Rolf Ward Green
Ralph Ellis Green
Anne Ruth Rutledge
Flora Marie Green

Odysseus and Circe by Salomon de Bray, 1650-55 CE

The lines have fallen to me in the best places, yea, I have a most excellent heritage.

(*Psalms 16:6; Brenton*)

Trojan War—
Year End Report
(Quilt Work Patch)

Chapter 1: Relativistic Earthly Age Lesson
Chapter 2: Chronology Aligned Under Sothic Egypt
Chapter 3: Manetho Offers Real Encouragement
Chapter 4: Ugarit Solar Eclipse Record Finds Realization In Egyptian Nineteenth Dynasty Late Years
Chapter 5: New, Irrefutable, Chronological Environment
Chapter 6: Absolutely Institutional Moon Secured
Chapter 7: Piye's Accession Year
Chapter 8: B4 Affirms Carbon-14 Kings
Chapter 9: Radiocarbon Egypt's Archaeometric Logic
Chapter 10: Whitelaw On Real Life Deluge Attested in *Radiocarbon* Study
Chapter 11: Adjusting Whitelaw's Estimate (Radiocarbon Ark Wood)
Chapter 12: Trees Represent Empirical Evidence

Chapter 1: Relativistic Earthly Age Lesson

Right: Hubble Frontier Fields view of Abell 2744 *(2014 photo, by NASA et al.)*

In the beginning, God created the universe. (*Genesis 1:1; International Standard Version, 2010*)

God by wisdom founded the earth, and by prudence he prepared the heavens. (*Proverbs 3:19; The Translation of the Greek Old Testament Scriptures, Including the Apocrypha. Compiled from the Translation by Sir Lancelot C. L. Brenton 1851.*)

11 In his 1991 book *Genesis and the Big Bang,* Jewish physicist Gerald Schroeder compares the billions of years of earthly development with the six literal days given in the Bible account, from the standpoint of relative time based on the mathematics of the theory of relativity.[1]

[1](*Genesis and the Big Bang,* by Gerald Schroeder, 1991)

12 Because the Big Bang occurred at a different place than the point in space in which the Earth now orbits its Sun, Mr. Schroeder has calculated that between five and six earthly days have passed at that original location.

13 Although any detail of the universal parameters at the time of the Big Bang are somewhat obscure, it has been determined from the temperature estimated according to the mass of a nucleon (ie. proton or neutron) that the current Earth era corresponds literally to our day six from the standpoint of the time nucleons were created.

14 It has been theorized that quarks become hadrons (this is to say that the subparticles that make up nucleons, the quarks, become neutrons and protons) at a critical temperature determined at the energy of about 175 MeV.[1]

[1](*Scale for the Phase Diagram of Quantum Chromodynamics, Science 24 June 2011 Vol. 332 no. 6037 pp. 1525-1528* by S. Gupta et al., arXiv.org 1105.3934 v1 May 19 2011, p. 12)

15 Since a critical temperature for quantum chromodynamic phase transition (when quarks become hadrons) has been determined as roughly 175 MeV, we may compare the rest mass of a nucleon (938-940 MeV) with this lower number to find a temperature ratio of 5.37 between these two. The temperature of creation is a measure of days, say.

16 Converting 175 MeV into a temperature in degrees K, we have 1 eV = 11, 604.50520 K and 175 MeV x 11,604.50520

= 175,000,000 x 11,604.50520
= 2 trillion K (2,000,000,000,000 degrees Kelvin)

17 This may be compared to the temperature of space today as measured by us near the earth to be 2.7 K, and made into a ratio of roughly a trillion to one, the same as the ratio of the stretching of time from the Big Bang. A million million, or a trillion, would then be simply the ratio between the 5.5 Earth days of creation, from the Bible (another very rough estimate seeing as it is on the sixth day that God created Adam or Man), and 14 billion years (about 5.5 trillion days) seen by Earth. Our perspective in the universe gives us the sensation that the universe is about 14 billion years old, thus. From the standpoint of the Big Bang it's about 6 days.

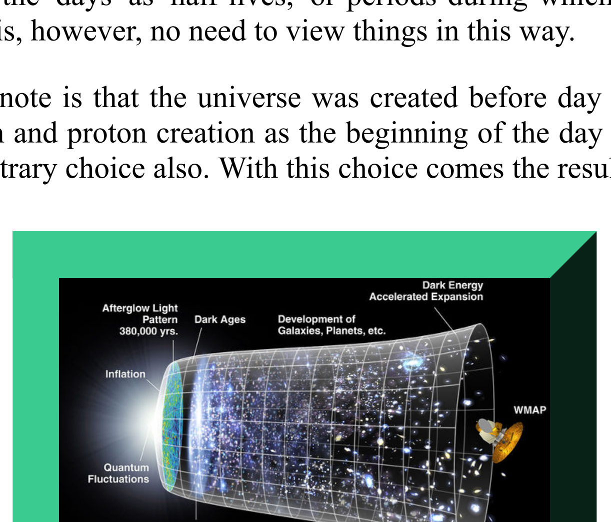
18 These numbers aren't accurately enough known to be too concerned about exactness, but the time dilation comes about because of the change in size of the universe as it expands after the Big Bang, so for each doubling in size comes a doubling in time dilation, resulting in a time dilation factor that is not constant, meaning the six days each contain a different number of the years, with more of the years coming into the beginning days. Adjusting for an increase in the expansion rate of 10% leads to an adjusted average expansion factor over the 5.5 days to 900 billion, a 13.6-billion-year universe:[1]

5.5 x 900,000,000,000 ÷ 365.25
= 13,552,000,000 (13.6 billion) years

[1](*The Age of the Universe, by Gerald Schroeder, October 2013*)

19 The important point to note here is that in the Hebrew Bible the word 'ohm' for 'day' can mean an indefinite, lengthy period of time, and the exact literal quantity of 24 hours is not required for each arbitrary period. Hence, the literal meaning of 'day' is not '24 hours'. Mr. Schroeder considers the 'days' as 'half-lives,' or periods during which time doubles as the days go back. There is, however, no need to view things in this way.

110 Another thing to note is that the universe was created before day 'one' began, and that the choice of neutron and proton creation as the beginning of the day count, while perhaps reasonable, is an arbitrary choice also. With this choice comes the result of 5.5 earthly days.



Above: The Big Bang *(as portrayed by NASA)*

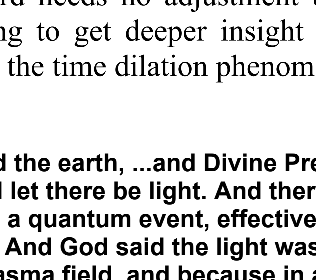
111 Thus, an argument may be made for the literal truth of the Bible account of Genesis, in which man is created on the sixth creative day.

