

The Demands Of The Saturnian Configuration Theory

by

DWARDU CARDONA

Dwardu Cardona has been a freelance writer since 1968. He has, since then, acted as a Contributing Editor for KRONOS and, later, as Senior Editor for the same periodical. He was a Founding Father of the now-defunct Canadian Society for Interdisciplinary Studies. He is currently the Editor of AEON as well as the Series Editor for the Osiris Series of books sponsored by Cosmos & Chronos. An enthusiastic researcher and writer, he has now published over 100 articles on various subjects in various periodicals.



Summary

*The Saturnian theory proposes a line-up of the planets **Saturn**, Venus, Mars and Earth, all sharing the same axis of rotation. According to the mytho-historical record, this seemingly outrageous arrangement of planets existed in prehistoric times before it fell apart in a series of catastrophic events. In reconstructing the events in the formation and destruction of this configuration, certain demands which the theory raises have to be met. These events should also have left tell-tale marks on the terrestrial environment.*

Introduction

For those who are not familiar with 'the Saturnian configuration', the theory, bizarre in the extreme, can be reduced to its simplest form by positing that the planets **Saturn**, Venus, Mars and Earth were once much closer to each other. More than that, they were strung out in a linear conformation, *in the order given above*, which Frederic Jueneman once jocularly described as a 'celestial shish-kebab'. They were strung out, one 'below' the other, rather than circling around each other. This would have meant that the planets composing this unheard-of configuration all shared the same axis of rotation and also that, from Earth, man would have seen the planet Mars centred on Venus which, in turn, appeared to be centred on **Saturn**.

I make no apologies here for the fact that this theory was constructed on the basis of the mytho-historical record rather than from astrophysical considerations. Note that, other than its mythological content, the mytho-historical record also incorporates the *worldwide* astronomical beliefs of our ancient forefathers and that these beliefs coincide with their

mytho-religious convictions. Ancient astronomical beliefs and mythology can therefore be considered together as a unified whole, even though in-depth research of such subjects ends up describing a Solar System that was entirely alien to the one we now inhabit.

The reconstruction of this model, together with its attendant event-filled scenario, is the fruit of decades of research - first by David Talbott and myself, later by Ev Cochrane and now Wallace Thornhill. For me, the impetus for this derived directly from the writings of Dr Immanuel Velikovsky, even though it led to the complete abandonment of Velikovsky's own scenario. It has often been stated by those who now oppose Velikovsky's *Worlds in Collision* [1] cosmic scheme that the good doctor might have been incorrect in details but correct in his overall reconstruction. As the years went by, I came to the opposite conclusion and now claim that Velikovsky was correct *in details* but entirely wrong in his overall presentation. He had the pieces correct but, unfortunately, displaced them in time.

Be that as it may, the outlandishness of what my research uncovered made me disbelieve the entire thing and it was not until I read *Hamlet's Mill* [2] that I finally accepted all I had unearthed. Maybe if scholars of the calibre of de Santillana and von Dechend were able to unearth the same set of bizarre situations I was not far off the mark. If they could discuss the ancient belief of a **Saturn** permanently fixed in Earth's north celestial sphere, then so could I. That they chose not to accept what they had discovered was their business but the lameness with which they ended up explaining it away made me all the more ready to accept it.

I shall not retrace the meandering path that led me to my conclusions [3], nor attempt a validation of the physical feasibility of the model. As Talbott said, when asked whether he should suggest some physical principles which could account for his scenario, 'I'm not a physicist' [4]. Neither am I but remember that things once thought impossible have eventually been found to be possible and that many of these have ended up becoming dogmas of science - e.g. meteoric falls, the non-illusory nature of comets and continental drift. However let's put all that aside and concentrate on the demands which the Saturnian configuration theory raises - and whether or not these can be met.

What do I mean by 'demands'?

Theories do not stand in isolation; they raise certain demands. For instance, the theory of the nuclear fuelling of the Sun demands that it sheds a vast amount of neutrinos. To date, only about two-thirds of the predicted amount have been detected. The theory of the Big Bang demands that a vast amount of matter should be there. To date, this 'dark matter' is still being looked for. These two theories should not be allowed to stand but, because scientists are still optimistic of eventually detecting both the missing neutrinos and the missing dark matter, they are *allowed* to stand.

I shall not use similar optimism as a crutch to validate the Saturnian configuration theory. I aim to present a series of demands which it raises, both within itself and also through hard science, and how these can be met. The list is not comprehensive but it should suffice to illustrate the significance and consequence of the evidence. I have neither the space nor the time to deal with all the planets that once constituted the Saturnian configuration and shall therefore concentrate on the two most important bodies of the alignment - **Saturn** and Earth itself. The roles which Venus and Mars played in the events must await a future work.

The Age Of Darkness

My version of the Saturnian scenario posits that man's earliest memory was of a sky in which the planet **Saturn** was the only visible celestial body, looming large in an all-pervading darkness - an endless night. One of the most persistent beliefs among the civilisations of ancient nations and also 'primitive' societies is that during a time remembered as 'the beginning', Earth was engulfed in darkness. Time and again we are told that 'in the beginning' there was no Sun, no Moon, no stars. The planetary god of beginnings, we are told *ad nauseam*, ruled alone and in darkness. Whether we turn to the pages of *Genesis* or to the ancient Egyptian myths of creation, the message is always the same; whether we seek the first appearance of the Hebrew *Elohim* or the Egyptian *Atum*, it is always stated that the god existed alone in darkness. It is the same in the ancient texts of India, not only among the Hindus but even among the lesser tribes: 'When this world was first made, there was neither sun nor moon ... and everything was dark' [5]. The *Laws of Manu* preach: 'This world was darkness, unknowable, without form, beyond reason and perception, as if utterly asleep' [6]. Turn to Japan, or the ancient Greeks; travel to the cold spaces of Siberia, or cross the ocean to North America, Central America, or South America; cross the Pacific to the archipelagos of Micronesia, Polynesia, Malaysia, Africa; it does not matter where one travels, or whose ancient beliefs one examines, the message is the same.

There are simply too many myths telling about this Age of Darkness to present them all here. An earlier paper on solely this subject [7] had to be selective to avoid boring the reader with this repetitive myth. My intention here is not to supply the evidence for this world-wide belief, since that is readily available [8], but to indicate what a theory positing such a state of affairs would additionally demand.

First, a caveat: this darkness was described as having been primarily in the sky. Such a darkness, however, could not but have touched Earth and many myths more than hint at this; in some instances, they actually state as much. However the description of such darkness should not be understood as meaning that there was absolutely no light. For anything to be visible at all, there must have been some light. Even though **Saturn**, at this stage, had not yet flared up to become a virtual sun, it must have shed *some* light. The myths indicate this. For instance, in the *Linga Purana* we read:

'When the night of Brahma born of the unmanifest reached the stage of dawn, this visible universe was one that had not been analyzed. It was still enveloped in the nocturnal darkness ... [but] the self-born lord, he who achieves all the affairs of the worlds, moved about like a glow-worm, with a desire to manifest' [9]

Thus, not only was the universe ('this all') enveloped in darkness but Brahma (i.e. **Saturn**) radiated, if only feebly, 'like a glow-worm'. I shall not list myth after myth to drive this point home but shall give one more from the lore of the North American *Mbayá* which states that:

'the First Being ... made darkness. He made the cradle of darkness ... [but] he did not see [this] darkness, though the sun did not yet exist. He was lit by the reflection of his own inner self' [10].

These fragments and others suggest that, even in this Age of Darkness, **Saturn** must have radiated a diffused glow but this was too dim to dispel the surrounding darkness. We must therefore think of this darkness as that which grips present-day terrestrial nights when the

Moon lights up the landscape. However remember that the Saturnian theory posits that **Saturn** and Earth shared the same axis of rotation, so **Saturn**, at this time the only luminary visible in the sky, was not seen to rise and set, but remained permanently visible, fixed in Earth's north celestial sphere. Add to this the perpetual night which the theory also posits as existing during the same time and mankind would have been unable to tell the passage of time.

This becomes one of the theory's first demands, because if mankind was not able to tell the passage of time during this period, the mytho-historical record should tell us as much. Does it?

The Timeless Era

As noted in an earlier paper [11], in this respect ancient man did not mince words. The *Satapatha Brahmana* speaks of a time when the year 'was not then in existence' [12]. Not only the year - but time itself: in its inimitable mixture of Muslim and pagan doctrines, the *Malay Charmbook* speaks of an era 'before the beginning of time' [13]. There is reason to believe that what the ancients termed the 'year' was synonymous with their concept of time. For instance, the *Maitri Upanishad* has it that 'the year, verily, is Prajapati, [who] is Time' [14]. This synonymity is also apparent in Hebrew, where *yom*, normally taken to mean 'day', has the additional meanings of 'year' and 'time' [15]. Similarly in Egypt the word *thera*, which means 'year', also means 'time' [16]. Even Macrobius spoke of a primordial period of chaos during which 'no time existed' [17]. The Chinese *Compendium of Wong-shi-Shing* tells of the age during which 'the day and night had not yet been divided' [18].

I could go on supplying records but this is not the place. All I wish to stress is that the first demand raised by our interpretation of the mytho-historical record is actually met by that record. Thus the record not only serves as a basis for our reconstruction of cosmic events but also as a means to test itself. More than that, it continues to do so, step by step, because as one demand is met, another arises. The first demand raises another: since the record records an era when time did not exist, it should also record a following era when time was recognised as having begun.

The Beginning Of Time

Not only do such records exist but quite a few connect the beginning of time directly with **Saturn**. Macrobius tells us:

'they [i.e. the ancients] conclude that, when there was chaos, no time existed, insofar as time is a fixed measure derived from the revolution of the sky. Time begins there; and of this is believed to have been born Kronos [i.e. **Saturn**] who is Chronos [i.e. Time]' [19].

