

# Earth's Axis Tilt, Global Catastrophe, Breach of Gibraltar Strait and a Global Calendar Change -3,450 Years Ago

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Note –from John Jensen Dec 17<sup>th</sup>, 2014

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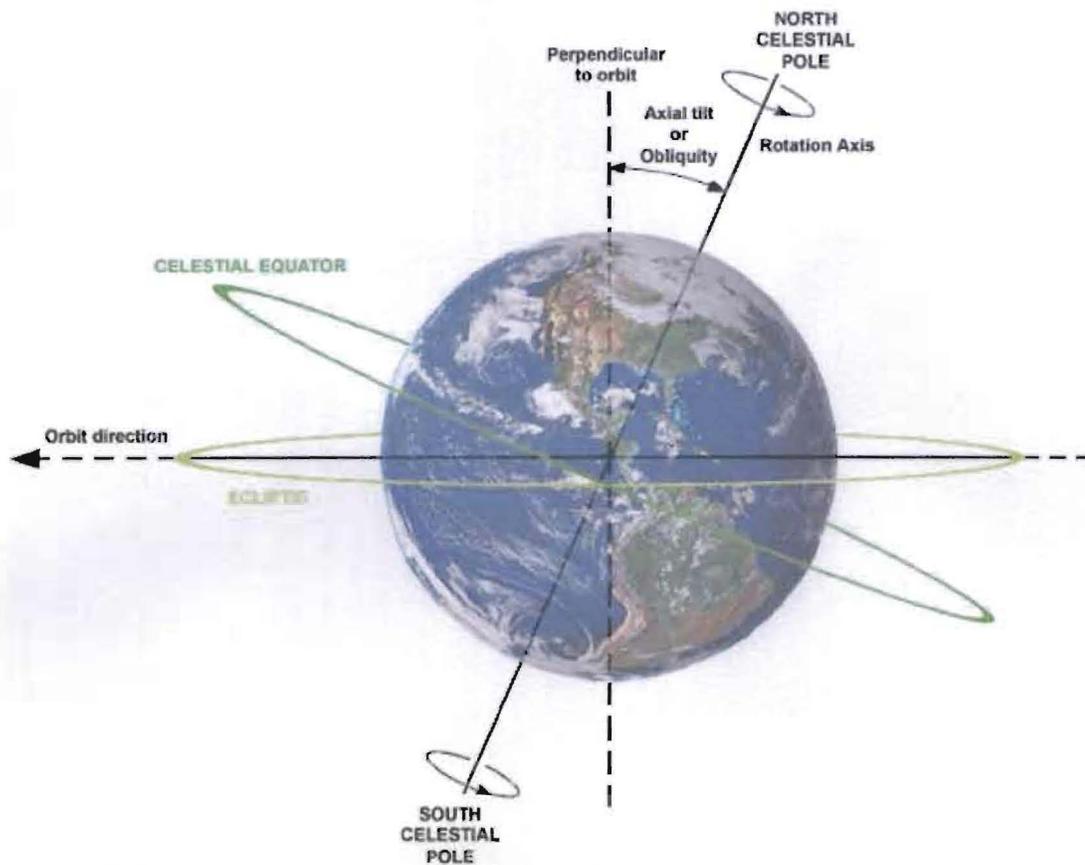
I want to make it very clear that I am neither an advocate-supporter nor a skeptic-antagonist for either side of the Science (Evolution) versus Religion (Creationism) argument on this or any other issue that I write about. I quote the Old Testament as well as Egyptian texts that were reported by Herodotus, as well as hieroglyphic manuscripts translated by Fernand Crombette as three known historical reports of the chronology of the events discussed in this paper. I also point to a "regression analyses" of the widening of the Strait of Gibraltar that indicates a breach likely occurred concurrent to the other events described in this paper. The addition of 5 days to the then 360 day calendar (worldwide) is well established, and is reviewed here as confirmation of the actual catastrophe and one of its consequences.

## Introduction

About -3,450 years ago, a regional to global catastrophe occurred that included a partial tilt of the Earth's axis causing a change in the Earth's perpendicular axis of spin to an axial tilt of 23.5 degrees. Most of the evidence in this paper which supports that statement is centered on the Atlantic rim, although the data will also include historical references to the same event from around the globe. In certain areas and regions of the Earth, the event is referred to as "the long day", particularly in the Eastern Mediterranean; while in other regions it is called "the long evening", "the long night", etc. as would be expected of a partial tilt of the Earth on its axis. For clarity, in this chapter, we will refer to the event as the "Axis Tilt Event".

The most well-known description of the Event comes from biblical records, particularly Joshua which describe in some detail the fall of the Walls of Jericho, (a sizeable earthquake) and the Sun "standing still in its path" (a tilting of the Earth Axis of rotation).

The other major effects of the event include the breach of the Strait of Gibraltar, the eruption of Santorini and the flooding of several non-natural harbors as well as tsunami deposits around the Atlantic Rim. I will present the evidence for the Axis Tilt first, and then present the "Regression Analysis" of the Gibraltar Strait breach, followed by a review of the (global) calendar change that occurred across all advanced cultures.



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## The Axis Tilt Event around the World.