112 The point is that just because modern science has seen the age of the universe as about 14 billion years, the Bible record needs no adjustment to its great account, since today scientists are still only beginning to get deeper insight into the marvelous workings of Jehovah. One of those insights is the time dilation phenomenon. Paraphrasing the late Arnie Novak, Mr. Schroeder says:

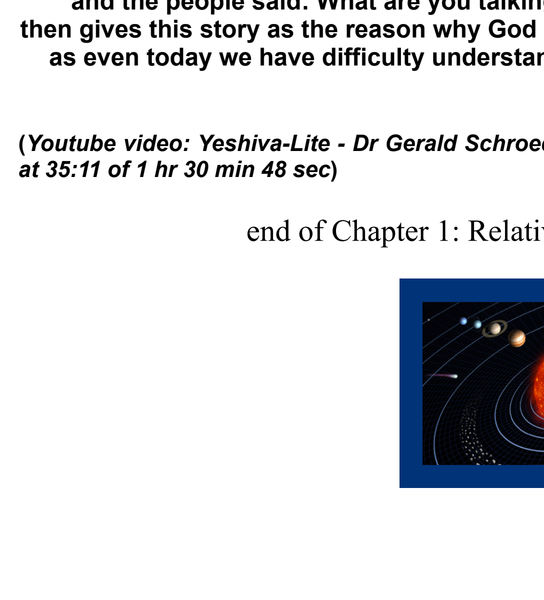
God created the heavens and the earth, ...and Divine Presence hovered over the surface of the waters, and God said let there be light. And there was a high energy plasma that burst forth from nothingness, a quantum event, effective quantum fluctuation, which can create something from nothing. And God said the light was good, but the light was trapped within the darkness of a plasma field, and because in a plasma field light cannot travel coherently, God had to separate the light from the darkness as the plasma cooled, and the light was able to escape from this high energy bundle. But as the plasma cooled further, matter and anti-matter were formed because energy can condense into the form of matter... And God called the Day light and the darkness Night, and there was evening and morning, one cosmic Day. But since, you see, there was no sun or moon yet, how could He measure a Day? Well, that's done by counting the oscillations of the background radiation that crested at each of the energy peaks. And Moses translated this information to the people, and the people said: What are you talking about? [Mr. Schroeder thanks Mr. Novak and then gives this story as the reason why God did not reveal everything at the time of Moses, as even today we have difficulty understanding it when we try to explain it using modern nuclear physics theory.]

(*Youtube video: Yeshiva-Lite - Dr Gerald Schroeder PhD - Torah Answers to Scientific Challenges, at 35:11 of 1 hr 30 min 48 sec*)

end of Chapter 1: Relativistic Earthly Age Lesson



Chapter 2: Chronology Aligned Under Sothic Egypt



Above: Cypriot bichrome pottery from Jericho *(Garstang's find, from Mar 28 2012 article by Bryant G. Wood, "Dating Jericho's Destruction: Bienkowski Is Wrong On All Counts")*

Absolutely all that we can now say about it [ie. Jericho] with certainty is that the city fell to the Hebrews sometime between cir. 1475 and 1300 B.C.
(Shifting Sands, by Thomas Davis, 2004, p. unnumbered)

It is apparent that the Sothic cycle using the calendar of Lower Egypt starting in 1314 [sic, but 1315 BG, below] **initiated the "Era of Menophres," which can now be understood as the "Era of Memphis."**
(The Reconstructed Chronology of the Egyptian Kings, by M. Christine Tetley, 2014 posthumous, p. 164)

Let luminaries come to be in the expanse of the heavens to make a division between the day and the night; and they must serve for signs and for seasons and for days and years.
(Genesis 1:14, New World Translation of the Holy Scriptures, 1984)

Table 2.1:
The Age of Menophres (or Memphis) in Heliacal Rise of Sothis
(PLSV 3.1, heliacal arcus visionis = 9.12)
(Ramesses II Colossal Statues at Memphis)

Year (BCE)	Thoth 1 (Julian)	Sothis 1st visible, Memphis (Julian)	Ramesses II Y1 (BG)
1326	Jul 21	Jul 18*	-
1325	Jul 20	Jul 17	-
1324	Jul 20	Jul 17	-
1323	Jul 20	Jul 17	-
1322	Jul 20	Jul 18	-
1321	Jul 19	Jul 17	-
1320	Jul 19	Jul 17	-
1319	Jul 19	Jul 18	-
1318	Jul 19	Jul 18	-
1317	Jul 18	Jul 17	-
1316	Jul 18	Jul 17	-
1315	Jul 18	Jul 18	yes
1314	Jul 18	Jul 18	-
1313	Jul 17	Jul 17	-
1312	Jul 17	Jul 17	-
1311	Jul 17	Jul 18	-
1310	Jul 17	Jul 18	-

*Dates of Jul 18 and Jul 17 in this column using arcus visionis of 9.12 in PLSV 3.1.0 (Nov 20, 2006), cf. Bradley E. Schaefer, p. 150 Sothic rising Jul 17.8 in 1500 BC, and Jul 17.2 in 1000 BC, in "The Heliacal Rise of Sirius and Ancient Egyptian Chronology," *Journal for the History of Astronomy,* Vol. 31 (2000), Part 2, pp. 149-155.

21 Ramesses II moved his capital from Thebes in the south to Pi-Ramesses in the Delta region of the north, so it is reasonable to assume that the measurement of Sothis risings also moved north at this time, Memphis, Egypt. It was at Memphis that Ramesses II built his colossae. The Era of Menophres was a chronological milestone and was mentioned by Theon in the 4th century CE as having come 1605 years before the end of the era of Augustus.[1] The late Ms. M. Christine Tetley mentioned this in her posthumously published book, and added that there also was a Sothic cycle observed from Memphis that ended in 139 CE and which is then associated with a Censorinus. There were some number of years, approaching 1460, for the completion of a Phoenix, or Sothic (Sirius) Cycle, and it is determined by the date of 'heliacal' rising, meaning the first, visible rising just before sunrise. These things were approximately dated in the past, but modern astronomy today permits near-precision datings. Ptolemy has assisted with an alignment of the Egyptian calendar saying 1 Thoth was Jul 21 Julian in 132-5 CE. Since historical accounting is the nature of our work, we do not mean to lessen the importance of historical, reliable, and traditional sources in any way; however, astronomy has the appearance of being simply accurate. When did the star Sothis rise heliacally on Thoth 1 in the time of Censorinus is the question, if not in 139? If, as many believe, it was 139, then 1453 years makes up a Sothic Cycle back to 1315 BCE (no year '0'), so a Cycle is shorter than 1460 years in astronomical terms as demonstrated in Table 2.1 (see right) using PLSV, a program that calculates visibility of heavenly bodies. We wish to be as simple as possible in our analysis of fundamentals, and thus we look first at the Cycle that came before 1315 BCE, that we also dated in *The Ark of Urartu* (our earlier article, in which was found a foundational date of Jul 18 2774 Julian for the date of an eclipse over the Ark site on Thoth 1, and it was presented as the start date of the Egyptian calendar). Jul 18 was Thoth 1 in 2774 BCE, and PLSV confirms that it was the first day Sothis became visible in Memphis. For comparison, it was Jul 13, in Thebes, in 2774 BCE. So the location of Memphis is an important one for us, historically, and bears relation to the Ark in Turkey. How many years were there from 2774 to 1315 BCE? 1459. This demonstrates the non-constancy of the Cycle time. From 1315 BCE to 139 CE there are 1453 years, allowing for the fact that there is no year '0' in the calendar at the turn of the common era (1315 + 139 - 1 = 1453). We can't be too precise about these astronomical dates near the time of Censorinus, although we get the word:

