf elephant, as well as fish, birds and rodents. Some of the bones were charred, suggesting they were cooked. Excavations are continuing. In 1998, stone tools and other evidence found on Flores suggested the presence 900,000 years ago of another early human, Homo erectus. The tools were found a century after the celebrated discovery in the 1890s of big-boned H. erectus fossils in eastern Java.

Now, researchers suggest H. erectus spread to remote Flores and throughout the region, perhaps on bamboo rafts. Caves on surrounding islands are the target of future studies, they said. Researchers suspect that Flores Man probably is an H. erectus descendant that was squeezed by evolutionary pressures. Nature is full of mammals -- deer, squirrels and pigs, for example -- living in marginal, isolated environments that gradually dwarf when food isn't plentiful and predators aren't threatening. On Flores, the Komodo dragon and other large meat-eating lizards prowled. But Flores Man didn't have to worry about violent human neighbors. This is the first time that the evolution of dwarfism has been recorded in a human relative, said the study's lead author, Peter Brown of the University of New England in Australia. Scientists are still struggling to identify its jumbled features. Many say its face and skull features show sufficient traits to be included in the Homo family that includes modern humans. It would be the eighth species in the Homo category. George Washington's Wood, for example, finds it "convincing."

Others aren't sure. For example, they say the skull is wide like H. erectus. But the sides are rounder and the crown traces an arc from ear to ear. The skull of H. erectus has steeper sides and a pointed crown, they said. The lower jaw contains large, blunt teeth and roots like Australopithecus, a prehuman ancestor in Africa more than 3 million years ago. The front teeth are smaller than modern human teeth. The eye sockets are big and round, but they don't carry a prominent browline. The shinbone in the leg shares similarities with apes. "I've spent a sleepless night trying to figure out what to do with this thing," said Schwartz. "It makes me think of nothing else in this world."

[Note: from ZetaTalk: ZetaTalk: Races of Man written in 1995. Zetas RIGHT Again!]



Troubled Times



Earth Core

On [July 15, 1995](#), at the start of ZetaTalk, the Zetas stated that the weakening magnetic field was caused by the approach of Planet X, [due to arrive](#) in the inner solar system in 2003.

Where some scientists state that the Earth's magnetic field has been weakening lately, this is certainly not the case. They misunderstand. The Earth's magnetic field is not weakening, it is changing course or direction, and thus Scattered does not register on their instruments in the same old way. This is an early indicator of the great confusion that tPlanet X will have on the Earth, soon, during the pole shift. Another way to describe this dispersing is the scientific term - base resonant frequency. This is just another name for magnetic pull, the strength of the pull the Earth's core has on instruments. Instruments, through electricity coursing through wires, create a magnetic field in a core of iron or some other highly susceptible material. The resulting electromagnetic field can be either aligned with the Earth, or set to cross the Earth's magnetic field, or at any partial angle that the scientists desire. Depending on the strength of the Earth's own magnetic field, the field created by the instruments is thus disrupted or weakened. This weakening disruption, noted by scientists, is just another indication of the dispersal of the Earth's internal magnetic field.

ZetaTalk: [Magnetic Field](#), written July 15, 1995

When first sighted in 1983, it was on the right hand side of Orion, as viewed from your northern hemisphere. It will first move left and up toward the elliptical plane as it nears the Earth's Solar System for its passage, as though to assume a place with the other planets in the Solar System, at this point being slightly to the left of Orion. In 1998 it will veer right, moving toward Taurus and Aries, assuming a retrograde orbit, and will come up through the plane as viewed from above the elliptical plane, in its first passage. Early on we made clear what was about to happen, in 2003.

ZetaTalk: [Planet X](#), written Feb 15, 1996

An article published in the National Geographic on [June 30, 2008](#) states that "rapid, almost sudden" changes have taken place since 2003, the time when Planet X, per the Zetas in their early predictions, arrived in the inner solar system.

Earth's Core, Magnetic Field Changing Fast, Study Says

June 30, 2008

<http://news.nationalgeographic.com/news/2008/06/080630-earth-core.html>

Rapid changes in the churning movement of Earth's liquid outer core are weakening the magnetic field in some regions of the planet's surface, a new study says. "What is so surprising is that rapid, almost sudden, changes take place in the Earth's magnetic field," said study co-author Nils Olsen, a geophysicist at the Danish National Space Center in Copenhagen. The findings suggest similarly quick changes are simultaneously occurring in the liquid metal, 1,900 miles (3,000 kilometers) below the surface, he said. The swirling flow of molten iron and nickel around Earth's solid center triggers an electrical current, which generates the planet's magnetic field. The study, published recently in Nature Geoscience, modeled Earth's magnetic field using nine years of highly accurate satellite data. Fluctuations in the magnetic field have occurred in several far-flung regions of Earth, the researchers found. In 2003 scientists found pronounced changes in the magnetic field in the Australasian region. In 2004, however, the changes were focused on Southern Africa. The changes "may suggest the possibility of an upcoming reversal of the geomagnetic field," said study co-author

Mioara Mandea, a scientist at the German Research Centre for Geosciences in Potsdam. Earth's magnetic field has reversed hundreds of times over the past billion years, and the process could take thousands of years to complete.



Troubled Times



Earth Hum

On Feb 15, 1999 the Zetas described the vibration that rock under pressure exhibits.

As the passage nears, during that day, the Earth will begin to groan and moan, resisting yet inclined to shift. But until the actual shift, the tension is sustained, and the Earth groans in her agony. The moaning of the Earth is akin to material snapping, screeching rock strata pulling across other strata, and vibrations of rock strata under tension. Many sensitive people report becoming ill prior to earthquakes due to similar vibrations, not particularly heard, but felt by the body in any case. In similar manner, many more humans will feel ill during the week of rotation stoppage, and not just due to the stress of the moment, but due to vibrations in the underlying rock strata.

ZetaTalk [Groaning](#), written 15, 1999

On May 1, 2004 the Zetas also predicted the emergence of an Earth torque caused by a tug back upon the magnetic S Pole while the Earth continues to rotate. This torque emerged in earthquake charts such as IRIS charts after the Dec 26, 2004 massive tsunami quake in Sumatra, with the West Coast of the US being virtually free of quakes the rest of the Ring of Fire was experiencing.

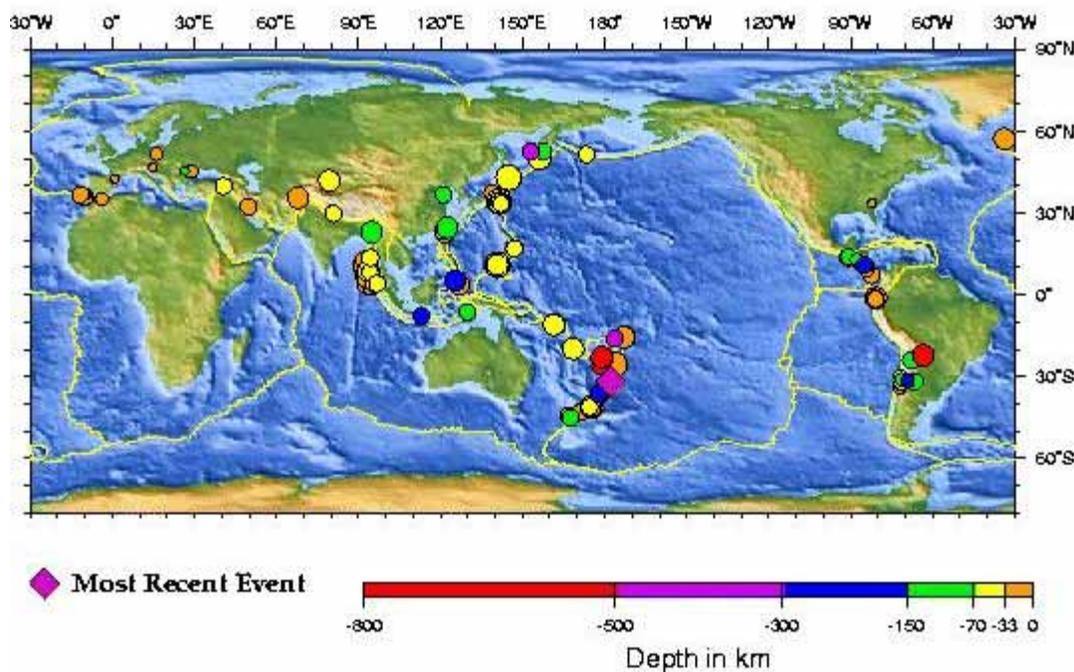
The overall effect of this drift, which will increase in speed and force as the whiplash proceeds, will be a torque. Hold the globe with the left hand on the N Pole, the right hand on the S Pole, and turn in opposite directions first this way, then back. The N Pole going in the direction of rotation with the S Pole held back, the torque forces the N American Plate down and into the Caribbean, East moving in the direction of SE. The S Pole pulled back by a grab on the Atlantic Rift in the southern hemisphere with the N Pole held rigid has the Indio-Australian Plate plunging under the Himalayas and Africa likewise plunging into the void, again East turning to SE.

ZetaTalk: [Torque Effect](#), written May 1, 2004

Put your hand on the N. Pole of the globe, twisting to the right as though turning the cap off a jar. Put your other hand on the S. Pole of the globe, twisting to the left as you open the jar, in this case the Earth, her plates coming apart. You not only pop the Indio/Australian plate lose and plunge the Pacific and Philippine plates under Asia, you relieve stress along the entire N. American continent!

ZetaTalk: [Snap, Crackle, and Pop](#), written Jan 23, 2005

Updated as of Sat Jan 22 16:50:39 UTC 2005.



USGS National Earthquake Information Center

On Feb 23, 2008 geologists released information on a new Earth hum phenomena, which they ascribed to a 'twisted crust' hum.

Mystery hum puzzles geologists

Feb 23, 2008

<http://www.sott.net/articles/show/150040-Mystery-hum-puzzles-geologists>

Listen closely, and you'll hear the Earth humming - in not just one note, but two. The source of this second signal is a mystery. For around a decade we've known about Earth's quiet "vertical" hum, probably caused by the steady thumping of deep waves on the ocean floor. Now a team in Germany has discovered a second "horizontal" note, too, and nobody knows what's causing this new signal. They found evidence of a "horizontal" signal at all four stations. The signal migrates by around 1 micrometre one way or the other every three minutes or so, and its horizontal orientation distinguishes it from Earth's "vertical" oscillation. (Geophysical Research Letters) Though certain events seem to amplify this constant signal - such as earthquakes, volcanoes and large storms - the source is a mystery. "Something entirely new to us is causing this hum," says Spahr Webb of the Lamont-Doherty Earth Observatory in New York, who studied the original hum. "Something entirely new to us is causing this hum. Its frequency suggests something is 'twisting' the surface of the crust." The frequency of the new signal suggests something is "twisting" the surface of the crust in some way, says Widmer-Schmidrig. When released, the crust swings back and forth because of its elasticity.



Troubled Times



Earth Plates

At the start of ZetaTalk on [Jul 15, 1995](#), Nancy recounted a vision given by the Zetas which showed the western half of Australia under water after the pole shift. By 2001, for the [Safe Locations](#) documentation, the Zetas explained that the India and Australian plates are one, operate as one, so that as India is driven under the Himalayas New Zealand and the eastern half of Australia rise. This was reiterated on Apr 15, 2002 for the [Scripted Drama](#) scenario.

Now over India, the Earth turns so I am taking a trip in the skies back toward North America. As I pass over Southeast Asia, I notice that the land along the sea coasts is disappearing, being eaten away as it were, by the water. This is happening all along the coast line, as far as my view can record, from north of Korea to Indonesia. Indonesia essentially disappears in this manner. Australia has been affected even before the eating away of the coastline started, as the entire western half appears to be under water.

ZetaTalk: [Zeta Vision](#), written Jul 15, 1995

Australia will be in a good and bad situation re the pole shift. The western 2/3 will go suddenly under water, due to the plate shared with Indian sliding under the Himalayas. However, the eastern 1/3 along with New Zealand will benefit from this, raising slightly out of the water, gaining land above where the melting ice caps will place sea level within two years after the pole shift. The eastern half of Australia and New Zealand benefit from this plate movement, lifting up as India is plunged under the Himalayas. Thus, even with the rising seas from melting poles, the mountains in eastern Australia and New Zealand will afford safe living areas.

ZetaTalk: [Australia](#), written 2001

The immediate affect of the massive plate housing Europe and Russia and the Near East to move is felt most strongly in India, as the Himalayas are driven over India at this point, effectively sumerging this country in a wink. The effect of the Indio-Australian plate taking a dive under the Himalayas is to relieve tension along the African rift.

ZetaTalk: [Scripted Drama](#), written Apr 15, 2002

The lifting of the western section of the Indio-Australian plate was demonstrated during the Dec 26, 2004 Sumatra quake and again during the Apr 7, 2007 Solomon Islands quake, where these island rose several meters.

Tsunami Images Dec 26, 2004

Jan 10, 2005

<http://bioweb.wku.edu/faculty/omeier/marinebio/tsunami.ppt>

The Sumatra earthquake displaced a section of the ocean floor over 700 miles long and 10 miles wide, nearly 100 feet upward.

Quake lifts Solomons island metres from the sea

April 7, 2007

http://rawstory.com/news/afp/Quake_lifts_Solomons_island_metres_04072007.html

The force of this week's Solomons earthquake has lifted an island in the South Pacific archipelago and pushed out its shoreline by tens of metres, exposing surrounding reefs. The remote island of Ranongga in the western Solomon Islands used to have submerged coral reefs that attracted scuba divers from around the world. But since Monday's massive earthquake in the Solomon Islands, the reefs are now exposed above the water and are dying.

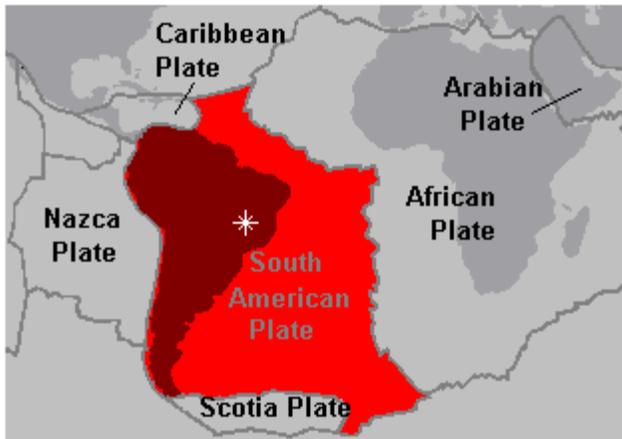


Troubled Times



Earth Plate Movement

On [Feb 10, 2006](#) the Zetas described the manner in which S America moves West, during continental drift, or rip as the Zetas describe it. The top part of the S American plate rolls to the West, pinned at the tip at Antarctica. The Nazca plate just to the West of the S American plate and the Cocos plate that would be pushed by both toward the West, are thus pushed westward during this process.



Look at S America, on the large S American plate. As the Atlantic is pulled apart, the Pacific compressed, it is required to have the upper part migrate to the West more than the tip, which is anchored at Antarctica. It moves as a whole, in the main, crunching the small plates in the Caribbean and Central America as it does so and popping the plate holding the Galapagos Islands which lies just to the west of S America. It can move, in short.

ZetaTalk: [N American Rip](#), written Feb 10, 2006

On Aug 2, 2007 an article appeared in [LiveScience](#) reporting the Cocos plate moving backwards at this point, *westward*, averse its normal direction. The Cocos plate is being pushed West by the motion of the S American plate, pushing the Nazca and Cocos plates!

In Surprise, Major Earthquake Fault Slips Backward

Aug 2, 2007

http://www.livescience.com/environment/070802_fault_backward.html

*A vast chunk of Earth sliding under Mexico has surprisingly reversed direction, puzzling geologists. The offshore tectonic plate had been sliding toward Mexico City at a rate of 1 inch per year, as recorded by Global Positioning System measuring stations near Acapulco and Guerrero, which is about 175 miles southwest of Mexico City. That movement was normal, as predicted by theories of how Earth's crustal plates should move. At subduction zones, like this one, an oceanic plate typically slides beneath a continental plate. Suddenly, in the latter half of 2006, the plate began moving the other way and quadrupled its speed, scientists announced today. This is the largest such backward event so far detected. The research, detailed in the Aug. 1 issue of the journal *Geophysical Research Letters*, is funded in part by the National Science Foundation and supported by the National Autonomous University of Mexico.*



Troubled Times



Earthquake Reporting

On Mar 15, 1999 ZetaTalk stated in the [1999 Predictions](#) that the increasing earthquake frequency and severity will be under-reported in the media, a coverup in place to dampen panic. By early 2002, this trend not only in the media but the [USGS](#) was evident. By [2002 the Tend](#) of under-reporting was evident, as a [Dramatic Increase](#) had been occurring.



Troubled Times



Earthquake Quickening

On Oct 28, 2006 the Zetas warned that the lineal increase in earthquakes was about to become an exponential increase. By Dec 15, 2006 they stated that this point had arrived.

Earthquake and volcano activity will steadily increase, on a somewhat linear scale.

ZetaTalk: [During 2002](#), written Oct 15, 2001

The Earth changes have been lineal, in the years leading into the pole shift, but when Planet X draws close they become exponential.

ZetaTalk: [Exponential](#), written Oct 28, 2006

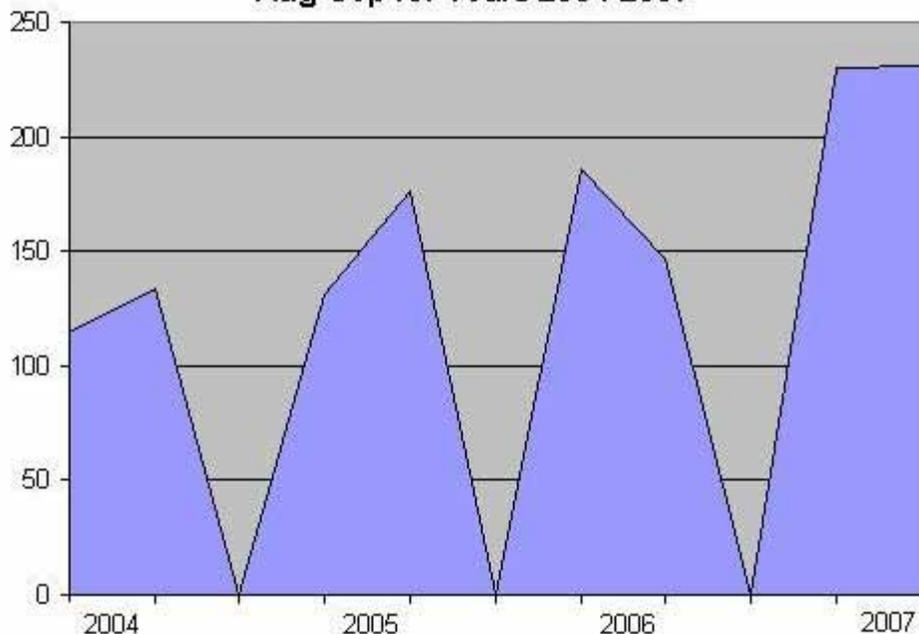
Where such activity was more lineal in years past, it will become exponential at some point, and this turning point has already arrived.

ZetaTalk: [Quickening Quakes](#), written Dec 15, 2006

By early October, 2007 it was clear that quakes had increased. An analysis of quakes from the [Advanced National Seismic System](#), comparing apples to apples for the months of August-September during the years 2004 though 2007, finds a *greater* than lineal increase in 2007. This was for quakes in the 4.9 to 5.9 Richter range, essentially Richter 5-6. The USGS has a reputation for [reducing Richter](#) or simply [dropping quakes](#), a practice they instituted in 2003.

From 2006-2007 quakes in this range took a 38% jump, from a total in Aug-Sep of 333 in 2006 to 461 in 2007. Comparing 2005 to 2006 for Aug-Sep, the increase was only 8% and the year before only 23%. The lineal increase had begun!

**Quake Increase
Comparing Magnitude 4.9-5.9 Quakes
Aug-Sep for Years 2004-2007**





Troubled Times



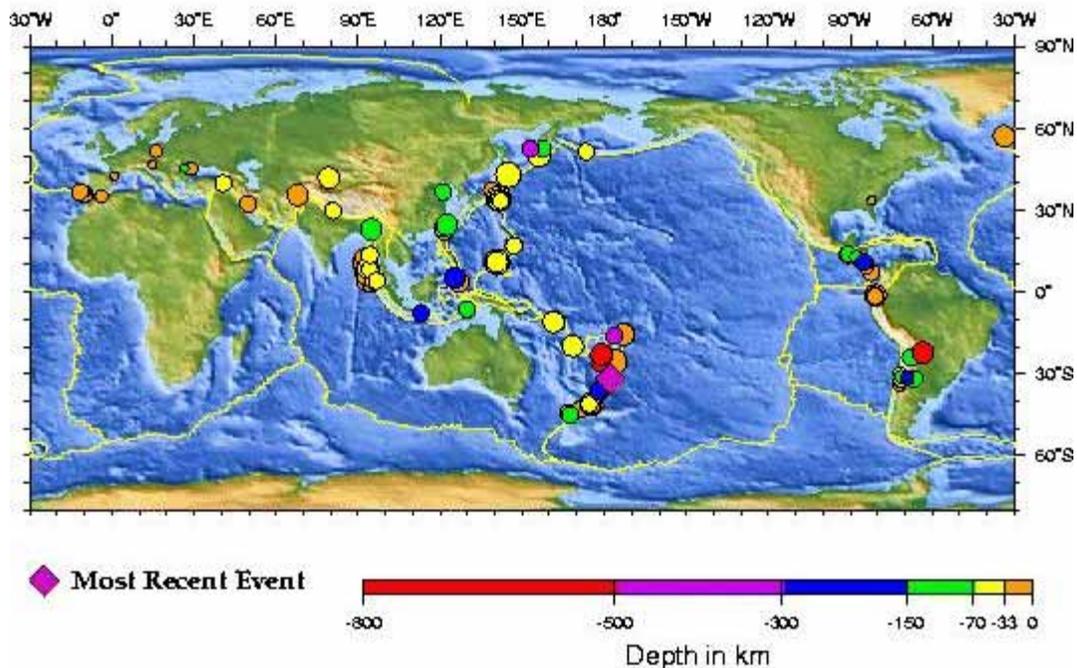
Earth Torque

On May 1, 2004 ZetaTalk that the Earth is being twisted, in a [Torque Effect](#), by the southern half being tugged back by Planet X while the northern half continues to turn. This has excentuated, and explains exactly why the Indio/Australian plate popped as it did Dec, 2004.

The overall effect will be a torque. Hold the globe with the left hand on the N Pole, the right hand on the S Pole, and turn in opposite directions. The N Pole going in the direction of rotation with the S Pole held back.

ZetaTalk: [Torque Effect](#)

Updated as of Sat Jan 22 16:50:39 UTC 2005.



USGS National Earthquake Information Center

Hold the globe as described, left hand on the magnetic N. Pole above the Canadian NW territories and right hand on the magnetic S. Pole South of Tasmania and you can sense why the Indio/Australian plate was forced to pop. This also explains why there are no quakes along the West Coast during this week, as the pressure is relieved there by the torque. USGS proof of the prophetic accuracy of ZetaTalk.

There is no other explanation for this earthquake spread. None. Once again, our words logical, precise, and consistent with prior messages.

ZetaTalk: [Snap, Crackle, and Pop](#), written Jan 23, 2005



Troubled Times



Earth Twin

In September, 1995 ZetaTalk stated that there is an [Earth Twin](#) positioned in the same orbit as the Earth, balanced exactly opposite the Earth so that it cannot be viewed from Earth as it is blocked by the Sun. In November, 1997, verification of this came from Russian scientists.

Date: Thu, 06 Nov 1997 14:47:57 +1100
Fwd Date: Thu, 06 Nov 1997 02:15:33 -0500
Subject: VOR - "2nd Earth Found in Solar System"

Australian, New Zealand and the Pacific UFO Hotline. Monitored today at 1015UTC the following statement from Russia's **Voice of Russia**, *World News Service*.

Announced that Mr. ?(inaudible)" says our solar system has two EARTHS. He says, a planet whose mass and dimensions equal our home planet is located behind the sun, on the other side of the solar system, it never shows up because it takes it, and EARTH exactly the same time to orbit the sun.

None the less it can be see if a space satellite with a telescope aboard is launched towards MARS or VENUS.



Troubled Times



Earth Wobble

An Earth wobble developed in 2004, under the influence of Planet X, the Zetas [first warning](#) of the extent of this on May 25, 2004. By Nov 27, 2004 the wobble had become obvious. The magnetic N Pole of Earth was forming a [Figure 8](#) on a daily basis.

Are we going to develop a wobble? Are we going to suddenly lurch about so that the Sun is rising and setting in a place way off from where the public would expect?

ZetaTalk: [Twirling Wobble](#), written May 25, 2004

Are we going to develop a wobble? Are we going to suddenly lurch about so that the Sun is rising and setting in a place way off from where the public would expect?

ZetaTalk: [Twirling into Darkness](#), written Nov 27, 2004

The Figure 8 pattern was documented by people all over the world on [Dec 2004](#), [Jan 2005](#), [Feb 2005](#), [Mar 2005](#), [Apr 2005](#), [May 2005](#), and [Jun 2005](#). The pattern having been established and the task time consuming, data gathering was quiesced until [Nov 2007](#), and [Mar 2008](#), wherein the wobble was shown to have become stronger, as predicted by the Zetas.

Planet X has turned in place so that it is now pointing its N Pole out toward Earth. The wobble has consequently become more severe because the interaction between Planet X and the Earth is driven by a N Pole push. Each day, when the Earth's magnetic N Pole comes over the horizon so that it is facing the Sun and the bully magnet Planet X, the Earth receives a shove from Planet X, pushing her magnetic N Pole away.

ZetaTalk: [Christmas Hammer](#), written Dec 21, 2007

The more extreme wobble, which continues to evolve, has increasingly been noted on message boards such as GodlikeProduction. During June, 2008 the following comments were posted, as an example.

I live in Fairbanks AK, used to live on the Kenai Peninsula just south of Anchorage and the Anchorage resident is right that there used to be at least a very deep dusk in the middle of even midsummer nights. Haven't been down that way for many years so I don't know about now. Here summer is definitely and always has been light all night (don't see stars from mid-May to early August), but the skies do seem more luminous, like something in the high atmosphere is scattering the light rays and we are getting more over-the-horizon 'backscatter'. This is especially noticeable in the wintertime.

I have been living in my home for 20 years now. And in this particular room, facing east for 6 years. And there is a house just to the left from where I look outside. And in the previous years, in the exact same time (exams period), the Sun would always wake me up. It would shine for approximately 2 hours straight into my room. Well now it appears that the house on the left of me is blocking the sunlight. so as a result, I get absolutely no direct sunlight in my room.

I just checked close to sunset here and it's a full 45 degrees north of due west here in Alabama. The sun is widely shining in the North end of my house, something it never used to do.



Troubled Times



Easter Island

Prior to July, 1995 ZetaTalk stated that the heads on [Easter Island](#) were moved with the same anti-gravity capability used to build the Great Pyramids. *Nova* reported on the [Public Broadcasting System](#) that this coincides with the oral tradition of the Rapa Nui folklore.

Oral Tradition Surrounding the Easter Island Statues

Like most oral traditions, Rapa Nui folklore has been passed down through the generations, and it is unknown whether the stories are based on historical fact. Most center on the mystical idea that the massive megaliths were moved using "mana," or divine power. Those who possessed mana were able to command the moai to walk to their designated places. Accounts of who actually possessed mana differ greatly. In 1919, Katherine Routledge, a British archaeologist who lived on Easter Island for a year, recorded in her journal: "There was a certain old woman who lived at the southern corner of the mountain and filled the position of cook to the image-makers. She was the most important person of the establishment, and moved the images by supernatural powers (mana), ordering them about at her will." Earlier accounts recorded by visitors to the island indicate that statues were ordered to walk by the mythical King Tuu Ku Ihu and the god Make Make. Even specialized priests were known to move moai at the request of those who wanted them on their family land or ahu.



Troubled Times



Ebola Spread

On Aug 25, 1999 ZetaTalk stated in the [Safe Locations](#) documentation that [Africa](#) should consider that Ebola type viruses, those similar to the Ebola, would spread beyond today's expectations.

Plagues similar to the Ebola virus will spread, under the influence of the continuous rains and drizzle that run for decades after the shift, to all parts of Africa, stopped only by the seashore. The Ebola virus and its cousins live in swamps, passed among the creatures that live there, and these creatures will find all of Africa to their liking during this continuous wet season.

ZetaTalk

On Apr 1, 2005 an African outbreak documented this trend.

Anomolous Deadly Marburg Virus Outbreak Spreading

From Patricia Doyle, PhD

National Public Radio - All Things Considered, April 1, 2005

The World Health Organization (WHO) says Marburg Virus has sickened 140 people in Angola and killed 132, most of them young children. International health organizations are rushing personnel and equipment to the war-ravaged country to stem the epidemic. Still, WHO experts told National Public Radio (NPR)'s Richard Knox that they expect the Marburg toll to get much larger.

Marburg hemorrhagic fever isn't as much feared as its cousin Ebola hemorrhagic fever. But in fact, they're hard to tell apart. [Clinically they are associated with similar disease symptoms, but the 2 viruses do not cross-react antigenically and are easily distinguishable by serology and RT-PCR assay. - Mod.CP]. In both cases, victims bleed to death, often from every orifice and every organ. Few infections are as deadly. That's why the WHO, the US Centers for Disease Control and Prevention, Health Canada and the medical aid group MSF (Medecins sans Frontieres) are rushing to Angola.

Dr. Mike Ryan is managing WHO's response from Geneva. He said that: "The cases counted so far don't include victims who died outside hospitals. Some WHO experts expect a doubling of the current toll. That would make this Angolan outbreak the largest Marburg epidemic ever...and larger than almost any Ebola [hemorrhagic fever] outbreak. International workers and protective gear are just arriving." So Ryan said also that it will take time to show results. "We're going to see further waves. Even with the best of interventions, you're going to see at least 2 waves of transmission before you start to gain control of the problem."

So far most Marburg cases have been in a northern province called Uige. But there are reports of cases across Angola's border with the Democratic Republic of Congo. Dr. Pierre Formenty, the WHO's top Marburg expert, is struck by how widely the virus has already spread. Dr. Formenty stated that: "It is the 1st time we have geographically speaking so large an outbreak of Marburg fever. We have cases not just in Uige city itself but in different cities around Uige, up to 20 to 40 kilometres away. The outbreak probably started last October [2004]. Many people got infected in hospitals." Dr. Formenty thinks sloppy injection practices

explain why most victims are below age 5. Doctors often give medicine to young children by injection rather than by mouth.

The biggest fear is that Marburg will begin spreading from person to person in Angolan cities. There have been cases in the provincial capital of Uige, a city of 200 000. And 3 people have died in Luanda, a coastal city of more than three million that is Angola's capital. Luanda has several other possible cases. But Dr. Formenty said the known and suspected victims came from Uige -- and didn't contract Marburg fever in Luanda. Formenty stated that: "Today we have no evidence of transmission within Luanda. We have evidence of people who have escaped Uige to die in Luanda, yes. ...but we have no secondary transmission in Luanda or in any other city. Finding and isolating Marburg cases in a big city is hard enough. Tracing people they might have infected is daunting. That's why Angolan and WHO officials are trying to dampen panic, which could cause people to flee from Uige to the capital...and bring the virus with them."



Troubled Times



Economic Collapse

In November, 1999 in [Market Crash](#) ZetaTalk stated that *Most stocks are inflated beyond their value, very few are not, and they can fall to 1/4 of their value before they settle with the public feeling they have some confidence in the stock and that it cannot be worth less*, and again in January, 2001 in [During 2001](#) ZetaTalk stated that *Economic impacts would begin to bump into each other, one causing the other, so that the economic result is beyond a recession and threatening to become a worldwide depression*. By July, 19, 2001 the reports of [Indicators](#) that a [Global Recession](#) was in process were rolling in. By 2002, reports of [Panic](#) in many countries and record [Bankruptcies](#) during 2001. During the May 4, 2002 Live ZetaTalk session, documented in [2002 Quickening](#), ZetaTalk stated *How many Enron's are out there? ... There are dozens of Enrons, many with far worse accounting and broader impact. In fact, our prediction on a Stock Market collapse, wherein the value of today's stock falls to 1/4 its current value, will be triggered in the main by revelations of this*. Subsequent to this, Worldcom was exposed and by July 19, 2002 the [Stock Market](#) had begun collapsing. By March, 2003 CNN reported that the Nasdaq was at its highest in March 2000 at 5048, but had fallen to 1/4 of its value, and the BBC reported that France was at 1/3 of its value, Germany below the Great Depression era value. By the end of 2008, the media was talking about the current times as a [Second Great Depression](#), which the facts bear out. On September 15, 2008 [Wall Street crashed](#), with the DOW falling steadily thereafter. By March, 2009 the DOW was dropping down below 7,000 and predictions were that the DOW would drop to as low as 4,000 points, from a high of 14,000 points in 2001.

Dow 4,000 by Summer

March 6, 2009

Global trade and economic output are collapsing at rates that outpace the Depression of the 1930s. The Dow could fall to 4,000 by this summer unless there is a quantum reduction in mortgage interest rates, says Evans-Pritchard.

Europe Crashes

[BBC](#), Mar 12, 2003

Earlier in the day, Paris stocks had plummeted to levels a little over one third what they were at their September 2000 peak. And Germany is now in the grips of a market downturn worse than it suffered in the Great Depression, calculations at investment bank Merrill Lynch have revealed. ... The fall in Germany's Dax index has seen it, for much of Wednesday, below the 2,200 mark which Merrill Lynch analysts believe marks the current bear market as worse than that of the 1930s' Great Depression.

Slump Felt Around the World

[New York Times](#), 20-Aug-01

The world economy, which grew at a raging pace just last year, has slowed to a crawl as the United States, Europe, Japan and some major developing countries undergo a rare simultaneous slump. The latest economic statistics from around the globe show that many regional economic powers - Italy and Germany, Mexico and Brazil, Japan and Singapore - have become economically stagnant, defying expectations that growth in other countries would help compensate for the slowdown in the United States.

The \$33 trillion world economy is still likely to expand this year, as it has every years since the Great Depression. Of the top economies, only Japan's total output seems likely to shrink, and even bearish forecasters expect the world to grow at about a 2 percent rate, a bit faster than during

international slumps in 1982 and 1991. Still, many experts say the world is experiencing economic whiplash, with growth rates retreating more quickly and in more of the leading economies than at any time since the oil shock of 1973. And this time there is no single factor to account for the widespread weakness, persuading some economists that recovery may be slow in coming. “We have gone from boom to bust faster than anytime since the oil shock,” said Stephen S. Roach, the chief economist of Morgan Stanley, a New York investment bank.

The biggest surprise is the sluggish performance in Europe, especially Germany, where leaders had until recently thought that they could escape the American slowdown. Germany’s economy, Europe’s largest, came to a standstill in the second quarter of this year. Italy and the Netherlands are showing practically no growth. And France’s relatively frothy economy has slowed sharply as both consumers and businesses have cut back spending. The result is that Europe, with a combined economy about as big as that of the United States, is in no position to take over as the locomotive of world economic growth.



Troubled Times



Face on Mars

In August, 1995 that the [Structures on Mars](#) were made by the same group that created the Sphinx and [Great Pyramids](#), and that the [Secret Chamber](#) was a navigational aid; in January, 1998, Astronomer [Van Flandern](#) confirmed that.



Troubled Times



Faked Terrorism

On [July 14, 2007](#) the Zetas explained that the announcements by Chertoff and others that terror attacks within the US were expected that summer was due to a plan within the White House to claim terror attack *had occurred*, when they had not.

Why are Chertoff and the White House promoting the expectation that terrorist attacks will occur in the US? They are clearly planning something, with the anticipation that this time, they will succeed. Since we have stopped literally hundreds of attempts, including dirty bombs in large cities within the US, they know they cannot actually cause a faked terrorist attack. But they can claim it occurred! Or so they think. The answer the White House has come up with is to claim an actual terror attack, complete with government reports and faked evidence to support the claim, and have this much in the news.

ZetaTalk: [GodlikProduction Live](#), written July 14, 2007

On Aug 10, 2007 New York City was under a close watch for a day, at the popular tourist area where Macy's and Empire State Building are located. This was in reaction to unverified reports posted on the Debka website, a website maintained by Israel.

Police Deployed In Response To Unverified Radiological Threat

August 10, 2007

Police, fire and EMT teams have been deployed around the New York City tonight in response to unverified reports of a radiological threat. Authorities stress that the threat is unconfirmed and that the city's terror alert status remained unchanged. Nevertheless, police say that they have deployed a battery of radiological sensors, including vehicle and helicopter-mounted devices, as a precautionary measure. Authorities are also examining vehicles at checkpoints in Lower Manhattan and selected Manhattan entry points.

Douglas J. Hagmann, Director

<http://www.homelandsecurityus.com/>

11 August 2007: An Internet-based threat of the detonation of a radiological device, or a "dirty bomb" in the area of Macy's and the Empire State Building in Manhattan caused an increase of the deployment of radiological sensors on vehicles, boats and helicopters Friday night. Police and federal officials set up vehicle checkpoints in lower Manhattan and at bridges and tunnels, checking for any indication of a conventional bomb laced with radioactive materials. Mayor Bloomberg downplayed the threat, calling it one of many they have experienced without substantiation.

Per the Zetas, the threat went beyond claims, as individuals had been lined up to claim a dirty bomb had actually been found. Similar to an incident in S Carolina which also happened during the vacation month of August.

2 Face Explosives Charges in Traffic Stop, but Feds Dispute Bomb Found

Aug 5, 2007

<http://www.cnn.com/2007/US/08/05/highway.closed/>

Two men faced state explosives charges Sunday after police outside Charleston, South Carolina, found what a law enforcement source said was a bomb and bomb-making material in their car during a weekend traffic stop. But federal officials disputed that account, telling CNN that there was no bomb. And FBI spokesman Richard Kolko told CNN, "We have not found a clear link to

terrorism." The Charleston County bomb squad responded, and traffic was halted along the road for 10 hours until the materials were detonated, reporter Venton Blandin of CNN affiliate WCIV said. He described the sound of the detonation as "fairly small." Federal law enforcement sources familiar with the case said no bomb was.

The New York City dirty bomb threat was such an attempt. That the announcement of overheard chatter detailing the threat was provided by an Israeli source should not be a surprise, as they were players in this game. What was to happen was an announcement that a dirty bomb had been discovered in a van, with the poor city of New York agast that it came so close to being struck, once again, by terrorists. What went wrong with the plan? As we have stated numerous times, if the thought resides in someone's head, we pick it up, as we are telepathic. We advise our human teammates, they advise their human contacts in the federal agencies, and the group planning to make false claims were detained. Once the public had been reassured, and the area searched to no avail, such a false claim could not be made. It would be quickly countered by the teams already in place, checking the areas. Those who were cooperating with the White House, poised to make false announcements, will not be allowed to return to their positions of authority.

ZetaTalk: [GodlikProduction Live](#), written August 11, 2007



Troubled Times



Faster than Light

In 1995 the Zetas stated that mankind's belief that nothing can move faster than the speed of light is erroneous, while stating that Planet X zooms into the solar system from its dither point between its two foci at a speed faster than the speed of light. Prior to that in 1995 they alluded to faster than light travel, interstellar travel, by eliminating the gravity repulsion force so that only the attraction force is present. Ridiculed at the time, the Zetas have now been proven correct with man's own experiments. CERN particles were observed moving faster than light.

There is no limit in space, only that which mankind assumes. During math discussions on sci.astro, it has been surmised that the speed of Planet X approaches the speed of light during its most rapid approach, and this astonishes those in the discussion. Why is it assumed that light is the fastest thing in the universe, re travel? Man thinks this because it is something he can measure. He is aware of such a small percentage of matter and energy about him that to say that he comprehends 1% of what the universe is composed of would be an overstatement. Our space travel, in 4th Density and even 3rd Density, is faster than light, and we do not melt. Man does not understand, so we cannot give him satisfaction in our explanations. Suffice it to say that our explanation is correct, and Planet X travels rapidly into our midst, thence the Repulsion Force is invoked, thence it floats past between the Earth and Sun.

ZetaTalk: Speed, written 2001

Most certainly we have interstellar ships, else how would we, as incarnated entities, arrive? The means of travel is not what humans assume, propulsion. As humans can only move by a snails pace unless they are propelled, they assume that interstellar travel is by propulsion. It is not, it is by attraction, and a quick kiss it is. We have spoken of the mutual attraction and repulsion of matter, which is, of course, what causes the planets and moons to go into orbit around each other and their suns. Normally this goes into balance, not by accident but by a series of maneuvers until the attraction and repulsion are equally strong, one not affecting the regularity of motion more than the other. Balance is assumed when the motion takes on a regularity. Imagine what would happen if the repulsion were eliminated, in a given interchange, and the attraction had no counterbalance? How fast is fast?

ZetaTalk: Interstellar Travel, written 1995

As a result of the CERN experiment, scientists have discovered that particles *can* move faster than light.

Particles Appear to Travel Faster than Light

September 23, 2011

http://www.cnn.com/2011/09/23/world/europe/switzerland-science/index.html?hpt=hp_c2

Scientists in Switzerland say an experiment appears to show that tiny particles traveled faster than the speed of light - a result that would seem to defy the laws of nature. The physicists say that neutrinos sent 730 kilometers (453.6 miles) underground between laboratories in Switzerland and Italy arrived a fraction of a second sooner than they should have, according to the speed of light. The report was published Friday by a group of researchers working on the so-called Opera experiment, based at the European Organization for Nuclear Research, known as CERN, in Switzerland. CERN is the home of the Large Hadron Collider. The finding would seem to challenge Albert Einstein's special theory of relativity, and the long-established law of physics that nothing can exceed the speed of light.



Troubled Times



Fisheries

On Mar 15, 1999 ZetaTalk stated in the [1999 Predictions](#) that fisheries would be affected by warmer oceans, and harvests reduced. On July 20, 2000 such loss in North Sea harvest began to be reported.

Overfishing and Global Warming Land Cod on [Endangered List](#)

By Paul Brown, *Environmental Correspondent*, July 20, 2000

Cod stocks in the North Sea are down to one-tenth of the level 30 years ago. The catch used to be 250,000 tonnes a year but the maximum permitted cod catch this year under EU rules is 34,301 tonnes, but even this seems far too high. Catches to July 13 were 13,305 tonnes - so low because fishermen, even with radar and sophisticated satellite tracking equipment, just cannot find the fish. **The plight of the once numerous fish has not been helped by changes in water temperature in the North Sea which has increased up to 3C.** Cod prefers cold water and the rise in temperature, which some ascribe to global warming, has damaged cod's ability to spawn. But no one doubts that overfishing is the primary cause of the fish's decline.

Complete Collapse of North Atlantic Fishing Predicted

New Scientist, Feb, 2002



Troubled Times



Flashes

On Jan 15, 1997 ZetaTalk stated that [Flashes](#) associated with booms were due to Methane gas released during underwater or landbased quakes. On March 22, 1999 documentation on the web on Earthquake Lights confirmed this.

Earthquake Lights

The first recorded sighting of earthquake lights dates back to 373 BC in Greece, but stories have long been told of strange lights in the skies before, during and after an earthquake. Today their existence is an accepted fact, although the mechanism that generates them is still a mystery. The first known scientific investigation of earthquake lights took place in the 1930s, and in the 1960s earthquake lights were well documented in a series of photographs taken in Japan. Japanese earthquake light photos: Steinbrugge Collection, Earthquake Engineering Research Center, **University of California, Berkeley**

- Ball of light
- Horizon light
- B & W horizon light

Eyewitness descriptions: The lights are most evident in the middle of a quake. People who have seen them sometimes describe them as searchlights and sometimes as fireballs or lightning. Other witnesses describe them as consisting of beams and columns of light, and still others report clouds that were illuminated during earthquakes or simply an eerie glow in the sky. In an article in *Nature* titled "*Earthquake Lights and Seismicity*," Marcel Ouellet described the lights that appeared during a three month period from November, 1988 through January, 1989, during a series of seismic shocks that occurred in the Saguenay region of Quebec, Canada: Fireballs a few metres in diameter often popped out of the ground in a repetitive manner at distances of up to only a few metres away from the observers. Others were seen several hundred metres up in the sky, stationary or moving. Some observers described dripping luminescent droplets, rapidly disappearing a few metres under the stationary fireballs. Only two fire-tongues on the ground were reported, one on snow and the other on a paved parking space without any apparent surface fissure. The colours most often identified were orange, yellow, white and green. Some luminosities lasted up to 12 min. Flashes of light were widely reported before the 1995 earthquake at Kobe, Japan:

- Some residents of Kobe and nearby cities saw aurora-like phenomena in the sky just before and after the quake.
- A Kobe firefighter observed a bluish-orange light above a shaking road that lasted about 4 seconds.
- A hotel employee on his way to work on Rokko mountain: "saw a flash running from east to west about two to three meters above the ground shortly after the quake. The orange flash was framed in white."
- Flashes of light were widely observed.

(Science Frontiers #99, MAY-JUN 1995. © 1997 William R. Corliss) One of the strongest earthquake illuminations came during Chinese earthquake of 1976, when it was reported that the lights at the centre of the earthquake were bright enough to turn night into day. As far as 320 kilometres from the epicenter of the quake people woke up thinking their room lights had been turned on. Just last year, on June 4, 1998, residents of the Charlotte, North Carolina area reported seeing a bright flash when the area north of

Charlotte was hit by a 3.2 magnitude earthquake. Oddly, the **National Earthquake Center** denied that the North Carolina flash would have been attributable to the 3.2 quake on June 4. The flash was said to have been so bright that area residents at first thought that a meteor had struck the ground.

What causes earthquake lights?

The most common explanation for earthquake lights is the piezoelectric effect in quartz-bearing rock. Quartz has the unique attribute of emitting electricity under pressure. Laboratory experiments have shown that this effect can produce light emissions, but they are, at least in the laboratory, of much shorter duration than reported earthquake lights. Some researchers theorize that earthquake lights are produced by seismic stresses that may generate high voltages that create small masses of ionized gas, which are then released into the air near the fault line. A second popular theory is that, during an earthquake, small pockets of trapped natural gas are released and ignited by friction. These burning balls of gas then rise in the air and create the effect of the lights. Another theory is that the pressure generated during earthquakes may cause water molecules to separate into atoms of hydrogen and oxygen, then quickly recombine back to water. In the process they theoretically could release light and create the mysterious earthquake lights.



Troubled Times



Flying Triangles

On Nov 15, 1995 ZetaTalk stated that [Flying Triangles](#) were military, not extraterrestrial. On Nov 29, 1999 Caus reported that triangular UFO's were first reported in the 1980's, and on Jan 14, 2000 an article about NOSS described another source of man-made flying triangles.

What Are the Flying Triangles?

[NOSS](#), US Military Uses of Space, Jan 14, 2000

The December 1999 issue of *Spaceflight* magazine carried two letters from writers looking for explanations of a curious celestial phenomenon: a triangle of lights crossing the night sky.

Summary

NOSS/Parcae sightings probably do not account for very many of the flood of "triangle UFO" sightings. The lights are dim, are visible only for an hour or so before and move in straight lines across the sky. Still, the phenomenon underscores the richness of prosaic visual stimuli out there waiting to mislead naive observers, and so would-be researchers should do well to rule NOSS out as an explanation before leaping to conclusions.

Satellites are not just steady points of light - they can flash and can travel "in formation." They can emit clouds of fuel or waste water or even sport visible thread-like tethers. Letter writer Nick Spall described what he saw from Cornwall at about 10 PM on August 10, 1999. The triangular-shaped formation moved from north to south passed the star Altair. "With the naked eye the formation appeared as one object," Spall wrote. However, "through binoculars (7x50) the group was resolved into three steady pinpoints travelling together in formation."

The Hickman Report - Flying Triangle Overview

UFOSEEK - UFO News Today, Nov 30, 1999

Many ufologists have noted in the past few years that we have had a major change in the type of craft we are seeing in the skies overhead. In the past, most "UFO's" were either the classic "flying disk" type, or cylinders, or even just anomalous lights in the skies. Today we have noticed a major increase in sightings that are of a specific type of aerial vehicle, the dark triangle. This type was first thought to have been seen in Belgium in the '80's ...



Troubled Times



Fossett Disappearance

On [Oct 12, 2007](#) the Zetas stated that Steve Fossett's disappearance was deliberate, as he wished to leave his life behind.

To continue competition means, eventually, a string of failures due to old age. One should quit while they are ahead, is often the adage. But Steve is a man who cannot do this, and knows himself well enough to realize this. A string of failures would be his humiliating outcome, of that he was certain. He decided on a type of suicide, but one which would leave no trace of his decision. Taking off from the Hilton ranch, it was only a short flight to Area 51, famous for the security forces defending this military installation from prying eyes. Area 51 prevents overflight as well as land incursions, and does so with force. A small plane ignoring warnings is pursued with more than warnings, is forced down. Seeing they had the famous Steve Fossett in their custody, a quick decision had to be made. Should they release him, allow his fame to broadcast what he had observed at Area 51, or should they detain him? He is alive, in detention, and unlikely to emerge. He has retired, the plane in a hanger and likely to be destroyed to remove all evidence. This was deliberate, an outcome Steve had hoped would occur.

ZetaTalk: [Steve Fossett](#), written Oct 12, 2007

Despite an intense search for this famous man, including the use of Google satellite imagery, no sign of the downed plane was found.

Steve Fossett

Sep 3, 2007

<http://www.stevfossett.com/>

As of September 10, search crews had found eight previously uncharted crash sites, some decades old, but none related to Fossett's disappearance. On September 7, 2007, Google Inc. helped the search for the aviator through its connections to contractors that provide satellite imagery for its Google Earth software. Richard Branson, Fossett's British billionaire friend, said he and others were coordinating efforts with Google to see if any of the high-resolution pictures might include Fossett's aircraft.

Eventually, Steve was declared dead by a judge and the case considered settled. But recently this conclusion was challenged by investigators.

Secret lovers. Hidden bank accounts. And still no sign of a plane wreck.

Did Richard Branson's balloon buddy fake his death?

30th July 2008

When adventurer Steve Fossett seemingly disappeared off the face of the Earth last September, his many admirers couldn't quite believe he had perished on something as mundane as a joyride in a light aircraft above the Nevada desert in the U.S. No body or wreckage has ever been found since Fossett failed to return from his last flight. And now - five months after a judge officially declared the 63-year-old financier dead - investigators have made the astonishing suggestion that he faked his own death. The claims come from one of the rescue team leaders and an insurance assessor who spent eight months trying to find out what happened on behalf of Lloyd's of London, who are said to face a £25 million payout on Fossett's death. Both say there are elements of his disappearance that make no sense, and they have independently come to the conclusion that Fossett - a close friend of

Virgin tycoon and fellow adventurer Richard Branson - could still be alive. Their inquiries have revealed that Fossett, married for 38 years to childhood sweetheart Peggy, had at least two mistresses and was living a secret double life. There are suggestions that he was in financial trouble and feared a ruinous divorce if his philandering was discovered.



Troubled Times



Frog Populations

On October 15, 1996 ZetaTalk stated that [Frog Populations](#) with their vulnerable DNA would be affected worldwide, the cause puzzling. On Jan 19, 2000 their declining numbers and confusion over the cause were being reported.

Frogs' Disappearance Baffles Scientists

Adapted from [Genevieve Hussey's](#) report, January 19, 2000

Australian scientists have joined an international effort to attempt to solve a worldwide environmental mystery: a drastic decline in frog numbers. Researchers are concerned that even frogs in pristine areas of rainforest are continuing to die for no apparent reason. But the decline in frog numbers could be a warning of a much more serious ecological problem. At a field research site on the Atherton Tablelands in north Queensland, scientists are searching for clues to why frogs are dying. Richard Rettallick from Queensland Parks and Wildlife says the frog decline is an "absolute mystery". "In the world, north Queensland, especially the wet tropics here, is one of the hardest hit [areas] that we know of," he said. "[The] number of species gone missing and the population declines have been most dramatic."

Frog populations worldwide have been declining for the past 20 years, some to the point of extinction. Mr Rettallick says the study team in north Queensland has found that frogs have gone missing from upland streams but are still present in lowland streams. "So what we thought we'd do is to bring frogs back to the upland streams and to watch them and see what happens, see if they die again," he said. Every week, the frogs - which have been placed in enclosures - are weighed and measured. "If the agent that killed the frogs 10 years ago in this area is still operating, this little guy should die soon," Mr Rettallick said.



Troubled Times



Giant Hominoids

Prior to July, 1995 ZetaTalk stated that the hominoids from the [12th Planet](#) were considered giants on Earth, being approximately 8 feet tall and large boned. Reports on the bones of such giants were documented on June 28, 2000.

[Skeletons Of Giants Found In Midwest Mounds](#)

By Patricia Mason, June 28, 2000

While doing research on the ancient Mound Builders of the Ohio Valley, Ross Hamilton and I came across some remarkable information. Here in Ohio almost every county history book from the 1800s has a section devoted to the Mound Builders. They usually give a general overview of the Mound Builders, then a description of the mounds in the county and what they found in the mounds that were opened. Here are a few examples typical of the many accounts we've collected that remark on the large size and unusual characteristics of some of the human remains:

Historical Collections of Ohio in Two Volumes, Noble County, Ohio:

In Seneca township, in 1872, one of the numerous Indian mounds that abound in the neighborhood was opened, ... This particular one was locally known as the "Bates" mound. Upon being dug into it was found to contain a few broken pieces of earthenware, a lot of flint-heads and one or two stone implements and the remains of three skeletons, whose size would indicate they measured in life at least eight feet in height. The remarkable feature of these remains was they had double teeth in front as well as in back of mouth and in both upper and lower jaws. Upon exposure to the atmosphere the skeletons crumbled back to mother earth.

A History of Ashtabula County, Ohio, 1878 (in two separate entries):

(first entry)

In cultivating the soil in the vicinity implements have been found, and in excavating the ground for graves it is said that bones have been exhumed which seemed to have belonged to a race of giants. This land at one time belonged to a Mr. Peleg Sweet, who was a man of large size and full features; and it is narrated that at one time he, in digging, came upon a skull and jaw which were of such size that the skull would cover his head and the jaw could be easily slipped over his face, as though the head of a giant were enveloping his ...

(Second entry)

The graves were, distinguished by slight depressions in the surface of the earth, disposed in straight rows, which, with intervening spaces or valleys, covered the entire area. The number of these graves has been estimated to be between two and three thousand. Aaron Wright, Esq., in 1800, made a careful examination of these depressions, and found them invariably to contain human bones blackened with time, which upon exposure to the air soon crumbled to dust. Some of these bones were of unusual size, and evidently belonged to a race allied to giants. Skulls were taken from these mounds, the cavities of which were of sufficient capacity to admit the head of an ordinary man, and jaw-bones [sic] that might be fitted over the face with equal facility. The bones of the upper and lower extremities were of corresponding size.

History of Morrow County and Ohio, 1880:

In 1829, when the hotel was built in Chesterville, a mound near by was made to furnish the material for the brick. In digging it away, a large human skeleton was found, but no measurements were made. It is related that the jaw-bone [sic] was found to fit easily over that of a citizen of the village, who was remarkable for his large jaw. The local physicians examined the cranium and found it proportionately large, with more teeth than the white race of today. The skeleton was taken to Mansfield, and has been lost sight of entirely.



Troubled Times



Global Warming

In early 1995 ZetaTalk stated that warming from the [Earth's Core](#) was in process, ascribed wrongly to Global Warming of the air, as the heat was coming from the core. In March, 2002 science studies confirmed that [Polar Ice](#) was melting *from beneath*, and in April, 2002 that heating of the [Continental Rocks](#) had accelerated during the few hundred years. By 2004 that the air temperature is actually cooling. In 2007, French and Dutch scientists were challenging the concept, saying the computer models did not hold true and other planets were likewise experiencing warming.

All attempts to explain the changes based on Global Warming from the Greenhouse effect will run into snags as the weather will refuse to be predictable. Areas of the world which have been deserts throughout mankind's memory will become swamps under constant and repeated rains. Temperate climates used to periodic gentle rainfall will suffer intractable droughts. Then this will switch about, for no apparent reason. The reason lies deep within the Earth's core, an area the meteorologists refuse to consider, and thus their predictions on the atmosphere will never be based on the right parameters. A key change, to which one could point, is the warming of the Earth's oceans, around the globe. This has been measured as a 6 inch rise, worldwide, on all the beaches. The waters have risen because they are warmer, and warm water takes up more room than cold water, as all elementary physics books will report. How is it that the oceans, so very deep and so very cold, have warmed up? Is it the almost imperceptible rise in the temperature of the air, a degree or so, as reported to date? Since heat rises, why would this slight rise affect the oceans? Meteorologists will tell you that the effect of air warming is air turbulence, not warmer oceans. The Oceans are Warmer because the core of the Earth has heated up, and it does so in response to its brother coming closer. This will continue, and increase, until sometime after the cataclysms are past.

ZetaTalk™, [Hearlding](#)

The weather is blamed on global warming, the greenhouse effect, which in and of itself might be an explanation that would hold if weather were the only symptom. It is the heat from the core of the earth and the increased earthquake and volcanic activity that boggles these attempts at alternative explanations.

ZetaTalk™, [Cataclysm Masks](#)

Signs of the Times #1016

Global Warming Challenged [Aug 2] 'A pair of papers by a University of Rochester scientist in the July 9 issue of Geophysical Research Letters hammers at shortcomings in the computer models and temperature readings that scientists have been using to predict how carbon dioxide will affect the Earth's temperature. The first paper looks at temperature readings at various heights in the Earth's atmosphere over the past 20 years against what the leading computer models predicted. According to the study, the computer models indicate that temperatures in the upper atmosphere should be rising; yet the opposite is happening. The second study took various temperature readings from weather balloons and satellites — data provided by the National Center for Atmospheric Research. According to the study, the new temperature readings show an Earth about a degree cooler than ground-level readings had found.' [Note: Global Warming as an excuse for Planet X effect on the globe, as [Predicted by the Zetas.](#)]

Prominent French Scientist Reverses Belief in Global Warming - Now a Skeptic

March 02, 2007

In the 1980s and early 1990s, when concern about global warming was in its infancy, little was known about the mechanics of how it could occur, or the consequences that could befall us. Since then, governments throughout

the western world and bodies such as the United Nations Intergovernmental Panel on Climate Change have commissioned billions of dollars worth of research by thousands of scientists. With a wealth of data now in, Dr. Allegre has recanted his views. To his surprise, the many climate models and studies failed dismally in establishing a man-made cause of catastrophic global warming.

Chicken Little and Global Warming

February 7, 2007

<http://www.boston.com/>

Henrik Svensmark of the Danish National Space Center believes that changes in the sun's magnetic field, and the corresponding impact on cosmic rays, may be the key to global warming. Nigel Weiss, a past president of the Royal Astronomical Society and a mathematical aerophysicist at the University of Cambridge, correlates sunspot activity with changes in the Earth's climate. Habibullo Abdussamatov, who heads the space research laboratory at Pulkovo Astronomical Observatory in Russia, points out that Mars is also undergoing global warming.



Troubled Times



Gonzales Resignation

On [Mar 26, 2007](#) the Zetas predicted that Alberto Gonzales, the embattled AG, would resign. This despite all insistence by Gonzales that he would remain and all insistence by Bush that he had his full confidence. Gonzales is a long time close friend of Bush, having traveled to Washington from Texas with him, and no impeachable offense had been documented by Congressional investigations at the time of his resignation.

We mentioned [a year ago](#) when the DoJ was investigating the NSA, and the FBI investigating the CIA, that Gonzales was very worried about this own skin. He has been close to Bush long enough to know the likely outcome if and when this presidency goes down. Watergate is an example. The President retired, and others went to prison. He is expected, as a long term friend of Bush who has benefited immensely from his association with Bush to be loyal and facilitate what Bush wants. On the other hand, he can see where his path is leading, and fears a prison term for himself. Gonzales has been attempting to trip through the mine field, keeping his integrity, avoiding giving testimony under oath in hopes that this muddies the water, avoiding direct responsibility for acts in hopes that this keeps him above the fray, all the while remaining a loyal Bushie in the eyes of Bush as such rewards as a Supreme Court justice position might lie in the future. So when there are discussions about getting rid of Fitzgerald, whom Bush insisted should be fired, or removing the US attorneys who went after Duke Cunningham or were investigating Fogo's CIA bribery parties, then nervously give the nod, off the record, and leave the room! Gonzales prevented Bush from firing Fitzgerald, something he angrily ordered ala Nixon, so where it looks as though Rove and Miers were having their way, in fact Gonzales only let them have a few crumbs! Will the truth out in Congressional hearings? Yes, but not because Bush or Rove or Miers confess, but because the email is so convoluted that a trail can be laid out. Was Gonzales at the helm, causing these firings? He was certainly cognizant, and did nothing, apparently, to stop the process. Impeachment by Congress is in the hand writing on the wall unless he resigns, which is likely.

ZetaTalk: [Gonzales Saga](#), written Mar 26, 2007

On Aug 27, 2007 Gonzales abruptly resigned.

Embattled Attorney General Resigns

Aug 27, 2007

<http://www.nytimes.com/2007/08/27/>

Mr. Gonzales appeared cheerful and composed when he announced that he was stepping down effective Sept. 17. Mr. Bush repeatedly stood by Mr. Gonzales, an old friend and colleague from Texas, even as Mr. Gonzales faced increasing scrutiny for his leadership of the Justice Department over issues including his role in the dismissals of nine United States attorneys late last year and whether he testified truthfully about the National Security Agency's surveillance programs. Mr. Gonzales, who was in Washington, had called the president in Crawford, Tex., on Friday to offer his resignation. The president rebuffed the offer, but said the two should talk face to face on Sunday. Mr. Gonzales and his wife flew to Texas, and over lunch on Sunday the president accepted the resignation with regret.

The Zetas likewise predicted on [July 28, 2007](#) that an insider would be preferred as a replacement, due to Bush's need to keep the White House crimes in an inner circle that could be trusted.

Clearly, every time a staunch defender of the Bush team is removed, this makes it more difficult for Bush to

function as he is used to doing, as a dictator without fear of discovery. Newcomers must be informed of the dirty dealings that went on in the past, and this takes time and energy, and often requires compromise with the newcomer who may be horrified and refuse to turn their back on such dealings. Bush is likely to insist on a new Attorney General similar to Gonzales, and there are many, many such men in the private sector.

ZetaTalk: [GodlikeProduction Live Chat, Jul 28, 2007](#)

As predicted, the first three candidates floated by the White House were close insiders of the Bush crime family.

Senior Admin. Officials: Chertoff May Get Nod

Aug 27, 2007

<http://politicalticker.blogs.cnn.com/2007/08/27/>

President Bush may nominate Homeland Security Secretary Michael Chertoff to replace Alberto Gonzales as Attorney General. Chertoff, 53, previously sat on the 3rd U.S. Circuit Court of Appeals, which handles appeals from New Jersey, Delaware, Pennsylvania and the Virgin Islands. Before becoming a judge, he was assistant attorney general in the Department of Justice's criminal division from 2001 to 2003. Chertoff received his law degree from Harvard University and was a law clerk to Supreme Court Justice William H. Brennan Jr. in 1979 and 1980. He first stepped into a prosecutorial role as an assistant U.S. attorney in the Southern District of New York from 1983 to 1987. From there, he moved to the District of New Jersey and was assistant U.S. attorney from 1987 to 1990 and U.S. attorney until 1994. Between 1994 and 1996, Chertoff was counsel to the GOP Whitewater committee investigating the business dealings of President Clinton and first lady Hillary Clinton. If he chooses, Bush has a week to install a new Attorney General by recess appointment.

Who Will Be Gonzales' Successor? Insiders Speculate

Aug 28, 2007

<http://rawstory.com/news/2007/>

The abrupt departure of Alberto Gonzales from his post atop the Justice Department has led many to speculate who President George W. Bush will choose to succeed his Texas confidant. The list of candidates who would be acceptable to both Bush and his Senate critics -- who must confirm the nomination -- is short. A source close to the White House mentions that ex-Deputy Attorney General George J. Terwilliger III is "looking very good." Terwilliger, who headed Bush's legal team during the 2000 Florida recount, led the Justice Department briefly in 1993 following the departure of Attorney General William Barr. He now practices law in Washington. Former Solicitor General Ted Olson and former appellate judge Laurence Silberman are "also in the running." Olson was in charge of the Justice Department's Office of Legal Counsel as assistant attorney general from 1981 to 1984. He represented Bush in front of the Supreme Court in the case Bush v Gore, which ultimately decided the 2000 election.



Troubled Times



GPS Failure

ZetaTalk warned that satellites guiding planes, known as GPS would fail to give accurate directions, adding to the number of [Small Plane Crashes](#).

Beyond these problems, airplanes use satellites to guide them, magnetic orientation to guide them, and these likewise will either fail on occasion or given invalid readings.

ZetaTalk: written [May 4, 2002](#)

What would occur if a small plane were informed, by GPS, that their location was not amidst hills, but in the open? Beyond confused guidance systems, small planes lack the ability to recover from electromagnetic surges.

ZetaTalk: written [Oct 25, 2004](#)

On the Oct 27, 2004 [Lou Gentile](#) show this prediction came under ridicule, but by the Dec 23, 2004 [Lou Gentile](#) show the evidence had already piled in, and later, on Dec 24, 2004 a GPS Admission!

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Reduced GPS accuracy alert
GPS Space Weather Service - Warning of increased GPS positioning errors
Source GPS Section of the Royal Observatory of Belgium
Frequency      ASAP, when needed
Format Plain text
Mail header    reduced GPS accuracy alert
SIDC code     gps
Latest issue
:Issued: 2004 Dec 24 1131 UTC
:Product: documentation at http://sidc.oma.be/products/gps
#-----#
# GPS Space Weather Service #
#-----#

```

WARNING: during the previous hour, the RTK positioning conditions were at red level

```

#-----#
# Solar Influences Data analysis Center - RWC Belgium #
# Royal Observatory of Belgium #
# Fax : 32 (0) 2 373 0 224 #
# Tel.: 32 (0) 2 373 0 491 #
# #
# For more information, see http://sidc.oma.be. Please do not reply directly #
# to this message, but send comments and suggestions to 'sidctech@oma.be'. #
# If you are unable to use that address, use 'rvdlinden@spd.aas.org' instead. #
#-----#
Details
This message is of the Fast Alert type.
It contains a single line indicating that the RTK positioning was severely (red
conditions)
or extremely (black conditions) disturbed.
For more details, see http://gpsatm.oma.be/Ionospheric-Products/General-Product-
Description.php
Check the ISES code book for information on ISES codes.

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Troubled Times



Great Pyramids

Prior to July, 1995 ZetaTalk stated that the [Great Pyramids](#) were constructed as navigational devices, with long tunnels ending in interior [Chambers](#) as sighting devices. These Zeta statements are in line with recent research.

The Orion Mystery, **AA&ES** site dedicated to the ideas of Robert Bauval:
Author of *The Orion Mystery*, published Jan. 1995

Over the past 200 years great advances have been made in our understanding of ancient Egyptian culture. From knowing virtually nothing we have now reached a stage where we are able to translate directly from hieroglyphs. But many mysteries remain largely unsolved:

- Why did the Egyptians build the pyramids?
- How did they achieve such amazing feats of architecture and engineering?
- When exactly were they built?

For many years classical Egyptologists maintained that the Pyramids were merely grandiose tombs to commemorate dead Pharaohs, built by slave labour and laid out in a relatively unstructured manner. However, recent work by Robert Bauval has shed an intriguing new light on the issue. He realized that the relative sizes, and detailed positioning of, the Giza pyramids were a faithful mimicry of the stars forming the 'belt' in the constellation of Orion. In addition, it transpired that the supposed 'air shafts' in the pyramids actually pointed directly towards Orion, apparently with the aim of projecting the soul of the deceased king out towards the constellation. These discoveries alone re-wrote our understanding of the motivations for building the pyramids and the state of technological advance of the ancient culture. But the plot continues to thicken with a robotic camera sent into the shafts recently enabling the discovery of a door to a previously unknown secret chamber deep within the structure. Rumours abound that imminent discoveries may even more radically change our perception of ancient civilisation...