In regard to the many other anomalies that occurred around the Atlantic rim, covered in other sections of this chapter, which define the event as an Axis Tilt and ensuing catastrophe, it is essential to ask whether or not the event was restricted just to the Atlantic Rim and/or Joshua's Palestine or whether it was global in scope. Certainly an "extended day or night" event would generate considerable concern among all peoples of the world, or at least the affected areas, provided it was a global event. Are there accounts of a long day, a long evening or even a long night extended though out the world? The fact is, we can find stories of a long evening, a long night as well as a long day. We can even find tales where the sun hung near the horizon for a long time. All the accounts taken together allow us to ascertain that the anomaly was an actual event, and it occurred on a global basis.

Some of the world's recitations of the extended period of the Axis Tilt are vague and unspecific while others are very clear. Many of the former are those which relate only that the people had knowledge of the concept that the sun, moon, and stars can reverse their motions. An example of one of these is the account referred to by Augustine in *The City of God* where he quotes the *Æneid* about a witch who:

*...can reverse the wheeling of the planets, halt rivers in their flowing.*

## The Axis Tilt Event in Africa (Egypt)

The Greek historian Herodotus wrote that when he visited Egypt, the priests there showed him an ancient manuscript which told the story of a day which lasted about twice as long as a normal day. At the time in question, the Egyptians had water clocks so that they could accurately measure the duration of the day, not being dependent on the motion of the sun, moon, and stars, as would other peoples around the world.

For the Egyptian account, the French classical scholar, Fernand Crombette, translated some Egyptian hieroglyphics which tell of the Axis Tilt Event. The text starts out with an edict from the king to exempt from taxation those who had been victims of a flood some two weeks earlier. Evidently the flood had been caused by an unusually high tide. The cause, according to the Egyptian hieroglyphics, was:

*The sun, thrown into confusion, had remained low on the horizon, and by not rising had spread terror amongst the great doctors. Two days had been rolled into one. The morning was lengthened to one-and-a-half times the normal period of effective daylight. A certain time after this divine phenomenon, the master had an image built to keep further misfortune from the country.*

*Hephaistos...grant protection to your worshipers. Prevent the words of these foreign travelers from having any effect. They are impostors. Let these enemies of the sacrifices to the images be destroyed in the temples of the great gods by the people of all classes. Make life harder for these cursed worshipers of the Eternal. Punish them. Increase the hardships of these shepherds. Reduce the size of their herds. Burn their dwellings.*

*Rameses, our celestial ancestral chief; you who forced these wretched people to work, who ill-treated them, who gave them no help when they were in need: cast them into the sea. They made the moon stop in a small angle at the edge of the horizon. In a small angle on the edge of the horizon, the sun itself, which had just risen at the spot where the moon was going, instead of crossing the sky stayed where it was. Whilst the moon, following a narrow path, reduced its speed and climbed slowly, the sun stopped moving and its intensity of light was reduced to the brightness at daybreak. The waves formed a wall of water against the boats that were in the harbor and those that had left it. Those fishermen that had ventured onto the deck to watch the waves were washed into the sea.*

*The tide, which had risen high, overflowed into the plains where the herds were grazing. The cattle drowned represented half the herds of Lower Egypt. The remains of abandoned boats broken against the sides of the canals were piled up in places. Their anchors, which should have protected them, had been ground into them. Quite out of control, the sea had penetrated deep into the country. The expanding waters reached the fortified walls constructed by Rameses, the celestial ancestral chief. The sea swept around both sides of the region behind, sterilizing the gar dens as it went and causing openings in the dikes. A great country had been turned into a wilderness and brought into poverty. All the crops that had been planted had been destroyed and heaps of cereal shoots lay scattered on the ground.*

The Crombette account is significant for a number of reasons. Crombette's interpretation that the moon was going to the spot where the sun had risen is explained by having the moon continue its orbital motion and its being located west of the sun, perhaps near last quarter.

Whether or not the tides mentioned in translation were really tides or a storm swell cannot be categorically ascertained. It is possible that the tidal bulge kept moving, but it is unlikely that the narrows of the Nile delta and the narrowness of the canals mentioned caused a bore wave, because that should always have been the case under normal tidal conditions. It is possible, though unlikely, that the breakup for the tidal bulge may have caused waves which interfered with each other and that Egypt's dikes might have broken at one or two points by constructive interference, thus the resulting flooding. But it seems more likely that the events mentioned in Egypt were the result of a severe storm swell in the Mediterranean caused by the breaching of the Strait of Gibraltar.

*And it came to pass, as they fled from before Israel, and were in the going down to Beth-horon, that the LORD cast down great stones from heaven upon them unto Azekah, and they died: they were more which died with hailstones than they whom the children of Israel slew with the sword.*

For comparison with the Egyptian account, and complementing it, there is a West African story of a long night. In that account, the night lasted way too long because the owl over slept and did not awaken the sun.

## The Chinese Account of the Axial Tilt Event

Another source depicting the event is based on what seems to be a recently lost ancient Chinese manuscript. In 1810 Gill presents the account:

*In the Chinese history it is reported, that in the time of their seventh emperor, Yao, the sun did not set for ten days, and that men were afraid the world would be burnt, and there were great fires at that time; and though the time of the sun's standing still were enlarged beyond the bounds of truth, yet it seems to refer to this fact, and was manifestly about the same time; for this miracle was wrought in the year of the world 2554, which fell in the 75<sup>th</sup>, or, as some say, the 67<sup>th</sup> year of that emperor's reign, who reigned 90 years.*

Now the year of the world 2554 is identical to Bouw's independently derived biblical chronology for the date of Joshua's "Sun standing Still". Incidentally, note that a 90-year reign (not Yao's age) is thoroughly consistent with the 110 to 120 year ages achieved by Moses, Aaron, and Joshua who would have been contemporaries of Yao.