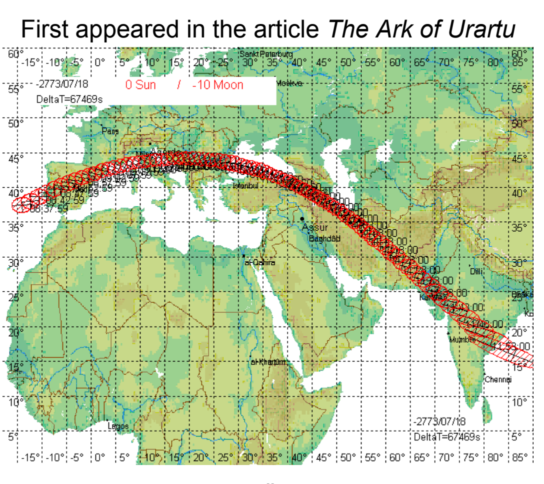
... of those, however, the beginning is always from the first day of the month which the Egyptians call Thouth [Thoth] which occurred this year on the seventh day before the calends of July whereas 100 years from the present [in the year] when imperator Antoninus Pius for the second time and Bruttius Praesens were consuls of Rome this same day occurred on the 13th day before the calends of August at which time the Dog Star habitually rises in Egypt. Hence we may know that of this Great Year - which, like said above, is named year of the Sun and year of the Dog Star and year of God - the present year is the hundredth.[2]
(excerpt from M.A. Thesis, by Damien F. Mackey (MA. B PHIL.) October, 1995 Sydney, Australia.

[1](*The Reconstructed Chronology of the Egyptian Kings, by M. Christine Tetley, 2014 posthumously, p. 163*) [2](*De Die Natali Liber, by Censorinus*)

22 Please note that the alignment in 2774 and 1315 BCE is determined independently using astronomic computation, and, thus, doesn't require the date 139 CE be 'right.' If you think you can align some astronomical date with the above statement about the Dog Star (Sothis), be my guest, but Thoth 1 is Jul 20 in 136-139 and Sothis may not rise on Jul 20 for the first time in any year, the only allowable dates at Memphis being on Jul 18 in 141 (Thoth 1 = Jul

19) and Jul 19 in 142 CE (ie. Thoth 1), so that 142 is the astronomically aligned date I find. Confirmation of Jul 19 as the time of Sothis rising is a record of a Sothic rising reported in Year 38 of the King Ptolemy III Euergetes I (238 BCE) as on Payni 01, which in the Egyptian calendar in this year is Jul 19. The *Decree of Canopus,* as it was called, had it succeeded, would have added an additional day to every fourth Egytian calendar year, thus (238 + 138) ÷ 4 = 94 days up to 139 CE, Thoth 1 in 139 being exactly 95 days after Payni 1 in that calendar, as unmodified, and Jul 19 falling the day before Thoth 1 in 139 CE, a situation that would be exactly right if Sothis always rose heliacally on Jul 19, whereas it did so on Jul 20 in 139 according to our astronomical calculator, PLSV. Agreeable with astronomy the Sothic Cycle has changed, and is now between 1453 and 1456 years long, not 1459, and it is merely a matter of slight spatial variations that makes it 1456 and not 1459 years, although we may be ecstatic about the problem of the wrong day, for it can be caused either by the location of the person who does the observing, by the atmospheric conditions, and the list goes on and on as to the other possibilities! It's ironic that the most recent Sothic rising, out of the four risings, is the only one having difficulties. What we conclude from our simple analysis is that Year 1 of Ramesses II was at the beginning of a new, Sothic Cycle, and helps explain his moving the capital north, for it was in the north that Sothis, so aligned, rose, and it was there that Ramesses left his great statues, at Memphis in Egypt, where Sothis 'began' in 2774 BCE.

First appeared in the article *The Ark of Urartu*



Above: Annular Solar Eclipse, Noah's Ark, Üzengili, Turkey, July 18 (Thoth 1*), 2774 BCE
*or perhaps the day before Thoth 1, as first suggested by Ward Green Dec 11, 2013
(synchronized with the heliacal rise of the Dog Star, Sothis)
(probably the most important chronological discovery to date, after The Deluge)

23 From 2774 BCE we constructed a chronology for Egypt in *Ark* in agreement with some pivotal testimonies. Since that article was being written during the period when the discovery of the *Eclipse of Nimrod* had actually not yet been made (then was made), the report on the 2774 annular solar eclipse was fresh but early. A review of our observations here appears forthcoming; may the reader be the judge of the content we present. In *Ark,* we say: "That the rule of Nimrod in its beginning preceded [rule of] Egypt is evidenced in the history of the ancient religious systems [naturally]."[1] It would be very logical to believe that the Egyptians began their calendar on the day of Sothic rising which corresponded to Thoth 1 as viewed at Memphis, since it was the same in Year 1 of Ramesses II, as we just saw. The magnificence of the Reign of Ramesses II will lend credence to the theory of such a prodigious beginning. Not only that, but chronology is always to be reckoned backwards from a known date, rather than from a guess, and the Sothic rising Ramesses Year 1 is astronomical, thereby making it excellent as the starting viewpoint. The 1315 Sothic rising is suffering at present, as did the 2774 Sothic rising, in its being newly discovered. Unlike the 1315 Sothic rising, though, the 2774 Sothic rising has the additional coincidence with an eclipse. The Narmer Palette seemed to suggest an eclipse on it. But the timing of our eclipse was in perfect agreement also with the chronology of Syncellus, who gave Nimrod as ruling from Year 2776 of the World (ie. from Adam).[2] Nimrod may be identified with the Egyptian King Narmer (as the similarity of their names is likewise evident) whose *Narmer Palette* depicts a seeming eclipse. Now, in our *Greenealogy,* Year 2776 of the World happens to be the year of an annular solar eclipse and it also so happens to be the Year 2774 BCE, because in this chronology Adam dates to (later in) 5550 BCE-- it is a date we determine at great length, independently. Of course, we need not be overconfident, as Syncellus, for all we know, may have used a similar Book to ours. That Book, for all we know, may also be an Holy Bible. The date 2774 BCE is far from "too good to be true," a date which requires much study, but in no way does the earlier date lessen the date 1315 BCE for Ramesses II, which we have already demonstrated to be lunar-aligned in a way consistent also with the *Exodus,* so we would do well to remember that Mr. Peter Huber gave us 1315 as the statistically favoured Ramesses II Year 1.[3]