It has often been argued that Kronos/**Saturn** has no philological connection with Chronos/Time [20]. However what we are positing is not a *philological* connection but a direct identity of one with the other, an identity which has long been recognised by past mythologists and students of ancient religion [21]. Even as far back as Cicero (106-43 BC), the equation had long been accepted:

'Saturnus was chosen as the one to have as his province the intervals and cycles of time. In Greek this god is called by the very word time, since Kronos

is the same as chronos, that is, time. We call him Saturnus because he saturates himself with years' [22].

The association of time with **Saturn** does not rest solely on the identification of the Greek *Kronos* with *Chronos*. We find the same in India where Kala, one of the names for the planet **Saturn**, also means 'time' [23]. As it happens, the Indic Kala (i.e. Time) is also one of the epithets of the Hindu Yama [24], the same as the Persian Yima, whose identity as **Saturn** is also well known [25]. This tells us that Time was simply another name for **Saturn**.

To the Hindus, the 'Wheel of Time' is known as the Kala-cakra (or 'chakra') [26]. It is important that it was Brahma who was said to turn this wheel of time [27], because another name for the planet **Saturn** in Sanskrit is *Brahmanyah* [28], which indicates that **Saturn** is considered to be Brahma's planet. In fact, while Indologists may find it difficult to accept, Brahma has long been identified as **Saturn** by certain Hindu sages [29]. The *Svetasvatara Upanishad* alludes to Brahma as 'the time of time' [30].

What of the *beginning* of time? Is it stated anywhere that this originated with **Saturn**? The *Mundaka Upanishad* proclaims that the year, which we have seen as having been synonymous with time, came *from* Brahma [31]. The *Atharva Veda* states that 'time in the beginning [is or was] Prajapati' [32]. Being an epithet of Brahma [33], Prajapati, too, must be seen as an alias of **Saturn**, as the Arabic scholar, Al-Biruni, discovered in his travels to India [34] - and was not Kronos himself lauded as 'the *originator* of times' [35]?

I could supply many more sources but time does not permit. The association of time with the planet **Saturn** has not eluded mythologists and, in seeking an explanation, they have naturally appealed to logic. As far back as 1875, attempts were made to justify the phenomenon by appealing to the planet's present lagging orbital pace [36]. As it moves along its orbit, **Saturn** is the slowest of the planets which were visible to the ancients' unaided eyes. However, slow as **Saturn** might move, it *moves*, and in that respect it is no different from other planets. Besides, why would the *beginning* of time be associated with the planet solely because of its slow pace? Why would **Saturn's** sluggish amble have led to the belief that time must have had a beginning, that at one period time did not exist?

Why was **Saturn** chosen to represent the year? If any celestial body can currently claim the right to represent the year, it is surely the Sun. As an indicator of the passage of time, it is supreme. Even the Moon would have been a better indicator than **Saturn**. Moreover, our ancient forebears would hardly have even noticed the planet **Saturn** if it then appeared, like now, as only a pin point of light in the night sky - let alone noticed its slow advance across the sky.

The Saturnian Sun

An extensive tour of the Saturnian model and scenario leading from the meeting of one demand to the other would take us the proverbial 'forever-and-a-day'. I shall, therefore, leave the *snowballing* effect of these demands to a later work and concentrate on a few other examples taken in isolation. One theme concerns the model's predication that **Saturn** once shone as a virtual sun. It also posits that what past mythologists have identified as a bevy of sun-gods (such as the Assyro-Babylonian *Shamash*, the Egyptian *Ra*, the Indic *Surya*, the Greek *Helios*) are actually misidentified *Saturnian* suns. In the case of *Shamash*, of course, the issue is at once settled by appealing to the ancients who venerated the god. Here, despite

the objection of most modern mythologists, the case is really closed since the Assyro-Babylonians themselves vouched for the identity of Shamash as a name for the planet we call **Saturn** [37]. The case is a little more circumspect when it comes to the Egyptian Ra. Despite the fact that an ostrakon from the Ptolemaic period was discovered bearing an inscription equating Ra with the Greek Kronos (i.e. **Saturn**) [38], I could not at first accept it, as Ra is presented in all books on Egyptian mythology as the sun-god *par excellence*. Yet if the theory demanded that Ra was really a personification of **Saturn** rather than the Sun, it should also demand that the characteristics and motions ascribed to Ra will not be found to fit those of the Sun.

As examples, Ra was often lauded as 'Lord of the Circles' and 'he who entereth [or liveth] in the Circle' [39]. He was described as 'the sender forth of light into his Circle' and the 'Governor of [his] circle' [40].

What is this 'Circle' that the hymns allude to? Egyptologists inform us that it was what the Egyptians referred to as the *Duat*, a word that has been rendered into English as 'the Underworld'. This makes one think of some dark region underground but according to Wallis Budge, the *Duat* was to be discovered 'away beyond the earth, probably in the sky' [41]. A clue to the real nature of the *Duat* comes from its description as being divided into regions, each of which (among other things) was called *qerert*, an Egyptian word that means 'circle' [42]. A circle composed of regions which were also circular is best understood as a nest of concentric circles. The most convincing evidence concerning the interpretation of the *Duat* as a circle, however, comes from the hieroglyphic determinative of 'Duat' which is depicted as a star surrounded by a band or circle [43].

It is thus obvious that, whatever Ra once signified, it was a celestial body that resided within a circle or band or ring - nay, within a nest of concentric circles or bands or rings. As we all know, the Sun does not send forth its rays into a circle; it does not reside in a ring or nest of rings. The planet **Saturn**, however, does [44]. There are those who will tell us that, under certain conditions, the Sun *is* seen to be surrounded by a ring. They are alluding to that atmospheric refraction which lends a halo to the solar orb. However not only is this too rare an apparition to earn Ra his title of 'Governor of his Circle' but it is a phenomenon that is restricted to northern regions and hardly, if ever, seen at the latitude of Egypt. Furthermore the Egyptians assimilated Ra to the god Atum and, in fact, this deity is often referred to in Egyptian documents as Atum-Ra. This god bore a specific and strange characteristic: Atum was honoured as a sun of night [45]. Does the Sun shine at night?

Students of Egyptian mythology have long grappled with the exact meaning that lies beneath this strange characteristic of Atum. The best explanation Wallis Budge could offer was that Atum was the Sun *after* it had set [46]. By this he meant to imply that the Egyptians worshipped the Sun even when it was absent from the sky. Sun worship at night, however, makes for an incongruous institution.

A 'sun of night' was also believed in by the Assyro-Babylonians but there this was explicitly identified as the planet **Saturn**. As Jastrow stated: 'Strange as it may seem to us, the planet **Saturn** appears to have been regarded as 'the sun of night' ... ' [47]. In view of the fact that Atum-Ra was likewise lauded as a sun of night, coupled with the Ptolemaic equation of Ra as Kronos, should we not then give credence to the identification of Ra as the same **Saturn**?

In another hymn we read:

'O Ra ... the heir of eternity, self-begotten and self-born, king of earth, prince of the netherworld [of the Duat, really] ... thou dost rise in the horizon of heaven and sheddest upon the world *beams of emerald light* ...'[48].

Not only did Ra shed a green, or emerald, light, he himself was green. As Donald Mackenzie wrote, in his form of Sebek-Tum-Ra, this sun was the 'radiant green disk' [49]. 'Hail Green One' was the manner in which Ra was lauded [50]. Mythologists have no explanation why the ancient Egyptians alluded to Ra as having been green and shedding a green light and, as long as they continue to believe that Ra was the Sun, how can they? Does our present Sun shed a green light? Is the disk of the present Sun green? Of course neither is the planet **Saturn** green - but what if it once was?

Consider further the motions of the celestial object called Ra. In one of the *Coffin Texts*, the deity is addressed with these words: 'You shall go up upon the great West side of the sky and go down upon the great East side of the earth' [51]. Does the Sun 'go up' in the west? Does it 'go down' in the east? Faulkner, who translated this passage, could not help stating that this 'unexpected reversal of the points of the compass is incomprehensible' [52] and ended up blaming what, to him, was an inconsistency on 'a blunder in an early copy which no one has noticed or at least attempted to correct' [53]. This, however, presupposes that there must be other texts which give the rising and setting of Ra correctly. However, as David Talbott has indicated,

'wherever the direction of the [sun] ship's movement is explicitly connected with the phases of morning and evening, the texts *always* reverse the direction expected by the solar interpretation' [54].

More than that, when sailing in his ship, or boat, Ra is said to move *down* at dawn [55] and 'upstream' *at night* [56], contrary to what we see the Sun doing in our sky. How, then, can mythologists continue to claim that the Egyptian Ra was a personification of the Sun?

The Polar Station

If, as the model assumes, **Saturn** appeared motionless in Earth's north celestial sphere, how could it have been seen to rise and set, even if contrary to the way the Sun does? This troubled me for some time until, with David Talbott, I realised that the fault lay with mythologists and not mythology or, more correctly, the fault lay with those who had *translated* the ancient myths - not that I blame them, because they only had the arrangement of the *present* sky to work with. When it comes to the Egyptian Ra, the terms 'rising' and 'setting' were actually mistranslations. If we translate the Egyptian texts concerning Ra literally and forget about what the Sun is supposed to do, we find that the light of the god is simply said to 'come forth' and 'recede'. The god himself 'comes out' and 'goes in' [57].

Egyptologists, of course, will claim that this was the way in which the Egyptians alluded to the rising and setting of the Sun - and one cannot really blame them. However, as Talbott noted [58], when we say that the Moon comes out at night, we do not mean that it rises but that it grows bright. Similarly with Ra, the god did not rise and set; he simply grew bright and dimmed. This is vindicated by the additional fact that the god was said to come forth and recede while remaining *em hetep*, i.e. 'at rest' or 'in one spot' [59].