## The Event in North America

Tales relating to the event abound in North America. Almost all of the tales in North America tell of a long night. Olcott has collected five of particular interest.

1. The Ojibway's tell of a long night without any light.
2. The Wyandot Indians told missionary Paul Le Jeune of a long night.
3. The Dogrib Indians of the North-West tell of a day when the sun was caught at noon and

it instantly became dark.

4. The Omaha's say that once the sun was caught in a trap by a rabbit that checked his traps at the break of dawn, presumably before sunrise. ,
5. The Bungee Indians from the Lake Winnipeg area of Canada also tell of a long night.

The preponderance of long night tales in the Americas would rule out the theory that Joshua's long day was a miracle which was local to Canaan. It also rules out the speculation that the story migrated around the world, for then it would everywhere be a long day (or a long night), but not a mixture of long days and long nights.

In addition, there are several large canal systems in Florida that appear to be quite old, deteriorating back into the landscape. The system at North Key Largo is a very good example.

### North Key Largo

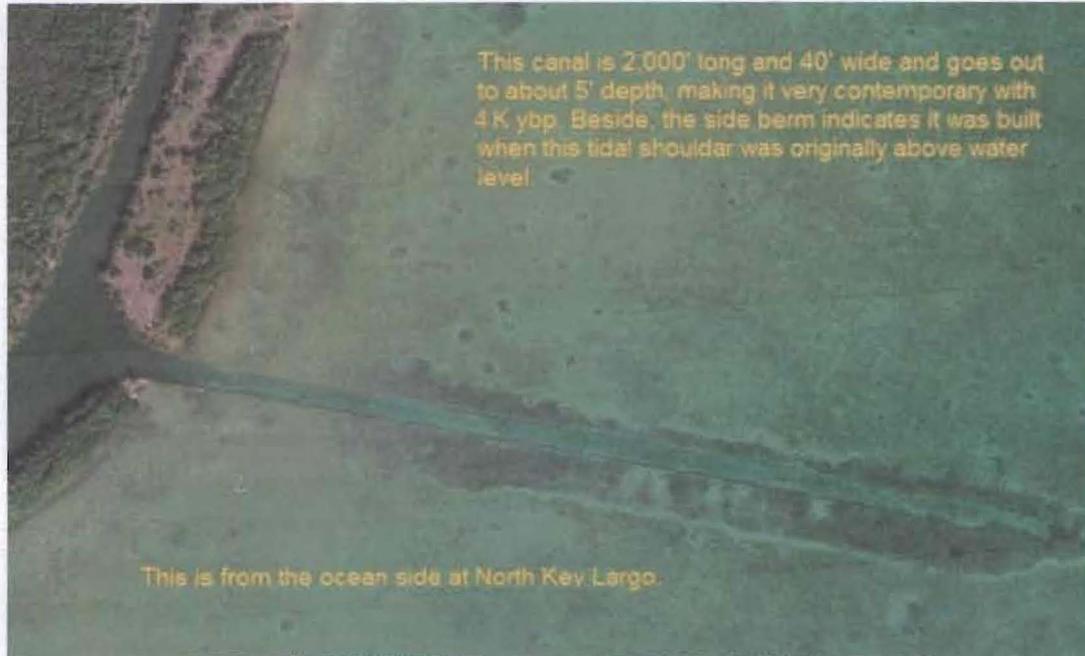


Above image-photo is a composite of Satellite Imagery and Google Earth of the North Key Largo complex, and is used with permission and/or used under 'public domain' and 'fair use' policies due to the nature and content of this information being research and education material. The coordinates in Google Earth are: 25°13'22.54"N, 80°20'23.09"W. Set 'Historical Imagery' to 11/12/2007 [View a live Google Earth image here](#)

This site is a series of inlet canals that are grown over and silted in, eroding back into the landscape. The center canal is one of the largest (if older) ones found to date. It is about 2,700' long to the end of the 'silted in' paddle head. The original width is about 350' and the newer section is about 170' wide. The old section of the south canal is about 445' wide, and the newer section is about 220' wide, the north canal is about 85' wide.

The curved S sections connecting the canals are completely silted in and grown over. To the right, an unused, unconnected cut canal goes out to open water. There is substantial berm

around the open water cut canal, indicating it was built with some technology that deposited berm debris on the canal shoulder, or when the tidal shelf was above water. Of significance is the moat canal surrounding this complex. All indications are that this complex is one of the older shore based complex systems found to date. Berm soil samples need to be taken here for a relatively accurate C-14 dating sample.



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This complex appears to have two building and use periods, one that is less structured and has the appearance of being built on top of the old system. The original berm on this center canal includes the large rectangle paddle head. The second berm seems to have been cut out of the silted over section. It is not possible in this preview, to do justice to the many features of this complex, and much field work is required to make serious statements of potential purpose and function.

First impression is that this complex is relatively the same age as the Matamoros, Mexico canal, and coincides with the breach of the Strait of Gibraltar at -3,450 YBP.