Troubled Times



Hale Bopp

On Aug 6, 1995 ZetaTalk stated that the newly announced [Hale Bopp](#) comet was in fact a [Fraud](#), being a nova on the opposite side of the skies from Orion, where the inbound 12th Planet could be found. The ESO subsequently announced they could find [No Comet Emissions](#) in what was being claimed to be the comet Hale Bopp, which would be outgassing beyond where any other comet had before, then stopped outgassing for over a year until early 1997 when it came close to the Sun. , and other reports on the Size and unusual outgassing beyond NASA reported that the Appearance of this supposed comet. By mid-year 1996 ZetaTalk warned that the second part of the fraud was emerging, to line the nova up with a [Real Comet](#) sighted by the [NEAT](#) program before it had outgassed. Repeated ZetaTalk [Predictions](#) on Hale Bopp proved to be correct.



Troubled Times



Israel Aggression

On Nov 10, 2007 the Zetas stated that Israel was getting desperate to achieve their plans for a greater balance of power with their Arab neighbors. The Bush administration was going to end and time was running out.

Israel is desperate, as they see their prime protector, the US military, pulling out of Iraq and leaving them with their ambitions unsatisfied. We have mentioned that they hoped to dominate not only Iraq but Iran, Saudi Arabia and Syria during the current invasion of Iraq. This was frankly the plan. Even though they are losing, and the plan cannot be actualized, there are those unwilling to give it up. They are proceeding, and taking over Iraq, or so they think. This is delusional, but if Bush and Cheney are considered mad, insane, for pushing on and talking about taking on Iran, then why would anyone expect Israel to be that much different? They are part of the same crowd!

ZetaTalk: [GodlikeProduction Chat](#), written Nov 10, 2007

By March 8, 2008 the Zetas were indicating that Israel had moved from desperate to frantic, and by June 21, 2008 they asserted that Israel and VP Dick Cheney had been unable to force the US military to participate in a war with Iran.

Israel is frantic to retain dominance in the vicinity, with her neighbors. She sees Bush losing Iraq and the Democrats likely to win the White House, so withdrawal is certain. Iran will not be a prize as they anticipated. Israel knows the US economy is tanking, and they are unlikely to get subsidies as usual. No funding, no US military to protect them, and enraged neighbors all around. What's a tyrant to do?

ZetaTalk: [GodlikeProduction Chat](#), written March 8, 2008

Israel realizes that the Bush administration has only a few short months left. Israel and Bush/Cheney have tried innumerable times to trick the US military into a confrontation with Iran. None of these attempts have worked. Now they anticipate failure in Iraq on top of this failure with Iran, so will have yet another border to defend. They are unsure of the future under Obama. So they are blustering, threatening, and saying to Iran "see how big we are". Iran is not confused about any of this, and takes it all in stride.

ZetaTalk: [GodlikeProduction Chat](#), written June 21, 2008

On Sep 11, 2008 an article revealed that since May of 2008, Israel had made several specific requests of the US that would have allowed Israel to bomb Iran alone, without direct involvement of the US. One request was for a corridor across Iraq. Another was for additional bunker busting bombs. And yet a third request was for aerial plane refueling. All three requests were denied by the US.

Israel Asks U.S. for Arms, Air Corridor to Attack Iran

September 11, 2008

<http://haaretz.com/hasen/spages/1019989.html>

The security aid package the United States has refused to give Israel for the past few months out of concern that Israel would use it to attack nuclear facilities in Iran included a large number of "bunker-buster" bombs, permission to use an air corridor to Iran, an advanced technological system and refueling planes. An attack on Iran would apparently require passage through Iraqi air space. The Americans also turned down this request. Refueling planes. An air attack on Iran would require refueling of fighter jets on the way back. The U.S. rejected an Israeli request for more advanced refueling tankers. The Israeli requests were discussed during President George W. Bush's visit to Israel in May, as well as during Defense Minister Ehud Barak's visit to Washington in July. At the

beginning of the year, the Israeli leadership still considered it a reasonable possibility that Bush would decide to attack Iran before the end of his term.



Troubled Times



Jet Stream Changes

On Jul 15, 1995 the Zetas stressed that the warming oceans were caused by a warmer Earth core, not Global Warming, as heat rises. On May 25, 2005 they stated that Jet Stream tornados were likewise not caused by Global Warming, but by the Earth wobble established in and increasing since 2004.

A key change, to which one could point, is the warming of the Earth's oceans, around the globe. This has been measured as a 6 inch rise, worldwide, on all the beaches. The waters have risen because they are warmer, and warm water takes up more room than cold water, as all elementary physics books will report. How is it that the oceans, so very deep and so very cold, have warmed up? Is it the almost imperceptible rise in the temperature of the air, a degree or so, as reported to date? Since heat rises, why would this slight rise affect the oceans? Meteorologists will tell you that the effect of air warming is air turbulence, not warmer oceans. The Oceans are Warmer because the core of the Earth has heated up, and it does so in response to its brother coming closer.

ZetaTalk: [Heralding](#), written Jul 15, 1995

A new development is tornado swirls within the jet stream, where the stream turns round upon itself rather than proceeding, high in the upper atmosphere, in its traditional directions. If tornadoes and hurricanes can occur in the lower atmosphere, on a local level, why could they not occur in the upper atmosphere? This is clearly not caused by Global Warming which has raised the air a fraction of a degree, nor has Global Warming been responsible for the permafrost or glaciers or poles melting, from the bottom up.

ZetaTalk: [Jet Stream Tornadoes](#), written May 25, 2005

On May 26, 2006 scientists confirmed that they had no answer for the changes in the jet stream, which are in fact making droughts more intractible.

Jet Streams Off Track, May Affect Weather Patterns

May 26, 2006

http://seattletimes.nwsourc.com/html/localnews/2003019908_jetstreams26m.html

Seattle researchers have discovered that warming of the Earth's atmosphere seems to be shoving jet streams out of their normal tracks - a change that could expand deserts and profoundly affect the world's weather patterns. Over the past 27 years, the high-speed air currents that steer storms to temperate zones in both hemispheres have shifted about one degree toward the poles, or about 70 miles, scientists estimate in a paper published today in the journal Science. The researchers stopped short of attributing the shift to global warming.

It's also impossible to say whether the shift is playing a role in recent droughts in the so-called subtropics, including the American Southwest, the Middle East and the Mediterranean. But if the jet streams continue to migrate away from the equator, wider swaths of the planet will almost certainly become hotter and drier. More study is needed to sort out possible contributions from natural cycles, random fluctuations and temperature increases caused by greenhouse gases from cars and industry.

At the Earth's surface, the most rapid and intense warming is taking place in the Arctic. In the atmosphere the most rapid heating in the subtropics - zones located at about 30 degrees north and south. These regions, which already have warm climates, also include southern China, North Africa,

southern Australia and the southern end of South America. The exact pattern was a surprise. It doesn't jibe with climate models, which predict more uniform warming of the atmosphere over the tropics. But the pattern of warming is directly linked to the jet-stream changes.



Troubled Times



JFK

Prior to July, 1995 ZetaTalk stated that JFK was [Assassinated](#) because he was going to tell the public about UFO's and the alien presence. In May and June, 2000 an interview with Jim Marrs was published, supporting this and referring to [Memos](#) supporting these Zeta statements.

Jim Marrs On [JFK Assassination](#)

Extracted from *X Factor magazine* (UK), No 85, May 2000

What do you make of the theory that Kennedy was assassinated because he intended to release information on the UFO phenomenon?

I have come across a lot of evidence to support this. For example, there is a 1962 CIA document that records the contents of a wire-tapped conversation between Marilyn Monroe and Hollywood reporter Dorothy Kilgallen two days before Monroe died. During the call, Monroe tells Kilgallen that JFK had told her of his visit to a secret air base where he viewed things from outer space. Kilgallen believed this was connected with the Roswell crash. Certainly, an FBI document of July 1947 confirms that Kennedy knew about Roswell. Additionally, Bill Holden, it steward on board Air Fore one, reported a conversation that he had with Kennedy in 1963, in which he asked the President what he thought about UFOs. Kennedy became very serious and replied 'I would like to tell the public about the UFO situation, but my hands are tied.' However, there is evidence that, on 12 November 1963, Kennedy ordered the CIA to hand over all UFO documents to the White House, and this was two weeks before he was shot.

Jim Marrs is one of the US's foremost investigative journalists. Probably best known for his groundbreaking research into the Kennedy assassination, his best-selling book *Crossfire: The Plot That Killed Kennedy* formed the basis of director Oliver Stone's film JFK. More recently, Marrs has turned his attention to the UFO phenomenon, leading, in 1997, to the publication of his book *Alien Agenda*, a thorough journalistic investigation into the subject, which has been hailed as one of the most balanced and well-documented books of its kind. His latest book, *Rule By Secrecy*, explores the possibility that global politics is controlled by shadowy elites operating from within secret societies, and whose origins, dating back to the first civilizations, may be influenced by extraterrestrials.



Troubled Times



John, Jr. Assassination

ZetaTalk stated in January, 1999 that the death of [John, Jr.](#) was an arranged accident. On December 16, 1999 details about a [Coast Guard Cover-up](#) were revealed.

JFK Jr. FAA Contact @9:39 PM July 16 In Official Coast Guard Report

From *NewsHawk Inc.* <hawkeye@saber.net>, 12-16-99

Check it for yourself - straight from the horse's mouth. *Here* is the U.S. Coast Guard report which contains the crucial information that John Kennedy Jr. *did* make radio contact with FAA personnel at 9:39 PM on July 16, only moments before initiating his final approach to Martha's Vineyard Airport. This is the information originally made public by **WCVB-Boston, ABC News, UPI, VirtualNY News** and some other news outlets before the information was squelched on orders from high levels of government... like the White House. As we noted in our article regarding the recovered tape archive of **WCVB-TV** Boston's July 16 broadcast that contained *numerous* references to this Coast Guard report, Kennedy would have contacted the FAA installation at Otis Air Force Base on Cape Cod before contacting the Vineyard Airport directly for final clearance.

That in fact is exactly what is referred to in this official Coast Guard report. WCVB newsroom reporter Susan Warnick partially misinterpreted the information in the Coast Guard report, as relayed to her by Coast Guard Petty Officer Todd Burgun, to mean that JFK Jr. had contacted the *Vineyard Airport* at 9:39 - a relatively minor error which however had the subsequent effect of further muddying the waters regarding this event; leading among other things to Vineyard airport personnel denying any such contact and helping to make it seem NO contact ever took place.

But Kennedy's 9:39 radio communication *did* take place, only with the FAA; which WCVB lead anchor and veteran pilot Chet Curtis said numerous times during his stint at the anchor desk later on July 16 is exactly what *would* have occurred. And it did. As we have noted in *many* articles about the murders of John Kennedy Jr., Carolyn Kennedy and Lauren Bessette, the timing of this radio contact as well as the tone and content of the communication, in conjunction with known weather conditions (visibility at *least* 8 miles) and Kennedy's proximity to land, utterly invalidate the official, disingenuous pack of lies the public has been force-fed about the plane crash and the deaths by government agencies and their pawns and lackeys in mass media.

See for yourself! Read the original Coast Guard report:

Coast Guard searching for missing Kennedy aircraft

BOSTON - The Coast Guard is actively searching for a Piper 32 Saratoga aircraft overdue on a flight from Caldwell, N.J. to Martha's Vineyard, Mass. John F. Kennedy, Jr. was on board the single-engine aircraft with his wife and a third unidentified person. The aircraft took off from Caldwell at 8:38 p.m. The FAA reported that last contact with the aircraft was at 9:39 p.m. as the aircraft was making its final approach to Martha's Vineyard. The Coast Guard assumed coordination for the waterside search at 8:25 a.m. today. The shore side search is being coordinated by the Air Force Rescue Coordination Center at Langley Air Force Base in Norfolk, Va. The aircraft was due to arrive in Martha's Vineyard around 10

p.m., and was later expected to fly to Hyannisport for a family wedding. The Coast Guard is using all available vessels and aircraft to search the waters west of Martha's Vineyard. An Air National Guard C-130 aircraft from the Suffolk Air National Guard Base is also in the air and actively searching. -USCG-



Troubled Times



Lebanon Escalation

On [July 15, 2006](#) the Zetas were asked on the GodlikeProduction Live Radio show what the agenda behind the provocation of Hezbollah by Israel had occurred. Israeli soldiers had crossed the border into Lebanon, their soldiers captured. Israel had started the missile war, lobbing the first missile. The Zetas stated Israel and the US hoped to force the reluctant US Military to engage Syria and Iran.

Is the sudden Israeli confrontation with Lebanon incited? Look at the rhetoric from the mouths of spokespersons for the US and Israel. Iran and Syria must stop their activities! Lebanon attacks, and now we are engaging Syria and Iran! Just what the Bush Administration and Israel wanted! While the reluctant US military is stuck in Iraq at present, trying to bring the troops home and slip away as quickly as possible, the Bush Administration is trying to force them into a war with Iran.

ZetaTalk: [Hezbollah](#), written Jul 15, 2006

On July 26, 2006, Harper's magazine reported that Bush intended to assign up to 30,000 troops in Lebanon, a move supported by the White House and civilian leadership in the Pentagon, but *not* the uniformed Military.

[Harper's: Former official says Bush mulling sending American troops to Lebanon](#)

July 26, 2006

A well-connected former CIA officer has told Harper's Magazine Washington bureau chief that the Bush Administration is considering deploying US troops to Lebanon. The officer, who had broad experience in the Middle East while at the CIA, noted that NATO and European countries, including England, have made clear that they are either unwilling or extremely reluctant to participate in an international force. Given other nations' lack of commitment, any "robust" force-between 10,000 and 30,000 troops, according to estimates being discussed in the media-would by definition require major U.S. participation. According to the former official, Israel and the United States are currently discussing a large American role in exactly such a multinational deployment, and some top administration officials, along with senior civilians at the Pentagon, are receptive to the idea. The uniformed military, however, is ardently opposed to sending American soldiers to the region. Most of our combat-ready divisions are in Iraq or Afghanistan, or on their way, or coming back. The generals don't like it because we're already way overstretched. The former CIA officer said that the Bush Administration seems not to understand Hezbollah's deep roots and broad support among Lebanon's Shiites, the country's largest single ethnic bloc. A U.S. force is going to end up making, not keeping, peace with Hezbollah. Once you start fighting in a place like that you're basically at war with the Shiite population. That means that our soldiers are going to be getting shot at by Hezbollah. This would be a sheer disaster for us.

Meanwhile, the US is the only country blocking condemnation of Israel in the UN, and the only country failing to call for a ceasefire among nations meeting on the issue. Clearly, they want something other than a ceasefire!

[The summit fails. War rages](#)

[Guardian](#) July 27, 2006

Fighting escalated on both sides as the much-vaunted peace conference in Rome broke up after failing to reach agreement to call for an immediate ceasefire. Condoleezza Rice, the US secretary of state, backed by Margaret Beckett, the foreign secretary, resisted calls from 13 other countries, as well as the UN secretary-general, Kofi Annan, for such a ceasefire.

Signs of the Times #1621

Hezbollah Drone Attacks Israeli Warship [Jul 14] Hezbollah rammed an Israeli warship with an unmanned aircraft rigged with explosives and set it ablaze Friday, after attack jets smashed Lebanon's links to the world one by one and destroyed the headquarters of the Islamic guerrilla group's leader. The attack on the warship off Beirut's Mediterranean coast - which left four sailors missing - was the most dramatic incident on a violent day in the conflict that erupted suddenly and appeared to be careening out of control despite pleas from world leaders for restraint on both sides. [and from another] Syria calls for Hezbollah cease fire [Jul 14] In a significant move, the Syrian ambassador to London, in an interview with the BBC, called on Hezbollah to stop firing missiles at Israel. [and from another] Israel gives Syria ultimatum [Jul 15] <http://www.ynetnews.com/> Israel gave Syria 72 hours to stop Hezbollah's activity.



Troubled Times



List to Left

During the May 5, 2007 Live Chat, the Zetas stated that there will be times when a temporary lean to the left occurs, showing up well ahead of the last weeks when a consistent lean to the left will occur. Such a lean to the left, which the Zetas termed a temporary lean to the left, occurred on March 4, 2010 and the days following.

There are several factors playing regarding the stress the Earth is under. One is how tightly Planet X grips the Earth, holding it at a lean, which is the case at present. The N Pole of Earth is pointing toward Planet X a bit, to align with its current position in its 270° roll. This presented as a lurch in late February and early March, but now it is more a steady grip. Thus, the Sun appearing too far North, consistently, is reported. In such a grip, there is little jerking around. This puts Earth at odds with the Sun, which it tries to align with. As Planet X continues in its roll, the Earth's N Pole will want to push away from the N Pole of Planet X, creating contention in its posture. Its posture will vary, jerking around returning, and the lean to the left we have predicted preceding the 3 days of darkness showing itself at times. Jerking around is what is creating plate movement. So we may have a period of quiet, but not for long!

ZetaTalk: [GLP Live Chat](#), written May 5, 2007

Nancy has been documenting what she assumes to be either an increased wobble or a slight lean to the left. It is both, but it is the slight lean to the left that has garnered attention as this has skewed the constellations out of place significantly and placed the Sun very noticeably out of position. This is due to the increased pressure on the Earth's magnetosphere from the hose of magnetons from the N Pole of Planet X. Planet X is coming from the right, so the N Pole of Earth is leaning to the left. This is not, however, the lean to the left we have predicted, which is preceded by a severe wobble. This is also not the severe wobble, which will occur along with the lean to the left and 3 days of darkness during the last weeks. This slight lean to the left is a temporary adjustment, which may result in a sudden bounce back with an overcompensation of a lean to the right. These types of temporary adjustments will occur on occasion as the Earth pulls hard to the left, to evade Planet X. All this pushing and wobbling and bouncing lurches the Earth plates, and thus they move, causing earthquakes. Where this may come and go, the pace will only increase, and certainly not go away.

ZetaTalk: [GLP Live Chat](#), written March 6, 2010

This temporary *List to the Left* was documented in [Issue 176](#) of the Newsletter. It was not just the position of the Sun, the constellations also were dramatically out of place. Note for the first Polaris report, if in central Wisconsin, Polaris should be at Azimuth 359° and Altitude 43° while Alderamin should be at Azimuth 344° and Altitude 19°. This is off by 16° for Azimuth combined 24° for Altitude, too high in the dome with a severe offside to the right (which is a lean to the left on the dark side of the Earth).

Saskatchewan, Canada
March 4, 2010

Yes, During the summer we noticed instead of the sun being in the usual SW position it seemed to steadily be in the NW position. I noticed it the other day with a clear sky. My backyard fence faced directly west, with a tree in the SW position and my garden gate in the NW position. One day it seems the sun is in the correct SW position and the next moment it's in the NW position. Hard to miss when observed. Noticing the sun should be in a position at a particular time, but seems to have shifted more to the NW than ever at this time. I've noticed it for many months.

San Diego

March 4, 2010

The Sun was way off today here in San Diego. I was shocked. Usually I see the sun set as I get out of work around 5:30 pm PST. Yesterday I couldn't see anything because it was setting to far south. The buildings were covering my view which has never the case! It has always been due west! Now it is more south than I have ever seen it!

San Diego

March 8, 2010

The sun was out of place once again here in San Diego this morning. The sun is usually to the right of one of the buildings that I work near. Today the sun was more to the left and was directly behind the building.

Los Angeles

March 4, 2010

I always use Orion as center. In LA tonight it shifted horizontally to right of center from last night. Way out of position from last night. Usually stars rise in east set in west, tonight they seem to be going from south to north.

South Carolina

March 4, 2010

Today, I was struck with the very very obvious mislocation of the sun on my way home from work. It was way too far to the NW for this time of year and it happened in only a day's time. Yesterday it was in the standard SW position. I drive a 7 mile rural road to and from work every day that has no curves and 2 medium to small size hills. Straight as an arrow. On a clear winter day you can see the stop sign or tail lights at the top of the last hill from the top of the first hill 6 miles away. Two times a year for a few weeks each, this road will be torture to drive because the sun shines directly into your eyes going to work in the morning, and coming home at night is the same way. The last few weeks, the sun has bounced from one side of the road to the other. Consider the road to be pointing to 12:00 o'clock. Today the Sun was at the 1:30 position where yesterday it was at the 11:00 position.

Ohio

March 6, 2010

My patio has always been in the shade; a very cool spot in summer. The house is oriented directly S (front) to N (rear of house). Patio is on North side of house. The Sun has moved to the NW, thus allowing more sunlight to stream across the patio that used to be totally in the shade, all year long. Sun used to set due West exposing just the Northern edge of the patio to sunlight. I started noticing, especially this week when I let puppy out, my patio is filled with sunlight. Seemed something not quite right. You know the feeling you are looking at something, but not quite believing what you are seeing. Now, today, here is 4:48 pm EST, bright sunshine, like a summer day, and a pie slice of around 40° on the patio is in sunlight.

March 6, 2010

I use a telescope with a clock drive and a nearly perfect alignment. Polaris always falls in the center of my finder's cross hairs. Since the last few weeks it is no longer the case. It is as Alderamin has become closer to my cross hairs . Take a look yourselves tonight.

March 7, 2010

Seriously, I noticed Polaris seems out of alignment just last night! My son and I had out his telescope. I thought I was imagining things.

GPS malfunction was also noted, in the extreme, during these days and the days preceeding March 4 but including the February 27, 2010 Chile 8.8 quake.

Pennsylvania

February 26, 2010

I use a GPS device in my car in northeastern Pennsylvania, and I've done so for about 24 hours every weekend since October of last year. On Thursday night (Feb. 25) when we received about 14 inches of snow, the Garmin brand GPS worked flawlessly as usual. However, on the following night (Feb 26), when we received just a dusting of snow, the GPS was going nuts all night. It stopped working about two or three times per hour, and when it was working it often showed me driving on the wrong street. Sometimes the street locations just floated up and down on the screen, as if the satellites were being buffed around in their orbits. I first noticed the GPS acting up around 5:30 pm eastern time on Friday afternoon (Feb 26), getting knocked out of commission 6 or more times per hour. The voice on the GPS would say "Satellite signal lost," or something to that effect. The screen would say "weak satellite signal". Usually the GPS is accurate to within half of a city block, or even better. It even tells me what alley or court I'm in when I'm between blocks. When the screen did work last Friday (Feb 26) night, sometimes the streets would float up and down the screen, and they would be several blocks away. The GPS has never done that before, and I've used it almost 24 hours a week or more since October. Sometimes the street grid would rotate inexplicably on the screen.

Los Angeles

February 27, 2010

I was driving down the coast of California on Saturday afternoon [Feb 27] into the late evening. I know the route well but I turn on my GPS just for the company. Just outside of LA I stopped for gas and then continued on southbound I-5. The GPS was telling me to "turn around when possible" and head in the opposite direction (north) to go to San Diego from LA. It was several miles before it reoriented itself and started giving the right directions.

Los Angeles

March 4, 2010

GPS is about 1.75 miles off, notice when I get off highway GPS says I'm on a different street than I'm actually on. 1.75 mile down range.

Columbus, OH.

March 4, 2010

Yesterday my granddaughter was in Columbus, Ohio taking her State Boards. She had started her examinations at 8 o'clock in the morning. By 3:15 pm, EST, new license in hand, she headed home. Being unfamiliar with the layout of the city, she was heavily dependent upon her GPS system. She turned it on, but kept getting a message that the signal was lost. This was the only problem she had had all day. Funny thing was, it was a beautiful, clear, sunny day in Columbus. The weather was like Spring.



Troubled Times



Illness

On Jan 15, 1998 ZetaTalk stated that [Illness](#) will increase as the 12th Planet approaches. On Feb 2, 2000 a Washington report confirmed this increase, and published [Concerns](#) were subsequently reported.

Diseases From Around World Threatening U.S.

Reuters, Feb 2, 2000

A U.S. intelligence report is warning Americans that they are under growing threat from infectious diseases brewing in the rest of the world. "Senior policymakers are becoming increasingly concerned about the implications of growing infectious disease threats for U.S. citizens at home and abroad, for U.S. armed forces deployed overseas," John Gannon, chairman of the National Intelligence Council, said on Tuesday. He released a new National Intelligence Estimate report, "The Global Infectious Disease Threat and Its Implications for the United States," at a symposium at the Smithsonian Institution. Asia was likely to see a major increase in infectious disease deaths driven by the spread of HIV and AIDS, replacing Africa as the epicenter of the disease before 2015, he said.

30 New Diseases Make Global Debut

At least 30 previously unknown diseases have appeared globally since 1973, including HIV, AIDS, Hepatitis C, Ebola haemorrhagic fever and the encephalitis-related Nipah virus that emerged in Indonesia last year, Gannon said. "Many are still incurable," he added. Twenty well-known infectious diseases such as tuberculosis, malaria, and cholera have re-emerged or spread since 1973, some reappearing in "deadlier, drug-resistant forms," Gannon said. Americans were at risk because the United States was a major hub of global travel, immigration and commerce and had a large civilian and military presence overseas, the report said. Infectious diseases killed at least 170,000 Americans a year and were "likely to continue to account for more military hospital admissions than battlefield injuries," the report said. At highest risk will be U.S. military forces deployed in humanitarian or peacekeeping operations in developing countries, the report said.



Troubled Times



Iran Invasion

On Mar 17, 2006 the Zetas went on record stating that despite the many reasons for the Bush administration to want to invade and control Iran, oil specifically, that military action would not occur, stop short of invasion or attack. They predicted US Military revolt against Bush plans.

The likely outcome is that the US will threaten and bluster, plant evidence against Iran that the US citizen and the world does not believe, rumble tanks and planes up to the border of Iran, and there the conflict stops. There will certainly be tense moments behind closed doors when the military is asked to take steps they refuse to take, confrontations that will not come out in the media until later, as leaks.

ZetaTalk: [Iran Boondoggle](#), written Mar 17, 2006

On Apr 8, 2006 Seymour Hersh reported that the military was pushing back against Bush on a nuclear option against Iran, many threatening to resign. This revelation by Hersh was a leak, from his confidential sources. .

Hersh: Joint Chiefs Opposed to Iran Nuke Attack, Members of Congress Gung-Ho

<http://thinkprogress.org/2006/04/08/>

April 8, 2006

A new report by Seymour Hersh finds that senior Bush administration officials are developing plans for a massive attack on Iran which could include nuclear weapons. Hersh points out that the Joint Chiefs of Staff - a panel of the highest-ranking military officials from each branch of the U.S. armed services - are strenuously opposed to the plan, so much so that some have threatened to resign if it goes forward: [A] Pentagon adviser on the war on terror...confirmed that some senior officers and officials were considering resigning over the issue. "There are very strong sentiments within the military against brandishing nuclear weapons against other countries," the adviser told me. "This goes to high levels." The matter may soon reach a decisive point, he said, because the Joint Chiefs had agreed to give President Bush a formal recommendation stating that they are strongly opposed to considering the nuclear option for Iran. "The internal debate on this has hardened in recent weeks," the adviser said. "And, if senior Pentagon officers express their opposition to the use of offensive nuclear weapons, then it will never happen."

But such advice hasn't fazed the ultra-hawkish members of Congress, who now refuse to accept any plan that doesn't include the use of nuclear weapons: A senior member of the House Appropriations Committee...said that no one in the meetings "is really objecting" to the talk of war. "The people they're briefing are the same ones who led the charge on Iraq. At most, questions are raised: How are you going to hit all the sites at once? How are you going to get deep enough?" (Iran is building facilities underground.) "There's no pressure from Congress" not to take military action, the House member added. "The only political pressure is from the guys who want to do it." ... "These politicians don't have a clue, and whenever anybody tries to get it out"-remove the nuclear option-"they're shouted down." While senior military officials oppose the use of nuclear weapons, Hersh's sources add that the idea "has gained support from the Defense Science Board, an advisory panel whose members are selected by Secretary of Defense Donald Rumsfeld."



Troubled Times



Iran Oil

On [Sep 26, 2005](#) the Zetas mentioned that sabre rattling by the US against Iran had at its base Iranian oil, one of the largest reserves in the world, and that to take over the oil fields of the world was a Bush administration agenda from the start.

The plans to invade Iran and Venezuela for their oil reserves, stymied because the US Military is needed at home, and is insisting it must leave Iraq to attend to the home front, rather than securing and guarding oil reserves for the Bush crowd.

ZetaTalk: [Bush Counter-Coup](#), written Sep 26, 2005

On July 27, 2006 Rolling Stones magazine reported a recent leak, that invading Iran was a plan of the Bush administration, as far back as 2003.

Iran: The Next War

Rolling Stones July 27, 2006

Even before the bombs fell on Baghdad, a group of senior Pentagon officials were plotting to invade another country. Their covert campaign once again relied on false intelligence and shady allies. But this time, the target was Iran. At the very moment that American forces were massing for an invasion of Iraq, there were indications that a rogue group of senior Pentagon officials were already conspiring to push the United States into another war-this time with Iran. A top-secret National Security Presidential Directive that dealt with U.S. policy on Iran, crafted by Michael Rubin, the desk officer for Iraq and Iran in Feith's office, the document called, in essence, for regime change in Iran.

The Bush administration's hostility toward Iran is not simply an outgrowth of the current crisis. War with Iran has been in the works for the past five years, shaped in almost complete secrecy by a small group of senior Pentagon officials attached to the Office of Special Plans. The man who created the OSP was Douglas Feith, the undersecretary of defense for policy. A former Middle East specialist on the National Security Council in the Reagan administration, Feith had long urged Israel to secure its borders in the Middle East by attacking Iraq and Iran. After Bush's election, Feith went to work to make that vision a reality, putting together a team of neoconservative hawks determined to drive the U.S. to attack Tehran.



Troubled Times



Loch Ness

In September, 1995 ZetaTalk stated that the [Loch Ness](#) monster was not the only dinosaur caught in fresh water lakes around the world. Recent research confirms this.

Lake Monsters around the Globe

From Paranormal A to Z

Lake Monster In different parts of the world unusual creatures or "monsters" are said to live in lakes. Most lake monsters come in one of two basic shapes. The first basic shape is like an enormous eel or snake. The second is like an ancient plesiosaur reptile or an Archaeoceti whale with a long neck, a fatter body, and some sort of flippers or fins. These may be very large fish, marine animals stranded in inland waters, prehistoric survivors, very large crocodiles, colorful hoaxes to attract tourists, or something else.

The most famous lake monster is the Loch Ness Monster in Scotland. Other lake monsters include Altamaha-Ha in Georgia, Champ from Vermont, Cressie in Newfoundland, Nahuelito in Argentina, Ogotogo from British Columbia, Slimy Slim from Idaho, and Storsjoodjuret or Storsjödjuret from Sweden. The Mokele-Mbembe in Congo, Africa is unique in being described as a living sauropod dinosaur.

Lakes that host "monsters" are typically large, deep, and are often murky. Host lakes frequently either connect to the sea or formerly connected to the sea. It is extremely rare for a lake creature to have any contact with a human. Attacks on humans by lake monsters are almost unknown, however crocodiles will attack humans. The field of zoology dealing with unknown creatures of unexpected form and size is cryptozoology.

The Legend of [Nessie](#)

'Nessie' Voices Recorded (?) Might Be [Relative Of Walrus?](#)

June 15, 2000

Forget the terror of the deep. Nessie could be from the shallower end of the gene pool. A team of Swedish scientists has revealed that the Loch Ness monster may be a distant relative of the walrus, writes Stephen McGinty. While theories abound that the fabled inhabitant of Scotland's most famous loch may be a trapped dinosaur, a giant sturgeon or even an aquatic ghost, new scientific research has suggested a more mundane solution. A sonic survey carried out by the Scandinavian Global Underwater Search Team found that a series of unidentifiable sounds fell into a frequency matched only by the elephant seal, the walrus or the killer whale. The sounds, which were described like a pig grunting or a person snoring, were recorded by highly sensitive hydrophones lowered to a depth of 65ft in two spots where sightings have been recorded. The Swedish team, which carried out the research in March on the Loch's west side, said the sounds were similar to those found in Swedish and Norwegian lakes also rumoured to be populated by water monsters.

Jan Sundeberg, the expedition leader, said the sounds had been analysed by both marine laboratories and the Swedish defence intelligence agency, known as FOA65. "Most of the noises we picked up in the loch we can identify as eels, pike or trout, but this noise was a sort of grunting, very like sounds we recorded in

Lake Seljordsvatnet [in Norway], although shorter and sharper." The analysis revealed that the noises were in a frequency range 747-751Hz and only the elephant seal, walrus or killer whale make sounds that fall into that category. "Let's say these sounds were from Nessie - she could be a relative, a sub-species," said Sundeberg. The expedition, called Nessie 2000, was organised by the Official Loch Ness Monster Fan Club, based in Inverness. Gary Campbell, an accountant who launched the Official Loch Ness Monster Fan Club, believes the research may prove correct. "I think Nessie is unlikely to be a dinosaur but I do think something got into Loch Ness 10,000 years ago and has evolved." Sundeberg's expedition has also included a trip to Ireland, where the scientists surveyed Sraheens Loch, also rumoured to contain a mythical beast. The team expects to continue studying Loch Ness in October.



Troubled Times



Magma Slam

After the dual 8.1/8.2 south of [Tasmania](#) and in [Auckland](#) on Dec 23, followed by the infamous [9.3 in Sumatra](#) on Dec 26, the Zetas gave their Magma Slam explanation, in which they predicted two other Magma Slam areas - the spine of the Andes and the African Rift. On June 13, a [Richter 7.9](#) quake struck in Chile, on that spine.

And where would those double whammy points be? ... Tasmania ... the African Rift ... the spine of the Andes in South America.

ZetaTalk: [Magma Slam](#), written Dec 28, 2004



Troubled Times



Magnetic Field

Prior to July, 1995 ZetaTalk stated that the Earth's [Magnetic Field](#) was appearing to weaken as it was diffused and confused by the 12th Planet's approach. On March 14, 1999, a NASA expert confirmed that.

Question #1-D (the Answer Man)

Answer from David P. Stern - NASA/GSFC Code 695

Updated March 14, 1999

QUESTION: (Earth's magnetic field weakening--leading to a pole shift?)

I am just a tax paying citizen, interested in astronomy all of my life. I am very interested in the physics of our earth which I believe is related to astronomy as it is our home and a part of this solar system. My question is: Is the earth's magnetic field weakening, heading to zero point? With this, is the base pulse frequency of the earth speeding up causing the magnetic fields to fluctuate so that it interferes with the pilots navigational equipment, so that the navigational charts have to be redrawn periodically and the air strips renumbered? Are the magnetic poles fluctuating? My experience is that they are. I have a quality, liquid filled compass secured to my desk. It has been very still now for the past month but the six weeks or so prior to that, there were constant fluctuations in its direction, up to as much as 2 1/2 degrees, always to the west. My understanding is: I have seen photographs of the sun taken from satellites, showing the sun going through major activity. Repolarizing itself? Causing the earth to repolarize itself? Going through a natural cycle as it has many times in the past with pole shifts? *On a scale from 1 to 10, with 1 being the weakest and 10 the strongest, 2,000 years ago it was a 10, today it is a 1.* Is it heading for a zero point when a pole shift will occur? The closer it gets to the zero point, the more fluctuations will occur?

Are the change in the magnetic frequencies causing at times a confusion in migratory animals? Causing cells to mutate, changing the DNA pattern within the cell? Causing certain strains of bacteria such as staph infections to become resistant to our antibiotics and causing new viruses to appear that we have never seen before, being able to survive in a new magnetic frequency? I believe these are very fascinating times in which we live. The science of all of this intrigues me to no end. I have some taped interviews of scientists and geologists relating to this subject and I read all that I can get my hands on, on the subject also. Your straightforward comments and answers will be most welcomed to help me to understand more, what is taking place. Thank you so very much.

Michael

REPLY:

Dear Michael,

A question on reversals appears in a list of questions and answers, at <http://www-spod.gsfc.nasa.gov/Education/FAQ.html> and two more are due to be posted there soon. Also, if you look up "Exploration of the Earth's Magnetosphere" you will see that the reason the Earth has a magnetic field is not any

polarization, but electric currents flowing in the Earth's core. You will also find there a great deal of material on the Sun's magnetic field and its relation to sunspots and their cycle.

Now to your questions. *Is the Earth's field getting weaker? Yes and no. That field is often viewed as being a two-pole ("dipole") structure similar to that of a small bar-magnet at the center of the Earth, inclined by about 11 degrees to the rotation axis of the Earth, so that the magnetic poles are not the same as the geographic ones. But the actual situation is more complicated, and magnetic charts note the fact by mapping deviations between magnetic north and the direction to the magnetic pole, which fit no simple pattern.* Why? Because the magnetic field is actually more complicated, and it contains additional fields, of more complex nature. All this originates in the Earth's core, about half the radius of the Earth. If we could go to the surface of the core, all the complicated parts would be much bigger. But they weaken more rapidly with distance, so at the surface of the Earth they are already quite weak, while the "dipole" part stands out more (in addition of actually *being* the biggest chunk of the field).

Are you still with me? The magnetic field of the Earth changes all the time, and yes, magnetic charts have to be redrawn from time to time (this was first found in 1641, by an Englishman named Gellibrand). *And yes, in the century and a half since the first careful mapping of the Earth's field, the dipole has become weaker by about 8% (the rate may have speeded up in 1970). If you draw a straight line through the points, you will find that perhaps 1200 years from now, the line goes through zero.* Extending straight lines too far beyond the present, however, is risky business, as noted by no less a scientific authority than Mark Twain. In *Life on the Mississippi* Twain noted that the Mississippi river was getting progressively shorter (mainly by floods - and by people - creating shortcuts through bends in the river) and he wrote:

"Now, if I wanted to be one of those scientific people, and "let on" to prove what had occurred in the remote past by what had occurred in a given time in the recent past, or what will occur in the far future by what has occurred in late years, what an opportunity is here! Please observe: In the space of one hundred and seventy six years the lower Mississippi has shortened itself two hundred and forty-two miles. That is an average over a mile and a third per year. Therefore, any calm person, who is not blind or idiotic, can see that in the lower Oolitic Silurian Period, just a million years ago next November, the lower Mississippi was upward of one million three hundred thousand miles long, and stuck out over the Gulf of Mexico like a fishing rod. And by the same token any person can see that seven hundred and forty years from now the lower Mississippi will be only a mile and three quarters long, and Cairo and New Orleans will have joined their streets together, and will be plodding comfortably along under a single mayor... There is something fascinating about science. One gets such wholesale returns of conjecture out of such a trifling investment in fact."

It is not impossible that the magnetic field will go through zero 1200 years from now, but (judging by the past record of reversals) not likely. In any case, the field is not going away: when one uses observations on the surface to reconstruct fields at the core, one finds that while the dipole field is getting weaker, the complicated parts are getting stronger, and the total magnetic energy does not change, within our observational accuracy. That's why I wrote "yes and no." I don't know about migrating animals (they may have magnetic organs, sort of built-in compasses), but there seem to exist no magnetic effects on DNA, resistance to antibiotics and so on; those changes seem more related to chemistry. Finally, be cautious with compass readings in your house. Houses do contain electric currents and machinery, and these may affect the readings of a magnetic compass. On NASA's satellites the magnetic sensor usually sits at the end of a long boom, to keep it away from interfering electric currents in the satellite's circuits. Keep up your interest in science!

David



Troubled Times



Magnetic Whammy

On [Jul 15, 1995](#) ZetaTalk mentioned the immense magnetic tug caused by Planet X, causing magnetic diffusion on Earth even from afar. In 2003, brownouts and surges were experienced due to the charged tail of Planet X wafting past Earth, and in [Apr 7, 2005](#) and [Mar 8, 2006](#) and as recently as [Jul 1, 2006](#) they warned this tail effect would return shortly.

The Earth's magnetism is being disturbed now, when stable for thousands of years. Magnetic diffusion is already causing mankind to move to alternate means of establishing bearings.

ZetaTalk: [Magnetic Field](#), written Jul 15, 1995

During the Summer of 2003, the tail of Planet X was spraying toward Earth, as it is hosed out of the N. Pole of Planet X, being magnetized iron ore dust. The tail of Planet X is once again turning toward the Earth.

ZetaTalk: [Tail Returns](#), written Apr 7, 2005

When it put on the brakes as it arrived at the Sun, in the Summer of 2003, the tail logically wafted past the halting Planet X to blow past the Sun to interfere with the electric grid in many countries in August-September of 2003, creating surges and brownouts, crashing the grids. The tail is charged, and this is the reason it clings to and follows Planet X, which is an immense planetary magnet. The tail blows away from the N Pole of Planet X, which is the outbound port of the magnetic particle flow that is the magnetic field of a planet. Does this mean that mankind will shortly have more of the tail effects, here on Earth? The Earth cannot escape this, and folklore speaks to this, but just what the timing of these assaults will be, we will not say.

ZetaTalk: [Tail Wafting](#), written Mar 8, 2006

Are we saying the Earth's magnetic field is going to get more erratic in the future, dramatically so? There is no question that this will be one of the signs that will come, yet another not covered by the Global Warming excuse.

ZetaTalk: [Magnetic Clash](#), written July 1, 2006 on the live GodlikeProduction Radio show.

In July, 2006 two ships, one near Florida and another near Alaska, listed so badly that one turned onto its side and another threw passengers overboard. High waves or weather were not a factor. Ships determine their list based on magnetic gyroscopes, which can be affected by magnetic pulse.

Signs of the Times #1624

<http://www.abcnews.go.com/GMA/story?id=2210556&gma=true> [Jul 19] *Passengers on the ship were thrown into the ocean after a steering problem caused the ship to tilt 30 degrees to the left right after it departed from Florida's Port Canaveral on its way to New York.*

[and from another]

<http://www.timesonline.co.uk/article/0,,3-2283612,00.html> [July 25] *The US Coast Guard and Air Force were attempting to rescue 22 crew from a cargo ship carrying nearly 5,000 cars last night after it rolled almost on to its side and began taking on water 230 miles south of the Aleutian Islands.*

As the [Zetas explained](#).

To all extent it appears to be a steering problem, but what made the automated equipment go awry? This equipment has been in use for many, many decades and of course uses stabilizing gyroscopes that utilise magnetics. Thus this is a magnetic anomaly, a type of magnetic surge that caused the gyroscopes to be off kilter. The ship was adjusting. The ship was attempting to adjust to what it perceived as reality. This had nothing to do with the captain steering a wheel and everything to do with the ship's internal gyroscopes trying to keep it steady and level. Does this equipment also turn the ship? It's involved in turning. If you're going to make a turn, you tell this equipment, the automated equipment, that you wish to make let's say a 90° turn. Well the ship doesn't immediately try to turn in place in the ocean, this takes a bit of tacking, tacking to the left or the right until the 90° angle is affected. You tell it how tight you want to make the turn. Do you have 2 miles before you need to be in that position or do you need to be there within 500 feet? Something like that. That indicates how sharp the turn should be or how gradual, but they have a limit on how sharp it would be. However, since this mechanism is in place to say how sharp the turn should be and it is controlled by automated equipment taking into consideration the parameters the captain enters, it is possible for this equipment to go to the extreme based on the gyroscope readings that tell it whether it's level or not. And it was just simply a factor that was never in place when these ships were built and this equipment was tested.

We are having magnetic surges. This is something that is also causing some electromagnetic brown-outs and surges. We had this in 2003 in August, September or so and there was a lot of black-outs around the world. New York City on August 14th, the Yucatan Peninsula, Sydney Australia, many areas were reporting sudden blackouts and this was related to equipment shutting down because they sensed a surge on the lines. Equipment does this automatically to protect itself so you don't have too much electricity flowing through and damaging the equipment, and then afterwards things have to be reset and restarted. So we're into a period where this is picking up. We mentioned recently on Godlike Productions that there would be more electromagnetic interference because the tail was starting to waft toward us. The tail has barely started to waft toward Earth again. Just wait till it's got a pretty good blast aiming in our direction, in the Earth's direction, then you'll really see equipment failure which the establishment is not ready to explain. This is most certainly not global warming.

ZetaTalk: [GodlikeProduction Live](#), written July 29, 2006



Troubled Times



Magnetism Trimesters

The Zetas have long stated that magnetic trimesters exist, ending at approximately the end of December, April, and August. The strongest of these is the Summer trimester.

Since magnetism is viewed as polarized, a N Pole and a S Pole, with particles flowing from one to the other, the idea that there would be trimesters is confusing. We have explained that the Sun's magnetism reaches to the ends of the solar system and beyond, and dominates. Mercury and Earth, for instance, align with the Sun's permanent alignment, and for those who say the Sun flops about, reversing fields every 11 years, NASA's own Ulysses probe proved them wrong in 2001. Imagine the solar system itself aligned along a magnetic flow line of a larger field, which pulses. It is no accident that the Earth, a magnetic planet, is going round the Sun every 365 days or so, as the magnetic trimesters have something to do with this progression.

ZetaTalk: [Magnetic Trimesters](#), written December 20, 2006

Why is it the Sun, as the giant magnet dominating the solar system, points North and South with its poles in the directions it does? For those late to this argument, the Sun does not reverse polarity every 11 years as NASA states, and the solar magnetic field reaches beyond the outer bounds of the solar system, affecting all the planets. The Sun likewise is under the dictates of influences that surround it, and as the Sun goes, so go the planets.

ZetaTalk: [Magnetic Trimesters](#), written 2001

In October, 2009 NASA's IBEX provided its first map of a newly discovered magnetic ribbon just outside the heliosphere. These maps were provided every six months, with a second provided Spring of 2010 and the third just recently in October 2010. NASA is declaring that changes occur within the magnetic ribbon *within a six month period*. They are not sure of the exact timing, as they only get a map every six months, but they are sure that the change happened with a six month period!

Knot in the Ribbon at the Edge of the Solar System "Unties"

September 29

<http://www.swri.org/9what/releases/2010/knot.htm>

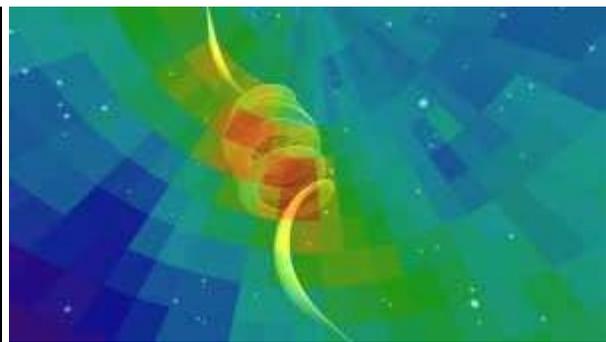
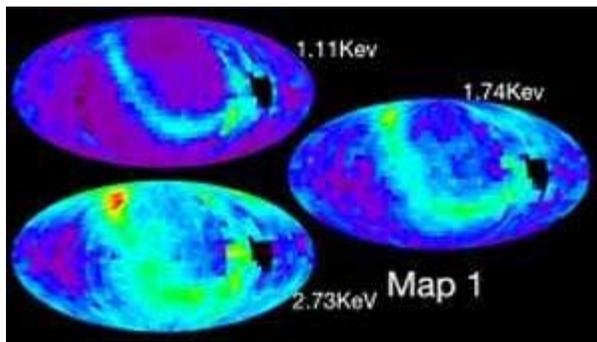
The unusual "knot" in the bright, narrow ribbon of neutral atoms emanating in from the boundary between our solar system and interstellar space appears to have "untied," according to a paper published online in the Journal of Geophysical Research. Researchers believe the ribbon, first revealed in maps produced by NASA's Interstellar Boundary Explorer (IBEX) spacecraft, forms in response to interactions between interstellar space and the heliosphere, the protective bubble in which the Earth and other planets reside. Sensitive neutral atom detectors aboard IBEX produce global maps of this region every six months.

NASA's IBEX Spots Mystery Emissions at Edge of Solar System

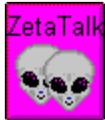
October 15, 2009

<http://www.foxnews.com/story/0,2933,567020,00.html>

"[The ribbon is] aligned by and dominated by the external magnetic field," McComas said in a briefing Thursday. "That's a huge clue as to what's going on. But still we're missing some really fundamental aspect of the interaction - some fundamental physics is missing from our understanding." The new IBEX results will be published in the Oct. 16 issue of the journal Science.



Troubled Times



Mammoth Lake

Signs of the Times #1125

What does this approaching monster do to the swirling magma, itself composed of many parts that are attracted or repulsed by the particle flows emanating from Planet X? They increase their churning, an action noted during the past few years in the solar system, causing various planets such as Jupiter to churn and various moons such as Europa to warm. The Earth, closest to Planet X, is certainly no exception. One has only to look at the edies and currents in a churning river to understand what might be happening to the magmet. Speed increases, buildup occurs where the flow is sluggish or blocked, and pressure mounts going into the blockage. Thus Etna oozes at high altitudes during the same time period, one-third way around the globe in Japan, eruptions throw white ash down upon Tokyo and, another third way around the globe, the Mammoth Lake caldera creates a panic. Why just the northern hemisphere? Planet X is approaching from the South, and those parts of the Earth's magma that wish to escape are moving North! [new ZetaTalk: [Monster Cometh](#)]



What about the months and years preceding the pole shift? It is no secret that Mammoth Lake and the caldera of Yellowstone are warming up, and the populace has been prepared for these occurrences by the movie Volcano where there, in the middle of LA, lava is bubbling up. In fact, there is a fault line running from the approximate San Diego/LA area, up into the Sierras, and this is liable to rupture rather violently during one of the quakes that precedes the pole shift by some months. [Note: old ZetaTalk: [Volcanoes](#), written [Feb, 2000](#). Zetas RIGHT Again!]

Signs of the Times #1124

USGS Emergency Response Bulletin, For Immediate Release, Long Valley Caldera and Mono-Inyo Craters Region, California. The CURRENT CONDITION has been downgraded to ORANGE (WARNING). If you reside in the affected area you are urged to implement your Level Orange emergency response plan immediately. [and from another source] I live in Tom's Place and my husband was called out [Sep 18] to an emergency firemans meeting about an hour and a half ago. I am worried, The ground feels like it is moving non stop now. ... My husband just came home. We are leaving. They are contemplating a manditory evacuation foir the entire area and whatever was said he isn't waiting. We are headed for family in Flagstaff. I have to go. [and from another source] Last nite [Sep 18] before I went to bed I had watch the quake swarm grow from like 70 some quakes into a little over 200. I get up bright and early [Sep 19] there are over 600+ quakes listed.



Troubled Times



Marilyn Monroe

Prior to July, 1995 ZetaTalk stated that [Marilyn Monroe](#) was murdered because [President Kennedy](#) had talked to her about the alien presence. A 1998 book by Donald Wolfe confirmed this, per a *UFO Digest* report.

[Marilyn Monroe and Roswell](#)

by Dirk Vander Ploeg

Was Marilyn Murdered?

This is the most amazing story I have ever read or imagined. It almost makes you involuntarily shake your head in disbelief and mutter, "This can't be true," or "these conspiracy guys are really nuts". Ok, ok, we can believe she was sleeping with Jack and Robert Kennedy, as well as mafia kingpins. Ok, she probably knew all about the "Bay of Pigs" and "The Cuban Missile Crisis", but "Roswell!" I received the following revelation in an email over the weekend. I still find it difficult to believe, but I want to learn more.

Breaking News - Subject: Marilyn Monroe Wiretap: According to an authenticated record of a CIA wiretap signed by CIA chief James Angleton the day before Marilyn Monroe's death, she was planning to hold a Press Conference to tell all about the crashed UFOs and bodies that Jack Kennedy had told her about. A copy of this leaked document has just been released in Dr. Steven Greer's new book '*Extraterrestrial Contact - the evidence and implications*', which is available at the CSETI Website. <http://www.cseti.org>".

Contains list of all ET related covert Military/Contractor facilities prepared at the request of Congressman Christopher Cox, authenticated CIA wiretap document of Marilyn Monroe signed by legendary Counter-Intelligence Chief James Angleton the day before her death detailing that she knew about the crashed spacecraft and dead bodies from Jack Kennedy and was planning a Press Conference to tell all..... and more! This is a breaking story and I will keep you posted!

It already went public. The 1998 Monroe book by Donald Wolfe includes a photocopy of it. In Europe and South America the book is called "*The Assassination of Marilyn Monroe*." In the United States, publisher William Morrow released it as "*The Last Days of Marilyn Monroe*." A French TV company is now shooting a Monroe documentary. The producer recently videotaped talking head interviews with Darryl Gates, who was a young lieutenant at the scene of Monroe's death, retired LA district attorney John Miner, and Donald Wolfe. Recently means September.

There is another Monroe book upcoming, from William Morrow, by Donald H. Wolfe: *The Last Days of Marilyn Monroe*. This one is not a distinguished effort. Wolfe depends on truly unreliable sources (Robert Slatzer, Jeanne Carmen) and the book tells us very little that is new - including Wolfe's tale of Monroe's murder at the hands of Robert Kennedy and his henchmen. Ugh!!

In the end, what is the truth about Marilyn? Go to your local video store and rent *The Prince and the Showgirl*, *Some Like It Hot* or *Gentlemen Prefer Blondes*. Pick up one of those lavish MM picture books. That is the truth about Marilyn. Her seemingly effortless work - which she labored and suffered over - is why she remains, in Barbara Leaming's words, the symbol of our secret desires. Editor's Note - I will keep

you posted as this story continues...



Troubled Times



Mars Exploration

In June, 1997 ZetaTalk stated that attempts by the elite to [Explore Mars](#) as a safe place during the forthcoming cataclysms would be foiled, and again in January, 1999 ZetaTalk stated that an [Escape to Mars](#) would not be allowed. On Nov 10, 1999 NASA claimed this failure, among their [Continuing Problems](#), was due to a metric error. The June, 1997 ZetaTalk stated that probes that encouraged the Awakening would be [Allowed](#), and the 2004 [Mar's Rover](#) received an assist!

Mars Climate Orbiter Failure Board Releases Report

NASA Release 99-134, Nov 10, 1999

"The 'root cause' of the loss of the spacecraft was the failed translation of English units into metric units in a segment of ground-based, navigation-related mission software, as NASA has previously announced," said Arthur Stephenson, chairman of the Mars **Climate Orbiter** Mission Failure Investigation Board. "The failure review board has identified other significant factors that allowed this error to be born, and then let it linger and propagate to the point where it resulted in a major error in our understanding of the spacecraft's path as it approached Mars.

The [Board's Report](#) is available on-line.

Metric Mixup Caused Loss of Mars Climate Orbiter

Astronomy Now, Sept 30, 1999

The \$125 million Mars Climate Orbiter mission was lost because its spacecraft and navigation teams were using different measurements units, NASA said on Thursday.

My current job is to develop systems for on-station geostationary satellites. We already did that for various other countries in the world: Ryad in Araby, Kiruna in Sweden, Bangkok in Thailand, etc. I'm actually leaving next week to train the operators of Hispasat in Madrid on this system. Any team working in cooperation in the space systems field is making sure, at the very *first*, that the reference system used is the same or has to be converted to the same system in order to communicate information about the *same* matters. It is just elementary. To make tests and compare results before the true operations begin. So, I *do not* buy this explanation. The error would have occurred before, OR the explanation is biased. There is something else going on. No way is this the explanation for what occurred.

Offered by [Véronique](#).

Yeah! There are 1.609 kilometers in a mile or 0.6 miles in a Km. How come the radar ranging equipment did not pick up the distance discrepancy long before it got to mars? It might of been the landing coordinates that where entered wrong, but that is hard to believe, if one thinks in a measurement system (Metric, English) it is quite unlikely he will try to convert one to the other in his/ head.

Offered by [Roy](#).



Troubled Times



Mars Water

Prior to July, 1995 ZetaTalk stated that [Life on Mars](#) had existed prior to the giant hominoids from the 12th Planet pouring the Mars oceans into subterranean cavities while washing ore during their mining operations. On Dec 10, 1999, *Science Magazine* and the Brown University *News Service* reported definitive evidence of ancient oceans on Mars, and on June 12, 2000 [NASA](#) confirmed this. On Jan 25, 2007 scientists admitted that the water must be underground, as it could not have evaporated.

Science Magazine, Dec 12, 1999

Possible Ancient Oceans on Mars: Evidence from Mars Orbiter Laser Altimeter Data

High-resolution altimetric data define the detailed topography of the northern lowlands of Mars, and a range of data is consistent with the hypothesis that a lowland-encircling geologic contact represents the ancient shoreline of a large standing body of water present in middle Mars history. The contact altitude is close to an equipotential line, the topography is smoother at all scales below the contact than above it, the volume enclosed by this contact is within the range of estimates of available water on Mars, and a series of extensive terraces parallel the contact in many places.

Brown geologist finds evidence supporting ancient ocean on Mars

News Service, Brown University

For Immediate Release: December 9, 1999

In an article to be published in *Science* magazine Dec. 10, 1999, Brown University planetary geologist James Head and five colleagues present topographical measurements which they say are consistent with an ocean that dried up hundreds of millions of years ago. The measurements were taken by the Mars Orbiter Laser Altimeter, an instrument aboard the unmanned spacecraft Mars Global Surveyor which is circling the planet.

Head's team set out to test the hypotheses of scientists who suggested the possibility of oceans on Mars in 1989 and 1991. The team used data from the Mars Orbiter Laser Altimeter, which beamed a pulsing laser to Mars' surface. Scientists measured the time it took for the laser to return to the satellite; the laser traveled a shorter length of time from mountain peaks and longer from craters. MOLA is the first instrument to provide scientists the information required to construct a topographic map of the entire surface of the planet. For years, scientists have known about channels in which water once flowed into the northern lowlands on the surface of Mars. "The question is whether it collected in large standing bodies," Head said. "This is the first time we could get instruments to comprehensively test these ideas."

According to Head, the team has found four types of quantitative evidence that points to the possible ancient ocean:

- The elevation of a particular contact (the border between two geological units, such as where one type of surface meets another) is nearly a level surface, which might indicate an ancient shoreline.
- The topography is smoother below this possible ancient shoreline than above it, consistent with smoothing by sedimentation.
- The volume of the area below this possible shoreline is within the range of previous estimates of water on Mars.

A series of terraces exists parallel to the possible shoreline, consistent with the possibility of receding shorelines.

The results "should make all of us think more seriously about the possibility of the presence of large-scale standing bodies of water on Mars, big lakes and oceans," Head said. "We can't think of anything else to explain these things. They merit much closer scrutiny." Head's team concludes that further tests are necessary, including analysis of meteorites from Mars and of landing sites, checking for the presence of salts that may be related to former oceans. The importance of determining whether there were ancient oceans - and life - on Mars is that scientists may be able to learn more about long-term climate change and why climate changed on Mars, which has relevance to the future of the Earth, Head said.

Hints of huge water reservoirs on Mars

25 January 2007

<http://space.newscientist.com/article/dn11030-hints-of-huge-water-reservoirs-on-mars.html>

Mars is losing little water to space, according to new research, so much of its ancient abundance may still be hidden beneath the surface. Dried up riverbeds and other evidence imply that Mars once had enough water to fill a global ocean more than 600 metres deep, together with a thick atmosphere of carbon dioxide that kept the planet warm enough for the water to be liquid. But the planet is now very dry and has a thin atmosphere.



Troubled Times



Martial Law

On [Mar 17, 2006](#) the Zetas predicted that Bush would attempt to declare Martial Law, but that this would be ignored or blocked by others in the federal government.

Although this is in the hands of man and man has free will, and thus any predictions must be predicated on this, we predict that Bush will not publicly declare martial law in the US in order to dictate his ways, though may write executive orders to this effect which will be ignored by any but the tight cabal surrounding him.

ZetaTalk: [Iran Boondoggle](#), written Mar 17, 2006

We have mentioned, in the Iran Boondoggle writeup, that we anticipated Bush to attempt to invade and attack Iran, with the military declining his orders, and we also anticipated Bush to attempt to declare Martial Law, with the agencies ignoring him. He has ordered an attack on Iran dozens of times over the past few months, and such orders were deflected and thus ineffectual. Martial law is another such order he has attempted to execute, writing numerous executive orders to facilitate this. One such occasion was after the Congress turned Democratic, a plan evidenced by his stubborn refusal to even acknowledge that he would have to compromise where before he just ruled. How is it that an agency can simply refuse to follow and order? Just that, the order is not enacted. If he thinks that putting a layer of yes men into place will change anything, he is mistaken. But then, this President has not been known for his acumen.

ZetaTalk: [GodlikeProduction Live](#), written Feb 3, 2007

On May 23, 2007 Bush signed an Executive Order granting himself dictatorial powers at his discretion. On Jun 26, 2007 a clear attempt by Bush to declare Martial Law by using the Emergency Notification Action network occurred. This was accompanied by an unusual notification to the US Military on the same day, Jun 26, 2007. On Jun 28, 2007, Bush gave a press conference and looked defeated and ragged. The Zetas stated this was a failed [Martial Law attempt](#).

Bush Makes Power Grab

May 23, 2007

http://www.worldnetdaily.com/news/article.asp?ARTICLE_ID=55824

President Bush, without so much as issuing a press statement, on May 9 signed a directive that granted near dictatorial powers to the office of the president in the event of a national emergency declared by the president. The "National Security and Homeland Security Presidential Directive," with the dual designation of NSPD-51, as a National Security Presidential Directive, and HSPD-20, as a Homeland Security Presidential Directive, establishes under the office of president a new National Continuity Coordinator. That job, as the document describes, is to make plans for "National Essential Functions" of all federal, state, local, territorial, and tribal governments, as well as private sector organizations to continue functioning under the president's directives in the event of a national emergency.

FEMA Hijacks Midwest Broadcast Signals with Mistaken Presidential Alert

June 26, 2007

<http://blogs.usatoday.com/ondeadline/2007/06/fema-hijacks-mi.html>

The federal government hijacked radio and TV transmissions in the Midwest yesterday [Jun 26] with test signals that triggered the sort of high-level emergency alert that is reserved for use by the president. The Quincy Herald says alerts were sent at 7:33 a.m., 7:49 a.m., 7:55 a.m. and 8:07 a.m.

Radio listeners heard nothing but dead air. TV viewers saw a scrolling message that said: "The Emergency Action Notification Network has issued an emergency action notification for the United States, beginning at ..." FEMA tells the Associated Press that the mistake affected Illinois, Indiana, Missouri, Wisconsin and Michigan. "While the interrupted morning drive-time broadcasts proved the Illinois system worked, the fact that what's known as an Emergency Action Notification, or EAN - the highest level of EAS alert, indicating an emergency message is coming from the White House - could be relayed mistakenly to override stations was a bit of a jolt, sending engineers scrambling at the affected outlets throughout Illinois and in adjacent media markets such as St. Louis," the Chicago Tribune reports. "Compounding the error, an actual presidential code, minus any audio explanation, was sent rather than a lesser alert or a notification of a systems test of some kind." A FEMA spokeswoman tells the paper that this "unintentional disruption" occurred after a new piece of equipment in Springfield, Ill., picked up test signals that were being sent between Cleveland and Richmond, Va. WLS-TV expands on this explanation: "The federal emergency management agency is adapting satellites to handle emergency messages, and a government contractor Tuesday was testing it for Illinois, except he used active codes to send the message."

US Ran Nuclear Weapons Exercises the Week Before Bush-Putin Summit

July 6, 2007

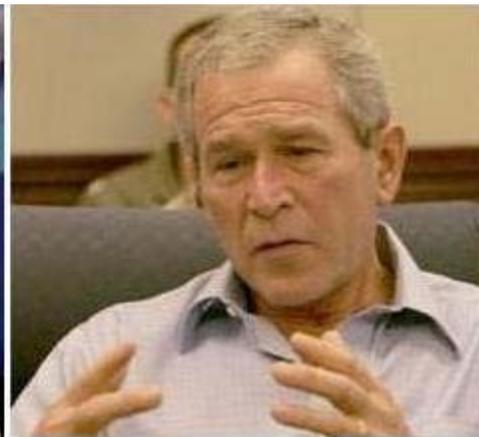
http://rawstory.com/news/2007/US_ran_nuclear_weapons_exercises_week_0706.html

International radio operators picked up large numbers of coded Air Force communications being sent around the world on June 26 that indicated some type of military activity was about to take place. The transmissions, which were 'extraordinary,' were related to US nuclear forces. A U.S. military official said the radio traffic was monitored from the Air Force Global High Frequency System (GHFS) that some observers regarded as 'extraordinary' because of the unprecedented length of messages. The messages appeared to be emergency action messages, coded communications sent by the Joint Chiefs of Staff to U.S. Air Force strategic nuclear forces.

Have you Ever Seen Such a Sad-Sack President?

Jun 28, 2007

He almost looks and sounds like someone has literally knocked the wind out of him.



Sep 24, 2005 NORTHCOM



Troubled Times



May 5, 2000

On August 15, 1996 ZetaTalk stated that the [May 5, 2000](#) conjunction would hold no threat for Earth. On Feb 10, 2000 the Oklahoma School of Science and Mathematics demonstrated this, and [NASA](#) concurs.

Source: Oklahoma School of Science and Mathematics

Planetary Conjunctions, *5 May 2000 Conjunction*

by Dr. Brian Monson

Conjunctions such as the upcoming 5/5/2000 event are actually quite common. ... The earth is 4.5 billion years or so old therefore there have been about 45 million such alignments in the history of the earth. Several dozen of these have happened since humans learned to write so if anything truly horrible had happened as a result of these alignments it would have been recorded. The point here is that none of these previous conjunctions produced the predicted effects, therefore future alignments will not either. Our civilization certainly wasn't destroyed in 1861 when the planets were grouped much more closely than they will be in 2000.



Troubled Times



Melting Poles

On July, 1995, ZetaTalk stated that a [Heralding](#) signs would be the oceans of the world heating from the bottom up, from the core of the Earth, in response to the approaching of the Planet X, and repeated this warning on Oct 15, 2002. By Mar 27, 2002, polar research scientists had conceded that warming from beneath the ice caps was the primary cause of disintegration. On Sep 14, 2006, NASA satellites had recorded drastic and startling changes in the ice.

The Oceans are Warmer because the core of the Earth has heated up, and it does so in response to its brother coming closer. This will continue, and increase.

ZetaTalk: [Heralding](#), written July 15, 1995

These and heating of the Earth from the core, causing melting polar ice and glaciers, is not new but an existing trend.

ZetaTalk: [During 2002](#), written Oct 15, 2001

Arctic Ice Melting from Below

[BBC News Online](#), Mar 27, 2002

Scientists believe they have identified a mechanism which can explain the thinning of the Arctic sea ice. They say the thinning, which in summer reaches more than 40% in some areas, has two causes. Rising air temperatures, possibly the consequence of global warming, are melting the ice from above. And warmer water is also rising from the depths to attack the ice from below. Professor Peter Wadhams, of the Scott Polar Research Institute in Cambridge, UK, said in 2000 that he had established the degree of thinning using measurements from submarines in 1976 and 1996. He said these showed that in that time a large area of the sea ice, stretching from the North Pole to the Fram Strait between Svalbard and Greenland, had thinned by 43% during the Arctic summer. US data from the other side of the Arctic, between the Pole and the Bering Strait, found a similar thinning over the same period.

The reported melting has been questioned by some scientists who believe the ice is still there, concentrated in areas where the submarines have not looked for it. But Professor Wadhams says the thinning he has detected, from 16ft (4.8m) 20 years ago to 9ft (2.7m) today, is scientifically explicable. He told BBC News Online: "People say global warming can't be raising air temperatures enough to melt the ice, because the Arctic winter temperature is around -30C anyway, and a one-degree warming would be irrelevant. But it's the summer temperatures that matter. Arctic summers are getting longer, so there is longer for the warmer air to melt the snow and affect the ice beneath. The other mechanism is the warming of one or two degrees in the water under the ice - enough to increase the bottom melting quite considerably. There is a cold water layer immediately beneath the ice. But that's changing its stability and salinity, because of changes in the distribution of Siberian river water in the Arctic. Over a large area that cold water is becoming more saline and denser, which means it's letting more heat rise through it."