[1](*The Ark of Urartu, 5.7*) [2](*Ibid., 6.10*) [3](*Journal of Egyptian History, Vol. 4, Issue 2, pp. 172-227, "The Astronomical Basis of Egyptian Chronology of the Second Millennium BC," by Peter J. Huber, 2011*)

Above: The Narmer Palette

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24 The *Exodus* date 1493 BCE, itself, is in our own *Greenealogy* closely connected to what is one of the best-known Sothic dates in Year 9 of Amenhotep I. The *Exodus* did not actually occur in the Year 9 of Amenhotep I, but a Sothic rising is shown in Year 9 of Amenhotep I, on Epeiph (III Shemu) 9, as written in the Ebers calendar, and many take this as an absolute, fixed date for the Egyptian chronology (Iron Furnace). In the *Ebers calendar,* it is noteworthy that in Year 9 of the Pharaoh the first day of the calendar is III Shemu 9 and is referred to the going up of Sothis, which has been widely interpreted as: heliacal rising. Precisely when this rising first occurred, should this calendar be like a projection into some future Year 9, is anybody's guess, except that it is readily fixed by astronomy, to an accuracy of plus or minus 1460 years! The time when Sothis rises heliacally, given III Shemu 9 as the date of first visibility, is either 1525 BCE, or it is 1460 years before or after 1525, when we take the place of observation to be Thebes and not Memphis. But why would this have occurred in Year 9 and be seen written in a calendar for that year? Is it not logical that there was great interest in the rising of Year 1? The simplest assumption that we can make is that it is Year 1 and not Year 9 that holds the greater interest, and that the rising of Sothis in Year 1 of a King then was to preserve for posterity the Year 1 of this King, which future astronomers could determine from the very date, which coincides with Sothis rising only in 1525! A simpler assumption is hard to imagine, but we should remember that here again we are faced with early days. During this writing we may be discovering things, that we only begin to understand much later, or appreciate. Yet there is a simple way to check a Year 1 by looking for lunar alignments in other dates during that Reign. For Ramesses II we had done that before, but the dates of Year 10 and Year 20 of Amenhotep I we had not done. Here, we need to determine Amenhotep's accession date. Possibly, of course, the accession date is the date of Sothic rising, but it need not be so. We are seeking a reckoning from a certain accession date, III Peret 21, which is that of Thutmose I, who reigned 12 years from the Eusebian version of Manetho, and died in 1493 BCE.[1]

[1](*Ancient Egyptian Chronology, 2006, p. 199*)

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25 His death date is immovable in our BG chronology, just a few days after May 03 near enough, as we may review. In 1493, the moon is invisible on Apr 17, and becoming visible again on Apr 18, with the Jewish calendar date of Nisan (Nissan) 01 being possibly Apr 19, "one true" path in history described in our *Joseph and On.* The month began Apr 17 with lunar invisibility, to the Egyptian religion, and had its religious full moon May 01, 14 full days later, as was the Egyptian reckoning. The full moon is symbolic of completion, and the later accession of Thutmose III is stated as 'certain' while we date it to the backdated position of May 01 1493 or Egyptian calendar date I Shemu (Pachon) 04, that year. Although we may be justified in doing this backdating, seeing as Pharaoh's firstborn son died on the night of Passover and was replaced by the next son, that night, that son's accession could only be considered as being on this day when we think of Thutmose I's Reign ending on a full moon for religious reasons. This is a little tenuous, to say the least, except that there are a few more details to factor into the equation. For example, when Thutmose II died, his accession date was subsumed by his wife Hatshepsut, who reigned until Thutmose III was 'of age,' and he later felt wronged by her so that he tried to obliterate all memory of her Reign. So, it perhaps is not all that unlikely that he subsumed that same accession date that she had gotten from tradition from her husband in the continuation of his own years. It would merely remain to find the date of Passover, a date determined from Jewish rather than Egyptian ways.

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26 The slaughter of the Passover victim took place at the time called in the Bible "between the two evenings," a time which was interpreted differently, depending upon how one defined the "evening" itself, since one school defined the first evening as sunset and the other just the moment when the sun began to set, the second being an evening at either dusk or at sunset respectively, a difference that caused a one-day difference of opinion in the day that Passover should be celebrated, whether at the beginning (evening) of the 14th day or 15th day of Nisan in the Jewish calendar, depending on beliefs. Jesus celebrated Passover with his disciples, and then he was crucified by Pharisees who celebrated afterward their usual Passover, according to their usual custom. The correct view, thus, is that the first evening came at full sunset, and the second at dusk, allowing a lot more time for the slaughter of the lamb, and requiring that Passover be eaten at the beginning of day 14, not that of day 15, having a consequence for all concerned that in our own calendar it began on day 13, actually. Thus, since May 03 is Nisan 15 in 1493 BCE (but begins on May 02, when we adopt Jewish tradition), day 13 may be seen ending on May 01, the start of Passover, also, and since Passover began on the evening of May 01, the death of Pharaoh's firstborn happened also that night. This startling coincidence makes it likely that Sothic alignment has been achieved with Amenhotep I Year 1 as 1525 (start ~August 1526), his Reign of 20 years and 7 months according to Josephus ending with the accession of Thutmose I on the 'certain' III Peret 21, or Mar 22 1505 BCE, continuing for the stated 12 years, to 1493. When the Sothic rising that occurred on Jul 13 1525 is considered as in Year 1 of Amenhotep I, it is aligned! This explanation is justified by the lunar alignments. Year 10 of Amenhotep I has a date I Shemu 01, which is now an exact Lunar Day 4 on May 04 1516 BCE, very near the new moon and a possible feast day for that reason. The Sothic rising date Epeiph 09 Year 1 is Jul 13 1525 and is here a Lunar Day 6 with Jul 08 as the new moon. Amenhotep I's Year 20 IV Akhet 19 in a graffito is now dated Dec 21 1507, a Lunar Day 7 fairly near new moon. Thus Amenhotep I's known dates appear as well aligned, even more so considering that grafitti are more casual and that Sothis ought rise on no particular Lunar Day. The result is more remarkable because 1493 BCE for the *Exodus* was obtained from the Bible and by using the dating of the solar alignment of Solomon's Temple! The impossibility of alignment makes it appear true!!! Also, may we not forget that Year 5 of Rehoboam was an importantly aligned date during the Reign of Shoshenq, whose Year 5 possesses a lunar-aligned, festival date.