## The Event in the Central and South Americas

Turning to the south, we find that Central and South America similarly experienced a long night. In the *Annals of Chauhtitlan*, the Mexican Indians tell of a long night. The Aztecs wrote of an extended period of time when the sun did not rise. According to their legend, there had been no sun for many years.

*... So a conclave of the gods was called in Teotihuacan, and there it was decided that one of them should offer himself as a sacrifice that once again the world might have a sun ... The sacrificed gods had disappeared in the brazier's flames, but as there was no sign of*

*the sun, the remaining wonder when it would first appear. At long last, the sun burst forth ... But the sun, despite his brilliant light, did not move; he hung on the edge of the sky, apparently unwilling to begin his appointed task.*

Likewise, in their national book the *Popol Vuh*, (which translates into "Book of the Princes,") the Quiché Mayans of Guatemala wrote about the people's reaction to a long night with these words:

*They did not sleep; they remained standing and great was the anxiety of their hearts and their stomachs for the coming of the dawn and the day ... "Oh, ... if we only could see the rising of the sun! What shall we do now?" ... They talked, but they could not calm their hearts which were anxious for the coming of the dawn.<sup>38</sup>*

Besides the accounts of a long night in North and Central America, there is also at least one story of a long night in Peru. According to Montesinos, the collector of the tale,

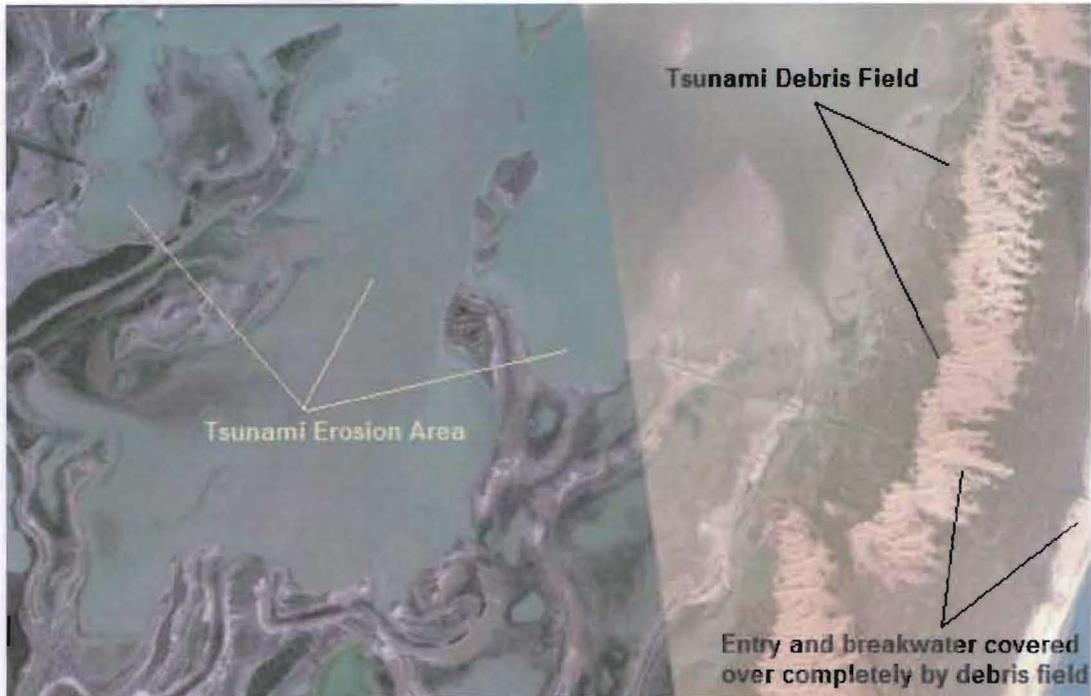
*...the sun was hidden for nearly 20 hours in the third year of the reign of Titu Yupanqui Pachacuti II because of sin in the land...*

Titu Yupanqui Pachacuti II ruled about -3,400 YBP.

## **Matamoros, Mexico Tsunami Debris Field**

In addition to the above, there is a very large shore side tsunami debris field that covers the ocean entry side of the 26 mile long Matamoros, Mexico canal. The shore side debris field is estimated to be 12' to 18' in depth, just over a mile inland, with continuing debris wash and upheaval for an additional 5.5 miles inland

This canal, about 20 miles south of the Rio Grande, in a straight line from Matamoros, which faces the Mexico-US border, is about 26 miles long to the ocean exit. It has a split (circular) feature at its head (enclosing the old city center), suggesting fresh water delivery to the city's inhabitants, agricultural irrigation, aquatic farming, small craft commercial use, and probably a defense-security mechanism. It is about 40' in width between two high berm banks, and expected to be about 5' to 9' deep. It appears to have been machine cut, and is an exact straight line along its 26 mile length between the city center and the ocean edge.



The above image-photo is a continuation of the composite of Satellite Imagery and Google Earth of the Matamoros, Mexico canal system, and is used with permission and/or used under 'public domain' and 'fair use' policies due to the nature and content of this information being research and education material. The coordinates in Google Earth are: 25°38'48.27"N, 97°14'35.82"W. Set 'Historical Imagery' to 11/18/2008

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If the canal's total length is 26 miles, at an average width of 40' and a depth of 9', original construction would have removed about 210,000 cubic yards of material per mile, or about 5.5 million cubic yards. At a cost of \$8 per cubic yard, it would cost about \$43.5 MILLION in today's dollars to complete the entire project.