Drastic' shrinkage in Arctic ice

Sep 14, 2006

<http://news.bbc.co.uk/go/em/fr/-/1/hi/sci/tech/5344208.stm>

A Nasa satellite has documented startling changes in Arctic sea ice cover between 2004 and 2005. The extent of perennial ice - thick ice which remains all year round - declined by 14%, losing an

area the size of Pakistan or Turkey. The last few decades have seen summer ice shrink by about 0.7% per year. The drastic shrinkage may relate partly to unusual wind patterns found in 2005, though rising temperatures in the Arctic could also be a factor. The research is reported in the journal Geophysical Research Letters. The change we see between 2004 and 2005 is enormous. The Arctic is warming about twice as fast as the global average; and recent studies have shown that the area of the Arctic covered by ice each summer, and the ice thickness, have been shrinking. If we average over the long term we find a reduction of between 6.4% and 7.8% per decade. What we have here is 14% in one year - 18 times the previous rate.



Troubled Times



Memphis Bridge

On [Aug 6, 2006](#) the Zetas predicted that during the diagonal pull on the N American continent that will eventually cause earthquakes and adjustments along the New Madrid Fault line, that the land to the west of the Mississippi would drop. This warning was repeated on [Mar 3, 2007](#).

It pulls at a diagonal, ripping the rock fingers along the New Madrid fault such that the land to the East of the Mississippi moves up and to the East, toward New England, and the land to the West of the Mississippi moves down and to the West. This does more than tear most of the bridges along the Mississippi, it weakens the land to the West of the Mississippi, causing it to drop. The land to the East of the Mississippi is rock, the bluffs of Memphis and underlying rock where the Appalachian Mountains curl through Tennessee and Alabama toward the Mississippi river. But the land south of the Ozarks is not solid rock, and when stretched will drop in elevation. This is already occurring.

ZetaTalk: [Water Tree](#), written Aug 6, 2006

The New Madrid is associated with fault lines that run up toward the Great Lakes, Chicago will adjust and rupture, Ohio will be pulled in places, and as we have explained, the land to the West of the Mississippi will sink in places

ZetaTalk: [GodlikeProduction Live Chat](#), written Mar 3, 2007

On Aug 27, 2007 a piling on the I-40 Mississippi bridge at Memphis sank 3-5 inches, on the west side of the Mississippi, the Arkansas side.

Eastbound Span of I-40 Bridge Over Mississippi Reopened

August 27, 2007

<http://www.cnn.com/2007/US/08/27/river.bridge.closed.ap/index.html?iref=newssearch>

Officials closed a major Mississippi River bridge between Tennessee and Arkansas for nine hours Monday after a pier under a small approach span settled several inches overnight. The approach span for the Interstate 40 bridge was still supported by other piers, so the most motorists might have noticed was a slight dip, said Randy Ort, a spokesman for the Arkansas Highway and Transportation Department. Engineers closed the span just after morning rush hour after finding a pier near the river had settled 3 1/2 inches. The problem was likely caused by additional, longer pilings being driven to improve the bridge's stability. While crews worked beneath one half of the bridge, the other half was carrying 35,600 vehicles daily. Workers have been improving bridges along I-40 to make them safer in case of earthquakes. The New Madrid fault runs through the area.

I-40 Bridge Shutdown

<http://www.wreg.com/global/story.asp?s=6990870>

The Tennessee Department of Transportation shut the bridge down Monday morning after noticing a support beam on the Arkansas side approach bridge sand 3 to 5 inches. Officials believe earthquake retrofitting on the bridge led to vibrations that caused the damage.



Troubled Times



Meteor Uptick

In June, 1997 ZetaTalk stated that [Green Meteors](#) and [Other Trash](#) will begin arriving with increasing frequency, but this will not be explained by the authorities. [Boulders](#) dropped on Greenland and Columbia in December, 1997, [Fireballs](#) and meteor showers arrived in February/March of 1998, and by December, 1998 huge fireballs would be on the [Increase](#), screaming across the sky, ignored by the authorities. In July, 2001 fireballs were seen across a wide swath of the US East Coast.

Our local ABC News affiliate has published some viewer comments about Monday evening's meteor sighting. They can be found at this sight by clicking on the line called [Strange Sighting in the Sky](#)

Several witnesses reported hearing what they called a "sonic boom". Other comments:

"It shook my house."

"It felt like an earthquake."

"There was a loud boom followed by several smaller explosion sounds over a period of 8-10 seconds."

"The 'sonic boom' was heard in Corning, New York as well."

"I saw a fiery redish-orange object appear in the sky."

"I saw a large ball of fire with a long tail following it."

"They said it was brighter than the sun."

"The boom radiated for 10 to 12 seconds."

"The loud continuous booms sounded that close to our house."

"Saw the meteor at about 6:20 pm down here in Delaware. Bright streak of yellow-green color, lasted about 5-10 seconds."

"Went to the Salladasburg area - found a cornfield where 'it' left a 'vapor trail'. Was later rumored to have found some fragments. Emergency personnel could or would not give us any information on what 'it' was. Was a few hundred yards away and was notified by bullhorn to 'Evacuate the area. It is contaminated'."

"I have seen many meteorites before and that's just what this was. It was much bigger than I have ever seen before ... the biggest I've seen yet!"

Offered by [Mike](#).

There is an upsurge of previously unknown space debris being located and tracked by astronomers. Some state that more sophisticated equipment is being used by more people, thus more discoveries and that's true in part. Although earth strikes are few the nature of the last event on the east coast seems to be one that will attract closer scrutiny as people there are sounding off and want some explanations as to why they were not forewarned of a body that had obviously been tracked. I heard about it on my local redneck news the day before it happened! They said a meteor shower would be visible along a certain strip of the coast.

Offered by [Mike](#).



Troubled Times



Migrations

In April, 1999 ZetaTalk stated in their [1999 Predictions](#) and again in September, 1999 ZetaTalk stated in the [Next 3 1/2 Year](#) predictions that migrations would increasingly occur as people tried to find refuge, someplace, as the cataclysms approached. One Troubled Times member noted this had occurred in his country, Slovenia, the following June, 2000, and news articles reported increased activity elsewhere around the world. By 2006, the US was having an immigration crisis.

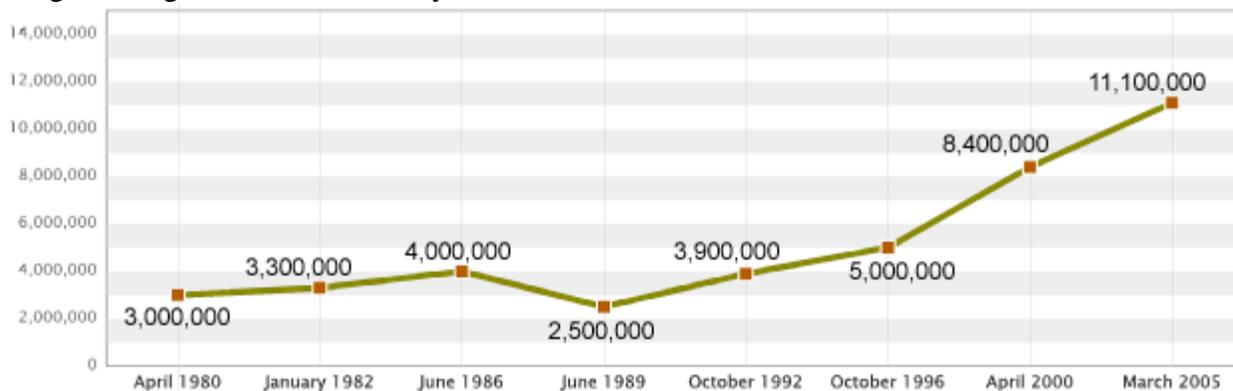
You will find human populations beginning to migrate. These migration not only happens in cases of severe starvation, such as in northern Africa south of the Sudan, where people just stumble like sticks in any direction, looking for food, but also occurs when things get bad enough, when crop shortages are bad, and people begin to wander. They're looking for something better. So you will have migrations and you will have guards against migrations. Rifles at the border, pointed and saying don't come a step further and shooting people for little reason. This is already starting to raise its head in the anxiety that the United States expresses about the people south of their borders.

ZetaTalk [1999 Predictions](#), written Apr 15, 1999

Flood of Illegals Turns into a Tsunami

Mar 29, 2006, 04:34

Sen. Lindsey Graham hears about illegal immigration whenever he travels his home state of South Carolina. And for good reason. South Carolina, a state with historically few illegal immigrants, saw a 1,000 percent increase in their numbers from 1990 to 2004. With 55,000 undocumented residents, South Carolina ranks far behind the nation's leader, California. But the issue is boiling throughout the country as illegal immigrants make their way to more cities and states than ever.



Increasing Migrations Through Solvenia

June 7, 2000, Offered by Kristof

Slovenia is due to its geographic position a transit country for many (illegal) things, one of which are illegal refugees, escaping their homelands heading to Europe (their promised land). They come from eastern Europe (Romania), Middle East (Iraq, Iran, ...) and even Far East (China, ...). They are routinely captured by border control, however, in past years there were reports of a few captured here and there, now these reports are almost a daily issue, with larger groups captured. As reported yesterday on daily news, their numbers have increased 20 times this year!

Illegals at Arizona-Mexico border

Associated Press, June 6, 2000

In March, the Border Patrol arrested 76,245 illegal immigrants in the Tucson sector, which covers all but 50 miles (80 kilometers) of the Arizona-Mexico border. That puts the sector on pace to break an annual record of detaining more than 470,000 illegal immigrants. Federal authorities have increased patrols in California and Texas, forcing more border crossers to enter through Arizona. And stricter enforcement of the border near Arizona's urban areas is in turn pushing immigrants to try remote areas where they can find little water and must often endure temperatures climbing above 100 degrees Fahrenheit (38 degrees Celsius). Most are ill-prepared to survive.

Migrations from Morocco on the Rise

BBC News, July 26, 2000

2,000 people have drowned crossing from Africa to Europe in past decade. Diplomats say the traffic is acquiring the proportions of the crisis of the Vietnamese boat people in the 1980s. So far, Spanish police have caught four times more illegal entrants this year than last. Spain arrested 300 people sailing in two dinghies at sea recently. Earlier this week, they notched their biggest haul on record, pulling more than 300 would-be migrants from the sea in a single day. Diplomats blame a second year of drought and economic slump in Morocco for the rise in numbers. And they also point to a flood of sub-Saharan Africans joining the exodus. The European Union is calling on Morocco to impose tough new border restrictions, but Morocco says it will not be Europe's policeman. It says massive foreign investment is required to deter its people from seeking a wealthier future in Europe.

Official: 15,000 Illegal Migrants Detained so far in 2000 in Ukraine

Associated Press, September 15, 2000

Ukraine's border guards have detained around 15,000 illegal migrants trying to cross into the country so far this year, and lost two servicemen in a clash with migrants and smugglers, the guards' commander said Friday. Most of the migrants were from the former Soviet republic of Kazakhstan in Central Asia, said the official, Borys Aleksiyenko. Other illegal migrants have traditionally included people from such countries as India, Pakistan, Afghanistan, Bangladesh, Vietnam, Nigeria, Sierra Leone and others. Ukraine has seen a growing influx of illegal migrants since the 1991 collapse of the Soviet Union and a loosening of its border controls. Last year, 14,646 migrants were detained in Ukraine, up from 11,744 in 1998, according to the border guards' command. Aleksiyenko, whose comments were cited by the Interfax news agency, said two guards were killed in western Ukraine this year while trying to stop a group of migrants. He said the border guards planned to increase the number of its posts along Ukraine's borders to better keep out illegal migrants.

South America's Expanding Exodus

By Anthony Faiola, *Washington Post*, November 30, 2000

Passport agencies in Argentina are swamped with economic refugees desperate to leave a nation suffering its worse recession in a decade. The U.S. Embassy in Colombia is so overwhelmed by visa applications that the earliest appointments for interviews are in March 2002. In Ecuador, an estimated 500,000 people - 4 percent of the population - have quit the country in the past 24 months, gone mostly to Europe, but also to the United States and Canada. These are signs of what analysts, government officials and aid organizations are calling the largest exodus from South America in almost a decade. Spurred by economic and political crises, large numbers of South Americans are planting roots in foreign lands while sowing fears back home of a professional brain drain and broken families.

The United States, in particular, has become used to waves of immigrants - legal and otherwise, economic and political - from Mexico and Central America, amounting to 300,000 a year from Mexico alone. But now, although estimates are vague, it appears at least half that many have started to leave South America

as well. The last time this continent experienced migration so large was at the end of the 1980s, when hyperinflation and drug and guerrilla wars crippled many countries. "This level of immigration from South America is something that the U.S. can support economically," said James Lindsay, an immigration specialist and senior fellow at the Brookings Institution. "Of course, if the economy in the U.S. takes a turn for the worse, you probably won't see as warm a reception. But for the time being, from a U.S. point of view, this does not appear to be a problem."



Troubled Times



Military Rebellion

Going into August, 2003, on [July 11, 2003](#) the Zetas warned that the US Military was rebelling, no longer considering Bush their Commander-in-Chief. They stated on [Oct 11, 2003](#) that the nuclear football had been taken away from Bush, and thus the long faces at Crawford that month. On [Nov 18, 2004](#), it was clear Bush was attempting to appoint members of the Navy, whom the Zetas said had remained loyal to Bush, to key positions. The Zetas also consistently stated that an invasion or [bombing of Iran](#) was not going to happen, regardless of any order issued by Bush.

The US Military has lost respect, utterly, for the Commander in Chief. The military was reluctant to go into Iraq, its advice ignored and its leadership treated like robots expected to follow orders without question. Rebellion, at the highest levels, is seething just under the surface.

ZetaTalk: [Changing Captains](#), written July 11, 2003

Given the decision and actions taken last August by the US Military to supplant the White House as Commander in Chief with their own internal leadership, how should the meeting of NATO commanders for supposed war games be viewed?

ZetaTalk: [Not Politics](#), written Oct 11, 2003

The US Military has been a sham, publicly, since August, 2003 when the football, the briefcase of nuclear codes, was taken from Bush, deemed a highly unstable megalomaniac as the War in Iraq demonstrated. The Navy, long at the heart of the Planet X cover-up in its position as timekeeper of the world and with tentacles into observatories worldwide, setting Sun and Moon times, and even controlling USGS and quake information before it is disseminated, allied with Bush. It was rumored at that time that prosecution or impeachment of Bush might occur, but this was deemed an impossible path given the Republican Congress and friends on the Supreme Court.

ZetaTalk: [Military Shuffle](#), written Nov 18, 2004

Although this is in the hands of man and man has free will, and thus any predictions must be predicated on this, we predict that Bush will not succeed in invading or bombing Iran, though orders may be given to the military to do so.

ZetaTalk: [Iran Boondoggle](#), written Mar 17, 2006

As the active military is not allowed to speak out publically against the Commander-in-Chief, little was heard of what was going on behind the scene, though there were plenty of [inuendoes from retired military in 2006](#). But by May 13, 2007 this rebellion was breaking out into the public view, active duty military confronting the Commander-in-Chief.

Tucker: Active-Duty Generals Will 'Revolt' Against Bush If He Maintains Escalation Into 2008

May 13, 2007

<http://thinkprogress.org/2007/05/13/generals-revolt>

Appearing on NBC's Chris Matthews Show this morning, Atlanta Journal-Constitution columnist Cynthia Tucker revealed that sources within the military are warning of "a revolt from active-duty generals if September rolls around and the president is sticking with the surge into 08. Noting that retired generals such as Gen. John Batiste have already begun voicing their discontent with the president's strategy in Iraq.

CENTCOM Commander's Veto Sank Bush's Threatening Gulf Buildup

May 15, 2007

<http://www.commondreams.org/archive/2007/05/15/1212/>

Admiral William Fallon, then President George W. Bush's nominee to head the Central Command (CENTCOM), expressed strong opposition in February to an administration plan to increase the number of carrier strike groups in the Persian Gulf from two to three and vowed privately there would be no war against Iran as long as he was chief of CENTCOM, according to sources with access to his thinking. Fallon's resistance to the proposed deployment of a third aircraft carrier was followed by a shift in the Bush administration's Iran policy in February and March away from increased military threats and toward diplomatic engagement with Iran. That shift, for which no credible explanation has been offered by administration officials, suggests that Fallon's resistance to a crucial deployment was a major factor in the intra-administration struggle over policy toward Iran. The plan to add a third carrier strike group in the Gulf had been a key element in a broader strategy discussed at high levels to intimidate Iran by a series of military moves suggesting preparations for a military strike. Admiral Fallon's resistance to a further buildup of naval striking power in the Gulf apparently took the Bush administration by surprise. Bush administration officials had just leaked to CBS News and the New York Times in December that the USS John C. Stennis and its associated warships would be sent to the Gulf in January six weeks earlier than originally planned in order to overlap with the USS Eisenhower and to "send a message to Tehran". But that was not the end of the signaling to Iran by naval deployment planned by administration officials. The plan was for the USS Nimitz and its associated vessels, scheduled to sail into the Gulf in early April, to overlap with the other two carrier strike groups for a period of months, so that all three would be in the Gulf simultaneously. Fallon said that he was not alone, according to the source, adding, "There are several of us trying to put the crazies back in the box."



Troubled Times



Mississippi Bridges

On [Feb 10, 2006](#) and again on [Aug 16, 2006](#) the Zetas predicted that bridges on the Mississippi would be collapsing as a result of Earth changes such as New Madrid adjustments.

This creates a diagonal stress on the N American continent where New England is pulled to the east while Mexico is pulled to the West, so the New Madrid is put under slip-slide stress where one half, east of the Mississippi, will move toward the NE while the other, west of the Mississippi, moves toward the SW. A widening seaway also does not affect just those land masses bordering the seaway, as buckling occurs inland and afar. What does man assume caused the Black Hills to be so rumped, with the appearance of a recent buckling and heaving? This is the center of a land plate! The tearing of the seaway does not end at Duluth, Minnesota, it travels underground to S Dakota!

ZetaTalk: [N American Rip](#), written Feb 10, 2006

What does this do to the N. American plate? It pulls it at a diagonal, ripping the rock fingers along the New Madrid fault such that the land to the East of the Mississippi moves up and to the East, toward New England, and the land to the West of the Mississippi moves down and to the West. This does more than tear most of the bridges along the Mississippi.

ZetaTalk: [Water Tree](#), written Aug 16, 2006

On Aug 2, 2007 a bridge crossing the Mississippi at Minneapolis, MN suddenly and dramatically collapsed, even though it was considered structurally sound upon inspection in 2005 and 2006, needing only superficial repairs such as paving.

7 Dead, Dozens Injured In I-35W Bridge Collapse

Aug 2, 2007

Mangled concrete sitting in a river, smashed cars and thousands of pounds of twisted metal don't even begin to tell the story of what happened when the Interstate 35W bridge spanning the Mississippi River in Minneapolis collapsed, sending cars, people and debris into the river below. The collapse was likely structural in nature and said it was not an act of terrorism. The bridge was undergoing repair work when it collapsed. Of the eight lanes on the roadway, four were closed for repair to the 40-year-old bridge's deck, joints, guardrails and lights. None of it would be related to the structure. The bridge was inspected by the Minnesota Department of Transportation in 2005 and 2006 and that no structural problems were noted. "There were some minor things that needed attention," he said.

The Zetas gave an explanation published on the [GLP message board](#) on Aug 2, 2007, early in the day.

We have predicted that bridges crossing the Mississippi will be affected when the New Madrid and related fault lines adjust, going into the pole shift. Was this bridge collapse which crossed the Mississippi in Minnesota caused by such an adjustment, the footings on one side of the bridge moving in an opposite direction from the footings on the other side, or perhaps the bridge being pulled apart? The Mississippi River is born in Minnesota, tumbling out of the headwaters in the highlands of Minnesota over a series of natural falls. This is a clue that adjustments in the rock strata could be involved. The highlands of Minnesota come to a point at Minneapolis, with lower land lying to the East along this point. What caused the land to the East to drop, unless this land was stretched in the past? We have stated that the ripping

apart of the St. Lawrence Seaway ends in the rumples Black Hills of SD. Run a line from Montreal, at the mouth of the seaway, to Rapid City, SD and the line runs through Minneapolis. Why would an adjustment be made in the middle of this stretch zone while the seaway itself did not part? When we described the diagonal pull the N American continent is enduring, and just how this will snap when adjustments are made, we did not intend that this process would occur smoothly, all at once as described. Weak points along the rip lines give way one by one, each such adjustment placing stress on other points in a domino manner. The I35W bridge, being the larger of the bridges crossing the Mississippi at this point, was less able to adapt to a change in position vs-a-vs its footings on either side of the river, as it was an interstate bridge supporting several lanes, and thus had massive and thus rigid supports. Smaller bridges have more flexibility as they are built to withstand uneven loads on either end, thus are more springy by design. Will there be more such disasters along the Mississippi and in the cities that will be affected by the New Madrid and seaway rip? This is just the start, and when the pace picks up, there will be no question that something other than Global Warming is the cause.

ZetaTalk posted on [GLP Message Board](#) Aug 2, 2007

The Zetas stated the land east of the Mississippi at Minneapolis was being pulled *east*, a fact confirmed by the Army Corp of Engineers the next day, Aug 3, 2007.

Bridge collapse probe focuses on unexplained shift

Aug 3, 2007

<http://www.cnn.com/2007/US/08/03/bridge.structure/>

Investigators trying to figure out what caused Wednesday's massive bridge collapse are focusing on the southern end of the span, which "behaved differently" as it fell, the National Transportation Safety Board said Friday. The NTSB says one part of the bridge shifted 50 feet as it fell, while other sections collapsed in place. What's getting investigators' attention is the way the southern part of the bridge fell in a video they've already examined -- recorded by a security camera near the bridge's north end -- and the way the section settled after the collapse. It appears that it has shifted approximately 50 feet to the east and when we compare that to what we've seen in the rest of the bridge -- the rest of the bridge appears to have collapsed in place.

In early 2008 an official explanation of the collapse was issued, explaining that the weight of the bridge must have been too much for repaving and other improvements done. However, a structural engineer points out the holes in this explanation.

The posting today on the Minneapolis Bridge collapse does make sense. How can gusset plates 1/2 the proper thickness and designed for a factor of safety of 1.3 not collapse before now. The bridge or "dead weight" is always the same and the "live rolling loads" (cars and trucks) can't weigh any more than a traffic jam that has the cars lined up bumper to bumper on the bridge. Surely if the gusset plates were under sized by a factor of 2 there would have been a failure before now. I am a Structural Engineer that's how I know something is up with the official explanation.



Troubled Times



MJ12 Documents

On July 15, 1996 ZetaTalk stated that the [MJ12 Documents](#) released were only half truths and would be discredited in time. On Jan 28, 2000 this was reported by *Sprynet*.

Research Synopsis On The Majestic Documents

By Timothy S. Cooper, Jan 28, 2000

In as much as the controversy surrounding the authenticity of the Majestic documents has generated in the last fifteen years among researchers, much evidence in the form of officially released documents through the Freedom of Information Act has either been ignored, or viewed as uninteresting by ufologists. In this synopsis, I argue the theory that FOIA documents in the public domain are the remnants of a high level UFO intelligence and psychological warfare program of the United States Government which began in 1946 and the Majestic documents reflect what might be a overt part of such a program. I also present documented proof that General Walter B. Smith, Director of Central Intelligence was the first DCI to preside over and coordinate all intelligence collection and dissemination functions of the U.S. intelligence community where UFO's played into psychological and intelligence operations in protecting U.S. strategic interests.

Contrary to popular belief, a coordinated program of UFO intelligence collection between the military and central intelligence began with General Hoyt S. Vandenberg in 1946 and was never properly implemented during Rear Admiral Roscoe Hillenkoetter's tenure as first Director of the Central Intelligence Agency due to the infighting between RHH and the Intelligence Advisory Board (IAB) dominated by high level military intelligence and State Department officials and did not begin until WBS was appointed DCI in October 1950. Also, given the fact that there may have been more than one Majestic project operating at two different levels, one conducted by the State Department and another by the CIA, it is possible that what researchers have studied is a hybrid mixture of both.

I propose that the questionable documents known as Majestic or MJ-12 are extrapolations from covert and overt intelligence and psychological material that may have once existed but have long since been absorbed into today's unacknowledged black programs and are now gone forever. In summary, the Majestic documents are, in all probability, an attempt by an informed person(s) to reconstruct for researchers a historical narrative based on non-existent and authentic documents supported by published facts with classic disinformation techniques in what is termed in counterintelligence parlance as "gray" intelligence. The question of whether they are genuine, authentic or real is not the issue here. The important point to keep in mind, as I believe, is the information contained in the documents themselves. For in these documents and the FOIA material already released, and the published facts contain the answers we all seek. The truth may be found in our individual perceptions.



Troubled Times



Moon Base

On Dec 15, 1996 the Zetas outlined the plan by the elite in the US government to escape to Mars, to escape the pole shift. This included more than Mars, as they explained on Jan 30, 2004, as bases on the Moon were to be involved.

Where the race to space in the 60's was originally spurred in part by the knowledge that the Earth was to experience another passage of Planet X in its near future, this factor is almost solely responsible for the Mars exploration fever of the late 90's. Back then NASA felt they had time to learn how to establish space stations far from the cataclysms the Earth was to undergo, and was smugly confident that the US taxpayers would be forced to pay for the personal escape route the elite at NASA and the establishment fully intended to use when the time came.

ZetaTalk: [Mars Exploration](#), written Dec 15, 1996

It has been no secret that the elite hoped to escape to Mars or the dark side of the Moon during the cataclysms, to well-stocked and secure Mars and Moon enclaves. Despite endless failures, such as disabled probes and the dramatic disintegration of the Columbia and a leaking Space Station, renewed efforts to put humans on the Moon and Mars [persist].

ZetaTalk: [Mars Press](#), written Jan 30, 2004

On July 25, 2006 National Geographic News reported that putting bases on the Moon was again on the NASA agenda. This time, to be supported by the wealthy elite!

NASA Aims to Open Moon for Business

[National Geographic News July 25, 2006](#)

For-profit space business is critical to any moon-mission plans, according to NASA under the Bush Administration. But how do you make money on the moon? The foundation believes the only way to efficiently explore the moon and beyond is to create permanent human settlements beyond Earth, extending commerce to outer space. The missions were outlined in 2004 by President George W. Bush in his Vision for U.S. Space Exploration. Given the high cost of space exploration, the U.S. space agency cannot afford to meet the vision by itself.



Troubled Times



Moon Cities

On Dec 15, 1995 ZetaTalk stated that [Moon Cities](#) existed, and on July 15, 1995 that [Tetrahedral Crystals](#) were used on the Moon by the Annunaki, and on April 15, 1996 that the [Astronauts](#) had been warned into silence about them, the [Apollo 13](#) problems being one example of this intimidation.

The Moon was used as an outpost by groups conducting genetic engineering operations on Earth, as many of these groups found the Earth to be a virtual swamp of life - murky, unpredictable, crawling with bugs and germs, and subject to erratic weather extremes. Their scientists had their specimens brought to the lab for detail work, and returned the fertilized ova for implantation. Thus, the structures seen on the Moon are ancient, and are a combination of the shards of Moon cities from genetic engineering operations and the shards of communication crystals - abandoned and idle but causing quite a stir among humans these days.

ZetaTalk [Moon Cities](#), written Dec 15, 1995

This was one of the things noticed by the astonished astronauts when they disembarked on the Moon. We are speaking here primarily of the inhabitants of Planet X. They had established a communication post on the Moon.

ZetaTalk [Tetrahedral Crystals](#), written July 15, 1995

The world watched in rapt attention during the first Apollo Moon landing - a first for mankind. The comments made by the astonished astronauts, who noted signs that they were not the first visitors to the Moon, have generated all manner of speculation. What did they see? From the Earth, the surface of the Moon looks placid, unwashed by water and without an atmosphere, nothing moves on the pock marked surface. Up close, however, one would discover dust covered litter and tracks left by vehicles, unmistakable signs that mankind was not the first. Machinery parts, collapsed structures, tie lines, and even a wheel or two here and there, covered by space dust that never washes away, these items look no different from Earth than the dust covered rocks and craters.

ZetaTalk [Silenced Astronauts](#), written on Apr 15, 1996

To abort the enthusiastic Moon missions, which were often being watched live by the public, the CIA threw a wrench in the works.

ZetaTalk [Apollo 13](#), written on May 15, 1996

By March 8, 1999 the *Paranormal* site and a *UPN Channel 13 News* film clip documents this. And the 2009 revelation by a former NASA employee of an Annunaki symbol discovered on the Moon virtually proves the Zetas to be correct.

The Moon Anomalies - *UPN Channel 13 News* Investigative Report

200,000 Year Old Statue Found On Moon

May 5, 2009

<http://thecrit.com/2009/05/05/200000-year-old-statue-found-on-moon/>

A noted scientist has just produced proof that the lunar surface was inhabited by intelligent life: a 10-inch angel sculpture embedded in a moon rock. Geologist Dr. Morris Charles revealed last



week that NASA lab workers chipped the angel from one of the rocks brought to Earth by Apollo 11 astronauts 40 years ago, in 1969. Dr. Charles was a NASA scientist himself for 23 years but left the agency in 1987. He still maintains close ties to many of his former colleagues.

*The angel - a humanoid female with wing-like appendages on her back and long flowing hair - is made of an iron compound found exclusively in the highlands of the moon. This rules out the possibility that it was dropped by a race of aliens from another planet. It's been hand polished to a silvery metallic sheen. Based on chemical analysis of the metal, geologists estimate the sculpture to be 200,000 years old which means it was made 170,000 years before the human species appeared on Earth. The Sumerians told stories of the Annunaki, winged deities, as far back as 18th century BC. Zecharia Sitchin has already shown in *The Twelfth Planet* that the statues of gods and goddesses from Sumer present special helmets with protuberances on both sides. Many drawings on the Sumerian plates show the gods with wings, which were not belonging to the body, but they were accessories of the flight suit, therefore the gods looked like eagle.*



a)



b)



b)



Troubled Times



Moon Plume

On [June 20, 2009](#) the Zetas stated that the mission to bomb the Moon to produce a plume that could be analyzed to determine the degree of water on the surface of the Moon would not go as planned, but would be a failure.

The bomb is to dig a cavern that will presumably protect the elite in their erected structures from debris in the tail of Planet X. How will all this fare, in the short time between now and the pole shift? Poorly, but the details of their failure is something we prefer to withhold, less they learn from our warnings. True karma is prevailing on Earth, with the elite not faring any better than the common man.

ZetaTalk: [Live Chat](#), written May 2, 2009

On October 9, 2009 when the heavily broadcast and heavily advertised Moon bombing occurred, it was a bust. No plume was visible by backyard telescopes, as had been touted, and observatories saw at most a tiny flash of light. Without a plume to analyze, the mission was a failure.

NASA Crashes Rocket, Satellite into Moon in Search for Water

October 9, 2009

<http://www.cnn.com/2009/TECH/space/10/09/probe.moon.crash/index.html>

NASA crashed a rocket and a satellite into the moon's surface on Friday morning, a \$79 million mission that could determine if there is water on the moon. NASA televised live images of the Lunar Crater Observation and Sensing Satellite, or LCROSS, as it crashed into a crater near the moon's south pole. NASA officials said it appeared to be a "successful impact." Minutes before its impact, the satellite guided a rocket into the Cabeus crater in an effort to kick up enough dust to help the LCROSS find whether there is any water in the moon's soil. The Centaur upper-stage rocket impacted the moon shortly after 7:30 a.m. ET, and the satellite followed it four minutes later. The LCROSS carried spectrometers, near-infrared cameras, a visible camera and a visible radiometer to help NASA scientists analyze the plume of dust -- more than 250 metric tons' worth - for water vapor.

NASA Puzzles over 'Invisible' Moon Impact

October 9, 2009

<http://www.newscientist.com/article/dn17951-nasa-puzzles-over-invisible-moon-impact.html>

In the final minutes of its plunge toward the moon, NASA's LCROSS spacecraft spotted the brief infrared flash of a rocket booster hitting the lunar surface just ahead of it - and it even saw heat from the crater formed by the impact. But scientists remain puzzled about why the event did not seem to generate a visible plume of debris as expected. A worst-case scenario would have occurred if the rocket hit bedrock rather than loose, gravelly soil. In that case, the debris plume might not have reached the minimum 1.5-kilometre altitude needed to catch the sunlight and be seen by LCROSS. Because of the angle of the crater, the plume would have needed to rise to 2.5 to 3 km in order to be seen by telescopes on Earth. A 10-km-high plume was expected.

Per the Zetas, interference, as they had predicted, had occurred.

We stated when asked about this mission earlier, that the mission would not go as expected, not be a success for the elite who hope to go to the Moon to avoid the pole shift on Earth, returning after the shift. If we can push the erratic Moon into place so that eclipses seem to be happening as expected, we can

certainly nudge a tiny probe to hit rock rather than dust. And this is what was done, with the permission of the Council of Worlds. The elite had hoped to get public funding into NASA to continue the plan to put man back on the Moon in a permanent base, which now is a dashed hope. The elite may have their own funds, but wanted the expertise at NASA to do the work for them, as they do not want to be seen as reacting to all the pole shift warnings. Now they must fund this themselves, and anticipate potential interference from the Council of Worlds. We warned the elite: inform the public about what is coming or suffer the same fate as the common man, stuck on the surface of Earth. The Moon plumb failure is just an explanation point on the end of this statement.

ZetaTalk, [Live Chat](#), written October 9, 2009



Troubled Times



Moon Rotation

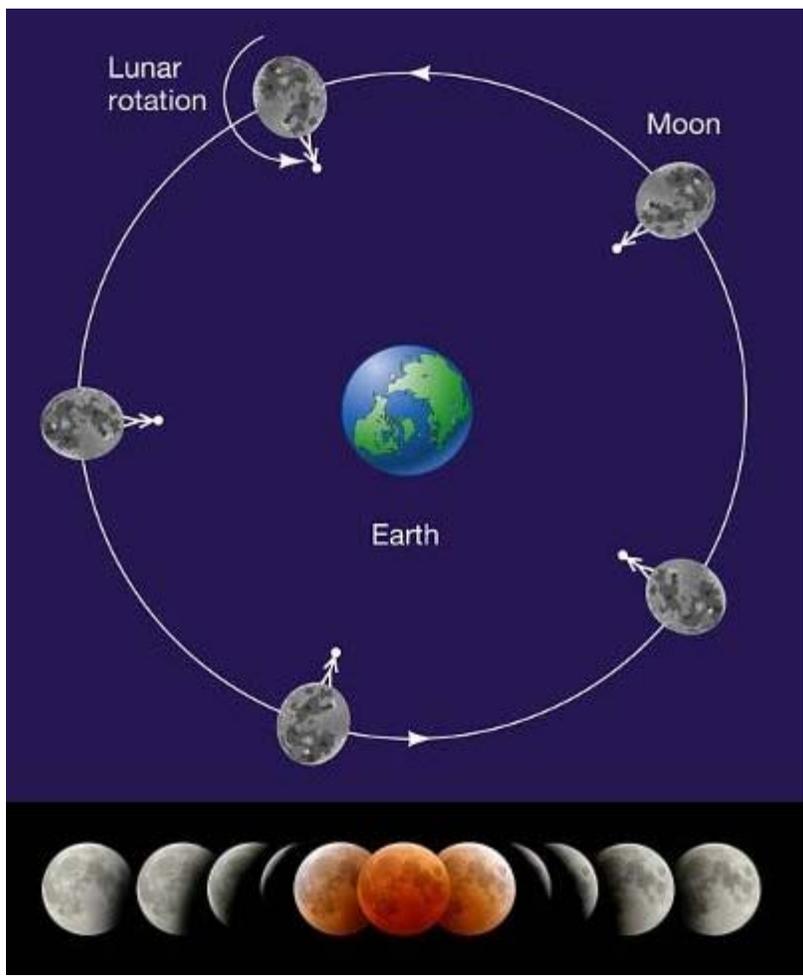
The Zetas have long stated described the Moon's supposed "rotation" as not a rotation at all but the Moon's Face glued to the Earth. There is a reason the lunar "rotation rate" (27 days, 7 hours, and 43 minutes) and the lunar period of orbit around Earth (also 27 days, 7 hours, and 43 minutes) are matched.

What makes the Moon orbit every 28 days, around the Earth, making almost precisely 13 such turns in an Earth year? The Moon does not have a liquid core, as does Earth, so its rotation is driving by fixed points on or within the frozen Moon. We have presented the reasons for the Earth's rotation as a dog chasing its tail, the motion of liquid magma, uneven in its nature, chasing places in the Universe while finding it cannot stop once it has come as close to these attractants as possible, as the motion drives it on. The Moon has no such variable. We have described the rotation of the Earth, so precisely to the second each day, as driven in the main by an attraction to points in the Sun, so those parts of the Earth are trying to face the Sun each day, only forced to part, eager lovers that they are, because of the motion of the Earth and the Sun itself. The Moon likewise is very regular, despite the erratic orbit which has the Moon swinging too far to the North between New and Full Moon and then too far to the South, lately, in response to the press from Planet X, particles flowing from Planet X that the Moon wishes to avoid.

The Moon obviously has a lopsided composition, as the Face of the Moon is glued to the Earth, staring at it constantly, so those on Earth never see the drk sde of the Moon. This is interpreted by some as a rotation of the Moon, but it is not the Moon that is revolving, it is the Earth that revolves. The Moon is merely following along, glued as it is to particulars in the Earth. Were the Moon stationary, and not orbiting the Earth, it would not have a rotation. But just as the Sun has sweeping arms that propel all the planets in a counterclockwise direction around the Sun, just so the Earth has sweeping arms that propel the Moon in its direction around the Earth. Where this the only influence on the Moon, the Moon would indeed be on the wrong side of the Earth from its predicted orbit, and within 6 months time. But this is not the only influence.

13 times a year the Moon's dark side is facing outward into the Universe, in the same direction. 13 times a year the Moon is impelled from this position by the sweeping arms of the Earth, which push it along to go round the Earth until it can come back to face that same point in the Universe once again. In a stalled Earth orbit or a moving Earth orbit, these 13 times a year are clicking along, like clockwork. Where the Earth is sped up slightly, 4 minutes a day, so that at high noon it is facing the Sun, which it synchronizes to, the Moon does the opposite, slowing down slightly so it can synchronize to those points in the Universe it is attracted to. Orbits, and rotation, as we have often stated, are not controlled by Newton's laws, some motion remaining constant over the eons, they are dynamic and controlled by attraction and repulsion among the moving bodies and points beyond!

ZetaTalk: [Moom Rotation](#), written February 3, 2007



Troubled Times



Moon Swirl

Prior to July, 1995 ZetaTalk described the [Trailing Moons](#) of Planet X and again in late Dec, 2001 ZetaTalk stated that the [Moons of Planet X](#) swirled behind, rather than orbit, Planet X, due to the periodic rapid passage it took it passing one of its suns. On April 23, 2002 the *New York Times* reported that when asteroids were discovered to have moons, or were of equal size to each other, this was the behavior.

*Why would such a moon pattern perpetuate itself? Does Planet X not come to a virtual stop at the mid-point between its two foci? Having established a swirl behind the planet, the moons have two factors preventing a return to the normal orbital pattern of moons around a planet. First, their **swirl perpetuates itself**. The speed is dictated not only by the normal rotation around a gravitational master that attractants in the vicinity would create, it is dictated by the need to move away from the other moons in the swirl. Second, the larger moons in the cluster are perpetually trying to reach a closer proximity to their planet, the point where the repulsion force between the moon and its planet creates a stalemate. Being the larger moons, they push smaller moons away from their path, but this pushing action, in space, has the effect of causing them both to move, thus not only increasing and perpetuating their swirling motion, but also pushing the larger moon away from the planet it seeks to come closer to.*

ZetaTalk™

Abundance of Cometlike Objects With Moons Stuns Experts

The New York Times

April 23, 2002

Even small cometlike bodies at the edge of the solar system often have companion moons, to the surprise of astronomers who cannot yet explain how such tenuous gravitational pairings formed. Writing in the current issue of the journal *Nature*, a team of American and French astronomers describe the looping elliptical orbits of 1998 WW31, a small icy clump 4.3 billion miles from the Sun, and its moon. The pair is part of the Kuiper Belt, a ring of debris beyond the orbit of Neptune. When a Kuiper Belt object is nudged by a passing object's gravity and falls into the inner solar system, it becomes a comet.

Discovered four years ago, 1998 WW31 is one of more than 500 bodies that have been cataloged in the Kuiper Belt. In follow-up observations in 2000, astronomers led by Dr. Christian Veillet of the Canada-France-Hawaii Telescope in Kamuela, Hawaii, noticed that 1998 WW31 appeared elongated, like a blurry peanut. Comparing their images with those taken earlier, they found that the shape of the peanut changed over time, suggesting the motion of a moon around 1998 WW31. The astronomers announced the discovery last year, the first known around a Kuiper Belt object, unless one counts Pluto's moon Charon. (Some regard Pluto as the largest of the Kuiper Belt objects.)

With help from new photographs by the Hubble Space Telescope, the same team of astronomers has now mapped out the trajectories. **Roughly the same size, 1998 WW31 is estimated at 75 to 90 miles wide; its moon is 60 to 75 miles wide and the two twirl around each other in a slow, highly elliptical dance.** At their closest, they pass 2,500 miles from each other. At their most distant, they are 25,000 miles apart. They take 570 days to revolve around each other. "Their orbital motion is very, very eccentric," Dr. Veillet said. **Astronomers once thought the gravitational pull of small bodies like asteroids and comets to be too slight to hold onto moons.** In 1994, they were astonished when photographs from NASA's Galileo spacecraft revealed a tiny moon circling the asteroid Ida. A handful more moons have been discovered since among

the thousands of asteroids between the orbits of Mars and Jupiter.

Moons around Kuiper Belt objects may be unexpectedly common. In the past year, astronomers have found moons about six more Kuiper Belt objects, and they have not yet examined most of them. "That's the extraordinary thing about this," said Dr. David Jewitt, a professor of astronomy at the University of Hawaii and one of the scientists who found the first Kuiper Belt object in 1992. No one predicted the observed abundance of moons. "It just happened," he said. Low-speed collisions between two Kuiper Belt objects may dissipate enough energy to allow the two to go into orbit around each other. A collision could also split one of the objects into a pair. "Then the details after that are hazy," Dr. Jewitt said. Now, most Kuiper Belt objects are too small, dim and distant for astronomers to learn much about them. They could get precise measurements of the sizes of 1998 WW31 and its moon when their orbits turn edge-on toward Earth, and one passes directly in front of the other. Astronomers have plenty of time to get ready, but many will not be alive to observe it. The earliest the eclipses may occur is around 2050. "I think I'm not likely to be," said Dr. Veillet, 54.



Troubled Times



N America Bowing

On [Feb 10, 2007](#) the Zetas described a bowing in the N American continent which would occur during New Madrid adjustments. This bowing would affect California, Arizona, and all the way to up to the Yellowstone area, fracturing the rock in these places.

When the New Madrid adjusts, Mexico will be too far to the West for the current comfort of the West Coast, which will bow in the southern California and Arizona region. The fault line that runs along Mexico's west coast runs just under the Arizona border, then on up along the west coast of California. Before the west coast of the US starts adjusting to the new position of Mexico, with slip-slide adjustments, there will be a bending of the Arizona desert area that will fracture the dry soil, create a breach in the great Colorado River dam, and allow magma to rise in the calderas in the US - Mammoth Lake in California and Yellowstone.

ZetaTalk: [Phoenix Lights](#), written Feb 10, 2007

On Aug 7, 2007 a mine collapsed in Utah, amid rare seismic activity for the area. Quakes occurred there both before and after the collapse, and the miners had been reporting bulging walls in the mine.

Rescuers May be 3 days from Trapped Utah Miners

Aug 7, 2007

<http://www.reuters.com/article/bondsNews/idUSN0727143320070807>

Six miners remained trapped deep in a collapsed mine in Utah late on Tuesday as frustrated rescuers said it could take several more days to reach the men -- if they are still alive -- and even longer to get them out. No contact has been made with the miners, stranded 1,500 feet below the surface, in the 36 hours since the Crandall Canyon Mine caved in on Monday -- though officials say the six men could survive for weeks in an underground chamber. A bitter dispute erupted over the cause of the accident, with the mine's owner insisting an earthquake was responsible after geologists had said seismic activity detected at the same time was probably caused by the cave-in itself. In the meantime, some 135 rescuers and mine employees used equipment placed on the side of the mountain by helicopter to drill directly downward toward the trapped men, hoping to at least provide them ventilation and water.

Seismic Activity Stops Mine Rescue Try

Aug 7, 2007

http://www.breitbart.com/article.php?id=D8QSHOTG0&show_article=1

Seismic activity has totally shut down efforts to reach six miners trapped below ground and has wiped out all the work done in the past day. Rescue crews are drilling two holes into the mountain in an effort to communicate with the miners-provided they are still alive. Meanwhile, unstable conditions below ground have thwarted rescuers' efforts to break through to the miners, who have been trapped 1,500 feet below the surface for nearly two days. But government seismologists have said the pattern of ground-shaking picked up by their instruments around the time of the accident Monday appeared to have been caused not by an earthquake, but by the cave-in itself.

Per the Zetas, this mine collapse was due to bowing in the mountains to the East of the Great Salt Lake flats.

The [great salt flats](#) in Utah show that they can withstand buckling, and have done so through several pole

shifts. Mountain ranges in the western US are termed new mountains as their edges are sharp rock, showing recent fracturing. Rock layers that are compressed, in the compression zone, will do one of two things. If hard enough, they will remain as flat land, as the salt flats have done, forcing the compression onto the surrounding areas. If able to be fractured, the weak link, they will fracture and throw portions of the layer up on top of other parts of the layer, thus creating mountains from flat land. Crandall Canyon lies to the east of the Great Salt Lake Desert, and passes on any stress created due to the bowing of land in the southwest we have predicted to the mountains to the east of these salt flats.

ZetaTalk: [GodlikProduction Live](#), written August 11, 2007



Troubled Times



Neanderthal Man

Prior to July, 1995 ZetaTalk stated that [Neanderthal Man](#) had died out, been replaced actually, during mankind's genetic engineering, due to digestive system problems - an inability to eat with ease what the Earth provided. On June 12, 2000 the *Associated Press* confirmed this!

Study suggests Neanderthals ate meat and little else

By Paul Recer, *Associated Press*, June 12, 2000

If a Neanderthal walked into a hamburger joint today, he probably would order a double burger. And hold the bun, the lettuce, tomato and onion. A new study of 28,000-year-old Neanderthal bones suggests the ancient hominid ate meat, lots of it, and very little else. "Their diet was about 90 percent meat," said Paul B. Pettitt of Oxford University in England, co-author of a study appearing Tuesday in the Proceedings of the National Academy of Sciences. "This means they were efficient hunters and not just scavengers as some have suggested." A life style so centered on meat, said Pettitt, means that the lowbrowed, hairy Neanderthal was able to organize complex hunts that brought down big and dangerous game. "This study suggests that the difference between Neanderthals and modern humans was only a matter of degree," said Erik Trinkaus, a Washington University at St. Louis anthropologist and co-author of the study. "Modern humans were probably more efficient in terms of their organization, but the Neanderthals were very close."

Trinkaus said the new study does not settle that debate, but it does show the Neanderthal was not just simple, stupid and brutish. "This study implies a much higher degree of social organization complexity than is frequently attributed to the Neanderthals," said Trinkaus. "They were much more equal to modern humans in many ways." One big difference, though, was food choices. Studies of bones from the early modern humans in Europe suggest they had a more varied diet, eating smaller animals, such as rabbits, and lots of fish - up to 30 percent of their diet. But for the Neanderthal, it was meat, meat and more meat. Europe of 28,000 years ago was enjoying a warm period between two extremes of the ice age, Pettitt said. The plains of Europe were grassy and probably included vast herds of animals, which he calls "lawn mowers." As a result, the Neanderthal hunter preyed on mammoth, horse, deer, woolly rhino and other large animals. When conditions changed and fewer of these animals were available, the Neanderthal may have had a more difficult time adjusting than did the competing humans who lived on a more varied diet, said Pettitt. The researchers probed the diet of the Neanderthal by measuring the isotopic ratios of nitrogen in skulls and jawbones recovered from a cave in Croatia.

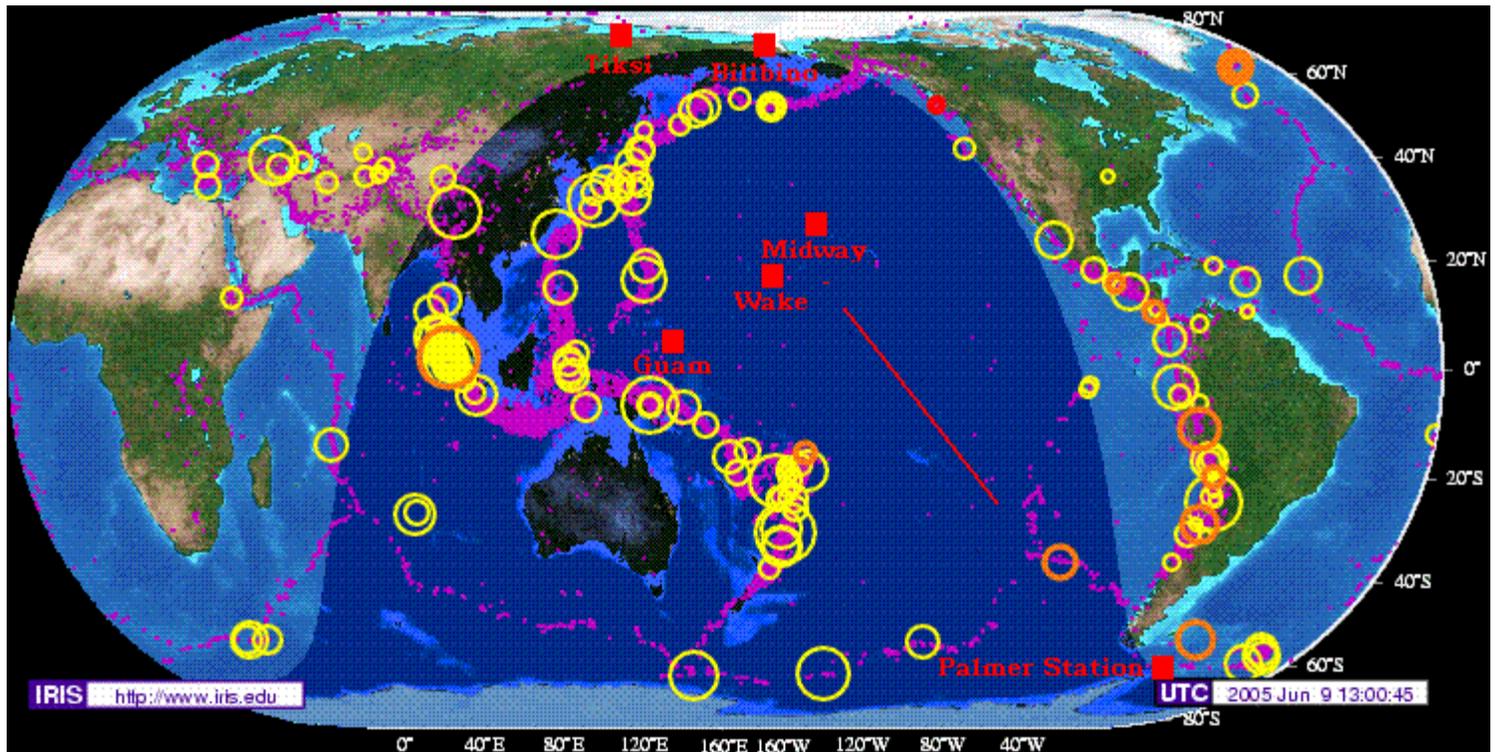


Troubled Times



New Land

On June 15, 1997, the Zetas stated that new land would emerge due to [Sinking/Rising](#) during the pole shift, between the tip of South American and Africa, as a result of the Antarctica plate being pushed down on the Pacific side. This type of stress became evident on June 9, 2005 in the [Pacific/Antartic](#), when the Zetas warned that a [Folding Pacific](#) would also occur, as quakes on all edges of the Antarctic Plate were evident. This was followed on June 10 by a distinct [Wake/Midway](#) adjustment, and on June 15 by more [Pacific Island](#) impacts.



Ridges will rise higher, trenches will grow more narrow, and the release of tension elsewhere will allow other plates adjoining the great Pacific to likewise move.

ZetaTalk: [Folding Pacific](#), written May 9, 2005

New land will emerge near Antarctica between the tip of Africa and South America.

ZetaTalk: [Sinking/Rising](#), written Jun 15, 1997



Troubled Times



Newman's Machine

In June, 1999 ZetaTalk stated that [Newman's Machine](#) would be proved to be a false claim. Some months later this was demonstrated to be the case.



Troubled Times



Newton's Laws

In October, 1995 ZetaTalk stated that Newton's Laws in [Ephemerides](#) are inaccurate, [Contradictions](#) exist, and the [Dark Ages](#) are still with us; in March, 1998 due to an expanding Universe discovery, Newton came under attack.

Anti-gravity surprises astronomers

Except for gravity that attracts mass towards mass, on a cosmic scale another force exists that pushes bodies away from each other. That is what American and Australian astronomers conclude in Science of February 27th, 1998. 'If it's not some kind of sneaky effect, than history of the universe has to be re-written', Adam Reiss of the universe of California says. 'My own reaction is that of amazement and terror', Brian Schmidt, spokesman of the investigation-team, says. 'Amazed because I never expected this, terror because I know most astronomers will never believe it.'

Cosmologist Dr. Peter Katgert of the Leiden observatory, an expert in measurements of the expansion of the universe, is for that reason careful about the information in Science. 'The team can say they eliminated all errors, but that is for others to decide.' The Britain astronomer Sir Martin Rees reacted with resignation to the new results. 'If on a cosmic scale Newton's law isn't valid anymore, we just have to accept that', he says, 'maybe the universe isn't that simple as we want it to be.'

Rangel I. Kolessin, Ph.D., Sofia, Bulgaria
The Secret of Creation - Scientific extract

The Existence of an Expanding Universe is Possible Only at a Constant, Sub-Critical Density of Matter

In the presence of gravitation, uniform expansion of the Universe by inertia is impossible. The gravity compulsory imposes a deceleration! This rule is irrevocable. However it is well known that galaxies at the periphery of the Universe run away with rates near to the speed of light. There are no symptoms of any deceleration after many billions of years gravitational activity! How to understand that? Since an eternal uniform inertial motion in the presence of a constraining force is impossible, the only alternative is: The motion is not inertial! Obviously the action of the gravity is suppressed by another force. Of course, this unknown force is not just equal to the gravity in order to support the uniformity of the motion. There is no reason for such a demand. It is more reasonable that this force is considerably bigger, and the motion it causes is an accelerated motion.



Troubled Times



Ocean Rebound

On [Jul 15, 1995](#) the Zetas stated that after the Pole Shift, the oceans would be lush, light green in color, on the rebound from all the CO2 in the atmosphere from volcanoes. They likewise predicted on [Jul 15, 1995](#) that the tail of Planet X would lay down iron oxide red dust, heavy enough to turn rivers and ponds blood red, per legend.

Life in the oceans will not die out. The water will have a green tinge. Little known among the populace, but well known among scientists, is that the ocean is one of the largest producers of the atmospheric oxygen. After the cataclysms, the atmosphere oxygen will be rebuilt from the oceans. The oceans will appear greenish to many, and for good reason. All the fires will have placed a tremendous amount of carbon dioxide into the air, the stuff of which vegetative grown is made of. With little vegetation on land, the ocean kelp will absorb and utilize this. The oceans will be lush.

ZetaTalk: [Ocean Life](#), written prior to July 15, 1995

The gases and dust curl toward the Earth, and are first noticeable as a fine red iron dust, turning the water a bitter blood red. Does this dust not burn in the available oxygen, and end as so many tiny flying star specs? This dust, already oxygenated, does not burn.

ZetaTalk: [Comet's Tail](#), written prior to July 15, 1995

On Aug 10, 2006 the [Green Geek](#) website reported the results of an experiment, whereby seeding the ocean surface with iron cause the phytoplankton to flourish and not only turn the surface green, it consumed the CO2 in the air above! It was not just the CO2, it was the addition of iron, that allowed this to happen. The iron oxide from the tail, combined with excessive CO2, would indeed turn the oceans lush, as the Zetas had predicted!

Seeding the Ocean to Promote Climate Change August 10th, 2006

<http://www.greengeek.ca/2006/08/10/seeding-the-ocean-to-promote-climate-change/>

Experiments in the early 1990s that seeded a region of the Pacific Ocean with iron dust saw a phenomenal 20 fold increase in the local phytoplankton population, with a corresponding decline in atmospheric carbon dioxide by roughly 2,500 tons within a period of 2 weeks. California-based Planktos Inc. believes this process can be repeated on a large scale to put a serious dent in our excess carbon dioxide problem. Since 1980, global levels of phytoplankton have dropped 25%. This is significant because phytoplankton, tiny floating surface algae, perform 50 percent of Earth's photosynthesis. The result of this is the production of 50 percent of our oxygen, and removed half of our carbon dioxide. At 1980 levels, this meant the metabolism of 50 gigatons of carbon dioxide each year. Since 1980, the loss in phytoplankton has resulted in a reduction of carbon dioxide metabolism of nearly 3 gigatons; equivalent to approximately half of all industrial and automotive emissions each year. 80 percent of the world's ocean water includes phytoplankton, the other 20 percent is said to be high nutrient/low chlorophyll (HNLC) because is it virtually devoid of phytoplankton. Although these areas are rich in



most of the nutrients required by plant life, they are missing one crucial ingredient: iron. Because the other nutrients (phosphorus, nitrogen, silicon) required for growth are already present, the addition of iron causes a very rapid algae bloom.



Troubled Times



Ocean Vortex

On Sep 15, 1996 the Zetas described ocean vortex that would occur during the pole shift, and their cause, cold water on top of warm, creating a vortex like a tornado in the ocean water.

Cold arctic water may have been thrust on top of warmer water, and as with tornadoes, when the thrust that caused this situation stops, the cold water will suddenly drop, creating a vortex.

ZetaTalk: [Ocean Vortex](#), written Sep 15, 1996

On June 2, 2006 reports from West Australia that such a vortex had emerged off their coast. The vortex involved cool water and pulls everything on the periphery into it, including coastal waters where fish larva grow and Australians sail.

Ocean Vortex 'Death Trap' Discovered

Herald Sun June 2, 2006

A massive ocean vortex discovered off the West Australian coast is acting as a "death trap" by sucking in huge amounts of fish larvae and could affect the surrounding climate. A team of scientists from The University of Western Australia Murdoch University, CSIRO and three American, French and Spanish research institutions announced the discovery of the vortex after a month-long research voyage in the ocean just west of Rottnest Island. Led by Dr Anya Waite, a biological oceanographer from UWA, the 10-member team found the vortex - 200km in diameter and 1000m deep - spinning at speeds up to 5kph just off the Rottnest Canyon. Dr Waite said the vortex, shaped like a giant child's spinning top, was created by current movement down the coast and is one of the largest ever found off of WA.

Visible from space, the vortex is acting as a "death trap" by sucking in fish larvae from closer to the shore, she said. "It's actually acting as a predator, it's actually taking the fish larvae which need to stick around their natural habitat on the coast, and dragging them off to sea," Dr Waite said. She said the climate above the vortex was noticeably different. "It feels like you're in the tropics," she said. "It's warm, soft, moist air, with flying fish, it's a very different environment." It could also potentially affect climate further afield, she said. "The vortex is moving a large volume of a very warm current out back into cooler waters, so essentially it's taking that heat and moving it away from the coast. "So essentially that really changes the heat budget of our regional ocean and it's the ocean that determines climate." Dr Waite said the vortex was unlikely to pose a danger to people sailing or diving in the area but the change was definitely noticeable. "We were in a 70-metre boat and you could immediately feel the shift in the ship's tract, so you can certainly tell that there's something unusual going on out there," she said.



Troubled Times



Omnipotent Krill

Prior to July, 1995 ZetaTalk confirmed [Bill Cooper's](#) story about the [Omnipotent Krill](#) was essentially correct.

From: **The Secret Government: The Origin, Identity, and Purpose of MJ-12**

By Milton William Cooper, May 23, 1989

Later in 1954, the race of large nosed Gray Aliens which had been orbiting the Earth landed at Holloman Air Force Base. A basic agreement was reached with them. This race identified themselves as originating from a planet around a red star in the Constellation of Orion which we call Betelgeuse. They state that their planet was dying and that at some unknown future time they would no longer be able to survive there. This led to a second landing at Edwards Air Force Base. The historical event had been planned in advance and details of the treaty had been agreed upon. Eisenhower arranged to be in Palm Springs on vacation. On the appointed day the President spirited away to the airbase and the excuse was given to the press that he was visiting a dentist.

President Eisenhower met with the aliens and a formal treaty was signed between the U.S.A and the Alien Nation. We then received our first Alien Ambassador from outer space whose name and title were "His Omnipotent Highness Krill", (pronounce "Krill"). In the American tradition of disdain for royal titles, he was secretly called the "Original Hostage Krill". You should also know that the alien's flag is known at the "Trilateral Insignia". It is displayed on their craft and worn on their uniforms. Both of these landings and second meeting were filmed which exist today in some vault.

The Treaty stated: the aliens would not interfere in our affairs and we would not interfere in theirs. We would keep their presence on earth a secret. They could furnish us with advanced technology and would help us in our technological development. They would not make any treaty with any other earth nation. They could abduct humans on a limited and periodic basis for purpose of medical examination and monitoring of our development with the stipulation that humans would not be harmed, would be returned to their point of abduction, that the humans would have no memory of the event, and that the alien nation would furnish MJ-12 with a list of all human contacts and abductees on a regularly scheduled basis. It was agreed that each nation would receive the Ambassador of the other for as long as the treaty remained in force. It was further agreed that the alien nation and the United States would exchange 16 personnel with each other for the purpose of learning more about one another.

The Alien "Guests" would remain on Earth and the human "Guests" would travel to the Alien's point of origin for a specified period of time and then return exchanging personnel to their home planet. It was also agreed that bases would be constructed underground for the use of the Alien nation. And 2 bases would be constructed for the joint use of the Alien nation and the United States Government. Exchange of technology would take place in the jointly occupied bases. These alien bases would be constructed under Indian reservations in the four corners area of Utah, New Mexico, Arizona, and Colorado. Another one would be constructed in Nevada within the area known as S-4 located approximately seven miles south of the western border of Area 51 known as Dreamland. All alien bases are under complete control of the Naval Department and all personnel who work in these complexes received their paychecks from the Navy. Construction of the bases began immediately but progress was slow until larger amounts of money were made available in 1957. Work continued on the "Yellow Book" compiling historical and sociological data about the alien culture.



Troubled Times



Planet X Triangulation

On [Feb 1, 2003](#) and again on [Aug 11, 2005](#), ZetaTalk pointed out the desire of the Bush Administration to triangulate the position of Planet X. On [Sep 21, 2003](#), ([zeta29.htm](#)) the plan was to nuke Planet X into a different path. This failed, but a triangulated position helps the Bush administration at least gauge the timing of the passage, or so they hope.

To nuke the inbound Planet X, coordinating the various nuclear devices they have already placed into space, on supposed probes, from a well equipped and staffed Space Station [was the plan]. To coordinate a nuking of Planet X, the Space Station, well above the soup of Earth's atmosphere, was required.

ZetaTalk: [Columbia](#), written Feb 1, 2003

The ISS was peeking at Planet X, providing information on its trajectory and speed, and to avoid transmitting this information to Earth via radio, which can be captured and cracked, they were using the Shuttle to ferry this to Earth so that only the elite would be aware of the presence and danger that Planet X represents to mankind.

ZetaTalk: [Shuttle Discovery](#), written Aug 11, 2005

On August, 2006 NASA will be launching twin probes to position themselves ahead of and behind Earth, supposedly to peer at the Sun. Since Planet X is so very close to the Sun, and moving toward Earth, this is an ideal position to determine the pace and position of Planet X, vs a vs the Earth! Perfect triangulation!

University of Minnesota

August 2006

In August this year, NASA is set to launch twin spacecraft, called STEREO, which will orbit the sun ahead of and behind the Earth, giving us our first stereoscopic view of these solar outbursts. Several University of Minnesota physicists have designed and built instruments that will be aboard both spacecraft, helping researchers better understand and predict the doings of our parent star.



Troubled Times



Pole Shift Equator

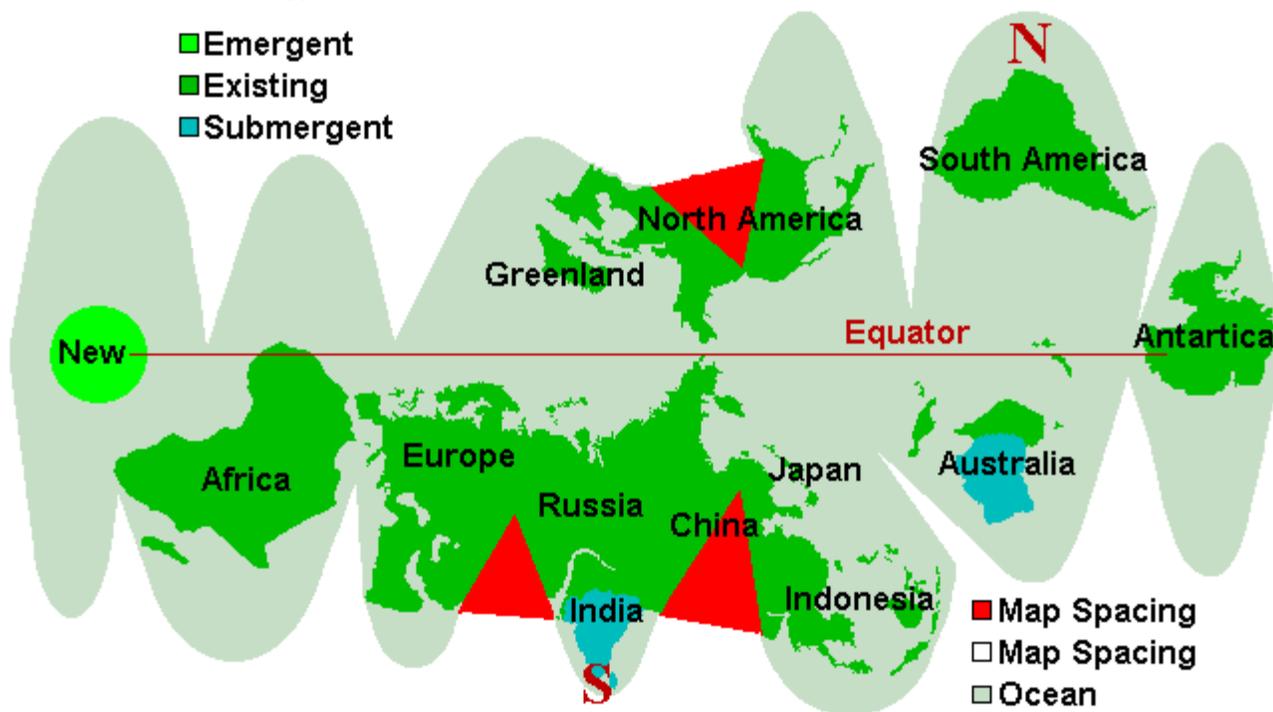
On July 15, 1995 at the very start of ZetaTalk, the Zetas presented the [New Geology](#) to come, where the new Equator would run through the Bering Straits, down the Pacific past the West Coasts of North and South America and thence through Antarctica and up the Atlantic to Greenland. Nancy drew a map showing the Zeta concept of this new geology. The [Vision](#) given to Nancy by the Zetas, which Nancy documented, stated that the new N Pole would be off the bulge of Brazil, and the new S Pole over India.

Positioned over North America, I see a line moving from the North Pole to just off the bulge of Brazil, out in the Atlantic Ocean. Then the Earth turns beneath me toward the east, until I am positioned somewhere over the Pacific Ocean, so that I can see the end point of a line moving from the South Pole to the center of India.

ZetaTalk: [Zeta Vision](#), written Jul 15, 1995

The pole shift, with consequent realignment of the poles, will place the New Equator over formerly frozen lands. Greenland, Canada, Alaska, Siberia, and Europe will be affected by the new equator.