Above: Pharaoh's daughter finding baby Moses *(Painting by Konstantin Flavitsky (1830–1866))*

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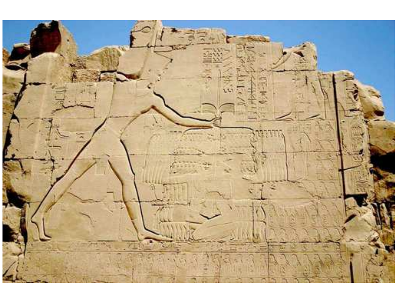
27 May the Reign of Ahmose I also be aligned with Sothis? It is by God's grace that we are standing, and that we understand some of his profound things (Romans 11:20). Josephus confuses Ahmose with 'Tethmosis,' the Pharaoh of the *Exodus,* while Manetho likewise conflates the departure of the Hyksos after Ahmose defeated them with the later departure of Israel under Moses, and it is during the Reign of Thutmose I that Israel departs. It's from Manetho that Josephus calls him 'Tethmosis,' and he says that he drove out a tribe of shepherds who went to Jerusalem thereafter, and that Tethmosis ruled thereafter for 25 years, the Reign of Ahmose actually, and too long for the 12 years of Thutmose I, sensibly. Our chronology with the *Exodus* in 1493 clearly, logically shows that Israel remained until Thutmose I. The Greek form of 'Thutmose' is of course 'Tuthmosis.' 'Thutmose' and 'Tethmosis' are wholly interchangeable. Consonants of ancient language being like desert sand, as it were, but vowels would be like dust in the wind. The sequence and duration of Pharaohs from Ahmose I is believed to be firmly established as 1. Ahmose I- 25y, 2. Amenhotep I- 21y, 3. Thutmose I- 12y, for all three Manethan versions converge with 25 years for Ahmose I, and modern pundits do agree that Thutmose I was called Miphres or Mephres by Manetho with his 12 or 13 years. Not that we rely on modern consensus, our dating being unique and *Blessed Greenealogy*-- we are unique. We don't make history-- history has already happened-- we are seeking to find out what happened, and tell it. We can see the 'truth' in what Manetho says, even when the 'technical quality' falls short in name or detail. Only because we have the *Holy Book* have we been able to determine with confidence what the 'truth' is. We and I have been on a journey, and to all those who, along the way, have helped us and me, I do say thanks. Some have made significant sacrifices to help us along the way, and these, especially, deserve our gratitude. Ancient authors and those who transcribed their works, later, may have helped us greatly to find out history, but we should be clear that our understanding changes, and will continue to change, as we gain understanding. Based on the 25 years of Ahmose I, we would set Year 1 for him at 1551 (possibly late 1552), considering that Amenhotep I's Year 1 is fixed Sothically at ~Aug 1526, and at latest before Jul 13 1525, by Sothic alignment. It is remarkable that secular sources have given quite similar dates for these two Kings, and the radiocarbon date of 1557 BCE for Year 1 of Ahmose I is also known. Radiocarbon dates are subject to bigger uncertainties. So our BG chronology has been aligned as for Ahmose I. We hope to discuss Manetho further in Chapter 3, as to the *Exodus* and its place in history, but we now turn to the dating of Jericho, and how it is relevant.



Above: Thutmose III smiting Canaanite enemies on the seventh pylon at Karnak *(Artwork describing the Battle of Megiddo, 15th Century BC.)*

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28 As far as I can recall, I was never grateful to people for telling me where to change trains or change buses, because I always expected such knowledge to be posted. It did make me angry to find out that it was so vague. I am grateful now, but far more to those helping more. In the world of golf, let's be clear, Jack Nicklaus is a human, and you were a great golfer, Jack, in my day. Lee Trevino, no question, I view Lee as a god in golf. I find Arnold Palmer to be one of the saddest golfers. Generally, though, golfers are a sad bunch, or golf is enough to make anyone very sad, as difficult as it is. The greatest of all time is for me Bobby Jones, unless it's Tom Morris or his son, young Tom Morris, perhaps. We make people examples, though, not because of any of their accomplishments, but for how that all turns out. Based on Tiger Woods, all of his forebears are idiots. While we are talking about history, Jericho was a case where modern archaeologists came along some 3500 years after Joshua and found that the Bible was just a hoax, based on pottery that (supposedly) wasn't found there. First of all, I would be thrilled if someone could put me onto an expert in trading partners of millenia ago. Even in a seaport village these things depend upon the trading partners, and Jericho is a tiny, inland place. Of course, pottery sherds are very interesting to see! However, to expect pottery dating to be as accurate as 100 years back as far as three millenia is... hopeful. However, we don't have astronomical alignments for our benefit (please God?) at Jericho, so we are left with: 1. radiocarbon measurements and 2. pottery typologies. Oh, one more thing-- we have the Bible, which says the Israelites arrived at Jericho and conquered it, as its wall fell down flat in their presence, and we have the date of this event as determined by Babylonian records of Jerusalem's captivity in 597 BCE, together with the Bible chronology and our research effort, as 1452 BCE. There are, of course, astronomical alignments for some chronologically related dates like Solomon's Temple, a date 479 years after the *Exodus* (1Kings 6:1) as we read, the Sabbath during the second month, 22nd day of the Jewish lunar month (Exodus 16:1), over 40 years before Joshua led his people Israel down into Jericho. Jericho is below sea level, an inland city, and it had at one time a very high wall around it, as well as its outer wall, and a steep slope between the two walls as a defense, with dwellings situated on this outer wall. It was in one of these outer buildings that Rahab, the prostitute, met the spies sent by Joshua and hid them. Modern archaeology has revealed that these outer rooms would have provided the access needed for the spies to leave and for Rahab's family to be lowered safely out![1] Happily, archaeology also revealed that the city wall, the upper one, had fallen over the outer one, prior to the city having been burned, a remarkable confirmation that the wall fell down before Israel burned the city. The Bible story is told in the Book of Joshua, and for

down before Israel burned the city. The Bible story is told in the Book of Joshua, and for years archaeologists had hoped to confirm it as truth.

[1](*Joshua 2:15*)

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29 Kathleen Kenyon concluded from her own, archaeological dig that the Jericho with the high walls was destroyed about 1550 BCE, and she believed this date was earlier than would be required by the Bible stories of Joshua. We should add that Ms. Kenyon's interpretation had the effect of causing her own loss of Bible faith, and had the same effect on many others, even to this very day. In part, this was because an earlier excavator, by the name of John Garstang, had decided the Bible dating of Jericho should be 1400 BCE, which his dig established, based on his own expert's dating of the local pottery. Ms. Kenyon did not find imported Cypriot pottery, such as she believed would be required for the later dating of Jericho proposed by Garstang, a deceptive argument, considering her dig's scale, an argument from absence. It was shown that Cypriot pottery was found at Jericho (by Bryant G. Wood), and his date would echo Garstang. However, radiocarbon dates from Jericho have tended to indicate older dates-- older by decades, or centuries. Thomas Levy wrote this on radiocarbon dating, in 2010:

> **A radiocarbon date is only as good as its context, so all efforts must be mobilised to provide securely provenanced samples.**
> (*Antiquity 84 834-847*)[1]

