The Metahistoric Zero Date at 9 Ajaw 3 K'ank'in, and a Synchronized Sidereal Year and Tropical Year Commensuration with the 3114 BC Era Base

John Major Jenkins. June 30, 2013

In June of 2013, upon re-reading Geoff Stray's book that resolves the 13 vs. 20 dilemma (*Mysteries of the Long Count*, Straydog Books, 2012) I was astounded to learn of a 13-Calabtun usage that J. Eric S. Thompson talked about in his book *Maya Hieroglyphic Writing*. This involves larger frameworks of the Long Count, using 20 or 13 units as the kick-over point in the calibrating of larger and larger cycles. Beyond the Baktun is the Pictun, the Calabtun, the Kinchiltun, and the Alautun.

Thompson was trying to figure out the larger Long Count numbers recorded on Tikal Stela 10 and a few other monuments (including the Calabtun number on Copan Stela C). His discussion of a reconstructed large Long Count Base Date is found in Appendix IV in his book, which is online here: http://www.mesoweb.com/publications/Thompson/Thompson1950-Appendix-IV.pdf. Stray explains the material cogently in his book, and went further to clarify Thompson's effort in an email to me:

> To summarise, Thompson calculated the 1.13.0.0.0.0.0.0 date from Tikal Stela 10. Tikal Stela 10 (see figs.12 &16 in my 13 v. 20 book) shows the date 1.12.19.9.3.11.2.(13) according to Thompson. The Kin place is missing, so 13 Kins comes from a reconstruction. Morley thinks that the Tuns coefficient is actually 6, (*Maya Hieroglyphs*, p.115) which explains why it looks like 6 in his drawing (fig. 16). ...in order to generate the 9.2.0.0.0 date on the stela, Thompson finds the 1.11.19.9.3.11.2.(13) period won't work as a distance number unless it is changed from 11 Calabtuns to 12. As a result, in this version of the Long Count which uses longer cycles (the "Metahistoric"), the date 9.2.0.0.0 becomes 1.13.0.9.2.0.0.0 4 Ahau 13 Uo. Therefore, he calculated that 13.0.0.0.0 4 Ahau 8 Cumku becomes 1.13.0.0.0.0.0.0 in the wider scheme. Quirigua F allowed the Alautuns to be calculated, meaning that the 9-place equivalent for the Base Date is 0.1.13.0.0.0.0.0.0 … [this is] the exact same date and time as 13.0.0.0.0 4 Ahau 8 Cumku, in 3114 BC, but expressed in a wider scheme. They are both 4 Ahau 8 Cumku because they are the same date expressed in Historic and Metahistoric schemes.
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> I know its not satisfying that he altered it from 11 to 12 Calabtuns on the distance date, presuming a scribal error, but the resulting formula solves more dates than any other. The same appendix discusses Copan Stela C. [p.c. email, June 23, 2013]

A key item here is that Thompson goes on to see this grand Base Date in the Calabtun glyph on Copan Stela C, which he takes to be a "12" because it prefixes the 3907 BC date at the top of the south side text. Since the Calabtun kicks up to 13 in 3114 BC, Thompson believes it must be a 12 here. And, as Stray notes, the 1 Kinchiltun value comes from the

full deep time date value on Tikal Stela 10. So, we have an equivalency between the Historic and Metahistoric schemes:

1.13.0.0.0.0.0.0 = 0.0.0.0.0 (or 13.0.0.0.0), which = the Era Base in 3114 BC

Now, there are two things to explore here. Firstly, the grand Zero Date would have occurred when the 13 Calabtuns count back to zero and the 1 Kinchiltun counts back to zero. (I will use the phrase "Era Base" to refer to the period ending in 3114 BC, "Base Date" to refer to 1.13.0.0.0.0.0.0, and "Zero Date" for when that Metahistoric Base Date is back-counted to the Calabtuns and Kinchiltun reaching zero.) It should go without saying that 1.13.0.0.0.0.0.0 is an immense period of some 5,204,218 years, or 1,900,800,000 days. I had already figured and proposed from my previous work that the 13 Calabtun value (apparent on Copan Stela C) provided an accurate Sidereal Year / Tropical half-Year formula. I then found that this much larger interval between the Metahistoric Zero Date and the Historic Era Base date provides a very accurate Sidereal Year AND Tropical Year commensuration, without a half-value needed. The math:

