



# The Ahau Chronicles



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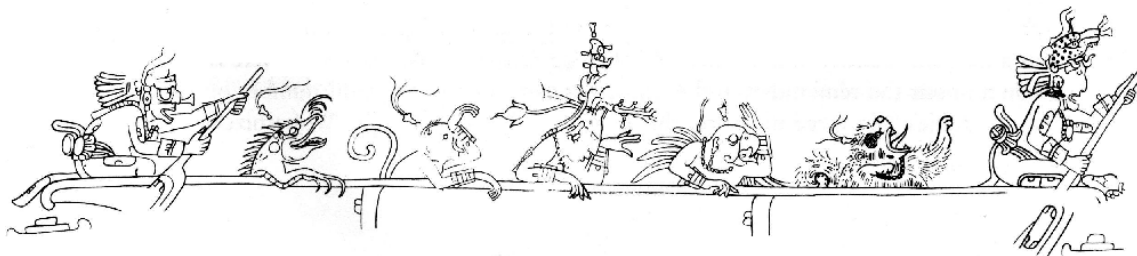


The Waters of Aquarius

Last month, February 27<sup>th</sup> marked the one year anniversary of the earthquake and tsunami that ravaged Chile and destroyed large parts of the only village on Robinson Crusoe Island. This month, on the opposite shore of the Pacific Ocean, another tremendous earthquake off the coast of Japan was quickly followed by a devastating tsunami that has crippled the island nation and triggered one of the worst nuclear reactor accidents in history. Some coastal towns were completely obliterated and may never be rebuilt. Crematoriums have been overwhelmed with corpses and, against the prevalent cultural tradition, bodies are being buried in mass graves. The economic fallout of the costliest natural disaster of all time has been felt around the world, with supply chain disruptions affecting industries both large and small. Even still, these apocalyptic scenes are being overshadowed in the media by coverage of the various religious wars that threaten to overwhelm the Middle East, the cradle of civilization. One wonders if these are simply isolated incidents or if they are harbingers of greater dangers to come.

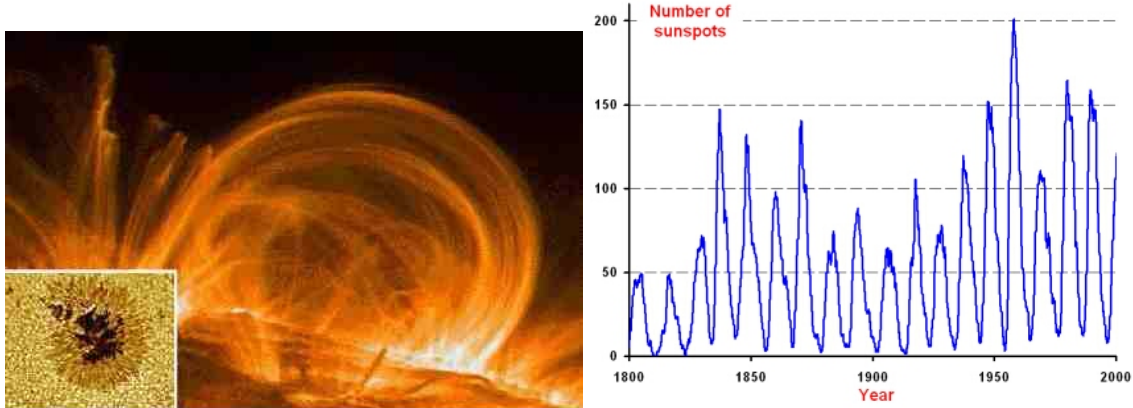


Readers of this newsletter will recall Volume 4 which noted that the Chile earthquake occurred near a full moon when the moon was at its closest approach to earth, known as “perigee”. The Japan quake occurred barely a week before the full “Supermoon” when the moon was at perigee and its closest approach to earth in 18 years.