This nearly 1,000' south breakwater wall appears to be significantly eroded. Toward shore, the breakwater wall is degraded to the point of being split into two sections, and the original canal has completely disappeared for about a mile under sand and other build up, that appears to be a tsunami debris field. During our recent or modern history there has not been a tsunami large enough on the gulf coast to leave tsunami debris field 1.5 miles inside the shoreline. That is exactly what is represented here. I would highly recommend that C-14 dating be performed on the tsunami debris field covering the entrance to this canal. I would be shocked if it did not represent a date of roughly -3,450 YBP to support the date when a major Atlantic category 3 catastrophe occurred.

It is not known whether the north breakwater wall was originally longer than its current degraded length. From a design engineering standpoint, it may not have been longer due to the fact that the south breakwater wall is angled toward the northeast, suggesting the prevailing winds and tidal-storm surge were predominately from the south-southeast, and that breakwater angle would clearly protect the canal-channel entrance, thereby reducing the need for a longer northern breakwater wall.



This canal is a major anomaly, because it is so close to the Brownsville 'canal', and because it seems to have served some light craft commercial or industrial purpose at one point, and is completely eroded at the ocean side portion, which is covered by a large tsunami debris field. At first review, the tsunami debris field completely covers the ocean inlet side of the canal for about 1.2 miles inland at an estimated depth of between 5-6 meters. Which suggests a very large tsunami struck this area of the Atlantic Coast. The debris field can be clearly identified. This canal appears to be very much like Florida's East Coast inland canals, particularly the North Key Largo complex.

A significant issue that points to the fact this system is NOT part of the -7K YBP event, is that the subsequent Ocean Level Rise of just over 5' would, in all probability mean that the breakwater wall would have to be quite a bit further out on the Continental shelf to be effective. A 5' decrease in ocean level at this location would mean the beach line would be several hundred feet from the current shore line. In effect, ensuring the canal and breakwater were built sometime after ocean levels had stabilized sometime after -5,500 years ago. And the catastrophe happened sometime after the breakwaters were built. The catastrophe date of -3,450 fits those facts better than any other scenario.

### The Long Sunset

There is a story of a long sunset in the Fiji Islands. J. G. Frazer tells of a tradition on the island of Lakomba in the eastern Fiji Islands where there is a hillside with a patch of weeds on it. The story goes that natives will tie the weeds together in order to keep the sun from going down. It is said that the sun did, indeed, stop from setting at one time.

Although there are several other traditions of stopping the sun, most are remotely, if at all, connected to the Axis Tilt Event. In Australia, for example, if a native wanted to stop the sun he would place a piece of sod in the fork of a tree. Similar traditions exist in Africa and in Central America. A tradition of that nature in Japan meant nothing more than the belief that a man's friends would wait dinner for him if he was going to arrive home late. Still, underlying all but the last of these traditions is the idea that the sun can, and by implication, did stop at least once upon a time.

## The Extra-Long Night

A handful of long day and long night tales do not seem to fit. The Hawaiian tale of Maui's capture of the sun is one, for it implies an arrest of the sun at sunrise. It is similar to the myths from other Polynesian Islands peoples, and those similarities serve to tie it to Peru's Hezekiah's sign accounts, not Joshua's long day.

Three peoples have a tale of a night which lasted several months: the Japanese, an ancient tribe in Lithuania, and the Cherokee Indians of North America. The Cherokee and Japanese tales are virtually identical and seem to stem from the same source. Both have the sun hiding in a cave for a long time and being tricked out of the cave.

The account from Lithuania was collected by Jerome of Prague when he visited the "heathen" of the area in the early 15<sup>th</sup> century. There he discovered a tribe which had migrated from the east and which also told tales of a night lasting several months.

There are two possible reasons for these accounts. All could be related to the Japanese account and could reflect either a volcanic eruption which darkened the sky over Japan and Siberia for months on end or else, it could be a tale of the long Arctic night, almost six months long at the pole. A two-month night is experienced about the latitude of Point Barrow, Alaska. Perhaps the accounts relate to these natural events. In any case, they stand in stark contrast with the other long day and long night tales from around the world.

## The Date of the Axis Tilt

The Biblical account of Joshua and Moses' entry into the promised land was early April of -3,448 years ago. Can we ascertain the month and day of the "long day" with any degree of certainty? As it turns out, we can come very close.

When the Israelites entered Canaan, it was the tenth day of the first month (Joshua 4:19), shortly before the time of the Passover which is at the time of the full moon. In -3,448 YBP the new moon and the first day of spring closely coincided, the first day of spring being March 19 at the time, so we can date the entry into the Canaan as Thursday, March 29, give or take a day.

