Chichen Itza Panel 1 and the 3-11 Pik Triple Station

(with one Appendix)

The right lateral side of Panel 1 (or Stela 1) on the west side of the Caracol at Chichen Itza. The “3-11 Pik” title/date of 10.2.1.6.0 is in the right column, halfway down. From Ruppert (1935). Currently in the entrance pavilion at Chichen Itza. Recent pictures show that the 3-dot coefficient on the right has broken off.

My entrée into this discussion is through the essay by Carl Callaway (Archaeoastronomy Journal, Vol. XXIV, 2011). I will expand the reading of the 3-11 Pik Triple Station on Panel 1 by looking at the astronomy on that date, and other factors such Venus morning risings, the Calendar Round, eclipses, the Venus Round calendar and other astronomical criteria. A fairly compelling interpretation emerges which ties into my earlier work on the cosmology of the Maya, especially at Chichen Itza (Jenkins 1998).

The cosmological unification of Chichen Itza, a model integrating what I called the Zenith Cosmology and the Galactic Cosmology, will find support in the 3-11 Triple Station on Panel 1.
From Ruppert (1935:Fig. 171):

Caption: “Caracol Panel 1 sitting above a stylobate niche” (Callaway 2011:45).¹

The shadow-casting protuberance above the cylindrical pillar will be of critical interest to my discussion. Callaway does not mention these features in his essays.

Callaway states that Panel 1 contains “the last inscription at Chichen Itza that refers to the life of K’ak Upakal” (43). It relates to a 17-Tun with a closing date of 10.2.17.0.0, which Callaway dates loosely as AD 885-886. For some reason, in the subsequent dating of several Long Count dates, he does not explicitly state the dates in modern terms. There’s the Tun ending, the Era Base date (which many readers might know and which he stated in an earlier section), and the “binding of” the 3-11 Pik calendar station. We are not told what the date of the 3-11 Pik station is, or that it’s an important Triple Station, but he does cite page 2 of MacLeod’s 2008 essay for this information.

MacLeod’s 3-11 Pik essay was posted, with her permission, on my website in early 2008 (here: http://alignment2012.com/3-11PikFormula.html). Her breakthrough work on

¹ *Archaeoastronomy Journal* Vol. XXIV. I have to call the publication date “2011”, although this is from the essay he wrote that was released/published in August of 2012. There was back-dating of the *Archaeoastronomy Journal* occurring, which greatly mucks up the correct publishing sequence and record, caused by repeated delays in the editorial preparation of that journal (according to the staff at the press). As such, in early 2015 the University of Texas Press was terminating its publishing of the *Archaeoastronomy Journal* (Vol. XXV is the last one, to be released in March 2015, but dated to 2012-13).
this topic was the reason why she contacted me in January of 2008, which led to extensive email conversations over the next six months, bringing in Michael Grofe, who independently figured out the 3-11 Pik formula in 2003. Unfortunately, although MacLeod presented her work at the Austin conference in March of 2008, it has not yet been published. Callaway cites it (2011:54) as an “unpublished manuscript in the possession of the author” and very few readers might seek out and find the unstated date of the 3-11 Pik Triple Station.

In any case, I can offer my own ancillary research and dig up the specific dates that were not provided. The three “linked” dates are thus:

- **Era Base:** “13.0.0.0.0” (p. 44) — August 11, 3114 BC
- **Tun ending:** 10.2.17.0.0 — May 14, 886 AD (J)
- **3-11 Pik:** 10.2.1.6.0 — December 4, 870 AD (J)

Dates are given in the 584283 correlation. Callaway points out and illustrates (Fig. 1 in his revised article) how the Panel 1 on which the dates are found sits above a niche that divides the stairway, and the niche is oriented to 22° 92’ north of west — the sunset azimuth of the solar zenith-passage day at the latitude of Chichen Itza (44). The platform appears to be intended for viewing the sunset direction at that time of the year.

Callaway next deduces and states, somewhat unclearly, that “If the stairway niche was used to observe the setting of the Sun, then Panel 1’s position was also aligned to target the zenith passage and witnessed the zenith event twice a year” (45). He seems to be referring to the passage of the sun through the zenith at high noon, which occurs on two days over the course of a year. The niche itself isn’t aligned to this overhead event, but to the sunset horizon of the same day. There are, however, two architectural features that align and point overhead, which Callaway didn’t mention. Just below the inscriptive panel on the front of the platform, there is a disk-like stone protuberance which hangs directly over a cylindrical column below (see Figure 2 above). This is probably a shadow-casting gnomon device, to indicate the solar zenith-passage, and thus provides evidence for Callaway’s solar zenith-passage discussion.

Clearly, at high noon on the solar zenith-passage day, the shadow from the disk-shaped protuberance will be cast over the column below. As sunset draws near, the shadow will creep up from below the protuberance and disappear in a straight-on alignment to the setting set, right before sunset. A two-part hierophany, at noon and sunset. Even without the disk’s help, the column would cast no shadow at high noon, thus serving as a solar zenith gnomon. Callaway states that “Tying Panel 1 inscriptions to the zenith Sun certainly makes for good ritual and drama” because “it ties the dedication to the Sun God’s deeds on the era day” (45). Although he doesn’t explicitly state it, I’m guessing his rationale for saying this is that the “era day” also fell on a solar zenith-passage day. Frustratingly, he doesn’t provide the specific data that underlies his deduction, which nevertheless is certainly stated at the end of this section of his essay: “…scribes are intentionally calibrating the solar zenith at Chichen Itza’s Caracol to correspond with a like-in-kind solar event at the start of the era” (45). Yes, very good. So, if readers make their own back-engineered inferences, they will understand why he says that. He concludes that “more data are needed.” Well, actually, a lot of data has been
left out, unstated, that could help us fine-tune and deepen our understanding of these fascinating archaeoastronomical texts and features. Let’s take a closer look.

We should suspect that the Tun ending date of May 14, 886 is a solar zenith-passage date, but, precisely speaking, it is not. It is some 7-9 days short of the solar zenith-passage date. We might accept that the Tun ending is the target for the narrative, and it generally refers to the date of the solar zenith-passage. And since solar zenith passages can stretch over several days, this may indeed be the case and we can skip the following paragraph.

Perhaps significantly there are other things going on in May which could indicate something more precise was being targeted. If we look up the astronomy for May 14, we find it to be the first heliacal rise of the Pleiades after its period of invisibility. This would not be viewed to the western horizon, of course, but to the east. The last visibility of the Pleiades, which is viewed to the west, was some 26 days earlier, and would occur further south along the horizon. This means that the sun’s conjunction with the Pleiades was on May 1 (halfway in between). My charts affirm all these dynamics (Jenkins 1998). These more precise dynamics may involve my reconstruction work relating to the sun aligning with the Pleiades in the zenith; what I’ve called the Zenith Cosmology (Jenkins 1998).

In any case, the mid-May date certainly draws attention to the impending solar zenith-passage, a few days later. Callaway is no doubt correct in alluding to the “like-in-kind” astronomical analogy between this date and the Era Base in 3114 BC, to which it is linked in the narrative. They share the solar zenith-passage. As mentioned, Callaway cites MacLeod for the 3-11 Pik date (10.2.1.6.0). It occurred some 15.3 years before the 886 solar zenith-passage date (10.2.17.0.0), and K’ak Upakal claimed it as his. She writes:

The text links (binds? records?) his 3-11-Pik and the 17th tun of K'atun 1 Ajaw … This "binding" is part of a verbal couplet, the other half of which is the Creation event or the changing of the hearth (at the edge of the sky, etc.) on 13.0.0.0.0 4 Ajaw 8 Kumk'u. So the narrative timeline is an important clue: it appears to have been foreordained when the 13-Bak'tun cycle was set in place that K'ahk’upakal would have this "binding" on 10.2.17.0.0.

We have a Triple station on 10.2.1.6.0 … There are in fact three things bound if we include the 3-11-Pik station/interval itself. (MacLeod 2008).