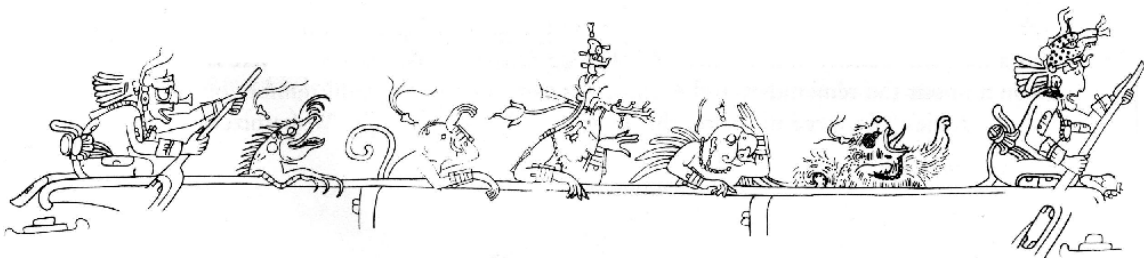


Given the complexity of the systems governing plate tectonics, gravitational tides, and the dynamics of the molten core of our planet, we should not expect a simple cause-and-effect relation between cosmic events and natural disasters here on earth. Certainly, perigee moons happen every month with no apparent ill effects. But the overwhelming power unleashed upon northern Japan demonstrates our inability to defend ourselves against the colossal forces of nature. And if our natural world were to undergo significant disruptions that were detrimental to our “global village” perhaps life on earth would be changed forever.

One of the indisputable natural occurrences that appears to coincide with the end of the Mayan calendar in 2012 is the solar sunspot maximum. Sunspots are dark areas on the surface of the sun where intense magnetic loops have formed. They appear dark compared to their surroundings and can grow to diameters equal to the size of the earth. The number of sunspots, which originate near the solar equator and slowly drift outward, rises and falls in a cycle of approximately 11 years. The current cycle, which exhibited unusual activity near its minimum, is expected to peak shortly after the end of 2012.

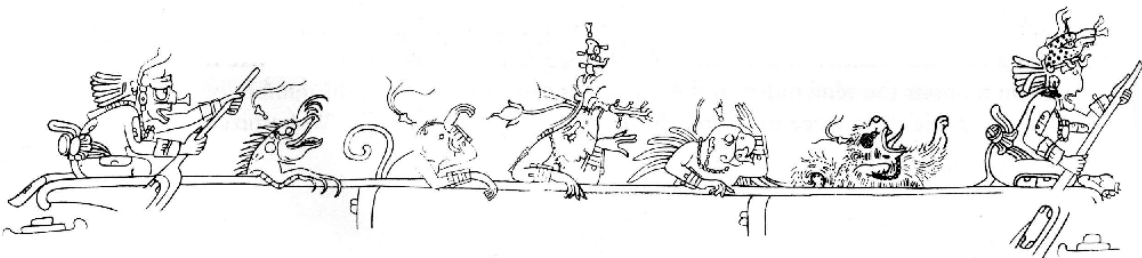
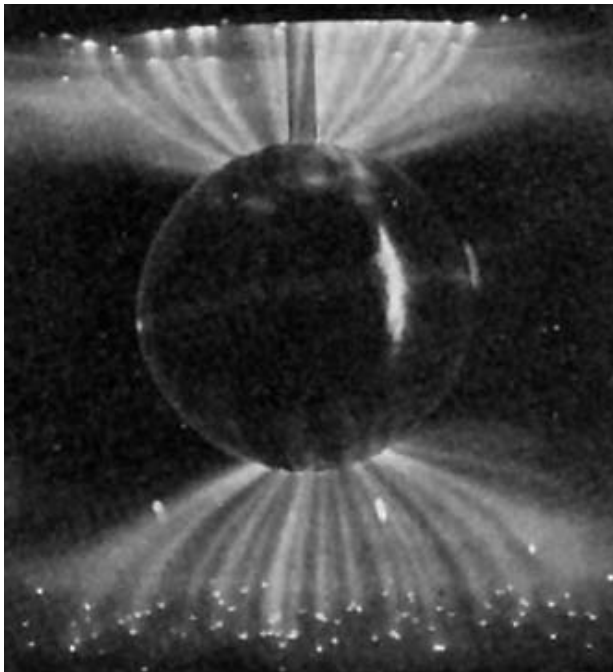