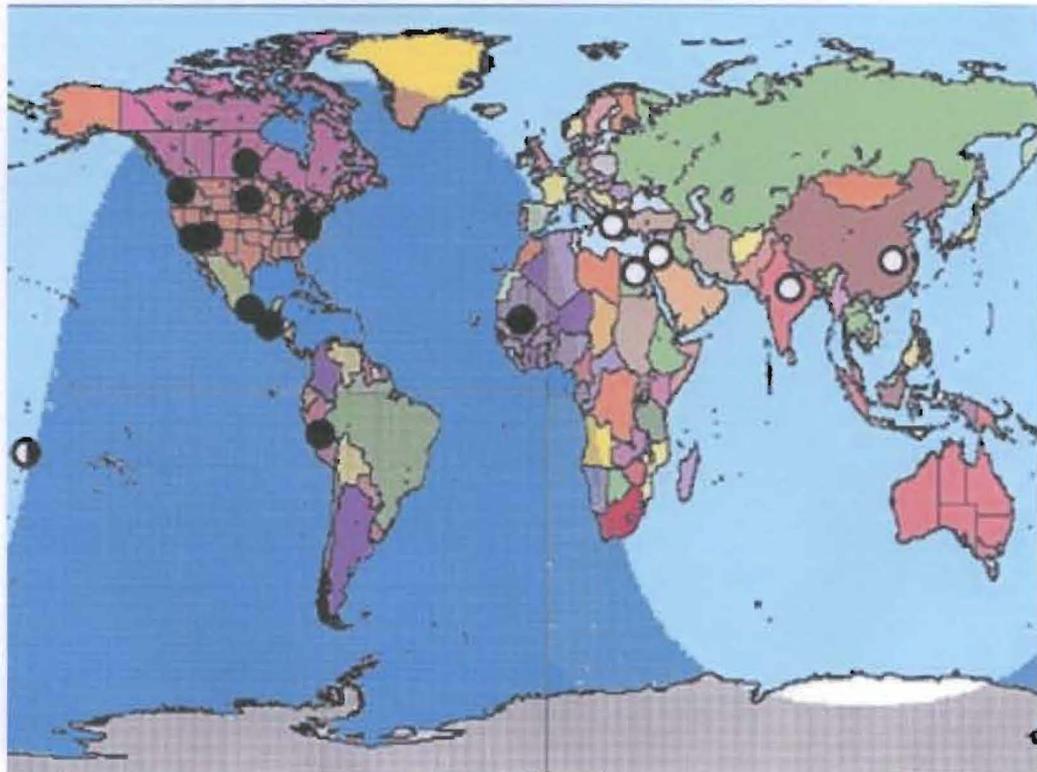
The events which are described between the Passover and the battle at Gibeon all took time. The Passover celebration itself took a week; the fall of Jericho took seven days; the fall of Ai took at least four days; the construction of the altar on mount Ebal and the copying of the law probably took a week or more; the trickery of the Gibeonites took still more time; the communication of that trickery to the Gibeonites' neighbors and the subsequent formation of an alliance, not to mention their march to Gibeon, all took time. It is reasonable to assume that over a month passed between the celebration of the Passover and long day. This is entirely consistent with the geometry of sun and moon presented in Joshua 10 where the moon seems to be west of the sun and both visible in daylight. Given that the time for the event was 9:00 a.m., the moon was most likely near or after its last quarter. More specifically, then, it appears that Joshua's long day happened somewhere between May 8 to May 15 of -3,448 YBP.

## Putting it all Together

Based on information in Old Testament texts, the best date for the event seems to be within four or five days either side of May 12, -3,448 YBP sometime between 8:30 and 9:30 a.m. This conclusion can be drawn from plotting all of the long day, long night, and the long sunset accounts on a globe. Such extensive observations preclude the conclusion that the event was an optical illusion restricted to the land of Israel. It also disallows the notion that Joshua's account is fictitious, for the testimony of the peoples around the world is entirely consistent with its reality.

That some peoples have tales of a long night while others tell of a long day while none have both a long day and a long night tale collectively reinforces that the Event is not one account, originating in the mid-East, which has migrated all over the world; for if such were the case, then all nations would tell of a long day and none would tell of a long night, let alone a perfectly-placed long sunset. So we must conclude that the Axis Tilt Event was a real, historical event and not some local work of fiction.

The upshot is that there appears to be solid evidence from contemporary accounts and from folklore around the world that there was one day which, depending upon geographical location, presented the inhabitants of the earth with an unusually long span of daylight or night.



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In the above photo the solid black circles show locations with tales of a long night; open circles plot tales of a long day, and the half-white half-black circle in the Pacific shows the location of a long sunrise tale. Recently, after this figure was made, another long sunrise tale was reported in

Hawaii.

It is my contention that only one geological event can account for the phenomenon of the 'Sun standing still in the sky' and that is a partial tilt of the Earth on its Axis of Rotation. Most cultures in the world say it happened, and some say 'when' it happened. Based on the other evidence presented in this chapter, taken together shows that a catastrophe happened about -3,450 years ago, and that catastrophe was a 23.5 degree Tilt of the Earth's Axis of Spin.

It is NOT my intention in this work, my upcoming book, or any other work, to define the 'cause' or 'trigger' mechanism of the event. Showing any so called 'Cause' or 'Event Trigger' is pure speculation. And I am not the least bit interested in arguments based on speculation.

### **Breach of Gibraltar Strait -3,450 Years Ago**

About 3,450 years ago, Gibraltar Strait breached, opening the Mediterranean up to direct access to the Atlantic Ocean. If the breach did in fact occur at that time, and the regression analysis below suggests that it did, then that begs the question of whether the breach occurred from the Mediterranean side out to the Atlantic, or it occurred inward from the Atlantic Ocean toward the Med side.