One problem with radiocarbon measurements is old wood, which can lead to dates older than that of habitation. However, some error can be removed by the study of the many layers of a long-inhabited city, such as Megiddo. It was at just such a city (in fact Megiddo, in Israel since ancient times) that Mr. Mark Toffolo conducted a new high-resolution radiocarbon study in 2014 with his 'coauthor' and PhD supervisor, Mr. Israel Finkelstein. The presence of Mr. Finkelstein's name on the work now known as *Radiocarbon,* Vol 56, Nr 1, 2014 is not without interest, as he has been a very vocal advocate of a low chronology which renders the Bible date moot. More significantly, the article raises the date of the end of the Late Bronze I period to 1450, or even 1530. Since, in Garstang's time, the Late Bronze I was still believed to end in 1400 BCE, these Megiddo radiocarbon results would appear to raise Joshua's dating to 1450! Indeed, all pottery from the end of Late Bronze I does now appear to need to be raised (in date) by 50 years. Thus, Garstang's 1400 could easily have been 1450 BCE. In 1942 Mr. G. Ernest Wright noted regarding Garstang:

> **Absolutely all that we can now say about it [ie. Jericho] with certainty is that the city fell to the Hebrews sometime between cir. 1475 and 1300 B.C.**
> (Shifting Sands, by Thomas Davis, 2004, p. unnumbered)

Our 1452 BCE date for Jericho's conquest by Joshua may be completely in harmony with Garstang's observations. Concerning Kenyon's own conclusions, Mr. Wood has used the pottery from Jericho to argue in favour of his own understanding of the Biblical date of Joshua, c. 1400. His understanding of Solomon's day is low by 50 years, as indicated by the date of Jerusalem's captivity with the Reigns of Jerusalem's Kings added back to Solomon. The Bible is the source for these Reigns, not Assyria. His pottery dates likewise need be raised by 50 years.

[1](*Antiquity, Vol. 84, Issue 325, pp. 834-847, "Ancient texts and archaeology revisited--radiocarbon and Biblical dating in the southern Levant.," by Thomas E. Levy et al., Sept. 01, 2010,*)

Above: Last Supper, Pinacoteca di Brera, Milan *(1631-32 painting by Peter Paul Rubens, oil on canvas, 304 x 250 cm)*

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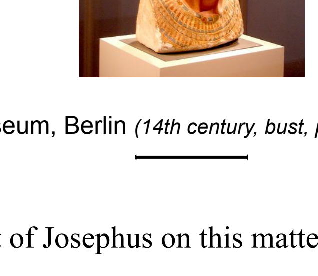
210 We can find no lunar alignment at Jericho, as we said. However, Moses has a lunar alignment based on a Jewish tradition that states that he died on the Sabbath day, on the Jewish calendar day Adar 07, his date of birth. We identified this date as Saturday, Feb 21 1452, when Moses was 120 years old at his death (born: 1572 BCE). Adar 07 is lunar-aligned to the new moon: Feb 15 1452. Since the *Exodus* began May 03 1493 BG, the time from then to Moses' death was 40 forty solar years (as the Bible says), about 2.5 months less than 41 years!! Both dates are lunar aligned, and the second one comes very shortly before Joshua razed Jericho by a burning. This has consequences for the Reign of Ahmose I, in an interesting sense, because of these following reasons: From what is believed about Ahmose, there was a quarry that was inaugurated in Year 22 of his Reign, and oxen used in the inauguration ceremony had been taken after a 3- to 6-year siege of a town, the siege of which had begun only after the capture of Avaris, so the capture of Avaris can have occurred no later than his Year 19. Since Avaris was the Hyksos capital, and Ahmose is the King who drove out the Hyksos, it is more logical than anything else to guess the Hyksos had left by Year 19. With Ahmose I's Year 1 in 1552 at earliest, and even a 6-year siege of Sharuhen, Year 16 of Ahmose is 1536 or so, and the Hyksos departed between 1537 and 1532 BCE, guessing that they had left by Year 19 of King Ahmose. The reason that this is so interesting is that Egypt's history is very confused regarding the Hyksos in their similarity to the *Exodus* of Israel, although we know that they were argued over at great length by the Jewish historian Flavius Josephus, he insisting on the distinctness of the two groups; however, we saw before from the date of Moses compared to the Hyksos Dynasty, which preceded that of Ahmose I, that Moses was likely born during the Reign of Apophis and adopted as one of them prior to the Reign of Ahmose, and as we know from the Bible that Moses left Egypt to go to Midian at the time 40 years before the *Exodus,* synergy should insist that Moses could have left by 1532 BCE with the Hyksos or near that time, since he then was of age 40, the age recorded in the Bible at Acts 7:23, Acts 7:30! We have now a beautiful explanation for the confusion, evident in Manetho, and ranted much about by Josephus. Let us see if we can demonstrate Manetho's chronology:

> **1552 - (287 - 19 - 1 - 5 - 12 - 13) = 1315, Year 1 Ramesses II !!!**
> (The Chronology of the Old Testament, by D. R. Fotheringham, 1906, p. 122, Manetho-Africanus with removal of Reigns of Amenophath, Ramesses, Armesses, Acherres, Chebron, from 'Manetho w/ an English Translation,' by W. G. Waddell, 1940, p. 107, using the analogy of Sethos as Ramesses [Ramesses II] from the work 'Against Apion,' by Josephus, i, sections 15, 26)

The recognizable conflations that appear in *Against Apion,* of Seti I for Ramesses II, and Armais, with verisimilitude to Horemheb the usurper and violator of the Queen's dignity after the death of King Akhenaten, the same Horemheb who was known militarily to Assyria, Akhenaten also represented in both Horus and Acherres, together with the chronologically synchronous Reign of Chebros, allow exclusion of the years for these Kings. Horemheb is here contained in the 12 years of Chebres, and the 12 years of Acherres is a redundant duplicate. This understanding, while not without many flaws, does arrive at the exact Year 1 of Ramesses II, who seems a fitting Aegyptus as the one after whom Egypt is named, and the most famous of all Pharaohs with a long Reign. In this way has Manetho had a resolution in Africanus!



Above: Nefertiti, Neues Museum, Berlin *(14th century, bust, painted stucco on limestone, 19 inches tall)*

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211 Turning now to the account of Josephus on this matter:

> **247 - 1 - 4 - 12 - 13 + 1315 = 1532, Hyksos depart Egypt !!!**
> (The Chronology of the Old Testament, by D. R. Fotheringham, 1906, p. 122, Manetho-Josephus with removal of Reigns of Ramesses, Armais, Acencheres, Chebron, from 'Manetho w/ an English Translation,' by W. G. Waddell, 1940, p. 107, using the analogy of Sethos as Ramesses [Ramesses II] from the work 'Against Apion,' by Josephus, i, sections 15, 26)

This case is different in that Josephus makes it clear that 'Tethmosis' (read 'Thutmose I) rules for 25 years *after the Hyksos departure,* so the calculation, done using the 1315 Year 1 obtained earlier by us, and excluding the exact same Reigns as we do in Africanus, gives the year in which the Hyksos Rulers leave Egypt! It actually appears to confirm the 1532 BCE date which we found to be the latest date for the Hyksos' defeat! This is more remarkable because it is also a discovery made just now in the preparation of this very article. It makes things much more interesting to write afresh, the 'ancientness' of Manetho being otherwise stifling. How many other chronologies can we find that have this ability to confirm the writings of Manetho, so easily?