It was this immobility of **Saturn**, stated of the god *and* the planet, that made me realise very early in my research, together with Talbott, but independently of him, that **Saturn** had once

occupied a stable position in Earth's north celestial sphere. It is not possible here to enumerate all the evidence concerning **Saturn's** immobility but a few snippets may be in order. For instance, one of the names for the planet **Saturn** in Assyro-Babylonian was *Lu-Bat Sag Us*, which translates as 'the steady planet' [60]. In Hebrew, the same planet is called S[h]abet (or Shabath), i.e. the 'Resting Planet' [61]. In the *Papyrus of Ani*, in which the deceased is prepared to enter heaven, he is addressed with these words: 'O thou who art without motion like unto Osiris!' - and this passage is twice repeated [62]. It thus becomes evident that Osiris was not only remembered as a sun that shone during the night [63] but as one that did not move. To indicate that this was no idle speculation by the ancient Egyptians, we also find Ra himself lauded as he 'who dost lie without movement' [64]. If Ra was the Sun, as mythologists would have us believe, why was it said to have been 'without movement'?

Therefore when the Makiritare Indians of Venezuela speak of *Wanadi*, a celestial being 'in the highest sky' who 'lit everything down to the very bottom' without ever setting, we can be sure that they are referring to the same planet **Saturn**. 'Wanadi is like a sun that never sets', they say [65].

Unless I am mistaken, there are only two ways in which the planet **Saturn** could have appeared suspended motionless in the sky without rising and setting. The first, and most believable, is to assume, as Lynn Rose and also Harold Tresman have done [66], that Earth orbited **Saturn** in phase-lock, like the Moon does in relation to Earth, thus always pointing the same hemisphere toward **Saturn**. As seen from Earth, **Saturn** would have appeared stationary in the sky. The second manner in which **Saturn** could have appeared immobile is much more difficult to digest and this is to have Earth stationed directly 'below' **Saturn** with both bodies sharing the same axis of rotation.

For years I objected to Rose's explanation of this phenomenon [67], just as he objected to Talbott's and mine [68]. More recently, Frederick Hall and David Talbott have suggested that it is quite possible that **Saturn** was phase-locked with Earth, in the manner that Rose posits, *before* it moved into a north polar position in relation to Earth [69] but, while I accept the possibility, I shall leave it for Talbott to expound on it at some future date. Even so, given that Rose's model is more feasible from a physical point of view, why should I continue to opt for the more bizarre idea of a **Saturn** stationed in Earth's north polar sky? The answer is simple: that is where the mytho-historical record places **Saturn**. Even Rose had to accept this:

'The traditions about an immovable **Saturn** atop some special pole made little sense after the Age of Kronos had come to an end. Those traditions were later revised and were attributed to the only 'immovable' point ... that could be found in the newer sky. To people in the northern hemisphere ... this was the north celestial pole ...'[70].

While it is possible, is it *probable* that 'these traditions' would have later been 'revised' all over the world? I cannot list all the multitudinous sources which claim that **Saturn** was once stationed in the spot in the sky now occupied by the Pole Star but I shall give a few snippets. The Egyptians, for instance, had no qualms about placing Ra 'in the north of heaven' [71], which again raises the question: if Ra was truly the Sun, what would he be doing there? In the 'Babylonian' zodiac, the emblem representing Shamash (i.e. **Saturn**) together with that of Venus and Sin, is placed in the north celestial sphere [72]. The Iranian Kevan, i.e. the planet

Saturn, was said to have occupied the polar centre [73]. Bran, the Celtic **Saturn**, was called 'the Niggard from the North' [74]. In China, the planet **Saturn** is given the same name as the Pole Star [75]. In addition, the records of the ancients do not describe this strange situation always in the same manner but in a hundred different ways, contradicting the diffusionist borrowing of the belief.

Can the demands which this postulate raises, too, be met? The postulate concerning the former polar station of the planet **Saturn** raises more than one demand but I shall only touch upon one - and it will serve to show that *physical* requirements, as well as those which the mytho-historical record itself answers, *can* be met.

The Lithic Bulge

Terrestrial tides are caused by the attraction of the Sun and Moon on Earth's oceanic waters. It matters not for this study whether this is due to gravitational pull or to some form of electric, or electromagnetic, forces. The result is what concerns us and it is there for all to see. We know that when the Sun and Moon apply their combined attractive forces at right angles to each other, the tides are low in comparison to when the Sun and Moon are in direct line with each other.

Now consider: with the massive **Saturn** in proximity to Earth, the tides that would have been raised should have exceeded present ones and, since Earth's tides are aggravated when the attractive force of the Moon is added to that of the Sun, the additional pull of Venus and Mars (which the theory dictates to have been in direct line with **Saturn** and Earth) should have raised the northern tide even more. In addition, with **Saturn** positioned in Earth's north celestial sphere, terrestrial tides should have accumulated at Earth's north polar region. The hydrosphere would not have been the only terrestrial element to respond to **Saturn's** attractive force: the atmosphere should also have piled up at Earth's northern areas and so, also, should Earth's crust [76]. This is what the Saturnian thesis demands - do we find it so?

To be fair, we cannot now take a trip up north to see if the water of the world is actually piled up in a tide around the North Pole. Earth's crust, however, is a different matter. Earth's hydrosphere and atmosphere would have easily (although not necessarily suddenly) have rebounded to settle in a more uniform shell around the world. Earth's crust, on the other hand, would have taken much longer to readjust to the new conditions. Since the **Saturn** configuration scenario is theorised to have played its drama just prior to the rise of civilisation, we should expect this northern lithic bulge not to have yet subsided. Do we find any evidence of it?

Lynn Rose has opted for the Afar Triangle region in East Africa as the former site of the Saturnian 'World Mountain', which he seems to have understood as Earth's former lithic bulge, at that time when Earth's land areas were still massed together in the super-continent 'Pangaea' [77]. This is an idea which had already been published by Frederick Hall [78] and, later, picked up by Harold Tresman [79]. Given Hall and Talbott's more recent theory concerning Earth's previous phase-lock with **Saturn** before being freed to line up with **Saturn's** rotational axis [80], this theory seems to hold promise as long as the break-up of Pangaea (at least in my opinion) is relegated to a time *before* the advent of mankind [81]. Whether this state of affairs pertained or not will be left for future research. What concerns us here is a lithic bulge which formed in Earth's north polar regions in response to the attractive forces of the lined-up planets of the Saturnian configuration. While advocating his own

model (which replaces **Saturn** with Mars as the northern body), Frederic Jueneman came closer to the mark when he, also, posited the one-time existence of such a lithic bulge [82] (even if his diagram greatly exaggerated the tidal bulges on both Earth and Mars) [83]. However is there any evidence of a remnant of such a tidal bulge in Earth's north polar region?

There is and it has been known since 1958 when the aberrations in the orbit of Vanguard I around Earth led NASA to disclose that Earth is actually pear-shaped, with a bulge at the north pole. Other satellites since Vanguard I have confirmed this discovery [84]. The real shape of Earth, as now deduced, is better described as a triaxial spheroid rather than an oblate one, with the bulge of its pear-shape measured in metres rather than kilometres [85] but as a residue of a former greater uplift of land even metres are of significance. As Frederick Hall asked:

'What pulled Earth out of shape from above its north pole? The small dimensions of this shift indicate the pull was short term (as in centuries to millennia) rather than eons. *Furthermore the effect is relaxing, and in geological terms the distorting influence must have been remarkably recent.*' [86].

In a personal letter, Leroy Ellenberger advised me that any 'tidal bulge that would have been raised would not have had time to relax since the disruption' [87]. 'Fred Hall cites the 18 meter polar bulge in Earth's figure; but any polar **Saturn** would have produced a bulge which today would be measured in kilometers!' [88]

How does Ellenberger know how far **Saturn** was from Earth in order to deduce the height of Earth's tidal bulge under its influence? How does he know how long this tidal bulge would have existed and how does he know when the Saturnian configuration disrupted? I, for one, have never hinted at these parameters and, without knowing these, nothing can be said concerning the height of the original bulge or to what extent it should have relaxed by now. It is true that Earth's present pear-shape could be explained by other causes than the Saturnian configuration theory but that is not the issue. What concerns us here is that the theory demands such a state of affairs and the demand is met.

The Axis Mundi

One of the most mysterious elements that can be retrieved from the mytho-historical record concerning the Saturnian configuration is what seems to have appeared, at least at first, as a tapered swathe of light stretching down from the configuration to touch Earth at its northern horizon. Having received the generic name *axis mundi*, this appendage is also recognised as the 'polar column' and 'cosmic tree'. It was even known as the 'world mountain' which, Rose notwithstanding [89], is not to be confused with the lithic bulge.

This tapering appendage has been explained in various ways. Rose compared it to the 'flux tube' between Jupiter and its satellite Io [90]. In Jueneman's Martian (as opposed to Saturnian) model, the *axis* is a colossal Rankine vortex [91]. Talbott, on the other hand, originally explained the polar column as a stream of debris stretching between **Saturn** and Earth [92] but later amended this to a stream of debris attracted from *Mars* towards Earth [93]. Wallace Thornhill believes he has recognised this ethereal pillar as a sustained plasma discharge in the form of Birkeland current [94].

Maybe all three of these functions came into play at once or in succession (Talbot himself seems to accept Thornhill's explanation in conjunction with his own [95]) but this might be stretching things a little. One objection to Talbot's interpretation, meanwhile, is the lack of recognisable Martian material in Earth's Arctic regions. Let's face it, if the polar column was really composed of material ejected from the planet Mars for decades, possibly centuries, this process should have completely scoured the face of Mars, depleting it of loose rubble. However, as we have found out from recent robotic landings, the surface of Mars (like that of the Moon) is littered with loose rubble. Also, the bombardment from Mars should have strewn Earth's Arctic regions with Martian detritus. Granted, no one has yet conducted a *deliberate* search for such material but none has yet come to light. Meteorites believed to have originated from Mars have been found elsewhere, including the Antarctic [96], but none has yet been discovered in the Arctic regions.

What Thornhill's explanation has going for it is the fact that galaxies exhibit what he terms 'plasma focus characteristics at their centre during their active, or quasar, phase by emitting beams of particles in the form of twisted vortices' [97]. These vortices bear a remarkable similarity to the *axis mundi* deduced from the mytho-historical record. Moreover, such a beam in the form of a filament of light has now not only been detected in conjunction with a planet (as opposed to a galaxy) and but even photographed. Together with the beam, we now have the first actual photograph of an extra- solar planet, a member of the double-star system TMR-1. The photograph shows what appears to be a runaway planet, jettisoned by the double stars, together with what has been described as 'a thin filament of gas' extending all the way from the planet to its primaries [98]. Anyone living on that planet looking up in the right direction would see a swathe of light stretching from the horizon to the double sun very much like the swathe of light our ancestors would have seen stretching from Earth's northern horizon to the Saturnian configuration. Those who told us that such a phenomenon is not physically possible can now be silenced.