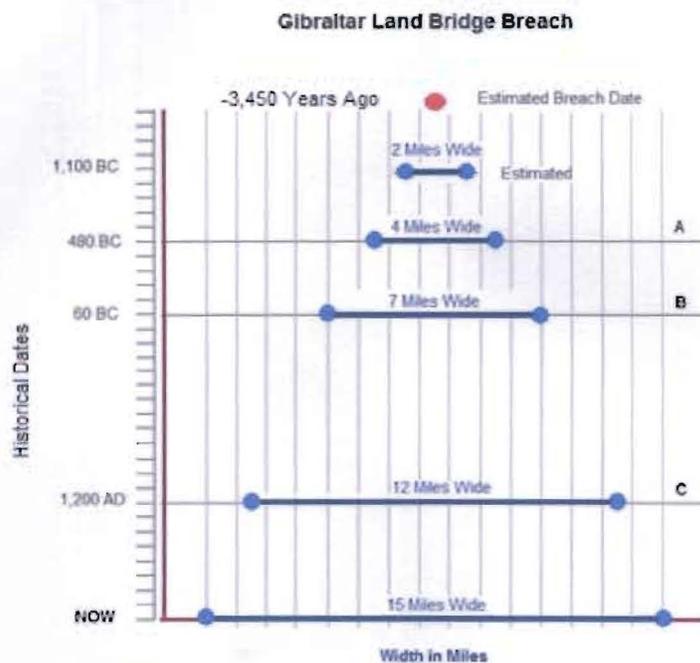


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A case for the former seems the most reasonable. If the Melt Water Pulse had caused ocean levels to rise 400' over the Holocene, and ice water melt from the European Ice Sheet had increased the level of the freshwater Mediterranean faster than the ocean rise of the outside Atlantic Ocean levels, then the breach would have been outward, from the Mediterranean toward the Atlantic Ocean. This makes logical sense, as the rising freshwater Mediterranean would have slowly spilled over, creating a narrow, thin river like spill, but as the levels increased, the spillway grew more torrential, widening the original gap more and more rapidly. It required an "equalization" of both the Mediterranean and Ocean level water tables in order for tidal effects to act in both direction, which caused a rapid "scouring" and widening of the gap on a much faster

basis. However, an equal and compelling argument can likely be made for an Atlantic side breach.

The Bosphorus Strait breached 3,600 years before Gibraltar, (-7,000 YBP) giving both the Black Sea and Mediterranean an opportunity to equalize their water tables. Following the breach in the Bosphorus land bridge, without an outlet, the combined Black Sea and Mediterranean water table should have risen faster than the global oceans, (due primarily to the fact that the world oceans was rising more slowly from the combined Laurentide, and Lambeck (European) Ice Sheets draining into the Baltic and North Sea, with only a small portion of the Lambeck runoff draining southward into the Black Sea-Mediterranean water table. The overall ocean level had a much larger surface to spread out the ice melt water; consequently the oceans would rise slower than the confined smaller area of the Mediterranean and Black Sea.



Graphic image © John Jensen, 2014

The Gibraltar Strait's width has quadrupled within recorded history. In the fifth century BC, the Greeks measured the Strait at 5 stadia or about four miles wide. When Julius Caesar's Roman Legions measured the Strait, it was seven miles wide. During the Crusades in the 11th century, Gibraltar was measured at twelve miles wide; now it currently measures fifteen miles wide.

If we reverse engineer the growth rate, we can extrapolate the initial failure to be sometime around 3,450 YBP. The above chart shows the Gibraltar Strait growth rate over time - please note that the left column depicts time in centuries (100 year) segments, and the bottom axis represents width in miles. Extrapolating those dates into a "regression table" indicates the date of the breach of the Strait of Gibraltar. Geologically, regression dating is a well-known and often used method to ascertain age-dating of certain geological events. For example; the annual regression or upstream decay of the actual waterfall face of both Niagara and Minnesota Falls demonstrates a likely date of their initiation or 'birth'. Generally speaking, regression dating is best used when a process like turbulent flowing water cuts or degrades the flow edge a measurable amount, over a known period of time. With that data a relatively accurate determination of the date of initiation or 'birth' of that process can be established.

If the above case is true, it solidifies the geological data that a catastrophic event occurred at a 3,450 YBP watershed.

## Calendar Change 3,450 Years Ago

Accurate knowledge of the Earth's orbit around the sun, called the sidereal year, and the exact dates of summer and winter solstices, as well as the spring and fall equinoxes, were critical information to both nomadic and agrarian based early societies. Planting, food gathering, harvest, storage, movement of domestic herds, hunting, and other seasonal aspects of life were regulated by this information. Consequently, one of the very earliest 'technical' achievements of an emerging social group was the development and use of an accurate calendar.

Information required to construct a precise, useful calendar was gathered by tracking movement of the Sun, Moon and other celestial objects. That information was provided by a simple solar observatory. Gathering and managing annual observatory information was a matter of setting a fixed observation point, and marking a horizon point with exact positions of the rising and setting sun, moon rise and moon set, as well as the movement of other planets and stars. In a very limited number of years, a relatively precise calendar would be established.



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Many surviving megalithic artifacts, stone rows, clusters and circles, aligned buildings, as well as other similar examples from Stone Age cultures are simple to complex solar observatories. They were by definition, precision instruments, providing quite detailed information to observers,

though they were often simple in terms of mechanical characteristics. It seems obvious then that a precise calendar of any early or prehistoric society was probably about as accurate as our modern Julian calendar.