As the above photo shows, solar flares and coronal mass ejections are most common in the vicinity of sunspots. Coronal mass ejections, as the name implies, are intense explosions where billions of tons of plasma are ejected from the sun and can reach speeds of 3,000 km/s. If these happen to be directed toward the earth, they can cause not only beautiful auroras (“northern lights”) in the upper atmosphere but can also fry satellites and overload electrical grids causing widespread power outages. On March 13, 1989, a coronal mass ejection caused the power grid in Quebec, Canada to overload and blackout 6 million people for nine hours. Recently, discussions regarding the effects of extreme space weather and the consequences for satellite and communication systems on earth caused one high ranking military officer to suggest that the United States could effectively lose command and control of its armed forces in the event of an especially disruptive storm.



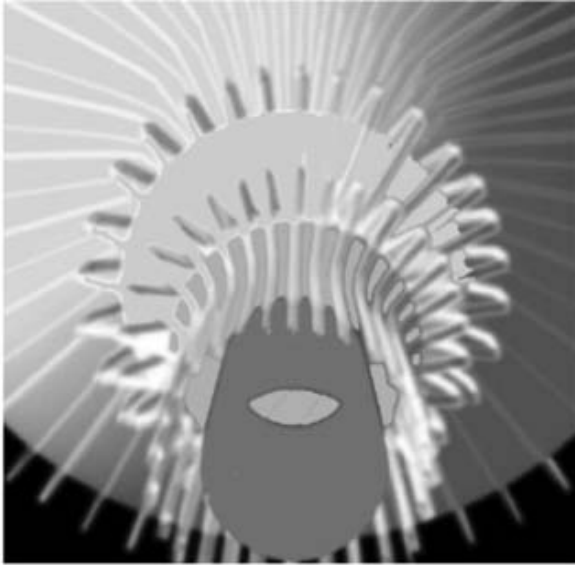
Rarely in recorded history have such violent geomagnetic storms been witnessed. The most powerful one occurred in September 1859 and is known as the Carrington Event, named after English astronomer Richard Carrington who witnessed the massive solar flare from his observatory. Shortly before dawn the next day, skies around the world erupted in brilliant auroras, even at equatorial latitudes. Telegraph wires sent out sparks, shocked operators, and could still transmit messages even after their batteries had been disconnected. Our much greater reliance on electrical and satellite technologies, including radar, GPS, and cell phones, suggests that the disruptive power of such an event would be enormous. But what if we were not talking about a short-lived random event but rather a sustained change in the physical region surrounding our earth?

In Volume 8 of The Ahau Chronicles, entitled “Earth Energy”, I discussed the effects of the solar wind on the earth’s magnetosphere, the protective cocoon encircling the earth generated by its own magnetic field. While I worried that some of the content of the newsletter was a little too “fringe” even by my loose standards, I was amazed afterwards to receive from Patricio Bustamante a copy of an article written by Anthony L. Peratt and others entitled “**Characteristics for the Occurrence of a High-Current Z-Pinch Aurora as Recorded in Antiquity**”. Peratt is a plasma physicist at the Los Alamos National Laboratory and the article presents evidence of an intense and enduring plasma field enveloping the entire earth, the existence of which was recorded in ancient petroglyphs and other durable artforms. Only through high-energy experiments are we able to model the behavior of plasma, such as the copper globe anode suspended between two cathodes in a vacuum chamber shown at left below. Therefore it seems more likely that ancient peoples were observing a naturally occurring global phenomenon of such awe-inspiring scale that they felt the need to memorialize it in their art.