One other aspect of Thornhill's postulate that fits well with the mytho-historical record is that magnetic fields tend to twist Birkeland currents into 'ropes' [99], making the structure appear like entwined snakes. This structure is important because, during its final phase, the Saturnian *axis* developed exactly that form.

Now ... if only we could make Thornhill's plasma discharge, this Birkeland current, twist and suck, because there is every indication that the *axis mundi*, this polar column, did just that - and therein lies the beauty of Jueneman's model, because the Rankine vortex he uses as an explanation for the phenomenon is, in effect, nothing but a colossal planetary tornado. As everyone knows, tornadoes not only twist, they also suck.

At this point I shall reverse my method of raising and meeting demands because it is not enough to use the mytho-historical record to test itself, or to test it using physical science; the mytho-historical record should also be used to test physical science. Can the mytho-historical record validate the postulate that the *axis mundi* went through a twisting, or churning and sucking process?

The Whirling Column

I shall not present all the evidential sources which attest to the whirling motion of the cosmic pillar but shall merely present the opinions of four authorities on the subject and leave those who are interested to check their sources.

De Santillana and von Dechend are two of many who came to the conclusion that the *axis* did twist and turn - although they seemed unsure of whether it did so slowly or rapidly [100] - even if, to them, the *axis* was anything but an actual physical entity. So did Elmer Suhr, who spoke of the 'whirling cosmic column'[101] and 'the whirling column of the cosmos' [102]. Suhr stressed: 'It is especially important to think of the cosmic column not as a static post but as a constantly whirling crucible ...'[103]. Talbott also recognised this when he wrote that 'the cosmic mountain in many creation epics *is* presented as a churning, serpentine column rising along the world axis ...'[104].

In most instances, past authorities have mainly opted for the abstract (though real) axis between Earth's North Pole and the celestial north pole as an explanation for the *axis mundi*. In a sense, of course, they were correct but it is obvious from descriptions of the Saturnian *axis*, as well as prehistoric petroglyphs, that the polar column was a *visible* entity rather than a deduced abstraction [105] - so much so that, in some cases, the *axis* was even pictured as a ladder reaching to the Saturnian sun [106].

Suhr, on the other hand, theorised that the cosmic pillar owed its genesis to the deduced cone-shaped shadow which the Moon sends toward Earth during a solar eclipse [107]. However I am hard pressed to understand how he can reconcile this explanation with his own conviction that the world axis went through a whirling motion.

The Entwined Serpents

As stated above, one aspect of Thornhill's postulate that fits well with the mytho-historical record is that magnetic fields tend to twist Birkeland currents into 'ropes', making the structure appear like entwined snakes. This is important because, among other things, the cosmic pillar was often described as having the form of a serpent or celestial dragon [108].

As already noted, Talbott, keeping to his theory that the axis was actually a stream of debris raining down on Earth from the Saturnian configuration (**Saturn** itself or Mars), recognised the fact that

'the cosmic mountain in many creation epics *is* presented as a churning, serpentine column rising along the world axis ... in several lands the word for 'mountain' is the same as the word for 'serpent' or 'dragon', though our natural world offers no basis for the equivalence' [109].

Talbott offers the following examples:

'In Mexico, Nahuatl *can* mean 'serpent' but also 'mountain ...[the] Egyptian Set is the primordial serpent or dragon, but *set* also means 'mountain' ... [the] ancient Sumerian dragon ... was the *Kur* ... but *kur* also possessed the meaning 'mountain' ... [the] Greek *Boreas* is the primeval serpent ... but etymologists connect the serpent-dragon's name with a primitive *bora*, 'mountain'[110].

Suhr tells us: 'Among primitive peoples there are signs of the column in the form of a python or dragon rising from the level of the earth to the clouds'[111]. He adds that among the Murngin people of northern Australia, the great python 'is the most impressive representative of the column'[112]. In China '[a] dragon ascending from the earth to the clouds can serve as the whirling column - which no doubt accounts for so many dragons on pillars'[113].

A serpent, or dragon, on the other hand, is not exactly the same thing as a pair of entwined serpents. If we are going to keep to the motif of Thornhill's Birkeland current, where do we find the cosmic pillar described as a pair of entwined serpents or, at least, a serpent entwined around a vertical prominence? We need only turn to the object the Greeks referred to as the *caduceus* - two serpents entwined around a central shaft, which Suhr also recognised as representative of the cosmic *axis* [114]. Nor must we think of the caduceus as a uniquely Greek invention, since the symbol was also popular in the east, including Mesopotamia [115].

A 4th century BC relief from Greece depicts a cylindrical altar with a snake coiled around it. Arthur Cook, who mentioned it in his monumental work on ancient religion, found it difficult to interpret [116]. What he should have realised is that the word 'altar', although derived from Latin, has its phonetic equivalent in the Arabic Al-Tur which means 'The Mountain' [117]. This connection did not escape Talbot, who has provided intriguing insights concerning the associations between the altar, the world mountain, the cosmic pillar and other Saturnian elements [118].

Other examples of this motif are encountered in depictions of Mithras, shown with a serpent coiled around him in spiral fashion, and of the Mithraic *Kronos*, or *Aion*, who is likewise shown within the coils of a spiralling snake [119]. Variants of the same motif are to be found in the serpent-footed Yahweh on coins of the Hellenistic period [120]. That Yahweh originated as a personification of **Saturn** was well understood by William Heidel, even if he himself did not quite accept the identification. Despite the slight phonetic similarity between the names Jehovah (Yahweh) and Jove (Iovis), Alfred de Grazia's view that Yahweh was a personification of the planet Jupiter [121] cannot be upheld. As Heidel tells us: 'That Yahweh and **Saturn** were identical was a belief widely accepted in antiquity ...'[122]. This can be verified through Tacitus who recorded that the Jews worshipped the planet **Saturn** as their god [123]. I mention this because the images of Yahweh reproduced on the coins referred to above do not merely show him as serpent-footed but with both serpentine legs entwined together, thus conforming to the demands of our model.

If we opt for Jueneman's Rankine vortex in lieu of Thornhill's Birkeland current (at least temporarily) how does this scheme account for the serpentine nature of the image? The answer is easy enough: as Jueneman explained,

'Terrestrial tornadoes occasionally exhibit smaller counter-rotating vortices in close proximity to the primary whirlwind. On a much vaster scale, similar counter-rotating catenulate *bolus flows* would have snaked around the polar column in filamentary fashion, first in a counterclockwise, then in a clockwise direction in a slow oscillation'[124].

It is this bolus flow that would have given the planetary tornado, or Rankine vortex, its serpentine quality.

The Watery Vortex

If, as Jueneman surmises, the polar column *was* a Rankine vortex which sucked up a goodly portion of Earth's hydrospheric content, we should find it so mentioned somewhere in the mytho-historical record. Once again, the model demands it. Looking at the vortex from a safe distance, ancient man would not have realised that it contained water. When the polar column was severed, however, the water contained within it would have been released and from this

ancient man should have deduced that the column did contain a reservoir of water. Does the mytho-historical record meet this demand?

We have already seen that among the Australian Aborigines the great python is the most impressive representative of the polar column. It is therefore significant that this python is not only believed to tower up to the level of the clouds but that he also 'brings about rain and flood' [125]. The Efe pygmies of the Ituri forest tell of a deluge of water which gushed forth as a mighty river when their version of the Cosmic Tree, which was the polar column, was felled [126]. Similarly, the Arawak Indians of the Guianas tell of a wondrous tree which Sigu cut down. From its stump, water gushed out in such quantity as to cause a deluge [127]. This tale is also found among the traditions of the Cuna, who tell of their mischief-maker, the Tapir, chopping down the Saltwater Tree from which salt water gushed out to form the oceans of the world [128].

Thus, Velikovsky was correct when he surmised that the water of the Deluge would have been salty but not, as he believed, because the salt, or at least its **chlorine** content, originated from **Saturn** [129]. The water was salty because it came from the same oceanic water the vortex had sucked up in the first place. Nor is this idea solely met among so-called primitive tribes. For instance, a mysterious plant was supposed to grow in the Mesopotamian *apsu* which was connected to the watery abyss by what is termed a *ratu* - a word that de Santillana and von Dechend conjecturally translated as a 'water pipe' [130]. According to William Albright, a flood rose out of this *ratu* [131].

The Flood From The North

If this is so, our scenario would then demand an additional set of data. If the Flood, or at least one of them, was caused by the release of water that had been contained in the vortex churning away in Earth's northern regions, the mytho-historical record should be able to supply us with some accounts that tell of a flood that swooped down from the north. This demand, too, is met.

Among the traditions of the Wintus, who once inhabited the Upper Sacramento Valley in California, we encounter the following:

'Water rushed in through the open place made by Lutchi when he raised the sky. It rushed in like a crowd of rivers, covered the earth ? as it rolled on toward the south. There was so much water ? that it rose to the top of the sky and rushed on toward Olelpanti [the highest heaven]' [132].

There is no need to point out that a flood which rolls on 'toward the south' must have 'rolled' in from the north. The Wichita Indians of Oklahoma tell something similar: they believed, 'the time would come when there would be some sign given so that the people would know that something was about to happen; that when the time should come it would begin from the north' [133]. Sure enough, after a while, there came some signs 'which showed that there was something in the north that looked like clouds' but the 'clouds that were seen in the north was a deluge' [134]. The Pawnee also claim that the water of the Deluge 'poured down from the heavens, and the water came from the northwest upon the earth so that it became deep ?' [135].