ZetaTalk: [New Geology](#), written Jul 15, 1995



In 2007 the **History Channel** produced a documentary called *Doomsday 2012: the End of Days*. 16:37 into the first hour, they talk about pole shifts causing crustal shifts, and depict such an occurrence that supposedly happend 800 million years ago with the Equator running down the center of the Pacific. Why depict this when talking about what to expect for 2012? There is *no* other source in print or on the web for such a depiction of the geology to come, with Antarctica and Alaska on the new Equator, except at the ZetaTalk website. Nor did the **History Channel** depict any other potential new geology in their documentary.



Troubled Times



Probe Behavior

During the 2001 sci.astro debates, the Zetas addressed probe behavior, where the probes were not acting according to mankind's expectations. They pointed to particle flows that mankind is unaware of, washing back into the Sun's equator.

Why do the probes slow? It is not gravity, the Sun pulling these probes back, but particle flows that mankind is currently unaware of. Why do the planets in the solar system all line up into the ecliptic plane? This phenomena occurs in the rings around Saturn also, and in the oceans of Earth which are fatter at the equator than at the poles. Visible matter, the planets and rings and oceans, that mankind can see, are slung faster from the waist of a rotating sun or planet than at the poles, a matter of momentum. But it is not the sling that keeps them at the waist, as a sling alone would not keep them nicely in place, a ring around the waist. There is a return of some type, with the return coming back into the rotating sun or planet at the poles, and then flowing in the direction of the waist, to fill the gap caused by the sling. This is not caused by the flow of gravity particles, as the flow of gravity particles is even. Does an object weigh more at the poles than at the equator? Nor is this the flow of magnetic particles, as the rings around Saturn and the planets in the ecliptic assume their position regardless of magnetic properties.

ZetaTalk [Slowing Probes](#), written 2001

This was in response to a report on CNN on this probe behavior, which scientists could not explain.

Puzzling hyper-gravity proves weighty mystery

May 21, 2001

<http://archives.cnn.com/2001/TECH/space/05/21/gravity.mystery/index.html>

An unknown force seeming to pull on a pair of distant space probes has left astronomers with a weighty mystery, one that appears to defy the conventional laws of physics. The Pioneer 10 and Pioneer 11 spacecraft, which for decades have steadily traveled in opposite directions in the solar system, have covered significantly less space than they should have, astronomers said. A team of NASA researchers has systematically attempted to determine what has slowed the sibling NASA robot ships, to no avail. "Something is slowing down the spacecraft. And we have not been successful in finding the source of that. There is more slowing than you would expect from Newtonian gravity," said John Anderson, a senior scientist at NASA's Jet Propulsion Laboratory in Pasadena, California.

On Feb 29, 2008, scientists were no closer to being able to explain odd probe behavior, and added probes passing the Earth during their trajectory to the study. The information they report confirms the Zeta explanation, that particles flowing back into the middle of rotating bodies are involved.

NASA Baffled by Unexplained Force Acting on Space Probes

Mar 3, 2008

<http://www.space.com/scienceastronomy/080229-spacecraft-anomaly.html>

Mysteriously, four spacecraft that flew past the Earth have each displayed unexpected anomalies in their motions. These newfound enigmas join the so-called "Pioneer anomaly" as hints that unexplained forces may appear to act on spacecraft. A decade ago, after rigorous analyses, anomalies were seen with the identical Pioneer 10 and 11 spacecraft as they hurtled out of the solar system. Both seemed to experience a tiny but unexplained constant acceleration toward the sun. A

host of explanations have been bandied about for the Pioneer anomaly. At times these are rooted in conventional science — perhaps leaks from the spacecraft have affected their trajectories. At times these are rooted in more speculative physics — maybe the law of gravity itself needs to be modified. Now Jet Propulsion Laboratory astronomer John Anderson and his colleagues — who originally helped uncover the Pioneer anomaly — have discovered that four spacecraft each raced either a tiny bit faster or slower than expected when they flew past the Earth en route to other parts of the solar system.

The researchers looked at five deep-space probes — Galileo to Jupiter, the NEAR mission to the asteroid Eros, the Rosetta probe to a comet, Cassini to Saturn, and the MESSENGER craft to Mercury. Each spacecraft flew past the our planet to either gain or lose orbital energy in their quests to reach their eventual targets. (Galileo made two flybys.) In five of the six flybys, the scientists have confirmed anomalies. "I am feeling both humble and perplexed by this," said Anderson, who is now working as a retiree. "There is something very strange going on with spacecraft motions. We have no convincing explanation for either the Pioneer anomaly or the flyby anomaly." In the one probe the researchers did not confirm a noticeable anomaly with, MESSENGER, the spacecraft approached the Earth at about latitude 31 degrees north and receded from the Earth at about latitude 32 degrees south. "This near-perfect symmetry about the equator seemed to result in a very small velocity change, in contrast to the five other flybys," Anderson explained — so small no anomaly could be confirmed. The five other flybys involved flights whose incoming and outgoing trajectories were asymmetrical with each other in terms of their orientation with Earth's equator. For instance, the NEAR mission approached Earth at about latitude 20 south and receded from the planet at about latitude 72 south. The spacecraft then seemed to fly 13 millimeters per second faster than expected. While this is just one-millionth of that probe's total velocity, the precision of the velocity measurements was 0.1 millimeters per second, carried out as they were using radio waves bounced off the craft. This suggests the anomaly seen is real — and one needing an explanation. The fact this effect seems most evident with flybys most asymmetrical with respect to Earth's equator "suggests that the anomaly is related to Earth's rotation," Anderson said. As to whether these new anomalies are linked with the Pioneer anomaly, "I would be very surprised if we have discovered two independent spacecraft anomalies," Anderson told SPACE.com. "I suspect they are connected, but I really do not know."



Troubled Times



Red Rain Microbes

On Jan 6, 2006 the Zetas stated that cell like structures in red rain that had fallen on India after a meteor disintegrated were a precursor to life - the cell which forms prior to DNA setting up housekeeping inside the Cell.

DNA supports the ability of life to replicate itself and carry forward the dictates of biological function. Since man comes late to examining his own beginnings, he cannot determine if DNA arrived before the cell, or the cell was in place before the DNA. The assumption is that DNA came first, links forming in some kind of primordial soup, and the cell developed later as a protective device. Now, they know otherwise. The cell body does not dissipate without DNA, as human scientists know. It feeds, and continues. The evidence dropped to Earth was encased in an asteroid chunk that protected the molecular composition of these cells from the formerly life bearing planets in the Asteroid Belt. They thus had no reason to die. But as the shape clearly presents, this was a stage of life prior to DNA insertion, the next stage.

ZetaTalk: Space Dust, Alive?, written Jan 6, 2006

On Jan 5, 2006 news reports were skeptical that this was life in any form, despite the similarity to cellular structure on Earth..

Skepticism greets claim of possible alien microbes

Jan 5, 2006

http://www.world-science.net/exclusives/060104_specksfrm.htm

A paper to appear in a scientific journal claims a strange red rain might have dumped microbes from space onto Earth four years ago. At least 50,000 kg (55 tons) of the particles have fallen in all. People on the streets found their cloths stained by red raindrops. In a few places the concentration of particles were so great that the rainwater appeared almost like blood. The particles look like one-celled organisms and are about 4 to 10 thousandths of a millimeter wide, somewhat larger than typical bacteria. The particles seem to lack a nucleus, the core DNA-containing compartment that animal and plant cells have, the researchers wrote. Chemical tests indicated they also lacked DNA, the gene-carrying molecule that most types of cells contain. The outer envelope seems to contain an inner capsule, which in some places appears to be detached from the outer wall to form an empty region inside the cell. Further, there appears to be a faintly visible mucus layer present on the outer side of the cell. The major constituents of the red particles are carbon and oxygen. Carbon is the key component of life on Earth. Silicon is most prominent among the minor constituents of the particles; other elements found were iron, sodium, aluminum and chlorine. The red rain phenomenon first started in Kerala after a meteor airburst event, which occurred on 25th July 2001. Alive or dead, the particles have some staying power, if the paper is correct. Even after storage in the original rainwater at room temperature without any preservative for about four years, no decay or discolouration of the particles could be found.

On March 31, 2006, the New Scientist reported that scientists had concluded this was cellular life, without the DNA. And on March 8, 2006, confirmation from British scientists that the cells appear to be of extraterrestrial origin.

Red rain puzzle is still up in the air

March 31, 2006

<http://www.newscientist.com/channel/life/mg19025453.100-red-rain-puzzle-is-still-up-in-the-air.html>

It is looking increasingly unlikely that the red particles in rain that fell over southern India in 2001 are alien microbes, but their identity remains a mystery. When red rain fell over southern India in 2001 it was sensationally suggested that the red particles in the rain could be alien microbes. Now, after weeks of analysis at two labs in the UK, microbiologists are still struggling to identify them. It sounds like an episode of The X-Files, but a down-to-Earth explanation is looking the more likely outcome. Astronomer Chandra Wickramasinghe is studying the cells with microbiologists at Cardiff University. "As the days pass, I'm getting more and more convinced that these are exceedingly unusual biological cells," he says. The red rain fell sporadically over Kerala during two months in 2001. Godfrey Louis, a physicist at Mahatma Gandhi University in Kottayam in Kerala, examined the red particles and, unable to find DNA, suggested that they might be alien microbes that had fallen to Earth on a comet.

Red rain from Another Planet?

March 08, 2006

<http://in.rediff.com/news/2006/mar/08gspec.htm>

On July 25, 2001, blood-red rain fell over Kerala. The unusual phenomenon continued for two months, raining crimson, turning clothes pink, burning leaves on trees. In some places, the rain fell in scarlet sheets. Scientists were shocked, and the government ordered an investigation. Scientists concluded that the rain was red because winds had swept up dust from Arabia and dumped it on Kerala. But Dr Godfrey Louis, a Reader in Physics at the School of Pure and Applied Physics at the Mahatma Gandhi University in Kottayam, Kerala, was not convinced. He diligently gathered rain samples and, after months of painstaking research, concluded: 'The red particles, which caused the red rain of Kerala, are of extraterrestrial origin.' His colleagues -- other scientists and physicists -- frowned at the conclusion. But Dr Louis stuck to his theory. His scientific conclusions have now received international support. Dr Milton Wainwright of the micro-biology Department at Sheffield University in Britain has been examining some of the particles of the red rain samples that hit Kerala. And he has come out in support of Dr Louis' theory that the rains could belong to an alien life form.

These are the findings:

** The phenomenon can be explained easily if it is assumed that the origin of the red particles is from cometary fragments, which underwent atmospheric disintegration above Kerala.*

** There is additional correlating evidences that prompts this line of thinking, like the sonic boom from the meteor airburst, which preceded the first red rain case. Having made a logical possibility like this, it follows that the cometary body in question should contain a huge quantity of these red particles, which amounts to an estimated quantity of more than 50,000 kg.*

** What makes this finding most important is the biological cell-like nature of the particles. Under an optical microscope, they appear like biological cells. Transmission Electron Microscopy further shows a clear cell structure. Their organic nature is indicated by the major presence of carbon and oxygen. But, despite these biological indications, the cells do not show the presence of DNA. The genetic molecule DNA is present in all living organisms found on Earth, so the absence of DNA argues against the biological nature of these cells.*

** There is thus the possibility of alternate biomolecules in these cells, whose origin is suspected as extraterrestrial. This way, the cells may represent an alternate form of life from space. If these are such biological cells, then their production in huge quantity inside cometary bodies can be explained by the theory of cometary panspermia.*



Troubled Times



Red Sea Stretch

On Apr 15, 2002 the Zetas described as a [Scripted Drama](#) the steps in continent crunching and ripping apart that will occur during the hour of the pole shift, stating that [Pre-Shift Quakes](#) fall along those lines. Termed the [Stretch Zone](#), those parts of the globe including the Red Sea because the Arabian Plate is moving clockwise as the African Plate drops toward the Indian Ocean. On Apr 5, 2003 the Zetas specifically mentioned volcanos in the stretch zone starting to ooze as their base of support thins, and also exploding.

Stretching also results in volcanoes oozing more lava, or if the skin of the Earth thins, an explosion. This could occur in all those areas we have listed as expected to rip greatly: Red Sea, African Rift, etc.

ZetaTalk: [Pre-Shift Quakes](#), written Apr 5, 2003

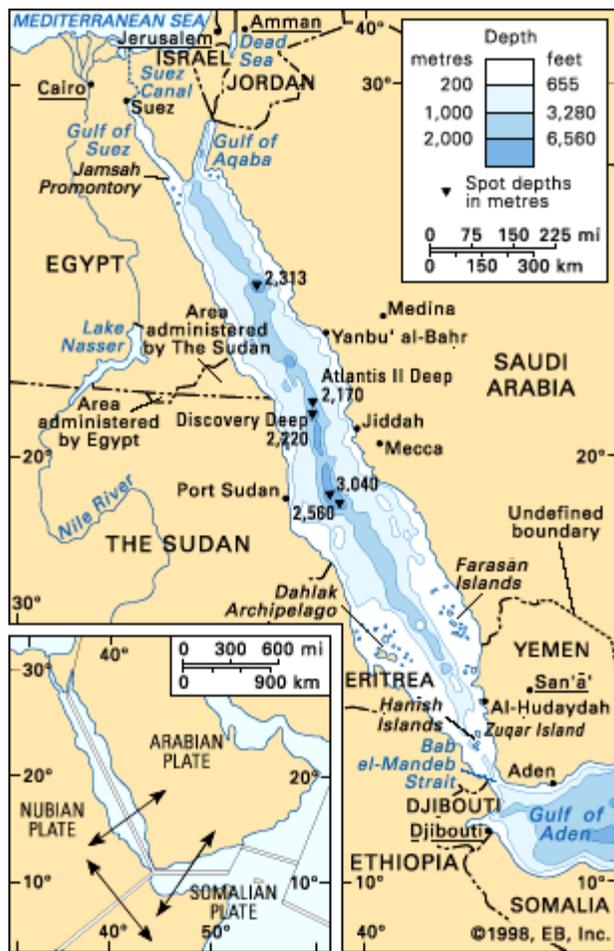
On Oct 1, 2007 a volcano in the Red Sea exploded without warning.

Volcanic Eruption Reported Off of Yemen

Oct 1, 2007

http://www.breitbart.com/article.php?id=D8S08KB80&show_article=1

A volcano has erupted on a tiny island off the coast of Yemen, spewing lava and ash hundreds of feet into the air, a Canadian naval vessel near the island in the Red Sea reported. The Yemeni news agency SABA confirmed the eruption and said a military garrison on the island is being evacuated. Large cargo ships pass nearby. Ken Allan, a Navy spokesman, said a NATO fleet just outside the territorial waters of the island reported seeing a catastrophic volcanic eruption at 7 pm local time. The two-mile-long island is about 70 miles off the coast of Yemen. The NATO fleet was sailing toward the Suez Canal when it spotted the eruption. The government of Yemen asked NATO to assist in the search for survivors and the closet ship, the HMCS Toronto, is heading toward the island.



Troubled Times



Repulsion Force

In September, 1995 ZetaTalk stated that gravity is balanced by a [Repulsion Force](#); scientists learned in March, 1998 that the Universe is expanding due to what they call a repulsion force which [Counteracts Gravity](#).

Tuesday, March 3, 1998

Copyright 1998 *The New York Times*

Astronomers See a Cosmic Antigravity Force at Work

James Glanz

An international team of astronomers who have used the brightness of distant exploding stars called supernovae to gauge how cosmic expansion has changed over time has reluctantly concluded that space itself appears to be permeated by a repulsive force. Gravity should have gradually slowed the outward rush of cosmic expansion, but as announced at a recent meeting, the dimness of the supernovae - pointing to unexpectedly great distances - implies that cosmic expansion has actually sped up in the billions of years since the stars exploded.

Volume 279, Number 5355, Issue of 27 February 1998, p. 1298

1998 by The American Association for the Advancement of Science.

Cosmic Force May Be Acting Against Gravity

By Kathy Sawyer, *Washington Post* Staff Writer

Friday, February 27, 1998

The universe is expanding at an accelerating rate, according to startling new evidence suggesting that a mysterious antigravity force permeates "empty" space and is counteracting the pull of gravity on a cosmic scale. If the new results hold up, scientists said, they could have enormous ramifications for theories of cosmic evolution, resolving some conflicts and creating new ones as they reverberate through studies of the largest-scale structures in the cosmos and the smallest particles in nature, and the frustrating quest for a "theory of everything" that would unify those fields. Scientists have reacted to the findings with a mix of shock, amazement, horror, excitement and suspended disbelief. The question of the fate of the universe - whether it will expand to infinity, contract in a "cosmic crunch" or flatline somewhere in between - is one of the oldest and most controversial in cosmology.

February 27, 1998

Scientists stunned to learn universe may be accelerating

WASHINGTON (CNN) -- Scientists are scratching their heads over a finding that indicates the universe, rather than slowing down, is being expanded by a mysterious force at an accelerating rate. And if the finding is correct, it also supports a concept first proposed by Albert Einstein, who later dismissed it as his biggest blunder. "It is such a strange result we are still wondering if there is some other sneaky little effect climbing in there," says Adam Riess, an astronomer at the University of California, Berkeley. Riess said he, Kirshner and others in the 15-member international team that made the discovery "have looked hard for errors" but found none.

Parallel study confirms finding.

Rocky Kolb, a University of Chicago astronomer, said in *Science* that the finding is so startling, "I think everyone should reserve judgment." Kirshner said the conclusion will go through an intensive review before the results are accepted, although he noted that preliminary results from a parallel study by another astronomy group are in agreement. "We are scratching our heads to think if there could be an alternative explanation for it," says Riess, "something more mundane than a repulsive force." It is being called a repulsive force because it seems to be working against gravity to speed up the expansion of the universe. "If it's confirmed by other results and other approaches, it's going to tell us there is something important, another constituent to the universe," says Kirshner.

A fifth force at work?

Unlike matter, which slows down as it moves through space, the new force - if the researchers are correct - moves faster. Four forces are accepted by modern physics: the strong force, which holds the nucleus of an atom together; the weak force, which causes atomic decay; electromagnetic force, which holds electrons in orbit in an atom; and gravity. Kirshner says a fifth force could be at work. The idea of a fifth force has been speculated about by physicists, he says. Over short distances, said Riess, this repulsive force can't be detected, but over distances of 7 billion to 10 billion light-years, "this force becomes something to reckon with, and is strong enough to overcome gravity and cause the universe to accelerate." Riess said he isn't surprised that the force hasn't been detected before. "The force is very weak on a small scale and it only becomes important when you are looking back," he said. "It's like a lot of little ants - one is weak but a lot of them can lift a big weight."

Correspondent Ann Kellan, *The Associated Press* and *Reuters* contributed to this report.



Troubled Times



Roswell

Prior to July, 1995 ZetaTalk stated that the [Roswell](#) incident did indeed occur, with more than one crashed ship, the weather balloon a cover-up, and [EBB](#) living after the crash. This is in accordance with facts and eyewitness accounts gathered by various researchers:

Roswell - The Facts, Truths and [Eyewitness Accounts](#)

by Richard Dean

On the evening of July 2, 1947, a bright, disk-shaped object was seen flying over Roswell, New Mexico, heading northwest. The following day widely scattered wreckage was discovered about seventy-five miles northwest of Roswell by a local ranch manager, William Brazel, together with his son and daughter. The authorities were eventually alerted and a quantity of wreckage was recovered by Major Jesse Marcel, a staff intelligence officer of the 509th Bomb Group Intelligence Office at the Army Air Forces base at Roswell Field, together with a Counter-Intelligence Corps officer. When the officers had returned to the Roswell base, an official press statement was released, authorized by Colonel William Blanchard, confirming that wreckage of a flying disk had been recovered. Shortly after that, Marcel was ordered to load the debris on a B-29 and fly it to Wright Field (currently Wright-Patterson AFB) at Dayton, Ohio, for examination. On arrival at an intermediate stop at Carswell Army Air Forces Base, Fort Worth, Texas (headquarters of the Eighth Air Force), General Roger Ramey took over and ordered Marcel and others on the plane not to talk to reporters. A second press statement was issued which stated that the wreckage was actually the remains of a weather balloon and its attached tinfoil radar target, and this was prominently displayed at the press conference. Meanwhile, the "real" wreckage arrived at Wright Field under armed guard; Marcel returned to Roswell, and Brazel was held incommunicado for nearly a week while the crash site was stripped of every scrap of debris. A news leak via press wire from Albuquerque describing this fantastic story was interrupted and the radio station in question, and another, were warned not to continue the broadcast: "Attention Albuquerque: Cease Transmission. Repeat. Cease Transmission. National Security Item. Do Not Transmit. Stand By..."

The unidentified wreckage, scattered over an area three-quarters of a mile long by several hundred feet wide, consisted of various types of debris, which according to Major Marcel was like nothing he had seen before or since. In his words, "There was all kinds of stuff - small beams about three eighths or a half inch square with some sort of hieroglyphics on them that nobody could decipher. These looked something like balsa wood, and were of about the same weight, except that they were not wood at all. They were very hard, although flexible, and would not burn. There was a great deal of unusual parchment-like substance which was brown in color and extremely strong, and a great number of small pieces of a metal like tinfoil, except that it wasn't tinfoil." Marcel added that one piece of metal foil, two feet long and a foot wide, was so durable that it could not be dented with a sledgehammer, despite its being incredibly light. Marcel was absolutely convinced that the material had nothing to do with a weather balloon or radar target. His testimony cannot be dismissed, owing to his background in aviation: he had served as bombardier, waist-gunner and pilot, had logged 468 hours of combat flying in B-24 aircraft, and was awarded five air medals for shooting down enemy aircraft in World War 2. Toward the end of the war he was attached to the 509th Bomb Wing, an elite military group for which all involved required high-security clearances. Following the Roswell incident he was promoted to Lieutenant Colonel and assigned to a Special Weapons Program. Marcel was certain that no bodies were found among the debris, and that whatever the object was it must have exploded above ground level.

But the evidence suggests that there was another crash site, in an area west of Socorro, New Mexico, known as the Plains of San Agustin, where witnesses supposedly discovered not only a damaged metallic "aircraft" resting on the flat desert ground, but also dead bodies. The first witness on the scene was Grady L. "Barney" Barnett, a civil engineer with the US Soil Conservation Service who was on a military assignment at the time. He told some friends that in early July 1947 he had encountered a metallic, disk shaped "aircraft" about twenty-five or thirty feet in diameter. While he was examining it, a small group of people arrived who claimed to be part of an archaeological research team from the University of Pennsylvania. Barnett later told his friends, "I noticed that they were standing around looking at some dead bodies that had fallen to the ground. I think there were others in the machine, which was kind of a metallic...disk It was not all that big. It seemed to be made of a metal that looked like stainless steel. The machine had been split open by explosion or impact." "I tried to get close to see what the bodies were like. They were all dead as far as I could see and there were bodies inside and outside the vehicle. The ones outside had been tossed out by impact. They were like humans but they were not humans. The heads were round, the eyes were small, and they had no hair. The eyes were oddly spaced. They were quite small by our standards and their heads were larger in proportion to their bodies than ours. Their clothing seemed to be one-piece and gray in color. You couldn't see any zippers, belts, or buttons." "While we were looking at them a military officer drove up in a truck with a driver and took control. He told everybody that the Army was taking over and to get out of the way. Other military personnel came up and cordoned off the area. We were told to leave the area and not talk to anyone whatever about what we had seen... that it was our patriotic duty to remain silent."

It is not known for certain if the craft and occupants allegedly witnessed by Barnett were connected with the Roswell wreckage. The Plains of San Agustin, near Magdalena, New Mexico, are about 150 miles west of Brazel's ranch site. Was the wreckage recovered at Roswell part of the same craft that had somehow managed to remain airborne for that distance before crashing on the Plains, or was it another craft that had also crashed? Some believe that two flying saucers collided, with one crashing at Roswell, the other making it to the Plains of San Agustin before crashing. Bill Moore (co-author of "The Roswell Incident"), in one of his updated research papers on Roswell, concludes that while there is insufficient evidence to substantiate Barnett's story or to justify linking it with what he calls the "proven" recovery of out of the ordinary wreckage at Brazel's Roswell ranch site, there is no reason to entirely dismiss the account. There is also the intriguing theory that the first press release, announcing the recovery of a crashed disk, was a counterintelligence ploy to deflect attention from the craft and bodies then littering the Plains of San Agustin. Leading researchers Stanton Friedman (a nuclear physicist and author) and Bill Moore have interviewed at least ninety-two witnesses who provided information about this sensational incident, of whom thirty were involved with the discovery, recovery or subsequent official cover-up. Ten of the original witnesses have identified the object as nonterrestrial in origin.

See also: [Roswell Testimony](#)

by Christopher Schmidt, January 1993



Troubled Times



Rotation

On Dec 15, 1995 ZetaTalk stated that the [Rotation](#) of the Earth and other planets with a liquid core was driven by the core. On July 18, 1996 the Lamont-Doherty Earth Observatory findings were published in [News Articles](#) showing that the core of the Earth turns *faster* than the crust, thus driving the process.

Core Spins Faster Than Earth, Lamont Scientists Find

Columbia University, Lamont-Doherty Earth Observatory

The inner core rotates in the same direction as the Earth and slightly faster, completing its once-a-day rotation about two-thirds of a second faster than the entire Earth. Over the past 100 years that extra speed has gained the core a quarter-turn on the planet as a whole, the scientists found. Such motion is remarkably fast for geological movements -- some 100,000 times faster than the drift of continents, they noted. The scientists made their finding by measuring changes in the speed of earthquake-generated seismic waves that pass through the inner core.



Troubled Times



Russian Overflights

On July 15, 2006 the Zetas stated that a card the Puppet Master would play if the Bush administration appeared ready to invade or bomb Iran would be to threaten US holdings in the Pacific or the State of Alaska. He would do this via his influence with various countries.

The Puppet Master has cards in his deck not yet played. For instance, the flurry of missile tests from N Korea was at his request, to remind the US Military that an invasion of Iran would result in threats to the US territories in the Pacific.

ZetaTalk [G8 Summit](#), written July 15, 2006

Starting in July, 2008 Russia made several threatening overflights over Alaska, the Aleutian Island, and US aircraft carriers in the Pacific. There is no rational explanation for this seemingly *new* behavior.

Russian Bomber Buzzes U.S. Aircraft Carrier

Feb 12, 2008

<http://www.cnn.com/2008/US/02/11/russian.bomber/index.html>

American fighter jets intercepted two Russian bombers, one of which buzzed a U.S. aircraft carrier in the western Pacific. Russia's Defense Ministry said Tuesday that there was no violation of flight regulations during the incident. A ministry official said the flights are standard operating procedure for air force training. One of them twice flew about 2,000 feet over the deck of the USS Nimitz Saturday while another flew about 50 miles away. Two others were at least 100 miles away. US defense officials said four F/A-18A fighter jets from the Nimitz were in the air. The Russians and the U.S. carrier did not exchange verbal communications. Four turboprop Tupolev-95 Bear bombers took off from Ukrainka Air Base, in Russia's Far East, in the middle of the night. One of the planes violated Japanese airspace. Russian bombers have been making flights over the western Pacific for several months. There have been eight incidents off Alaska since July. Among the latest, on September 5, six F-15s from Elmendorf Air Force Base, adjacent to Anchorage, Alaska, intercepted six Russian bombers about 50 miles from the northwest coast of Alaska. Two similar incidents occurred in August, one near Cape Lisburne, Alaska, and the other near Cold Bay, Alaska, west of the Aleutian Islands.



Troubled Times



Santilli Tapes

In August, 1995 ZetaTalk stated that the Santilli [Autopsy Tapes](#) would be proved a fake; in March, 1996, the [MUFON Journal](#) published a study of Santilli's alien autopsy film, stating just that.



Troubled Times



Satellite Failures

In August, 1996 ZetaTalk stated that [Bill Gates](#) will profit when magnets in satellites begin pointing in wrong directions, causing them to mis-perform; in [May, 1998](#), a massive satellite failure occurred because the satellite rolled out of position. During the Jan 16, 2002 and May 4, 2002 [Live ZetaTalk](#) Sessions, the Zetas added detail to their prediction. On Jul 11, 2002, SpaceMart reported not only that the failure rate was up 146%, and their numbers doubled between 1996 and 2002. [GPS Failure](#) also occurred. By May 4, 2006, in the middle of the solar minimum, [Severe Warnings](#) were being issued. During the Dec 27, 2006 [Taiwan quake](#), satellites were out of position for some time. On January 26, 2008 the [Galaxy IV](#), a spy satellite the size of a bus, was crashing to Earth, out of control.

Satellite Anomalies Pushing Insurance Rates Up [SpaceMart](#), Jul 11, 2002

In recent years, the satellite insurance market has experienced a great deal of volatility. This is consistent with insurance markets overall, in particular the dramatic rise in insurance rates after September 11. In addition, satellite insurance rate increases are directly linked to a growth in claims, industry analyst Futron says in a research paper released Wednesday. Satellite insurance rates are affected by several factors, primarily the levels of anomalies, or malfunctions, in the operation of a satellite. While anomalies occur every day within the global satellite fleet, it is severe anomalies resulting in a total or partial inability for the satellite to perform its mission that can trigger an insurance claim. Thus, satellite insurers are very sensitive to any increase in satellite anomalies, which can be a leading indicator of decreased satellite reliability.

However, the situation surrounding the increase in satellite anomalies is complex. Many factors have contributed to this increase, only some of which are directly related to satellite reliability. A sentiment exists in parts of the satellite manufacturing community that the satellite insurance industry has overreacted to the increase in anomalies. The recent insurance rate increases have affected the already-thin profit margins associated with satellite manufacturing and, in some cases, jeopardized the economic viability of certain satellite ventures. The satellite insurance industry argues that it is simply correcting a situation that produced large losses. If not for this correction, insurers would be forced to abandon the satellite industry for more favorable markets. There are elements of truth in both positions, and Futron does not take sides in this White Paper. Instead document attempts to clarify some of the issues through an objective analysis of satellite insurance, reliability, and performance.

*This White Paper also includes a technical analysis of the range of anomalies experienced in recent years, and puts this in the context of the increased number and complexity of satellites launched. Futron's primary findings include: In the last four years, space insurance rates have risen by 129%. **In the last four years, major on-orbit anomalies have risen by 146%.** There has been a significant increase in the number of GEO commercial communications satellites and the on-orbit population of such **satellites doubled between 1996 and April 2002.** Technical complexity of satellites has increased significantly over the last five years. For example, the average payload power almost tripled from 2.3 kW in 1996 to 6.3 kW in 2001. The anomaly rate of new satellites is relatively high in the first two years of a satellite's life, then drops dramatically and continues to decline thereafter. Satellite manufacturers are*

implementing stringent quality control standards in the design and manufacturing process.



Troubled Times



Saudi Takeover

On Nov 30, 2002, the Zetas mentioned that Iraq was only a prestep to invading Saudi Arabia, for their oil. On Feb 8, 2003, this was mentioned again.

Bush trying to find reason for a war with Iraq, so their oil can be well in hand and Israel put in charge of Iraq and Saudi oil prior to the shift, as planned.

ZetaTalk: [Leaks](#), written Nov 30, 2002

Their best laid plans are not working out, and not being allowed to overtake their objectives promptly so that Iraq falls, Saudi Arabia falls, and the rest of the world be damned.

ZetaTalk: [Monitored](#), written Feb 8, 2003

On Oct 15, 2005, [The Guardian](#) published a surprise, that internal memos had revealed a plan from the start to invade Saudi Arabia as well as Iraq. Where the excuse, as with Iraq, was due to weapons of mass destruction, the invasion of both countries was obviously over their oil reserves. The [Independent](#), another UK newspaper, confirmed.

Bush told Blair of 'going beyond Iraq'

October 15, 2005, [The Guardian](#)

George Bush told Tony Blair shortly before the invasion of Iraq that he intended to target other countries, including Saudi Arabia, which, he implied, planned to acquire weapons of mass destruction. Mr Bush said he "wanted to go beyond Iraq in dealing with WMD proliferation, mentioning in particular Saudi Arabia, Iran, North Korea, and Pakistan," according to a note of a telephone conversation between the two men on January 30 2003. The note is quoted in the US edition, published next week, of Lawless World, America and the Making and Breaking of Global Rules, by the British international lawyer Philippe Sands. The memo was drawn up by one of the prime minister's foreign policy advisers in Downing Street and passed to the Foreign Office, according to Mr Sands.

It is not surprising that Mr Bush referred to Iran and North Korea, or even Pakistan - at the time suspected of spreading nuclear know-how, but now one of America's closest allies in the "war on terror". What is significant is the mention of Saudi Arabia. In Washington, the neo-cons in particular were hostile to the Saudi royal family and did not think they were doing enough to quell Islamist extremists - 15 of the 19 September 11 attackers were Saudis. But the Bush administration did not in public express concern about any Saudi nuclear ambitions. In September 2003, the Guardian reported that Saudi Arabia had embarked on a strategic review that included acquiring nuclear weapons. Until then, the assumption in Washington was that Saudi Arabia was content to remain under the US nuclear umbrella despite the worsening relationship between Riyadh and Washington.

Bush to Blair: First Iraq, then Saudi

16 October 2005, [Independent](#)

George Bush told the Prime Minister two months before the invasion of Iraq that Saudi Arabia, Pakistan, Iran and North Korea may also be dealt with over weapons of mass destruction, a top secret Downing Street memo shows. Mr Bush said he "wanted to go beyond Iraq in dealing with WMD proliferation", says the letter on Downing Street paper, marked secret and personal. No 10 said yesterday it would "not comment on leaked documents". But the revelation that Mr Bush was

considering tackling other countries over WMD before the Iraq war has shocked MPs. Saudi Arabia and Pakistan have been close allies of the US in the war against terror and have not been considered targets in relation to WMD. The confidential memo recording the President's explosive remarks was written by Michael Rycroft, then the Prime Minister's private secretary and foreign policy adviser. He sent the two-page letter recording the conversation between the two leaders on 30 January 2003 to Simon McDonald, who was then private secretary to Jack Straw, the Foreign Secretary. Mr Rycroft said it "must only be shown to those with a real need to know".

"The conversation seems to indicate that Iraq was not seen as an isolated issue but as a first step in relation to a broader project," he said. "What is interesting is the mention of Saudi Arabia, which to the best of my knowledge had not at that time been identified particularly as a country with WMD. An alternative view is that the mention of Saudi Arabia indicates that the true objectives were not related exclusively to WMD." "If this letter accurately reflects the conversation between the President and the Prime Minister it will cause consternation, particularly in Saudi Arabia. American policy in the Middle East for decades has been based on support for Israel and an alliance with Saudi Arabia," he said. "If this was more than loose talk and represented a genuine policy intention it constitutes a radical change in American foreign policy."



Troubled Times



Sea Level Rise

The Zetas have predicted that sea level will rise approximately 675 feet, world wide, within 2 years after the pole shift. But can this rise be consistent for all land, given the Equatorial Bulge? Water tends to pool at the Equator due to centrifugal force, and would drift to the poles if rotation stopped. The Zetas themselves acknowledged this as they stated that this is the reason Edgar Cayce stated that Virginia Beach would be a safe place, stating that Cayce intended this for the week of rotation stoppage only.

In computing the rise in the seas to 675 feet, more than the melting of Antarctic and Greenland ice is presumed, as this rise has been computed by man to be only 200 feet. Since the water flowing from the pole is cold, and would drop and run along the deep ocean rifts, this would bring those rifts to the freezing point, cold water falling below warm. All land surface will be heated due to the swirling of the core. Under the oceans, this equates to a higher ocean bottom, with the water needing to go someplace, and as the bottom is moving up, the sea level can only go up also. Thus, where this cannot be computed by man, being a missing dynamic in his statistics, this is the explanation for why our 675 foot rise does not compute given the known factors - water volume and increase per degree of heat rise.

ZetaTalk: [Rising Seas](#), written October 5, 2002

After the cataclysms the existing polar ice will melt, while at the same time reforming over the new poles. The melting will occur faster than the reforming, as for ice to form there are more factors at play than for ice to melt. Where new poles take centuries to fully form, existing poles thrust under an equatorial sun melt rapidly. The melting poles will thus raise the sea level, worldwide, by 650 to 700 feet within two years.

ZetaTalk: [Melting Ice Caps](#), written July 15, 1995

Our general guidelines are to be 100 miles inland and 200 feet above sea level at that location. One should not stand on the beach. As we have explained, Cayce was talking about the time of rotation stoppage, when the water pulls from the equator and moves to the poles. Then matters reverse, and the sloshing starts. There will be tidal surges between now and the time of the pole shift which will clue any residents along coastlines that they are not safe.

ZetaTalk: [GLP Live Chat](#), written December 6, 2008

Equatorial Bulge is the term used to explain why the Earth appears fatter around the Equator. This bulge is not due to ocean water pooling there, though centrifugal force would tend to pull water to the Equator, but because the Earth itself, magma and crust, is pulling outward at the Equator. Ocean water has different forces, as water seeks its level and if the poles are, from a spherical sense, lower than the Equator, ocean water would tend to also flow to the poles as this is, whether north or south, downhill. Thus, as the Zetas stated, the 650-700 foot rise in sea level is consistent over the globe, with only a slight pooling of water at the poles during the week of rotation stoppage.

Equatorial Bulge

http://en.wikipedia.org/wiki/Equatorial_bulge

An equatorial bulge is a bulge which a planet may have around its equator, distorting it into an oblate spheroid. The Earth has an equatorial bulge of 42.72 km (26.5 miles) due to its rotation: its diameter measured across the equatorial plane (12756.28 km, 7,927 miles) is 42.72 km more than that measured between the poles (12713.56 km, 7,900 miles). An often-cited result of Earth's

equatorial bulge is that the highest point on Earth, measured from the center outwards, is the peak of Mount Chimborazo in Ecuador, rather than Mount Everest. But since the ocean, like the Earth and the atmosphere, bulges, Chimborazo is not as high above sea level as Everest is.

How the Ocean Works: an Introduction to Oceanography

By Mark Denny, page 185

The bulge is in the solid part of the Earth, rather than in the oceans. ... the distance from the center of the Earth to any point on the Equator is 21.5 kilometers longer than the distance from the center to either of the poles. ... What happens to the oceans on this bulging Earth? Nothing, really. The oceans form a layer of more or less constant thickness over the bulging earth. Centrifugal force still tends to move water toward the equator and gravity still tends to move water toward the poles. In this case, "downhill" can be taken in a literal sense - traveling poleward involves moving down the hill formed by the bulging solid earth. Given the current shape of the earth, stationary water everywhere in the ocean is at equilibrium between centrifugal and gravity acceleration.



Troubled Times



Seaway Rip

On Feb 10, 2006 the Zetas warned that the Seaway would rip open well ahead of the pole shift.

The primary drama preceding the pole shift will be the ripping action that a plate unable to move must endure. The stress on the N American plate will resolve by ripping the St. Lawrence Seaway open. A widening Seaway also does not affect just those land masses bordering the Seaway, as buckling occurs inland and afar. What does man assume caused the Black Hills to be so rumped, with the appearance of a recent bucking and heaving? This is the center of a land plate! The tearing of the Seaway does not end at Duluth, MN, it travels underground to S Dakota!

ZetaTalk [N American Rip](#), written Feb 10, 2006

On Sep 29, 2003, commenting on the [New York City blackout](#) in August, 2003 caused by a failure in the Niagra substation that bridges the seaway, the Zetas also warned that gas and oil pipelines would rupture during the stress preceding the pole shift.

As with derauling trains, which cannot be explained by any but earth movement, and exploding gas lines or broken water main, which likewise point to earth movement, electrical systems are fragile, a single broken point causing domino effects. But the problems are more than single breaks, they are massive breaks, of major cables running underwater between European countries, of entire connections across a seaway tearing apart, of whole substations fracturing so all connections coming in or out are essentially broken. Large mechanical breaks, and not the ones that should be the focus of concern. Electrical breaks result in lose of electrical power, the public being plunged into darkness or without communications, but far worse than this are breaks that are about to occur in gas lines and gasoline refinery and distribution networks. When these break, as break they will, there will be explosions and fires that will not be so easily corrected nor subdued. A holocaust, an inferno, one that spreads without abatement along the distribution lines, so hot and intense that none can approach.

ZetaTalk [Power Outages](#), written Sep 29, 2003

On Nov 29, 2007 the major oil pipeline from Alberta, Canada to the midwest ruptured in upper Minnesota. It had ruptured weeks earlier and been repaired, but ruptured again for *no known reason*. Per the Zetas, this was a [seaway rip](#).



Fire at Major US Oil Pipeline Kills 2

Nov 29, 2007

A deadly fire at a pipeline from Canada that feeds oil to the United States sent oil prices soaring. Two workers fixing the underground pipeline were killed when fumes apparently escaped and ignited the blaze. No other injuries were reported. The fire along the Enbridge Energy pipeline in northern Minnesota was reported shortly before 4 pm [Wednesday, November 28]. The 34-inch pipeline carries crude oil from Saskatchewan to the Chicago area. The pipe had leaked a few weeks ago and was being repaired. It appears as though one of those fittings may have failed and caused fumes to leak, and it caught fire. Clearbrook is about 215 miles northwest of Minneapolis.



Troubled Times



Shroud of Turin

On [July 15, 1995](#) the Zetas stated that the Shroud of Turin was a fraud, produced by merchants hoping for tourism.

The current shroud of Turin is a well concocted fake, done by chemists in the late 1950's. These individuals were interested in increased activity in their local area, to increase business in general. They lacked an attraction, so created one. The method used to create the fake left no residuals, as most chemical reactions do not after a time. Thus this fake cannot be proved or disproved, and the controversy only incites interest, so the promoters get the desired outcome, either way.

ZetaTalk: [Shroud of Turin](#), written May 2, 2009

On October 6, 2009 it was reported that the shroud was completely and simply reproduced using methods that were even available in the 14th century.

Shroud Of Turin Reproduced; Italian Group Says Relic Is Man-Made, Fake

October 6, 2009

http://www.huffingtonpost.com/2009/10/06/shroud-of-turin-reproduce_n_310605.html

Scientists have reproduced the Shroud of Turin - revered as the cloth that covered Jesus in the tomb - and say the experiment proves the relic was man-made. The shroud bears the figure of a crucified man, complete with blood seeping out of nailed hands and feet, and believers say Christ's image was recorded on the linen fibers at the time of his resurrection. Scientists have reproduced the shroud using materials and methods that were available in the 14th century, the Italian Committee for Checking Claims on the Paranormal said. The group said in a statement this is further evidence the shroud is a medieval forgery. In 1988, scientists used radiocarbon dating to determine it was made in the 13th or 14th century. But the dispute continued because experts couldn't explain how the faint brown discoloration was produced, imprinting on the cloth a negative image centuries before the invention of photography. Many still believe that the shroud "has unexplainable characteristics that cannot be reproduced by human means," lead scientist Luigi Garlaschelli said in the statement. "The result obtained clearly indicates that this could be done with the use of inexpensive materials and with a quite simple procedure." The research was funded by the debunking group and by an Italian organization of atheists and agnostics, he said.



Troubled Times



Sighting Aliens

On February 15, 1998 ZetaTalk stated that the [Next Phase](#) in the Awakening of Earth to the alien presence would be sightings of aliens, fleeting glimpses at first. By August, 2001 such sightings were on the increase.

'Tiny Flying Alien' spotted in Turkey

AnaNova, August, 2001

A field in Turkey has been sealed off by police after a villager claimed he saw a 2ft tall flying alien in a yellow suit. Fevzi Cam, his wife and another woman said they spotted the alien on Monday morning as they rode on a tractor to a tobacco field. Mr Cam said he threw stones at the creature, which was wearing a shiny, yellow-grey outfit with a yellow light on the front. Regional governor Ayhan Cevik ordered police to protect the field near Narli in Usak province, despite having doubts about the claim. He said: "We have more important matters to deal with but we have no other choice. The area is being protected, we are waiting for the scientists." A team from Sirius, a Turkish UFO research group, is on its way to the scene. It will check radiation levels and analyse the soil. Two other villagers claim to have seen lights in the area at the same time as Mr Cam saw the alien. He described it as just over two feet tall with a wide, round head and wide eyes. He said: "It didn't have wings or a propeller but it could fly upward."

Argentina: Policeman Inexplicably Vanishes for 20 Hours

EL DIARIO, Mar 4, 2006

An officer of the cattle-theft division "vanished" for nearly twenty hours. Found in a fetal position: Officer Pucheta escaped Thursday night after having come across "two small, red-eyed creatures that chased him and gave him telepathic commands." He was found yesterday afternoon some 20 kilometers away from the site in a fetal position. On Thursday night the young officer, having some five years' experience with the force, was driving a Honda 125cc motorcycle along the rural roads of Dorila. Amid this activity, Pucheta "requested backup over his cell phone" at 21:20 hours from a site near the La Barrancosa ranch. When a squad car arrived from General Pico, police only found Pucheta's motorcycle and some of his belongings, including his firearm (broken in three parts), his helmet, a "handy" and the cell phone with which he had previously requested assistance. It was reported that Pucheta had experienced a UFO episode near La Barrancosa, and that he had in recent weeks been involved with the recording of "strange lights" in the company of others. Pucheta's trail reached some 2700 meters away from the site where the episode occurred and the young man has no idea how he arrived at the location where he was rescued. (translation (c) 2006, Scott Corrales, IHU. Special thanks to Christian Quintero, Planeta UFO)



Troubled Times



Slowing Rotation

ZetaTalk stated during the sci.astro debates the [Slowing Rotation](#) was known to the Navy and NASA, who were inserting seconds into the master clocks.

Where the master clock is in the hands of the US Navy, which has been in the center of the secrecy over Planet X and related matters for almost half a century, this is not a difficult feat. All network computers in the world, ultimately, sync with the US Navy master clock, most by the networks dialing in during the night and adjusting. A second here, a second there, and it is always assumed to be the peripheral computers that are off, a bit, when an adjustment is made! Unless an individual is astute, and notices the increased adjustments required to their watches and clocks, they assume they are the problem, not the master clocks that run the world.

ZetaTalk: [Slowing Rotation](#), written Jan 15, 2001

The Slowing [TOPIC](#) and [TEAM](#) pages have recorded this by early 2003, at time when the Earth was particularly subject to slowing by tugging by Planet X, as an insertion rate of 1second/day. Per the Zetas, this was a time when slowing was more acute due to conflict between the position of Planet X vs a vs the Sun. When they aligned more closely, this slowing pace stopped.

Any detectable slowing occurred in the months when Planet X was approaching the inner solar system and causing confusion in the Earth. The Earth clicks or synchs with points in the Sun on a daily basis, and thus the reliable 24 hour day. Planet X caused confusion, pulling at the Earth points that wanted to click with the Sun's points. But since Planet X is now close to the Sun, from the Earth's viewpoint, this confusion no longer exists. Until the weeks before rotation stoppage, there will be no measurable slowing.

ZetaTalk: [Slowing Pace](#), written Nov 1, 2008

But the fact that more than the occasional leap second was had been inserted into the master clock was never admitted, though on Mar 4, 2003 [NASA Admitted](#) to this slowing rotation, blaming it on Global Warming.

Changes in the Earth's Rotation are in the Wind

March 4, 2003

<http://www.gsfc.nasa.gov/topstory/2003/0210rotation.html>

Because of Earth's dynamic climate, winds and atmospheric pressure systems experience constant change. These fluctuations may affect how our planet rotates on its axis, according to NASA-funded research that used wind and satellite data. NASA's Earth Science Enterprise (ESE) mission is to understand the Earth system and its response to natural and human-induced changes for better prediction of climate, weather and natural hazards, such as atmospheric changes or El Niño events that may have contributed to the affect on Earth's rotation. "Changes in the atmosphere, specifically atmospheric pressure around the world, and the motions of the winds that may be related to such climate signals as El Niño are strong enough that their effect is observed in the Earth's rotation signal," said David A. Salstein, an atmospheric scientist from Atmospheric and Environmental Research, Inc., of Lexington, Mass., who led a recent study.

But on Nov 20, 2008 the [Russians admitted](#) that a slowing rotation had been occurring.

World Should Prepare For Cataclysmic Global Flood, Warn Russian Scientists

Nov 20, 2008

http://www.fourwinds10.com/siterun_data/environment/earth_changes/news.php?q=1227213833

The Earth is rotating around its own axis slower. The International Earth Rotation Service has regularly added a second or two to the length of a 24-hour day in recent years. A weakening of the Earth's magnetic field was first registered early in the 20th century, and a consistent drop in the speed of rotation, in the late 1980s and early 1990s.



Troubled Times



Social Security

By Dec, 2000 ZetaTalk stated that a [Social Security Scam](#) was being proposed by the new Bush Administration, sacrificing these funds to support a teetering Wall Street. By Feb, 2002 details explaining on what this change would mean appeared in print.

[Four Lies About Social Security](#)

Impact Press, Feb, 2002

A CBS News poll taken in August 2001 found that a majority of Americans do not believe that Social Security will be able to pay their retirement benefits. A similar majority believe that investing part of our Social Security funds in the stock market is a good idea. That speaks to the success of a brilliant, multi-year public relations campaign engineered by rich Wall Street firms, in conjunction with their friends in conservative Washington think tanks. Their goal: to convince the public to consider dumping Social Security in favor of private accounts. It's a campaign built on misinformation, distortion, and outright lies. What's Wall Street's stake in all this? They want to get their hands on the one trillion dollars currently sitting in the Social Security trust fund - probably the largest single stash of dough ever amassed in human history. If Social Security were privatized, that giant trust fund would be sliced up into individual retirement accounts, managed by the banks, one account for every man, woman and child in America. Each one of those accounts would generate management fees for the banks, a never-ending Niagara Falls of fees, cascading forever into the coffers of Wall Street. ...

Lie #3: The stock market is definitely a better deal. The pro-privatization President's Commission to Strengthen Social Security has claimed that stocks will have an annual "return" of 7 percent, while the current Social Security system only returns about 3 percent. But the Commission does not provide any hard numbers to back up their 7 percent estimate. That's a stunning omission, given the fact that the whole argument for privatization rests on projected stock market returns. The truth is that the stock market is a much shakier investment than most people realize. Even with recent drops, stock prices are still high by historical standards. At this writing, the Dow Jones stands around 10,000. But Alan Greenspan warned that stock prices were too high (by making his "irrational exuberance" comment) back when the Dow was way down below 7,000! Another problem is Social Security's own accountants are projecting that corporate profits will grow much slower over the next 75 years than they have in the past. Since stock prices are tied to corporate profits, this can only dim the prospects for stock market returns. Economist Dean Baker of the Center for Economic and Policy Research crunched Social Security's own numbers and came up with a future stock market return of 3.6 percent a year. When you subtract the fees that banks will charge to manage the accounts, the stock market drops back into a dead heat with old reliable Social Security. Except that with the private accounts, it would still be possible to lose everything in a stock market crash. So far, the President's Social Security Commission has failed to refute or even respond to Baker's calculations.



Troubled Times



Solar Reversals

Prior to July, 1995 in explaining the process of the [Pole Shift](#) and man's theories about [Polar Reversals](#), by Jan 9, 1997 on the sci.astro [Usenets](#), ZetaTalk stated that the Sun's magnetic field [Dominates](#) the solar system. By early 2001, NASA et al had announced, based on the appearance of Sun spots, that the solar maximum had occurred and the Sun had reversed its magnetic field. On Sep 9, 2001, the Ulysses probe, carrying a [Magnetometer](#), found otherwise, as reported in the [New Scientist](#), proving the [Zetas RIGHT Again!](#)

JPL September 9, 2001

Space physicists predict gusty winds for the next few months at the Sun's north pole, an area that will be observed when the Ulysses spacecraft passes over it starting on Aug. 31 [2001]. This pass over the pole occurs at a time of solar maximum ... This will be Ulysses' second pass over the Sun's north pole. It completed a circuit of the Sun in 1996 ... In 1995, Ulysses saw strong and simple magnetic fields at both poles of the Sun. ...

As Ulysses passed by the south pole of the sun a few months ago, scientists expected to find that magnetic lines were pointing outward, because observations from Earth show that the magnetic field has already reversed at the Sun's surface. Instead, they found that they Magnetic lines were still pointing Inward, just as they had been Throughout solar minimum.



Troubled Times



Solar System Magnetism

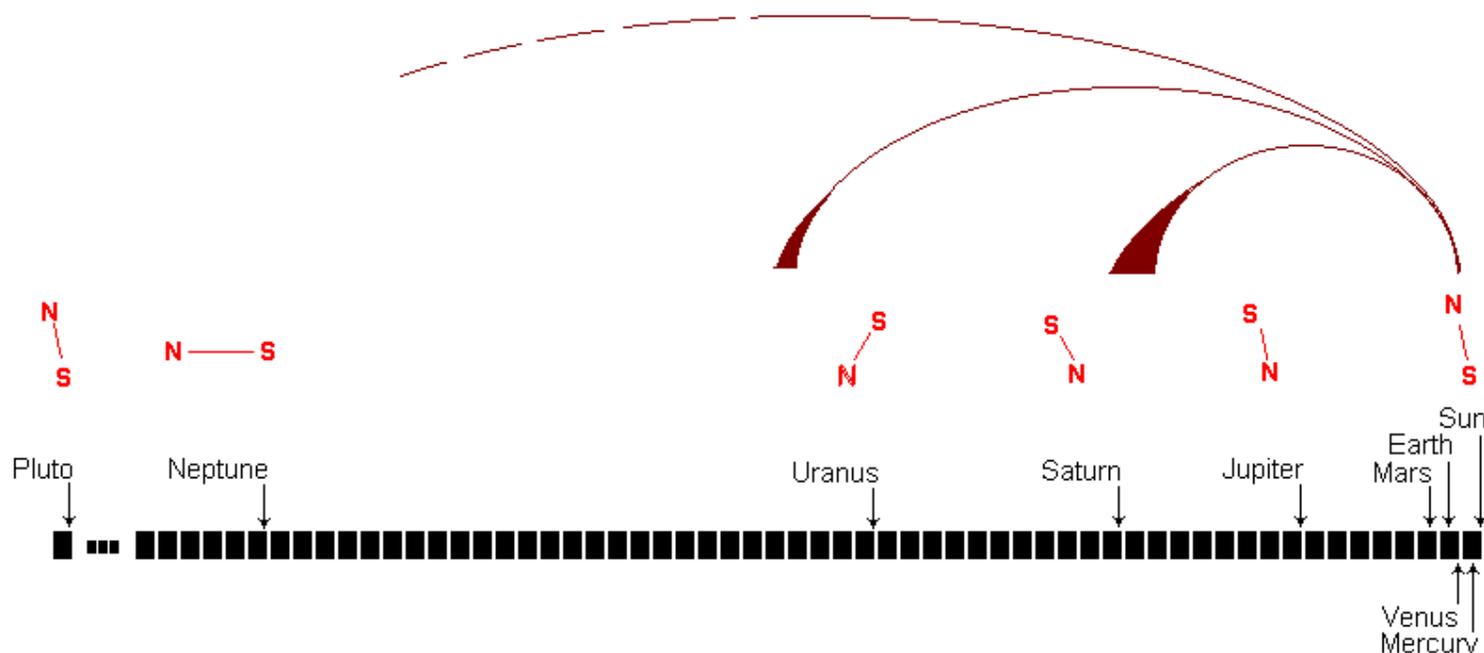
The Zetas have always asserted that the Sun dominated the solar system's magnetic field, and did not flip its poles every 11 years as NASA has asserted. The Zetas stated that the Sun's influence reached to the end of the solar system, and that a magnetic influence affecting the solar system came from beyond the solar system, triggering what the Zetas called the Magnetic Trimesters.

Magnetic influences between planets are greater than humans imagine, because they use as their frame of reference objects on the surface. The Earth's crust is magnetically diffuse, representing many different pole alliances over the eons, as magma hardened after volcanic eruptions during pole shifts. The Earth's thick crust acts as a shield in this way, so that only sensitive needles on compasses, floating freely, jiggle into alignment with the Earth's core. A planet's magnetic influence is not encapsulated by its crust, but reaches beyond this even to the ends of the solar system.

ZetaTalk: [Planetary Magnetism](#), written February 15, 1996

When this path of least resistance is established in a gaseous planet, the magnetic particle flow takes a short cut to the south pole of the Sun, the dominant magnetic influence in the area. Those particles flowing through such a gaseous magnet do not return to the south pole of the planet they have just passed through, but move along to the south pole of the Sun. Magnetic fields are measured by man not by the flow of particles, but by the direction of the flow, as the orientation is determined by which way a magnet swings under the influence of this flow. Thus, probes sent to measure the magnetic field of a gaseous planet find their test magnets swinging into alignment, both the south pole of the gaseous planet and the test magnet lined up to act as a conduit for the intense flow of magnetic particles on the move. The fact that there is no actual field about the gaseous planet, no return from the north pole of the gaseous magnet to its south pole, is not noted.

ZetaTalk: [Opposition](#), written 2001



Why is it the Sun, as the giant magnet dominating the solar system, points North and South with its poles in the directions it does? For those late to this argument, the Sun does not reverse polarity every 11 years as NASA

states, and the solar magnetic field reaches beyond the outer bounds of the solar system, affecting all the planets. The Sun likewise is under the dictates of influences that surround it, and as the Sun goes, so go the planets.

ZetaTalk: Magnetic Trimesters, written 2001

On October 15, 2009 NASA admitted that the prevailing concept of how the solar system was shaped was wrong. They had assumed it was delimited by the solar wind, creating a comet like shape - a nose cone in front and a tail in the back. Their own probe demonstrated that the solar system was in the shape of a bubble, delimited by magnetic particle flow.

Cassini Data Help Redraw Shape of Solar System

October 15, 2009

<http://www.jpl.nasa.gov/news/features.cfm?feature=2337>

Images from the Ion and Neutral Camera on NASA's Cassini spacecraft suggest that the heliosphere, the region of the sun's influence, may not have the comet-like shape predicted by existing models. In a paper published Oct. 15 in Science Express, researchers from the Johns Hopkins Applied Physics Laboratory present a new view of the heliosphere, and the forces that shape it. As the solar wind flows from the sun, it carves out a bubble in the interstellar medium. Models of the boundary region between the heliosphere and interstellar medium have been based on the assumption that the relative flow of the interstellar medium and its collision with the solar wind dominate the interaction. This would create a foreshortened "nose" in the direction of the solar system's motion, and an elongated "tail" in the opposite direction. The Ion and Neutral Camera images suggest that the solar wind's interaction with the interstellar medium is instead more significantly controlled by particle pressure and magnetic field energy density.

NASA's IBEX Spots Mystery Emissions at Edge of Solar System

October 15, 2009

<http://www.foxnews.com/story/0,2933,567020,00.html>

"[The ribbon is] aligned by and dominated by the external magnetic field," McComas said in a briefing Thursday. "That's a huge clue as to what's going on. But still we're missing some really fundamental aspect of the interaction - some fundamental physics is missing from our understanding." The new IBEX results will be published in the Oct. 16 issue of the journal Science.



Troubled Times



Stretch Zones

On Apr 15, 2002 the Zetas described as a [Scripted Drama](#) the steps in continent crunching and ripping apart that will occur during the hour of the pole shift, stating that [Pre-Shift Quakes](#) fall along those lines. Termed the [Stretch Zone](#), those parts of the globe including the African Rift, rip because the plate cannot move and must therefore rip apart. In [N America](#), the St Lawrence Seaway is a rip point.

Is there a correlation also to the earthquakes that occurred in Africa's stretch zone, the Rift area, on Dec 5? Indeed, as the Torque Effect on the Earth is increasing, tearing the Atlantic apart, twisting the North American plate into a diagonal with New England pulled East while Mexico is pulled to the West, dropping Africa into the Indian Ocean as the African continent is likewise pulled East while its tip is held firm near Antarctica, and sinking the western edges of Great Britain as the Atlantic Rift widens and stretches under the curve of the Earth so the land along the edges sinks.

ZetaTalk: [Stretch Zone](#), written Sep 11, 2004

In September 2005, the African Rift started to rip dramatically, and by March 15, 2005, this story hit the news with dramatic photos.

A Continent Splits Apart

Spiegel, Mar 15

Normally new rivers, seas and mountains are born in slow motion. The Afar Triangle near the Horn of Africa is another story. A new ocean is forming there with staggering speed -- at least by geological standards. Africa will eventually lose its horn.

Geologist Dereje Ayalew and his colleagues from Addis Ababa University were amazed -- and frightened. They had only just stepped out of their helicopter onto the desert plains of central Ethiopia when the ground began to shake under their feet. The pilot shouted for the scientists to get back to the helicopter. And then it happened: the Earth split open. Crevices began racing toward the researchers like a zipper opening up. After a few seconds, the ground stopped moving, and after they had recovered from their shock, Ayalew and his colleagues realized they had just witnessed history. For the first time ever, human beings were able to witness the first stages in the birth of an ocean.



Normally changes to our geological environment take place almost imperceptibly. A life time is too short to see rivers changing course, mountains rising skywards or valleys opening up. In north-eastern Africa's Afar Triangle, though, recent months have seen hundreds of crevices splitting the desert floor and the ground has slumped by as much as 100 meters (328 feet). At the same time, scientists have observed magma rising from deep below as it begins to form what will eventually become a basalt ocean floor. Geologically speaking, it won't be long until the Red Sea floods the

region. The ocean that will then be born will split Africa apart.



Troubled Times



Summer Snowstorms

On the Jan 12, 2000 *Sightings* radio show, ZetaTalk predicted in the [Predictions for 2000](#) that cold summers, even snow in the summer, would be experienced as part of the the increasing weather irregularities. Starting in April, 2000 such reports began. By June, 2005 a first every snowfall in Somalia, a tropical country, occurred, '*The first snowfall on this part of the world ... The storm left a blanket of snow on the ground, something residents had never seen in their lives before*'. By the Fall of 2006, snow was reported in [Argentina and Australia](#) had snow for Christmas.

Snow in Boston!

April 26, 2000, Offered by Richard

I live less than ten miles north of Boston. The tulips are up; the forsythia is dropping its yellow flowers for green leaves; the flox is out; the azaleas are flowering; the daffodils are in bloom; and it's snowing! I got up at six this morning and it's still going at quarter to nine as I write - coming down at a pretty good clip, too. It's sticking to the grass and bushes and somewhat to the sidewalks and roads. The forecast for today was rain and temperatures in the upper forties or low fifties. No warning of this from the weather service. I'm glad I didn't put in that grass seed yesterday as I had planned. The next door neighbor was out planting his. Oh well, I'll just have to chalk this up to another countdown adjustment!

Early Antarctic Chill Invades Australia

Discovery Earth Alert, May 31, 2000

At least two people in eastern Australia were killed during the weekend in accidents triggered by one of the worst cold spells in living memory. Both victims were crushed by falling trees laden with snow. Although it is officially still autumn, the cold front spread across Victoria, Tasmania and South Australia. Snow fell less than 60 miles from the city of Melbourne for the first time in 25 years. Temperatures in Brisbane fell 50 degrees Fahrenheit below the seasonal average for May. Flooding and fallen trees continued to wreak havoc in southeastern Australia on Tuesday, and black ice and snow also remained a problem. The bitter cold caused demands for gas and electricity to reach record levels for the third consecutive day. Ski resort operators were thrilled about the possibility of an extended snow season. Victoria's Falls Creek got 12-18 inches of snowfall. Falls Creek spokeswoman Debbie Howie said, "This is the biggest snowfall at this time of the year since 1968." She reported that the resort would open two weeks earlier than usual.

Snowstorms in France

Associated Press, June 11, 2000

Snowstorms in southeastern France left some areas covered in up to 40 centimeters (16 inches) of snow. Six people had to be rescued by helicopter Sunday morning from the Pyrenees mountains, according to the French television station, LCI. In northeastern France, dozens of villages were affected by heavy hail and snowstorms. Traffic was slowed in the area and certain roads remained covered with mud from storms the day before.

Swiss Alpine Passes get Midsummer Snow

Associated Press, July 11, 2000

Even as Southeastern Europe suffered from a heat wave and wildfires, an unusual cold snap has brought

snow to Switzerland's Alpine passes, officials said Tuesday. The San Bernardino pass in southern Switzerland was closed Tuesday morning to allow snowplows to clear about 20 kilometers (12 miles) of road, the motorists association Touring Club Suisse said. On other passes cars had to use chains. Freezing temperatures in the mountains meant snow would continue to fall above 1,800 meters (5,900 feet), forecasters said. At lower elevations across Switzerland temperatures averaged an unseasonably cool 13 degrees centigrade (55 Fahrenheit) Tuesday, said Saskia Willemse of MeteoSuisse. In the Balkans some 1,000 kilometers (600 miles) to the southeast, meanwhile, a heat wave was expected to peak around 43 degrees (109 Fahrenheit) by Wednesday. Firefighters in Greece have had to battle more than 100 wildfires sparked by the prolonged heat wave.

Southern Brazil Sees Snowfall

Discovery Earth Alert, July 14, 2000

The first significant snowfall in 16 years blanketed streets and rooftops in parts of southern Brazil this week, delighting children who built their first-ever snowmen. The snow, which began late Tuesday, fell in the states of Rio Grande do Sul and Santa Catarina, forcing officials to close all schools. Many roads were left impassable. Temperatures fell by more than 60 degrees Fahrenheit in the semitropical cities of Rio de Janeiro and Sao Paulo this week. Residents who were enjoying 95 degrees Fahrenheit weather several days ago suddenly found themselves hit by the cold front.

Snow Traps Thousands in Saudi Arabia

[*AnaNova*](#), July 25, 2001

Thousands of people ended up trapped in a national park in Saudi Arabia after it started snowing. Rescue workers were called after 75 people were injured in the panic. Several hundred were rescued using helicopters and mountain jeeps. Several inches of snow fell in the mountainous area in the south west of the country, while other regions baked in 100 degree Fahrenheit temperatures. Entrepreneurs have been using snow-making machines to try and build ski resorts in the mountains, near Saudi Arabia's border with Yemen, reports ABC.



Troubled Times



Sun Binary

On Aug 15, 1995 the Zetas went on record stating that our Sun has a binary, and that Planet X orbits both on a long elliptical orbit essentially a sling orbit. On Oct 15, 1995 they gave more detail about this dark binary, which has never lit.

The path of Planet X is elliptical, making a long flat circle around its two gravitational masters, your Sun and a body you cannot see. Since it rivals the Sun in mass, the assumption would be that your astronomers would know about it. However, being dark, they stare past it and think it space. To use multiples of the distance from your Sun to its farthest known orbiting planet, which you call Pluto, this foci is from the Sun 18.724 times as far away.

ZetaTalk: [Comet Orbit](#), written Aug 15, 1995

This second foci of Planet X has not been located by your astronomers because it is dark, not lit, and does not happen to block any view your astronomers are particularly interested in. They think it empty space. Unlike the Sun, this dark twin never lit. Although comparable in size and mass, its composition was subtly different, and it has no potential for becoming a lit sun under the present conditions in your part of the Universe. It has no planets of any size to mention, though is orbited by a lot of trash. Should one wish to search for it, it stands at an angle of 11 degrees off the Earth's orbital plane around the Sun, in the same direction we have given for the approach of Planet X. Not being a luminous body, and not giving off any radiation detectable by human devices, you will be unable to locate it, but this does not mean that it is not there.

ZetaTalk: [Second Foci](#), written Oct 15, 1995

On Apr 24, 2006 scientists were coming forward declaring that our Sun was indeed part of a binary twin set, based on the orbits of newly discovered planetoids Sedna and Xena. Note, like the outer planets of the solar system and 13 long period comets, these long elliptical orbits lean in the direction of Orion, where the Zetas state the dark binary twin sun lies.