As for Eusebius and his version of Manetho, we compute (Reigns in round brackets only for Orus to Cencheres):

> **(371) - 40 - 68 - 5 - 8 - 13 + 1315 = 1552, Year 1 Ahmose I**
> (The Chronology of the Old Testament, by D. R. Fotheringham, 1906, p. 122, Manetho-Eusebius with removal of Reigns of Amenophis, Ramesses, Armais, Acherres, Chebron, from 'Manetho w/ an English Translation,' by W. G. Waddell, 1940, p. 107, using the analogy of Sethos as Ramesses [Ramesses II] from the work 'Against Apion,' by Josephus, i, sections 15, 26)

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212 The BG chronology is apparently aligned with Sothis in the Reign of both Ramesses II (1315 BCE) and Amenhotep I (1525 BCE), purifying the Egyptian annal of Manetho. The controversial Horemheb graffito, dated I Shemu 09, Year 27 (with Year 1 in 1344) is an exact new moon Mar 23 1317 in the possible scenario that he died in 1317! This would permit two years and some months thereafter for Ramesses I (with Seti I coruler with Ramesses II), whose Reign as "Menophres" had only a Year 2 attested. Remarkably, the date (II Peret 20) is aligned with the moon in 1315 as a Lunar Day 02 Jan 03, this date being late in Year 2 of Ramesses I and six months before the Sothic alignment in Year 1 of Ramesses II, allowing no room for a Reign of Seti I of any duration in between.* The stela date of Lunar Day 02 is a probable alignment for Year 2 of Ramesses I on this date in 1315, but the Reign of Seti I would then be included within the time of the Reign of his son, Ramesses II, ie. a coregency. There may have been competition between Horemheb and a Ramesside King during the last 14 years of the '27' of Horemheb, masking the Reigns of Ramesses I and Seti I. It could still revert to the position we present where Ramesses I rules in 1331 to 1329, then Seti I to 1315. The Sothic alignment with Thoth 1 (New Year's Day) for 1315 BCE does not appear to be one a King can give up, which would incline Ramesses II to make it his Year 1. Even if it were Seti's Year 1, a father of Ramesses II would hardly want to deny his son a great distinction. Ramesses II was crowned in the presence of Seti I, his father, as monumental evidence indicates, although the precise chronology of this coronation remains unclear. Jehovah will surely reveal any further necessary fact. Manetho allocates anyway only a few years for Ramesses I and Armais together, and puts (in Eusebius) Ramesses II for 68 years immediately following Armais, allowing Seti 51 or 55 years, and only in Dynasty 19, preceding Ramesses (61 or 66 years and plus 60 years), too great a Reign for Seti, unless he reigns along with his son. This might be true, except: "Ramesses II's regnal year count did not begin under Seti I," as stated on p. 211 of the book *Ancient Egyptian Chronology* (2006). No basis is given for this claim, which must therefore be viewed as totally unfounded, based on the monuments and their lack of "double dates" during the coregency. We just don't see the propriety of basing a chronology on objects whose interpretation depends on chronology. On the whole, the BG as we see it now is well-aligned. There will continue to be analysis of ancient sources. Yet, alignment of Sothis to Egypt runs our chronology. Manetho takes on the dual persona of god and devil for makers of Egyptian chronology: none better, few worse. So, we take as a blessing good agreement with Manetho. We may now consider the encouragement Manetho gave us.

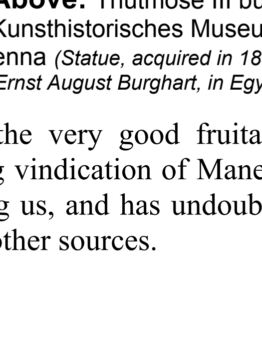
* Later in this article, in Chapter 5 paragraph 7, there is presented another possible interpretation of Seti's Year 1 as in 1318 BCE, and this puts Ramesses I Year 2 II Peret 20 date in 1318 (Jan 04) and as a LD-1, early by one day for LD1, yet still potentially a stela date (possibly as a negative error for LD1) as indicated, a situation which puts Year 1 of Ramesses I in 1320 BCE, as is likely, with Horemheb's death at near that time. However, it should be noted here also that the Year 27 for Horemheb is believed to be a 'burial' date, and as such is customarily not 'lunar influenced,' with these funeral events held precisely 70 days after the death. There is thus little reason to expect lunar alignment, for Horemheb's burial date, nor to rule it out either. Horemheb could have acceded in 1341 BCE and Ay in 1346 on the death of Tut, I noted in Book 33 p. 10, Dec 18, 2015, which makes Horemheb's dates LD3, LD3 and LD5 as from Years 1, 3 and 6 respectively (with Year 1 1341), while Horemheb's Year 27 burial date could assume Ay's Year 1 (ie. the usurping of Ay's Reign) in 1346, which with the death of Tut in early January 1346 is Year 27 at a Julian date up to 6 days earlier in January 1320. With I Shemu (Pachon) 9 as Mar 24 1320 for Horemheb's, dated burial, 70 days earlier is his death thus on Jan 13 of 1320 BCE, making Tut's death before Jan 19 1346. When, as was considered in our 'B4' article, par. 2-11 (see Chart 1, par 1-2b, 2-1b and Table 3, 2-8, 7-7-b), Tut acceded in late summer 1355, the Year 9 Wine label attributed to him is now here dated autumn of 1347 and his death (which we put previously in Jan 1348) is now apparently fitting (so remarkably neatly) in Jan 1346.

end of Chapter 2: Chronology Aligned Under Sothic Egypt

Chapter 3: Manetho Offers Real Encouragement

> **A fool scorns his father's instruction; but he that keeps his commandments is more prudent.**
> **(*Proverbs 15:5, Septuagint by Sir Lancelot Charles Lee Brenton, 1851*)**

> **El loco menosprecia el castigo de su padre; mas el que guarda la corrección, saldrá cuerdo.**
> **(*Proverbs 15:5, Las Sagradas Escrituras Version Antigua, 1999*)**



Above: Thutmose III bust, Kunsthistorisches Museum, Vienna *(Statue, acquired in 1821 by Ernst August Burghart, in Egypt)*

31 While the Sothic alignment of Year 1 for the two Kings Ramesses II and Amenhotep I of Egypt have, as far as I know, never before been mentioned in the literature of the subject, there are many reasons for us to rejoice. It is vital to remain humble in the face of discovery. It would be a mistake, however, not to notice the very good fruitage that our *Blessed Greenealogy* has, as manifested in its startling vindication of Manetho. Manetho has passed through a great many hands prior to reaching us, and has undoubtedly seen much corruption, but he is relied upon when there are no other sources.