What of the hard sciences? Is the evidence there? Once again, I can only mention a few items here but that an enormous flood had once swept down from the north to scour the land surface of North America has been suggested by J. Harlan Bretz [136]. Similarly, C. Warren Hunt speaks of evidence pointing to a flood from the north, excavating the land as it went before it emptied into Lake Bonneville [137]. That Lake Bonneville itself also burst its bounds to cause a secondary flood has been documented by Robert Jarred and Harold Malde. What is of additional interest here is that the area once covered by this lake constitutes a vast salt deposit 100 square miles in extent [138]. Similar signs of a vast scouring flood from the north have also been discovered in Siberia [139].

It is, of course, theorised that this flood was due to the catastrophic melting of the northern ice cap at the end of the Ice Age. I, on the other hand, claim that, at this time, the northern ice cap had not yet been formed.

The Churning Of The Ocean

One of the most dramatic images of the concept, which brings various of our motifs together, is invoked by the Indic myth, from the *Mahabharata* and the *Bhagavata Purana*, concerning the production of *amrita* (or ambrosia). Briefly the myth is this: in an effort to produce this divine nectar, both gods and demons used Mount Mandara as a churning stick. Winding the serpent Vasuki, also known as Ananta [140], around Mount Mandara, the gods (at one end) and the demons (at the other) grasped hold of Vasuki by the head and tail and, pulling him back and forth, were able to rotate Mount Mandara fast enough to whisk the sea into an ocean of milk from which amrita was produced [141].

In most visual representations of this myth, Mount Mandara is depicted not in the form of a mountain but as a pillar [142], thus validating the conviction that the mythic World Mountain and the Axis Mundi were one and the same. In fact, it has long been known to Indologists that Mount Mandara stood for the axis of the world [143]. The second noticeable thing is hardly worth mentioning: this cosmic pillar *did* twist and churn. In Vasuki we recognise the bolus flow wrapped around the central vortex - and it is interesting to note that this entity was 'associated with the north' [144], locating the entire action there. Finally, in the divinities' churning by pulling the coiled Vasuki this way and that, an echo is retained of the clockwise/counter-clockwise rotation of the bolus flow described by Jueneman.

The elements contained in the myth of the churning of the ocean must not be thought of as uniquely Hindu in origin. In the Hindu myth, for instance, Mandara was placed on the back of a tortoise. In Chinese mythology, it is Shang-ti who is depicted as standing on the celestial tortoise, while the serpent was said to have encircled the tortoise [145]. Shang-ti's title was 'The Holy and Propitious Prince of the North Pole', who is usually represented as surrounded by a halo [146], both of which have special meaning to this study. It is also noteworthy that the symbolism of the tortoise and serpent goes at least as far back as the Han Dynasty and was used as an emblem for the northern region of the world [147]. More than that, as Lord of the Centre, Shang-ti was also revered as Huang-ti [148], who is perhaps better known as the Yellow Lord [149] or Yellow Emperor [150], long acknowledged to be an avatar of **Saturn** [151].

In the Japanese *Kojiki* we learn of the Heavenly Jewelled Spear which joined heaven to Earth and which acted as the churning stick responsible for the surfacing of the mythical (one might as well say celestial) island of Onogoro [152].

The reason behind the churning of the milk ocean seems to be variously given. Thus, according to Veronica Ions, the divinities involved were actually bent on retrieving certain items, including the famed amrita, which had been lost during 'one of the periodic deluges which destroyed the world' [153]. In fact, these items *were* eventually retrieved from the milk ocean due to the churning action of Mandara [154]. While, as yet, I have not been able to ascertain this assertion in an *original* Indic source, if well-grounded it would mean that, following the flood, or at least one such flood, the axis vortex re-established itself. In any case, Ion's assertion seems to point to a re-creation of **Saturn's** cosmos which can be deduced on the strength of other evidence much too complex to go into here.

The Arctic Carnage

Does this scenario, involving a tornado of planetary proportions, raise even more demands? We are all acquainted with the destructive force that tornadoes exhibit. Should not **Saturn's** Rankine vortex, therefore, have left signs of an even greater destruction, especially since this titanic maelstrom would have wrought its devastation while standing still laterally?

A full exposition of the history of the Axis Mundi requires a volume to tell in full and here I can only provide a few isolated items. Firstly, there is the Arctic 'muck', or frozen soil, which 'covers no less than one seventh of the land surface of earth', all of which encircles the Arctic Ocean and lies within the Arctic Circle [155]. Composed mainly of silt, sand, pebbles and boulders, it is often accompanied by 'preserved, semi-decayed, or fully decayed vegetable and animal matter' [156]. Its depth in some places 'has always caused even the most open-minded geologists to boggle' [157]. The Russians, who have conducted studies on this muck, have in some places drilled down more than 4000 feet without reaching rock bottom [158]. Entire forests have been found buried in this area, including plum trees complete with their leaves and fruits [159] and also palm trees and huge exotic ferns [160]. Animals are also found buried in this muck, the most notable of which is the mammoth. As George Gaylord Simpson was astute enough to realise, catastrophic events at the end of the Pleistocene were not only much more severe in North than in South America, they also affected a much larger proportion of animals [161].

Now here is the puzzle. As one writer put it, 'how do you get that thickness of what is manifestly surface-derived material if it is the result of mere run-off?' [162]. As Dolph Hooker says: 'In some areas there are no evidences of former highlands from which sediments could have been eroded and transported to the areas of perma-frost' [163]. Now consider the model being discussed. Would not such a colossal vortex have scoured the land, year-in year-out, uprooting not only whatever trees might have thrived in the region but also sizeable chunks of rock and boulders which would have swirled around, grinding relentlessly against each other, breaking apart into ever smaller pieces until ground into sand and silt? What is the area that is now filled with the Arctic Ocean if not an immense basin scoured out of the living rock?

I almost hate to bring up the subject of the frozen mammoths, so much has been written about them. I shall not discuss here the few that have been found frozen complete or almost complete in areas where the muck has melted. What I shall stress is the vast remains of torn and broken mammoths both in Alaska and Siberia which are associated with evidence of an atmospheric tempest of unprecedented dimensions. The Liakhov Islands, the islands of Stolbovoi and Belkov and the New Siberian Islands are so full of mammoth bones and tusks that one investigator described these lands as if they were 'actually composed of the bones

and tusks of elephants' [164]. Similar remains in Alaska have also been numbered in thousands [165]. In both Siberia and Alaska, the signs of destruction are very apparent. In Alaska, multitudes of trees are found 'twisted and torn' and 'piled in splintered masses'. Mammal remains (mammoth, mastodons, bison, horses) are found dismembered and torn but with portions of ligaments, skin, hair and even flesh, still intact and fresh, all mingled with the splintered remains of this once mighty forest [166]. In Siberia it is exactly the same: entire uprooted forests, bituminous trunks and fossilised charcoal, everywhere intermingled with petrified ash, veins of ice and sand that has turned into sandstone. Among this colossal devastation are found the skeletons of mammoths, rhinoceroses, bison and horses [167].

Neglecting to take the effects of his own Rankine vortex into consideration, Jueneman opted for waves of translation due to terrestrial stasis as the reason 'why hecatombs of broken and smashed animal bones literally blanket the Arctic regions' [168]. However would waves of translation have carried trees *without dropping their leaves and their fruits along the way*? Besides, as he himself pointed out, these waves of translation would not only have swept from the equator towards both poles, carrying boulders, uprooted trees and mangled animals with them; they would also have travelled back *towards* the equator [169]. Why, then, did the waves not carry most of the boulders, uprooted trees and mangled animals back with them or, as Richard Smith asked [170], why do we not find the same state of affairs in the *Antarctic*? As I replied to Smith [171], the answer is simple: there was no vortex churning above Earth's South Pole.

Gordon Williams questioned Jueneman's explanation and also mine while presenting his own [172]. Unfortunately, he relied, in part at least, on his mistaken belief concerning the Orphic Egg of myth [173] and also his non-polar placement of **Saturn**. There is much that can be said against Williams' views but this is not the time or place. All I shall say is that, on this topic, I have the additional evidence of the mytho-historical record on my side - as the theory, in fact, continues to demand.

What is this evidence? Does it have anything to say about the catastrophic demise of the mammoths in the north? Given that 'mammoth' is an English word derived from the Russian *mamantu* through the Tatar (or Tartar) *mamma*, which means 'earth' - 'because their remains are found embedded in the earth' [174] - I shall use the word 'elephant' in its stead, which is how they would have been remembered by the Hindu descendants of those who witnessed the event. Are elephants mentioned in the record in connection with the polar vortex? In the *Mahabharata* we read that Mandara, that churning mountain, was 'crowded with tusked animals' [175]. When the churning began, it is said, great trees spun off, were crushed against one another, lightning flashed forth, a fire blazed burning the elephants and other beasts 'and all the various creatures there lost their life's breath'. The water pouring from above eventually doused the fire and flowed into the ocean [176]. Thus we have here the entire spectrum of the devastation: the whirlwind, the uprooted forest, the carnage, the fire and the ensuing flood. Does this not tally with what is found in Earth's northern regions? There are other instances in Indic lore which touch upon the same event but the above should suffice for now.

If man was close enough to this planetary tornado to witness it, how was he not engulfed in its carnage? Why do we not find human remains in the northern permafrost? Man is an intelligent animal and would have known enough to stay in the safety zone outside the periphery of the vortex. Thus it was written in relation to Mount Meru, the 'golden mountain' which, like Mandara, was a stand-in for the *axis mundi* [177], that men cannot approach it.

'Dreadful beasts of prey wander over it', wrote the ancients, 'but others cannot approach it even in thought' [178].

Animals, however, are not stupid either. So why were they dim-witted enough to get caught in the maelstrom? In fact, at first they were not. Like man, they would have respected the safety zone but in the end, when the planets were displaced from their polar alignment, the funnel of the polar column was dislodged from its axial locus. Swirling now in corkscrew fashion, writhing like a serpent, it went berserk and overstepped the bounds within which it had been contained for ages. Taken unawares, beasts fell prone to it. Man, apparently, was just that bit smarter.