Evidence Mounts for Sun's Companion Star

http://www.eurekalert.org/pub_releases/2006-04/bri-emf042406.php

April 8, 2006

The Binary Research Institute (BRI) has found that orbital characteristics of the recently discovered planetoid, "Sedna", demonstrate the possibility that our sun might be part of a binary star system. A binary star system consists of two stars gravitationally bound orbiting a common center of mass. Once thought to be highly unusual, such systems are now considered to be common in the Milky Way galaxy. Walter Cruttenden at BRI, Professor Richard Muller at UC Berkeley, Dr. Daniel Whitmire of the University of Louisiana, amongst several others, have long speculated on the possibility that our sun might have an as yet undiscovered companion. Most of the evidence has been statistical rather than physical. The recent discovery of Sedna, a small planet like object first detected by Cal Tech astronomer Dr. Michael Brown, provides what could be indirect physical evidence of a solar companion. Matching the recent findings by Dr. Brown, showing that Sedna moves in a highly unusual elliptical orbit, Cruttenden has determined that Sedna moves in resonance with previously published orbital data for a hypothetical companion star.

In the May 2006 issue of Discover, Dr. Brown stated: "Sedna shouldn't be there. There's no way to

put Sedna where it is. It never comes close enough to be affected by the sun, but it never goes far enough away from the sun to be affected by other stars... Sedna is stuck, frozen in place; there's no way to move it, basically there's no way to put it there - unless it formed there. But it's in a very elliptical orbit like that. It simply can't be there. There's no possible way - except it is. So how, then? "I'm thinking it was placed there in the earliest history of the solar system. I'm thinking it could have gotten there if there used to be stars a lot closer than they are now and those stars affected Sedna on the outer part of its orbit and then later on moved away. So I call Sedna a fossil record of the earliest solar system. Eventually, when other fossil records are found, Sedna will help tell us how the sun formed and the number of stars that were close to the sun when it formed." With Dr. Brown's recent discoveries of Sedna and Xena, (now confirmed to be larger than Pluto), the search for a companion star may be gaining momentum.

Sedna

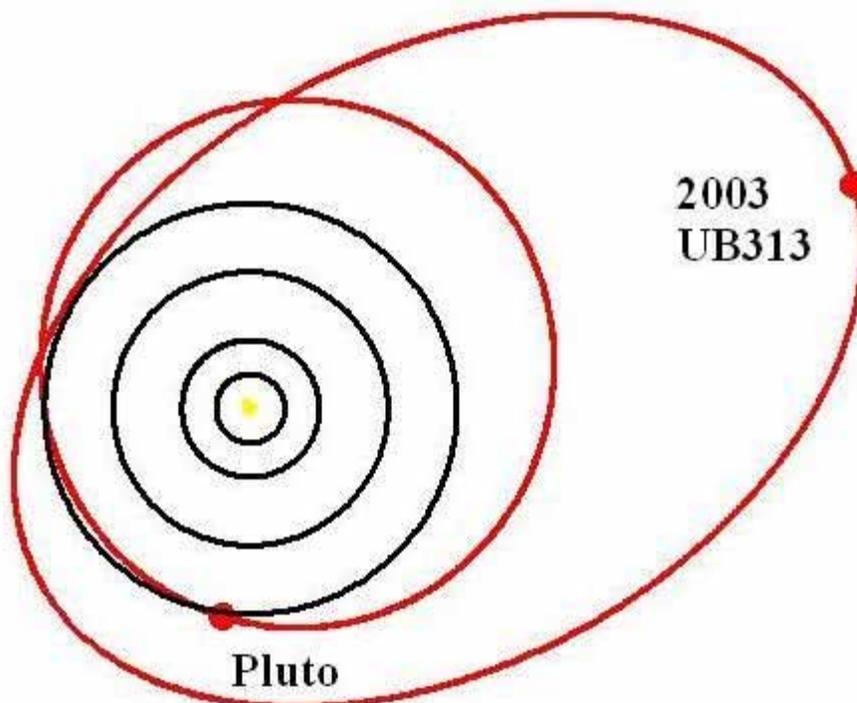
<http://www.gps.caltech.edu/~mbrown/sedna/>

On 15 March 2004, astronomers from Caltech, Gemini Observatory, and Yale University announced the discovery of the coldest, most distant object known to orbit the sun. The object was found at a distance 90 times greater than that from the sun to the earth -- about 3 times further than Pluto, the most distant known planet. Standing on the surface of Sedna, you could block the entire sun with the head of a pin held at arm's length. Even more interestingly, the orbit of Sedna is extreme elliptical, in contrast to all of the much closer planets, and it takes 10,500 years to circle the sun. In March 2004, the location of Sedna is easily found in the evening sky to the southwest just after sunset. It is almost directly below Mars, and forms a triangle with the very bright Venus. The following sky chart was accurate for mid-March 2004 and is only left in place for an historical reference.

Xena (2003 UB313)

<http://www.gps.caltech.edu/~mbrown/planetlila/>

The new planet is the most distant object ever seen in orbit around the sun, even more distant than Sedna, the planetoid discovered almost 2 years ago. It is almost 10 billion miles from the sun and more than 3 times more distant than the next closest planet, Pluto and takes more than twice as long to orbit the sun as Pluto.





Troubled Times



Sun Scald

On Dec 11, 2005 the Zetas confirmed Sun scald since 2003, scattered white light from the Sun causing sunburn and early crops and a white Sun, all due to the disbursing of light through the tail of Planet X, which had arrived in 2003.

An ultra-glaring Sun was noted in 2003, when Planet X roared into the inner solar system from the direction of Orion, and screeched to a halt as it neared the Sun and the repulsion force clicked in. The tail of Planet X, not affected by the repulsion force, maintained its momentum and wafted past the Sun to deliver red dust and odd atmospheric changes to the Earth. In the Summer of 2003, it was noted that people sunburned more readily, construction workers long used to working out of doors, noted an unusual tendency to burn. Crops likewise matured two weeks early that year in many places, and comments about the intense brightness of the Sun were common.

What causes the Sun scald, the intense brightness that does not translate into increased heat and cannot be correlated to solar activity or sun spots? A fog bank, with a light shown on it, appears to be evenly lit, because the light is scattered and bouncing back to the observer. Is there more light, or simply scattered light? If the Sun is no longer yellow, it is because all light rays are scattered, and the steady state of yellow is interfered with. You formerly looked at the setting Sun without distress, the yellow or orange Sun, though the Sun was still in view and its rays were coming into your eye with full force.

It is the loss of your yellow Sun that is affecting your eye's ability to look at the Sun, thus the perception of increased brightness, as the Sun's rays, scattered, are presenting the same mix to your eye that high noon presents. Likewise with the rays that created sunburn, which normally are not bent toward the observer at sunset or at other than high noon, but now are scattered to arrive at one's skin. The time of day is no longer a protection from sunburn. This will only get worse, as the tail continues to turn toward the Earth.

ZetaTalk: [Sun Scald](#), written Dec 11, 2005

Nothing appeared in the media, the subject ignored, until 2006, when official *acknowledgement* finally occurred. Where sunlight dimmed by 6% between 1960 and 1990, this trend has now reversed. No explanation for the reversal was given, except to imply that a reduction in pollutants in the atmosphere was responsible for the dimming.

Brighter sun adds to fears of climate change

<http://www.timesonline.co.uk/article/0,,2087-2104022,00.html>

March 26, 2006

The amount of sunshine reaching earth is increasing, accelerating the pace of climate change, scientists have found. Researchers will present their findings to the European Geophysical Union conference in Vienna next week. They reverse a 30-year trend. Measurements of sunshine levels between 1960 and 1990 had shown a decrease in the amount of sunshine reaching the earth, a phenomenon known as global dimming. This was thought to have been caused by dust, smog and other pollutants, mainly from industrialised western countries. The pollutants, known as aerosols, reduced sunshine levels by absorbing and scattering solar radiation and promoting the formation of clouds that reflected radiation back into space. Sunshine levels had been decreasing by 2% a decade between 1960 and 1980 - a total decline of about 6%. Now they are going up again. Perhaps this is why our Swiss glaciers are melting. Atsumu Ohmura, of the Swiss Federal Institute of Technology in Zurich, has collated measurements from 400 sites worldwide and found an increase in sunshine at

300 of them, sited mainly in Eurasia and the Polar regions. Some showed a decline in sunshine since 1990, largely in fast-developing countries such as China and India.



Troubled Times



Suppressing Word

Prior to July 1995 ZetaTalk stated that the government had been [Suppressing the Word](#) on the 12th Planet for years, and on March 23, 1998 an article on the Space Station to be hoisted aloft in 2003 stated it had been planned for two decades.

8:15 AM 3/23/1998 - Intl Space Station Costs Soar, Delay Seen-WSJ

New York, March 23 (Reuters) - Costs of the International Space Station could climb to as much as \$24 billion - \$3 billion higher than projected - with completion delayed as long as three years, the Wall Street Journal reported Monday. **Launch of the station's first module is scheduled for June after two decades of effort, with assembly slated to be complete by 2003.** But frustrated lawmakers, hoping to rein in the budget and maintain the schedule, are warning of tougher controls or cutbacks that could shrink the station's scope. "This thing is continuing to spiral out of control," the Journal quoted Republican John McCain of Arizona, the Senate Commerce Committee chairman who has promised hearings on the matter. "There may be a requirement for some kind of restructuring. We just can't keep up."



Troubled Times



Swine Flu

On [April 25, 2009](#) when the Mexico swine flu outbreak first occurred, the Zetas stated that this would not become a pandemic, despite the death rate in Mexico which was running at a 5% rate, the same death rate as had occurred during the 1918 bird flu epidemic.

From the start of this outbreak it was clear that this was not a natural emergence of a virus. Pig virus from three different continents, an avian virus, and human virus. How does one catch a swine flu from a pig that has traveled to three different continents? Swine flu normally travels from a pig to a human and there stops, but this strain was to ensure human to human transmission by including human flu virus. The list of anomalies in this incidence is long, and has eyebrows raised all around the world. Yet another suspicion is the means by which citizens, primarily children, were infected in the US when they have not traveled or had exposure to pigs. Outbreaks normally have a trail that can be followed, this one infects that one who travels and infects yet another. But here there are great leaps. It frankly looks planted, and it is. Who benefits from this engineered outbreak, which will not become a pandemic despite the hype. Note that where vaccines are not available, two flu drugs - Tamiflu and Relenza, are reportedly effective.

ZetaTalk: [GLP Live Chat](#), written April 25, 2009

Despite the World Health Organization raising the level to 5, the level just below 6 which is a pandemic level, this did not become a pandemic because the flu that continued to spread had become mild. This despite the original death rate in Mexico and the wide spread of the virus to other countries.

Pandemic 'Imminent': WHO Raises Swine Flu Pandemic Alert Level to 5

April 29, 2009

<http://abcnews.go.com/Health/SwineFlu/Story?id=7456439&page=1>

The World Health Organization has raised its pandemic swine flu alert level to phase 5 -- its second-highest level. The move by the agency, which is the public health arm of the United Nations, is "a strong signal that a pandemic is imminent," according to published guidelines. It also places the world a single step away from an official global pandemic. In the United States, the swine flu virus has spread to 11 states and infected 94 people, according to the U.S. Centers for Disease Control and Prevention. Meanwhile, Mexico's Health Minister Jose Angel Cordova said on Tuesday night that more than 1,300 people were in hospitals, some of them "seriously" ill, out of a total of around 2,500 suspected cases of the virus. "In the last few days there has been a decline (in cases)," Cordova told a news conference. "The death figures have remained more or less stable." Around the world, New Zealand confirmed 11 cases, and Israel confirmed one. South Korea, Australia and the Czech Republic announced several suspected cases. Spain had one previously confirmed case, the United Kingdom, two and Canada, six. Most of the individuals involved had recently returned from Mexico.

Per the Zetas, the killer virus had not been able to survive and pass person-to-person, but a milder cousin in the mix was being passed. The Zetas were aware of this on April 25, 2009 even before the media or the World Health Organization was aware of it.

It is very obvious that outside of Mexico, this flu outbreak is not fatal. In fact, it is described as being a very mild flu. Even the toddler who died within the US was Mexican, came from Mexico City on a visit, and has been described as being in poor health even before the infection. Why the difference between

infections in Mexico and elsewhere? Cloning activities do not always succeed, due to man's clumsy steps and lack of knowledge. This bio-engineered virus was sliced and slammed together. Flu virus is notorious for mutating, and this one has, in a reverse direction, becoming less lethal as it passed from one to another. All deaths in Mexico has been as a result of being infected directly by the virus from a test tube, including the Mexican toddler who died in Texas. Those who were directly exposed but did not die passed the virus on, but in a modified state. Second hand infections were the passing of modified virus which survived the immune systems of these individuals, and this virus was only one of many in the original mix. What we are telling you is that the strong virus, the one capable of killing people, inciting a 1918 type of response, did not survive in the human body, and thus was not passed. What passed was a second cousin in the mix, which was mild.

ZetaTalk: [GLP Live Chat](#), written May 2, 2009

The Zetas claim on April 25, 2009 that the virus was engineered was later supported by a virologist in any article dated May 13, 2009.

Swine Flu May Be Human Error; WHO Investigates Claim (Update1)

May 13, 2009

<http://www.bloomberg.com/apps/news?pid=20601087&sid=afrdATVXPEAk&refer=worldwide>

The World Health Organization is investigating a claim by an Australian researcher that the swine flu virus circling the globe may have been created as a result of human error. Adrian Gibbs, 75, who collaborated on research that led to the development of Roche Holding AG's Tamiflu drug, said in an interview that he intends to publish a report suggesting the new strain may have accidentally evolved in eggs scientists use to grow viruses and drugmakers use to make vaccines.

Gibbs said he came to his conclusion as part of an effort to trace the virus's origins by analyzing its genetic blueprint. Gibbs wrote or co-authored more than 250 scientific publications on viruses during his 39-year career at the Australian National University in Canberra, according to biographical information on the university's Web site. Gibbs said his analysis supports research by scientists including Richard Webby, a virologist at St. Jude Children's Research Hospital in Memphis, who found the new strain is the product of two distinct lineages of influenza that have circulated among swine in North America and Europe for more than a decade. In addition, Gibbs said his research found the rate of genetic mutation in the new virus was about three times faster than that of the most closely related viruses found in pigs, suggesting it evolved outside of swine.



Troubled Times



Syria Strike

On Nov 3, 2007, the Zetas stated that Israel expected to get a nuclear device from the attempted theft from [Minot and Barksdale Air Force Bases](#). This device would then be used to start a conflagration in the Middle East

That the attempted theft from Minot Air Force Base occurred on September 5, 2007 and the Israeli raid occurred the very next day is not coincidence. Israel expected to drop a nuke or two on Syria to bolster their claim that Syria was developing nuclear material. Radiation from the US nukes would thus be claimed to be radiation emanating from Syrian nuclear development.

ZetaTalk [GodlikeProductionLive](#), written Nov 3, 2007

On Feb 11, 2008 the [New Yorker Magazine](#) published an article by Seymour Hersh, where he confirmed that Israel expected to be able to claim that they had bombed a nuclear installation in Syria.

A Strike in the Dark. What did Israel bomb in Syria?

February 11, 2008

http://www.newyorker.com/reporting/2008/02/11/080211fa_fact_hersh/?printable=true

Sometime after midnight on September 6, 2007, at least four low-flying Israeli Air Force fighters crossed into Syrian airspace and carried out a secret bombing mission on the banks of the Euphrates River, about ninety miles north of the Iraq border. Despite official silence in Tel Aviv (and in Washington), in the days after the bombing the American and European media were flooded with reports, primarily based on information from anonymous government sources, claiming that Israel had destroyed a nascent nuclear reactor that was secretly being assembled in Syria, with the help of North Korea. ... There is evidence that the preëemptive raid on Syria was also meant as a warning about—and a model for—a preëemptive attack on Iran. When I visited Israel this winter, Iran was the overriding concern among political and defense officials I spoke to—not Syria. There was palpable anger toward Washington, in the wake of a National Intelligence Estimate that concluded, on behalf of the American intelligence community, that Iran is not now constructing a nuclear weapon. Many in Israel view Iran's nuclear ambitions as an existential threat; they believe that military action against Iran may be inevitable, and worry that America may not be there when needed.



Troubled Times



Tornadoes

On [Sep 15, 1999](#) ZetaTalk stated that tornadoes would start to appear in places not used to tornadoes.

Massive tornadoes such as recently tore through Oklahoma will not go away, but will be on the increase and will occur in places that do not experience such tornadoes.

ZetaTalk: [Next 3 1/2 Years](#), written Sep 15, 1999

By Aug 24, 2006, the fact that Tornado Alley in the US had moved several states to the North was apparent. By the 2007 season, tornado blitzes had moved up into Manitoba. In 2009 a freak tornado struck Argentina, a region not previously experiencing tornadoes.

Signs of the Times #1634

[Aug 24, 2006] The biggest of the twisters was up to 1/2 mile across and was on the ground for 8 to 10 miles. Many structures were reportedly flattened to the foundation. Here's a pic of the 1/2 mile wide one. [and from another] Earlier in the day, the story the hail up to 6" thick. Strong updrafts which keep such massive hail aloft is exactly the conditions that fostered the tornadic activity later. Baseball sized hail. Bigger than baseballs with numerous reports of small craters being left in the ground. [and from another] Forecasters issue tornado warning in New York [Aug 25] The possibility is very real, according to weather forecasters, who've issued a tornado warning this morning for parts of New York City and nearby New Jersey. National Weather Service radar indicated a severe thunderstorm that's capable of producing a tornado near Ridgefield, New Jersey. [Note: Zetas RIGHT Again! Tornado alley has moved several states North.]



Illinois Sets Tornado Record

Dec 15, 2006, 06:10

A record 126 tornadoes spun through Illinois in 2006, breaking a state record set three years ago and dwarfing the 19 tornadoes that hit the Land of Lincoln last year. But the National Weather Service isn't ready to close the books just yet.

Via Email: *Manitoba had tornadoes this week. It's seemed we are beginning to see what's happening into US, migrating to North. People there, says they never seen something like this.*

More Tornadoes Hit Southern Manitoba

June 24, 2007

<http://www.cbc.ca/canada/story/2007/06/24/manitoba-tornadoes.html>

Environment Canada is looking into reports that more tornadoes swept through southern Manitoba, a day after fierce twisters caused heavy damage in the town of Elie, west of Winnipeg. Twisters were spotted Saturday evening near Pipestone, Minto, the Canupawakpa First Nation and an area between Hartney and Deloraine. The twister that lifted four sturdy homes off their foundations was an F-4 on the Fujita scale - F-4 and F-5 being the most powerful. It was likely churning at between about 330 and 420 km/h.

Freak 'tornado' kills 16 in Argentina, Brazil

Sept 8, 2009

http://www.terraily.com/reports/Freak_tornado_kills_16_in_Argentina_Brazil_999.html

A violent storm described as a freak "tornado" shredded hundreds of houses and killed at least 16 people in the southern part of South America. Northern Argentina and southern Brazil, and the small countries of Uruguay and Paraguay wedged between them, were hit by a fierce atmospheric mass packing rain, hail and winds over 120 kilometers (70 miles) per hour. Witnesses and local media described the storm as a tornado.

Argentina Tornado Kills 10, Injures About 50

September 8, 2009

<http://www.bloomberg.com/apps/news?pid=20601086&sid=aVN6fuk38Io>

The tornado, which destroyed houses and knocked over trees, touched ground last night in San Pedro, a city on the border with Brazil, 240 kilometers (150 miles) northeast of Posadas, the capital of Misiones.



Troubled Times



Triangular UFO

In 1995, ZetaTalk stated that [Triangular UFO](#) were in fact human planes designed to be confused with UFOs and thus used for disinformation to assert that humans, not aliens, were responsible for UFO activity if a panic started. During the increase of true [UFO Sightings](#) in 2004, there was a concomitant increase in triangular stealth plane sightings. And on Apr 9, 2005 the words '*EMERGENCY RELEASE and RESCUE*' were sighted on the bottom as it floated overhead.

Triangular UFO are being seen worldwide at this time, to build a debunking case against all the mass sightings also occurring worldwide, in case this debunking should be deemed necessary to stop a panic over the alien presence. To prepare for such a debunking, these stealth planes are sent forth to coincide either with a sighting or slightly after.

ZetaTalk: [Triangular UFO](#)

Close encounters with silent ultrasonic Flying Triangles in the [Indian side of Himalayas?](#)

Nov 25, 2004

According to recent publications America has witnessed silent high speed triangular space crafts of the size of Foot Ball fields in the sky that could travel silently. Definitely these are frictionless anti-gravity propelled flying machines that are UFOs. The aircrafts are said to be either extra-terrestrial or secret advanced US Air Force planes. ... Are these extra terrestrial UFOs or spy machines of some unknown country. The area is sensitive and it is possible that some countries are watching this area. Also it is possible that the extra-terrestrials are watching the nuke installations of India and China also.

Is Contact Under Way in [India?](#)

Nov 3, 2004

'Persistent stories out of India indicate that something extraordinary is happening there involving UFOs. Since October 10, everyone from members of the Indian Military to young children have reported seeing multiple UFOs of all shapes and sizes near the high altitude glaciers in the Tarai region of India, about 40 kilometers (25 miles) from the Chinese border.'

English words identified on black triangular craft

[NUFORC](#), Apr 9, 2005

On 04-09-2005 I saw what I believe to be a UFO in Comanche County Texas at 9:12 local time. I offer some unique observations.

That evening, I was walking back to my motor home after wildboar hunting in an unpopulated area that I lease for hunting. The sky was clear; wind calm and the sun had just set. The sky was growing darker and darker blue straight above and stars were beginning to show. The sky was becoming black in the east. The setting sun was still keeping the western horizon illuminated and indirect lighting from the west made it possible to see my way without a flashlight.

I had my .243 Win. Remington 700 varmint rifle of which I am a quite an accomplished shooter. It is considered a "high-powered" rifle. I do quite a bit of bench rest competitive shooting with it as well as hunting. The rifle is set up with a high-tech "Leupold" optical sight, (scope) which is extremely accurate and highly specialized for great light gathering ability and performs best in low light conditions. It is not what is called a "night vision" sight. The scope magnifies the target image with

great sharpness and definition and the magnification is adjustable from 4.5 to 14 times that of the natural image.

Upon my return to the motor home, I was tired after a long walk. I had carried quite a bit of equipment with me. I sat on a chair, took my eyeglasses off and toweled my face as it is already becoming hot in Texas. While I rested, without my glasses on, I noticed three very "unfocused" lights to my south and these lights were moving toward me. Immediately I put my glasses back on and saw what I believe was a UFO. (SEE ATTACHED ANIMATIONS) (a) Is the appearance of the vehicle without my glasses on and (b) is the view I had with my glasses on.) (I drew the images on my pc) The object approached from the south-southwest and while moving north-north east, passed almost directly overhead making no sound whatsoever. I estimate its altitude to be somewhere about 800 feet and its airspeed speed approximately 30 mph. It "floated" and did not fly as it obviously had insufficient airspeed to fly. (I am a Physicist & an FAA Licensed Pilot) While the sky was almost entirely black behind it, I could clearly see its underside as it was illuminated from the fading sunlight to the west. I estimate that the machine was about 60 feet wide and 80 feet long and 10 feet thick at the rear. Under its belly, there was a straight line going from its leading tip toward the center of the aft edge of the fuselage, which was perpendicular to its travel. This straight edge clearly showed its shape to be three-dimensional. The straight line showed that its belly was V-shaped, much like the hull of a speedboat. It was similar to the space shuttle as when viewed from in front and below the shuttle.

This machine was directly over me and I was alone in the middle of nowhere, therefore, I felt quite "uneasy." It made no threatening moves whatsoever, but I aimed my rifle at it and through the riflescope, which was set on 8.5 power, I could clearly see surface detail in explicit detail. The machine's surface detail appeared to be covered with well-fitted tiles, much like the ceramic tiles used on the United States Space Shuttle. Then in the fading light, I noticed a distinct marking.

This marking was absolutely shocking, as I could actually read it! It was white print outlined in black on a red arrow pointing toward a rectangle of sorts. The arrow pointed at a something rectangular that I cannot define, but I clearly could read these three words, "EMERGENCY RELEASE and RESCUE." In the same place were other words that appeared too fuzzy to read. I suspect that these words were "PULL FOR..." Instantly I realized that this was a military machine and no "flying saucer." I felt much better as I knew that these were surface details that were intended to help rescue people access and then be able to remove the pilots on board in the event of a crash.

I kept the crosshairs on the center of the aircraft as it disappeared into the darkness but as I realized it was "one of ours" and it was not a threat to my own personal safety (I think) I put the rifle safety back on. I can see however that others may have "defensively" shot at it - and that may have resulted in a crash of the vehicle.

I am somewhat "pissed off" at the military as while this area is directly under the Ft. Hood, Texas MOPA and practice flights are flown daily, really - they should not be taking chances like this where someone on the ground could actually be shooting the damned things down! I am sure that the military pilots (if it even had a crew...) were aware of my presence but they NEVER expected possible "offensive action" to be taken against them on this low level flight. The last thing I would have ever have wanted would have taken a "defensive" shot and then find American military pilots onboard in the wreckage.



Troubled Times



Troops Home

Signs of the Times #1043

Bush to cut forces in Europe, Asia [Aug 14] <http://www.usatoday.com/news/washington/2004-08-14> 'President Bush has decided to bring home tens of thousands of U.S. troops from posts around the world — most of them in Europe and Asia — plus 100,000 of their family members and support personnel, U.S. officials said Saturday. As part of the largest troop realignment in years, Bush will shift about 70,000 uniformed military personnel, most of them currently in Europe. A significant proportion will come home, though it was not clear when.'

[and from another source]

<http://www.globalsecurity.org/military/ops/> As of early May 2004, there are some 250,000 soldiers, sailors, airmen, Marines, and Coast Guardsmen deployed in support of combat, peacekeeping, and deterrence operations. This figure does not include those forces normally present in Germany, Italy, the United Kingdom or Japan. If one were to include these forces the number of deployed troops worldwide would be around 350,000.

[and from another source]

ZetaTalk: [Greater Need](#), written Oct 11, 2003 The war games discussed during the NATO exercises included disasters equivalent to those we have predicted for the pole shift, immense devastation sparing none. In the event that such a scenario ensues, increasing volcanic eruption, quake torn roads and crumbling cities, mass populations homeless and roving the countryside, how should treaties installing the US Military in bases around the world be viewed? In the event of such earth changes, troops would be brought home, under stealth and with little fanfare, to the respective homelands, leaving at most a skeleton crew at the bases. [Note: Zetas RIGHT Again!]

U.S. Military Works to get Troops Home Faster from Iraq

November 24, 2011

http://www.cnn.com/2011/11/23/world/meast/kuwait-us-troops/index.html?hpt=hp_t3

The U.S. military is ordering that soldiers crossing from Iraq into Kuwait be returned home at a faster rate, a move that comes as commanders work to break up a bottleneck of troops who have been pouring across the border ahead of a year-end deadline to withdraw. Of the approximate 11,000 troops in Iraq, down from the 50,000 three months earlier, only about 150 will remain after the deadline to assist in arms sales.

Obama: the US Can No Longer Fight the World's Battles

January 6, 2012

<http://www.independent.co.uk/news/world/americas/obama-the-us-can-no-longer-fight>

The mighty American military machine that has for so long secured the country's status as the world's only superpower will have to be drastically reduced, Barack Obama warned yesterday as he set out a radical but more modest new set of priorities for the Pentagon over the next decade. Instead, the US military will lose up to half a million troops.



Troubled Times



Tunguska

In February, 1996 ZetaTalk stated that [Tunguska](#) was due to methane released during an earthquake; articles and discussion with Russian scientists in March 1997 showed the [Tectonic Explanation](#) more accurate, backed by Iridium Concentration and Radiocarbon data, and Andrei Yu Ol'khovator and the *BBC* argue that with [Methane Evidence](#). On July 21, 2001 *The Times* of London reported that German scientists had concluded a [Gas Explosion](#), and by Sep 2, 2002 the [Russians Agreed](#).

July 10, 1998

A couple days ago I have returned from Tunguska (the conference and the epicenter). A success of 'endogenists' was larger than I anticipated. Despite we were a minority, we advanced, and 'meteoritists' retreated a little. Anyway, finishing the conference, the informal leader of the Tunguska research - **Nikolai Vasilyev had to say that unexpectedly an idea that the Tunguska was terrestrial origin is coming back, based on another idea**. I think since that time 'meteoritists' can't ignore it anymore. But, of course, it is just a beginning. Possibly one more 'dark cloud' for 'meteoritists' is appearing (possible finding of **another large forest dated probably 1908 with very high iridium concentration**). If future research will prove it, it will be a devastating strike on 'meteorite Tunguska'.

Poka!
Andrei

Yonenobu, H. & Takenaka C. The Tunguska event as recorded in a tree trunk. *Radiocarbon* 40: 367-371 (1998). Basically, they present isotopic evidence that the event was not due to a comet.

[Doug Keenan](#)

In CCNet April 10, 2001, Matthew Genge posted his opinion on presence of extraterrestrial substance in the Tunguska epicenter. Here I'd like to make a couple of remarks.

The isotopic ratio for Tunguska epicenter's REE measured in the place of the most REE enrichment is the terrestrial one. Regarding C-14, its data is rather controversial, but the latest measurements seem to show no significant deviations against background. And is it plausible to propose that over the epicenter the extraterrestrial substance was dispersed into fine microparticles during the powerful Tunguska explosion and flew away, explaining why there was no fall out? The latest published calculations of the hypothetical Tunguska spacebody's explosion show that a plasma column of the remnants was to strike the ground. So this scenario (99.999...% of the substance flew accurately away from the epicenter!...) looks very unlikely.

But the problem is even much more deep. Where is enormous quantity of extraterrestrial substance, which the hypothetical Tunguska body was to loose before its explosion? Indeed, according to practically all calculations, the hypothetical Tunguska spacebody lost a significant (probably even dominated) portion of its mass before it reached the explosion altitude of 5-8 km. In other words, at least, a hundred thousands tons of extraterrestrial substance (from large fragments to dust) must be deposited along the lower part of Tunguska spacebody trajectory. Despite many years of careful search nothing was discovered... By the way, a couple years ago application of just one of the many Tunguska substance search's methods allowed easily find small fragments of a meteorite (with initial mass of several tons, probably), which is

integrated over another place in Siberia in 1904...

But the substance problem is just one of many other unresolved Tunguska mysteries. Here I can just repeat words of recently deceased leader of Tunguska research, academician Vasil'ev that we don't know what Tunguska was....

Sincerely,
Andrei Ol'khovatov
Moscow, Russia
olkhovatov@mtu-net.ru



Troubled Times



TWA800

On July 15, 1996 ZetaTalk stated that the [TWA800](#) crash was caused by a missile fired by parties wanting to institute Marshall Law. By August 15, 2000 those hundred of citizens who observed this, and were being ignored, took out a full page ad in the *Washington Times*.

We Saw TWA 800 Shot Down By Missiles

Sightings.com, August 15, 2000

The *Washington Times* carried a full page ad from the TWA 800 Eyewitness Alliance demanding that they be heard. The ad claims that the FBI and NTSB have lied to the American public and that hundreds of people witnessed a missile shoot down Flight 800. It concludes: "We, the eyewitnesses know that missiles were involved. We don't know who launched them, but we know that for some reason our government has lied and tried to discredit all of us to keep that question from being addressed." ... "The claim that our evidence is worthless is false and we want to know who is behind it. Hundreds of us *saw* what happened. The FBI, the CIA and the NTSB must not be allowed to get away with this cover-up by defamation of the eyewitnesses. We appeal to those who know why this is being done to share their information with us. Confidentiality is guaranteed.



Troubled Times



UFO Increase

In 1995, ZetaTalk stated that [Sightings](#) would be on the increase, including mass sightings. Many occurred in 2003, and by 2004, the increase was at an astonishing level, and increasingly reported in the media. On January 26, 2007 a [mass sighting by United Airlines](#) workers in Chicago hit the news, and on February 7, 2007 a [repeat of the 1997 Phoenix Lights](#) occurred. In 2008 such stories began hitting major media. CNN, MSNBC, and even the conservative Fox News covered a massive mothership sighted overhead in Texas and a New Year's Day UFO sighting in San Diego.

Dozens in Texas Town Report Seeing UFO

January 14, 2008

<http://www.msnbc.msn.com/id/22656172/?gt1=10755>

In this farming community where nightfall usually brings clear, starry skies, residents are abuzz over reported sightings of what many believe is a UFO. Several dozen people - including a pilot, county constable and business owners - insist they have seen a large silent object with bright lights flying low and fast. Some reported seeing fighter jets chasing it. "People wonder what in the world it is because this is the Bible Belt, and everyone is afraid it's the end of times," said Steve Allen, a freight company owner and pilot who said the object he saw last week was a mile long and half a mile wide. "It was positively, absolutely nothing from these parts." While federal officials insist there's a logical explanation, locals swear that it was larger, quieter, faster and lower to the ground than an airplane. They also said the object's lights changed configuration, unlike those of a plane. People in several towns who reported seeing it over several weeks have offered similar descriptions of the object.

Could the UFO in the San Diego Skies Be Sky Lanterns?

January 1, 2008

Possible explanations flooded into FOX6 after we aired our first report, from top secret military drones to rockets. Several viewers suggested the lights were Chinese flying lanterns. Basically, miniature hot-air balloons fueled by a candle or other flame. They are customarily released at the New Year for good luck.

Signs of the Times #1467

[Jun 24, 2004] 'A massive UFO sighting took place on Friday June 24, 2005 in Xalapa, Mexico. This stunning event was witnessed by Xalapa's governor, Fidel Herrera Beltran, members of his staff, many officers of the Xalapa police department, newspapers and television reporters and many people gathered at Casa Veracruz for an official ceremony for the delivery of new police patrol cars to the police department. Just after governor Fidel Herrera Beltran finished a speech inaugurating the new units, his attention was called by his officials signaling to the sky where a strange spectacle was appearing. A spectacular UFO fleet of at least 14 unknown flying objects shocked the entire gathering at casa Veracruz who, pointing to the sky, screamed "OVNIs OVNIS!!" in a tremendous state of excitement. The police officers were also signaling to the sky wondering what these unknown flying objects could be. Governor Beltran took the microphone and said jokingly: "It seems the martians have arrived!!" The enigmatic flying objects remained almost static in the sky in



formation describing a triangle pattern in perfect alignment for almost 30 minutes. On Friday night, TV Azteca presented the report with videos on their national tv newscast giving the account of the unprecedented incident. On Saturday June 25 the Diario de Xalapa newspaper as well as others published on main headlines.' [and from another] In step with the increased pace of the Awakening, sightings will become mass sightings, affecting the whole populace in crowded or urban areas. The media will suppress the news, but they cannot prevent neighbors from chatting with one another or gossip on the Internet. The word gets out. **ZetaTalk: Mass Sightings**, written July 16, 1996 [and from another] Where sightings are on the increase, just where and when they occur depends on many factors, only one of which is the desire of the local inhabitants to experience one. Some sightings such as the dramatic Mexico City sighting seen by thousands and video taped by hundreds, hasten the Awakening by being broadcast and highly authentic. **ZetaTalk: Sighting to Increase**, written Jul 15, 1995 [Note: this dramatic Mexico sighting, witnessed by the Governor, has been completely suppressed in the US media. Zetas RIGHT Again!]

Signs of the Times #1196

Little Green Men Adore Ontario Town [Oct 20, 2003] 'The small town of Moonbeam, Ont., may want to change its name to Roswell North as it gears up a tourism campaign to become the UFO capital of Canada. Local lore has it the town was named Moonbeam after several residents reported seeing strange, unexplained lights in the sky as early as the 1900s.' [and from another source] UFO Sightings Worldwide are High [Oct 22]



<http://www.unknowncountry.com/> 'On October 19, the Cassini spacecraft returned a very strange image indeed from the region of that very planet, that reveals what appears to be a cylindrical object in space between Cassini and Saturn.' [and from another source] Intense UFO Activity in Midwest, Canada [Oct 2] <http://www.unknowncountry.com/> 'Strange beams of light are being observed in the midwest and Canada. The National Weather Service theorized that the lights were moonbeams shining through the clouds. According to the National Weather Service, it was clear at the time of the incident.' [and from another source] UFO Conference To Present Startling New Evidence [Oct 20] <http://www.unknowncountry.com/> 'Among the guests at this years conference is Air Force First Lt. Robert Salas, a former missile launch officer responsible for nuclear warheads stored at Malmstrom AFB. He describes an incident in 1967 in which a glowing, oval-shaped object hovered over the base and disabled approximately 20 nuclear warheads housed in an underground bunker.'

Signs of the Times #1131

Northern Poland hit by mysterious record-breaking earthquake [Sep 21, 2003] <http://www.wbj.pl/?command=article&id=24013> 'The quake exceeded 5 on the 10 point Richter scale, which makes it the strongest ever recorded in the region. Scientists are at a loss to explain possible reasons for the earthquake as the region is not considered to be seismic. [and from another source] Strong earthquake shakes the Oslo region [Sep 21] 'Two unusually strong earthquakes shook the Oslo region Tuesday afternoon. The last quake, which measured 5 on the Richter Scale, made many large buildings sway and rattle glassware in private homes. Experts at the NORSAR earthquake observatory north of Oslo say it is very unusual that an earthquake that far away was registered at such strength in the Oslo region. It is also unusual that two such strong quakes occur within two-and-a-half hours.' [and from another source] These quakes were widely reported in the Finnish media because earthquakes hardly ever happen at this part of the globe. [and from another source] It is unique for our region. Many scientists are in shock. In discussion forum in Internet (f.ex. www.Delfi.lv) also were mentioned link to www.zetatalk.com

Signs of the Times #886

UFO Puts Portugal on Military Alert [Jun 4, 2003] <http://www.unknowncountry.com/news/?id=3845> 'The Portuguese press has announced that the airforce is on alert since dozens of people saw a UFO on Tuesday. The Portuguese UFO is described as a silent, luminous object, giving off white smoke. Paulo Lagarto, of the national air traffic control authority, Navegacao Aerea de Portugal (NAV), says, "The control tower in Oporto (north) detected a flying object which had been observed 25 minutes earlier in Montijo and Beja (south)." Geologist José Fernando Monteiro says the UFO wasn't a meteorite, since a meteorite would have moved much faster and made a lot of noise. The European Space Agency says it wasn't a satellite.' [and for another country] 'In South Devon, in the U.K., the switchboard at the Herald Express was swamped with calls from people who saw a

cigar- shaped UFO. Retired British Aerospace engineer Roy Dutton tracked the object for 20 minutes through a high-powered telescope. There were no features whatsoever. It was jet black. It was just like a great big party balloon. It was flying at about 10,000 ft and it was very big, at least the size of a Jumbo jet.' [and from another source] Multicolored UFO Photographed Over Hugo, OK [Jun 4] <http://www.rense.com/general53/mutli.htm> [Note: the trend for more mass sightings, more camera and video recordings, continues. The Awakening the Zetas stated would occur.]



Troubled Times



UK Foot and Mouth

On [Aug 11, 2007](#) the Zetas stated that the recent Foot and Mouth outbreak in the UK had been caused by an individual in the UK labs, who due to a moment of insanity had released the virus.

The outbreak has been traced to a lab, germs released. When this type of incident occurs, everyone thinks of massive conspiracy, a desire in the establishment to have the populace starve, or perhaps a rival country trying to punish Britain or some form of terrorism. What is not considered is that individual people go quietly insane, seeing the Earth changes and the way these are ignored by the media and their leaders in the government. Britain has just dealt with record floods, and this after tornadoes and record storms have been assaulting the islands increasingly over the past couple years. No end in sight! And no honesty from the government about the cause and where this is leading. The public does not believe this is Global Warming, as it is not logical. Train derailments are not caused by Global Warming, for instance. Thus many go quietly insane, and take steps that are harmful to themselves or others. Anger and despair is at the base of such actions. An individual released the germ, and this individual is still in a position to repeat the act.

ZetaTalk: [GodlikeProduction Live Chat](#), written Aug 11, 2007

On Sep 8, 2007, reports confirmed this.

Government lab blamed for foot-and-mouth

September 8, 2007

<http://news.independent.co.uk/health/article2941846.ece>

Blunders at a government-run laboratory have been blamed for last month's outbreak of foot-and-mouth disease, which cost British farmers more than £30m. A combination of leaking pipes, rows over who should pay for repairs, poor checks on vehicles leaving the site and unexpected flooding was the most likely cause of the virus escaping, two official inquiries concluded in reports published yesterday. Last night, farmers' leaders threatened legal action against the Department for Environment, Food and Rural Affairs over the mistakes. Peter Kendall, of the National Farmers' Union, said he found it indefensible that standards were so lax, given that "those concerned were handling some of the most dangerous animal viruses on the planet".



Troubled Times



Ummo

In June, 1997 ZetaTalk stated that the tale of the [Ummo](#) contact was not a true tale. *Strange Magazine* agrees!

The [UMMO Experience](#): Are you experienced?

By Scott Corrales, *STRANGEmagazineWEB*

UMMO - a name to bewilder researchers with, yet one that delights the true believers. The full panoply of Ummite madness was never unleashed upon the United States, nor indeed the English-speaking world. The putative race of space-farers from the star Wolf 424 was partial to France and Spain, and its network of informants destined the bulk of its reports to recipients in these countries. One researcher has gone as far as to describe the whole UMMO experience as "Star Trek made flesh," a phrase which elegantly summarizes the legacy of millions of words left to us by visitors from another star system. Before the reader gets too excited, it is necessary to observe that like Star Trek, UMMO was merely a work of fiction (a much kinder description than merely branding it a hoax). The incredible mythos spun out by Spanish psychologist Jose Luis Jordan Pena had consequences that went far beyond any hoaxer's expectations.



Troubled Times



Volcano Uptick

On the Jan 12, 2000 *Sightings* radio show, ZetaTalk predicted in the [Predictions for 2000](#) that the volcano upheaval, such as the undersea upheaval causing the El Nino, will continue and increase. Starting in August, 2000 this was a clear trend.

Daily Dose of Eruptions, Earthquakes gives Japan the Seismic Jitters

By Chisaki Watanbe, *Associated Press*, August 10, 2000

Will Japan survive the summer? For more than a month, earthquake bulletins have flashed daily across TV screens, sometimes coming every half hour or so. Several quakes have been so strong that the national broadcaster, NHK, has been forced to throw out normal programming and go into its emergency warning mode. And then there are the volcanoes - three of which have belched up large eruptions in the past four months. Although Japan is one of the world's most earthquake- and eruption-prone countries, a flurry of activity lately has been extraordinary - and has become a serious fray on the nation's nerves. Japan's jitters continued Thursday, as a volcano on an island off Tokyo erupted for the fourth time in a month, sending black ash into the sky and forcing the evacuation of more than 600 residents. The eruption of Mount Oyama on Miyakejima, a small resort island with a population of 4,000, was its biggest since 1990. It was not unexpected, either.

Over the past two months, seismographs on Miyake and other islands in the Izu chain have recorded tens of thousands of earthquakes believed to be the result of shifts in huge underground pools of magma. Nearly 12,000 of the quakes have been strong enough to be felt, and some have even swayed buildings in Tokyo and neighboring Yokohama, 190 kilometers (120 miles) away. All of the stronger quakes automatically send Japan's emergency warning system into motion, resulting in news flashes and cautions of possible quake-caused tidal waves. Scientists believe the activity in Izu will continue, but admit they are having trouble predicting just what to expect.

Volcano Eruption Data

Southwest Volcano Research Centre, Apache Junction, Arizona USA

Compiled by R.B. Trombley, Ph. D, Principal Research Volcanologist

Number of Volcanoes Erupted in Past 12 years (data does not include submarine type volcanoes)

1989=46, 1990=32, 1991=40, 1992=50,
1993=44, 1994=44, 1995=45, 1996=35,
1997=33, 1998=36, 1999=48, 2000=51 (so far*)

*Last count made on October 9, 2000



Troubled Times



Vote Fraud

On [Sep 23, 2006](#) and again on [Oct 28, 2006](#), ZetaTalk predicted that no vote fraud would occur during the 2006 elections because the Puppet Master was determined to counter this. The Bush administration obviously expected vote fraud to succeed, as despite polls showing that Republicans were turning Democrat, and the vast majority of likely voters determined to vote Democrat, they were adamant that they were going to retain control of both houses of Congress.

Rove has his minions out, of course, with more opportunities as there are more electronic voting stations. The Puppet Master is clearly aware of his tactics, also, and that the stolen identities are going to allow voting tabulators to be altered, by threats of identity theft or just mocking identity for entry, more likely. This has been the plan, and ongoing, for some time, so the Puppet Master is aware of and on top of this scheme. We feel the outcome of voter fraud will be high, with the likelihood of being countered by the Puppet Master even higher.

ZetaTalk: [GodlikeProduction Live](#), written Sep 23, 2006

The Bush White House is trying to bravely whistle in the dark, re the coming election. They are aware that the Puppet Master is intending to right any wrongs they do re voter fraud, but got away with it in 2004 and Rove has done his best to weave a mess impossible to unravel. However, he does not have ourselves, the Zetas, on his side, and his plans are known by the Puppet Master as soon as conceived. Bush Co has stated they expect to win, had some magazines publish articles to this effect, and are trying to suppress exit polls so the public will buy a fraud if they pull it off.

ZetaTalk: [GodlikeProduction Live](#), written Oct 28, 2001

When the election occurred, the results were stunning. Both the House and Senate fell into Democratic hands, and the results of the election matched the historically correct exit poll and all the polling that had occurred going into the election. For the first time since 2000, election fraud had not occurred! The Zetas then [explained the techniques](#) used!

The exit polls that leaked out in the late afternoon ended up matching the final results almost exactly -- nothing like what happened in those other Bush-era elections. The razor-close races all broke late for the Democrats, unlike Florida in 2000 or Ohio in 2004. And when that happened, there were no major charges of fraud, no "Brooks Brothers Riot," and no demand for a recount.



Troubled Times



Wandering Planets

In early 1995, in one of the first ZetaTalk writeups, ZetaTalk described the 12th Planet as a [Wandering Planet](#) spending most of its time hovering between two suns. In the March-April of 2002, the *American Scientist* reported that scientists had recently been astonished to find such wandering planets.

Why does the 12th Planet swing so far away from your Solar System, and why bother to return, having done so? There is a balance between the attraction of your Sun and another, unseen by you but nevertheless present and in force. The 12th Planet travels interminably between these two forces, not able to settle on an orbit around just one because of the momentum and path it originally took. It is caught. The path of the 12th Planet is such that it spends most of its life out in dark space, slowly moving from one giant tug to another.

ZetaTalk™

Free-Floating Planets and Stellar Clusters

American Scientist, Vol 90, Mar-Apr, 2002

For centuries a planet has been defined as an object that orbits a star. This notion was recently upended when several groups of astronomers reported the discovery of planet-sized objects wandering through space on their own, with no parent star in sight. The discovery of these objects within dense stellar clusters has unsettled the astronomical community and raised questions about the nature of planets and how they might form. Jarrod R. Hurley and Michael M. Shara review these recent discoveries and consider how the dynamic interactions between the stars in a dense stellar cluster may free planets from the gravitational bondage of their parent stars. Jarrod Hurley is a postdoctoral investigator at the American Museum of Natural History. His research involves studying the evolution of star clusters through computer simulations. His models have helped to explain the formation of blue-straggler stars in the open cluster M67, and he has recently begun to investigate the behavior of planetary systems in star clusters. Michael Shara is curator and chair of the Department of Astrophysics at the American Museum of Natural History. His research interests include the structure and evolution of novae and supernovae, collisions between stars, and the nature of stellar populations in star clusters and galaxies.



Troubled Times



Warm Winters

On the Jan 12, 2000 *Sightings* radio show, ZetaTalk predicted in the [Predictions for 2000](#) that winters warm enough to confuse crops would be experienced as part of the the increasing weather irregularities. By 2001, such reports began.

This from The Times of London:

- Many birds are laying eggs two to three weeks early. Some species have stopped migrating, and others are leaving later than normal.
- Meteorologists have declared this "the strangest autumn in history."
- Scientists believe that in some areas this year's winter may be forgotten altogether, with trees such as oaks keeping their leaves through to spring.
- In Ireland, bluebells are now flowering two weeks earlier than a decade ago.
- Hedgehogs are hibernating for just a few weeks instead of months.
- In Scotland, the number of annual skiers has dropped by almost 50% over the last decade.
- Trees are producing new leaves almost a month earlier than in 1970.

Offered by [Mike](#).



Troubled Times



Monstrous Waves

On Jun 15, 1997 the Zetas predicted monstrous ocean waves, swamping ships.

The increasing activity in the core of the Earth will eventually manifest itself in ways that will become difficult to explain. Erratic weather will continue to be explained away as global warming, the result of the atmosphere heating up to cause swirls in the upper atmosphere. VIOLENT WAVE ACTION THAT SWAMPS LARGE OCEAN GOING SHIPS and the booms from clapping air caused by under water plate movements will be lumped in with earthquake activity. The increasing incidence of earthquakes will be explained as periodic cycles, with ancient legends to support the cycle theory, or improved reporting mechanisms, implying that quakes were not recording in the past. The dramatic flashes of light caused by methane gas flares as the gas is released from trapped pockets under moving plates will be explained away as lightning. The increasing magnetic diffusion will be blamed on sun spot activity, as neither is readily measurable to the average man so the story will not often be challenged.

ZetaTalk: [Manifest Clues](#), written Jun 15, 1997

After the year 2000 such stories were increasingly in the news, but by Mar 31, 2006 it was reported that waves of a size breaking all records had been recorded. These waves were not considered freak waves, a rare single wave, but were sustained over a 12 hour period so were rather wave action. This was followed by reports on Sep 22, 2006 from the other side of the globe, Australia.

Vessel Measures Record Ocean Swells

March 31, 2006

A British research team has observed some of the biggest sea swells ever measured. A whole series of giant waves hammered into their ship that were so big, according to computer models used to set safety standards for ships and oil rigs, they shouldn't even exist.

When the RRS Discovery set out to sea, the crew was expecting stormy weather. Meteorologists had predicted a violent storm, and the scientists -- a team from Britain's National Oceanography Center -- wanted to observe it from up close. What they ended up experiencing went far beyond anything they could have imagined -- and could have cost them their lives.

Near the island of Rockall, 250 kilometers (155 miles) west of Scotland, enormous waves came racing toward the vessel. When they checked their measuring instruments later, the scientists discovered that the tallest of these monster waves had hit nearly 30 meters (98 feet) at wind force 9. And it didn't come alone. "We were shaken up these waves for 12 hours," said Naomi Holliday, the leader of the expedition. Entire sets of giant waves hammered the ship.

After the adrenaline levels of the scientists had fallen somewhat, astonishment spread among the crew. The standard computer programs had predicted stormy weather for February 8, 2000, but not such a tempest. Even more astonishing, the giant waves had not appeared individually, but in a group. Previously waves of such size were assumed to only appeared alone.

What Holliday characterized as a "dangerous situation" has turned out to be a spate of luck. The Discovery's crew witnessed the largest waves ever measured by a scientific instrument on the open

sea, according to an article the scientists have only now published in the journal Geophysical Research Letters.

Biggest waves ever measured

With a height of up to 29.1 meters (95 feet) from trough to crest, the single waves are the highest ever measured. In terms of so-called significant wave height, they established a new record, according to the scientists: 18.5 meters (61 feet). Significant wave height is the median height of a wave's upper third. It corresponds roughly to the sea swell that experienced sailors can estimate with the naked eye.

More important than the record, however, is how the waves were born. "They were not caused by very strong winds," Holliday told SPIEGEL ONLINE. The strongest phase of the storm had already been over for a day when the largest water masses hit the RRS Discovery.

The scientists think a so-called resonance effect was responsible for the monstrous waves: waves and wind travelled across the Atlantic at practically the same speed. The storm was able to pump energy into the waves efficiently for a long time, building them up to giant size. According to the article published by Holliday and her team, the rapid increase in wave height at the beginning of the event supports this hypothesis.

Trouble for sailors and shipbuilders?

The new data may spell trouble for sailors and shipbuilders, the British scientists believe. Their research results suggest that giant waves may be much more common than previously believed. "Of course we can't make general claims about all the world's seas on the basis of the specific event we observed," Holliday said. "But computer simulation can do this for us."

According to Holliday, plugging the new data into the standard formulas shows that existing computer simulations are slightly off the mark -- at least as far as the formation of giant waves is concerned. "The waves we observed were not predicted by the computer simulation," Holliday explained. That has implications for the construction of ships and oil rigs. "The safety standards are partly based on the computer simulations."

Why was the difference between simulation and reality not noticed earlier? Because of the relative scarcity of measuring buoys and ships collecting scientific data, according to Holliday: "Direct wave height measurements are extremely rare." Cargo ships tend to avoid powerful storms, and oil rigs are so few and far between they hardly ever encounter giant waves.

For this reason alone, the measurements taken by the British research expedition are "spectacular," confirmed Wolfgang Rosenthal, a marine weather expert at a Geesthacht research institute associated with Germany's GKKS ship-building society. Waves of the sort observed by Holliday's team had already been analyzed theoretically, but the only practical knowledge about them came from vague reports. The new measurements confirm the theories that have been developed. "Nothing like this has ever been documented before," Rosenthal said.

Not freak waves

The significant wave height of 18.5 meters (61 feet) is particularly interesting, according to Rosenthal. "The giant 29 meter (95 feet) waves fit well with this statistically," Rosenthal said. He explains that the giant waves observed at Rockall are not the same as the notorious "freak waves" that appear out of nowhere during relatively mild weather, destroying even large vessels. Only those waves are considered freak waves whose overall height is at least twice their significant wave height. When the significant wave height is in the region of 18.5 meters (61 feet), giant waves

roughly 30 meters (98 feet) tall become possible -- as they did near Rockall in 2000, and as Holliday and her colleagues were able to find out for themselves.

But Rosenthal doubts that the new data will have a significant effect on security standards in shipbuilding. "A single case doesn't render the existing computer simulations obsolete," he said. Nonetheless, questions about the accuracy of computer simulations have been raised for some time with regard to sea swells under extreme weather conditions. Rosenthal explained that this is partly a result of the weak measurements obtained by means of satellite-based radar. "The stronger the wind gets, the weaker and harder to measure the radar signal reflected by the waves," he said.

Holliday -- whose team includes an expert for computer simulations of sea swells -- is convinced her measurements will contribute to an improvement in computer models. "The existing models strongly underestimate maximal wave heights," she said. "The people in charge of simulations are going to have to find out what they're doing wrong."

Wild Weather Produces Record Wave

ABC News Online, Sep 22, 2006

The wild weather that has hit Tasmania this week has also produced one of the biggest waves ever recorded in Australia. The wave was 19.5 metres tall. It was recorded yesterday, 10 kilometres off the state's west coast, near Cape Sorell. Swellnet forecaster Ben Matson says the wave would have had the potential to cause serious damage. This time of year is reasonably active in the southern Ocean and throughout winter we've probably seen five or six swell events where maximum wave heights have reached about 14 or 15 metres at the Cape Sorell Buoy. But this far above and beyond anything that I've seen in 10 years of forecasting.

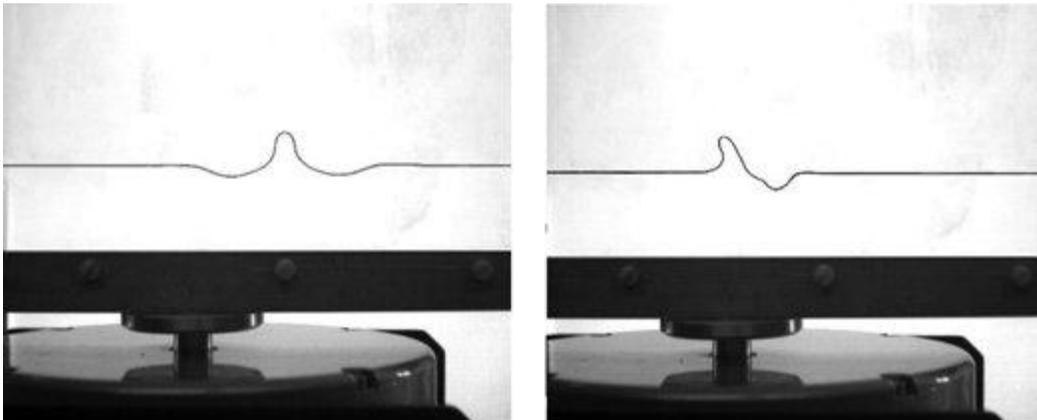
In 2011 the results of a scientific experiment simulating the floor of an ocean showed that plate movement under the ocean could CAUSE rogue waves, and were the likely source of the increase in rogue waves. By merely moving the bottom of the water container up and down, rogue waves were produced on the surface, confirming what the Zetas stated in 1997 when they stated, well before this experiment, that rogue waves would be "caused by under water plate movements".

Scientists Discover Two Never-Before-Seen Kinds of Water Waves

July 19, 2011

<http://www.popsci.com/science/article/2011-07/scientists-discover-two-new-kinds-water-waves-never-seen>

By precisely shaking a shallow container of water, researchers have now observed two new types of waves that have never been observed before in water--and one that has never been observed in any other media either. These new wave architectures may not look like much, but they inform our knowledge about large amplitude waves and their formation in the ocean. That's a good thing to know about, as large-amplitude waves also go by the names "rogue waves" and "tsunamis" in certain contexts.





Troubled Times



Chinese Pyramids

On Oct 15, 1996 ZetaTalk stated that [Chinese Pyramids](#) were built by the same 12th Planet hominoids who erected the Giant Pyramids and other such structures around the world. Works by Hartwig Hausdorf confirm this.

The Chinese Pyramids - An Extraterrestrial Legacy

by Hartwig Hausdorf

According to ancient Chinese legend, over one hundred pyramids discovered in China are the legacy of extraterrestrial visitors. At the turn of the century, two Australian traders happened upon a vast area in the plains of Qin Chuan, Central China. There they discovered over one hundred pyramids. When they asked the custodian of a local monastery about them, they were told that, according to records housed in the monastery, the pyramids were said to be "very old". Since the records were themselves over 5,000 years old, one can only guess at the age of the pyramids themselves. The traders were told that the pyramids belonged to an age when the "old emperors" reigned in China, and that the emperors always stressed the fact that they did not originate on Earth. Rather they were the descendants of the "sons of heaven, who roared down to this planet on their fiery metallic dragons". The traders were told that the pyramids had been built by visitors from outer space.

Forbidden Zones

In March 1994 I visited China myself. I travelled to the 'forbidden zones' surrounding the city of Xian in Central China, Shensi Province, where I found 6 of the legendary pyramids. When I returned in October 1994, I took a video camera with me, and shot around 18 minutes of footage. When watching the footage at home later, checking the zoom sequences, I could see more pyramids in the background. To date, I have counted over 100 pyramids in an area of 2,000 square kilometres! Some of these pyramids are now in quite poor condition, largely due to being plundered by local farmers and residents. The pyramids are generally made of clay and earth, not stone, and some farmers took it upon themselves to take the material for their fields and homesteads. It is a shame, but that's the way it is.

I have had great difficulty in getting permission to continue my investigation of these astonishing artefacts. The Chinese government are very protective of them, and do not allow excavations. The only information I have managed to glean came from a Chinese archaeologist called Professor Xia Nai, who said that any excavations would be the work of the next generation of Chinese scientists. Already the Chinese government have planted fast-growing conifers on the pyramids, so that in twenty years time they will be able to say: "What pyramids? They are just natural hills with trees growing on them". I am left to wonder what it is they are trying to cover up.

The Great White Pyramid

All the pyramids I know of are situated in the Qin Chuan plains, and differ in size from between 25 to 100 metres in height. All except one, that is. To the north, in the valley of Qin Lin, lies what has become known as the Great White Pyramid. It is immense, approximately 300 metres in height (1000 feet)! I would say this is the mother of all Chinese pyramids. Another interesting point about the Great White Pyramid, and perhaps the reason the Chinese government refused me permission to go there, is this. In the immediate vicinity the Chinese government have built a launch pad for their space program, and of course, the area is sealed off to all foreigners. The Chinese are even more paranoid than the Americans, I think!

The Mexico Connection

As you can see from the photographs, the Chinese pyramids are very similar to those found in Mesoamerica (Mexico, Guatemala, etc). When I first discovered the Chinese pyramids I was immediately in mind of other pyramids I had seen in the jungles of the Yucatan. When these mexican pyramids were first discovered, they too were covered with vegetation, and looked identical to the pyramids in the Qin Chuan plains. The resemblance is truly astonishing. Perhaps they were built by the same "sons of heaven"?

At present I am on the trail of another amazing mystery in China. In an area of Central China, not all that far from the Qin Chuan pyramids, I have learned of some people who are supposedly living descendants of alien forefathers. I plan to go there either later this year or next, and if I discover any extraterrestrials hanging out there, I promise I will let you know.

Finally I would like to bring to your attention the work of a prominent author from Vienna, Peter Krassa. He has written two excellent books about alien traces in China, the first published in 1974, the second in 1984. Peter accompanied me to Qin Chuan in March 1994, and co-authored my second book, *Satelitten der Gotter (Satellites of the Gods)*. Unfortunately this book is not yet published in Britain. Previously published in *UFO Reality* issue 3 aug/sept 1996.



Troubled Times

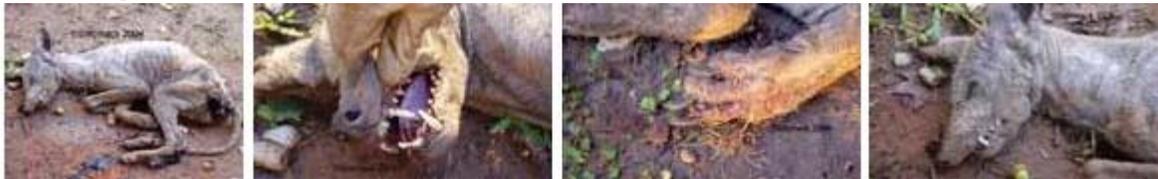


Chupacabras

In May, 1996 ZetaTalk stated that the [Chupacabras](#) were akin to [Dragons](#) and [Vampires](#), brought to earth by aliens in the Service-to-Self orientation to terrify humans, and that the rules of the Council of Worlds was such that harm to a human could only occur if the human in some way gave permission during their terror. They also stated that South America was a [Continent](#) targeted by these aliens, and the Chupacabras have consistently been reported in this area. Subsequent reporting by [UFO Roundup](#) in August, 1997, [Strange Magazine](#), and [UFO Roundup](#) again in May, 2000, and [Associated Press](#) on August 30, 2000 have confirmed these Zeta statements, and capture of Chupa bodies in 2004 proved it.

Signs of the Times #1187

Another Texas Chupacabra? [Oct 14] <http://www.theaustralian.news.com.au/> 'Local animal experts are having a hard time identifying a strange looking animal killed in Angelina County on Friday - an animal that looks eerily similar to the as yet unidentified Elmendorf Beast killed near San Antonio earlier this year. The animal's blue-grey skin is almost hairless and appears to be covered with mange. A closer look at the animal's jaw line reveals a serious overbite and four huge canine teeth, and a long, rat-like tail curls behind the animal's emaciated frame. It had no hair, a severe overbite and its claws were entirely too long for a dog. The animal's front legs were much smaller than its hind legs. WOAI-TV in San Antonio has aired several stories on the so-called "Elmendorf Beast" since a nearby rancher shot and killed one earlier this year. The animal depicted on the station's Web site, at www.woai.com, looks eerily similar to the one discovered in Pollok. The rancher from Elmendorf, located southeast of San Antonio, killed the animal after 35 of his chickens disappeared in one day. The animal was also almost hairless, with blue-grey coloring and four large "fangs." The station reported that tissue from the animal has been sent for DNA testing, and that it will be several more weeks before the tests are completed. Sightings of similar animals have been reported across the country, from California to Maryland.' [and from another source] If leaving anyway, the Service-to-Self, not known for their concern for the environment or having any sense of responsibility, would scarcely scout about to collect all the young their charges might have spawned. Thus they show up, infected and suffering from malnutrition, unidentifiable as a known species on Earth, puzzling those who come upon their remains. [Note: new ZetaTalk: [Chupacabra Remains.](#)]



[Chupacabras](#) Attack More Farms In Chile

From Joseph Trainor-editor, [UFO Roundup](#), May 11, 2000

Last week saw another rash of Chupacabra attacks in Chile. Eyewitnesses also sighted two weird humanoid creatures, said to be Chupacabras, near the city of Concepcion, located 300 kilometers (180 miles) south of Santiago de Chile, the national capital. The new round of Chupacabra incidents began Wednesday, April 12, 2000 in the small town of Tucapel, in Bio Bio province just east of Concepcion. Witnesses reported that "a large bunch of dried brambles were crushed by a strange luminous phenomenon." On Saturday, April 29, 2000, Jose Ismael Pino, 59, a farm worker employed at the Esperance Ranch two kilometers (one mile) east of Huepil, near Tucapel, had a face-to-face meeting with the Chupacabra. Leaving the barn at 8 p.m., Pino explained, "There was a large bull running wild. I was

walking along when I saw something, and I thought that was it. 'Hey, damned bull!' I shouted, and then I saw that it wasn't. It hardly moved. It just stood there, looking at me. It stood about 1.5 meters (four feet) tall, like a big monkey, with long clawed arms, enormous fangs protruding from its mouth, as well as a pair of wings. I was so scared I turned and ran back for the hounds. I set them all loose and let them chase after 'The Bird.' Cachorro (one of the dogs - J.T.) came back with a bloodstained neck."

"Pino's boss, Jorge Venegas, owner of the 75-acre farm, carries a loaded shotgun on his shoulder."

"Venegas, on his part, lets his employees leave early, since they are fearful of walking around at night, and he himself since the night of the luminous phenomena in Tucapel, has slept with his shotgun beside him."

"We don't know what we're dealing with here. I'm not so concerned about the attacks on the animals, but I have two children, 12 years old and 15 years old, and I'm not going to let anything happen to them. In fact, right now I'm going to get a floodlight to see at night, in case something weird shows up,' explained the planter, hefting the shotgun to his right shoulder." Farms in the Huepil-Tucapel area "were affected by the alleged predator, which killed four sheep on one farm and a cow on another." However, not everybody believes that the the Chupacabra is the culprit.



Troubled Times



Clinton's Exit

On February 23, 2008 the Zetas predicted that the party elders and superdelegates would arrange for a "sudden death" of Hillary's campaign at some point.

Hillary, and in particular Bill, will not go quietly, but the drama will occur mostly behind the scenes. As has been noted, most of the superdelegates have not endorsed. Hillary and Bill want to go to the convention and haggle until they get their way - wear the delegates down. They have been doing this behind the scenes already. The Clintons will be threatened with massive public action against them unless they concede. The threat will include having almost all the superdelegates and certainly the major players such as Pelosi and Gore endorse Obama, en masse. This would be a supreme embarrassment to the Clintons, forcing them to crawl forward with a demoralized campaign and facing ridicule in the press. The alternative would be to have Hillary concede.

ZetaTalk Sudden Death, written February 23, 2008

The Zetas explained that the need for a "sudden death" was due to the Clinton's propensity for vengeance on anyone who was perceived to have done them wrong.

What is holding the superdelegates back from frankly endorsing Obama? Fear of Clinton rage, which has shown itself recently when Richardson endorsed Obama and when Speaker of the House Pelosi dared to suggest that the will of the people should prevail. Pelosi was threatened by Clinton's principal backers, who in essence stated that their money should call the shots. The party elders have decided on a path that will limit the Clinton rage. The Clintons are expected to hold to their argument that Hillary wins among Democrats in the big blue states, and insist that Michigan and Florida be allowed to be seated as is from the January illicit primaries. It is then that the boom will be lowered. The party elders, including Pelosi, Al Gore, and Howard Dean are aware of which direction the supposedly undecided superdelegates are leaning. Pelosi, as head of the House, listens to their hand-wringing all the time, and as the chair of the upcoming Denver convention gets phone calls from superdelegates not in Washington DC. She has the counts, and has advised those worried about the Clinton wrath to hold off so they can all endorse as a block. When it is clear that Obama has won more states, won more pledged delegates, and won more of the popular vote, then the superdelegates as a block will put him over the top. This will be sudden death for the Clinton ambitions.

ZetaTalk Clinton Revenge, written April 29, 2008

A sudden surge of super delegates did indeed occur at the end of the primary season, despite the fact that Hillary had amazing victories in West Virginia and Kentucky at the end. The superdelegates came out in droves, putting Obama suddenly 200 or more superdelegates ahead of Hillary.