So, we have these dates linked together under the umbrella of the local ruler K’ak Upakal claiming his right to the precessional station of the 3-11 Pik formula. That links him to the 56th Triple Station after the Era Base (the 56th of 72 stations which lead to the cycle ending in 2012). (See discussion in MacLeod 2008.)

But why should he link his 3-11 Pik station to the solar zenith-passage parallel? Well, that local solar zenith-passage date (in 886) may have been part of the dedication ceremonies for the Caracol, the astronomical observatory. It would have been clever to link it to the Creation Myth symbolism and mythology of the Era Base — a replication of events in primordial time. The dedication of the Era linked to the dedication of the new building. (Curiously, in a somewhat similar way, on Tortuguero Monument 6 the new

---

2 The 25,980-day Triple Station periodicity (71.13 years) results in 72 stations through the 13-Baktun cycle, with 1,440 days (4 Tuns) left to go. In five 13-Baktun cycles, the remainder is 1 Katun. If there were 26,000 days in a 3-11 Pik Triple Station, there’d be no remainder (26000 x 72 = 1,872,000 = 13 Baktuns).
building/shrine dedication is linked to the far future 2012 date.) The interval, perhaps intentionally, is 3999 years (3114 BC + 886 AD = 3,999; year zero isn’t counted). It might have been more relevant to plan the celebration in anticipation of the following year’s completion of a 4000-year interval. Any Triple Station is a marker for astronomy — for precessional shifting very accurately in 1 day (or degree) increments. And as it turns out, this isn’t the only astronomical property of the Panel 1 Triple Station.

The Triple Station linked in the narrative, Long Count date 10.2.1.6.0, corresponds to December 4, 870 AD (Julian). This is within two days of the sun’s alignment with the crossing point of the Milky Way and the ecliptic, at the southern terminus of the Dark Rift in the Milky Way — a Sidereal Year parallel to the same alignment on the Era ending of December 21, 2012. The 2012 date is not stated on Panel 1, but then again less than half of the text survives. This is, to say the least, a striking situation. The “like-in-kind” astronomical parallel between the Triple Station in 870 and the era conclusion date, in 2012, is analogous to the other like-in-kind parallel previously described, between the Era Base in 3114 BC and the contemporary solar zenith-passage marker (in 886).

I can suggest socio-political and cosmological reasons as to why K’ak Upakal would link himself to both of these astronomical alignment complexes — one involving the sun in the center of the sky in 3114 BC and the other involving the sun at the center of the Crossroads in 2012 — but I’ll reserve this for Appendix 1. For now, we might want to look at a chart of Triple Station dates to explore how the dates shift through the tropical year. Adding to MacLeod’s Triple Station date list:

<table>
<thead>
<tr>
<th>Long Count</th>
<th>Tzolkin/Haab</th>
<th>Begin Station #</th>
<th>Julian</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.16.16.3.0</td>
<td>12 Ajaw 8 Mak</td>
<td>49</td>
<td>Jan 7, 373</td>
</tr>
<tr>
<td>9.0.8.6.0</td>
<td>5 Ajaw 13 Pax</td>
<td>50</td>
<td>Feb 24, 444</td>
</tr>
<tr>
<td>9.4.0.9.0</td>
<td>11 Ajaw 13 Pohp</td>
<td>51</td>
<td>Apr 12, 515</td>
</tr>
<tr>
<td>9.7.12.12.0</td>
<td>4 Ajaw 18 Zotz'</td>
<td>52</td>
<td>May 29, 586</td>
</tr>
<tr>
<td>9.11.4.15.0</td>
<td>10 Ajaw 3 Mol</td>
<td>53</td>
<td>July 15, 657</td>
</tr>
<tr>
<td>9.14.17.0.0</td>
<td>3 Ajaw 8 Zak</td>
<td>54</td>
<td>Aug 31, 728*</td>
</tr>
<tr>
<td>9.18.9.3.0</td>
<td>9 Ajaw 13 K’ank’in</td>
<td>55</td>
<td>Oct 18, 799</td>
</tr>
<tr>
<td>10.2.1.6.0</td>
<td>2 Ajaw 18 K’ayab</td>
<td>56</td>
<td>Dec 4, 870</td>
</tr>
<tr>
<td>10.5.13.9.0</td>
<td>8 Ajaw 18 Wo</td>
<td>57</td>
<td>Jan 20, 942</td>
</tr>
<tr>
<td>10.9.5.12.0</td>
<td>1 Ajaw 3 Xul</td>
<td>58</td>
<td>Mar 8, 1013</td>
</tr>
<tr>
<td>10.12.17.15.0</td>
<td>7 Ajaw 8 Ch’en</td>
<td>59</td>
<td>Apr 24, 1084</td>
</tr>
<tr>
<td>10.16.10.0.0</td>
<td>13 Ajaw 13 Kej</td>
<td>60</td>
<td>June 11, 1155</td>
</tr>
</tbody>
</table>

*Four days after first Venus morningstar rise. Moon-Mars closely conjunct at zenith before sunrise. Uranus at DR-XRDs.

Triple Station number 54 (bolded) initiates the fourth quarter of the full 72-station process, from 3114 BC to 2012 AD (quarter divisions fall at the 1st, 18th, 36th and 54th stations). I have bolded two dates, one of which is our astronomically significant Triple Station in 870 AD. The two bolded dates are four Triple Stations apart (roughly 284 years). The partner date falls on May 29, 586, which places the sun at the opposite Crossroads. It’s not a precise tropical year opposition; it’s off by five days. However, it works pretty nicely for this specific instance, which corresponds to a very busy period of the late Classic Period florescence (586 AD to 870 AD). More research can be done on the other dates, and MacLeod’s essay (2008) can be consulted for her “3-11 Pik hypothesis.”
Conclusion (for now, but see the three sections that follow)

The 3-11 Pik “title” was claimed by several Maya kings, and the Triple Station of 870 AD no doubt would have been anticipated, and its ancillary properties calculated. By this time, many Maya kingdoms were disintegrating. The collapse in the Peten was well underway, and the Classic Period of the Maya is usually given as ending in 900 AD. In the Yucatan, there was an upswelling and renaissance due largely to a surge of Central Mexicans after the fall of Teotihuacan. An integration of cultures and cosmologies occurred. Building programs at Chichen Itza resulted, in the 9th century, in the Great Ballcourt, the Pyramid of Kukulcan, and the Caracol observatory. It was this zeitgeist that K’ak Upakal was born into. His binding of himself together with a solar zenith-passage marker, an archaeoastronomical alignment of the Caracol, and a 3-11 Pik Triple Station that had an additional special property, is totally comprehensible given the cosmological preoccupations evident at Chichen Itza.

My 1998 book Maya Cosmogenesis 2012 was devoted to reconstructing ancient Maya precessional cosmologies, and the attendant mythologies and beliefs. My Appendix 1, below, will share this work and show how the Panel 1 dates provide some confirming evidence for my model of evolving cosmologies in Mesoamerica. I began this article with a discussion of Carl Callaway’s essays of 2011 and 2012, which appeared in two of three academic anthologies that discussed 2012. I had to unpack and complete Callaway’s presentation so that we could examine more closely what it was that he had found and partially explained. When this process was completed, as described above, we found something new that supports the pioneering work I published in my 1998 book.

Meanwhile, my book was cited or alluded to by many of the scholars in those three anthologies. It was cited in misleading ways to identify me as belonging to an apocalypse-obsessed MPM (Maya Prophecy Movement, see Campion 2011), or focused on my brief comments about psychoactive drugs as a way of casting aspersions on my work (without even accurately discussing it). Other scholars (Van Stone, Carlson) critiqued or echoed my ideas without citing me for them. The list goes on.