The Onslaught Of Ice

The penultimate question I wish to raise concerns the freezing of the entire hecatomb - animals, trees, boulders, sand and all the other detritus which constitutes the Arctic muck or permafrost. How did it all freeze? Where did the ice come from? Does the record have anything to say about it? Is it traceable to the planet **Saturn** or Earth's primeval position in relation to **Saturn**? Can this demand also be met?

This is an easy question to answer. The Greeks, for instance, had long associated the planet Kronos (i.e. **Saturn**) with snow and hail [179]. In fact, **Saturn** was *renowned* for being 'cold' and 'moist' [180]. This seemingly-odd belief is not met only among the Greeks. Abu Ma'sar also stated that **Saturn's** nature is cold [181]. Alcabitius likewise recorded that 'he [**Saturn**] is bad, masculine, in daytime cold?' [182] Epigenes of Byzantium classified **Saturn** as 'cold and windy' [183]. Dorotheus also talked of 'cold **Saturn**' [184]. Pliny wrote that '**Saturn** is of a cold and frozen nature' [185], while Virgil spoke of '**Saturn's** cold star' [186]. We can thus be almost certain that when the Zunis of New Mexico refer to Awonawilona as having also been associated with cold [187], they were reiterating an archaic testimonial to the planet **Saturn's** association with snow and ice. This is made all the more clear since Awonawilona means 'All-Father Father' [188], an epithet reserved elsewhere for the Saturnian deity. Thus Kronos/**Saturn** was referred to as 'First Father' [189], while Odin was known as 'All-father' [190], the very same name of the Zuni Awonawilona.

Mythologists have never supplied a convincing explanation for why the planet **Saturn** and its deity should be associated with cold, snow and ice. A telling clue comes from William of Conches, who says '**Saturn** is called cold not because he is inherently cold himself but because he *causes* cold' [191]. Why would it have been believed that **Saturn** causes cold unless it, or he, was remembered as having once done precisely that? Nonnos, for instance, told of the 'shining victory of Zeus at war and the hailstorm snowstorm conflict of Kronos' [192]. Is it not written that during the war between Zeus and Kronos, a war said to have lasted ten years, Zeus pelted Kronos with thunderbolts, while Kronos retaliated with snow? Is it not told in the Persian *Shahnama* that when Kai Khusrau departed he prophesied that 'a furious blast' will rise 'and snap the boughs and leafage of the trees' and 'a storm of snow will shower down from heaven's louing rack' [193]? In the first fargard of the *Vendidad*, it is written how Ahura Mazda is made to say:

'I, who am Ahura Mazda, created Aryanem Vaejo of good capability. Thereupon, in opposition to it, Angro-mainyus, the Death-dealing, created a mighty serpent and snow?'[194]

The Modoc Indians of southern Oregon and northern California tell of how the Chief of the Sky Spirits drilled a hole in the sky with a rotating stone, through which he pushed snow and ice to form a mound which almost touched the sky [195]. Dorothy Vitaliano understood this as a memory associated with Mount Shasta's eruption [196] but the drilling of the sky with a rotating stone is too similar to the churning of the ocean by Mount Mandara to escape notice. Destruction of the world by cold is also met among the marginal, forest, and southern Andean peoples [197]. As Dolph Hooker informs us:

'In spite of long continued efforts to prove that ice sheets accumulated because climate had deteriorated, little if any actual evidence has been discovered to validate the theory. On the contrary, there is evidence that glacial ice appeared with catastrophic suddenness. There is evidence that at a time when temperate climatic conditions extended even into polar regions, the world, teeming with warmth-loving species of flora and animal life, was overwhelmed by fall of snow, ice and rain, so violent, so sudden, so chilling, that great numbers of creatures were forthwith destroyed; so vast, so violent that it brought to an abrupt end one geologic age and ushered in another'[198].

'Knowing that glacial ice came upon the world stage suddenly, we understand why we cannot find evidence that Earth's climate grew cold *before* the advent of an ice age; why, on the contrary, climate grew colder only *after* the ice arrived and only to the extent that the ice itself refrigerated the Earth?' [199].

Meanwhile, while I do not agree with him when it comes to the actual source, the extraterrestrial origin of the ice which caused the so-called Ice Age has been promoted by William Thompson, who formerly worked at NASA [200] - and this information should not be ignored simply because it comes from a Creationist source. As Hooker also tells us: 'Obviously the perma-frost accumulated from the bottom upward - not by freezing from the top downward' [201]. What this means is that the detritus which forms the permafrost was frozen as it was being laid down.

Am I here suggesting that the ice which caused the 'Ice Age' came from the planet **Saturn**? No - I am claiming that the snow, ice and sleet came from the axial vortex when it was severed for the last time because that is where a vast quantity of terrestrial moisture had been stored. Why and how did it freeze to fall as snow, ice and sleet? As mentioned earlier, this all transpired during the break-up of the Saturnian configuration. **Saturn**, Venus and Mars were thrown out of axial alignment and so was Earth. Its axis shifted to take up its present alignment. Do we also find this in the mytho-historical record? Is this demand also met?

Earth's Shifting Axis

The topic of Earth's shifting axis has been touched upon by many writers and I shall not reiterate all the evidence. The Muria, a tribe of the Bastar State in the Central Provinces of India do not chew words in the telling of their creation myth. They tell without ambiguity how Mahapurub turned the world topsy-turvy [202]. There are many records of this nature and I shall not repeat them all but I shall include that of the Hopi because it is one of the best to illustrate the subject. These Indians narrate [203]:

'the world, with no one to control it, teetered off balance, spun around crazily, then rolled over twice. Mountains plunged into seas with a great splash, seas

and lakes sloshed over the land; *and as the world spun through cold and lifeless space it froze into solid ice.*'

How would these Indians have known that the teetering of the world would cause seas and lakes to slosh over the land? How would they have known that a shifting of Earth's axis could freeze it into solid ice?

Had I any faith in the accuracy of *counting* the annual layers of ice retrieved in cores drilled out of Greenland's ice fields, I would even have been able to date the event for you.

Saturn's Departure

My final point concerns **Saturn's** departure. I need not tell you that **Saturn** is no longer in Earth's proximity. The theory then demands that somewhere in the record, **Saturn's** removal from Earth's proximity should be encountered. So we find as, for example, with the tale of Quetzalcoatl [204], whose 'paladins' died from the cold through the snow that fell upon them just before the god took off on his serpent raft to be seen no more [205]. I mention this one myth because, as one can see, it ties in nicely with **Saturn's** removal at the very time when Earth, teetering off balance, was deluged with the ice that ushered in the so-called Ice Age.

There is much more that I can add to the topic of **Saturn's** removal from Earth's vicinity but it is time to call it quits. Even so, having said so much about the Egyptian Ra at the beginning of this treatise, it is perhaps fitting to end with him. Thus, in an Egyptian myth, Ra is made to say:

'Weary indeed are my limbs and they fail me. I shall go forth ? Henceforth my dwelling place must be in the heavens. No longer will I reign upon the earth.' [206]

and:

'I have determined to cause myself to be uplifted into the sky, to join the blessed gods and to renounce rule of the world.' [207].

Then Ra raised himself from the back of the goddess Nut into the sky [208].

If Ra was truly the Sun, where was it prior to its ascent into the sky? If, as mythologists tell us, Nut *was* the goddess of the sky, what would it mean that the Sun rose from the back of the sky (i.e. Nut) *into* the sky? What does it mean that, before ascending into the sky, the Sun had reigned upon Earth? What does it mean that the Sun once ruled the world? Do we not, in fact, find it stated in an Orphic fragment that '**Saturn** dwelt openly on earth among men' [209]? So, also, Dionysus of Halicarnassus who declared that 'Kronos ruled on this very earth' [21]. Besides, as it was written, when Ra removed himself into the sky, 'darkness came on' and 'Ra was borne through darkness' [211]. Does this make sense if Ra was the Sun? Do we see darkness coming on when the Sun rises into the sky? The answer to this mystery is that the sun of night, which had ruled Earth due to its proximity, had now removed itself into the blackness of space. True night, as we now know it, finally descended upon the world and the stars, which could not have been seen as long as the Saturnian sun of night was shining down on Earth, appeared in all their brilliance for the first time. Do we find this stated in the mytho-historical record? Can this last demand be met? As it is written:

'[When Ra left Earth he] went on his way through the realms which are above, and these he divided and set in order. He spake creating words, and called into existence the field of Aalu, and there he caused to assemble a multitude of beings which are beheld in heaven, even the stars?' [212].