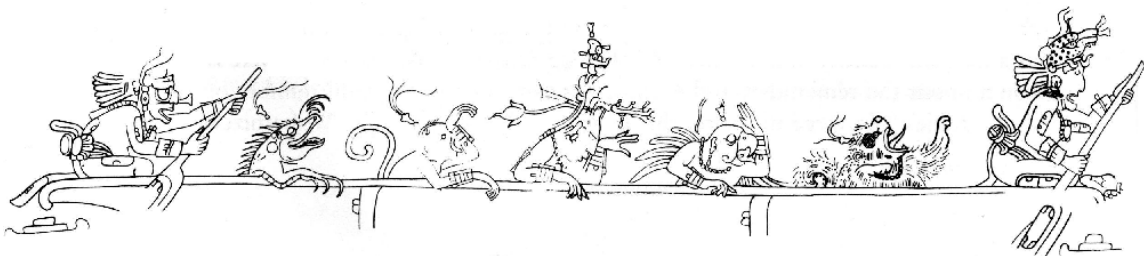
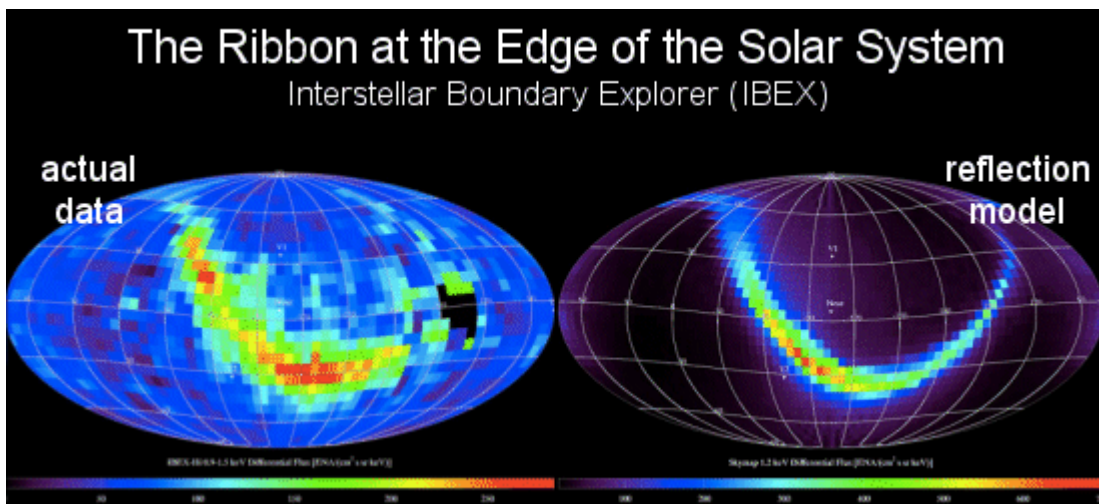




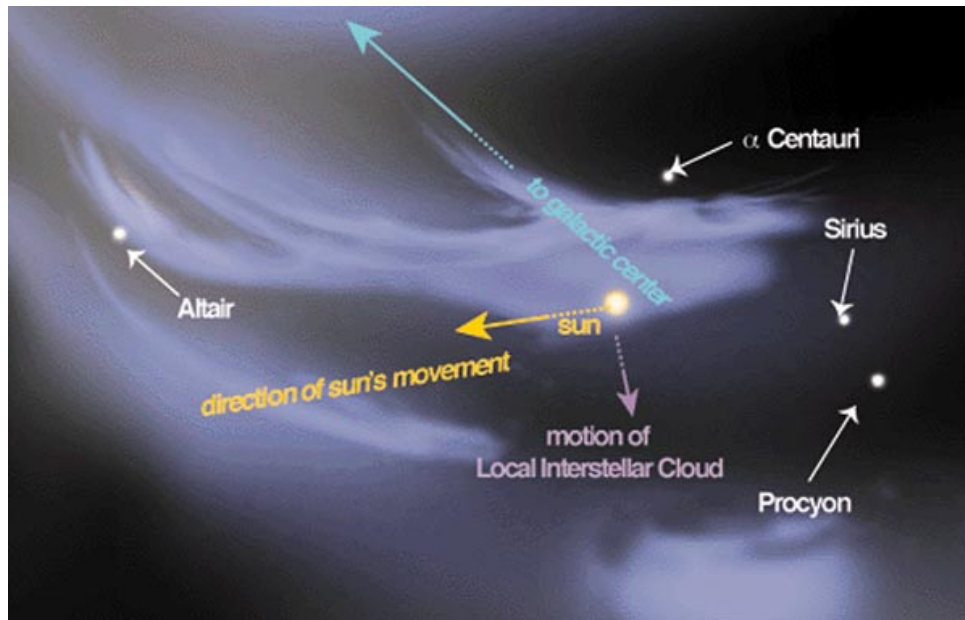
Convincingly, the esoteric ancient artforms closely resemble plasma auroras, are uniform around the world, and even show varying perspectives depending on location. The image at left below is a computer simulation of an oblique view into the auroral plasma column compared to the image from a vase from Nazca, Peru. The widespread distribution of the plasma-inspired art in disparate cultures around the globe suggests that “intense auroral events were a common occurrence for at least a few centuries if not millennia.”