I’ll point out that an accurate understanding of the work that they themselves are doing results in identifying support for the work that I previously published, years before they thought about 2012, in a book that they largely dismiss or cite, misleadingly, as a wedge for casting aspersions. Appendix 1, below, shares verbatim material from my 1998 book. Let’s see if their under-informed assertions and false critiques hold water.
The left and right lateral sides of Panel 1. The 3-11 Pik title/date is at R-10. From Alexander Voß (2001). The ta-1 Ajaw glyph is at R11. The 12 something, possibly “Haab” is at Q12. The “k’ak” glyph (fire) is at R12. The somewhat possible period-ending dedicatory verb (my speculation) is at Q11.

Callaway’s reading is in his *Catalogue of Era Day Inscriptions* dissertation. I was asked not to report his reading, so instead I will simply report the basic information with the most likely English for some of the glyphs:
Caracol (Structure 3C15), Panel 1, Right Lateral Face (Q7-R12):

Q7: 4 Ajaw  
Q8:  
Q9:  
Q10: 17 Tun  
Q11:  
Q12-12 Haab?  
R7:  
R8: (8) Kumku  
R9:  
R10: 3-11 Pik  
R11: 1 Ajaw  
R-12: K’ak (Fire)

My reading. I’ve left out details and do not offer here a precise translation. The critical elements of the basic meaning are the changing of the altar/pedestal back on 4 Ajaw 8 Kumk’u (in 3114 BC), which is a “binding” --- the 3-11 Pik (in 870 AD) with the 17th Tun (in 886 AD), followed by a 1 Ajaw glyph, a probable 12 Haab glyph, and what seems to be a partially eroded “fire” statement. I suspect the “binding” is intended to link the king who commissioned the inscription, K’ak upacal, with the dates and their cosmological implications. See the following sections for more details on why this would be a rhetorically meaningful thing for him to do.

Notice the possible reading that a “1 Ajaw” and a “12 Haab” and “Fire” concludes the translation, after the 3-11 Pik Triple Station is stated, where the stone starts to erode. This will be relevant for my later discussion (p. 13 below) which links the 3-11 Pik station on the monument into Calendar Round and Venus Round frameworks.

See more sections below
1. The Two Captains on the Disk-Shaped “protuberance” or Altar

We see here a typical scene found often on murals and carvings at Chichen Itza: two groups coming together in offerings and reconciliation. This is clearly a reiteration of the “union of Captain Sun Disk and Captain Serpent” theme that scholars recognize as a historical episode at Chichen Itza in the 9th-century — a negotiated collaboration between Maya and Nahuatl people from Central Mexico. The factions were represented symbolically by the “captains”, or avatars, of the respective worldviews, known to scholars as Captain Sun Disk and Captain Serpent. Other images at Chichen Itza show the serpent and sun disk accoutrements of these totemic leaders (see Jenkins 1998, 2002 for a few).

Here, the image is somewhat eroded, but we can see the serpent tail emissary on the far left of the lower portion. On the right of the lower portion, we see the feathered headdresses that emulate solar rays, and thus the emissaries of the Sun Disk faction. We also have a bi-level split going on here. Many murals at Chichen Itza have multiple levels of action going on. The upper register has what appears to be an incensario in the middle, over which appears and hovers a figure. The figure is clearly suspended in an above-ground position. This is probably an ancestor- or deity-invocation ceremony and the upper level is concerned with the manifestation of supernatural beings to supervise or
sanction the historical union-ceremony happening in the lower register. This is a common occurrence often portrayed in Maya ritual art.

I’d suspect that the Chichen Itza leader K’ak Upakal was historically involved in the ongoing activities of negotiated reconciliation. In one possible placement of this disk, it hovers over the pillar below and serves as a solar-zenith shadow-casting device, referring to the sun in the zenith center (the Zenith Cosmology / Captain Serpent system, echoing the Era Base astronomy of 3114 BC). Meanwhile, the emphasis on the 3-11 Pik binding of December 4, 870, on the associated Panel 1 directly above the disk, completes a “union” of the cultures and their cosmologies (because that date places the sun at the center of the Crossroads and echoes the Long Count / Captain Sun Disk / Era Ending astronomy of 2012 AD).

For the fuller treatment of these ideas and reconstructions, see Jenkins (1998) and Appendix 1 (begins at the bottom of page 15).

Inversion Table: 3-11 Pik Triple Stations calculated backwards from 12-21-2012:

<table>
<thead>
<tr>
<th>Long Count</th>
<th>Tzolkin/Haab</th>
<th>Begin Station #</th>
<th>Julian</th>
<th>From 2012 back:</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.16.16.3.0</td>
<td>12 Ajaw 8 Mak</td>
<td>49</td>
<td>Jan 7, 373</td>
<td></td>
</tr>
<tr>
<td>9. 0 . 8. 6.0</td>
<td>5 Ajaw 13 Pax</td>
<td>50</td>
<td>Feb 24, 444</td>
<td>9.0.12.6.0</td>
</tr>
<tr>
<td>9. 4 . 0. 9.0</td>
<td>11 Ajaw 13 Pohp</td>
<td>51</td>
<td>Apr 12, 515</td>
<td>9.4.4.9.0</td>
</tr>
<tr>
<td>9.7.12.12.0</td>
<td>4 Ajaw 18 Zotz’</td>
<td>52</td>
<td>May 29, 586</td>
<td>9.7.16.12.0</td>
</tr>
<tr>
<td>9.11.4.15.0</td>
<td>10 Ajaw 3 Mol</td>
<td>53</td>
<td>July 15, 657</td>
<td>9.11.8.15.0</td>
</tr>
<tr>
<td>9.14.17.0.0</td>
<td>3 Ajaw 8 Zak</td>
<td>54</td>
<td>Aug 31, 728</td>
<td>9.15.1.0.0</td>
</tr>
<tr>
<td>9.18. 9.3.0</td>
<td>9 Ajaw 13 K’ank’in</td>
<td>55</td>
<td>Oct 18, 799</td>
<td>9.18.13.3.0</td>
</tr>
<tr>
<td>10.2. 1.6.0</td>
<td>2 Ajaw 18 K’ayab</td>
<td>56</td>
<td>Dec 4, 870</td>
<td>10.2.5.6.0, 12 Ajaw</td>
</tr>
<tr>
<td>10.5.13.9.0</td>
<td>8 Ajaw 18 Wo</td>
<td>57</td>
<td>Jan 20, 942</td>
<td>10.5.17.9.0</td>
</tr>
<tr>
<td>10.9.5.12.0</td>
<td>1 Ajaw 3 Xul</td>
<td>58</td>
<td>Mar 8, 1013</td>
<td>10.9.9.12.0</td>
</tr>
<tr>
<td>10.12.17.15.0</td>
<td>7 Ajaw 8 Ch’en</td>
<td>59</td>
<td>Apr 24, 1084</td>
<td></td>
</tr>
<tr>
<td>10.16.10.0.0</td>
<td>13 Ajaw 13 Kej</td>
<td>60</td>
<td>June 11, 1155</td>
<td></td>
</tr>
</tbody>
</table>

(4 Tun differential). 25,980 days = 3.12.3.0

*It is curious that a 12 something (Haab?) comes after the 3-11 Pik statement.

2. The Calendar Round, the 3-11 Pik Station, and Sacred Days of Venus, 830 to 934 AD

Venus is a very important player at 9th-century Chichen Itza. The Sacred Day of Venus, 1 Ajaw, appears immediately after the 3-11 Pik Triple Station on Panel 1, although it is not clear why because the reading of the text is largely unclear after this point (however, see the summary paragraph and “postscript speculation” below).

Floyd Lounsbury identified a likely Sacred Day of Venus framework in the Dresden Codex. This codex is from the region of Chichen Itza but is dated to the 14th century. However, it’s well known that the Venus tables go further back in time. As such, Lounsbury’s work is probably on target and thus November 18, 934 AD corresponds to a
first morningstar rise of Venus on 1 Ajaw, and the inauguration of a new Venus Round of 104 Haab\(^3\) (Jenkins 1992/1994).