Notes and References

1. I. Velikovsky, *Worlds in Collision*, New York, 1950.
2. G. de Santillana & H. von Dechend, *Hamlet's Mill: An Essay on Myth and the Frame of Time*, Boston, 1969, p. 135.
3. See 'The Road to **Saturn**', *AEON* I:1, Jan. 1988, pp. 108-129 and 'The Road to **Saturn**, Part II', *AEON* I:3, May 1988, pp. 109-138.
4. J. Gibson, '**Saturn's** age', *Research Communications Network Newsletter* #3, Oct. 15, 1977, p. 4.
5. R. Van Over, *Sun Songs: Creation Myths From Around the World*, NY, 1980, p. 299.
6. *Laws of Manu* I:v:5.
7. D. Cardona, 'Darkness and the Deep', *AEON* III:3, Oct. 1993, pp. 49-70.
8. E.g., *ibid.*, where sources are cited in *quantum sufficit*.
9. *Linga Purana* I:59:6-9.
10. J. Bierhorst, *The Red Swan: Myths and Tales of the American Indians*, N. Y., 1976, p. 38 (paragraphing altered).
11. D. Cardona, 'The Beginning of Time', *AEON* III:5, May 1994, pp. 71-76.
12. A. B. Cook, *Zeus: A Study in Ancient Religion*, Vol. II, Part II, N. Y., 1965, pp. 1035-1036.
13. Van Over, *op. cit.* [5], pp. 386-387.
14. *Maitri Upanishad* VI:15.
15. J. Strong, *Hebrew and Chaldee Dictionary*, Madison, 1890, p. 48.
16. E. A. W. Budge, *An Egyptian Hieroglyphic Dictionary*, Vol. II, N. Y., 1920/1978, p. 857.
17. Macrobius, *Saturnalia* I:22:8.
18. As cited by I. Donnelly, *Ragnarok: The Age of Fire and Gravel*, republished as *The Destruction of Atlantis*, N.Y., 1971, pp. 210-211.
19. Macrobius, *loc. cit.*
20. Cf. especially Cook, *op. cit.* [12], p. 374.
21. Cf. especially W. A. Heidel, *The day of Yahweh*, N. Y., 1929, pp. 468-469; L. C. Stecchini, 'Chronos and Kronos', *KRONOS* VII:2, Winter 1982, p. 41.
22. Cicero, *De Deorum Natura* II:25.
23. de Santillana & von Dechend, *op. cit.* [2], p. 135.
24. E. Burgess, *Surya Siddhanta*, Calcutta, 1860/1935, p. 5.
25. H. Collitz, 'Konig Yima und **Saturn**', *Festschrift Pavry*, 1933, pp. 86-108.
26. W. E. Begley, *Visnu's Flaming Wheel: The Iconography of the Sudarsana-Cakra*, N. Y., 1973, p. 96.
27. F. O. Schrader, *Introduction to the Pancaratra and the Ahirbudhnya-Samhita*, Madras, 1916, pp. 106, 132.
28. V. S. Apte, *The Practical Sanskrit-English Dictionary*, Delhi, 1975, p. 708.
29. E. Moor, *Hindu Pantheon*, London, 1864, p. 218.
30. Van Over, *op. cit.* [5], p. 308.
31. *Ibid.*, p. 311.
32. *Atharva Veda* XIX:53:8-10.
33. W. D. O'Flaherty, *Hindu Myths*, Harmondsworth, 1976, p. 350.
34. E. C. Sachau, *Alberuni's India*, London, 1914, pp. ii, 121.
35. de Santillana & von Dechend, *op. cit.* [2], p. 133 (emphasis added).
36. See, for instance, G. Schlegel, *Uranographie Chinoise*, Leiden, 1875, p. 628.
37. M. Jastrow, Jr., 'Sun and **Saturn**', *Revue D'Assyriologie et D'Archeologie Orientale*, Paris, Sept. 1910, pp. 163-164.

38. F. Boll, 'Kronos-Helios', *Archiv für Religionswissenschaft* XIX, 1916-1919, pp. 343 ff.
39. E. A. W. Budge, *The Gods of the Egyptians*, Vol. II, N. Y., 1904/1969, p. 339.
40. *Ibid.*, pp. 339-340.
41. *Ibid.*, pp. 170-171.
42. *Ibid.*, p. 176.
43. E.A.W. Budge, *An Egyptian Hieroglyphic Dictionary*, Vol. I, N. Y., 1920/1978, p. cxxv; S. A. B. Mercer, *The Pyramid Texts*, Vol. II, N. Y., 1952, p. 156.
44. Note that the ring, or rings, around Ra to which the hymns allude was not the present set of Saturnian rings but that does not detract from the point being made.
45. E.A.W. Budge, *Osiris & the Egyptian Resurrection*, Vol. I, N. Y., 1911/1973, pp. 65, 104.
46. E.A.W. Budge, *The Egyptian Book of the Dead*, N. Y., 1895/1967, p. 246, where Atum, here called Temu, is referred to as 'the night sun, at the twentieth hour of the night'. Elsewhere in the same work, Atum is referred to as *Tum* and/or *Atemu* (see p. cx).
47. Jastrow, *op. cit.* [37], p. 170.
48. Budge, *op. cit.* [46], p. 250 (emphasis added).
49. D.A. Mackenzie, *Egyptian Myth and Legend*, N. Y., 1907/1978, pp. 236-237.
50. E.A.W. Budge, *Osiris & the Egyptian Resurrection*, Vol. II, N. Y., 1911/1973, p. 355.
51. *Coffin Texts*, Spell 18.
52. As quoted by D. Talbott, 'The Ship of Heaven', *AEON* I:3, May 1988, p. 85.
53. *Ibid.*
54. *Ibid.*, p. 86.
55. *Pyramid Texts*, Spell 1133.
56. *Coffin Texts*, Spell 136.
57. D. N. Talbott, *The Saturn Myth*, N. Y., 1980, p. 49.
58. *Ibid.*
59. *Ibid.*, p. 48.
60. Jastrow, *op. cit.* [37], p. 170.
61. R. H. Stieglitz, 'The Hebrew Names of the Seven Planets', *Journal of Near Eastern Studies*, April 1980.
62. Budge, *op. cit.* [46], p. 315.
63. A. F. F. Mariette-Bey, *Catalogue du Musée de Boulaq*, 1864-1867, pp. 20-21, 100-101; E. A. W. Budge, *Osiris and the Egyptian Resurrection*, Vol. I, N. Y., 1911/1973, p. 21.
64. Budge, *op. cit.* [46], p. 250.
65. M. de Civrieux, *Watunna: An Orinoco Creation Cycle*, Berkeley, California, 1980, p. 21.
66. L.E. Rose, 'Variations on a Theme of Philolaos', *KRONOS* V:1, Fall 1979, p. 26; H. Tresman & B. O'Gheoghan, *SISR* II:2, pp. 35-40.
67. E.g. D. Cardona, 'The Reconstruction of Cosmic History', *AEON* II:2, February 1990, pp. 116 ff.
68. L.E. Rose, *op. cit.*, pp. 12 ff.; *idem*, 'On Saturn at the North Pole', *AEON* I:6, December 1988, p. 39.
69. F. F. Hall, 'Solar System Studies', Part 2, *AEON* I:4, July 1988, p. 28.
70. Rose, *op. cit.* [66], p. 30.
71. E.A.W. Budge, *The Book of the Dead*, New Hyde Park, 1960, p. 86.
72. G. Rawlinson, *The Seven Great Monarchies of the Ancient Eastern World*, Vol. II, N. Y., 1884, facing p. 176.
73. L. de Saussure, 'Le Système Cosmologique Sino-Iranienne', *Journal Asiatique*, April-June 1923, pp. 235-297.
74. F. Hitching, *The World Atlas of Mysteries*, London, 1978, p. 231.
75. de Santillana & von Dechend, *op. cit.* [2], p. 136.

76. Cf. R.B. Driscoll, 'Magnetic Models of the Polar Configuration', *AEON* IV:2 August 1995, p. 25.
77. L.E. Rose, 'The Afar Triangle as the Nether Reaches of Eden and Babel', *AEON* II:4, May 1991, pp. 5-28.
78. Hall, *op. cit.* [69].
79. H. Tresman, 'Geological Genesis', *C&CW* 1993:1, pp. 9-13.
80. Hall, *op. cit.* [69].
81. Cf. W. Thornhill, 'Evidence for the Extreme Youth of Venus', *C&CR*, 1993 Special Issue, p. 79.
82. F.B. Jueneman, *Limits of Uncertainty*, Chicago, 1975, pp. 84.
83. *Ibid.*, p. 82.
84. D. King-Hele, 'The Shape of the Earth', *Scientific American*, Oct. 1967, pp. 67-76; D. A. Slade, 'Eric Crew and the Tippe-Top', *SISW* 4:3, Dec. 1981, p. 35.
85. Hall, *op. cit.*, [69] p. 18.
86. *Ibid.*, p. 19 (emphasis as given).
87. C.L. Ellenberger, private communiqué, Sept. 26, 1988.
88. *Ibid.*
89. Rose, *op. cit.* [77], pp. 6, 10-11, 14, 16, 18.
90. Rose *op. cit.* [66], pp. 37-38.
91. F.B. Jueneman, 'The Polar Column: A Physical Model of Myth', *AEON* I:4, July 1988, pp. 36-49.
92. Talbott, *op. cit.* [57], p. 214.
93. D. Talbott, *Symbols of an Alien Sky*, Beaverton, Oregon, 1997, pp. 127, 144 ff.
94. W. Thornhill, *The Electric Universe*, Beaverton, Oregon, 1997, p. 100.
95. E.g. D. Talbott, 'The **Saturn** Thesis', Part 3, *AEON* IV:6, May 1997, p. 50.
96. Cf. E. Cochrane, 'Martian Meteorites in Ancient Myth and Modern Science', *AEON* IV:2, Aug. 1995, pp. 57 ff., where various other sources are cited.
97. Thornhill, *op. cit.* [94], p. 22.
98. Anonymous, 'Planet Poseur?', *Discover*, Aug. 1998, p. 24.
99. Thornhill, *op. cit.* [94], p. 17.
100. de Santillana & von Dechend, *op. cit.* [2], pp. 159, 231.
101. E. G. Suhr, *Before Olympos*, N.Y., 1967, p. 53, but see also pp. 69, 72.
102. E.G. Suhr, *The Spinning Aphrodite*, N.Y., 1969, p. 36.
103. Suhr, *op. cit.* [101], p. 79.
104. Talbott, *op. cit.* [57], p. 214 (emphasis as given).
105. Cf. E. Cochrane, 'The Milky Way', *AEON* IV:4, April 1996, pp. 39 ff., esp. illustrations on pp. 46, 53, 54, 55.
106. E. Cochrane, 'Stairway to Heaven', *AEON* V:1, Nov. 1997, pp. 69 ff., esp. illustrations on pp. 75, 76.
107. Suhr, *op. cit.* [101], p. 72; *idem* [102], pp. 53 ff.
108. Cf. illustrations in Cochrane, *op. cit.* [105], pp. 57 & 58; compare the latter to the one on p. 55.
109. Talbott, *loc. cit.* [57].
110. *Ibid.* (emphasis as given).
111. Suhr, *op. cit.*[101], p. 80.
112. *Ibid.*, p. 84.
113. *Ibid.*, p. 85.
114. *Ibid.*, pp. 72 ff.
115. *Ibid.*, p. 72.
116. Cook, *op. cit.* [12], pp. 1175-1176.
117. N. J. Dawood (translator), *The Koran*, Harmondsworth, 1978, p. 445.
118. Talbott, *op. cit.* [57], pp. 314-315, 330.
119. Cook, *op. cit.* [12], pp. 1952-1953.
120. D. H. Kelley, 'The Nine Lords of the Night', *Contributions of the University of California Archaeological Research Facility*, No. 16, Oct. 1972, p. 63.