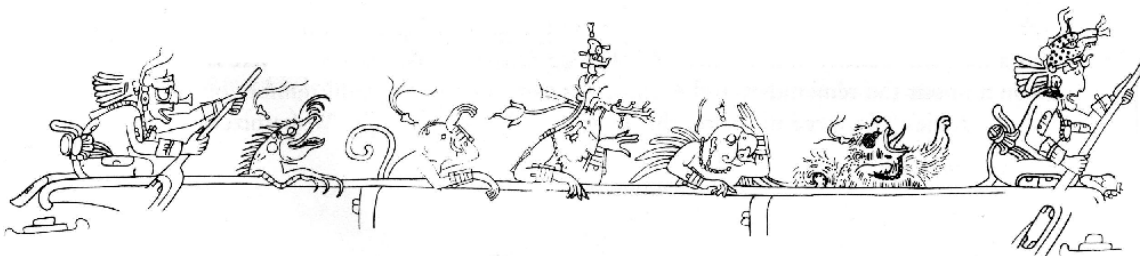
In 2009, NASA's IBEX (Interstellar Boundary Explorer) spacecraft discovered a giant ribbon at the edge of the solar system caused by an immense magnetic field that can reflect the solar wind back toward the sun. The IBEX data fit in nicely with recent results from the two Voyager spacecraft launched in 1977. Voyager 1 and 2 are near the edge of the solar system and have sensed strong magnetism nearby.



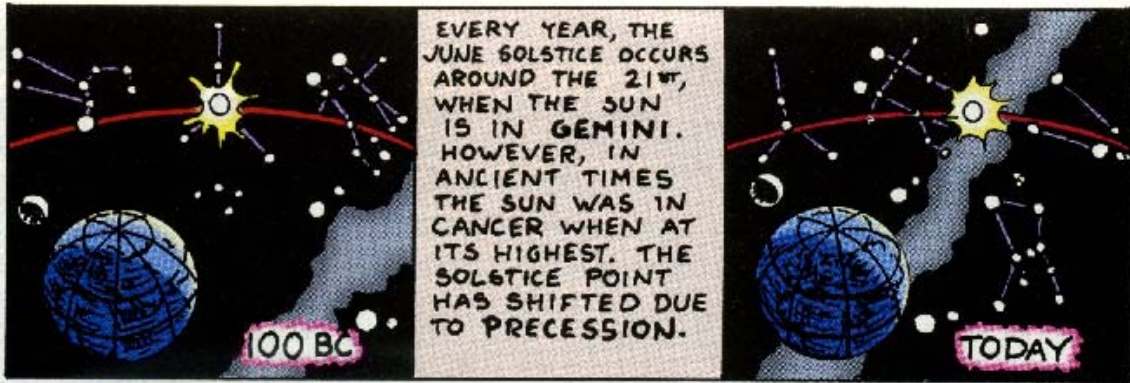
Currently our solar system is passing through a gaseous portion of the galaxy known as the Local Interstellar Cloud which we are predicted to move beyond in about 10,000 years. Scientists have detected an anomalously small magnetic field within the cloud and have concluded that the cloud may have an irregular or inhomogenous magnetic field. Just as the earth is protected by the magnetosphere, our sun produces a similar protective boundary known as the heliosphere which is thought to extend into space for a distance 100 times the distance from the earth to the sun. However, interactions with the magnetic fields beyond the heliosphere can affect its shielding properties and could cause changes in the intensity of cosmic rays entering the inner solar system.