It’s believed that the Venus Round tables and data tracking for this particular framework of the predictive system may go back, three Venus Round periods, to 622 AD. The system requires adjustments after each Venus Round, and it’s not clear when it was officially inaugurated. It’s accurate for the 934 Sacred Day of Venus. Less so for the beginning of the previous one, which curiously occurs in the year 830 AD — the year of the end of Baktun 10. In fact, that Venus Round would have begun in mid-December, exactly 14 uinals (280 days) after 10.0.0.0.0. Within a few days of the solstice.

Any Venus Round consists of two Calendar Rounds, though we can’t assume that a Calendar Round beginning was coordinated with the beginning of each Venus Round, unless the Year Bearer system in use included the day-sign Ajaw. (The Yucatec system did not). Nevertheless, the Calendar Round beginning prior to the 934 Sacred Day of Venus (halfway between 830 and 934) may have been of some ritual significance to the Chichen Itza cosmologists, and it brings us into the zone of the dates on Panel 1, falling between the 3-11 Pik date in 870 and the solar zenith-passage marker of 886. The CR date is: December 1, 882 AD. It’s very interesting here that we have, like the 3-11 Pik date exactly 12 Haab earlier, another date of the sun’s alignment with the Dark Rift/Crossroads. Halfway between Sacred Day of Venus heliacal risings of Venus, we shouldn’t be totally surprised that it is also a date of a superior conjunction of Venus with the sun. And it happens to be precise — the sun was literally occulting Venus on this day. The Tzolkin date of this CR beginning is, of course, also 1 Ajaw.

This situation curiously echoes the sun’s alignment with the Dark Rift/Crossroads on the 3-11 Pik date, 12 Haab earlier. Since 8 Haab-years equal 5 Venus cycles, the remaining four years should be suspected to bring us back around to a Venus morningstar rise, close to the 3-11 Pik date. (This thought process underscores the theoretical puzzling over the math that the Maya scribes and astronomers may themselves have employed, and that actually had greater meaning than a precise empirical correlation.) In any case, it’s gratifying to discover that the 3-11 Pik Triple Station (a 2 Ajaw day) fell some three days before the inferior conjunction of Venus and thus roughly seven-to-eight days before Venus’s first appearance as morningstar. As the sun shifted eastward and Venus quickly leapt into view as morningstar, to the west of the sun, it happened to emerge right at the Dark Rift Crossroads, in conjunction with Mars, and this double-alignment at the Dark Rift became even more evident in the days that followed. The coordination of Mars with the morningstar rise of Venus is interesting, because the Sacred Day of Venus in 934 also involved Venus aligning with Mars as it first appeared as morningstar in the east.

Given the dynamics already identified in regard to the cosmological underpinnings of the two Captains, the facts of the Crossroads/Dark-Rift alignments on the 3-11 Pik date and a ritual (if not calendrical) Calendar Round beginning (falling precisely between the Sacred Days of Venus in the year of 10.0.0.0.0 and the Dresden Codex’s Venus Round year of 934 AD) is striking, to say the least. It certainly would have struck the Maya cosmologists at Chichen Itza, whose job it was to look for these kinds of alignments and rhetorically useful parallels.

---

\(^3\) Lounsbury used his argument, misleadingly, as a rationale for the 285 correlation and thus he states the date as November 20\(^{th}\). I thoroughly examined Lounsbury’s arguments and identified the flaw, in my 1992 book *Tzolkin* (Borderlands, 1994). His argument still works for locating the Venus Round.
At the time of the Conquest, it’s known that New Year’s Day in Yucatan was coordinated with the second solar zenith-passage (July 26). Adjustments were necessary to keep this aligned. My research on Year Bearer signs and other evidence at Chichen Itza (Jenkins 1998) argues that one of the solar zenith-passage days was thought to be New Year’s Day during Chichen’s 9th-century florescence. The related Pleiades factor in understanding these solar zenith-passage dates identifies Captain Serpent’s sovereignty over the Year Bearer. The “ritual” or “symbolic” Calendar Round of December 1, 882, however, points to the other cosmological locus in the Chichen cosmovision — the one supervised and symbolized by Captain Sun Disk. This unification — a negotiated transfer and sharing of power between these two cosmological worldviews — is what was going on at Chichen Itza in the 9th-century, and these astronomically relevant dates would merely be another opportunity to further “bind” the alliance.

Unfortunately, the Panel 1 text is not complete. The front face (see page 7 above) seems to have some interesting statements, but working alone I cannot parse them out clearly. However, as mentioned earlier, a “1 Ajaw” follows the 3-11 Pik statement, followed by a 12 something (perhaps a Haab, a 365-day period, see page 9 above). If it does mean 12 Haab, it’s interesting to note that the 3-11 Pik Triple Station date (December 4, 870) plus 12 Haab results in the symbolic Calendar Round date of December 1, 882, which does fall on a 1 Ajaw date in the Tzolkin, and shares the sun-DR alignment with the 3-11 Pik station. Both dates fall on 18 Kayab (Tikal system⁴), the same Haab date of the future Sacred Day of Venus in 934 AD.

Postscript speculation: One wonders if the glyph at Q11 (page 8), which falls between the 3-11 Pik date and the 1 Ajaw glyph, is a form of the dedicatory verb. The “stairs” and the “1 dot” that are usually seen in these glyphs are present, and the oddly drawn design next to the stairs may be a garbled foot with toes. Just a guess. Those dedicatory verbs often occur at period endings, are sometimes depicted with a God N head, and can mean “ascend” or “change of state.”

The 12 “Haab” glyph at Q12 is followed by a “K’ak” glyph at R12, meaning “fire.” The New Fire ceremonies always happened at the end-beginning of a Calendar Round, and even if only symbolic the Calendar Round beginning of 882 may have been referred to in some such way involving “fire.” — JMJ, 1-24-2015.

3. The lunar eclipse on the solar zenith-passage day seven days after 10.2.17.0.0 (May 14, 886), with the full moon at the Dark Rift/Crossroads

We may wonder why May 14, 886 was selected for the apparent dedication of the Caracol observatory. I’ve already noted that the solar zenith-passage day, which would have been the likely locus of interest, came 7-9 days after this date. We can reason that May 14th was chosen because it was the nearest period-ending (the 17th Tun), and in any case solar zenith-passages are generally in effect for many days. Or, the date was precisely selected because it was the day that the Pleiades made its first appearance in the

---

⁴ Or 16 Kayab in a Yucatec Year-Bearer system possibly used at Chichen Itza (Edmonson 1988).
east after its period of invisibility (as I previously discussed, above). All of these things may have been at play.

There is, however, another striking occurrence — one that nevertheless requires some contextualizing explanation. According to the NASA eclipse charts, a total lunar eclipse happened on May 21, 886, seven days after the May 14th date that K’ak Upakal linked with himself and the 3-11 Pik Triple. (Recall that this date, December 4, 780, was a date on which the sun was aligned with the Dark Rift/Crossroads in Sagittarius). The total lunar eclipse on May 21 was not visible from Chichen Itza, as it was happening just before noon local time. The eclipse calculations of the Maya may have indicated that one was to occur, but it can be hard to predict the exact time of day and, as in this case, it started occurring a few hours after sunrise and was therefore not viewable.

Nevertheless, it could have been expectantly marked in their eclipse tables. They must have watched westward and waited, in the early predawn hours of May 21, also knowing that at noon the next day the sun would pass through zenith. Exciting times! But as the almost-full moon drifted slowly closer to the horizon, and simultaneously slowly drifted closer to the nearby Dark Rift/Crossroads (at this time it was 9° away), it didn’t go dark. The sun rose on May 21, 886 (7 Manik), and unbeknownst to the skywatchers, the moon, now well below the western horizon, began to be eclipsed. Perhaps they thought there was still a chance it might be eclipsed later that evening, after sundown.