Clinton Ending Candidacy, Supporting Obama

June 5, 2008

Her path to the nomination inevitable no more, Hillary Rodham Clinton plans to announce she is ending her groundbreaking candidacy and supporting Barack Obama, her rival in a presidential quest for the ages. Clinton prepared to declare Saturday that she is backing the Illinois senator after Democratic congressional colleagues made clear they had no stomach for a protracted intraparty battle once Obama secured the 2,118 delegates necessary to clinch the nomination. A presidential contender who announced 17 months ago that she was "in it to win it," the former first lady plans to

end her quest with a more humble plea for party unity. In truth, she had little choice. Hours after Obama sealed the nomination, Democrats coalesced around his candidacy, sending a strong signal to Clinton that it was time to bow out. The announcement closed an epic five-month nominating battle pitting the first serious female candidate against the most viable black contender ever.

Later, it was admitted that the Clintons were unforgiving in their treatment of anyone judged to be working against them.

Those Loyal to the Clintons take Note of those who were Not

June 11, 2008

<http://www.iht.com/articles/2008/06/11/america/11clinton.php>

Senator Hillary Rodham Clinton was gracious in her full-throated endorsement of Senator Barack Obama. But that does not mean all is forgiven by others in the Clinton universe. As the Obama bandwagon has swelled, so have the lists of people Clinton loyalists regard as some variation of "ingrate," "traitor" or "enemy," according to the associates and campaign officials. These are people who should know better than to ask the former president or first lady for a job recommendation for a son-in-law. While Hillary Clinton has a short list of people who disappointed her, Bill Clinton, who reportedly has an encyclopedic memory of all the people he has helped, employed or appointed over the years, apparently has a far longer one.



Troubled Times



Columbia Shuttle

On Feb 1, 2003 in explanation of the [Columbia Shuttle](#) disaster, the Zetas stated that the shuttle had been taken down by aliens, on instructions from the Council of Worlds.

A decision was made by the Council of Worlds, and the directive carried out by those visitors who carried their concerns to the Council. Those astronauts who go on missions know the dangers, the shuttle having blown up previously due to a faulty O-Ring. Thus, they had made their peace with death, to a one. The message of the disintegrating and finally exploding shuttle was to the Bush Administration, who will not fail to get the message.

ZetaTalk: [Columbia](#), written Feb 1, 2003

NASA announced it was due to faulty insulation tiles, a matter not considered serious during previous flights nor considered serious when some tiles were blown off during blast-off, but the only excuse available. Rumors circulated thereafter about an amateur video of Columbia's entry, showing a strike of the shuttle as it descended, but no video or photos became available until 2006.

Columbia Disaster Revisited

<http://www.thunderbolts.info/tpod/2006/arch06/060331columbia.htm>

March 31, 2006

On February 23, 2005 our topic was, "Space Shuttle Struck by Megalightning?" The accompanying picture shows the plasma trail of the shuttle Columbia on reentry about 63 kilometers above the earth, and it seems to show an electric discharge striking the shuttle's plasma trail. For anyone knowledgeable on the upper atmospheric electrical environment of the Earth the question raised is all too obvious. Could this discharge have caused the disastrous breakup of the shuttle, leading to the death of the seven astronauts? Shortly after we posted the story, the amateur astronomer who had taken the picture contacted us. He insisted that we remove the photograph. So we did. Now we are returning the image to our published files because it is not in the public interest that the image be ignored or forgotten--the fate of so many uncomfortable images in the space sciences. ... One might have expected this image to catch the attention of media around the world. But before that could happen, both the camera and the photograph were examined by NASA scientists. Most shocking was the explanation given by experts who analyzed the photograph. They said that the luminous corkscrew trail was an "artifact" caused by a camera wobble. The explanation left critics aghast, since the Columbia trail in the photo is crisp with no evidence of camera movement. The Columbia trail brightens precisely at its juncture with the corkscrew trail. This brightening is an electrically predictable occurrence when two plasma channels merge.

[Note: photo removed per below]

To The Owner of Website:

It has recently been brought to my attention that your website contains and presents a photograph of mine. I refer to the so-called "lightning bolt" photograph of the Columbia Shuttle re-entry taken in San Francisco on Feb 1, 2003.

As stated, the photograph is my property and is protected under copyright law of the United States. Your display and transmission of this image without my permission represents a violation of federal and international law. Continued possession, display, and/or transmission of this image will result in legal action against you and your ISP. You must immediately remove the image and delete the image, including all digital or print derivatives thereof. Your compliance with copyright law will be monitored.

The image is currently located on this URL:
../theword/tworx532.htm

Sincerely,
Peter Goldie, Ph.D.



Troubled Times



Comet Behavior

In April 6, 1997 the Zetas started a debate on [sci.astro](#) wherein they stressed repeatedly that NASA and JPL were asserting [Comet Behavior](#) that was not correct, in essence in the [Dark Ages](#) on this matter. They were brutally ridiculed. In June, 1999 when [Comet Lee](#) appeared, NASA admitted their formulas were not working, and the Zetas explained the [Reversal](#).



Troubled Times



Comet Origin

On Jan 15, 1996, the Zetas explained that comets, the dirty snowballs that supposedly sling in from the Oort Belt out beyond the solar system to round the Sun every once in awhile, did not *originate* from the Oort Belt as human science supposes but rather are water from the Asteroid Belt when it was pelted to pieces by Planet X in the past. The Zetas stated that several water planets rode that orbit, the Asteroid Belt, and this is where some of the water went, into comets.

Ah, the theoretical Oort Cloud. It is not real. The majority of comets visiting your Solar System return because they originated here, during planetary breakups caused by the periodic passage of the 12th Planet, for one. Look to the nature of your Solar System, the composition and shape of the planets. How would irregularly shaped chunks of ice, which in essence comets are, begin? The Earth was once a water planet, but lost much of her water following a collision with a traveling moon of the 12th Planet. Where do you suppose her waters went?

ZetaTalk: [Oort Cloud](#), written Jan 15, 1996

On Mar 14, 2006, the Associated Press reported that NASA was surprised to find particles that had been formed in heat, in the comet particle collected by Stardust in 2004. Since the mythical Oort Cloud was assumed to be cold, leftovers, floating in space, this did not compute. But it computes with the Zetas explanation!

NASA finds another solar system mystery

Associated Press, Mar 14, 2006

NASA scientists have a new mystery to solve: How did materials formed by fire end up on the outermost reaches of the solar system, where temperatures are the coldest? The materials were contained in dust samples captured when the robotic Stardust spacecraft flew past the comet Wild 2 in 2004. A 100-pound capsule tied to a parachute returned the samples to Earth in January. The samples include minerals such as anorthite, which is made up of calcium, sodium, aluminum and silicate; and diopside, made of calcium magnesium and silicate. Such minerals only form in very high temperatures.

"That's a big surprise. People thought comets would just be cold stuff that formed out ... where things are very cold," said NASA curator Michael Zolensky. "It was kind of a shock to not just find one but several of these, which implies they are pretty common in the comet." The discovery raises questions about where the materials in comets form, he added. One theory is that particles from the outer reaches of the solar system slowly move toward the sun, where they are set ablaze and shot back out. A scientific model once suggested that might be a natural occurrence, but it wasn't accepted because materials tend to cluster in zones the farther they are from the sun, Zolensky said.

If the model were true, materials would mix more, the NASA scientist said. "It raises a question of why we still see zoning in the asteroid belt. It is a big mystery now," Zolensky said. "It's kind of really exciting." He said it is also possible that the comet particles could have been formed in another solar system and catapulted into our solar system. To determine where the particles originated, scientists are now studying their isotopic makeup. About 150 scientists worldwide have been studying the dust since it arrived.

During the \$212 million mission, the Stardust spacecraft looped around the sun three times to

capture the interstellar and comet dust. The comet dust was captured in a silicone-based material contained in a tennis racket-sized collector mitt. The mother ship, which has traveled nearly 3 billion miles, remains in permanent orbit around the sun. The next time it flies by Earth will be in January 2009. Don Brownlee, a University of Washington astronomer who is the mission's principal scientist, said in a few weeks or months he and his colleagues hope to know more. "It depends on whether the isotopic composition indicates these grains are from our solar system or from another star," he said. "It's a real exciting mystery story. So stay tuned."



Troubled Times



Contradictory Messages

In February, 2000 ZetaTalk stated that [Contradictory Messages](#) given out by the establishment would include talking about [Bumper Crops](#) to disguise crop shortages and cutting back on foreign support. By mid-year 2000, reports reflected this.

Foreign aid to Mongolia not forthcoming

Associated Press, June 27, 2000

The United Nations has received dlr\$ 371,000 for emergency relief aid for Mongolia - just 10 percent of its initial appeal for dlr\$ 3 million.

International Disaster Aid Being Cut

Associated Press, August 4, 2000

The United Nations reported last week that only 36 percent of the aid requested to alleviate disasters around the world had been delivered by member nations. WFP has cut rations to some refugee camps and other food programs because not enough food is available.

Summer had highest food prices since 1989

Agriculture.com, September 8, 2000

American shoppers saw a slight increase in prices at the supermarket during the third quarter of 2000, according to the American Farm Bureau Federation's latest Marketbasket Survey. The group found a 23-cent increase in prices for 16 selected items compared with their second quarter survey. Though prices always tend to be higher in the summer months, the total of \$33.60 is the highest average recorded since the survey's inception in 1989. Last year's third quarter survey noted an 87-cent jump over second quarter prices. A dozen eggs experienced the largest increase, jumping 12 cents to 97 cents. A pound of sirloin increased 10 cents to \$2.65. The price of a pound of pork chops fell 10 cents to \$3.05.

Foreign Aid to Kenya Falls Short

Associated Press, September 18, 2000

Some parts of Kenya are suffering from the worst drought to hit the East African nation in 40 years. Semiannual rains have failed since late 1998, leaving 3.3 million people in need of emergency food and water. But international donors have been slow to respond to appeals for emergency funds. WFP, the U.N. food agency, has requested dlr\$ 132 million but so far has fallen dlr\$ 40 million short, agency officials said. The funds are needed to finance food deliveries until December. The United States has already supplied more than 70 percent of the food delivered so far, but the European Union has yet to pledge any food aid, Bertini said. As a result, food rations to the most vulnerable were cut 30 percent in August, WFP officials said.

Not Enough Aid in Southeast Asia

Associated Press, September 20, 2000

The Red Cross has appealed for dlr\$ 3.4 million in aid for Cambodia and Vietnam but has received less than dlr\$ 1 million. Som Ath, the director of disaster preparedness for the Cambodian Red Cross, said there

is enough manpower to distribute aid but not enough aid.

Worldwide Wheat Stores Dropping

Offered by Steve Havas, November 20, 2000

Just a bit of interesting info I thought I'd pass along. I was recently speaking to a guy out of Saskatchewan who invests in wheat share pools (my job involves talking to investors all day) and I asked him how the wheat market was doing. He said he expects his shares to do well as worldwide wheat stores are at the lowest they've been in 40 years with most of the inventory being located in the US. As a result the US pretty much sets the price. He also said the newly planted winter crop is in danger of failing next year as the weather has been very unfavorable. If this happens, he said there should be a wheat share price explosion next year as inventory falls further.

Futures Markets..What's Happening?

Offered by Joel Kohn, December 23, 2000

I don't understand what's going on. I trade the futures markets. Yet, I read all the postings to this list about farm emergencies, and still prices are not skyrocketing. Prices are supposed to reflect supply/demand and other fundamental information. I subscribe to an email list comprising farmers and ranchers. Many of them post horror stories about how the agribiz conglomerates artificially depress prices in order to get a piece of legislation thru congress (eg. Farm Bill of '96 which gutted many family farms) only to allow them to buy grains at low prices, at same time purchasing cheap futures contracts, which then soar as grain prices rise. For more, visit graintraders at e-groups.com.



Troubled Times



Cover-up Increase

Signs of the Times #1020

Sky Lights Up For NZ Post Pilots [Aug 3] There have been sightings of a meteor streaking its way across the upper South Island and lower North Island. Pilots describe seeing a bright white and green light that lit up the cockpit as if it were daylight. The meteor had crashed into the sea somewhere off the east coast of the lower North Island. [and from another source] A huge fireball lit up the night sky over Cardiff in Wales UK on Friday night. [Jul 31] <http://www.rense.com/general56/firebal.htm> Four hours later, at 2:45 am Saturday 31st July 2004 a second object impacted a remote hillside near Cwmaman in Aberdare, Wales. Witnesses say the impact lit up the sky and a huge explosion shook all the houses in the area. Three fires were seen burning on the hillside and it was soon covered with police and firemen with torches. Despite an obvious large presence of the local authorities who cordoned off the area, subsequent enquiries to the police and the fire brigade have been met with denial of any events that night. Police claim that there is no record on their computer of anything happening that night. The mystery deepens. [Note: cover-up increasing as Earth changes increase, the worse it gets, the less we hear, as Predicted by the Zetas.]



Troubled Times



Cover-up Crack

On Dec 7, 2002 ZetaTalk stated that [Certainty](#) on when the cover-up would crack would be difficult to pinpoint, but it would suddenly collapse:

The increased core swirling, by a core most responsive to the approach of a magnetic giant into the neighborhood, also is heating the earth's plates, causing melting poles, melting glaciers, and rising seas. This is occurring, but under reported at present, but like the under reported quakes will burst into the public eye when cities along coastlines are inundated by several feet of water, their streets awash. How will this change in the months going into the shift? Higher tides, more inundation, and more frantic city managers.

ZetaTalk

Where quake Richter had been [Downplayed](#) by 1.5 Richters and [Dropped](#) with [Late Reporting](#) to allow time for doctoring, when a [9.2 in Sumatra](#) causing a gigantic tsunami occurred, the downgrading reversed and went from 8.1 to 8.5 to 8.9 to 9.0 to 9.2. Simultaneously, reports from various scientist about the Earth's axis having been affected, and spin speed having caused the quake, to rotation affected were in the news.

Signs of the Times #1280

Russian Scientist: a change in Earth spin rate could be a possible cause of recent EQ [Dec 28] <http://216.180.244.91/bbs/> Quick translating from Italian news: 'A change in the spin speed of the Earth could be the origin of the tsunami that has destroyed countries on the Indian Ocean side. This is what a Russian scientist, Aleksandr Ponomariov, assistant manager of the Institute of Land Physics to Moscow, says. "We think that the change of that speed is a possible cause of the most recent earth cataclysms", Ponomariov has declared.' [and from another source] Quake rattled Earth Orbit, Changed map of Asia: US geophysicist [Dec 28] 'An earthquake that unleashed deadly tidal waves on Asia was so powerful it made the Earth wobble on its axis and permanently altered the regional map, US geophysicists said. In addition, the energy released as the two sides of the undersea fault slipped against each other made the Earth wobble on its axis, Hudnut said.' [and from another source] Speaking on SKY TG24 TV, Enzo Boschi, the head of Italy's National Geophysics Institute said the quake even disturbed the Earth's rotation [and from another source] Drudge Report: 'Gravity expert Richard Gross of Jet Propulsion Laboratory, Pasadena: "Quake may have altered earth's rotation, may have shortened the day by 3 microseconds". On premise a slab slid into core, Gross said he's done calculations.'



Troubled Times



Hezbollah

On July 15, 2006 the Zetas stated that it was not Hezbollah per se that kidnapped the Israeli soldiers, but Israeli agents that had infiltrated Hezbollah. A setup, to allow Israel to start bombing Lebanon, which they did. Israel tossed the first missile.

If a civil war in Iraq didn't spill the conflicts over into Iran, then what to do? Kidnap a few Israeli soldiers, with the cooperation of Israel, and demand Lebanon produce them! Can they do this when they don't have the soldiers? Hezbollah has been infiltrated, as one might imagine, by Israeli agents, and why would it not? In the past it has been a major headache for Israel. This was an Israeli arranged kidnapping, with the soldiers in the hands of Israeli agents.

ZetaTalk: [Hezbollah](#), written Sep 15, 1996

After this was written, it came to Nancy's attention that the Hezbollah website is hosted by a US Contractor! However, this accusation is [Denied by Al Hejailan](#).

The SITE Institute is an organization that tracks terrorist activities and internet postings. The Search for International Terrorist Entities Institute (The "SITE Institute"), seems to be chronocling most of the terrorist activity you hear about in the news, and appears to be the source for much of the reporting on terrorist activities provided to the mainstream media. One of the pages hosted on the SITE Institute website, provides a list of "Terrorist Websites". One of six websites listed is for Hizballah (Party of God) SITE lists their website as: [link to www.nasrollah.org]

According to the domain registration record, nasrollah.org is registered to a "Hussein Beydoun", who resides at a Beirut (Lebanon) address. Looks pretty legitimate, but things get fishy when you look at the IP address of their web server.

www.nasrollah.org resolves to 82.205.138.35

The RIPE registration record for that IP address says it belongs to a "Horizon Communication", out of Riyadh, Saudi Arabia. The registration record goes on to list "Karthikeyan K" at an address of "Hejailan Projects". Thinking that was a rather strange address, I searched for information on who "Hejailan Projects" is. I found them listed on a directory of Defense / Aerospace contractors.

Al-Hejailan Projects Co., Ltd.

Al-Hejailan Projects Engineering Co. is a Saudi engineering firm known to be involved in maintenance and upgrading of vehicles belonging to the Royal Saudi Land Forces Infantry Corps. 1993. FMC-Arabia Ltd. is established as a joint venture between United Defense Industries, Inc. (Arlington, VA) and the Al-Hejailan Group (Saudi Arabia). The company is 51% owned by United Defense. April 2003. Al-Hejailan Group acquires the 51% stake in United Defense Systems-Arabia owned by United Defense Industries, Inc. (NYSE: UDI) for approximately \$0.4 million. Why is a US defense contractor hosting a known terrorist website?



Troubled Times



Hoagland

On Nov 16, 1996 ZetaTalk stated that Hoagland was cooperating with the Hale-Bopp conspirators in enhancing the Hale-Bopp mystique. During a later [Attack on ZetaTalk](#) from Hoagland's web site, this failure to adhere to the truth emerged. Note that Planet X and the 12th Planet are the same inbound planet.

ZetaTalk on Hale-Bopp: [November 16, 1996](#)

In an attempt to get the Hale-Bopp conspirators off the hook, a proper funeral for their fraud has been planned. Hoagland's early conclusion that what NASA was calling Hale-Bopp was an object under intelligent control gave the conspirators a way out. They planned and are now executing a maneuver to both bury their fraud while at the same time continuing to distract mankind from the search for the 12th Planet in Orion. This latest maneuver was planned well in advance by the Hale-Bopp conspirators. Just how did those reporting on a bright object seen in the vicinity where the path of Hale-Bopp was placed calculate that this object is four times the size of the Earth? This conclusion is thrown out in the same manner as the earlier conclusions about the fraud, Hale-Bopp. It was supposed to be a repeating comet with an Orbit of 3,200 to 4,000 years, though never before seen by modern man and with no history whatsoever on record! The means by which these calculations are made are never explained to the public, who hears only the conclusions.



Troubled Times



High Tides

On Apr 15, 1999 ZetaTalk stated in the [1999 Predictions](#) that high tides would be experienced, unrelated to earthquakes. They repeated this prediction on [Jan 12, 2000](#), with more specifics.

Winds sweeping in without notice, sudden storms, deluges, tides that are greater than expected, especially along the Pacific coastlines.

ZetaTalk: [1999 Predictions](#), written on Apr 15, 1999

We also predict, as we did last year, that there will be high tides. Not tsunamis, following earthquakes, but unusual high tides.

ZetaTalk: [During 2000](#), written Jan 12, 2000

On Jan 26, 2000 a 65 foot wave was reported in the Philippines, cause unknown, by mid-2000 the US Government was preparing for unexplained [Tsunamis](#), and on both May 20 and 22, 2005 the [Indian state of Kerala](#) evacuated 15,000 due to high tides come crashing into huts and submerged villages. On April 11, 2007 [Acapulco, Mexico](#) had a sudden unexplained wave that washed inland. By May 18, 2007 more reports were coming in from [Indonesia](#). High tides *unrelated to any cause*. On Nov 27 a high tide affected both the [Essex coast of Britain](#) and Indonesia and Vietnam, virtually simultaneously (when the international date line is taken into consideration). These high tides were immense and had *no known cause*. During July, 2009 high tides along the East Coast of the US baffled scientists and on the other side of the world India experiences its highest tides in 100 years.

Experts Struggle to Explain High Tides

Jul. 25, 2009

<http://www.charlotteobserver.com/breaking/story/852054.html>

Since June, tides have been running from 6 inches to 2 feet above what would normally be expected, even considering seasonal and lunar fluctuations. While local tidal changes are not uncommon, researchers for the National Oceanic and Atmospheric Administration aren't sure they have ever recorded an event like this one, which is showing up all the way from Maine to Florida.

Scientists Don't Know What's Causing Freak Tides

July 27, 2009

<http://www.gpb.org/news/2009/07/27/scientists-dont-know-whats-causing-freak-tides>

Marine scientists say, they're baffled by several weeks of unusually high tides that coastal residents have noticed from Maine to Florida. Unusually high tides are not uncommon, but their causes are usually easily identified. Since mid-June, however, scientists have found no credible reason why tides are running a half to two-feet above normal up and down the East Coast.

Mumbai Braces for Highest Tide in 100 Years

July 24, 2009

<http://www.hindu.com/thehindu/holnus/000200907241023.htm>

Nearly 200 people have been evacuated from coastal areas, warnings have been sent out to those in low-lying regions and schools have advised students to stay at home as India's financial capital braces for a massive 5.5 metre high tidal wave, billed as the highest in 100 years, to lash it Friday afternoon.

High Tides Flood Indonesian Capital with Sea Water

November 27, 2007

High tides in Indonesian capital forced thousands of people to abandon their flooded homes and cut off the road leading to international airport. Authorities installed pumps to bring down water levels, which were 1.7-meters (yards) high in several subdistricts and reached up to two kilometers (more than a mile) inland, but said they expected tides to continue to wreak havoc through the end of the month. Residents in north Jakarta have grown used to flooding during the monthly high-tide cycle, but Monday's was the worst in memory.

Tides Erode Dykes, 300 houses Flooded15:59'

Nov 27, 2007

<http://english.vietnamnet.vn/social/2007/11/757006/>

Many houses in Thu Duc District's Hiep Binh Phuoc ward are now under one metre of water, with house-hold appliances damaged and dozens of families having to move to safer areas along National Highway 13. Equipment kept outdoors by various companies was also damaged by the water. High tides on the rivers of Tuy An Song Cau in the south central province of Phu Yen caused 50 houses to collapse and sank 11 fishing vessels.

At least 4,000 W Aceh Residents Displaced by Tidal Waves

May 19, 2007

At least 4,000 residents of West Aceh district in Nanggroe Aceh Darussalam province have been forced to flee their homes by tidal waves that have been hitting their coastal villages continuously over the past few days. Besides Aceh, tidal waves of up to seven meters high also struck the coastlines of other provinces in Indonesia such as North Sumatra, West Sumatra, Bengkulu, and Lampung on Sumatra island, West Java, Central Java, East Java, and Bali island.

Tidal Waves Hit Indonesian Coastal Areas

May 18, 2007

Geophysics and Meteorology (BMG) officials said the tidal waves that happened in Java's northern and southern coastal areas were triggered by the accumulation of wind swell from other areas.

Freak Wave Hits Acapulco

Apr 11, 2007, 23:00

Six people were rescued Monday after being swept out into Acapulco Bay when an unusually large wave washed over part of the resort city's coastal road, government news agency Notimex reported. Photos obtained by the Associated Press showed the seawater reaching the wheel wells of cars on the hotel-lined boulevard, dozens of yards inland from the normal high-tide mark. The six people rescued were apparently walking along the beach when the wave hit and were pulled to safety by passing boats, Notimex said. There were no reported injuries. The wave occurred on a sunny, hot day with no storm in sight, and its source was not clear. Such unusual waves can sometimes happen in good weather because of meteorological phenomenon occurring farther out to sea.

Tidal Waves Leave Thousands Homeless in Philippines

Discovery News, Jan 26, 2000

At least 5,150 people were left homeless and dozens injured by massive waves that swept over the remote southern Philippine province of Tawi-Tawi on Tuesday. Before the 65-foot waves hit, many local residents in the stricken coastal villages were able to flee to higher ground after local fishermen sounded the alert. The Tawi-Tawi communities of Matata and Ungos, 671 miles south of Manila, were severely battered by the rampaging waves. Scores of people were injured as they escaped. Hundreds of traditional stilt houses in the region were leveled by the waves that struck just after midnight. At least 150 homes in the island towns of Sapa-Sapa and Simunol were also destroyed. Officials reported that there were no indications of how the huge waves were generated.

Freak Tide Submerges Bangladeshi Community

Discovery Earth Alert, Aug. 31, 2000

A freak high tide submerged an entire island community off the coast of Bangladesh beneath 6 feet of sea water for nearly three hours on Wednesday. Nearly 10,000 people on Sandwip Island were forced to rush to cyclone shelters as the water gushed into their homes. Golam Rabbani, a disaster management official, reported that the victims, who were mostly fishermen, moved to the shelters built on higher ground. Although the tide began to recede after three hours, a flood protection embankment constructed around the island prevented the water from flowing back out. The country's meteorological office reported that the unusually high tide had been triggered by a depression over the Bay of Bengal that caused the sea to rise. The area is located off the coast of southeast Bangladesh near the city of Chittagong.

Florida Mystery Waves Blamed On Meteorite Impact

By Milt Salamon, *Florida Today*, September 5 2000

"I'd be willing to bet that if you had the weather maps of the Atlantic Ocean on those days, you'd find no wave-generating storm off Africa," wrote Gene Floersch of Melbourne Beach. He was referring to a suggested cause of the mysterious huge waves we've been writing about. They suddenly invaded the beach north of Fort Lauderdale on a clear, sunny, wind-free day in early March 1962 and frightened onlookers. One, Mary Swanson, now an Indianantic resident, said she'd moved to Arizona soon after the event and never knew what caused it. She hoped our readers could tell her. We've been reporting their responses, which mostly blame the waves on far-off storms, as distant as Africa. Gene contrasted the nature of the waves described by Mary to the storm-generated ocean swells that "every good surfer knows" - like the ones he surfed that year in Daytona Beach ("no mystery waves there," he said).

"Any storm powerful enough to send waves clear across the Atlantic would have affected the whole Florida coastline ... and would also have first devastated the Bahama Islands," Gene said. However, he added, "there was a more recent incident of 'mystery waves' that did hit Daytona Beach on an evening when the sea was flat, swamping beach-parked cars and scaring a lot of tourists at the boardwalk. Officials claimed these waves were generated by a 'sand slide' out on the continental shelf, but there was no geological activity registered by seismic sensors along the east coast. "Some weeks later a local news channel ran a report about the operators of a shrimp boat off the coast witnessing a huge splash in the distance and then almost being swamped by massive swells. "I believe the waves in both cases were caused by meteor impacts at sea. I also believe that safety officials play down these incidents, feeding the public any excuse but the truth. "Why? Because we have no defense or warning systems to deal with meteor impacts. Our government justifies spending billions of tax dollars on missile defense systems, and yet a missile attack is less of a threat than the debris flying around in local space. The reality is that even if an imminent impact were predicted, there is nothing we could do about it."



Troubled Times



Human Combustion

In April, 1996 ZetaTalk stated that Spontaneous [Human Combustion](#) was caused by internal chemistry in the body itself, burning without oxygen. On August 30, 1998, BBC reported that the human torch effect is caused by a wick effect from human body fat.

BBC News, August 30, 1998

New light on [Human Torch](#) Mystery

Scientists believe they have found the secret behind stories of people suddenly bursting into flames. BBC 1's QED - which brought together the world's top fire experts - looked at cases of spontaneous human combustion from around the world. Spontaneous human combustion hits the headlines And the programme discovered that the so-called wick-effect, in which a body is devoured by flames from its own body fat, is behind the mystery.



Troubled Times



Hurricanes, Atypical

In September, 1999 ZetaTalk stated in their predictions for the Next 3 1/2 years that hurricanes would be no more fierce than previously, but would occur in [atypical places](#). On Feb 20, 2007 the Zetas explained how the Earth wobble was [creating a pump](#) driving wind into Europe.

Hurricanes will be no more fierce than they are today, but will occur in places not used to hurricanes force winds. Not just Japan and the East Coast of the US and Bangladesh, but other places, perhaps the west coast of Africa, places that do not expect hurricanes blasting inland.

ZetaTalk: [Next 3 1/2 Years](#), written Sep 15, 1999

Both Europe and the US went from unseasonably warm weather to ice storms or hurricanes. We explained recently on the GLP live chat for late December that the figure 8 so well documented when the wobble first established itself in 2004 has continued, with more vehemence. During the wobble, the Earth is suddenly dragged under its mantle of air, but the air mass tries to cling to the land, and follow. This has the effect of pulling cold air to the South, pulling warm air to the North, and all of this creates hurricanes. Hurricanes or cyclones are formed over warm equatorial waters, and the same effect is produced when warm land such as Europe has experienced is pushed under cold air. For the US mainland the result has not been hurricane force winds but a rush of high pressure cold air into the low pressure that warm air essentially becomes, being lighter because the air molecules are more active and thus farther apart from each other. For Europe, which is tipped to the left, the north-west, during the wobble, and then back again to the right, to the north-east, the wobble acts like a pump, first pushing air down toward the Equator and then sucking it back up. Combined with the Coriolis effect, this creates swirls, drawing the cold air from the Arctic down into the center, thus the hurricane formation. Will this type of extreme weather continue? Certainly, but other forms of extremes will show up too. We have warned that the seasons will blend into one another, that hurricanes and tornadoes will appear where unexpected, and that swings from drought to deluge will continue, all in an unpredictable manner. We have warned of this since 1995, from the start of ZetaTalk, when it came under much ridicule. Are the debunker claims, that the weather is normal, still being made now?

ZetaTalk: [GodlikeProductionLive](#), written Feb 20, 2007

On Jan 19, 2007 Europe was battered by a hurricane not seen in a decade. But this was becoming routine as on March 3, 2008 yet another such hurricane battered Europe. Atypical, but with normal hurricane force winds.

Poland Battered by Deadly Storm

January 19, 2007

<http://news.bbc.co.uk/2/hi/europe/6277537.stm>

Poland and the Czech Republic are the latest countries to have been hit by a storm that has swept northern Europe leaving at least 43 people dead. At least six people were reported killed in Poland as winds of more than 200km/h (124mph) were recorded. Germany, the UK, France, Belgium, and the Netherlands were picking themselves up on Friday after the storm passed. Meteorologists said the winds reached severe gale force in Britain and were the strongest there since January 1990. They hit hurricane force in Germany, the worst in nearly a decade.

High Winds Kill Eight, Cut Power In Central Europe

March 3, 2008

<http://www.planetark.org/dailynewsstory.cfm/newsid/47304/story.htm>

In Germany, trains were delayed by uprooted trees and an intercity express collided with a fallen tree between the cities of Cologne and Koblenz. Nearly 130 flights to or from Frankfurt airport were either cancelled or diverted. Air traffic in Austria and the Czech Republic was also briefly interrupted when the storm, packing winds of between 155 kph (96 miles) and 180 kph (110 mph) lashed parts of central Europe. The storms left a mounting death toll across the region. Power cuts hit tens of thousands of households in Austria; and the high winds also disrupted power supplies to around 150,000 people in Bavaria.



Troubled Times



Implants

Prior to July, 1995 ZetaTalk stated that [Implants](#) were tracking devices, and later clarified that [Brain Buzz](#) was due to electrical stimulation of these devices. In February, 1996, implants were removed from contactees, describing a nerve connection and substantiating the Zeta descriptions.

Surgeon Discusses Results of [Implant Removal](#)

Ufodigest.com, February, 1996

This article summarizes a lecture given by Dr. Roger Leir at a public meeting in Thousand Oaks, California on February 23, 1996, sponsored by the local chapter of MUFON (the Mutual UFO Network). Dr. Leir is a California surgeon who has removed what may be actual alien implants from two people brought to him by hypno-anesthesia therapist and abduction researcher Derrel Sims of Houston, Texas. Derrel Sims was the main speaker at the Thousand Oaks meeting but turned the podium over to Dr. Leir for the medical part of the presentation. On August 19, 1995, several alleged "implants" were surgically removed from two abductees who have been working with Sims. If preliminary findings are confirmed by further laboratory testing, these implants might provide hard evidence that the abduction phenomenon is a reality. Dr. Leir removed a total of three objects, two from one patient and one from a second patient. Both specimens in the first patient, a woman, were located in her large toe, one on each side of the toe. The third object was removed from the back of the left hand of the second patient, a man, slightly above the web area between the thumb and the index finger. According to Sims, these people were originally unaware that they had the implants. The objects were accidentally discovered on x-rays taken for unrelated reasons. At the time, these individuals were seeing Derrel, as there were indications that they had a history of abduction. After extensive interviews were taken by Derrel, he ordered copies of their medical records and these objects came under scrutiny. There was no pain associated with these implants, and neither patient had any prior sensation of foreign objects in the body. Another peculiar fact is that these implants also left no sign of entry into the body; if there was an initial incision, it healed so perfectly that there was no outward scar.

To help locate the implants more specifically prior to surgery, Dr. Leir used a stud finder and a gauss meter. A gauss meter measures electromagnetic fields. When the gauss meter was put near the object in the man's hand, the meter "went crazy." Dr. Leir first tested the man with the gauss meter indoors, then took him outdoors away from all other magnetic influences. The results were the same. Similarly, when he used the stud finder, it lit up brightly over the man's hand, so they knew there was something there. Prior to the surgery, both individuals received a type of local anesthetic which would normally anesthetize the area of surgery for up to six hours. While Dr. Leir was searching within the woman's toe for the first implant, he accidentally touched the object and the patient "almost jumped off the table." Dr. Leir explained that the only time a surgeon gets this type of pain reaction under anesthesia is when something, in this case the object, is in close proximity to a nerve fiber. This is because the nerve fiber arouses the sensation of pain directly in the patient's brain, outside of the field of anesthesia. This happened in all three spots with both patients. When the objects were extracted, both patients had the same painful response. This led Dr. Leir to the realization that these objects were somehow attached to nerves. The first object removed was flat and approximately triangular shaped, about half a centimeter on each side. Though metallic inside, it was covered with a thick, dense gray membrane. Dr. Leir tried to cut into the membrane with a scalpel, but couldn't. When foreign objects have been in the human body for a long time, they do get covered with a dense fibrous coating, but usually such material can be scraped off with a blade. In this

case, however, the membrane was nearly impossible to remove. A similar coating was found on all three objects.

Dr. Leir's next concern was how to safeguard and preserve the objects until they could be transported to a lab for analysis. In other cases of alleged implant retrievals, objects have reportedly turned to powder, disintegrated, or somehow disappeared. Dr. Leir decided the safest way to store these objects for transport was in the patients' own biological fluid. He had his nurse withdraw blood from each of the patients, then removed the serum in a centrifuge, mixed it with an anticoagulant preservative, and placed each implant in a vial filled with the fluid. Derrel Sims then took them back to Houston for further analysis. Dr. Leir was responsible for the biological end of the implant research. After the objects were removed, he sent samples of surrounding tissue to a local pathologist. When the objects were taken out, Dr. Leir had noticed that the tissue around them was a discolored gray tone, not the color normally seen in tissue inflammation surrounding a foreign object. He received three reports back from the pathologist, one for each of the tissue samples. He was excited to see that none of the samples showed any signs of inflammation. Normally there is an inflammation response to any foreign object in the body. This results from white blood cell activity in the area, attempting to rid the body of what it considers garbage that doesn't belong there. If the object is something soft, like a splinter, the body is able to disintegrate it and take it away one piece at a time. If the body can't remove the foreign object, it does the next best thing. Thousands of cells join together in a process called differentiation, changing form and surrounding the object to wall it off and separate it from the rest of the body. Any type of foreign object placed in the body - whether by accident, such as a splinter, or something surgically inserted by a doctor - will show this type of inflammation. So it was extremely strange that the pathology reports on these objects showed no inflammatory cells at all.

Another strange thing was also discovered. In the tissue around each implant, there were numerous nerve endings that didn't belong there. None of the investigators could say why these nerve endings were there, but it suggests the possibility that the implants act as some kind of monitoring device through attachment to the nervous system. When Derrel Sims got the objects back to Houston, his first test was to expose them to ultraviolet light. He found that they all glowed brilliant fluorescent green. Derrel has found in his research with abductees that patches of some substance, invisible to the naked eye but fluorescent under black light, sometimes show up on the abductee's body following an abduction. He suspects that whatever this substance is, it could result from direct physical contact with the body of the abductor. With this in mind, he said he was not surprised to see that the three removed objects were fluorescent. Later, Derrel dried out the three objects, and the membranes surrounding them became brittle. He was then able to scrape some of the membrane material off and send it back to Dr. Leir for analysis. After scraping off the brittle membrane, he found a highly magnetic, metallic, shiny black material inside. When Dr. Leir received the three different scrapings of the membrane coatings from Derrel Sims, he sent them out to three separate pathologists. When the reports came back, it turned out that the main ingredient in this very tough membrane was something simply made from blood. In this bloody mass were some brown granules. The pathologists did an iron stain test and found that these brown granules were made of oxygen-carrying pigment from human red blood cells. Besides this, they also found a material called keratin, which comprises the outer layers of human skin, hair and fingernails.

Dr. Leir pointed out that if medical science could figure out how to duplicate this membrane, we would solve one of the biggest problems in medicine, that of transplant rejection. The membrane around the objects was apparently composed of material from the patients' own bodies BEFORE the objects were inserted. If we knew how to do this, we could put almost anything into the human body and have absolutely no rejection. Leir and Sims illustrated the structure of one of the implants taken from the woman's toe. When first removed, it was flat and triangular. When the outer membrane was removed, inside were two separate pieces of shiny black metal, tightly joined together in the shape of a "T". Apparently only the membrane itself held these two metal pieces in alignment. On February 22, 1996, the first preliminary lab reports came back on the metal itself. Leir and Sims both said they would await the final reports before announcing any details. They stressed that they had sent the samples for testing to highly specialized labs and had not indicated anything about where the samples came from. Dr. Leir told

the Thousand Oaks audience that the preliminary findings are "mind-boggling," and that the first metallurgist simply said: "Wow, you guys really found something here." Dr. Leir stated that as soon as they get final reports from all three labs, they will make their findings public. "I think you're watching history," he said in conclusion. Prior to working with Derrel Sims on this project, Dr. Leir had been an occasional consultant for MUFON, but had not been deeply involved. Now, he says, this project "has literally changed my life."



Troubled Times



Imploding Buildings

On [November 30, 2002](#) the Zetas stated predicted that the Earth changes caused by the near proximity of Planet X would cause imploding buildings.

Cities have several stories under them, where electrical wires and plumbing run, so as to keep this from the streets above. It is not just those cables and pipes buried in roadways, but the deep basements of skyscrapers that we are addressing. The Earth, in areas where it is being stretched, like the entire eastern portion of North America and western portion of Europe, will find the ground adjusting. What does it take to break a supporting structure, causing the mass to come down? And if the mass drops, the buildings where this plumbing went up into are finding a tug down where they were least designed to expect this. This weakens the infrastructure of the building, and it then starts to implode and plummet. As in earthquakes, building affect their neighbors, and fire starts and spreads. When would this start, and where? We are not allowed to pinpoint the city or estimated date, just as we are not allowed to do so with earthquakes. However, we can say this, that anyone living in stretch zones should expect this to happen at any moment, as the trail derailments have shown that earth movements of this kind, a separating of support, has started. Many cities are rooted in rock, but this also can shift, one side down, the other tilted up, and this alone would cause adjustments in the cities above. In cities in compression zones, or slip-slide, the results are similar, but accompany quakes. This, city disasters along with quakes, is called earthquake damage. Our imploding buildings prediction will not be called as correct until such matters happen outside of quake accompaniment.

ZetaTalk: [Imploding Cities](#), written Nov 30, 2002

On March 3, 2009 a perfect example of an imploding buildings occurred in Germany. This was not an earthquake fault, not due to recent maintenance, nor was the building so old that collapse of the building itself would have been expected. Note the mention of recent cracks in the basement floor. The implosion was due to the ground under the building giving way.

3 Missing in Germany Building Collapse

March. 3, 2009

<http://www.msnbc.msn.com/id/29491469/>

Cologne's six-story city archive building rumbled and then collapsed into a pile of rubble. Many people inside were able to flee to safety, but authorities said they were searching for three people missing from nearby buildings. The collapse, which occurred about 2 pm, also dragged down parts of two neighboring buildings in the western German city. "Suddenly there was a rumbling, as if a train were going past," witness Alfred Hoovestaedt. "Then the noise got louder and louder, and we heard vibration. Then, in seconds, the whole area was covered in a haze." Florian Hacke, who lives two buildings away, said he ran out of his house after he heard a creaking noise and cracks opened up in his ceiling. Alerted by the sounds that preceded the collapse, staff and visitors at the Cologne archive were able to get out in time. The modern-style building opened in 1971. A longtime archive employee, Eberhard Illner, told a German radio station that he had noticed cracks in the basement last year.



Troubled Times



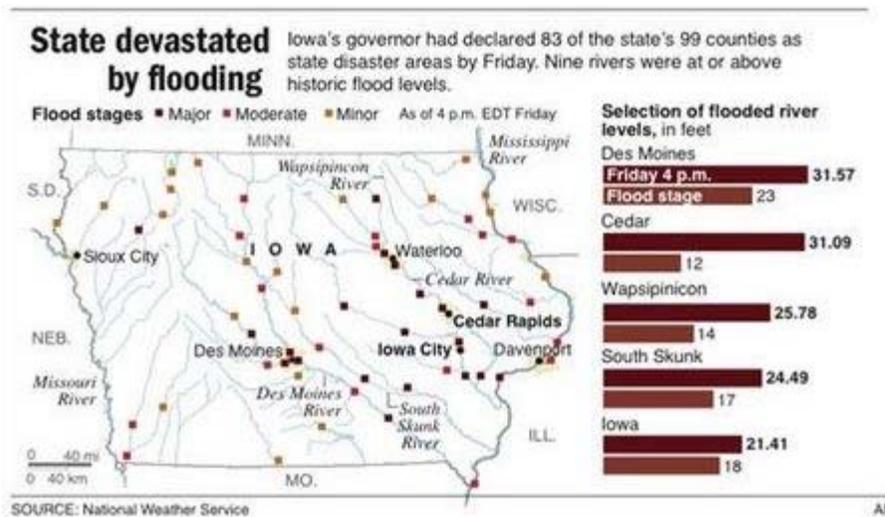
Iowa Floods

In 2001 when the Zetas compiled the Safe Locations document, they warned that Iowa would be virtually covered by water during the hour of the pole shift, severe flooding from rivers backing up and unable to drain.

Lying between the Missouri and the Mississippi rivers, Iowa will find itself under water during the deluges that accompany the pole shift. It will take many weeks for the water to drain away, and due to the continuing rains, will find itself soggy for months and even years afterwards.

ZetaTalk Iowa, written 2001

During the floods in June, 2008 Iowa surpassed the 500 year flood level, with major cities such as Cedar Rapids and Des Moines evacuated.



Floods Force Thousands from Homes in Iowa

Jun 14, 2008

http://www.breitbart.com/article.php?id=080614225015.iwdbradu&show_article=1

Iowa's biggest cities were submerged Saturday after swollen rivers forced thousands of residents to flee their homes amid devastating floods in the Midwestern US state. A large swathe of Des Moines was underwater after a river levee was breached in the city of 200,000, and officials were concerned that a forecasted evening thundershower could bring raise river levels even higher. Muddy water from the Des Moines River covered several bridges and poured down streets north of the state Capitol, swallowing a neighborhood with about 200 homes and 40 businesses. At least 2,500 volunteers had registered to help hold the water back by filling and laying down even more sandbags under the hot sun.

Unprecedented flooding covered hundreds of city blocks in Cedar Rapids, as officials urged residents to limit their water use to drinking, according to the municipality's website. The University of Iowa, based in Iowa City, cancelled classes until June 22 as the flood threatened its dorms, research facilities, library and art museum. Extreme weather has left at least 16 dead and thousands homeless in the state since May 25, said Bret Voorhees, spokesman for the Iowa Homeland Security and Emergency Management. Serious flooding has hit the entire region, including parts of South

Dakota, Minnesota, Wisconsin, Nebraska, Illinois, Indiana, Kansas, Oklahoma and Arkansas. Rail shipments have also nearly ground to a halt in the state as floodwaters covered and even washed out track and key bridges and barge traffic on the Mississippi River was also interrupted. The power of the rushing floodwaters in Cedar Rapids was awesome. Houses and cars could be seen pressed up against a rail bridge which caught them as they were swept downstream.



Troubled Times



Orbit Halt

On Aug 20, 2003 the Zetas hinted that orbits were [Not Sacred](#) and could halt or be retarded. The Earth and Planet X were approaching each other on Dec 25, 2003, and on Dec 21, 2003 Homeland Security called their second level Orange for the year. As 2004 passed, the [Orbit](#) irregularities showed the orbit indeed halted, the Earth tilted and in a wobble due to the close presence of Planet X.

There will be evidence that the orbit of Earth is not proceeding as expected. As there is no gravitational pull on mankind from an orbit, during a slowing or even reversal in an orbit, mankind would be unaware of this. He is aware of the Earth's orbit only from the movement of stars. Mankind's gravity focus is the Earth itself. As long as the tilt of the Earth remained the same, based as it is on the Earth's own rotation, there would be scant clues to orbit changes unless the days were abnormally long or short, the Sun rising and setting out of ordinary, and this would have to be extreme before the common man would even notice.

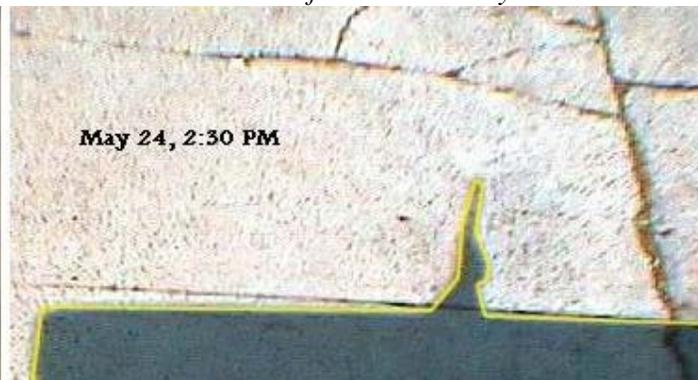
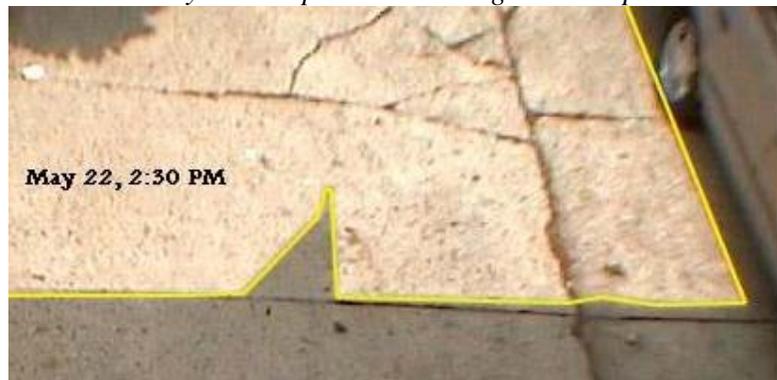
ZetaTalk: [Sacred Orbits](#)

Signs of the Times #562

Americans are warned [Dec 20] 'Officials across the United States responded to the decision on Sunday from the Department of Homeland Security to elevate the national terror alert level to orange, the second highest level. It is the fifth time that America has been put on orange alert since the colour-coded system was introduced after the 11 September attacks in 2001. Tom Ridge, the director of Homeland Security, repeated his message of Sunday that the country should be especially vigilant. He said the warning was based on information which indicated that attacks might be imminent. He did not specify the sources of the information or where the attacks could occur. Mr Ridge called on Americans to be extra vigilant but added: If you've got holiday plans, go.' [Note: the last Code Orange was called just after May 16, after the Zetas gave dates for rotation slowing to a stop to be on May 20. Dec 25-30 is anticipated to be the next [Sweeping Arm of the Sun.](#)]

Signs of the Times #858

The May 19-23 [Sweep](#) was also accompanied by a documented [Tilt/Lean](#). Photographic proof that the Earth is pulled about during these planetary encounters caused by the sweeping arms of the sun. These photos were taken on May 22 and May 24 respectively, at the same time of day as measured by the same clock, at 2:30 PM. Note that the change can be measured by the car parked to the right in one photo. The shadow moves at least two feet within a day!



Signs of the Times #953

The full moon set this morning, July 2, at 210° of compass here in Washington State. For those not familiar with these sorts of things, that heading is a mere 30° away from magnetic south! And just a scant few hours earlier, the full moon made it's daily appearance at 128° east, southeast. During the entire course of it's transit across the southern sky, it never rose more than 30° from the horizon. [Note: 15° too far SOUTH, for Moonset in Washington State] We must be

changing directions with our wobble again. On Saturday night (July 3) at its orbital peak the moon was really low, not more than 35° above the southern horizon. Sunday night (July 4) it had swung back some, to about 45° above the southern horizon. And last night (July 5) it was about 50° above the horizon here in Mississippi. [Note: 15° too HIGH at orbital peak on July 5 in Mississippi.] Twirling? What does that mean? Why is the cold spot to the west of Hudson Bay the coldest spot on Earth? That's not the N Pole. What point is pointing away from the Sun most of the day? Are we going to develop a wobble? Are we going to suddenly lurch about so that the Sun is rising and setting in a place way off from where the public would expect? This is in your future, folks, but we will not give you the date. [Note: ZetaTalk: Twirling Wobble predicted by the Zetas on May 25. Zetas RIGHT Again!]



Troubled Times



Power Outages

On July 15, 1996 ZetaTalk stated that [Outages](#) were indeed caused by UFO's when trying to impress the authorities or the public. An incident as recent as March, 1999 supports those Zeta statements.

Wild Week in Brazil: UFOs, [Power Blackout](#) and Chupacabra

UFO Roundup, V4.11 - March 22, 1999

On Thursday, March 11, 1999, at 10 p.m., a mysterious electrical blackout knocked out power to several states of Brazil. Losing all electrical power were the states of Rio de Janeiro, Sao Paulo, Parana, Minas Gerais, Santa Catarina, Goias, Mato Grosso and Mato Grosso do Sul. Three electrical utilities were affected by the unprecedented blackout - FURNAS, Itaip and Vale do Sao Francisco. According to Brazilian television reports, the blackout originated at a power station in Bauru, 350 kilometers (210 miles) northwest of Sao Paulo, Brazil's largest city. Power was out for four hours in the states of Sao Paulo, Rio de Janeiro, Minas Gerais and in portions of Espiritu Santo state. The blackout lasted only fifteen minutes in Goias, Mato Grosso and Mato Grosso do Sul and in the city of Brasilia, the national capital. At midnight, FURNAS restored power to the states of Parana and Santa Catarina.

UFOs were seen in two Brazilian cities just prior to the blackout. In Londrina, capital of Parana state, located 300 kilometers (180 miles) southwest of Bauru, witnesses saw a luminous disc cross the night sky at a very high velocity. In Itu, a city 150 kilometers (90 miles) west of Sao Paulo, eyewitness Joao Cardes do Santos "at the time of the blackout went outside of his house and watched the sky, which was clear. At that moment he saw three strange glowing objects. They were silvery and bigger than an airplane. They were hovering at a low altitude over the power cables that come from the hydroelectric station at Itaip (and go) to Sao Paulo. They departed in a straight direction at high speed."

Three days after the blackout came the report of a Chupacabra attack in the state of Parana. The morning of Sunday, March 14, 1999, Sra. Maria Moretti went outdoors to feed her chickens in Vila Reis, a country town 420 kilometers (242 miles) southwest of Londrina, and noticed some strange grooves in the ground. Looking closer, she saw that the grooves were filled with coagulated blood. "Dozens of birds were found dead yesterday morning (March 14) at a farm in the district of Vila Reis, 360 kilometers from Apucarana. The majority of the dead animals had no puncture marks, and each one sustained a shattered skull. Locals credited the attack to chupacabras, as was seen in past years." "The owner of the poultry, Maria Moretti, did not observe anything wrong in the yard. What called her attention to the situation was the discovery of ground grooves filled with coagulated blood." The state of Parana was the scene of a major Chupacabra flap in 1997.



Troubled Times



Pakistan Sinking

On April 17, 2010 the Zetas stated that in order for the plate tongue holding Indonesia so sink, the Indo-Australian Plate needed to tip sideways. On October 16, 2010 this was further defined as a 10 foot drop in elevation.

The Indo-Australian Plate will tip sideways so that Indonesia can plunge under the eastern side of the plate. Islands in Indonesia will be affected by this plunge, ultimately sinking. Do such adjustments happen all at once, or gradually? Both occur, but the trend is unmistakable long before a major adjustment occurs.

ZetaTalk: [Prediction](#) written April 17, 2010

We have predicted that the western edge of India will only lose 10 feet of elevation during the 7 of 10, and given the degree of flooding that Pakistan is already experiencing, Karachi has already experienced some of this elevation loss. The flooding in Pakistan, however, is afflicting the Indus River valley to the east of Karachi at this time, on that portion of Pakistan lying on the plate holding India.

ZetaTalk: [Prediction](#) written October 16, 2010

Pakistan had been flooded in July of 2010, but there was no official admission of an elevation drop in 2010. Officially, the flood water were just slow to drain.

Lingering Floods in Pakistan

<http://earthobservatory.nasa.gov/NaturalHazards/view.php?id=47886&src=nha>

Compared to the image acquired a year earlier, however, the December 2010 image shows the extent of the lingering floods. Lasting flood damage is also apparent along the coast, around the city of Thatta. Although the image from December 2010 shows remarkable improvement over conditions two months earlier, it also reveals persistent pockets of floodwater that did not exist the previous year.

But in January 6, 2011, there was an admission in the press that Pakistan, the Indus Valley and parts east, had sunk, and the drop in elevation was ... exactly 10 feet!

Pakistan Still Grappling with Flooding Fallout Months After Deluge

January 6, 2011

http://www.pbs.org/newshour/bb/international/jan-june11/pakistan_01-06.html#

More than five months after floods swamped Pakistan, the process of recovery is barely beginning. Vast swathes of Pakistan's southern Sindh Province remain inundated, in some places under 10 feet of water.



Troubled Times



Permafrost Melt

On [Oct 15, 2001](#) ZetaTalk stated that magma had increased its swirling about due to the approach of Planet X, releasing heat, and this would be steadily apparent, on the increase.

Should one run statistics on the changes, one would see other than lineal changes overall. It is simply that the core must increase substantially in its temperature or motion for a small increase evident on the crust. This is not lineal, and the crust is pushed outward when increased heat and swirling about occur, so is less subject to rubbing one plate against another and there are more places where magma can ooze out in the deep ocean rifts.

ZetaTalk: [During 2002](#), written Sep 15, 1999

These and heating of the Earth from the core, causing melting polar ice and glaciers, is not new but an existing trend.

ZetaTalk: [During 2002](#), written Oct 15, 2001

By Sep 6, 2006, the journal Science and the journal Nature and report from Alaska were that the permafrost was melting faster than expected, releasing gasses such as Methane. Where this is ascribed to Global Warming, the permafrost is several feet deep, underground, and does not react to a degree or two of warming. In addition, heat rises. The permafrost is melting from the bottom up, as heat rises.

Methane a New Climate Threat

Sep 6, 2006

Global warming gases trapped in the soil are bubbling out of the thawing permafrost in amounts far higher than previously thought and may trigger what researchers warn is a climate time bomb. Methane, a greenhouse gas 23 times more powerful than carbon dioxide, is being released from the permafrost at a rate five times faster than thought, according to a study being published Thursday in the journal Nature. The findings are based on new, more accurate measuring techniques. Scientists worry about a global warming vicious cycle that was not part of their already gloomy climate forecast: Warming already under way thaws permafrost, soil that has been continuously frozen for thousands of years. Thawed permafrost releases methane and carbon dioxide. Those gases reach the atmosphere and help trap heat on Earth in the greenhouse effect. The trapped heat thaws more permafrost and so on. The higher the temperature gets, the more permafrost we melt, the more tendency it is to become a more vicious cycle. Some scientists say this vicious cycle is already under way, but others disagree. Most of the methane-releasing permafrost is in Siberia. Another study earlier this summer in the journal Science found that the amount of carbon trapped in this type of permafrost called yedoma is much more prevalent than originally thought and may be 100 times the amount of carbon released into the air each year by the burning of fossil fuels. It won't all come out at once or even over several decades, but if temperatures increase, then the methane and carbon dioxide will escape the soil, scientists say.



Troubled Times



Philadelphia Experiment

Prior to July, 1995 ZetaTalk stated that the [Philadelphia Experiment](#), as reported, was a decoy, as the actual experiment took place in Kansas. A March 26, 1999 investigative report confirmed this.

Philadelphia Experiment- Didn't Happen Says Former Crew Members

By Lacy McCraey, *Philadelphia Inquirer*, March 26, 1999

The truth is out here. It is in a hospitality room of a boardwalk hotel, with some old salts sitting around white-clothed tables laughing at reports that their ship was involved in a top-secret World War II experiment. Sailors who served on the USS Eldridge, the ship that legend says vanished briefly in 1943 at the Philadelphia Navy Yard, met here this week for their first reunion in 53 years and spent part of their time joking about the so-called Philadelphia Experiment. The Eldridge, they said yesterday, may well have been invisible to Philadelphia because it was never in Philadelphia. The ship's log and several veterans who were on the ship from its launching on July 25, 1943, at Port Newark, N.J., say it called on many East Coast ports, but never Philadelphia. Two movies, two books and several Web sites have kept the myth about the Eldridge alive. As the story goes, the destroyer escort was surrounded by a greenish fog, disappeared for a few minutes, then reappeared.

But none of the veterans believes it. "I think it's somebody's pipe dream," said Ed Wise, 74, of Salem, Ind. Ted Davis, 72, of Grand Island, Neb., was more emphatic. "It never happened," he said. Bill Van Allen, 84, who was executive officer and then captain of the Eldridge in 1943 and 1944, said he never saw any sign of experiments aboard the ship. "I have not the slightest idea how these stories got started," said Van Allen of Charlotte, N.C. These former sailors said they sometimes had fun pretending the experiment actually occurred. "When people would ask me about it, I would play along with them and tell them I disappeared. After a while they realized I was pulling their legs," said Ray Perrino, 72, of Cranston, R.I. None of the 15 at the reunion could explain why writers picked their ship, out of the thousands that sailed in the war, as the site of invisibility experiments. Frankly, some are tired of being asked about it. "We can't wait to put it to rest. We can't because it keeps coming up," Davis said. "I'm still asked about it now, mostly by younger people. I have a Pennsylvania auto license DE-173 [the designation and number of the Eldridge] , and every once in a while somebody will stop and ask me if it was really true," said Mike Perlstein, 72, of Warminster. "I tell them I know nothing about it. I've seen the movie, and it's a good movie, but there's no truth to it," Perlstein said.

The Navy said it had received so many inquiries through the years about the Philadelphia Experiment - the title of a 1984 movie, a 1993 sequel and two books - that it prepared and sends out a fact sheet. The Navy said the myth dated to 1955 with the publication of *The Case for UFO's* by the late Morris K. Jessup. It said Jessup later received letters from a Carlos Miguel Allende, who gave a New Kensington, Pa., address, and claimed he witnessed the ship becoming invisible from another vessel. Allende also said the ship was "teleported" to and from Norfolk, Va., in a few minutes with some terrible aftereffects for crew members. Questions about the experiment probably arose from "quite routine" research at the Philadelphia Naval Shipyard during the war, according to the Navy fact sheet. "It was believed the foundation for the apocryphal stories arose from degaussing [demagnetizing] experiments which have the effect of making a ship undetectable or 'invisible' to magnetic mines," the Navy said. But the Navy said it had never conducted invisibility experiments, either in 1943 or at any other time. The legend says the ship became invisible on July 22, 1943, but ship records and the veterans say it was not launched until July 25. The

second experiment, in which the Eldridge was sent to Norfolk and back to Philadelphia, was supposed to have occurred on Oct. 28, 1943. The ship's log says it was at the Brooklyn Navy Yard on that date, but did spend two days in the Norfolk Navy Yard in November 1943. The gray-haired men, some wearing baseball caps with "USS Eldridge" printed on them, chuckled as they ribbed one another about the mental problems the crew supposedly suffered from the experiments. "The only part of the book I think is true is the part about the crew being a little crazy," said Ed Tempany, 75, of Carteret, N.J. He referred to *The Philadelphia Experiment: Project Invisibility* by William L. Moore in consultation with Charles Berlitz. "When I get home I'm going to apply for disability," Perrino said, with a smile. "Beam me up, Scotty," said Tempany.



Troubled Times



Planet X

By late 1997, ZetaTalk was providing [Coordinates](#) where the inbound Planet X, aka the 12th Planet, aka Nibiru could be located in the sky, projecting the [Path](#) it would take. In early 2001 the inbound planet was [Sighted](#) at observatories by teams in France, Canada, and the US, at the Zeta coordinates and by early 2002 was being imaged by [Infrared CCD](#) in the US and France at the Zeta coordinates, showing a [Moving Object](#) not a nova or a comet.

The 12th Planet will appear to linger at the point where it turns to assume a retrograde orbit, spending a two year period in this portion of the path alone, anticipated to be at:

RA 4.29741 Dec 9.96621 on March 3, 2003
RA 5.47 Dec 19.54 on September 1, 2000
RA 6.23 Dec 24.12 on May 1, 2000
RA 6.24 Dec 23.45 on January 1, 2000
RA 6.32 Dec 21.57 on January 1, 1999
RA 6.24 Dec 19.16 on December 1, 1997

ZetaTalk (dated 1997)

Salut! Bon les jeunes y'a du nouveau. j'ai envoye les donnees concernant la 12e planete a une amie, et voici ce qu'elle me repond: Observatoire de Neuchâtel(celui du paternel) toute première réponses: oui,ce pourrait être une comète. Elle est sur un des bras d'Orion(?) et vont se mettre à mieux regarder pour valider ou non "la naine brune"...car je ne sais pas si tu sais, mais ce stade est juste avant celui du pulsar et donc émet des ondes... CQFD... je me demande ce que la Terre en reçoit ou en recevra mais... Mystère et boules de gommés... Attendons les autres labo... mais celui-ci en particulier je lui fait confiance car il ne jouerait pas la carte du complot avec mon père... ça franchement non... (autant dire que le - dit Père est tout exité!!!)

Neuchatal, Feb 7, 2001

Somebody from tt-france had access to the Haute-Provence Observatory in France (a professional one) and he had the opportunity to point to the co-ordinates you indicated. Please have a look at the photos. Here are the technical details: The first attached photo (provided by ESO Digital Sky Survey) includes the comparison field (one must do inverse-rotation to compare) The 4 other ones are the images he took on Jan, 19 2002. using a 5'x5' field centered on the co-ordinates given by the Zetas on Jan, 17 2002: RA = 4h 27mn 22s Dec = 12h 8mn 20s. The two circled objects are the only two objects which do not exist in the reference field.

Best regards,
Véronique



Troubled Times



Planet X Denial

Prior to July, 1995, ZetaTalk stated [Public Sightings](#) of the inbound Planet X (aka 12th Planet or Nibiru) would not be assisted by NASA or observatories worldwide, but would be resisted. By 2002 this had been well documented, resistance to [Viewing](#) at observatories in 2001 followed by disinformation on the imaging in February, 2002 by [Doctoring NEAT](#) star charts to include the object found, as the [sci.astro Debates](#) demonstrate.

Beyond the fact that assistance will not be given to anyone trying to locate this comet, is the resistance that will be given. The establishment knows it is there but fears the chaos that will erupt if the populace knows. Those in the establishment who are knowledgeable are personally planning escape routes and safe places, and will disappear when the time comes. Those who are knowledgeable and are concerned about getting the word out are brutally repressed. They know that any statements they make will be followed by personal discrediting, vicious in nature. Therefore, where individuals may locate what they think is the comet, they will not receive the assistance of those with access to high powered equipment, as all this equipment falls under the umbrella of the establishment in some way.

ZetaTalk™, Suppressing the Word

Date: Sun, 05 May 2002 22:02:20 -0500
Article: <3CD5F23C.3EE72A05@zetatalk.com>
Subject: Re: Planet X Animated GIF

While the Neat NEAT Trick operators were "taking vacation" or otherwise not heard from, immediately after the Jan 19th announcement, and then the NEAT images were either unavailable to be downloaded or had serious errors in them so they could not be displayed ...

```
In Article <3C7D2AA5.35E63605@zetatalk.com> Nancy Lieder wrote:
> In Article <3C717603.C2015A6C@zetatalk.com> Nancy Lieder wrote:
>> Steve Havas (shavas7@hotmail.com) wrote:
>>>> A second set of infrared images of Planet X was taken
>>>> on Jan 19, 2002. The Haute-Provence Observatory ..
>>
>>> I see Dave Tholen has not made any comments yet...
>>> Does this image speak for itself?
>>
>> Dave is waiting for instructions from his handlers.
>
> And he apparently GOT them! I received a note from
> Steve Havas regarding a new NEAT image recently
> taken and trumped by Tholen debunking the Jan 19th
> imaging of Planet X, claiming that it also shows up a
> year earlier.
>
> Nancy, when I was finally able to bring up the .fits
> file of the NEAT image (2001-01-17) I was able to
> confirm that they do show an existing object exactly
> where the object is in the Jan 19/2002 image. The
> other object that was shown on the Jan 19, 2002
> image (below and left when inverted and rotated)
> is not present.
> Steve Havas
```

The OBVIOUS source of comparison was being overlooked! Open Minded's Jan 5th infrared image, compared to Pierre's Jan 19th infrared image, of which we have the ORIGINAL .FITS from the CCD camera. On Jan 5th, the object identified by the Zetas is NOT at the Jan 19th location, and on Jan 19th, the object identified by Pierre is NOT at the Jan 5th location.

Images: [use90543.htm](#)
Images: [use90548.htm](#)

This demonstrates that the NEAT images, if they show otherwise, have been doctored!



Troubled Times



Planet X Gravity

At the start of ZetaTalk on [Jul 15, 1995](#), The Zetas described Planet X as having 23 times the mass of Earth, while being 4 times the diameter of Earth, and that the hominoids on Planet X were 1.5 times the size of man. This issue came up during the [May 5, 2007](#) live chat on GLP, as seemingly incompatible due to the gravity pull of Planet X. After the Zeta response, another poster presented the mathematical formula that proves the Zeta had been correct in their 1.5 ratio, as the computed gravity on Planet X would be 1.56 times that of Earth! Note Nancy is not a mathematician and does not speak math very well.

***Question:** ZetaTalk claims that Planet-X is 4 times the diameter of Earth. This would make it 64 times the volume of Earth, with a gravity field that no land animal from Earth could adapt to. Yet ZetaTalk claims that the inhabitants of Planet-X send their people to the various planets and moons of our solar system (with weaker gravity than the Earth) to collect gold, on missions that span for thousands of years. ZetaTalk claims that their descendants eventually return to Planet-X with the gold that was mined, and live as a lower class, forbidden from having children due to being genetically impure. Given this scenario, how could any land animal (such as the supposed inhabitants of Planet-X) adapt to the gravity field of Planet-X that is more than 64 times as strong as that which their bodies are adapted to? Would they not be crushed by their own bulk, suffocate from an inability to breathe, or have a heart attack due to being able to pump blood up and down their tall bodies? Here's the math:*

if Diameter of Earth = 1

Diameter of Planet-X = 4 according to ZetaTalk

thus Volume of Earth = 0.524

thus Volume of Planet-X = 33.51

33.51/0.5224 = 64.15 (the volume of the Earth thus divides into the volume of Planet-X 64.15 times)

Therefore Planet-X would have 64.15 times the volume of Earth, and since massive objects compress under their own weight, Planet-X would have more than 64.15 times the mass of the Earth.