1,900,800,000 / 5,204,016 = 365.2563712 (modern value = 365.2563630)
1,900,800,000 / 5,204,218 = 365.2421939 (modern value = 365.242190)

The SY is off by only .0000082 days
The TY is off by only .0000039 days

To me, this seems extraordinary. *It is a commensuration between cycles.* This is precisely what the ancient Maya sought in their exploration of larger and larger periods and cycles. It means that, theoretically at least, both dates in the two schemes (the Metahistoric Zero Date and the Historic Era Base date) would place the sun at *the same* sidereal position on *the same* solar zenith-passage date. The Tropical and Sidereal Years would both come back to their starting points — an extraordinary occurrence since the two values are separated by only .01417 of a day.

Consequently, this grand 1.13.0.0.0.0.0.0 period must be, putatively and logically, a multiple of some estimate of the equinoctial precession cycle itself. The closest multiple is found to be **200** precessional cycles, resulting in a value of 9,504,000 days per precessional cycle, which equals 26,021 years per cycle. This is 66 Baktuns, and Barb MacLeod discusses this period as a possible estimate the Maya used for precession (in her "3-11 Pik" essay, which was posted on my website in 2008 with her permission: http://alignment2012.com/3-11PikFormula.html). It is striking that this precessional commensuration reaches the round vigesimal multiple of 200.

The second thing to look for is: *what is the Calendar Round position of the Metahistoric Zero Date?* This can be calculated by the remainders of the divisors 260 and 365. The former results in a 60-day remainder and the latter in an 85-day remainder. Since 0.0.0.0.0 in 3114 BC fell on 4 Ajaw 8 Cumku, we can calculate that the Tzolkin day 60 days prior to 4 Ajaw is **9 Ajaw**. And the Haab date 85 days prior to 8 Cumku is **3 K'ank'in**. The Metahistoric Zero Date, according to Thompson's work and which can

be calculated from the 1.13.0.0.0.0.0.0 date that he believed was logically implied on Tikal Stela 10 and Copan Stela C, is thus: 9 Ajaw 3 K'ank'in.

It turns out that this Calendar Round date is found in the text in Palenque Temple XIV, involving the deity Bolon Y'okte and Deep Time calculations of the moon cycle, which was explored by Michael Grofe in his poster presentation at the 2009 Tulane conference ("Temple XIV: Lunar Calculations in the Deep Time Mythology of Palenque"). It's not yet clear what the relation this curious Calendar Round date may have to this reconstructed Metahistoric Zero Date (apart from the fact that *they are the same*). But it is curious that we reach the 3 K'ank'in Haab position, also found in the 2012 period-ending date, and that we also find Bolon Y'okte (whose "investiture rite" or "great return" occurs on 3 K'ank'in in 2012, according to Tortuguero Monument 6). The two Calendar Round dates (9 Ajaw 3 K'ank'in and 4 Ajaw 3 K'ank'in) are exactly 8 Haab apart, which equals 5 synodic cycles of Venus (of 584 days each).

Since the 9 Ajaw 3 K'ank'in date in the Temple XIV text is identified as a K'awil-taking event in the young life of Kan Bahlam, the date is located at 9.11.1.2.0 (in 653 AD). The interval between this date and the Metahistoric Zero Date is: 1,902,175,600 days. This is 100,220 Calendar Rounds and 50,110 Venus Rounds. Though it refers to an earlier ritual in his life, Kan Bahlam commissioned the Temple XIV text probably in the 690s, not long before Copan Stela C was dedicated (in 711 AD).

Tikal Stela 10. The huge Long Count number from which J. Eric S. Thompson reconstructed his 1.13.0.0.0.0.0.0 Base Date, and which Geoff Stray explores as the equivalent Metahistoric expression of the Historic Era Base date 0.0.0.0.0 (in 3114 BC). Both share the Calendar Round date of 4 Ajaw 8 Cumku.

My discussion involves the Zero Date implied by the Metahistoric Base Date, and the resulting formula for a Sidereal Year & Tropical Year commensuration to the Era Base in 3114 BC. Also, the resulting Calendar Round date for the Zero Date is *9 Ajaw 3 K'ank'in*, which is used in Deep Time calculations on the tablet from Palenque Temple XIV and shares the Haab position of the 13-Baktun period-ending date in 2012 AD.

image from: http://de.academic.ru/dic.nsf/dewiki/1394510