The total lunar eclipse of May 21, 886 (J), maximizing over China (around 11:22 a.m. Chichen Itza local time). By midnight on that evening (May 21), the just-past-full moon was high over Chichen Itza, at the Dark Rift & Crossroads of the Milky Way and the ecliptic. Even at this tardy moment, it may have still been expected, by the Maya skywatchers, to be eclipsed that evening.

The solar zenith-passage happened at noon that day. By sundown, they waited with anticipation. The moon rose in the east, higher and higher. Now it was much closer to the Dark Rift/Crossroads — about 4° away. By midnight, about 2°. Still no eclipse. But now the just-past-full moon (still looking very full) was high overhead, much like the sun at noon on the previous day. And, most strikingly, it was very close to that mythic place of renewal, the Dark Rift / Crossroads — the same place that the sun occupied 15½ years earlier, on the 3-11 Pik Triple Station date (K’ak Upakal’s station). By 4 a.m. on May 22 the moon was almost set, and was precisely at the Crossroads of Milky and ecliptic.

Does it matter that the eclipse didn’t happen? Well, it would have been nice if it was viewable to the Maya. But we can reconstruct how it would likely have been expected. Despite their good calculations it’s not likely they could nail down the eclipse...
timing so precisely as to know the time of day. Thus, when an eclipse occurred during the daytime, local time, it wouldn’t be seen. In this case, the following day and evening would still have been a time of much anticipation, and the fact that, now, the just-past-full moon was at the Dark Rift/Crossroads probably meant a great deal in the ceremonial myth-making of the Maya. That was Captain Sun Disk’s place; that was K’ak Upakal’s place. Especially so, given how we’ve seen that part of the sky referenced by the 3-11 Pik Triple Station and the symbolic Calendar Round date of 882 AD. And now we have a third reference to that celestial location, one that insinuates itself directly into the solar zenith-passage marker stated on Panel 1 (in mid-May of 886).

Over Chichen Itza, 11:55 p.m., May 21, 886, 12 hours after full moon & eclipse viewable over China

The sidereal position of the missed-eclipse, at midnight on the solar zenith-passage day, provides yet another beautiful polarity integration of the Captain Serpent and Captain Sun Disk worldviews, the astronomical basis of which I reconstructed in *Maya Cosmogenesis 2012* (1998).

**Appendix 1.**

**Excerpt from *Maya Cosmogenesis 2012* (1998): Two Cosmologies United at 9th-Century Chichen Itza**

Part I of my book is titled “Precession Astronomy.” In five chapters, I explain and present the Maya calendars, how mythology and astronomy go together in Maya thought, how the precession of the equinoxes works, how the concept of “finding the cosmic center” was important to Mesoamerican kings and cosmologists, and how cosmological thinking likely evolved in Mesoamerica, based upon their interest in astronomy.
With this as the foundation, Part II lays out the material that resulted in my model for understanding 9th-century Chichen Itza. The part is titled “The Union of Captain Serpent and Captain Sun Disk.” (Captain Sun Disk was a culture hero, a pseudo-historical leader with mythological and cosmological underpinnings who K’ak Upakal emulated.) The seven chapters of this part are titled as follows:

6. The Pyramid of Kukulcan: A Cosmic Myth in Stone
7. The True Meaning of the Toltec New Fire Ceremony
8. Zenith Imagery in Mesoamerica
10. Maya Creation: The Stellar Frame and World Ages
11. The Cosmic Symbolism of the Maya Ballgame
12. Chichén Itzá Cosmology: Maya-Toltec Reconciliation

As can be clearly seen (even without reading the chapters), my work here is all about Mesoamerican astronomy, calendrics, symbolism, architectural iconography, and mythology. The reader will find these chapters to offer a well-documented and deep investigation, full of evidence and deductions and arguments and end notes with citations to academic sources. The essays that, with some alteration, became these chapters were written in 1995 and 1996. I’ll now summarize the findings of this part of my book and then will offer, below, the concluding chapter of this section (Chapter 12).

This part of my book is concerned with my reconstruction of two precession-tracking methods employed by the ancient Mesoamericans. One involves the tracking of the sun’s conjunction with the Pleiades in relation to the solar zenith-passage day. The New Fire ceremony and the Calendar Round were utilized for this tracking method. The second method is, of course, the galactic alignment process of the solstice sun moving into alignment with the Crossroads at the Dark Rift in the Milky Way. The Hero Twin myth and the Long Count were utilized in this precession-tracking method. A third observation of the Mesoamericans involves the precession-caused “fall” of the Big Dipper constellation (Seven Macaw in the myth) away from his perch on the North Celestial Pole. This was a very early cosmo-conception, held by the Olmecs and evident in the formulation of the Hero Twin myth at Izapa (this is explored more in Part IV). I noted that the two primary precession-tracking cosmologies were integrated at Chichen Itza in the 9th century, and the whole picture is summarized and explained quite nicely in the Chapter 12 material reproduced below. Note: A correction to my terminology is that “Toltec” should be more accurately phrased as the Central Mexican “Nahuatl” people.

Chapter 12
Chichén Itzá Cosmology: Maya-Toltec Reconciliation (Jenkins 1998: 139-149)

The great city of Chichén Itzá, a magical center of Mesoamerican knowledge, is where the equinox manifestation of Kukulcan, the Plumed Serpent, occurs. This has become an annual event in which thousands of people from around the world gather to watch the sun cast its rays across the corner of Kukulcan's pyramid, projecting a shadow-image of a descending serpent along the balustrade of the north stairway. Viewers come away amazed at the sophisticated architectural engineering of the Maya, and with a feeling for
their profound and little understood cosmology.

The cosmological insights of Chichén Itzá go even deeper than its shadow-play. There are other cosmic alignments at Chichén involving the Great Ballcourt, the Upper Temple of the Jaguars, and the famous Caracol observatory. We will look closely at these architectural cosmo-conceptions to reveal exactly what purpose Chichén Itzá served within the larger context of Mesoamerican civilization and its evolving cosmological knowledge.

A Polar History of Mesoamerica

As discussed earlier, the Olmecs were the great Mesoamerican "Mother Culture," building an extensive civilization that existed between 2500 B.C. and 300 B.C. Olmec sites such as La Venta, San Lorenzo, and Tres Zapotes are located in the so-called Olmec heartland—the low, swampy, Gulf Coast areas of the modern states of Tabasco and Veracruz. According to historians and archaeologists, the Olmec represented a unified phase of Mesoamerican civilization that lasted from 900 B.C. to 500 B.C. ¹

But what happened after that? It appears that a split occurred, dividing a previously unified Mesoamerican civilization into two camps, each with different cosmological doctrines. Around 100 B.C., the rise of two major cultural traditions began, but in two widely separated regions. In Central Mexico, the Toltecs founded a metropolis called Teotihuacan, City of the Gods, aligning it with the Pleiades and the zenith sun. This great center of civilization grew and established many towns under its dominion, coming to control most of Central Mexico for six centuries. Teotihuacan is where the present, soon-to-end Fifth Sun was born, and it is believed to be the mythical Tollan of the Aztecs. (The Aztecs arrived on the cultural scene of Central Mexico much later, in the fourteenth century A.D.) At the same time that Toltec tradition and cosmology were being formulated in Central Mexico, the Maya, far to the east, emerged in the jungle-forests of Guatemala, Belize, and Yucatán, creating inter-related city states such as Cerros, Caracol, Calakmul, Uaxactun, El Mirador and Tikal.

Diagram 76. Map of Mesoamerica: 1) Maya zone, 2) Toltec zone, 3) Maya-Toltec zone

The Maya and the Toltec civilizations developed at the same time and, although they nurtured trade links through which artistic forms and ideas were shared, they designed two different cosmological systems to track World Ages. The underlying calendar used by both groups was the 260-day calendar, but a basic disagreement in how large-scale cycles of time were to be tracked—the timing of World Ages—apparently drove a wedge between the Toltecs and the Mayas and prevented a harmonious reconciliation for many centuries.