121. A. de Grazia, *Chaos and Creation*, Princeton, N. J., 1981, p. 198; see also, Velikovsky *op. cit.* [1], pp. 99-100.
122. W.A. Heidel, *The Day of Yahweh*, N. Y., 1929, p. 465.
123. Tacitus, *The Histories*, V:iv.
124. Jueneman, *op. cit.* [91], p. 40.
125. Suhr, *op. cit.* [101], p. 84.
126. J-P Hallet (with A. Pelle), *Pygmy Kitabu*, N. Y., 1973, p. 212.
127. *Ibid.*, pp. 240-241; de Santillana & von Dechend, *op. cit.* [2], pp. 217-218.
128. *Ibid.*, p. 247.
129. I. Velikovsky, 'On **Saturn** and the Flood', *KRONOS* V:1, Fall 1979, pp. 7-8.
130. de Santillana & von Dechend, *op. cit.* [2], pp. 419-420.
131. W.F. Albright, 'Notes on Assyrian Lexicography', *Revue d'Assyriologie et d'Archéologie Orientale*, 16, 1919, pp. 175 ff.
132. J. Curtin, *Creation Myths of Primitive America*, 1899, p. 22.
133. G.A. Dorsey, *Mythology of the Wichita*, 1904, chapter entitled 'The Deluge and the Repeopling of the Earth'.
134. *Ibid.*
135. G.A. Dorsey, *The Pawnee: Mythology*, Part I, 1906, pp. 134-137.
136. See S.J. Gould, 'Toward the Vindication of Punctual Changes', in W.A. Beggren & J.A. Van Couvering (eds.), *Catastrophes and Earth History: The New Uniformitarianism*, Princeton, N. J., 1984, pp. 17-18.
137. C.W. Hunt, *Environment of Violence*, Calgary, Alberta, 1990, p. 126.
138. R.D. Jarrett & H.E. Malde, 'Paleodischarge of the Late Pleistocene Bonneville Flood, Snake River, Idaho, Computed from New Evidence', *Geological Society of America Bulletin* 99, July 1987, p. 127.
139. V.R. Baker, *et al.*, 'Paleohydrology of Late Pleistocene Superflooding, Altay Mountains, Siberia', *Science* 259, Jan.15, 1993, pp. 348-350.
140. J. Herbert, 'Hindu Mythology', in 'India: The Eternal Cycle', *Larousse World Mythology*, London, 1972, p. 210.
141. O'Flaherty, *op. cit.* [33], pp. 274 ff. (NOTE: This myth, as it appears in the *Mahabharata*, incorporates at least two earlier versions so that certain elements and events are duplicated. See *-Ibid.*, pp. 273-274.)
142. E.g. illustrations in: Herbert, *op. cit.* [141], p. 211; P. Masson-Oursel & L. Morin, 'Indian Mythology', *New Larousse Encyclopedia of Mythology*, London, 1972, p. 363; W. R. Fix, *Star Maps*, London, 1979, pp. 26, 27.
143. Herbert, *loc. cit.* [141].
144. Kelley, *op. cit.*, p. 60.
145. H. Maspero, 'The Mythology of Modern China', *Asiatic Mythology*, N. Y., 1972, pp. 340-341.
146. *Ibid.*, p. 339.
147. *Ibid.*, p. 340.
148. *Ibid.*, p. 339.
149. *Ibid.*
150. *Ibid.*, p. 332.
151. de Santillana & von Dechend, *op. cit.* [2], p. 129.
152. D.L. Philippi (trans.), *The Kojiki*, Tokyo, 1969, p. 49.
153. V. Ions, *Indian Mythology*, London, 1967, p. 48.
154. *Ibid.*
155. Anonymous, 'Much About Muck', *Pursuit*, Oct. 1969.
156. *Ibid.*
157. *Ibid.*
158. *Ibid.*
159. *Ibid.*
160. I.C. Johnson, 'Antarctic Anomalies', *AEON* II:1, June 1989, p. 126. (Note: Despite the title of this paper, Arctic anomalies are mentioned in conjunction with

Antarctic ones.)

161. J. Abery, review of G.G. Simpson, *Splendid Isolation*, Yale, 1980, *SISW* 4:1, July 1981, p. 27.
162. 'Much About Muck' *op. cit.* [156].
163. D.E. Hooker, *Those Astounding Ice Ages*, N. Y., 1958, p. 95.
164. D.G. Whitley, 'The Ivory Islands in the Arctic Ocean', *Journal of the Philosophical Society of Great Britain*, XII, 1910, p. 41.
165. F. Rainey, 'Archaeological Investigation in Central Alaska', *American Antiquity*, V, 1940, pp. 301-307; F. C. Hibben, 'Evidence of Early Man in Alaska', *American Antiquity*, VIII, 1943, pp. 256-257.
166. *Ibid.*, p. 256.
167. Whitley, *op. cit.* [165], p. 50.
168. F.B. Jueneman, 'The Terrestrial Sea: A Critical Model of Science and Myth', *AEON* IV:6, May 1997, pp. 32-33.
169. *Ibid.*, p. 33.
170. R.M. Smith, 'Some Thoughts on the Saturnian Sun and Polar Column', *AEON* V:1, Nov. 1997, p. 5.
171. D. Cardona, in *ibid.*, p. 6.
172. G.P. Williams, 'Changing Sea Levels', *AEON* V:3, Dec. 1998, pp. 21 ff.
173. Cf. D. Cardona, "The Evolution of the Cosmogonic Egg," *AEON* III:5, May 1994, pp. 52-70.
174. N. Webster, *Webster's Twentieth-Century Dictionary of the English Language*, N. Y., 1939, p. 1000.
175. O'Flaherty, *op. cit.* [33], p. 274.
176. *Ibid.*, p. 276.
177. *Ibid.*, p. 348.
178. *Ibid.*, p. 274.
179. Cook, *op. cit.* [12], Vol. II, p. 558.
180. R. Klibansky, *et al*, **Saturn** and Melancholy, London, 1964, pp. 127-195.
181. Abu Ma'sar, *Introduction to Astrology*, cited in *ibid.*, p. 130.
182. Alcabitius, *Introductorium Maius*, cited by Klibansky *et al*, *op. cit.* [181] p. 131.
183. Epigenes of Byzantium, as quoted by Seneca, *Naturales Quaestiones*, vii:4:2; see also Cicero, *De Natura Deorum*, ii:119.
184. Dorotheus, as cited by Klibansky, *op. cit.* [181], p. 148.
185. Pliny, *Natural History*, II:vi:34.
186. Virgil, *Georgics* I:336.
187. Van Over, *op. cit.* [5], p. 24.
188. *Ibid.*
189. *Great Magical Papyrus of Paris*, 4:308 ff., as cited in K. Preisendanz (trans.), *Papyri Graecae Magicae: Die Griechischen Zauberpapyri*, Vol. I, Berlin, 1928, p. 173.
190. J.W. Perry, *Lord of the Four Quarters: Myths of the Royal Father*, N. Y., 1970, p. 185.
191. William of Conches, *Philosophia*, as paraphrased by Klibansky, *op. cit.*, [181] p. 181 (emphasis added).
192. Nonnos, *Dionysiaca*, XII:52-63.
193. de Santillana & von Dechend, *op. cit.* [2], p. 42.
194. *Vendidad*, fargard 1:3.
195. D.B. Vitaliano, *Legends of the Earth*, Indiana University Press, 1973, p. 125.
196. *Ibid.*
197. H. Osborne, 'South American Mythology', *Mythology of the Americas*, London, 1970, p. 379.
198. Hooker, *op. cit.* [164], p. 48.
199. *Ibid.*, p. 94 (emphasis as given).
200. W.I. Thompson III, 'Extraterrestrial Origin of the Ice Age', *A Symposium on*

- Creation*, VI, Seattle, 1977, pp. 91 ff.
201. Hooker, *op. cit.* [164], p. 94.
 202. Van Over, *op. cit.* [5], p. 300.
 203. F. Waters (with O. White Bear Fredericks), *Book of the Hopi*, N.Y., 1974, p. 20.
 204. For Quetzalcoatl as **Saturn** see, D. Cardona, 'Morning Star', *AEON* IV:1, April 1995, pp. 11-21 where various sources are cited.
 205. de Santillana & von Dechend, *op. cit.* [2], pp. 78, 360.
 206. Van Over, *op. cit.* [5], pp. 262-263.
 207. *Ibid.*, p. 270.
 208. E.A.W. Budge, *The Gods of the Egyptians*. Vol. 1, N.Y., 1904/1969, p. 367.
 209. O. Kern (ed.), *Orphicorum Fragmenta*, Berlin, 1963, p. 186.
 210. Dionysius of Halicarnassus, *Roman Antiquities* I:36:1.
 211. D.A. Mackenzie, *Egyptian Myth and Legend*, N.Y., 1907/1978, p. 10.
 212. *Ibid.*

Question Session 6 on Dwardu's paper Chairman David Salkeld

Q1 Janek Pietron was sceptical about the **Saturn** myth and asked about Mars configurations and the appearance of Venus and Mars at the North Pole. Dwardu said these were valid queries which were more fully dealt with in as yet unpublished portions of the **Saturn** scenario. In the **Saturn** configuration, the stars were not visible. They became visible at the time of the breakdown of the configuration. The planets that were visible were not turning around - they were in a steady line.

Q2 Trevor Palmer asked for some indication of when the **Saturn** catastrophe took place. Did the Pleistocene Ice Age, with ice sheets over North America and Northern Europe happen and, if so, over what time scale? Dwardu replied that there was a time when the ice caps did not exist. When they did develop, it happened quickly. This does not mean there were no earlier ice ages but this goes beyond the scope of the present model.

Q3 In response to a question from **Lynn Rose**, Dwardu explained that all the planets on the 'shish kebab' shared the same axis of rotation.