As we slowly drift through interstellar space the precession of the equinoxes moves us from the Age of Pisces into the Age of Aquarius. The flow of water from his cosmic jug is encountered first, hinting at a flood from above. Could this be a return of energetic particles raining down from the heavens, such as that depicted in ancient art millennia ago? To learn more about how precession works, check out the cartoon by Jay Ryan below.

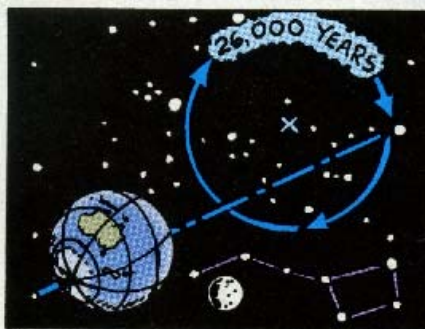
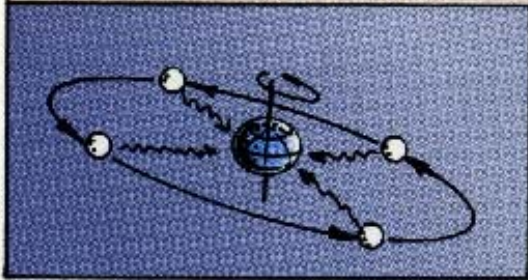




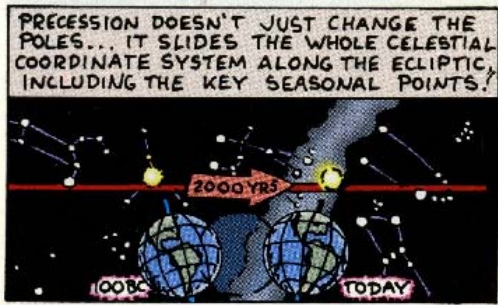


EVERY YEAR, THE JUNE SOLSTICE OCCURS AROUND THE 21<sup>ST</sup>, WHEN THE SUN IS IN GEMINI. HOWEVER, IN ANCIENT TIMES THE SUN WAS IN CANCER WHEN AT ITS HIGHEST. THE SOLSTICE POINT HAS SHIFTED DUE TO PRECESSION.

PRECESSION IS A VERY SLOW ROTATION OF THE EARTH'S AXIS. THE MOON'S GRAVITY EXERTS A TUG ON THE EARTH'S EQUATORIAL BULGE, MAKING THE EARTH'S AXIS WOBBLE LIKE THAT OF A SPINNING TOP.



THE EARTH'S AXIS TAKES 26,000 YEARS TO PRECESS ONCE. AS A RESULT, THE CELESTIAL POLES MOVE WITH RESPECT TO THE STARS. IN THE FAR FUTURE, POLARIS WILL NO LONGER BE THE POLE STAR!



PRECESSION DOESN'T JUST CHANGE THE POLES... IT SLIDES THE WHOLE CELESTIAL COORDINATE SYSTEM ALONG THE ECLIPTIC, INCLUDING THE KEY SEASONAL POINTS!

SO THE RIGHT ASCENSIONS AND DECLINATIONS OF THE STARS ALL OVER THE SKY CHANGE TOO. AND IN A FEW CENTURIES, THE SUN AT THE JUNE SOLSTICE WILL BE IN TAURUS!