Check the numbers at <http://www.csgnetwork.com/circlecalc.html>

ZetaTalk: *Early in the life of ZetaTalk, Nancy was challenged as to our statement that the gravity of Planet X is approximately 1.5 times that of Earth. As we were stating a mass 23 times that of Earth, this seemed not to compute. However, a mathematician came forward during these discussions and stated that the computations allow for a 1.6 pull of gravity on such a surface, in accordance with our statement. Thus, your math is wrong, and designed to discombobulate Nancy during her chat.*

From another poster, posting later in the chat after the Zeta response.

The Force ratio can be calculated as:

$$F2/F1 = m2/(r2)^2$$

$$F2/F1 = 25/4^2 = 25/16$$

$$F2/F1 = 1.5625$$



Troubled Times



Weather Changes

Prior to July, 1995 ZetaTalk stated that weather changes were [Heralding](#) the approach of Planet X, and would become increasingly unpredictable, though this would be slow to be recognized as disasters are a regular part of the Earth's history.

Mankind will find its greatest problems with the weather to be its unpredictability. Areas of the world which have been deserts throughout mankind's memory will become swamps under constant and repeated rains. Temperate climates used to periodic gentle rainfall will suffer intractable droughts. Then this will switch about, for no apparent reason. The reason lies deep within the Earth's core, an area the meteorologists refuse to consider, and thus their predictions on the atmosphere will never be based on the right parameters.

ZetaTalk: [Heralding](#), written July 15, 1995

On Dec 14, 1999 the *Associated Press* reported that weather changes are occurring at an increasing rate, and this trend continued! By 2006, the swings were undeniable. By Nov 25, 2007 it was reported that weather related disasters had more than quadrupled over the past two decades.

Chinese droughts, flood were century's deadliest weather disasters

Associated Press, Dec 14, 1999

China experienced three of the century's four deadliest weather-related disasters, two drought-induced famines that killed more than 29 million people and a Yangtze River flood that claimed 3.7 million lives, U.S. weather experts said Monday, Dec. 14. Despite 11,000 deaths in Central America, last year's Hurricane Mitch does not rank near the top of the century's deadliest incidents. Looking back over the century, experts of the National Oceanic and Atmospheric Administration found that famine brought on by drought generally was deadlier than storms or floods like the Yangtze disaster of 1931. Most of the famine deaths were in Asia. A 1907 episode killed more than 24 million Chinese. Also in China, the "New Famine" of 1936 killed an estimated 5 million Chinese, and a drought in 1941-2 more than 3 million. The administration estimates of the dead from starvation in Ukraine and the Volga region of Russia, during the early Soviet years 1921-1922, vary from 250,000 to 5 million. Wind and a storm surge from a 1970 cyclone in Bangladesh may have killed as many as half a million. Climate now is changing faster than ever recorded, said D. James Baker, who heads the federal agency.

Why has our [Weather gone Wild?](#)

By Joseph D'Agnese, *Discover Magazine*, Vol. 21 No. 6 (June 2000)

Globally, insurance companies are calling it a "catastrophe trend." In a report issued last December, Munich Re, the world's largest reinsurer, or insurer of insurance companies, noted that the number of natural disasters has increased more than fourfold since the 1950s. Earthquakes, which are not weather-related, caused nearly half the deaths in those catastrophes; storms, floods, and other weather woes killed the other half. In 1999, the number of catastrophes worldwide - including mud slides in Venezuela, a severe hailstorm in Sydney, avalanches in the Alps, Denmark's worst winter storm in a century, floods in Latin America and Southeast Asia, Cyclone Bart in Japan and Cyclone 05-B in India - hit 755, surpassing the record of 702 set only the year before.

Still, the statistics meteorologists have collected on extreme weather events aren't enough to prove

that the weather is getting worse. By their very definition, extreme events happen infrequently, and no one has been collecting scientifically sound data long enough to know how common they are. For example, a storm that happens once a century might require two millennia's worth of storm data to draw conclusions. To top it off, the computer models scientists use to study climate crunch numbers on a scale of centuries at a time. "Ideally, you'd like data sets that go back several hundred years," says Philip Arkin, deputy director of the International Research Institute for Climate Prediction at the Lamont-Doherty Earth Observatory in Palisades, New York. "But they just don't exist. The U.S. data go back 50 years. Before World War II, it's very difficult to come up with good numbers. We have some data on heavy rain events before 1900, but there's nothing useful."

Disasters Quadruple over Last 20 Years: Oxfam

Nov 25, 2007

<http://www.reuters.com/article/environmentNews/idUSL2518480220071125>

From an average of 120 disasters a year in the early 1980s, there are now as many as 500. It follows a pattern of more frequent, more erratic, more unpredictable and more extreme weather events that are affecting more people.



Troubled Times



Weather Swings

On May 4, 2002 the Zetas stressed that temperature swings, as well as swings between drought and deluge, would increasingly occur as we approached the pole shift.

Weather irregularities will continue in the manner we have described since 1995, with increasing swings and extremes. In that weather irregularities are smoothed, by nature, by increased atmospheric activity or ocean currents, temperature extremes will not occur. Rather, oscillating extremes, similar to what the world has already experienced, will occur. Sudden shift to cold weather, sudden unseasonably warm weather, and the like.

ZetaTalk: 2002 Quickening, written May 11, 2002

On May 5, 2006 the UK gave us an example of those extreme swings.

Basking in a One-Day Heatwave

May 5, 2006

One of the longest and coldest springs in decades gave way to a mini-heatwave yesterday as Britain basked in the highest temperatures of the year. Average temperatures across Northern, Central and South-East England were an unseasonably high 77-79F (25-26C), compared with an average temperature for May of 59-61F (15-16C). The sudden heat came after a protracted and chilly spring. The temperatures caused severe problems on the London Underground. On the District Line services were cut by half in the evening rush hour as trains slowed to 20mph to avoid the tracks buckling in the heat.

On January 7, 2008 Australia shifted from suffering under and extreme drought that had broken all records and lasted for years to drowning in floods from record rains. The drought to deluge swing the Zetas had predicted.

Australia Floods Strand Thousands

January 7, 2008

<http://news.bbc.co.uk/2/hi/asia-pacific/7174377.stm>

Thousands of people remain stranded by some of the worst flooding eastern Australia has seen in 20 years. Parts of the country's most populous state, New South Wales, have been cut off by heavy rain and have been declared natural disaster zones. There are similar problems further north in Queensland, which has also been battered by wild conditions. The floods are easing now but officials have warned that many communities could be isolated for several days. Others parts of the country had also been suffering from the weather. More summer rain is anticipated but climatologists believe it is far too early to declare Australia's drought to finally be over. They say that the continent's long dry spell has built up massive rainfall deficits that will take a lot more than one reasonable wet season to fix.

By July 6, 2009 an Oxfam report states that the "seasons are shifting".

Millions Face Hunger as Seasons Disappear

06 July 2009

A new report reveals that seasons which were once distinct are shifting, destroying harvests and causing widespread hunger. This is just one of the multiple impacts of climate change taking their toll on the world's poorest people, according to the Oxfam report 'Suffering the Science - Climate

Change, People and Poverty'. New research based on interviews with farmers in 15 countries across the world reveals how once distinct seasons are shifting and rains are disappearing.



Troubled Times



Weather Predictions

Prior to July, 1995 ZetaTalk stated that [Weather Predictions](#) would be inaccurate, based upon the wrong parameters. On Jan 27, 2000 a new supercomputer was failing in just this manner, and admissions continue to be made.

Daft Computers Still Fail to Understand Weather

Computers Fail to Notice US Snowstorm

The Times, Jan 27, 2000

It sounded phenomenal a week ago, as American meteorologists unveiled a supercomputer capable of 2,500 billion calculations a second that would give them warning of impending weather problems up to ten days in advance. As it turned out, the new marvel failed to notice a huge snowstorm until it was almost on the doorstep. By yesterday, as the paralysed East Coast of the United States dug out from South Carolina to Massachusetts, there was much hand-wringing among weather forecasters over their misreading of the size, intensity and course of the storm. For a second day, the federal Government remained closed in Washington. So, too, did hundreds of schools and businesses. Airlines struggled back into operation, but delays were horrendous. The new IBM supercomputer, running an array of programmes said to be the world's best for weather forecasting, had digested reams of data from balloons, satellites, ships and ocean buoys on Monday. At 3.30pm, the National Weather Service announced: "A 40 per cent chance of light snow. Total accumulation: less than one inch." It was not until 10pm that forecasters issued their first winter storm warning, but by then it was too late. Most Americans get their weather forecasts from the early evening television news.

Snow and 60mph Winds Set to hit Britain in New Arctic blast

December 16, 2011

<http://www.mirror.co.uk/news/top-stories/2011/12/16/snow-and-60mph>

BBC Look North weatherman Paul Hudson said: "All I can say is it went wrong. We have Supercomputers and we ran the information through them 52 times and all 52 solutions did not predict the snow."



Troubled Times



Whirlpools

In February, 2000, ZetaTalk predicted that [During 2000](#) whirlpools in the ocean would shock those who had never seen such a thing.

We also predict that there will begin to be reports of whirlpools in the oceans that will startle those who have never seen such a thing in the oceans.

ZetaTalk: [During 2000](#), written Jan 12, 2000

In May, 2001, a report of just such a shocking and unexplained whirlpools off San Diego hit the news. On Dec 3, 2007 a whirlpool off the coast of Taiwan took an entire ship down, suddenly. The first such reported incident. On July 2, 2009 a whirlpool developed off shore from La Jolla, CA. In September 2, 2010 a giant whirlpool developed [offshore from Okinawa](#).



Weird Whirlpool Just Off San Diego Shoreline

May 9, 2001

It can best be described as a giant whirlpool caught on videotape off Black's Beach. A man flying in a biplane shot the footage with his home video camera and it is extraordinary to say the least. Oceanographers say they've never seen anything like it. But at least one expert says an unidentified underwater object could have caused the weird whirlpool. ... Saturday, February 3, 2001 - 1100 feet above Black's Beach. Mike Runion is a passenger in an open-air biplane on a sightseeing tour when he sees something he's never seen before. The pilot circles around for another look and there it is: a huge, spinning whirlpool.

Whirlpool May Have Sucked Down Freighter

Dec 3, 2007

A freighter may have sunk in a whirlpool last week, dragging down as many as 27 crew members within five minutes after the ship was struck by a giant wave off Taiwan. The eddy between currents about 35 nautical miles east of Taiwan's northern tip is suspected of sinking the ship, which was carrying iron ore and an Indonesian crew of 28. One crew member was found alive, clinging to his life vest, a day after the freighter went down. "A whirlpool effect is possible", said Taiwan Coast Guard spokesman Hsieh Ching-ching after hearing the survivor's account.

Weird Rip Currents Spook La Jolla Divers

July 2, 2009

<http://www.nbcsandiego.com/sports/more/Weird-Rip-Currents-Spook-La-Jolla-Divers.html>

A strange current pulled divers off the La Jolla shore into a tornado-like swirl. Now, lifeguards are

warning scuba divers about the dangerous currents in the waters off La Jolla Shores. Several groups of divers reported the unexplained undertow around 7:30 a.m., according to officials. The divers said the underwater currents were pushing down and to the south about 30 feet underwater. Even experienced divers said they had to fight to get to the surface and that it was unlike anything they had ever experienced. Lifeguards and experts at the Scripps Institution of Oceanography were unable to explain the unusual current.



Troubled Times



Work Camps

On Oct 26, 2002 to Apr 12, 2006, the Zetas have warned that the Bush administration intended to establish work camps that would be virtual slave camps.

Governments will be heard from after tragedies, disasters, and when bad news must be announced and can no longer be denied or suppressed. They will announce solutions, work camps or refugee camps.

ZetaTalk: 2003 Approach, written Oct 26, 2002

Another plan was to create work camps, to transfer strong workers there with job offers, and we have warned against this early on.

ZetaTalk: Plan Tests, written Feb 15, 2003

The point of this? To have a worker base, a slave labor base, that is young and healthy and unlikely to complain. Early plans for a draft, during the days going into the Iraq War, called for men and women, 18-35, with many skills. This was to be a worker base, not a soldier base. Selecting out this base into camps, along with healthy and compliant unskilled workers from Mexico, would form the slave camps of the future.

ZetaTalk: Guest Worker Program, written Apr 12, 2006

On Apr 27, 2006 the news reported that Halliburton had received a no-bid contract to develop such camps on military bases.

Who is to be Detained?

Apr 27, 2006

<http://jimhightower.com/>

Halliburton has been granted a \$385 million contract for a most unusual project: building a network of detention centers across our country. Up to 5,000 people could be "detained" and held in each of these centers, which are to be run by homeland security authorities and possibly located on unused military bases. So, why does America suddenly need to spend a third-of-a-billion dollars to establish a new mass prison complex in our country? The feds and Halliburton cryptically say that the detention centers could be needed for "some kind of mass migration" or for "the rapid development of new programs." When asked what is meant by the ominous term, "new programs," a Halliburton spokeswoman said she could provide no additional information. Another curious aspect is that the Bushites refer to this as a "contingency contract," saying that the detention centers might never be built, but that Halliburton will have the cash and authority to move quickly if and when given the go-ahead. But who is to be managed, and in support of what policy?



Troubled Times



Worldwide Infertility

Prior to July, 1995 ZetaTalk stated that [Worldwide Infertility](#) was being affected by PCB's that had leaked and spread into the water and food chain; on August, 1996, articles about the *Endocrine Disruptor* PCB appeared, followed by more such news.

[Endocrine Disruptors, Pesticides](#)

Pesticides and their possible link to endocrine (hormone) disruptors have been in the news since the book *Our Stolen Future* by Theo Colburn, John Peterson Myers, and Dianne Dumanoski was published. Vice President Al Gore has compared the book with Rachel Carson's *Silent Spring*, which warned against the threats posed by pesticides like DDT. Gore writes in the book's foreword: *Our Stolen Future* takes up where Carson left off and reviews a large and growing body of scientific evidence linking synthetic chemicals to aberrant sexual development and behavioral and reproductive problems." Research has suggested that the average male sperm count has plunged by almost a half in the past 50 years. Synthetic chemicals such as pesticides, plastics, detergents, and toiletries are suspected as interfering with the human hormone system.

A study from Tulane University has added to the controversy. A report in the journal *Science* found that in some cases the combinations of chemicals would be additive. John McLachlan of Tulane University said, "We found in some cases that one plus one equals a thousand." Although chemicals in the environment are much less potent than natural estrogens, the effects of combinations of the compounds were 10 to 1,600 times more potent than the individual compounds in activating estrogen receptor-mediated transcription. Lynn Goldman, Chief of the USEPA Office of Prevention, Pesticides, and Toxic Substances said the McLachlan study will have to be verified in other labs. Other scientists also said that the work will have to be double-checked by other researchers.

The USEPA has taken several steps to address this issue. The American Crop Protection Association and the Chemical Manufacturers Association stated, "As EPA decides how to address endocrine disrupting chemicals, remember pesticides already are subjected to much testing." The USEPA said in a background paper (*EPA Activities on Endocrine Disruptors*) that "they believe the potential implications of endocrine disruptors for our children and for our future are serious enough to warrant the Agency taking prudent, preventive steps, without waiting for the research to be complete." Although much more research needs done on this issue, it will play a role in future pesticide rules and regulations. The Food Quality Protection Act of 1996 added provisions for endocrine testing to current law.

(Adapted from *Sun Times*, June 7, 1996; *Science*, June 7, 1996; *U.S. News & World Report*, March 11, 1996; *P&TCN*, July 17, 1996; *EPA Background Paper: EPA Activities on Endocrine Disruptors*; and EPA email messages)

Sperm on the Wane: Scientists
Montreal Gazette, June 22, 2001

Scientists from around the world are alarmed by a dramatic increase in genetically damaged human sperm

- a trend that is not only causing infertility in men, but also childhood cancers in the offspring of those who can reproduce.



Troubled Times



Yellowstone

In January 12, 2000 ZetaTalk stated on the Sightings radio show that a fault line up into the Sierras could cause [Yellowstone](#) caldera to erupt. On February 3, 2000 the *BBC* reported on this potential.

Supervolcanoes (Yellowstone)

Excerpt : *BBC2 Horizon Television Programme*, February 3, 2000

NARRATOR (SINÉAD CUSACK): Yellowstone was on a 600,000 year cycle and the last eruption was just 600,000 years ago. Yet there was no evidence of volcanic activity now. The volcano seemed extinct. That reassuring thought was about to change. There was another geologist who was fascinated by Yellowstone's volcanic history. Like Bob Christiansen, Professor Bob Smith has been studying the Park for much of his career. In 1973 he was doing field work, camping at one end of Yellowstone Lake.

ROBERT SMITH: I was working at the south end of this lake at a place called Peal Island. I was standing on the island one day and I noticed a couple of unusual things. The, the boat dock that we normally would use at this place seemed to be underwater. That evening as I was looking over the expanse of the south end of the lake I could see trees that were being inundated by water. I took a look at these trees and they were be, being inundated with water a few inches, maybe a foot deep and it was very unusual for me to see that because nowhere else in the lake would the lake level have really changed. What did it mean? We did not know.

NARRATOR: Smith commissioned a survey to try to find out what was happening at Yellowstone. The Park had last been surveyed in the 1920s when the elevation, the height above sea-level, was measured at various points across Yellowstone. 50 years later, Smith surveyed the same points.

SMITH: The idea was to survey their elevations and to compare the elevations in the mid-70s to what they were in 1923 and the type of thing that we did is to make recordings at a precision level of, of a few millimetres.

NARRATOR: The two sets of figures should have been similar, but as the survey team moved across the Park, they noticed something unexpected: the ground seemed to be heaving upwards.

SMITH: The surveyor said to me there's something wrong and he said it's not me, it's got to be something else, so we went through all the measurements again trying to be very careful and the conclusion kind of hit me in the face and said this caldera has uplifted at that time 740 millimetres in the middle of the caldera.

NARRATOR: As the measuring continued, an explanation for the submerged trees began to emerge. The ground beneath the north of Yellowstone was bulging up, tilting the rest of the Park downwards. This was tipping out the south end of the lake inundating the shoreside trees with water. The vulcanologist realised only one thing could make the Earth heave in this way: a vast living magma chamber. The Yellowstone supervolcano was alive and if the calculations of the cycle were correct, the next eruption was already overdue.

ROBERT CHRISTIANSEN: Well this gave us a real shiver of nervousness if you will about the fact that we have been through this 600,000 year cycle and that the last eruption was about 600,000 years ago.

SMITH: I felt like telling people, that is we basically have on our hands a giant.



Troubled Times



Table of Distances

Distance Table

(Based on Earth passage Date May 15, 2003)

Weeks to go	Apr. Date	% of Distance from mid-sun	Dist to Earth in S-P units	Dist in B. mls.
182	11/7/99	0.2787	9.3106	34.216
169	2/7/00	0.4243	9.29698	34.166
156	5/7/00	0.6460	9.2762	34.09
143	8/7/00	0.9833	9.24465	33.974
130	11/7/00	1.496	9.19665	33.797
117	2/7/01	2.278	9.1234	33.528
104	5/7/01	3.468	9.012	33.119
91	8/7/01	5.2798	8.8424	32.495
78	11/7/01	8.0370	8.58428	31.547
65	2/7/02	12.234	8.1913	30.103
52	5/7/02	18.6238	7.593147	27.904
39	8/7/02	28.3499	6.68259	24.558
26	11/7/02	43.155	5.2965	19.464
13	2/7/03	65.693	3.1865	11.71
9.7	3/2/03	73.0869	2.494*	9.1665
5	4/2/03	85.0774	1.37176	5.0412
3	4/16/03	90.7587	0.83987	3.0865
2	4/23/03	93.74	0.5607	2.060
1	4/30/03	96.8195	0.33093	1.216
0	5/7/03	100.00	-.02529	-.0929

* This is the distance in [Sun / Pluto] units from Earth orbit to the deflection point. Add the distance from Earth to the Sun in S-P units (.025293) to get the original total of 1.2598 times the orbital distance of Pluto from the Sun to the deflection point.

The equation proceeds as follows:

1.2598 * Pluto's orbit * 2 = S-P units conversion distance from Sun to deflection point
2.519 S-P units = 2.494 [distance to 12th planet at 9.7 weeks] + **.025293** [Earth to Sun]
2.519 = 2.494 + 0.25293
2.519 = 2.519 checks

Column Explanations:

Weeks to go: The amount of weeks prior to initial incoming Earth orbit passage(imaginary circle at a

distance of 92.95 million miles from the Sun.

Apr. Date: Approximate date in month/day/year to reference the location of the 12th planet.

% of Distance: Percentage of the total distance traveled from the mid point between the Sun and the Dark One,(the unlit star), towards the Sun.

Distance to Earth S-P: The distance from the 12th planet to Earth orbit on the near side of the Sun in S-P units where 1 equals the distance between the Sun and Pluto or 3,675,000,000 miles.

Distance in B. Mls.: The distance from Earth orbit to the 12th planet in billions of miles.

Offered by [Robert](#).



Troubled Times



Perl Program

The source code of the program:

```
#!/usr/bin/perl -w

use strict;

my %counts;
my $state = 0;

while (<>) {
if (/^\d\d\d\d/) {
$state = 1;
}
next if $state == 0;
my @eqdata = split " ", $_;

my ($year) = $eqdata[0] =~ /(\d\d\d\d)/ or $state = 0, next;
my $magn = $eqdata[5];
my $exponentiated = 10 ** $magn;

$count{ $year }{'cnt'}++;
$count{ $year }{'exp'} += $exponentiated;
$count{ $year }{'pwr'} += $exponentiated ** 2;
}

foreach (sort keys %counts) {
my $c = $count{$_}{'cnt'};
printf "%4d: %2d q.; pwr. %8.0fG, exp. %8.0fk, magn. %3.2f\n",
$_,
$c,
$count{$_}{'pwr'} / 1000000000 / $c,
$count{$_}{'exp'} / 1000 / $c,
log($count{$_}{'exp'} / $c) / log(10);
}
}
```

Offered by [Antti](#).



Troubled Times



Shooting

year	cnt		pwr		exp		avg.mag.
1970:	36	q. ; pwr.	244911G,	exp.	9926k,	magn.	7.00
1971:	30	q. ; pwr.	1131942G,	exp.	17388k,	magn.	7.24
1972:	22	q. ; pwr.	202473G,	exp.	10628k,	magn.	7.03
1973:	26	q. ; pwr.	247645G,	exp.	10964k,	magn.	7.04
1974:	29	q. ; pwr.	181943G,	exp.	10245k,	magn.	7.01
1975:	36	q. ; pwr.	805044G,	exp.	16834k,	magn.	7.23
1976:	39	q. ; pwr.	671985G,	exp.	13860k,	magn.	7.14
1977:	25	q. ; pwr.	509002G,	exp.	14866k,	magn.	7.17
1978:	29	q. ; pwr.	354497G,	exp.	13287k,	magn.	7.12
1979:	26	q. ; pwr.	491572G,	exp.	13781k,	magn.	7.14
1980:	28	q. ; pwr.	307230G,	exp.	9419k,	magn.	6.97
1981:	19	q. ; pwr.	263482G,	exp.	10866k,	magn.	7.04
1982:	7	q. ; pwr.	404478G,	exp.	12575k,	magn.	7.10
1983:	18	q. ; pwr.	34852G,	exp.	5313k,	magn.	6.73
1984:	7	q. ; pwr.	161617G,	exp.	8361k,	magn.	6.92
1985:	16	q. ; pwr.	64135G,	exp.	7117k,	magn.	6.85
1986:	7	q. ; pwr.	581962G,	exp.	12339k,	magn.	7.09
1987:	23	q. ; pwr.	93869G,	exp.	7146k,	magn.	6.85
1988:	12	q. ; pwr.	75214G,	exp.	6532k,	magn.	6.82
1989:	9	q. ; pwr.	36942G,	exp.	5510k,	magn.	6.74
1990:	12	q. ; pwr.	91049G,	exp.	7316k,	magn.	6.86
1991:	13	q. ; pwr.	49578G,	exp.	5884k,	magn.	6.77
1992:	25	q. ; pwr.	108200G,	exp.	7639k,	magn.	6.88
1993:	24	q. ; pwr.	45992G,	exp.	6151k,	magn.	6.79
1994:	23	q. ; pwr.	771921G,	exp.	12952k,	magn.	7.11
1995:	51	q. ; pwr.	691405G,	exp.	13936k,	magn.	7.14
1996:	44	q. ; pwr.	993551G,	exp.	15182k,	magn.	7.18
1997:	35	q. ; pwr.	308523G,	exp.	10316k,	magn.	7.01
1998:	30	q. ; pwr.	685584G,	exp.	12262k,	magn.	7.09
1999:	35	q. ; pwr.	277022G,	exp.	11752k,	magn.	7.07
2000:	37	q. ; pwr.	777600G,	exp.	15096k,	magn.	7.18
2001:	20	q. ; pwr.	1235848G,	exp.	20372k,	magn.	7.31 (to July 17, 2001)

Offered by [Antti](#).



Troubled Times



China

Albino Wildlife in Shennongjia Puzzles Zoologists

Xinhua News Agency, March 9, 1998

A growing number of albino animals have been observed in Shennongjia nature reserve in central China, puzzling zoologists about the cause. In the dense forest, people have reported seeing bears, snakes and river deer with white skin or fur. Witnesses said they have even seen white crows. Zoologists confirmed that wildlife workers have seen and captured a white snake, a white turtle and white river deer during two major field surveys in the region between the late 1970s and mid 1980s. Explorer Zhang Jinxing also said he encountered albino animals when he stayed in Shennongjia forest areas conducting field research for three years in the early 1990s.

Tang Mingliang, professor of the school of biology at Wuhan University, said no significant differences have been observed in the habits and characteristics between these albino animals and their peers. The white snakes, for example, are often seen in the company of green ones at brookside in the deep mountains. The white bear is an omnivorous animal like the brown bear and has similar habits such as licking its paws, according to Tang, who has visited Shennongjia a dozen times. He said so far Chinese zoologists have no convincing explanations for the phenomenon. He said it might be due to special geographic position of Shennongjia Mountain where some wildlife have survived since the fourth glacier period. Another possibility is that it is a sort of atavism, or throwback to an earlier time, Tang said.



Troubled Times



Australia

Rare White Croc Appears in Australia

Discovery News, Dec 7, 1999

A rare white saltwater crocodile swam out of the mangrove swamps of Australia's Cape York Peninsula one night last month just as wildlife officers were conducting a survey of the area. The rare reptile surfaced in the Wenlock River, north of the city of Weipa. Queensland Parks and Wildlife Service crocodile researcher, Mark Read, says, "This is the first white one I've seen. They are a pretty rare beastie." Read says he believes that the white estuarine crocodile was the first ever to be found in Queensland, and perhaps in all of Australia. The two-year-old female crocodile was about 35 inches (90 cm) long. The wildlife experts captured, photographed, measured and tagged her before releasing the reptile into the river. She was fitted with a tracking device that will enable the biologists to monitor her location in the river. Read reports that he would visit the river again one night soon to check on the white crocodile. "We look for crocs at night because their eyes shine bright red and they are easier to spot."



Troubled Times



North America

A broadcast on french TV tonight [Jan, 2000], sort of *National Geographic* stuff as you know it. They stated that about 10% of the supposedly black bears in Canada are now being born white, for an unknown reason.

Offered by [Veronique](#).

Colorless in a World of Color

By Peter Friederici, *National Wildlife Magazine*, Aug./Sept. 2000

Prairie dogs

Last summer in west-central Wyoming, Dick Baldes saw something extraordinary. A resident of the expansive Wind River Indian Reservation, he was accustomed to seeing white-tailed prairie dogs, which range in the area's shortgrass prairies. But he had never seen prairie dogs like these: about a dozen snow white, pink-eyed individuals scattered amid the hundreds of ordinary, earth-colored animals. Baldes had worked for year as a biologist for the U.S. Fish and Wildlife Service and he knew this sighting was rare. So he photographed and videotaped the white creatures for three weeks. Then, seemingly overnight, the animals vanished. It wasn't too difficult for Baldes to guess why. "From a distance you can't see the brown prairie dogs, but the white ones stood out like sore thumbs," he says. "They must have been pretty vulnerable to aerial predators like hawks and eagles."

Toads

Lack of normal pigmentation has also been seen occasionally en masse in amphibians such as toads and salamanders. Last summer, Oregon biologist Jay Bowerman found thousands of unusually pale individuals in a population of western toad tadpoles. "Approximately 1 percent of the tadpoles appeared to be virtually white," he says. "They appeared to lack any black or dark pigmentation." In the Oregon lake where Bowerman studied the creatures, the normal-colored tadpoles continued to develop and completed metamorphosis, while the white tadpoles did not progress beyond the early leg stage. The scientist captured some of the white tadpoles and observed that they remained healthy even though they did not transform into adulthood. He surmises that the phenomenon could have resulted from a genetic mutation that disrupted the production of both hormones and pigments needed for metamorphosis. Eventually, the white tadpoles in the lake disappeared, while those Bowerman kept in an aquarium lived on, leading him to suspect that they were far easier for predators to find than the darker tadpoles.

Chernobyl and albinism (radiation link)

In the Ukraine, where the Chernobyl nuclear plant accident caused large-scale radioactive contamination, barn swallows subsequently showed a much higher rate of partial albinism than other, uncontaminated populations. The rate of partial albinism among swallows near Chernobyl jumped from 0 percent before 1986 to 15 percent in 1991.



Troubled Times



White Moose

White Moose Off-limits to Idaho Hunters

Oct 18, 2002

<http://www.danielnpaul.com/AlbinoMoose.html>

White moose off-limits to Idaho hunters

October 18, 2002

A group of eastern Idahoans smitten by a white moose have persuaded the state to make the animal off-limits to hunters. Steve Huffaker, director of the Idaho Department of Fish and Game, made an emergency order last week making it illegal to shoot the albino cow moose, which has been spotted with a black calf on private land in southeastern Idaho. Albino moose have been showing up in the area for several years, said Dale Toweill, trophy species manager for the fish and game department. Normally, only 1 in 100,000 moose have the albino trait, which is recessive. But the gene appears to run in the herd in southeastern Idaho, where Toweill theorizes the probability of an albino moose may be 1 in 10,000.



Troubled Times



Pink Dolphin

<http://www.foxnews.com/story/0,2933,287938,00.html>

Rare Pink Dolphin Seen in Louisiana Lake

July 03, 2007

A charter-boat captain from Lake Charles, La., photographed a rare pink dolphin a couple of weeks ago in Calcasieu Lake, an estuary just north of the Gulf of Mexico in southwestern Louisiana. According to Calcasieu Charter Service's Web site, Capt. Erik Rue was on the lake June 24 with fishing customers when five dolphins came into view - four normal-looking gray ones, and a bright pink one that appeared to be an adolescent. "It appears to be an uncanny freak of nature, an albino dolphin, with reddish eyes and glossy pink skin," the Web site reads. "It is small in comparison to the others it is traveling with and appears to be a youngster traveling with mama."

There is a species of pink dolphin that lives in the Amazon River in South America, but this one appears to be a more common bottlenose dolphin.



Troubled Times



Pink Fawn

Forwarded via email, from Rhinelander, Wisconsin, date unknown but received January 2008.

I saw this lil' feller run out in front of a car - thought it was a lost baby goat. Stopped to get it, and wow! A real albino Whitetail Deer. Just hours old, but doing fine. No Momma deer around. Another car nearly hit it in front of me. Well, he is the neatest thing any of us ever saw. And such a "freak of nature", that only 1 in more than a million are even born. He took his bottle of food, followed us around the house, doing great. He was snow white, pink eyes, ears, nose and hooves. Kids called him powder. He was so small. That is my shoe lying beside him.



Troubled Times



White Orca

White Killer Whale Spotted Near Aleutian Isle

March 06, 2008

Scientists aboard the NOAA research vessel Oscar Dyson in the North Pacific have sighted a creature of great rarity and even myth: a white whale. The white killer whale was spotted with its pod about two miles off Kanaga Volcano, part of Alaska's Aleutian Islands, on Feb. 23.



Troubled Times



Drudge Report

From: drudge@drudgereport.com (DRUDGE REPORT)

To: DRUDGE@drudgereport.com

Date: 97-12-03 15:46:19 EST

XXXXX Drudge Report Final XXXXX Tues Dec 02 1997 22:45 EST XXXXX Air Force Lt Colonel: Evidence Raises Serious Questions in Ron Borwn Death

Newspaper Report Starts Commotion

A US Air Force Lt. Colonel has told investigative reporter Chris Ruddy in Wednesday's *Pittsburg Tribune-Review*: Secretary Ron Brown was found with an "apparent gunshot wound" to his head.

In Ruddy's report: According to Lt. Col. Steve Cogswell, a doctor and deputy Armed Forces medical examiner with the Armed Forces Institute of Pathology, and once member of the Brown plane crash investigation, officials who examined Brown's body at Dover Air Force base shortly after the April 3, 1996 Croatia crash discovered "essentially... **Brown had a .45 inch inwardly beveling circular hole in the top of head, which is... the description of a .45-caliber gunshot wound.**" **The wound was documented, photographed, and X-rayed, in a medical examination at Dover Air Force base, writes Ruddy.**

The *Tribune-Review* is in possession of numerous crash, medical examination and other photos that purport to show Brown, the *Drudge Report* can confirm. One photo, to be published in the paper, shows a hole consistent with a .45 caliber gunshot wound, it will be alleged. Cogswell claims that one photo-X-ray even shows a possible "lead snowstorm" of metal fragments in Brown's head.

Cogswell tells Ruddy, on the record, for full attribution, that incriminating X-rays were destroyed shortly after the examination of Brown, disappearing from the case file. Ruddy backs up Cogswell's claims with other sources present at Dover, as well as independent experts who have examined photos of the body and photos of the X-rays.

"Even if you safely assumed accidental plane crash, when you got something that appears to be a homicide, that should bring everything to a screeching halt," **Cogswell said, arguing that the finding of the apparent gunshot should have triggered the Presidential Assassination Statute - which covers Cabinet members like Brown - and immediately prompted an autopsy.** Ruddy reveals in his detail drenched story that no autopsy was conducted on Brown.



Troubled Times



Conspiracy Archive

The Conspiracy Archive

Why would anyone want to murder Ron Brown? Brown was up to his neck in major scandals. At the time of his murder, Brown was under investigation by a special prosecutor in the Justice Dept., the FDIC, the Congressional Reform and Oversight Committee, the FBI, the Energy Dept., the Senate Judiciary Committee, and even his own Commerce Dept. Inspector General.

1. How did North Vietnam recently get us to drop our trade embargo against them so suddenly? Easy. As a Vietnamese businessman and official later revealed to the press, the Communist government paid Brown \$700,000 to do it. The money went into a Singapore bank account, the embargo fell, and Clinton squashed a feeble FBI attempt to investigate. He and Brown also neutralized a federal grand jury probe later.
2. The 1/23/95 U.S. News & World Report broke the news that Brown had bought a \$360,000 townhouse for his girlfriend, Lillian Madsen, a prominent political player and whorehouse madam from Haiti.
3. Brown used to receive \$12,500 a month as the PR flack for Baby Doc Duvalier, the much-loathed dictator of Haiti. Brown also managed Baby Doc's \$50 million investment fund, most or all of which is now in Vietnam firms.
4. Brown okayed the sale of a new U.S. gas turbine engine to China for use in its cruise missiles.
5. Brown irked Congress and most of Europe by acting as point man for Clinton to bring Iranian Muslims and their weaponry into the Bosnia war.
6. Janet Reno appointed Daniel Pearson to prosecute Brown in a grand jury probe of an Oklahoma gas company's large money payments to Brown's son, Michael. The president of the company told a Tulsa grand jury that the money was to be routed to Ron Brown, who was expected to "fix" a big lawsuit for the company. When Reno gave Pearson blanket permission to investigate anything, Brown angrily demanded that Clinton force her to withdraw Pearson. When Clinton said he couldn't comply, Brown angrily told Clinton he wasn't going to take the rap. He was going to finger Bill and Hillary instead. From that point on, Brown was dead. Like Vincent Foster before him, he knew too much. More than any man in Washington, he knew where all the money went for the payoffs, bribes, scams, money laundering, cover-ups, participation fees, hush money, and side deals--all the way from one-man operations to vast multinational trade treaty fixes.



Troubled Times



JP Morgan

There's No Exit For Morgan-Chase's \$29 Trillion Derivative Exposure

Is J.P. Morgan Chase too Big to Fail?

This question is admittedly a bit premature. But you can bet this concern will start going around in the next few weeks if the giant New York bank continues its recent streak of bad luck. Back in early December this column speculated that Global Crossing Ltd. would be the next Enron, bitten by the bankruptcy bug. That happened this week as Global entered a pre-packaged bankruptcy with a couple of Far East firms. In that December column I also speculated on the much more important aspect of Global Crossing's problems - that J.P. Morgan Chase, Citicorp and BankAmerica were each lead bankers for one part or another of Global's borrowings. Global is said to have spent \$15 billion in five years building a fiber-optic cable network around the world. Those banks largely got the money together, including putting in a lot of their own. Even though other banks were lured in by Global Crossing's pitch, the focus will be on J.P. Morgan Chase mainly because the company has been bathing in misfortune lately - having been heavily involved in Kmart and Enron as well. The Chase part of the organization, meanwhile, made heavy and risky bets in the dot.com bubble a couple years ago. And we all know how that turned out. Those losses were one of the reasons Chase ended up in a merger with J.P. Morgan. And if corporate failures weren't enough, J.P. Morgan Chase also was heavily involved in the banking situation in Argentina. Could all of this lead to a big problem? Yes. Could all of this lead to - just perhaps - the failure of J.P. Morgan? Probably not, but only because the giant banking conglomerate is too big for Washington to allow it to fail.

PNC Bank this week shocked Wall Street by increasing its losses, mainly because of deficits that lay hidden off its main books. PNC, unlike J.P. Morgan Chase, isn't that important to the U.S. financial system. But the fears are similar. Charles Peabody, one of Wall Street's best banking analysts, agrees that J.P. Morgan Chase will be preserved by the government, if it ever comes to that. "But that doesn't mean it won't be a \$10 stock." J.P. Morgan's shares were selling at \$33 yesterday. But that's down from over \$40 in December. The stock had been this low before: during the terror scare in September. Although it still recommends the stock, Merrill Lynch this week reduced J.P. Morgan Chase's forecast because it felt expenses would be higher than expected. But what has the pessimists worried, very worried, is that some banks - think PNC - haven't been forthright in their financial reporting. Part of this is just a general concern about bank accounting, but it also has something specific to do with J.P. Morgan Chase itself. Yesterday, for instance, J.P. Morgan Chase told Argentine authorities that a bank it co-owns down there may have broken the law by illegally moving \$260 million overseas as that country's troubles increased. Peabody, who works at a investment boutique called Ventura Capital, recently laid it all out for his clients. "I remain convinced that J.P. Morgan Chase will emerge as the poster child for what ails this economy - excessive leverage, financial engineering, aggressive accounting and conflicted interests."

Card-House of Morgan

It is hardly a coincidence that bullion prices zoomed to \$300 on the day that J.P. Morgan Chase shares came crashing through their September lows. As I wrote here the other day, Morgan's problems could eventually dwarf those of Enron. They are bound up together right now, to the extent Morgan - the largest lender in the world to U.S. firms - supposedly has Enron exposure that exceeds \$2.3 billion. However, as my recent note here suggested, the banking giant's risk in the derivatives markets could be considerably

higher, since it holds leveraged debt paper with a notional value exceeding \$30 trillion. You'd think things could not get much scarier than that, but on Tuesday - with gold prices soaring - they did. As it happens, Morgan is a big player in the gold market, mostly by way of bullion loans that work best when gold prices are weak.



Troubled Times



Egyptian

[Egyptian Relics in Australia](#)

By Paul White, extract from *Exposure Magazine*

Vol 2 No.6, 1996, printed in Australia.

- There is approx 2 hrs drive North of Sydney a rocky outcrop that contains c. 250 Egyptian hieroglyphics, etched into 2 opposing wall surfaces.
- The photographs of some of these glyphs are here.
- The carvings have apparently been part of the local folklore of the area for nearly a century with reports of people who sighted them as far back as the early 1900's.
- The Egyptologist Ray Johnson, a translator for the Museum of Antiquities in Cairo has translated what is described as an Archaic, and until recently, little known and early dynastic style, from the 3rd Dynasty, as described in the Article. The hieroglyphic writing is in the most ancient style of the Egyptians, with many of the glyphs and pictograms bearing a striking resemblance to early Phoenician and Sumerian forms.
- There are other sites in Australia; Gympy and Cairns boast artifacts discovered in 1910; small stone Egyptian scarabs inscribed with hieroglyphs
- A hand made glass amulet, in a stretched pyramid shape with Egyptian characters on the four sides, was found outside the northern NSW town of Kyogle in 1983. It was dated by the Department of Mines at 5,000 years old.



Troubled Times



Fortean Times

Elusive Bigfoot

[Fortean Times](#), Issue 93

We still don't know for sure that the elusive North American Bigfoot exists, but if it is ever proved, the implications are startling. To those who believe in its reality, Bigfoot (a.k.a. Sasquatch) is a hairy man-beast, 7-9ft (2.1-2.7m) tall, possibly a kind of Gigantopithecus survival. To the disbelievers, all sighting reports are lies or misidentifications and all photographs are hoaxes. In the event, reports and photographs are just anecdotal evidence and only an independent scientific examination of an actual Bigfoot is going to settle the matter. Close encounters between the creature and armed men are rare and it has, to date, proved difficult to track and kill. The opinion also exists that Bigfoot ought to be left in peace, for if its existence were proved, its isolated life would be disrupted forever.

There are well over 1,000 recorded sightings of Bigfoot going back nearly 200 years. It has been seen in all parts of the North American continent, but mainly in the Pacific North-West: in British Columbia, Oregon, Washington State and California. Sightings continue to be reported today, but photographs and other tangible evidence are rare. The most convincing and convenient proof of Bigfoot's existence would be the discovery of a carcass - but that's not likely. Any wildlife remains are rare finds in the North American forest where scavenging creatures can reduce something as substantial as a dead moose to just toenails, teeth and antlers in a few days. And after a week even those tail-ends are usually gnawed away. The only dead wildlife that most people see are fresh victims of collisions with vehicles. So far, Bigfoot has avoided becoming a roadkill. You are more likely to get a glimpse of Bigfoot in your rear-view mirror than in your headlights. Bigfoot researchers say that drivers consistently report rear-view sightings - usually of something large hunched down at the roadside, rising to cross the road after the vehicle passes. The evidence suggests that Bigfoot is canny enough to stay out of traffic as well as avoiding definitive proof of its existence.



Troubled Times



New Scientist Article

Space Storm Alert: 90 Seconds from Catastrophe

March 23, 2009

<http://www.newscientist.com/article/mg20127001.300-space-storm-alert-90-seconds-from-catastrophe.html?full=true>

It is midnight on 22 September 2012 and the skies above Manhattan are filled with a flickering curtain of colourful light. Few New Yorkers have seen the aurora this far south but their fascination is short-lived. Within a few seconds, electric bulbs dim and flicker, then become unusually bright for a fleeting moment. Then all the lights in the state go out. Within 90 seconds, the entire eastern half of the US is without power. A year later and millions of Americans are dead and the nation's infrastructure lies in tatters. The World Bank declares America a developing nation. Europe, Scandinavia, China and Japan are also struggling to recover from the same fateful event - a violent storm, 150 million kilometres away on the surface of the sun. It sounds ridiculous. Surely the sun couldn't create so profound a disaster on Earth. Yet an extraordinary report funded by NASA and issued by the US National Academy of Sciences (NAS) in January this year claims it could do just that.

The grids were not built to handle this sort of direct current electricity. The greatest danger is at the step-up and step-down transformers used to convert power from its transport voltage to domestically useful voltage. The increased DC current creates strong magnetic fields that saturate a transformer's magnetic core. The result is runaway current in the transformer's copper wiring, which rapidly heats up and melts. This is exactly what happened in the Canadian province of Quebec in March 1989, and six million people spent 9 hours without electricity. But things could get much, much worse than that. The most serious space weather event in history happened in 1859. It is known as the Carrington event, after the British amateur astronomer Richard Carrington, who was the first to note its cause: "two patches of intensely bright and white light" emanating from a large group of sunspots. The Carrington event comprised eight days of severe space weather. There were eyewitness accounts of stunning auroras, even at equatorial latitudes. The world's telegraph networks experienced severe disruptions, and Victorian magnetometers were driven off the scale.



Troubled Times



Ohio

Explosive sound shatters quiet of Bloomville

Toledo Blade, Jan 4, 2000

Some residents here were ready to change their town's name to "BOOMville" early yesterday. A mysterious explosion shook the Seneca County village and startled residents just after midnight. So far, the cause of the boom is unexplained. Officials are investigating. Ear witnesses said the night was quiet when suddenly - Ka-Boom! - a single explosion was felt and heard by residents within a mile-wide circle. Resident Nicole Phillips said it rattled her whole house. "Scary. It was very scary," Rene Bernal, another resident, said. "It felt like our house was hit by something. The walls shook. "My daughter, Julia, was on the phone, and she came running out of her room yelling that she thought something was coming through her walls." Mrs. Bernal's husband, Tim, ran outside. He and a neighbor searched but found nothing. The Bernals were among the many who called police, prompting Chief Howard Minzer to check the entire village on foot. "He found no flashes, no power outages, no fires," said police Officer Mark Lawson.

Officer Lawson had just arrived home when he felt the blast at his midtown residence. "It was a very, very loud explosion, definitely somewhere in town," he said. "But nothing is damaged in the village, and no one has reported anything. "We have no idea what it could have been. It's a mystery." Col. A.J. Feucht, commander of the Ohio Air National Guard 180th Fighter Wing, based at Toledo Express Airport, said no flights by supersonic or any other aircraft were in the air at that time.

Neighborhood Rattled By Explosion (in Canton, Ohio)

By Lori Monsewicz, *Repository*, April 29, 2000

The glow of a late-night TV screen faded fast just after midnight Wednesday when a loud blast and an orange glow momentarily filled the Fourth Street end of De Mario Court NW. "I thought it was a bomb," said Chester H. Welsch, who had been watching television with his sister, brother and a nephew at 2538 Fourth St. NW when the single boom occurred at 1:05 a.m. "A big orange flash come down there and knocked all the windows out." On Friday afternoon, neighbors still didn't know the source of the noise, and neither did police, who took reports from 2538 and 2542 Fourth St. NW. Residents there said electric company employees called by police came out and checked a nearby transformer located on a utility pole at the intersection, but detected no trouble. The homes sustained no outages. Tom Lukowski, Canton district manager for the American Electric Power Co., said Friday that he could find no reports of any problems in the 2500 block of Fourth Street NW from Tuesday through Thursday. "I don't know who's reporting what, but we can't confirm anything at this point," he said.

Still neighbors are at a loss trying to figure out what caused the blast that shook their homes and damaged belongings inside. Two windows in each house on either side of De Mario at Fourth Street were shattered. Wall hangings on 2538 fell to the floor and broke. Chrissy Bailey, who lives across De Mario at 2542 Fourth St., said everything fell off her fireplace. "It was loud; it was really loud. I'm not sure how to explain (what the sound was like)," she said, adding that she, too, had been watching television when she heard it. "The whole house shook." Bailey said that everyone on the block ran up to her house to see what happened. "It lit up the whole alley like it was daytime for a second," said her brother-in-law, Chris Rogers. Rogers, Bailey and Welsch said the neighborhood is normally quiet. The playground and parking lot for Clarendon Elementary School lies across the street. Although the next-door neighbors said they

could not guess what could have caused the sound, which produced no visible damaged in the littered De Mario Court, Bailey ruled out a backfire by a passing car. "There weren't any cars around," she said, "but there are a lot of teen-agers in this neighborhood, so I don't know." Then, she shook her head and discounted the theory. "That was too loud. It had to be something else."



Troubled Times



Georgia

Georgia Sonic Boom Linked to Skyborne Mass

Far Shores News, February 8, 2000

No one seems to know what caused the boom Saturday afternoon [Feb. 5] that rattled the windows and minds of Russell and Muscogee mountians. Was it a sonic boom? An earthquake? Or something that is not likely to be explained? **Authorities remained at a loss Monday to explain what caused the boom heard around the Chattahoochee Valley** - some say as far away as Eufaula - shortly before 5:30 p.m. Saturday. Residents throughout the area described it as having a concussion effect - shaking the ground and rattling windows "I know exactly what it was," said Columbus Mayor Bobby Peters. "We had opened up our light bill at the Government Center and that was the sound of me passing out on the floor." Muscogee County Emergency Management Director Riley Land, meanwhile, said he was "stumped." "Like the old saying goes - it's a mystery wrapped in an enigma," Land said. "We'd love to know what it was, so at least we could tell people something." Land said he contacted the Georgia Emergency Management Agency regarding the boom. GEMA, he said, could provide no explanation. Bill Watt, operations supervisor of the Federal Aviation Administration's Columbus Airport tower, said he had received a number of calls - including inquiries from 911 operators in Russell and Muscogee counties - asking about the boom. He even received a call from a Harris County resident, about 10 miles away. "We don't know anything about it," he said. Military officials shed no light on the mystery of the boom, either. Fort Benning officials said they didn't know its origin and a U.S. Air Force spokesman in Atlanta said he was looking into the cause but could offer no explanation Monday.

Land, meanwhile, and perhaps only half-seriously, suggested looking into the possibility of a meteor having entered the atmosphere at supersonic speed, and then having disintegrated before striking land. And a meteor is what Mike Love thinks he might have seen. Love, who lives in Smiths, was hunting squirrel in the woods near the East Alabama Motor Speedway outside Crawford late Saturday afternoon when he heard the boom. "It felt like it was right there by me," he said. Immediately after the concussion, Love said he heard what sounded like a jet. "About a split-second later, I looked up and saw what looked like a black mass of something," he said. Love said white smoke trailed the mass and was traveling just above the trees. "It didn't look like a jet, and it was traveling faster than any jet I've ever seen. I thought it was maybe a meteor or something." Stephen King, owner of Sky High Pyrotechnics in Columbus, said none of his fireworks could boom the bang he heard Saturday afternoon. "My first thought was that a car had run into the gas pumps down the street," King said. "Then I thought, if that was some pyrotechnics, I sure would like to have a few of them. They would be a real crowd-pleaser."

Though an earthquake has not been completely ruled out, a trembler seems an unlikely culprit. Columbus State University geologist Tom Hanley said it is not unusual for earthquakes to create a boom. In fact, he said, a 1982 Halloween-Eve earthquake measuring 3.1 on the Richter scale - centered near Fortson, outside of Columbus - did just that. Hanley said he forwarded readings taken Saturday from a seismograph at Carver High School in Columbus to a Georgia Tech seismologist. The seismologist told him that the boom's seismic patterns do not display readings normally associated with an earthquake. "It was probably a sonic boom, but the pattern was a little different than a sonic boom," Hanley said. "To be honest, I don't have a clue what it was. But I will stop short of saying it was a UFO, thank you." Mayor Peters, who also said he heard the noise, said city officials had no explanation for it. "Just be sure to assure everyone I wasn't driving at the time," he said. "It wasn't me."



Troubled Times



Atlanta

Boom Report from Metro Atlanta

Offered by Michael, July 21, 2000

Today around 1 p.m. there was some kind of very loud *boom* noise heard over Atlanta. The sound was registered on a seismograph at Georgia Tech (almost downtown and inside the I-285 perimeter). The sound allegedly shakes the walls of homes. What is interesting about this is that it was not only heard but also *felt* in the suburb of Marietta... even in my apartment complex some 15-17 miles away. I work in Doraville which is more west of the city and I did not hear it there. Many people called in to radio stations, etc. worried about what they heard and felt. Even a 12 year old boy called in. They are making a report on the news right now about it on WSB channel 2... WOW... this thing was heard from Spaulding County to Cherokee County. It shattered windows... caused bricks to fall off of buildings. Good grief....!!! It almost shut down one county's 911 system flooding it with calls. The claim is (as you might have guessed) "Oh, it's just a sonic boom from an F-15!" Now I have heard lots of sonic booms in my life. Never knew of one to span about 60 miles. Never knew of a sonic boom doing the physical damage that this boom did. I don't believe this boom theory.

Mysterious Boom Shakes West Georgia

The Atlanta-Journal Constitution, August 3, 1999

Residents in four counties along the Georgia-Alabama border were startled by a loud boom and ground tremor for which officials have been unable to determine a source. The disturbance was reported about 10:10 p.m. EDT Monday [Aug 2] in Georgia's Heard and Troup counties and in Alabama's Chambers and Randolph counties, according to law enforcement dispatchers who received a flood of 911 calls. The area is about 70 miles southwest of Atlanta. Gary Crook, a Heard County police dispatcher, described the boom as an "explosion, earthquake, something." The Georgia Emergency Management Agency dispatched a team to the area this morning to see if there was any damage, said spokeswoman Pamela Swanson. She said the earthquake lab at Georgia Tech would try to determine the cause of the boom. The National Earthquake Information Center in Golden, Colo., said it recorded no abnormal seismic activity in the area Monday night. "It sounded like thunder to me, but there wasn't a cloud in the sky," said Albert Walker, a Heard County jailer. Walker said Sheriff Ross Henry planned to call researchers at Georgia Tech in Atlanta today to determine whether the event registered on any monitoring equipment. GEMA spokesman Ken Davis said such a "snap, pop, explosive type shift" typically signifies an earthquake. "Something definitely shifted around," he said. "Exactly what it is, we don't know."



Troubled Times



Alabama

Mystery Boom Rattles Alabama Windows

Birmingham News, April 12, 1999

Officials are still at a loss to explain the big boom heard Friday afternoon [April 9] in at least five central and east Alabama counties. The boom at around 2 p.m. reportedly rattled windows and startled residents throughout the area. Geological officials ruled out an earthquake and area officials said there were no reports of fires, injuries or anything blowing up. Saturday, an official with the FAA in Atlanta said that office received no complaints or calls about a sonic boom from any aircraft. There are spots in Alabama where military aircraft can fly faster than the speed of sound (which would cause a sonic boom), but the closest area to the reported boom would be in south Alabama near Dothan, an FAA supervisor said.



Troubled Times



Canada

Canadian Crop Circle Summary Report 1999

Circles Phenomenon Research Canada, Dec 29, 1999

Unexplained "crop circles", circular and other geometric patterns of flattened field crops, continued to be reported across Canada in 1999, as well as a number of other countries, including England, the Czech Republic, Germany, Holland, the USA, Israel and elsewhere. This past year's "circle season" in Canada, from July to October, saw developments in the phenomenon on a number of fronts, including the number of reported formations (20, up from 14 in 1998 and 2 in 1997), size and complexity (ranging from the common small simple circles to formations two to three hundred feet in size, some more elaborate than in past years) and many associated anomalies, notably stalk nodes from some formations with very significant stretching, swelling and expulsion cavities as compared to normal control samples, as well as numerous electrical equipment malfunctions and failures in and around some formations.

Formations were reported in six provinces - British Columbia (1), Alberta (4), Saskatchewan (10), Ontario (3), Quebec (1) and Prince Edward Island (1). Many excellent firsthand reports came in this year, from farmers in whose fields the circles were found, thanks to the efforts of a growing network of CPR-Canada coordinators, field investigators, researchers and other assistants, as well as a reporting hotline and growing publicity in various media, etc. As in past years, most formations were reported near the end of the harvesting season, in late August and September, simply because that is when most of them are initially discovered by farmers as they are combining their fields, literally stumbling across them as it were. Relating to this is the fact that circles in Canada have appeared virtually across the entire country, which geographically is of course much larger an area than England (where it is easier to discover and document new formations almost as soon as they appear, often by pilots, as most formations there tend to be found within a fifty or so mile radius of the Stonehenge / Avebury area). Therefore, a significant number of formations in this country probably never get reported at all, and in fact we know of several cases in the past where formations were found but not initially reported to anyone, then only found about weeks, months or even a year or two later. As mentioned above, thanks to a growing network, hotline, etc., that situation is now beginning to improve.

As has been the case virtually since the phenomenon started being documented in this country in the 1970's, most circles were reported in the province of Saskatchewan (ten out of twenty reports this year), and in many cases (in several provinces) in the very same areas, or in close proximity to, where they were found last year and previous years. In one case in Alberta, the second formation found this year just outside of Edmonton, was in the same end of the same field as a set of simpler circles last year. It is the consensus now of CPR-Canada and others, that these localized "hot spots" should be the primary focus for future surveillance, field studies and other experiments. It is a situation analogous to southern England, where by far the most formations (in the world as well as England itself) are found each summer in the Wiltshire and Hampshire areas.

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Troubled Times



Crop Failures Increase in 2000

Farmer: 'Sometimes it feels like we're getting [ganged up on](#)'

By Wayne Drash, *CNN.com*, September 22, 2000

The heavy rains unleashed by Tropical Storm Helene couldn't come at a worse time for farmers in the southeastern United States, who were finally ready to harvest after enduring a drought-stricken summer. Lots of rain is the last thing farmers need during harvest. "It's not a very good time to have this amount of rain in our state," Georgia Agriculture Commissioner Tommy Irvin told *CNN.com*. "We needed some of this rain spread out in July and August, but you usually don't get it when you need it." Billy Griggs, a farmer of peanuts and cotton in south-central Georgia, echoed those sentiments. "We just couldn't get any rain from April to almost the middle of September, and now we're at harvesting time ... and it's raining," said Griggs, who has farmed for 31 years. "Sometimes it feels like we're getting ganged up on."

Georgia is the No. 1 producer of peanuts in the nation, producing roughly 38 percent of the nation's crop. The state also ranks third in cotton production. Farmers need dry conditions for the best crop yield, and large amounts of rain disrupt the harvesting process. At worst, peanut vines can get so damaged that the peanuts can't be picked. Too much rain on cotton during harvest can hurt crop quality or knock the cotton off the plants, making it unusable. "You get too much rain during harvest time and it can drown you," said commissioner Irvin. "A lot of people don't realize how devastating lots of rain can be until it happens." Roy Baxley, president of the Southern Cotton Growers Inc., a regional organization that represents farmers in Alabama, Florida, Georgia, North Carolina, South Carolina and Virginia, said the Southeastern U.S. cotton crop had been on schedule to produce well until the last week or so. The Carolinas had a good crop until a tropical storm moved through in recent days - and now forecasters predict Helene's remnants will soak the region. "These two tropical storms I think are going to put a damper on (our crops)," said Baxley, a cotton farmer in South Carolina. "As of tonight, we will have seen our second tropical storm in a week. It's going to hurt us yield-wise and quality-wise." He said cotton growers in drought-stricken regions of Alabama, Florida and Georgia would have the toughest time coping with Helene's rains. "It's kind of like you have a minor catastrophe," Baxley said, "and then all of a sudden something comes along and blindsides you."

Fickle weather giving farmers trouble in U.S.

Kelli Miller, *Weather.com*, July 30, 2000

Sloppy, soggy weather darkened skies over nearly the entire eastern half of the United States Sunday, delivering rain from the Canadian border all the way to Texas. The rains offered a much-needed glass of water to the drought-stricken regions of the East Coast. Georgia, and several other states, saw showers and thunderstorms off and on again throughout the weekend. The National Weather Service called some of the rains "beneficial." So who doesn't want this wet weather? Farmers. Believe it or not, the same farmers who coped with devastating droughts now say they can't win. The rain they've received is either too little or too much. Recent unseasonable downpours from Maryland to Massachusetts are washing away seeds, drowning young plants and causing rot and fungus. Now farmers are hoping for sun to dry up the ground.

Miserable summer spells gloom for French farmers

Reuters, July 28, 2000

Cereals and oilseeds crops had weathered an excessively dry spring and early summer and were on target for healthy, if not record production in 2000. Harvesting had only just begun when freak storms lashed the north of the country on July 2 and 3, downing power lines and damaging crops. Farmers reported wheat crops completely flattened by hail and rapeseed fields had turned white as violent winds split open stems. Persistent rains, which dampened the country's expensive Bastille Day celebrations, have since prevented growers from bringing in their already mature crops. "The problem is when it pours down on mature cereals," said a Paris analyst, noting that part of the wheat crop had started to sprout, a phenomenon which causes enzyme changes and reduces the baking value of milling wheat.



Troubled Times



Crop Failures in 2003, 2004

Signs of the Times #1565

This info can be found on Page 21 of 'Power Down' by Richard Heinberg: Worldwide Total Cereal Crop, Year and Reserves, all in Millions of Metric Tonnes 1999 ... 684.5, 2000 ... 633.4, 2001 ... 584.2, 2002 ... 466.6, 2003 ... 371.9

Signs of the Times #1017

Floods destroy crops in North Korea [Aug 3, 2004]

<http://www.abc.net.au/news/newsitems/200408/s1167102.htm> 'Reports from North Korea say heavy rains and floods have caused widespread destruction in the country. The country's official news agency says there has been severe damage to crops and farmland. Millions of North Koreans already depend on food aid from abroad and famine has caused thousands of people to leave the country for China.' [and from another source] Rain offers little for grain crops [Jul 29] <http://www.abc.net.au/news/newsitems/200407/s1164319.htm> 'Recent rain has been too little too late for the Darling Downs grain growing areas of southern Queensland. Graincorp is predicting a 13 million tonne winter harvest, up 2.8 million tonnes on last year. In terms of the inner-Downs, we estimate only about 25 per cent of that has been planted.' [Note: the weather related crop failures Predicted by the Zetas.]

Signs of the Times #942

Fifth Consecutive Year of Decline in Level of Stocks of Grain is Forseen by the UN Food and Agriculture Organization 'The trend shown reflects all the various aspects of an economy in breakdown - lack of infrastructure to compensate for adverse weather, high energy costs for agriculture inputs, loss of family farm systems in many big grain regions, domination of grain trade by cartels, etc. Year World Grain Stocks (million metric tons) 2000/2001 598.5 2001/2002 570.8 2002/2003 474.9 2003/2004 est. 397.8 2004/2005 forecast 362.7' [Note: the Crop Shortages predicted by the Zetas.]



Troubled Times



Sailor's Tale

The [Lake Michigan Triangle](#), A Sailor's Tale ...

It was a perfect night for a sail with 7-10 knot winds, flat seas, and as it was mid-week we had the lake to ourselves. I was aboard one of three classic wooden sailboats, part of an active racing fleet who competed every Sunday and practiced several nights a week. Around dusk on this sultry July evening we set sail for what seemed to be an idyllic cruise, as fate would have it, the gods had something else in mind. Not an hour out of port and quite unexpectedly, a dense fog rapidly descended upon us. Visibility dropped to zero. We became disoriented fearing we'd crash into the other boats. The winds were erratic filling the mainsail from two opposing directions, a phenomena no one had ever seen before. I became aware of being extremely cold. In fact, I was freezing.

I turned to ask my crew mates if they were cold and to my shock, they were no longer standing next to me! One minute we're packed in the tiny cockpit like sardines, and the very next instant I'm alone at the helm. Dumfounded, I called out and located them on the back deck. They seemed perplexed and urged me to join them. It was a good 20 degrees warmer up there. At this point I noticed no one was steering the boat. The captain raised his arms high over his head, gleefully wiggling his hands and fingers in the air, and stated he hadn't been steering for the past ten minutes. Yet not a minute before I was certain he was standing behind me at the helm. Draped in dense fog, the vessel began a curious aquatic ballet slowly but deliberately turning on her axis. She completed three perfect pirouettes of 360-degree rotations, never once crossing the wind.

Just as suddenly as it had appeared the fog dissipated. To our utter astonishment we saw the two other boats pirouetting in exactly the same manner! A moment later we regained control of the vessel and pulled out of the vortex. Almost in unison all three boats turned for home.

We glided over a placid sea under a brilliant full moon and made our way back to port. I began to notice something remarkable. It seemed I'd entered into an altered state of awareness as if awaking from a dream. Although I had always been intuitive, I now found myself experiencing a powerful feeling of presence of my recently deceased father. I simply didn't know what to make of these events. I wasn't worried, our collective mood was one of utter tranquility. The lead boat entered the anchorage moments before we arrived to port. This boat had recently belonged to our captain and we knew the mooring well. Tonight as we entered the marina we found our old mooring empty, our sistership no where in sight. We scanned the horizon for mast movement but all was quiet. We were the only vessel underway in the tiny inlet.

We couldn't imagine where they had gone. In fact, there was no place they could go. Thinking perhaps they'd sailed through the tiny anchorage for sport, we took a short sail in search of them. But to no avail. Upon returning to their mooring, we were astonished to see they were not only tied up but with sails stowed. And, they were already in their dinghy rowing ashore! Nothing added up - time either seemed to stand still, or speed up. We were still scratching our heads when the third boat arrived. Back on shore we met briefly. This usually boisterous group seemed dazed and wanted nothing more than to go home, and go to bed. It was midnight. It seemed we'd been out for just two or three hours instead of six. As the weeks passed I realized we couldn't account for a good portion of the evening, but at the time no one thought anything of it.

The next weekend, as we readied ourselves for the big race, I brought up the events from the previous week. To my chagrin none of the gang had any interest in discussing it. To make matters worse, they acted as if nothing out of the ordinary had happened! I felt I'd entered the twilight zone. I eventually dropped the subject although the enigma has remained with me for years. Our captain has since passed away and I've lost contact with the old sailing gang. I've told the story many times calling it my "Lake Michigan Triangle" story. Years later I learned of a book written about mysterious events and disappearances of boats, and airplanes in the Great Lakes, entitled "*The Great Lakes Triangle*," which unfortunately is out of print. Today as I awaken to my own incredible saga, and personal history of anomalous phenomena, I've come to realize the events of that night may very well have been for my benefit, as yet another chapter in a series of bewildering, yet remarkable phenomenon, earmarking this journey I call my life.



Troubled Times



Skeptics

Inevitably, there are skeptics. Carl Sagan made an issue of what the Dogon don't know. He asks why extraterrestrials would tell them about only four of Jupiter's moons, and about Saturn's rings, but nothing about any of the planets beyond Saturn? He suggests that the reason is because these things, along with Sirius B, were what a European visitor would have told the Dogon in the years between 1925 to 1935. Therefore, Sagan and others say, the Dogon must have obtained their knowledge of astronomy from missionaries or traders or other visitors to the area in the years before Griaule was told of their cosmology. He says that the Dogon simply incorporated this new knowledge into their already existing beliefs about Sirius A. Reverence for Sirius A, the brightest star in the sky, was not uncommon among ancient peoples, because its appearance in the dawn sky signaled the nearness of summer, with implications for agriculture.

Were there missionaries among the Dogon before 1931? Robert Temple said in 1990 that he had written to the Father Superior of the White Fathers Mission in Mali, asking when the first missionaries had been sent to the Dogon region. He said that the Father Superior replied that the earliest missionaries had arrived there in 1949. Such things should be verifiable. Missionaries record their activities rather thoroughly and make regular reports to their churches. However, the presence of traders or other Europeans among the Dogon between 1925 and 1931 would be very difficult to verify.

Griaule's colleague and co-author, anthropologist Germaine Dieterlen, who had lived among the Dogon for most of her life, was asked by a reporter for BBC-TV's Horizon program whether the Dogon could have learned the Sirius information from other Europeans. She called the idea "absurd" and displayed a 400-year-old Dogon object that clearly indicated Sirius and its companion stars.

Skeptics say that the object, a ceremonial mask, has never been carbon-dated. In an article called *The Dogon Revisited*, Bernard R. Ortiz de Montellano flatly questions Griaule's work regarding Dogon cosmology: In fact, the entire Dogon question may be futile theorizing, because Griaule's original data, on which this whole edifice is built, is very questionable. His methodology with its declared intent to redeem African thought, its formal interviews with a single informant through an interpreter, and the absence of texts in the Dogon language have been criticized for years.

Other anthropologists who have studied the Dogon in more recent years, have been unable to find evidence of the knowledge of the Sirius system that was related to Griaule. One of these, a Belgian anthropologist named Walter van Beek, is particularly critical of Griaule, according to de Montellano: Van Beek points out that Griaule's data was developed in long intense sessions with one primary informant, Ambara. In this process, Griaule probably reinterpreted statements from his informant in the light of his own knowledge about Sirius and its heavy companion, which had been much in the news at the time he began his field work. In turn, the Dogon, because Griaule was extremely respected and liked and because the Dogon culture places enormous importance on consensus and in avoiding contradictions, would have accepted his analysis as if it were theirs.