We can envision this split as a natural dichotomy in the development of whole systems (including cultures), in which the Mystery Play of polarization and eventual reconciliation is the name of the game, an organic necessity much like cell mitosis. Polarization and reunification is a process that manifests on all levels of life. It is identifiable in a person's life, in the dynamics of social and philosophical movements, within schools of thought, and in societies and civilizations as a whole. This model is in accord with the progressive science of whole systems dynamics. A schism may appear in
what was previously a whole unto itself; a polarization of opposite tendencies or ideas then develops, until complete opposition defines the mutually arisen need for the other, thus initiating the move to reunification. We can identify eras in social movements or civilizations as either divergent or convergent. The questions that naturally arise upon considering these historical facts are: what defined the differences between ancient Maya and Toltec cosmo-conception, and how and where did those differences get reconciled? The answers are found when we look at the two different methods used by the Toltec and the Maya to track World Ages. I believe that these differences led to the age-old fundamental schism between Toltec and Mayan thought—the rift in the Mesoamerican psyche.

So far in Part II, we have been concerned with reconstructing two different methods used by Mesoamerican skywatchers to track precession. One is called the Zenith Cosmology and the other is the Galactic Cosmology. The Toltecs of Teotihuacan, living in the early years of the first millennium of the Christian era, counted World Ages with a fifty-two-year period known as the Calendar Round. With it, they initiated the Fifth Sun (or World Age) at Teotihuacan and projected its end some time in the distant future. Their New Fire ceremony became critical to our understanding of how they used the Calendar Round to track precession. The Toltec Fire Priests, you will remember, performed the New Fire ceremony at the end of each Calendar Round, during which they carefully observed the Pleiades passing through the zenith at midnight. When the day on which it did this shifted (as a result of precession), the Toltec astronomer-priests adjusted their World Age calendar and knew they were moving closer to the much anticipated ending of the Fifth Sun.

The Toltecs believed that the next World Age would begin when the Pleiades aligned with the first zenith passage of the sun in May, and this is the phenomenon they tracked with their Calendar Round and New Fire ceremony. This zenith alignment was conceived as a World Age birth, but its precise timing is dependent upon one's latitude of observation. At the latitude of Toltec Teotihuacan, it occurred in the early nineteenth century. The Fifth Sun thus seems to have already ended. However, the timing shifted when the Toltecs transported the Zenith Cosmology to Chichén Itzá, whose latitude is a little further to the north and therefore offers a later calculation for the World Age shift. As argued in Chapters 7 and 8, the high god of the Toltec pantheon that represented the Zenith Cosmology was Quetzalcoatl, whose earliest astronomical association is with the Pleiades. According to scholars, Quetzalcoatl emerged into Mesoamerican consciousness at Teotihuacan around the third century A.D., the same time the New Fire ceremony started being performed. The Pleiades were known as the serpent's rattle, and the flight of the Pleiades into alignment with the zenith sun evoked the image of a flying serpent—the feathered serpent Quetzalcoatl.

As for the Maya, they too were tracking precession as the basis of their World Age doctrine, but they were concerned with a completely different astronomical alignment, the solstice-Galaxy conjunction of A.D. 2012. They used the Long Count calendar (rather than the Calendar Round) to track this precessional alignment, which they calculated to occur on the Long Count date 13.0.0.0.0. The Mayas' World Age cosmology concerned itself with a rare and profound galactic alignment—the convergence of our Earth-sun system's solstice meridian with the larger galactic frame of time. This is the "Zero Point" of the Galactic Cycle of precession, an event that
previously occurred 26,000 years ago. The early Maya skywatchers understood this vast
time cycle and brilliantly devised the Long Count calendar to end on the Galactic Zero
Point. Because this cosmology involved the movement of the solstice sun, the supreme
avatar of the Maya pantheon was Ahau, the solstice Sun Deity, pictured at Chichén Itzá
as a solar warrior within a Sun Disk. Among many Maya scholars including Arthur
Miller, Linda Schele, and David Freidel, the preferred name for this deity is Captain Sun
Disk.³

Diagram 77. Captain Sun Disk

Another "captain" of high rank in the Chichén Itzá murals was dubbed Captain Serpent,
who is none other than the snake deity Quetzalcoatl-Kukulcan—the avatar of the Zenith
Cosmology. Captain Serpent is portrayed with a rattlesnake wrapped around him.

Diagram 78. Captain Serpent

Significantly, as pictured on murals throughout Chichén Itzá, these two gods formed an
alliance. As such, Chichén Itzá was the site of an ongoing cultural-cosmological
experiment through which the schism in the collective psyche of ancient Mesoamerica
was healed. Historically, after Teotihuacan in Central Mexico fell around A.D. 750, Chichén
Itzá (formerly a primarily Maya city) received a flood of Toltec immigrants, who brought
with them their own brand of World Age cosmology and myth. By the end of the tenth
baktun in A.D 830, many of Chichén Itzá's most fascinating structures were built, aligned
to the heavens in specific though complex ways. The new chapter in the history of
Chichén Itzá was stimulated by fresh ideas from the west, resulting in the synthesis and
reconciliation of the two primary cosmological systems previously described. We will see
evidence for this pact between the Toltec and Maya worldviews as we proceed to explore
some of Chichén's lesser-known cosmic alignments.

Cosmic Alignments at Chichén Itzá

Any discussion of the astronomical alignments at Chichén Itzá must begin with the
Caracol observatory, where astronomer Anthony Aveni and his colleagues identified
several significant astronomical orientations. Windows in the ruined upper tower point
toward the extreme northern and southern rise positions of Venus. The equinox sunset is
visible through another window in the tower. The orientation of the base of the entire
structure indicates that the astronomical positioning of the Caracol was intentional. The
corner to corner alignment of the base corresponds with the solstice axis. A perpendicular
line from the base of the upper platform points to the location on the horizon where the
sun sets on the dates of its zenith passage at the latitude of Chichén Itzá—May 20-25 and
July 22-27.⁴ According to Aveni, around A.D. 1000 the last annual setting of the Pleiades
could be viewed in late April from a window in the Caracol's upper tower. In addition to
the Caracol's alignments with the Pleiades, the zenith sun, the solstice axis, the equinox,
and the setting extremes of Venus, Aveni found fifteen other alignments that correspond
reasonably well with astronomical events.
The shadow serpent that descends the Pyramid of Kukulcan on the equinox has already been discussed. Briefly, in my recent work on the astronomy and mythology of this event, I discovered an unrecognized facet that completes the mythic message. As previously explained, the serpent is a well-known symbol of the sun. In addition, Yucatecan rattlesnakes often have a natural "solar face" design near the rattle, reinforcing their meaning as solar divinities. In the Yucatec Maya language, the rattle is called tzab, which is also the name for the Pleiades. At ancient Chichén Itzá, New Year's Day was celebrated on one of the zenith-passage dates, suggesting that solar zenith passages were very important as temporal beginning and ending points. My reconstruction of the true meaning of the Toltec New Fire ceremony, transplanted to Chichén, proposes that this ceremony was really about tracking when, in the remote future, the Pleiades conjunct the sun on the solar zenith-passage date. Due to precession, this complex astronomical convergence now occurs at Chichén Itzá every May 20, when the sun and Pleiades are conjunct within the prescribed six-day range for zenith-passage dates at Chichén. The mythology of Kukulcan descending, in relation to the symbology of the rattle (the Pleiades) and the snake (the zenith sun), points directly to the May 20 event, sixty days after the equinox. Thus, the Pyramid of Kukulcan is a cosmic myth set in stone, pointing straight up to the zenith, where an astronomical alignment suggestive of World Age transformation occurs in the twenty-first century A.D. As if the equinox shadow-serpent manifestation alone is not enough to inspire an awesome respect for ancient Maya cosmology, this World Age myth, clearly alluded to by the equinox event itself, is worthy of being called the greatest calendrical-architectural achievement known. A compelling event is beginning to transpire—the sun and the Pleiades joined in the zenith over Chichén Itzá—that will extend through the next century and then fall out of sync, never to happen again. This is the era of World Age transformation as formulated by the ancient Toltecs. The players, as with other alignments at Chichén, are the Pleiades and the zenith sun. As is now clear, however, this was only one method used by the ancient Mesoamerican skywatchers to track precession. The other involved the Maya Long Count calendar, the Milky Way, and the solstice sun. These mytho-astronomical players are found in Chichén's ballcourt alignments.