The process was just complex enough however, to be relegated to an 'intellectual' class which often later evolved into a 'priest' or 'shaman' class. Their responsibility of tracking days and seasons expanded into providing a semblance of 'purpose and meaning' to seemingly random events such as weather, storms, flooding, eclipses, and social behavior. Astrology, or the divination of positions of various celestial bodies at a given time and location, in its various forms, is still practiced in our modern world today.

In the final analysis however, the annual calendar count and the exact dates of the solstices and equinoxes were the primary function of the local solar observatory. A direct result of the solar year day count was the definition of 'degrees' of a circle, which were derived from sunrise and sunset positions on the horizon. In addition, the Zodiac or Astrological Chart with its 12 signs or houses, each being 30 degrees of the ecliptic, is a direct remnant of the solar calendar system.

All early major primitive societies, Sumerian, Egyptian, Ethiopian, Babylonian and Mesoamerican had a primary 360 day solar calendar, and all but the Maya had a 360 degree circle, and a 12 sign Zodiac. The additional 5 days were dealt with by each group, but were always 'add-ons' to the fixed length calendar. The length of the calendar was not a function of mathematical simplicity, but rather an accurate reflection of the actual day count of a sidereal year, which suggests that sometime in our not so distant past, Earth had a solar orbit path exactly 360 days long.



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Generally, sometime after the emergence of the earliest known historical city state cultures, many peoples who had previously considered the year to be 360 days in length began using a calendar of twelve 30-day months, and sometime in the mid third millennium BC, they all individually added an additional five days to the end of their year. These additional days were considered to be very unlucky or 'dark days'. These groups in the mid-east are:

**Sumerians** had a calendar five thousand years ago, that divided the year into 30-day months, divided the day into 12 periods (each corresponding to 2 of our hours), and divided these periods into 30 parts (each like 4 of our minutes).

**Copts**, and their neighbors to the south, the **Ethiopians**, probably because they were surrounded by Islamic peoples, never adopted the Western calendar. Instead, these two isolated groups continued to use the older 360-day calendar.

**Babylonians**, during the reign of the Babylonian king Nabonassar (-2,747 – 2,734 YBP) discontinued their practice of looking for the new moon in order to name the beginning of a month. Instead, they returned to a previous fixed-length calendar that had 12 months of 30 days each, with five days added at the end.

**Zoroastrians** began their calendar in -2,389 YBP with the birth of Zoroaster, their founder. Like others in the region, their calendar consists of a 360 day year of twelve 30-day months with five "gatha days" added at the end.

**The Maya** in ancient times had a tradition of a 360-day year. But by the -1,300 YBP they took a different approach than either Europeans or Asians. They maintained three different calendars at the same time. In one of them, they divided a 365-day year into eighteen 20-day months followed by a five-day period that was part of no month. The five-day period was considered to be unlucky.



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## Conclusion

Based on the information in this paper, I have come to the startling conclusion that about -3,450 years ago, a global catastrophe occurred that included a partial tilt of the Earth's axis. The event, while devastating, was not nearly as cataclysmic as the earlier event -7,000 years ago. The Tilt Event caused a change in the Earth's perpendicular axis of spin to an axial tilt of 23.5 degrees.

The most well-known description of the Event comes from Biblical records, particularly Joshua, which describe in some detail the fall of the Walls of Jericho, (a sizeable earthquake) and the Sun "standing still in its path" (a tilting of the Earth Axis of rotation). In addition, I have used many other historical references including Egyptian Hieroglyph translation to support the dating and narrative of events defined in this paper.

The other major effect of the event is the 'regression dated" breach of the Strait of Gibraltar. This is the most compelling evidence for the scope of the event. Without detail, I also think that the dating of the eruption of Santorini, or Thera (estimated to have occurred -3,600 years ago) is too close to the date of -3,450 to be more than coincidence. I predict that further testing will establish a date for the Thera eruption to be nearly identical to the regression date of the breach of Gibraltar Strait.

The Axis Tilt, a catastrophe of serious magnitude, is not nearly as lethal or devastating as the -7,000 YBP Mega Cataclysm. That earlier event was a serious near extinction level event, and will be covered in detail in another chapter of this book called "**The Last Great Cataclysm, -7,000 Years Ago**". The Axis Tilt is a catastrophe, (not a cataclysm) that occurred while there were

growing remnant-survivor-derivative populations from the -7,000 YBP Mega Cataclysm event. The 7K super cataclysm stopped progress for nearly a thousand years, which seems to be the length of time necessary before a surviving culture can start rebuilding their civilization in any meaningful way. Some of those cultures had already started to rebuild their cultures from the 7K event, and had established several advanced technologies including early forms of writing, leaving us fairly reliable reports of the Axis Tilt event. There is good evidence to suggest another period of nearly 1,000 years followed the -3,400 event before survivor-derivative cultures could once again effectively begin to rebuild. The explosion of Greek culture a thousand years after the Tilt event is a good example.

Last, it is very important to me, that I make the case on a stand-alone basis for the Axis Tilt to have occurred -3,450 years ago, ensuring that information in NO WAY suggests the catastrophe at that time had anything at all to do with "The Flood", the "Sinking of Atlantis" or any other like "legends" or "myths" of similar type events.

I am interested in any and all feedback, criticism, editorial comments, diction and grammar corrections, or just different and opposing opinions and viewpoints.

I am not the least bit interested in personal attacks.

Thank you for your review.

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