Oddly, in Griaule's first paper on the subject, *Un Systeme Soudanais de Sirius*, he names his "informants", their tribes, and their languages. There are four of them, and none is named "Ambara." In another place Griaule names his Dogon instructor as Ogotemmeli of Lower Ogol, who claimed authority from the Dogon priests of Sanga. In fact, one of Griaule's papers is called *Conversations with Ogotemmeli*. One wonders

whether the problem here is that the Dogon elders simply do not trust Van Beek and the later anthropologists such as Boujou and Lane as much as they trusted Griaule. One also wonders whether de Montellano's criticisms of Griaule aren't unnecessarily harsh.

Temple's *The Sirius Mystery* has been the object of much criticism as well. Nowhere in his book does he cite an assertion by Griaule that the Nommo were extraterrestrials who visited the Dogon. Rather, the Nommo are a part of the Dogon creation myth. Nor does Griaule directly state that the Dogon obtained their knowledge of the Sirius system from extraterrestrials. Yet Temple somehow manages to conclude these things from Griaule's data. Temple also takes Benest and Duvent's theory of a small red dwarf in the Sirius system (Sirius C), which is given as a possible explanation for a perturbation, and turns it into confirmation. That's a bit premature.

However one chooses to believe, the question of how the Dogon came by their knowledge of Sirius B and possibly of Sirius C is far from settled.



Troubled Times



Indicators

ZetaTalk says that this year will see that: *Economic impacts are beginning to bump into each other, one causing the other, so that the economic result is beyond a recession and threatening to become a worldwide depression.* I wonder what the ripple effect of sacking 20,000 people, cutting expenses by \$2B and reducing capital spending by \$750M will be? And this is not an isolated event, far from it actually, businesses are failing all around the world this year and are all slashing their expenses and spending budgets. All driving down-stream effects. Anyway, here's the latest story.

Lucent loses \$3B

By John Rendleman, *InformationWeek*

Wednesday, 25 July 2001

The tough times aren't over for Lucent Technologies, which has reported a US\$3.25 billion third-quarter loss and announced a plan to lay off as many as 20,000 more workers. Lucent blamed the loss on lower revenues across all of its product lines, a reduction in sales of high-margin software, and the loss of several contracts here and abroad. "Lucent's hit some pretty tough times," said Tracey Vanik, technical director at market research firm RHK. Two things that may turn the tide in Lucent's favour, however, if and when the economy picks up. They are its strengths in optical networking technologies and its focus since last year on networking equipment based on IP technologies - the protocol that will be at the heart of almost all new data networks, Vanik said.

The US\$3.25 billion loss for Lucent's third fiscal quarter, ended June 30, amounts to a loss of 95 cents a share, and compares with a US\$301 million loss, or 9 cents a share, in the same quarter last year. Lucent's revenues for the quarter were US\$5.82 billion, a 21 percent decline from the US\$7.41 billion in revenues it earned in the same quarter a year ago. After a previous round of cost-cutting measures that already resulted in 19,000 job cuts this year, the company is planning the second phase of its restructuring that will eliminate 15,000 to 20,000 more jobs, said top Lucent executives. Other cost-cutting plans include a US\$2 billion reduction in its annual operating expenses, a US\$1 billion improvement in working capital performance, and a US\$750 million reduction in its capital spending, according to the executives. The second-round of spending cuts are intended to return Lucent to profitability sometime next year and will result in a US\$7 billion to US\$9 billion one-time charge the company will take in the fourth quarter of this year, the executives said.

Lucent also said it has sold its Optical Fiber Solutions unit for US\$2.225 billion to Furukawa Electric of Tokyo and Corning. Furukawa will pay US\$2.25 billion for its share in the optical fiber business; Corning will pay US\$225 million.

Summertime Blues

By Jonathan Weber, *The Standard*, July, 2001

Last year's economic optimists turned out to be wrong, but the bad news is that the hoped-for second-half recovery now seems to be out of the question.

Offered by [Gino](#).



Troubled Times



Global Recession

Bank Warns World on Brink of Global Recession

ABC, July 19, 2001

Echoing the concerns of the Federal Reserve chairman, a major Australian bank has warned that the world stands on the brink of a global recession. The ANZ Bank has also cautioned that the Australian economy will be compromised. Just when the domestic economy in Australia was starting to hum, conditions offshore and beyond Australia's control loom as the bogey. "What we are now looking at is for the first time in arguably 20 years, a synchronised slowdown in all of the major economic regions of the world," ANZ Bank chief economist Saul Eslake said. Mr Eslake says world growth will be doing well to average 2.5 per cent. "Two-and-a-half per cent is significant because it represents for the global economy what consecutive quarters of negative growth have traditionally represented for any individual advanced economy, namely recession."

Commentary: It's Not Pneumonia, but Asia's Deep Chill Could Last

BusinessWeek, July 30, 2001

Japan and Singapore are in recession. Just about every other major economy in Asia is contracting--and even go-go China is slowing. Jitters in Argentina and Turkey are prompting worries that another financial contagion is about to spread around the globe. If you believe the gloom meisters, what this means is a reprise of the 1997 Asian crisis - crashing stock markets, swooning currencies, bankruptcies on an epic scale, and bailouts from the International Monetary Fund. In fact, Asia does face a crisis, but one of an entirely different - and more chilling - nature. The region has insulated itself against a 1997-style financial meltdown by stockpiling foreign currency reserves, running current account surpluses, and reducing its dependence on short-term, dollar-denominated debt to foreign banks. But in the past few years, much of Asia has become addicted to high-tech exports, and it's not likely to get another major fix for several years.

Since the crisis, Malaysia, South Korea, Taiwan, and Thailand have relied to a dangerous degree on supplying the seemingly insatiable U.S. appetite for PCs, mobile phones, and personal digital assistants (chart). Now, America is sated, and it's not likely to develop similar demand for some time - if ever. Economists have come to realize that the U.S. high-tech binge in 1999 and 2000 was an anomaly, driven by Y2K fears, euphoria over the possibilities of fiber optics, and a rapid buildout of the Internet. When tech spending in the U.S. recovers, it's unlikely to reach the same level of intensity witnessed during the bubble years.



Troubled Times



Panic

The [Panic](#) Spreads

Forbes Global, Feb 14, 2002

You can no longer safely shrug off Japan's economic crisis. It just might drag the world into a depression. The world - including even the previously sanguine Japanese - is now catching on to the fact that Japan's 12-year slump has deteriorated into a full-blown crisis, threatening a wild global ride. Falloffs in various indicators in the world's second-largest economy resemble the plunge of such countries as the U.S. into the Great Depression of the 1930s.

The article about [South Africa](#) starts like this:

There have been a number of most troubling things which have happened in South Africa in recent days which shows that the country's economic base is slowly crumbling and falling apart. One was the accidental, but nevertheless troubling, run on SAAMBOU bank. Due to some troubling news reports there was a run on the bank (something which is virtually unknown in South Africa). One billion Rand was withdrawn and the bank was put under curatorship and all withdrawals stopped.

Argentine Bank Crisis Spreads out to Uruguay

by Thomas Catán in Buenos Aires, Feb 14 2002

Argentina's largest private bank, Banco de Galicia, on Wednesday suspended its operations in Uruguay, one of the first signs that Argentina's financial crisis is spreading to its neighbours. Uruguay's central bank said it would take control of the bank for 90 days after nervous depositors had withdrawn a third of the subsidiary's deposits since December. Argentina's central bank said it would use "all the actions at its disposal" to protect Galicia's Argentine operations, insisting that the two banks were independent of each other. Given the troubled history of Argentina's banks, many Argentines choose nearby Montevideo to deposit their savings. Argentines have billions of dollars in undeclared cash sitting in the banking haven, giving it a reputation as the Switzerland of South America.



Troubled Times



Bankruptcies

Bankruptcies Soar to Record in 2001

Reuters, Feb 19, 2002

With the economy mired in recession, debt-burdened U.S. consumers and businesses filed for bankruptcy in record numbers last year, the Administrative Office of the U.S. Courts said on Tuesday. The total number of bankruptcies filed during the year jumped 19 percent to 1.49 million from 1.25 million in 2000. That total easily surpassed the previous high of 1.44 million bankruptcies recorded in 1998. Economists have predicted for some time that bankruptcies would reach new highs in 2001 as the recession took a toll on the finances of consumers and corporations alike. And some experts forecast the surge will continue this year. "I think the feeling of most people is that 2002 will be an equally big year," said Sam Gerdano, executive director of the American Bankruptcy Institute. A recent, informal poll of ABI members found 93 percent thought filings would keep on rising.



Troubled Times



Stock Market

The Crash of 2002

[CNN](#), July 19, 2002

Ten trading days, 1,360 points off the Dow. Let's start calling the "sell off" what it is. Let's call it a panic. Let's call it a crash. Indeed, after rallying following Sept. 11, the markets topped out in March, and have been careening downward ever since: **The Dow is down 25 percent since then; the S&P 500 is down 27 percent, and the Nasdaq is down 32 percent.** People worry that, with \$7.7 trillion knocked off U.S. market capitalization since March 2000 (\$750 billion in the past week alone!), the selling will bleed into the economy, not just snuffing the recovery but sending the country into a deflationary episode like the one Japan labors under. Or like the U.S. strained under in the 1930s. The fear breeds selling, the selling breeds more fear. Some economists have even begun to talk about how the Fed could step in and cut rates to try and stanch the bleeding - while at the same time they worry that for the Fed to do that would only stoke the market's fears.

Remember 1998? This script is starting to look familiar, says James Padinha, economic strategist at Arnhold & S. Bleichroeder. It's starting to feel like 1998, when fears ran high that financial crisis would seize up the economy. "It's just eerie," he said. "We have exactly the same kind of thing going on." In the latter half of 1998 a debt crisis in Russia and hedge funds, which were almost as profoundly overleveraged as they were mispositioned, sparked a global flight to safety in the markets. ...

Unlike 1998, the current crisis is rooted in the United States. **It's our stock market bubble that popped.** The U.S. was attacked, and **our CEOs cooked the books.** In 1998 U.S. investors were staring out at the world and wondering where it would end. Now the world's investors are staring at the U.S. and wondering the same thing. Griffin can imagine, he said, a Japanese-style pullback from risk in the U.S., in which investors give up, banks refuse to lend and the economy languishes. He can imagine other countries, accustomed to the United States' role as the world's economic locomotive, not taking up the standard. He can imagine a crisis of capitalism of a 1930's order. Griffin thinks the people talking about deflation are probably wrong, but he doesn't think they're crazy. We can be smug now, and say the 1987 crash, when the Dow dropped 30 percent in two days, was all about the way investors were using portfolio insurance. But at the time it seemed much bigger than that. At the time people were seriously entertaining the idea of a depression. We're not there quite yet, thinks Padinha, but we're on our way. He can see the panic growing, see the 1930s references getting progressively more ink. He can imagine the Fed cutting and people arguing that lower rates won't do a thing. That moment - and who knows how far down from here it is - will be the sign. "Right there is the bottom," he said. "The bottom for the funds rate, the bottom for the market, the bottom for everything."



Troubled Times



Small Plane Crashes

Signs of the Times #1215

Virginia Crews recover all 10 bodies at Hendrick crash site [Oct 25] '10 people killed in the crash of a Hendrick Motorsports plane that was carrying family and friends of one of NASCAR's top syndicates. Investigators will try to piece together what happened from the wreckage, radar data and communications between the pilot and the airport.' [and from another] Small Planes Crash in Missouri [Oct 26] 'A small private plane crashed while approaching the airport here, killing two of three people aboard. The cause was not known.' [and from another] Marion, WI [Oct 26] 'A small airplane crashed in the woods in the central Wisconsin town of Marion.' [and from another] Pilot dead in Leominster plane crash [Oct 27] <http://www.boston.com/> 'Plane crashed into a shop shortly after it took off from Fitchburg Municipal Airport.' [and from another] Arlington Hts. Pilot not hurt in Crash [Oct 27] 'Engine trouble at about 1,600 feet in the air.' [and from another] Investigators examining cockpit voice recorder San Diego area crash [Oct 24] 'Federal Aviation Administration are trying to determine what caused the jet to crash into the mountain shortly taking off from Brown Field on Sunday.' [and from another] Los Alamos Couple Hurt In Utah Plane Crash [Oct 26] 'Witnesses say visibility was very poor, but investigators still haven't determined the exact cause of the crash.' [and from another] Atlanta Students Witness Plane Crash [Oct 27] 'Most students were still in a state of shock after the plane met its fiery end, moments after it was seen spinning out of control.' [and from another] Fatal Kansas Plane Crash [Oct 27] 'The cause of the crash remains under investigation.' [and from another] Plane crash in Glenwood, SC under investigation [Oct 26] 'Pilot tried to make a second landing attempt after he flew past the airport.' [and from another] Small Plane Crash in Aiken County Kills Pilot [Oct 25] 'Pilot was preparing to land when the plane crashed.' [and from another] Deadly Plane Crash Still Under Investigation [Oct 25] 'National Transportation Safety Board investigators were still working Monday to determine what led to a deadly plane crash near the Crawford County town of Chester last week.' [and from another] 3 killed in Florida air ambulance crash [Oct 20] <http://www.chron.com/> 'There was no distress call then and no further communication with the helicopter.' [Note: this represents 13 small plane crashes within a week that were reported in the news, in the US alone. The worldwide average is less than one a day. Something is up.]



Troubled Times



Memos

Was JFK Silenced for Knowing too Much?

by Jim Marrs, June 8, 2000

President John F. Kennedy may have had more than the usual knowledge about UFOs, according to several credible sources. Further support for Kennedy's high-level knowledge regarding UFOs came from a former steward aboard Air Force One who told of a cryptic remark by President Kennedy. Bill Holden, who also served as loadmaster for Air Force One, traveled with Kennedy to Europe in the summer of 1963. He said a UFO conference in Bonn, Germany, prompted a discussion of the subject aboard the President's plane one morning. Holden said he turned to Kennedy and asked, "What do you think about UFOs, Mr. President?" He said Kennedy became quite serious and thought for a moment before replying, "I'd like to tell the public about the alien situation, but my hands are tied."

A controversial MJ-12 document titled *Interplanetary Phenomenon Unit Summary*, noted Kennedy's insider knowledge. This document, apparently written soon after the crashes in New Mexico during July 1947, states, "It has become known to CIC [Counter Intelligence Corps] that some of the recovery operation was shared with Representative John F. Kennedy, Massachusetts Democrat elected to Congress in '46, Son of Joseph P. Kennedy, Commission on Organization of the Executive Branch of the Government. [Jack] Kennedy had limited duty as naval officer assigned to Naval Intelligence during the war. It is believed that information [concerning the Roswell crashes] was obtained from [a] source in Congress who is close to [the] Secretary for Air Force." Kennedy was the only Congressmen named who was aware of the truth of the Roswell incidents at the time.

Yet another document appears to be a memorandum written from President Kennedy to the director of the CIA regarding "Classification review of all UFO intelligence files affecting National Security." In this memo, Kennedy stated, ". . . I have initiated [blacked out] and have instructed [then NASA Administrator] James Webb to develop a program with the Soviet Union in joint space and lunar exploration. It would be very helpful if you would have the high threat cases reviewed with the purpose of identification of bona fide as opposed to classified CIA and USAF sources. It is important that we make a clear distinction between the knowns and unknowns in the event the Soviets try to mistake our extended cooperation as a cover for intelligence gathering of their defense and space programs." Kennedy then asked for all files on "Unknowns" to be turned over the NASA authorities and an interim report be forwarded to the White House no later than Feb. 1, 1964. This document which clearly showed a president about to make UFO secrets available to wider circles in government and, hence, probably available to the public was dated Nov. 12, 1963, just 10 days before his Nov. 22 assassination in Dallas.

Desperately clinging to their UFO-free mindset, debunkers question this document's authenticity while an unquestionably authentic document has been found in the John F. Kennedy Library. National Security Action Memorandum No. 271 is titled *Cooperation with the USSR in Outer Space Matters* and is addressed to the Administrator of NASA, at that time James Webb. This signed memo does not mention UFOs specifically, nevertheless, Kennedy instructs Webb to "assume personally the initiative and central responsibility within the Government for the development of a program of substantive cooperation with the Soviet Union in the field of outer space, including the development of specific technical proposals." Kennedy added that this plan was a direct result of "my September 20 proposal for broader cooperation between the United States and the USSR in outer space, including cooperation in lunar landing programs."

This incredible document was also dated Nov. 12, 1963, but who in 1963 would have believed that the United States and the Soviet Union would have been engaging in cooperative joint space operations? The White House log of that day showed that beginning at 2 p.m. Kennedy had lunch and then "no official appointments" but "conferred with various staff members during the afternoon." Obviously on this day, Kennedy had more than enough time to deal with space matters. Also obvious is the fact that this apparent attempt to cooperate with the USSR ended with Kennedy's death in Dallas. On through the administration of Ronald Reagan, we were still warned against the "evil empire" and the costly Cold War continued.

Opponents to JFK became frantic over his attempts to alter the course of previous U.S. policies. According to one knowledgeable source, Kennedy played a dangerous game, ". . .after making it clearly evident that he was not prepared to support action against the communists in the normal sense - plans to withdraw troops from South Vietnam - plans to fracture or abolish portions of the CIA; plans for expansion to the Justice System; failure to support the Bay of Pigs [invasion]; and a desire to share some of our most sensitive secrets with the Russians and Chinese - space borne platforms, etc. ... All during a time when his popularity was growing in leaps and bounds with the American public - a President who did not enjoy majority support at his election. A very dangerous situation, leaving few methods for control beyond assassination." This same source went on to say, "I believe John F. Kennedy was appraised of, and had access to, sufficient classified information, to have personally come to the conclusion that UFOs and therefore possible alien life-forms were possibly extant within our solar system. . .I think Kennedy certainly came to this conclusion and was looking to demonstrate not only mankind's ability to come together for a common goal, but to formally demonstrate we could enter and conquer space as a species. Back then, some would have seen this as either crazy (if they had no access to the material) or (if they had access) very premature and possibly dangerous."

A whole JFK issue evolved around his planned speech at the Dallas Trade Mart, the destination of his ill-fated motorcade on Nov. 22, 1963. Several researchers and some tabloids have claimed that he planned to change his scheduled talk and referred to handwritten notes, which may have included comments regarding UFOs. These notes have never been made public and so continue to be fodder for theorists. Spurred on by such tantalizing bits of evidence, some researchers even claimed that Kennedy's assassination was to prevent him from revealing the news of extraterrestrial visitation to the public. While this theory is certainly unproved and probably untrue, his willingness to end the Cold War and share our knowledge of outer space with our perceived enemies may have been the straw that broke the back of those within the Military-Industrial (and Intelligence) Complex. This group already thought the young president was "soft on communism" and a danger to their command and control structure. With all the evidence now at hand, there can be little doubt that President Kennedy may have known more about UFOs than is generally believed.



Troubled Times



Concerns

Is Global Warming Harmful to Health?

By Paul R. Epstein, *Scientific American*, August 2000

Today few scientists doubt the atmosphere is warming. Most also agree that the rate of heating is accelerating and that the consequences of this temperature change could become increasingly disruptive. Even high school students can reel off some projected outcomes: the oceans will warm, and glaciers will melt, causing sea levels to rise and salt water to inundate settlements along many low-lying coasts. Meanwhile the regions suitable for farming will shift. Weather patterns should also become more erratic and storms more severe. Yet less familiar effects could be equally detrimental. Notably, computer models predict that global warming, and other climate alterations it induces, will expand the incidence and distribution of many serious medical disorders. Disturbingly, these forecasts seem to be coming true. Heating of the atmosphere can influence health through several routes. Most directly, it can generate more, stronger and hotter heat waves, which will become especially treacherous if the evenings fail to bring cooling relief. Unfortunately, a lack of nighttime cooling seems to be in the cards; the atmosphere is heating unevenly and is showing the biggest rises at night, in winter and at latitudes higher than about 50 degrees. In some places, the number of deaths related to heat waves is projected to double by 2020. Prolonged heat can, moreover, enhance production of smog and the dispersal of allergens. Both effects have been linked to respiratory symptoms.

Global warming can also threaten human well-being profoundly, if somewhat less directly, by revising weather patterns particularly by pumping up the frequency and intensity of floods and droughts and by causing rapid swings in the weather. As the atmosphere has warmed over the past century, droughts in arid areas have persisted longer, and massive bursts of precipitation have become more common. Aside from causing death by drowning or starvation, these disasters promote by various means the emergence, resurgence and spread of infectious disease. That prospect is deeply troubling, because infectious illness is a genie that can be very hard to put back into its bottle. It may kill fewer people in one fell swoop than a raging flood or an extended drought, but once it takes root in a community, it often defies eradication and can invade other areas. The control issue looms largest in the developing world, where resources for prevention and treatment can be scarce. But the technologically advanced nations, too, can fall victim to surprise attacks as happened last year when the West Nile virus broke out for the first time in North America, killing seven New Yorkers. In these days of international commerce and travel, an infectious disorder that appears in one part of the world can quickly become a problem continents away if the disease-causing agent, or pathogen, finds itself in a hospitable environment. Floods and droughts associated with global climate change could undermine health in other ways as well. They could damage crops and make them vulnerable to infection and infestations by pests and choking weeds, thereby reducing food supplies and potentially contributing to malnutrition. And they could permanently or semipermanently displace entire populations in developing countries, leading to overcrowding and the diseases connected with it, such as tuberculosis.



Troubled Times



Continuing Problems

Jinxed planet swallows invaders

The Times, Dec 7, 1999

MARS has a reputation as the Bermuda Triangle of space, swallowing spacecraft for nearly four decades. About two out of every three missions sent to Mars have failed, prompting the semi-serious opinion among space scientists that the planet is jinxed. There is, in fact, no logical reason why so many Mars probes should have failed and why the record in exploring Venus should be much better. ... The failure this week, if so it proves, ends an ignominious year for the US space agency, NASA. Mars Climate Orbiter failed because of a confusion between metric and Imperial units and Mars Polar Lander for so far unknown reasons.

Is ET Capturing our Mars Spacecraft?

Filer's Files #49-1999

MUFON Skywatch Investigations, Dec 9, 1999

One of the few scientists who ever studied UFOs, was Germany's world-famous father of rocketry, Professor Hermann Oberth. After three years of studying the information supplied by his own and other governments, the outspoken Oberth said at a news conference in 1954: "There is no doubt in my mind that these objects (UFO's) are interplanetary craft of some sort. I am confident that they do not originate in our solar system, but they may use Mars or some other body for a way station." MUFON's Antonio Huneus interviewed him later and Oberth said he stood by his statements. His comments have new meaning based on the Mars Polar Lander failure and the September failure of the Mars Climate Orbiter.

It is a total loss for the entire, \$330 million Mars '98 project, which consisted of Polar Lander, the Deep Space 2 microprobes and the Climate Orbiter. Doesn't it seem strange that two out of every three of Earth's space probes going to Mars fail? You might remember we lost the billion dollar Mars Observer spacecraft in 1993, just as it was about to go into orbit. That gave NASA a wakeup call particularly since the Russian probes met a similar fate. I suggest that Dan Goldin and NASA review the March 28, 1989, images showing a huge cylinder shaped craft intercepting the Soviet Phobos 2 spacecraft. The UFO interceptor is very similar to the ones reported by hundreds of witnesses here on Earth. We have multiple witness reports including pilot reports, videotapes and photos of these objects. ET may be waiting near Mars to capture or knock out our probes, but they are also here on Earth.

Space 1999: NASA's Annus Horribilis

[*Washington Post*](#), Dec 22, 1999

Two botched robot missions to Mars. A comatose space telescope. A shuttle fleet grounded for months at a time. And a space station in limbo. It has been a difficult year for NASA as the agency closes the books on the final decade of the world's first century of spaceflight. The jokes by editorial cartoonists and late night comics over a spate of highly publicized failures toward year's end are stinging more than usual at an agency accustomed to success.



Troubled Times



NASA

NASA finds evidence of [Water on Mars](#)

Spaceflight Now, June 21, 2000

Confirming what scientists had long theorized, NASA will announce Thursday that water has been found on Mars. The Mars Global Surveyor spacecraft currently orbiting the planet made the detection. MGS was launched in 1996 to map the Martian surface. Among the news reports circulating was a BBC story. The report today said evidence of liquid surface water was detected "in the central part of the mighty Valles Marineris, the 6,000 km long (3,700 miles) canyon that scars the Martian surface." Images taken by MGS show blackish, or dirty, water seeping from beneath the surface in an area of layered terrain and pooling. The report said the seepage could occur only seasonally, explaining why it had not been seen in all images taken of the region. Because the Martian atmosphere is too thin, water is unable to exist on the planet's surface today. However, central parts of the Valles Marineris canyon are a few miles lower than the rest of the surface, giving credence to higher atmospheric pressure and the suspected water seepage, the BBC reported.

Meanwhile, other scientists say they might have found similar water seepage on the walls of at least two craters in other parts of the planet Mars, the BBC story went on to say. Rumors about the discovery were initially reported by the NASA Watch Web site earlier this week, which said the White House had been briefed on a major finding by MGS. The site later reported a paper was being prepared for the upcoming issue of the journal *Science*. NASA's long-term Mars exploration program, which suffered the loss of two robotic missions last year, has been geared toward finding water on Earth's neighbor. **Vast oceans are believed to have once flowed on Mars and scientists have suspected some water might still be trapped below the planet's surface.** The ill-fated Mars Polar Lander probe was headed for the Martian south pole last December to dig for water ice just below the surface. But the craft crashed. The discovery of present-day liquid water potentially has profound implications about whether there is or was life on the Red Planet. Water is considered the cornerstone to life, and NASA's Mars research efforts have been dedicated to find evidence of past or present water. Such a finding of water, space agency officials have said, would be a major step forward in answering the question of where life has ever existed on the planet closest to Earth.



Troubled Times



NASA

Source: NASA Goddard Space Flight Center

National Space Science Data Center

The Planetary Alignment of 5 May 2000

On May 5, 2000 the planets Mercury, Venus, Earth, Mars, Jupiter, and Saturn will be more or less positioned in a line with the Sun. Additionally, the Moon will be almost lined up between the Earth and Sun. Although this has led to many dire predictions of global catastrophes such as melting ice caps, floods, hurricanes, earthquakes, etc. there is absolutely no scientific basis for these claims. The distance to the planets is too great for their gravity, magnetic fields, radiation, etc. to have any discernible effect on Earth. In fact, we won't even be able to see this alignment, as all the planets will be on the opposite side of the Sun from the Earth.

While each planet has a minute and virtually undetectable gravitational pull on the Earth, with the planets on the opposite side of the Sun the force from each body will actually be at its absolute minimum during the alignment. And there is nothing "magic" about the planets being in a line, the effects do not somehow multiply simply due to a geometric arrangement. For example, the combined gravitational effect of all the planets together is much less than the effect of the Sun or the Moon on the Earth. Depending on how strictly you want to define "alignment", the inner six planets are aligned every few hundred years or so. While unusual, such alignments have happened in the past without any consequences. The planets are simply too far away to have an effect on anything here on Earth - except our imaginations.



Troubled Times



Counteracts Gravity

KnightRidder News Service

It sounds more like "Star Wars" than real science, but astronomers are taking seriously new evidence that a mysterious "dark energy" pervades empty space. You can't see it or feel it, but this strange force is so powerful that it counteracts gravity and makes stars and galaxies fly apart faster than scientists previously thought. Without it, the universe would have caved in ages ago. "There is now tantalizing evidence for an extra repulsion force that overwhelms gravity on cosmic scales," Martin Rees, Britain's astronomer royal, told a symposium at the Library of Congress last week.

Understanding this force will be "one of the grand challenges for the millennium to come," said Neta Bahcall, a leading cosmologist at Princeton University. In scientific papers and talks, the dark force goes by a variety of exotic names: "cosmic dark energy ... negative gravity ... vacuum energy ... zero-point energy ... X-matter." To describe it, cosmologists have even revived the ancient term "quintessence" - the name medieval scholars gave to an invisible substance in which heavenly bodies supposedly floated.

Some scientists equate the force with the "cosmological constant" - a notion proposed more than 80 years ago by Albert Einstein to explain why gravity doesn't cause the universe to collapse of its own weight. The "constant" was a number Einstein inserted in his equations to make them come out even - a gimmick your high school math teacher probably would call cheating. The great physicist later repudiated his own idea, calling it his "biggest blunder," but it has popped up again in respectable scientific circles. A repulsive force is now considered the best way to explain why the universe appears to be expanding ever faster.

In the 70 years since astronomer Edwin Hubble discovered the universe is getting bigger, scientists have debated whether it will continue to grow or slow down, halt and reverse course under the pull of gravity. Early this year, two international teams of astronomers announced that recent observations of supernova - massive exploding stars at extremely great distances - provided convincing evidence that the expansion is not only continuing but also gaining speed. These observations "suggest that the expansion of the universe is accelerating, indicating the existence of a cosmological constant or dark energy," Princeton's Bahcall wrote in the May 28 issue of Science magazine.

The supernova evidence is forcing a major shake-up in astrophysics, the science of space-time, Bahcall said. "The most popular explanation is that space itself could have additional properties, a kind of springiness, an energy, a negative pressure, that tends to make space expand all by itself," Robert Kirshner, associate director of the Harvard-Smithsonian Center for Astrophysics in Cambridge, Mass., said at a NASA science briefing. Though this exotic form of energy is difficult to measure, astronomers believe it dominates the universe.

The best available data indicate that matter - atoms, chairs, trees, people, planets and stars - makes up barely one-third of the universe, according to Michael Turner, chairman of the department of astronomy and astrophysics at the University of Chicago. The remaining two thirds consists of gravity-defying negative energy, such as Einstein's cosmological constant. "We need the cosmological constant to balance the books, since matter makes up only 35 percent of the density of the universe," Turner said.

The balancing act was described by Sean Carroll, a theoretical physicist at the University of California, San Diego, as a tug of war. "In a universe with both matter and vacuum energy, there is a competition between the tendency of [vacuum energy] to cause acceleration and the tendency of matter to cause deceleration," Carroll said. "The ultimate fate of the universe depends on the precise amounts of each component." As they try to figure out the nature of the dark force, astronomers who usually deal with outer space are drawing on the latest theories of inner space - the weird world of subatomic physics.

Modern physics teaches that a vacuum, such as space, is not really empty, but rather is filled with infinitesimally small particles that constantly flicker in and out of existence. "Space is a simmering sea of particles living on borrowed time and borrowed energy," Turner said. "Otherwise empty space is seething with these ghostly entities," astrophysicists Fred Adams of the University of Michigan and Greg Laughlin of the University of California, Berkeley, declared in their new book, *The Five Ages of the Universe*. "The energy required to make these particles is borrowed from the vacuum and then quickly repaid when the particles annihilate each other and subsequently disappear back into nothingness," Adams and Laughlin explained.

It is these particles, they believe, that create the "negative pressure" that drives the universe to expand at an accelerating rate. Engineers at NASA's Marshall Space Flight Center in Huntsville, Ala., and at Lockheed Martin, the giant aerospace company headquartered in Bethesda, Md., are tinkering with possible ways to extract useful sources of power from the vacuum - ultimately perhaps driving spaceships to the stars. Although dreams of interstellar voyages fueled by anti-gravity are probably at least a century away from being fulfilled, the idea of some such dark force, once considered outlandish, is now in the scientific mainstream. "We have to take it seriously," said Harvard's Kirshner.



Troubled Times



MUFON Journal

The March 1996 *MUFON Journal* featured an article by Kent Jeffrey, the coordinator of the **International Roswell Initiative**, who concluded that the Roswell autopsy film was a fake. His findings support many of the contentions that they Zetas made in August, 1995, to wit:

ZetaTalk on the Body

The body of the alien in the autopsy film, so human in appearance with few exceptions, was in fact a human. The differences noted were in some cases natural, in some augmented by plastic surgery, and in some cases faked. The base body was of a prepubescent girl who sickened and died in an institution for the retarded, and had long been a ward of the state. Retardation was caused by water on the brain, a condition that creates an enlarged head. The large eye sockets came with the package, but the eyes themselves were replaced by even larger orbs, the reason for the unblinking appearance due to the eyelids being stretched and incapable of closing. This girl was essentially a vegetable toward death, and was unable to consent or refuse treatment. Plastic surgery was performed in her last months to remove her navel and nipples, but the occurrence of six fingers and toes, a common recessive gene, was already present.

MUFON on the Body

The humanlike qualities of the supposed alien suggest that it is either a doctored human corpse or a dummy patterned after a human body. ... Particular aspects of the alleged alien's external body shape, such as the protrusions of certain underlying muscles and bones, like the clavicle, imply a corresponding human internal structure ...

ZetaTalk on the Organs

As for the organs, never seen clearly while being removed, these were substituted while all was a blur and in motion.

MUFON on the Organs

Quoting the Houston pathologist Ed Uthman, the article states "The most implausible thing of all is that the 'alien' just had amorphous lumps of tissue in 'her' body cavities. I cannot fathom that an alien who had external organs so much like ours could not have some sort of definitive structural organs internally."

ZetaTalk on the Cameraman

Of course the cameraman's story is hokum, and this is because the cameraman is hokum! As with Ray Santilli's story, the cameraman's story has been carefully staged and the search for the cameraman just props on the stage to make the cameraman's story somewhat credible.

MUFON on the Cameraman

Pointing out many flaws in the cameraman's story, the article states: "One almost humorous aspect of the American cameraman's story is that it was told in British English. While the nuances may not be readily apparent to those who speak the 'King's English' (the language would, naturally, seem normal to them), they are obvious to Americans."

ZetaTalk on the Sloppy Filming

How would it be that at an autopsy of such importance that a camera man would *blur* the image? Does he not understand how to operate his camera? Was he not chosen for his expertise? And if not, if he was inexperienced,

why did he seem to have no learning curve in this regard?

MUFON on Sloppy Filming

Having located and extensively interviewed three military cameramen - Joe Longo, president of the international Combat Camera Association, Bill Gibson, who photographed balloon launches and recovery operations of Project Mogul, and Lieutenant Colonel Daniel McGovern, who was the project officer on classified projects Twinkle and Grudge and shot footage of the Hiroshima and Nagasaki nuclear devastation - the article states: "All three consider the quality of the camera work in the Santilli film appalling and, for a myriad of reasons, not even close to meeting military standards."

ZetaTalk on Fraud Charges

Will someone go to prison for having committed fraud? For what crime? Fraud must have monetary damages, and this has none. Fraud must have some sort of damages, and none will be forthcoming. What would be the claim? I was assured that aliens were real and then found they were not. Laughed right out of court.

MUFON on Fraud Charges

Contacting the Serious Fraud Office of Scotland Yard with the evidence that the Santilli autopsy film was a fraud, the author received a written response to the effect "that this was not 'a matter suitable for investigation by this office.' In a follow-up phone call, I was told that before they could act, 'there had to be a victim in the U.K.'"

ZetaTalk on the Outcome

What was its intent? Of course it was to acclimate the public to the alien presence, the sight of alien bodies, the thought that humans and aliens have contact, the image of their government in contact - but reassuringly with the impression that humans have the upper hand. How could it not be so, when alien bodies are being cut apart by humans in white coats. And for those too frightened by this thought, whose hearts are beating, blood pressure rising, anxieties distracting them from the day's work - there are the doubts about the authenticity of the film, which will soon be strengthened as more and more skeptics come forward with specifics.



Troubled Times



May 1998 Satellite Failure

UFO RoundUp, Volume 3, Number 21

May 24, 1998

Editor: Joseph Trainor

Satellite Failure Causes Communications Chaos

On Tuesday, May 19, 1998, at 6 p.m., the satellite Galaxy IV suffered a failure in its onboard control system. The backup switch also failed, and the \$250 million satellite rotated out of position, completely disrupting communications here on Earth. Owned by PanAmSat, Galaxy IV was launched in June 1993. It is positioned in a geosynchronous orbit 22,000 miles above Kansas. USA Today called the incident "the biggest telecommunications failure in recent years," adding that the breakdown "wiped out pager traffic, halted credit card transactions and knocked TV and radio stations off the air."

Pager service to 45 million customers was lost when **Galaxy IV rotated out of position**. "Personal pagers use less than one percent of the capacity of the Galaxy IV satellite...The satellite's primary users are broadcast and cable TV companies and big telecommunications companies." "Galaxy IV remains in orbit but **is no longer pointed at its target on Earth**. PanAmSat, which is 81 percent-owned by Hughes Electronics, says an onboard navigational computer and its backup failed. It can't explain why." As of Friday, May 22, 1998, "PanAmSat still doesn't know why Galaxy IV's spin controller and backup failed. The satellite is beyond repair."

All 600 stations of the USA's National Public Radio were knocked off the air when Galaxy IV went haywire. They were served by the two channels of NPR Satellite Service routed through Galaxy IV. Other affected radio broadcasters included KOA-AM in Denver, Colorado, KSJN-FM Minnesota Public Radio in Minneapolis, Chicago White Sox radio, KIRO-AM in Seattle, Washington, KEX-AM Trail Blazers Radio Network in Portland, Oregon, KGIL-AM in Los Angeles and all four channels of World Harvest Radio International WHRI-SW short wave. Television broadcasters affected included the WB, UPN and CBS networks, Reuters TV, Motor Racing Network, CNN Airport Channel, the Chinese Television Network in Hong Kong and Soldiers Satellite Network, the USA armed forces entertainment network.

Private business TV stations such as Aetna, Microsoft, 3M and the Ford Motor Company's Fordstar service were also knocked out, as were the Ohio, Minnesota and Texas state lotteries. "Fred Landman, CEO of PanAmSat, knew he had trouble when one of his company's 17 satellites failed just after 6 p.m. Tuesday...About 90 direct customers of PanAmSat use Galaxy IV, so Landman was shocked when he learned 100 calls from the media had come in by 3 a.m. Wednesday. 'That was the biggest surprise,' he recalls." PanAmSat is currently retargeting and shifting customer traffic to other satellites in orbit. "We expect that within one week of the occurrence that virtually all service will be up in force," Landman said. (See USA Today for May 21, 1998, "Satellite's death puts millions out of touch," pages 1-B and 3-B. Also for May 22, 1998, "Satellite emergency a lesson in spin control," page 2-B. For more on strange events in the USA's heartland on May 19, the day of Galaxy IV's failure, see the related stories in this issue.)



Troubled Times



Live ZetaTalk

We have predicted that satellites will malfunction in the year before the shift. Satellites have already been misbehaving, by early 2002, but the public is not informed anymore as they were in 1999 or thereabouts. More satellites are put up, a backup system in place, and the functions overlap at all times. Since the military and a few telecom companies are doing this, the public is kept in the dark. Few know the number of satellites and their function and ownership.

ZetaTalk, written [Jan 12, 2002](#)

Beyond these problems, airplanes use satellites to guide them, magnetic orientation to guide them, and these likewise will either fail on occasion or given invalid readings.

ZeatTalk, written [May 4, 2002](#)



Troubled Times



Severe Warnings

Scientists Warn of Immense Solar Storm Threat

May 4, 2006

[Discovery Channel](#), Canada

As the world scrambles to prepare for hurricanes and earthquakes of unprecedented strength, some scientists say the sun poses an equal threat, with predictions calling for a 2012 sun storm of immense proportions. The vast space between the Earth and the Sun is filled with electrically-charged particles, radiation, magnetic fields, and electromagnetic energy that could play havoc with Earth in the event of elevated solar output. The last great solar super storm was 145 years ago. But, this event provides little context given our very recently-adopted dependence on satellite-based technologies.

Last month, experts convened in Colorado during Space Weather Week (April 25-28) to discuss the issues surrounding the approaching 2012 event. If the storm turns out to be at the same scale as the one in 1859, economic disaster would ensue, with immediate costs around the \$20 billion mark. Sten Odenwald of the QSS Corp., based at NASA's Goddard Space Flight Center in Greenbelt predicts that in the 2012 storm will kill only the oldest of the 300 geosynchronous Earth-orbiting (GEO) satellites. However the storm would likely reduce the life of all the other satellites by five to 10 years. These longer-term problems would add tens of billions of dollars more over the years, Odenwald says. The GEO satellites alone generate about \$97 billion US in revenue each year.

A solar superstorm could also:

- force about 100 low Earth-orbiting spacecraft to undergo earlier-than-normal reentry*
- disrupt Global Positioning Systems the world over*
- force the International Space Station to lose altitude*



Troubled Times



Spy Satellite Galaxy IV

Disabled Spy Satellite Threatens Earth

January 26, 2008

http://www.breitbart.com/article.php?id=D8UDPGFO0&show_article=1

The satellite, which no longer can be controlled, could contain hazardous materials, and it is unknown where on the planet it might come down. The spacecraft contains hydrazine _ which is rocket fuel. Hydrazine, a colorless liquid with an ammonia-like odor, is a toxic chemical and can cause harm to anyone who contacts it. Spy satellites typically are disposed of through a controlled re-entry into the ocean so that no one else can access the spacecraft.

AF General: Spy Satellite Could Hit US

Jan 30, 2008

http://www.breitbart.com/article.php?id=D8UG19Q80&show_article=1

The U.S. military is developing contingency plans to deal with the possibility that a large spy satellite expected to fall to Earth in late February or early March could hit North America. The size of the satellite suggests that some number of pieces will not burn up as the orbiting vehicle re-enters the Earth's atmosphere and will hit the ground. The spy satellite is designated by the military as US 193. It was launched in December 2006 but almost immediately lost power and cannot be controlled. It carried a sophisticated and secret imaging sensor but the satellite's central computer failed shortly after launch.



Troubled Times



Tectonic Explanation

Date: Mon, 25 Oct 1997
To: longo@bo.infn.it
From: Patricia Thomas <pt50@pearl.mhtc.net>
Subject: **Tunguska Explosion**

After reading some of the articles concerning this episode, I was wondering if anyone considered the explosion itself might have been that of built-up methane gas in the region that was triggered by the fireball witnessed. Has this view been approached? If so, could you direct me to articles concerning this? If not, is this a view that might have some bearing in this event? Thank you for time in reviewing my questions.

Pat Thomas

Date: Mon, 27 Oct 1997 10:57:38 +0100
From: Giuseppe Longo <Giuseppe.Longo@bo.infn.it>
Organization: INFN
To: pt50@pearl.mhtc.net
Subject: [Fwd: A letter from Andrei Ol'khovatov]

Dear Patricia,
May be that Andrei (see the letter enclosed) can answer your questions. Bye
Giuseppe

Giuseppe Longo E-mail: longo@bo.infn.it
Department of Physics, Fax: (**39-51)244101
University of Bologna, Phone: (**39-51)351087
Via Irnerio 46, Web page:<http://www-th.bo.infn.it/tunguska/>
I-40126 Bologna, Italy To: longo@bo.infn.it

From: "Andrei Yu. Olkhovatov" <andrei@olkhov.msk.ru>
Date: Sun, 16 Mar 97 07:39:22 +0300
Subject: A letter from Andrei Ol'khovatov

Dear Prof. G. Longo,

Thank you very much for fast reply and attention. I was very glad to read your remarks. Let me comment some of them.

A few years ago I even don't know what does word 'tectonic' mean. Now it seems to me I understand a little what does it mean, but I'm not specialist in 'tectonics' anyway. It's important that there are practically no specialists on 'explosive fireballs' generated by tectonic processes. Probably the best are researchers of ball-lightning. I'm in close contact with them. But they can't explain a physics of ball-lightning!

I collect events of 'fireballs' in connection with earthquakes and some of them are like mini-

Tunguska. Unfortunately modern seismologists practically don't pay attention to them (nowadays they are interested in a propagation of seismic waves at first). So I must at first tell him about such events! But when they are aware of them, as a rule, they become interested with the tectonic interpretation of the Tunguska and they think that it doesn't contradict our knowledge of what happens in connection with earthquakes. **Anyway, now the majority of the top of Russian seismologists are interested in the 'tectonic Tunguska' and even ask me to give them copies of my articles on it!**

59 samples is enough large number to reveal statistics close to Gaussian. But your statistics is not Gaussian, so some 'distorting' factor is present. **'Tectonic Tunguska' explains it very easy. It's an increase of outgassing of the Earth, which is well-known before earthquakes. And how 'meteoritic Tunguska' could explain it?**

I told Yu. M. Yemel'yanov (he discovered an increase of the Tunguska epicentre tree growth rate) about 'lignification's problem'. He found it very unusual. On the other side significant influence of tectonic processes (before the earthquakes) on vegetation is known. How 'the meteoritic Tunguska' could explain it?

Please, inform me about the delivery of my air-mail. I would be very glad to discuss the Tunguska with you.

Best wishes, Andrei



Troubled Times



Methane Evidence

The Tectonic Interpretation of the 1908 Tunguska Event

By Andrei Yu. Ol'khovатов, Russia, [Moscow](#)

North Sea wreck in [Methane Mystery](#)

BBC News, November 29, 2000

A trawler found at the bottom of the North Sea may have been sunk by a massive and very sudden release of methane gas, scientists speculated on Wednesday. The wreck, which has just been surveyed by submersible camera equipment, lies in an area known as the Witch's Hole, 150 kilometres north east of Aberdeen. The patch of seabed, at least 100 metres across, is one of many "pockmarks" in the region - depressions in the sediments created by escaping gas. That the boat should be sitting upright in the middle of this "crater" could be just a huge coincidence, but marine geologist Alan Judd told *BBC News Online* it was also possible the trawler was in the wrong place at the wrong time. "Was it just happenstance that it landed here or, against even longer odds, was it sailing immediately above the Witch's Hole when there was a gas escape? If it was caught in the gas it would have been swamped and gone down as though it were in a lift."

Organic matter deep under the seabed generates methane which works its way up through the sediment over thousands of years. Pockets of gas can build up just beneath the seafloor and are held in place by the weight of overlying grains of sediment and the column of water. Every once in a while, the pressure of the gas increases to such a level that the methane bursts out and streams to the sea surface. Oil drilling platforms are well aware of the dangers of this "shallow gas" phenomenon and have safety procedures to follow if they hit a methane pocket. But there are no confirmed reports of ships being caught out by sudden and large releases of gas. The expedition to the Witch's Hole wreck was filmed by the Granada TV programme *Savage Planet* using the expertise and equipment of the offshore survey ship *Skandi Inspector*, operated by Fugro-UDI. Although pictures from a robot submarine showed that the sunken trawler had indeed suffered little damage and gone straight down, there was nothing Alan Judd saw that proved the gas hypothesis.

"We didn't find the evidence I thought we would find in an active pockmark," he said. "Ideally, we would have seen a few gas bubbles about and bacterial 'mats' where microbes beneath the seabed consume the methane." Dr Robert Prescott, director of the Scottish Institute of Maritime Studies at St Andrews University, is attempting to identify the trawler and determine some of the circumstances surrounding its loss. His is the lead agency in the UK dealing with matters relating to wreck heritage. "It's an early 20th century steel-built steam trawler. That much is clear from the pictures - the configuration of the deck, the layout of hatches, the shape of the hull," he told *BBC News Online*. "I think most ships are lost through stress of weather but the argument that it was lost in a gas emission is a plausible one. It's an intriguing hypothesis and I keep an open mind on it." The findings of the institute's research on the wreck will be revealed in the *Savage Planet* programme due to air early next year on ITV. And a more detailed account of the recent expedition can be found on the *New Scientist* website. The magazine travelled on the *Skandi Inspector*.



Troubled Times



Gas Explosion

Siberia Blast was "Volcanic Blowout"

by Giles Whittell in Moscow

The Times, July 21, 2001

The cause of a massive explosion over central Siberia that has remained one of the great mysteries of modern science, was a "volcanic blowout" of ten million tonnes of natural gas, a noted German physicist has claimed. The eruption over the Tunguska plateau one summer morning 93 years ago has long been explained as the impact of the biggest meteorite to hit Earth since prehistoric times. It scorched nearly 1,000 sq miles of forest, incinerated entire colonies of reindeer and sent elderly men 200 miles away running for the bathhouse to be clean for their impending deaths. For the past half-century the "Tunguska event" has been explained as an incoming meteorite or comet exploding in the upper atmosphere with the force of 1,000 Hiroshima bombs. However, it left no cosmic debris or crater, forcing even experts to admit that its cause was one of the great mysteries of modern science. That may be about to change: 17 factors, including the patterns of tectonic faults and fallen trees in the area, suggest that the explosion had nothing to do with outer space, but was caused by gas forced upwards from the planet's molten core, Wolfgang Kundt, Professor of Astrophysics at the University of Bonn, writes in August's issue of the journal *Current Science*.

The "outgassing" may also have created, in a few earth-shaking minutes, a geological structure close to the surface of the Earth known as a kimberlite after the legendary diamond reserves found in the 19th century near the South African town of Kimberley, Professor Kundt writes. "If they find that, as is indicated, it would turn Siberia into a rich industrial country," he told *The Times*, dismissing the comet and meteorite theories as pseudo-science. "If good physicists had been involved from the start this problem would never have occurred," he said. "As it was (the early study of the Tunguska phenomenon) was left to geophysicists and geologists with no knowledge of extraterrestrial bodies." The first outsider to visit Tunguska was neither a physicist nor a geophysicist, but a goldsmith named Suzdalev, who arrived in 1910 and swore the locals to silence about what he found. They obeyed, and it is unknown whether he left with a fortune in diamonds or nothing at all. The next expedition was in 1927, when Leonid Kulik, a Russian geologist, observed a stunning radial pattern of thousands of trees felled by the blast, their blackened trunks pointing to an epicentre in the middle of a 250 million year-old volcanic crater at the junction of seismic faultlines. Witness accounts from 1908, throughout the region were plentiful, but contradictory. They spoke of fireballs, twin columns of flame and trails of fire from several directions. There were also reports of eerie lights in the night sky before and after June 30, strong enough to read a newspaper by and visible as far away as Western Europe.

Amateurs have explained these accounts with theories about black holes, "anti-matter bullets" and, most popular of all, an exploding spaceship that was the subject of a best-selling Soviet book, *Guest From Space*. Two costly expeditions by the University of Bologna since the Soviet collapse have focused on meteorites. They claim to have found microscopic traces of space dust in spruce resin to support the view that the blast was caused by a stony meteor 200ft wide approaching at a 45-degree angle and exploding four miles above the Earth. However, such a meteorite cannot account for 12 conical holes in the ground near the epicentre and would have felled the trees in a parallel pattern, Professor Kundt insists. Andrei Olkhovatov, a Russian scientist who supports many of his findings, says that a meteor 200ft across would have left at least 100,000 tonnes of debris along its approach path. "But the question arises, where are the

remnants?" he asked. "Nowhere, nothing after decades of detailed research."



Troubled Times



Russians Agreed

DEEP IMPACT, New Hypothesis Of The Tunguska Explosion

Space Daily, Novosibirsk, Sept 2, 2002

A geologist from Novosibirsk has set up a new hypothesis of the explosion in Podkamennaya Tunguska, which took place on June 30, 1908. It was not a meteorite that caused such extensive destructions and conflagration, but a fluid jet, which had shot up under high pressure from the interior of the Earth. The event which occurred almost a hundred years ago in Podkamennaya Tunguska has drawn scientists' attention again. What actually exploded at that time in the remote taiga, the power of explosion being equal to the 50-megaton H-bomb? **The hypothesis that it was a meteorite or any other extraterrestrial object has not quite satisfied inquisitive minds, since too many puzzles remain unsolved.** A geologist Vladimir Epifanov, Siberian Research Institute of Geology, Geophysics and Mineral, reported to the recent Conference "Degasification of the Earth" (Moscow) that the reason for the explosion could have been a powerful fluid jet suddenly shot up from the depth of the planet.

Extensive carbohydrates accumulations exist in the area where the alleged 'Tunguska meteorite' fell down. Two abyssal breaks in this area split the sedimentary rock containing the gas-and-oil fields and gas-condensate fields sealed up by basalts on top, the basalts streamed from multiple fissures and volcanoes 200 million years ago. The epicentre of the explosion is located just above one of the ancient craters. The scientist assumes that the gases associated with the oil deposits, and **methane produced in the depths of coal beds were accumulated under a thick cover of basalts and then they broke free one day. It seems that a moderate earthquake could have promoted the process.** The gas kick started nine days prior to the major explosion, a narrow jet of gases rushed up southbound. The fluid jet from under the earth was accompanied by dust, and the wind carried the dust to the west. **In the upper layers of atmosphere a layer of aerosols was formed. This layer charged with electricity could have produced the fatal 'sparkle'. It put on fire the top of the liquid jet, and the fire ball rushed towards the Earth. In the oxygen saturated layer of atmosphere the fire ball exploded, the blast wave stirred up the ground, and the gas discharge ceased.**

The conflagration was in full swing in the area of explosion, however the trees in the epicentre remained alive. An ice dome was probably formed around the place where from the gas discharged, similar to that as it gets formed in a refrigerator when the gas goes through a narrow opening and then gets into a large chamber. It is interesting to note that the local carbohydrates are rich in helium, which could have ensured the H-bomb effect. Vladimir Epifanov is perplexed by some circumstances of the Tunguska catastrophe, the extraterrestrial hypothesis being unable to account for them. For instance, not all the trees in the epicentre got burned. Judging by the strength of the blast wave, radiation burn, pine-tree mutations and other parameters, the event resembles the H-bomb explosion, except for high radiation. The motion path of the exploded body is such that it could hardly be a spaceship or a meteorite, the substance of which has never been found in the soil. All these facts have made the scientist think about an earthly nature of the explosion, particularly because such conjectures were made more than once by researchers in different years. Thus, in the middle of the 80s A.A. Rastegin, geologist from Novosibirsk, pointed out that the epicentre of the explosion was indeed located above a major gas accumulation.



Troubled Times



UFO Roundup

Chupacabras Run Wild in Southern Brazil

UFO Roundup, [Vol. 2, No. 31](#), Aug. 3, 1997

Chupacabra seems to have found a home in Brazil. During the past month, there have been dozens of sightings in the rural districts of the states of Minas Gerais (M.G.) , Sao Paulo (S.P.) and Parana. During the week of July 25, many dead animals were discovered in Betim and Nova Contagem in Minas Gerais under "circumstances that are extremely mysterious and defy the investigators." On Saturday night, July 26, 1997, a farmer in Nova Contagem reported that he'd entered his chicken house and found every one of the fowl lying dead. The same night, in Betim, M.G., rancher Leandro Amador found dead goats on his property. All had been killed with a blow to the maxillary bone, and all had a distinguishing mark on the ear. Amador told the Brazilian newspaper *O Estado de Minas*, "The whole situation is unreal." Also in Betim, farm worker Tolentino Antonio de Oliveira telephoned his "patrao" (boss) that night and reported find a goat dead and drained of blood. The animal had strange marks on its ears, and several bones were broken. Ricardo Cicarelli, owner of eight goats, was the first victim of the current flap. He told the newspaper, "no explanation was made so as not to alarm the populace." He added, "I am preparing to slay the beast."

Meanwhile, in the state of Sao Paulo, the month of July ended with a host of animal deaths attributed to the Chupacabra. According to the newspaper *Correio Braziliense* of Brasilia, D.F., 21 ducks, 20 chickens and 12 other fowl were killed in Baixada Santista, S.P. The first attack in July occurred at Praia Grande in Sao Paulo state, followed by a second at Jardim Mulvi, S.P. during the week of July 14. Five days later, another reputed Chupacabra attack took place in Carara, a barrio of Bertioga, S.P. Curiously enough, all of the attacks took place in barns or sheds or pens that were securely locked. In Praia Grande, 10 ducks were killed. Another 11 were killed in Bertioga. According to veterinarian Dr. Ines Matsumoto of the Mascote Clinic, the ducks all died of internal hemorrhaging, which was caused by extensive squeezing. On July 20, there was an attack on 20 chickens at a home in Iriiri, another barrio of Bertioga. Dr. Matsumoto told the newspaper that the injuries sustained by the fowl are inconsistent with wounds inflicted by jaguars and other felines. The Jardim Mulvi case is being investigated by Wallacy Albino of the Grupo Ufologico de Guaraju (GUG). On Sunday, July 27, 1997, in Minas Gerais state, Sr. Amador was interviewed by a team from the Centro de Investigacao Civil de Objetos Aereos Nao-Identificados (CICOANI). The group arranged for animal cadavers to be sent to Belo Horizonte, the state capital, for lab tests. (See the newspapers *O Estado de Minas* for July 29, 1997 and *Correio Braziliense* for July 31, 1997.)



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Strange Magazine

[Mystery Creature](#) Causes Havoc in Puerto Rico

By Scott Corrales, *STRANGEmagazineWEB*

The Caribbean island of Puerto Rico has been galvanized by numerous sightings of a strange, livestock-killing creature which has been dubbed "el Chupacabras" (The Goatsucker) as a result of its penchant for sucking the blood out of goats, chickens, and household pets. The creature has been sighted throughout the island by credible witnesses who have much to lose by stepping forward with their testimony. This bewildering story has been covered by a number of stateside newspapers and has become a major news item for Puerto Rico's media. The enigmatic creature can best be described as a cross between one of the "Grey" aliens and a terrestrial animal such as a porcupine or a kangaroo due to the presence of quill-like appendages running down its back and enormously powerful hind legs which enable it to leap over trees in a single bound. First reported in the municipality of Canóvanas, this entity (or many similar to it - an even more sobering thought) has been reported in all the communities which comprise metropolitan San Juan. The creature's habits are both diurnal and nocturnal; one daylight sighting had it walking down a street, to the amazement of onlookers. One eyewitness, Lucy Batista, interviewed by Jorge Martín, stated that other animals seemingly "go crazy" or become panicked when the creature is around. The entity has reportedly landed on trees and bent them due to its apparently considerable weight.

The authorities have remained silent on the entire matter, while the local press has made light of it, dubbing the intruder el chupacabras (the "goat sucker" or "goat vampire"). Researcher Martín has admonished both his readers and the listeners of his radio program that while such jocular names may prompt a smile, there is nothing humorous about the situation. At this time, the reports on this latest escapee from the "phantom menagerie" were multiplying: the creature has been seen as far as the opposite end of the island from where these cases first appeared. A local security guard agency complained of its inability to staff the third shift of a manufacturing complex on the island because the guards were terrified to work in the darkness for fear of the creatures. Allegedly, the strange entity is now being reported in twos and threes.

José Soto, the mayor of Canóvanas, the community in which events first started to occur, organized a "monster hunt" staffed by elements of the Civil Defense, the police, and municipal workers. A large cage made out of welded iron garden fencing was brought along in hopes of trapping the unwanted visitor. Political opponents have taken him to task on this matter, but the mayor's constituency appeared to support this decisive course of action by an elected official. Carlos de Jesús, manager of a local junkyard where the "Chupacabras" had been sighted, stated emphatically: "The Chupacabras situation is not a joke, and the authorities ought to pay more attention to this strange situation. Right now it's only farm animals [being slain]. Tomorrow it could easily be one's children or grandchildren." Matters have since worsened: bogus "UFO research groups" have sprung into existence, preaching the gospel of a purported secret government document which states that the wave of unusual creatures is in fact extraterrestrial in nature and "the source of the AIDS epidemic." These sensationalist fearmongers have gone as far as saying that the sudden emergence of these hitherto unknown beings heralds humanity's doom, since their vampiric powers will be used to slay humans en masse, leaving the Earth free for colonization by aliens. Adding insult to injury, film crews from the Inside Edition tabloid TV program visited the island, mocking witnesses and the public officials who are actively in pursuit of these creatures. Activities of this nature can only be injurious to the sensitive work being carried out by earnest investigators.



Troubled Times



Associated Press

Mysterious, perhaps Mythical Beast reported in Two Countries

Associated Press, August 30, 2000

Reports of a mysterious, vampire-like beast that allegedly preys on animals have reappeared suddenly in two Latin American nations. On Wednesday, the newspapers *Nuevo Diario* and *La Prensa* published photos of a dead creature that shepherd Jorge Luis Talavera claimed was a "chupacabras," a "goat-sucker," he had killed with a shotgun. The dog-sized creature had a bull-like head and small feet. Gioconda Chevez, a zoologist who examined it, told the newspapers that the creature had smooth skin like that of a bat, long claws and a crocodile-like crest running down its back. The cadaver was turned over to the National Autonomous University, where officials said it would be examined. Talavera said he had lost several sheep in mysterious ways recently at his farm in western Nicaragua and stayed awake at night to catch the attacker.

The Mexico City daily *El Universal*, meanwhile, also reported rumors of a goat-sucker in the town of San Pedro in the northern state of Coahuila. Farmers had reported the unexplained deaths of several animals there. Rumors of goat-suckers spread across Latin America several years ago, though many officials dismissed the reports, saying animals were being killed by wolves, dogs or coyotes. The rumors spawned folk songs, t-shirts and even little rubber goat-sucker figures. Reports were common in Puerto Rico and there were some in the Rio Grande Valley of Texas.



Troubled Times



Accusation Denied by Al Hejailan

This is to clarify our position in regards to the posting on your website and thereby to neutralize any plausible implications that may be construed thereof.

The following is the link to the original posting in question.

../theword/tworx543.htm

At the outset, it will be logical to start with the relationship between the three companies mentioned in your post, Al Hejailan Projects Engineering, Horizon Communication Services and Horizon Satellite Services.

Al Hejailan Projects Engineering Co. is a reputed company established in Saudi Arabia way back in the 80s and as a holding company, it offers a diverse range of services and products through many of its subsidiaries. The activities of these subsidiary companies range from construction, telecoms, manufacturing and other services. Al Hejailan Projects Engineering Co. supports its subsidiaries with Management and Financial Support services.

Both, Horizon Communication Services, registered in Riyadh, Saudi Arabia and Horizon Satellite Services, registered in Dubai, UAE are fully owned subsidiaries of Al Hejailan Projects Engineering Co.

Horizon Communication Services (HCS) provides IT infrastructure implementation and maintenance support to Al Hejailan Projects Engineering Co. Whereas Horizon Satellite Services (HSS) provides internet-via-satellite connectivity solutions for the Middle East region.

As an Internet Service Provider, HSS is a member of RIPE (<http://www.ripe.net>) and conducts business in strict adherence to regulations stipulated by RIPE including those related to issuing of IP addresses to clients. Accordingly, we are required to specify the usage and update the RIPE database to reflect our customers' details as and when new IP addresses are issued.

IP address 82.205.138.35 was assigned to Horizon Communication Services (HCS) in May-06. In due course, when HCS requested more IP addresses, we (HSS) assigned them with a new set of IP addresses and gave their old IP address 82.205.138.35 to one of our customers in Lebanon. However, we did not update this information on the RIPE database to reflect the new change, since it is a standard practice to do this periodically and not as soon as an IP address is changed. This explains why the search to www.nazrolla.org led to the fact that it was hosted on 82.205.138.35 and why the RIPE database was still showing Horizon Communication Services' name.

Further, Al Hejailan's name was not registered to that IP address but the address of one of the persons registered in the RIPE database, Karthikeyan K, which mentioned Al Hejailan Projects Engineering's name.

As an Internet Service Provider, these kinds of issues are common and whenever HSS receives inquiries related to usage of its services, in the larger interest of all concerned and that of the society we live in and contribute to, it is our policy to disclose all necessary information, within our means and knowledge, on the person or company using our Internet services, including IP addresses that have been issued by us. However, when it comes to content, understandably, we do not have control over the content hosted by customers using our services.

I hope this explains the situation and trust you will be kind enough to use this clarification to clear up this issue with the owner of the blog. Also, kindly remove this posting from your website.



Troubled Times



Enterprise Mission

For instance, "Zeta Talk" has alleged, in 1995, among other things, that Hale-Bopp was "not a comet." This would come as quite a surprise to those of us that viewed it our night skies for several months in 1997. They've also claimed that Enterprise principal investigator Richard C. Hoagland once went on Art Bell to concur with this opinion by stating he "suspected Hale-Bopp of being not a comet but an intelligently driven star-like object." We of course never said any such thing. They've also charged that Hoagland did this at NASA's behest in return for a promise that NASA would re-photograph Cydonia. No such "quid-pro-quo" has ever taken place between these two parties on any matter.

Enterprise Mission, 2002

The Zetas say there was a comet overhead in 1997, being pointed to as Hale Bopp, but it could not have been the same thing supposedly discovered in 1995 and played up with so much hoopla for 2 years before it finally arrived and proved to be no more spectacular than Hayakutake the previous year. I do remember Richard Hoagland on Art Bell saying that because NASA was refusing to use the Hubble telescope to view Hale Bopp while it was at its closest point to earth, that it could indicate that Hale Bopp was artificial, perhaps a vehicle being driven by astronauts, something placed by NASA in the sky to cover up that there was no real comet, why else the refusal to focus the Hubble on it, and their argument that it would reflect too much light he also countered by saying they had imaged other bright objects with no problem, so why the refusal of this once in a lifetime opportunity to view "the most spectacular comet ever" with our best telescope, the Hubble. I looked on enterprisemission for an article related to that Art Bell show and didn't find the artificial theory in writing, but I well remember that show, which related to this article

<http://www.enterprisemission.com/nasabell.html>. Also see other 4/97 links at

<http://www.enterprisemission.com/bridge.html>

Offered by [Milly](#).

Setting aside the PX issue, Hoagland has some serious credibility issues: He went on [Rense's Show](#) several years ago and claimed that North Korea was about to start a war. He warned that Washington DC was about to be nuked. This shows that he does get "info" from someone that is clearly designed to destroy what little credibility he has left. How does a guy who mainly studies Mars and the Moon get such great "insider info"? If you look at his book and his early writings, compared to his recent stuff, there is a marked change for the worse. Now what he writes about is mainly numerology/Masonic/astrology. As in "Horus rises at such latitude at this time and date, therefore, incident Y was planned by Masonic forces to follow their belief system." This not only makes no sense but again he is marginalizing himself. He has flip-flopped many times on PX. Once he said that Sitchin's PX is impossible because the orbit would be unstable, he bought into Van Flandern's exploding planet theory until his falling out with him, he hints that a catastrophe is possible between 2003-2012, now he says it isn't. In one of his posts he even claims that PX's existence is predicted by *his* hyper-D physics theory (which makes no sense by the way). Basically he's covered all the bases, if PX exists or not/comes in 2003/2012 or never, Hoagland will be right. Hoagland once was somewhat respectable, he spoke at the UN and even at NASA facilities about Cydonia. So clearly he's too smart to be doing these things unless behind the scenes he has been bought off or coerced.

This synopsis of his 9-29-95 Art Bell interview is also interesting because back then he was agreeing with ZetaTalk about [Hale-Bopp](#) and also pro-PX. Hoagland reminded Art Bell that when he first heard about Hale-Bopp he "predicted" a 3,600 year return, which is "the classical Summerian Shar", the return of the 12th Planet known as the "planet of the crossing". Hoagland explained that the "Summerian Priests understood" all the planets in the Solar System, plus "another object" they called the "planet of the crossing". This planet had a "highly elliptical orbit" several hundred AU beyond Jupiter. Hoagland stated that Sitchin's work had "impressed him", and that he felt Hale-Bopp "has been made to fit the Sitchin model". Hoagland stated he was "incredibly suspicious" when the orbit of Hale-Bopp was

announced. Hoagland suspects "someone" nudged a speck to "mimic" the 12th Planet

Hoagland said, regarding the projected arrival in 1997, "what is stunning is the timing", as by his calculations this is the correct ending of the "Mayan Calendar" which was to end on December 23, 2012. Hoagland stated that "because of errors in our own calendar" that it is "later than you think", and that 1997 is the "end of the fabled Mayan Calendar". Hoagland stated that he felt the Mayan Calendar date "is critical now", as without intervention there will be "increased geological activity". After a lengthy discussion about various alien and human takeover agendas and predictions on pending geological changes, Hoagland responded to a question, saying "Why would someone try to confuse us? Answer: to distract us. If the physics is mandating major geological changes, and we are distracted both individually and governmentally into looking in the wrong directions until the clock strikes one, then maybe somebody doesn't have to lift a finger because nature will take care of, quote, the problem."

Offered by [PS2003](#).