The High Priest's Grave, a small ruin in the old section of Chichén near the Caracol, is a miniature model of Kukulcan's pyramid. Scholars have been unable to precisely examine its orientation because of its eroded condition. Interestingly, however, they found a large chamber underneath the small pyramid and identified it as the tomb of a shaman or priest. A Long Count date found in this underground chamber is a solstice date from the ninth century. As described in Chapter 11, the Great Ballcourt aligned with the Milky Way on solstice dates in the mid-ninth century, the point being that solstice dates as well as equinox dates were apparently significant for Chichén's calendar keepers.

Finally, scholars have determined that the Pyramid of Kukulcan was built around the end of the tenth baktun in A.D. 830, when the Toltec Calendar Round ending happened to synchronize with the Maya baktun ending. This significant calendric convergence offered the Maya-Toltec thinkers a rare opportunity to reconcile the two main streams of cosmological thought in Mesoamerica—the recalibration of the Toltec Calendar Round with the Maya Long Count. The year A.D. 830, which is 10.0.0.0.0 in the Long Count, was the date of this incredible calendric opportunity, and this is when most of the amazing astronomical structures at Chichén were designed and built. For this
reason as well as others, Chichén looms as a place of calendrical and cosmological unification.7

The Great Ballcourt, the largest ballcourt known in the ancient Maya world, lies a short distance to the northwest of the Pyramid of Kukulcan. As discussed in the previous chapter, it encodes many alignments, most notably ones involving the Milky Way and the solstices. For instance, the Great Ballcourt was aligned with the Milky Way at midnight on the June solstices around A.D. 865. This means that if you stood in the center of the ballcourt at midnight on one of these solstice dates, you would see the Milky Way arching overhead, touching the opposed horizons to which the lengthwise axis of the ballcourt points. Overhead, you would see the place where the Milky Way and the ecliptic cross.

Diagram 79. Ballcourt schematic showing cross formed by the Milky Way and the ecliptic.

This intersection forms the cross-shaped cosmic ballcourt—a symbol important for its role in the Long Count end-date of A.D. 2012. Simply put, the center of this cosmic cross is where the December solstice sun will be in 2012. The mural on the east wall of the ballcourt shows the primary ballplayer—in reality a high deity—being decapitated. His severed head becomes the gameball, which the players then must kick into the goalring. This scenario is a metaphor for the December solstice sun moving slowly into its "goal"—the dark-rift near the cosmic cross formed by the Milky Way and the ecliptic. Within the metaphor of the ballgame, the dark-rift "cave" is the goalring, and the severed head or gameball is the December solstice sun.

You may recall that the actual stone goalring of the ballcourt's east wall is above and to the left of the mural depicting the severed head as the gameball. As high noon approaches on the June solstice, a shadow cast from this stone goalring slowly moves along the mural toward and finally through the gameball. The effect is that of the ball moving slowly through the goalring as high noon approaches on the solstice. This shadow-play alludes to the mythic meaning of the ballgame as a metaphor for the alignment of the 2012 end-date. The December solstice sun converges upon and conjuncts the dark-rift "goalring" in the center of the cosmic Milky Way ballcourt only in the years surrounding A.D. 2012. Like Chichén's Toltec Zenith Cosmology, this alignment is an effect of the precession of the equinoxes, and occurs in the early twenty-first century.

The astounding sophistication of this hierophany, in the architectural engineering as well as in the intended mythological meaning, almost eclipses the mind-boggling profundity of the shadow-serpent manifestation on Kukulcan's pyramid. But we are not finished with the Great Ballcourt yet. One more alignment, one that confirms Chichén's role as the site where the Zenith and Galactic Cosmologies were merged, occurs above the east wall mural, in the Upper Temple of the Jaguars.

The Upper Temple of the Jaguars is a small building constructed over the eastern wall of the Great Ballcourt. Its west-facing doorway provides a clear view of the flat horizon. The doorway is a wide portal leading into the inner chamber, and is flanked on both sides by serpent columns. These are stone sculptures of the inverted serpent image that is found throughout Chichén Itzá, reminiscent of the equinoctial shadow-serpent that
appears on the Pyramid of Kukulcan. Inside the chamber, several murals were still visible in the late nineteenth century, but are now completely deteriorated. Luckily, Adela Breton made detailed drawings of them in 1906. One of the murals within the Upper Temple of the Jaguars depicts two beings of equal stature and is situated such that the rays of the setting sun on its date of zenith passage illuminate it. This is, literally, where the secret history of Chichén comes to light.

**The Union of Captain Serpent and Captain Sun Disk**

Based upon Breton's drawings, there was enough information in the murals to identify the two beings as none other than Captain Sun Disk and Captain Serpent, the mytho-historical figures found throughout Chichén who played an important role during the Maya-Toltec synergy of the ninth century.

Diagram 80. Drawing from a Chichén Itzá mural showing Captain Sun Disk (Maya) and Captain Serpent (Toltec) together. From the Upper Temple of the Jaguars

Although these two characters may have had some meaning as actual historical figures, their mythological role, as representatives of the Toltec and Maya cosmologies, is more important. The biannual zenith illumination of their meeting symbolizes, and serves as a reminder of, the political and cosmological alliance formed between the Toltec and Maya civilizations. Captain Sun Disk represents the Maya ideal of a cosmic ruler and symbolizes the prevailing Maya cosmology of the solstice sun disk moving toward the Milky Way. Captain Serpent is the Toltec avatar associated with the feathered serpent, Quetzalcoatl (that is, with the World Age cosmology involving the Pleiades movement toward the zenith sun). In that the Mesoamerican schism formed after the fall of the Olmec, the reconciliation of Captain Sun Disk and Captain Serpent was probably almost three baktuns in the making. And they came together to recognize and agree that it would be another three baktuns before the end times—the era of World Age renewal—would arrive.

The joining of these cosmic avatars of the Toltec and Maya peoples represents a reconciliation of the ancient schism in the Mesoamerican psyche, which I believe occurred at Chichén Itzá in the ninth century A.D. It was a reconciliation of two different branches of what was, after all, a basically shared cosmological discovery: the precession of the equinoxes. Both traditions competed to identify the future World Age transition by tracking the precession of the equinoxes. However, early in Mesoamerican history, perhaps around 50 B.C., two different precession-tracking methods were formulated that resulted in two slightly different timings. This gave rise to a cosmological conflict—a disagreement on the very important and basic concept of when the next World Age would arrive. We might imagine this conflict to be similar to modern battles between Israel and Palestine, battles arising from serious social, religious, and political differences, even though these two traditions spring from the same source. In fact, a polarization of opposed ideals seems to be the underlying root of basic social and philosophical problems in the world today. The possibility of successfully reconciling such differences, on the scale of civilizations, is attested to by what was accomplished at Chichén Itzá.

The original Toltec tracking method, based upon calculations made at the latitude
of Teotihuacan, resulted in a World Age shift to occur in the early nineteenth century. Early on, however, the Toltecs noticed their end-date cosmology was not in accord with the Maya Long Count system, which predicted the Zero Point of precession in the early twenty-first century. For the two systems and the schism in Mesoamerican civilization to be reconciled, some adjustment had to be made somewhere. What occurred is clear: the Toltec Zenith Cosmology was adjusted when the Toltecs relocated to the latitude of Chichén Itzá, effectively bringing it into line with the Long Count end-date.

Captain Sun Disk and Captain Serpent each represent the fully manifest ideal of their respective cosmologies. Having achieved full polarization and complete expression, they could then meet and be reconciled. This was no doubt a recognition by the Toltec-Maya alliance of the deeper process of civilization of which they were a part—an intentional decision to adapt, compromise, reconcile, and integrate into a new level of unity rather than violently break down into separatist camps. The successful reunification achieved by Chichén's Toltec and Maya inhabitants is evident in the intentional blending of their respective calendar cosmologies around A.D. 830. The pact between the Toltec and the Maya was formed at this time, anointed by solar alignment, and preserved in stone for future generations. The years following the alliance saw massive monuments built and dedicated to consecrate the pact, and point anyone with eyes to see to the World Age shift now agreed upon by both systems.

The Pyramid of Kukulcan represents the Toltec New Fire system that points, after a slight adjustment upon the Toltec relocation to the latitude of Chichén Itzá, to the early twenty-first century. The Great Ballcourt's alignment with the Milky Way, as well as the symbology of the ballgame itself, reminds us of the solstice convergence with the portal to the next world—the Maya Galactic Cosmology that likewise identifies a World Age shift to occur in the early twenty-first century (A.D. 2012).

Diagram 81. Two Mesoamerican Precessional Cosmologies

<table>
<thead>
<tr>
<th>The Zenith Cosmology</th>
<th>The Galactic Cosmology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site of Origin:</td>
<td>Teotihuacan</td>
</tr>
<tr>
<td>Era of Origin:</td>
<td>First Century A.D.</td>
</tr>
<tr>
<td>Culture:</td>
<td>Toltec</td>
</tr>
<tr>
<td>Calendar:</td>
<td>Calendar Round</td>
</tr>
<tr>
<td>Myth:</td>
<td>New Fire</td>
</tr>
<tr>
<td>Astronomy:</td>
<td>Zenith Sun &amp; Pleiades</td>
</tr>
<tr>
<td>Captain:</td>
<td>Serpent</td>
</tr>
<tr>
<td>Deity:</td>
<td>Quetzalcoatl</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The Galactic Cosmology</th>
<th>The Zenith Cosmology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Era of Origin:</td>
<td>First Century B.C.</td>
</tr>
<tr>
<td>Culture:</td>
<td>Maya</td>
</tr>
<tr>
<td>Calendar:</td>
<td>Long Count</td>
</tr>
<tr>
<td>Myth:</td>
<td>Hero Twin/Ballgame</td>
</tr>
<tr>
<td>Astronomy:</td>
<td>Solstice Sun &amp; Galactic Center</td>
</tr>
<tr>
<td>Captain:</td>
<td>Sun Disk</td>
</tr>
<tr>
<td>Deity:</td>
<td>One Hunahpu</td>
</tr>
</tbody>
</table>

Here are the End Notes (cited sources are at: http://alignment2012/com/bibbb.htm):


2. Milbrath (1980a); Brundage (1979); Dow (1967). According to Miller and Taube (1993:141-142), the earliest appearance of the quetzal serpent in Central Mexico occurred
at Toltec Teotihuacan in the third century A.D. That the Teotihuacano astronomer-priests were interested in the Pleiades and the zenith sun is evident in the orientation of the city, as outlined in Part I. Given these facts, a conceptual association between the Pleiades, the zenith sun, the New fire ceremony, and the Toltec Plumed Serpent, Quetzalcoatl, is likely.


4. In my close scrutiny of the zenith-passage phenomenon, I realized that a range of days fulfills the "no shadow at high noon" criterion. The range depends upon one's latitude of observation. See Appendix 3 for the data.

5. The date is currently thought to be 10.0.12.8.0, equivalent to June 18, 842 via the 584283 correlation. See Schele and Freidel (1990:356) and Slayman (1996).


10. As Milbrath wrote, "Astronomy and history may be fused if the figures are in fact co-rulers who claimed celestial patronage of heavenly ancestors, perhaps even the legendary founders of Chichén Itzá" (1988a:66). Clearly, Milbrath was on the right track.


I left out the segue section at the end, that introduces Part III. The illustrations were also left out; the captions describe the diagrams and I trust the reader gets the point without them — last time I checked my book could be bought at the online store for a penny. This chapter was written as an essay in October of 1996, and was published in 1997 in the World Explorer magazine.5 It should be apparent to the reader how these discoveries published in my 1998 book relate to Callaway’s Panel 1 discussion, if we expand his observations with the evidence of the shadow-casting pillar, the implied heliacal rise of

5 I had sent it in for their consideration and was planning on negotiating the terms, if they were interested. To my surprise, they just took it and published it without further discussion. A few years later they also used it in a thick anthology, also without informing me. David Hatcher Childress, the publisher at Adventures Unlimited Press, was an acquaintance of mine from the 1980s. In any case, this article can be considered the third in a series between 1994 and 1997 that presented the core elements of my work prior to Maya Cosmogenesis 2012 being published with Bear & Co., in 1998. The other two articles are “The How and Why of the Mayan End Date” (1994) and “The Pyramid at Chichen Itza: A Cosmic Myth in Stone” (1996). I was also planning on submitting my article “The Cosmic Symbolism of the Maya Ballgame” (written in 1996), but then it became subsumed into my 1997 version of Maya Cosmogenesis 2012.
the Pleiades and the Sun-Pleiades conjunction, and the sun-Crossroads alignment astronomy of the 3-11 Pik Triple Station in 870 AD.

Perceptive and honest historians of 2012, and concerned readers generally, might also like to compare the lengthy excerpt given above with the citations to my book offered by scholarly critics, and note how very far their assertions, insinuations, and critiques are from the actual content of my book and my approach to the 2012-related material that is evident if my book is actually read. It’s as if they’ve just hallucinated their own versions of what my work is about, and loosely toss me into an undiscerning category along with the milieu of popular writers, often giving the impression, as Nicholas Campion did (2011), that I should be identified with an apocalypse-obsessed “Maya Prophecy Movement” (MPM). Consequently, scholars are unable to see when new evidence comes along that affirms my earlier work, as my discussion of Callaway’s article shows. Furthermore, they usually don’t refer to my later writings, such as my 2009 book The 2012 Story (Tarcher/Penguin), which provide updated perspectives, convenient definitions, and clear summaries of my work.

For more on this systemic problem in the academic critique of my work, based on deceptive tactics and factual errors in their citations, which their university press publishers refuse to acknowledge or correct, see my responses to critics at http://Update2012.com. Ongoing research is at: http://thecenterfor2012studies.com.

The Four Main Points:

- The 3-11 Pik Triple Station date on the Caracol Panel 1 at Chichen Itza is December 4, 870, which is a date (in that era) of the sun’s alignment with the Dark Rift/Crossroads.

- The 17-Tun ending on Panel 1 (May 14, 886) targets a date of the Pleiades’s heliacal rise in the east, and also generally marks the time of the solar zenith-passage. A lunar eclipse was probably anticipated 7 days later, when the full moon overhead was aligned with the Dark Rift / Crossroads (but the eclipse had already happened, visible over China, twelve hours earlier during the daylight hours).

- The ritual scene on the stone disk (below Panel 1) shows yet another example of Captain Sun Disk & Captain Serpent in some kind of negotiated reconciliation. The disk was probably positioned over the pillar as a secondary shadow-casting device. According to my previous work (Jenkins 1998), the “cosmic center” cosmologies associated with 3114 BC and 2012 AD are united in these scenes at Chichen Itza: the solar zenith-passage with the Pleiades and the sun aligned with the Dark Rift / Crossroads.

- The Calendar Round prior to the 934 AD Sacred Day of Venus (Dresden Codex) fell on 1 Ajaw, December 1, 882, which is another date that positions the sun at the Dark Rift / Crossroads. It is exactly 12 Haab after the 3-11 Pik Triple Station, both dates sharing the 18 Kayab Haab date with the 934 Sacred Day of Venus. The eroded text immediately after the 3-11 Pik glyph shows a “1 Ajaw” and possibly a 12 Haab (according to Callaway).

John Major Jenkins

Email: The2012story@gmail.com, Websites: http://TheCenterfor2012Studies.com