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32 A priest who lived in the time of Ptolemy I, of Egypt, c. 300 BCE, Manetho appears correlated with the period of the Egyptian Ptolemaic Kingdom which began 323 BCE, and perhaps was working down to Ptolemy III (246-222). Manetho came from Sebennytos, on the lower Nile River, northern Egypt, writing his *Aegyptica* in Greek. He was said to have been a chief priest of Heliopolis. The *Book of Sothis* is also associated with him. In *Aegyptica,* he originated the term "Dynasty." None of Manetho's works is known, and they are brought to us by means of other writers quoting from his work. Since his works were involved in rivalries between the Egyptian, Jewish and Greek histories of old, they were probably quoted with 'alterations' for such a purpose. Josephus quotes him in the first century CE, taking an opposing view (in *Against Apion),* the earliest. Later *Epitomes* of Manetho were preserved for us by Sextus Julius Africanus, Eusebius of Caesarea (this by Jerome's Latin work; also an Armenian translation), plus a George Syncellus version of

Africanus/Eusebius. Manetho to Syncellus took, all-told, about 1100 years, with our first record 400 years after Manetho offered. As we were taught, in my family: "Like it or lump it."

[3] Ramesses II lived 1000 years before Manetho, and ruled from 1315 BG for a period of 66 years, or in Manetho a period of 68, 66, 61, or 60 years in various versions. The 68 years of Manetho could be a combination of the 66 Regnal Years of Ramesses II, and the current BG version. More importantly, the *Exodus* did not occur near to the time of Ramesses I and II, as seems popular for scholars to say, but Manetho says it occurred prior to Ramesses by over 100 years, in the Reign of Tethmosis. Manetho, in the version of Josephus, is thus in agreement with the BG and refutes the popular opinion! This offers real encouragement for us BG believers, in that such an ancient and respected source could agree:

Manetho says [the Exodus] occurred prior to Ramesses by over 100 years, in the Reign of Tethmosis.

I shall therefore resume my quotations from Manetho's works in their reference to chronology. His account is as follows: "After the departure of the tribe of Shepherds from Egypt to Jerusalem, Tethmosis, the king who drove them out of Egypt, reigned for 25 years..."
(Against Apion, i, 15, 16 by Flavius Josephus)

This remarkable quotation from Manetho by Josephus has the effect of dating the *Exodus*, whether of the mixed Hyksos, or that of Ahmose I, at a distance in time quite definitely before the Reign of Ramesses. In the BG, we have seen that the "Shephards" may refer to either the Israelites or the Hyksos Kings, and that they both left Egypt within a fifty-year span of time. We want the words of Josephus to calculate the correct time for the departure of the Hyksos Kings from Egypt. The King who drove out the Hyksos, Ahmose, didn't rule afterward for 25 years, but for 25 years in sum total. In *Against Apion*, section 16, Josephus quotes Manetho's stories about Amenophis who dates, according to Manetho, 518 years after the Jewish epic. In a similar way, Josephus puts Ramesses much later in Dynasty 18 than Tethmosis-- in the BG 178 years later! Josephus disagrees strongly that the Jews lived in the time of Amenophis in Egypt but left 518 years earlier. In the same way we (and he) should have to strenuously disagree that the *Exodus* occurred in the era of Ramesses II, yet also more than a hundred years prior.

Above: Self-Portrait, Rubens House, Antwerp *(1628-30 painting by Peter Paul Rubens, oil on canvas)*

[4] At the end of Chapter 2 we showed how the years can be reckoned from Manetho to add up to the correct date of Ahmose I Year 1 and to the date the Hyksos left Egypt. May we get from Manetho the date of the *Exodus*? For Ramesses I in 1329, he rules 164 years after 1493. So we are looking for totals of 164 years, in Manetho, from the end of the Reign of Thutmose I in the BG, who died in the *Exodus* (this is Mephres, Misaphris, or Miphris in Manetho, according to today's scholars). First, we consider the account of Manetho in Josephus:

247 - (1 + 12 + 25 + 13 + 20 + 12) = 164 years, Exodus to Ramesses I
(The Chronology of the Old Testament, by D. R. Fotheringham, 1906, p. 122, Manetho-Josephus with removal of Reigns of Amenophis, Acencheres, Tethmosis, Chebron, Amenophis, Mephres, using the modern-day identification of Mephres with Thutmose I and the BG identity of Thutmose I as Pharaoh of the Exodus)

One of the two duplicate Reigns of Acencheres- 12y, is removed, and the order of the Reigns adjusted to place Ameses (Hatshepsut) after Mephres (Thutmose I), which is the correct order, allowing the removal of the four Reigns preceding the Exodus (Ahmose as Tethmosis- 25y, Chebron- 13y, Amenophis- 20 y and Mephres- 12y) and 1y for Ramesses I, since his Reign is no part of the sum. We arrive at 164 years and 1493 - 1329 = 164, also, as we find Manetho is very encouraging in this case, too!

[5] Let's try once more for Manetho according to Eusebius:

348 - (40 + 68 + 5 + 25 + 13 + 21 + 12) = 164 years, Exodus to Ramesses I
(The Chronology of the Old Testament, by D. R. Fotheringham, 1906, p. 122, Manetho-Eusebius with removal of Reigns of Amenophis (40) Ramesses (68), Armais, Amosis, Chebron, Amenophis, Miphris, using the modern-day identification of Miphris with Thutmose I and the BG identity of Thutmose I as Pharaoh of the Exodus)

Here Armais- 5y is removed (as Ramesses I, say), after that, Ramesses- 68y and Amenophis- 40y are removed, as they come after Ramesses I, and the first four Reigns, Amosis- 25y, Chebron- 13y, Amenophis- 21y and Miphris- 12y are all preceding the Exodus, with Miphris here as Pharaoh of the Exodus (Thutmose I in the BG), for 164, the same total necessary to account for it once again! Note also how the 68 years of 'Ramesses' is, possibly, from 2 years (Ramesses I) plus 66 years (Ramesses II)!

Above: The Chronology of the Old Testament by D. R. Fotheringham (1906), p. 122 *(the 18th Dynasty Egyptian Pharaohs from Manetho, as recorded by Africanus, Josephus, and Eusebius; also, "18th" Dynasty Greek Shepherds: 518 years, Africanus)*

[6] Viewing the numbers for Manetho from Julius Africanus:

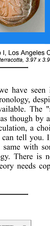
287 - (19 + 1 + 25 + 13 + 21 + 13 + 31) = 164 years, Exodus to Ramesses I
(The Chronology of the Old Testament, by D. R. Fotheringham, 1906, p. 122, Manetho-Josephus with removal of Reigns of Amenophath, Ramesses, Amos, Chebros, Amenophibis (corrected to 21), Misaphris, Amenophis, using the modern-day identification of Misaphris with Thutmose I and the BG identity of Thutmose I as Pharaoh of the Exodus)

The 'errant 24' years of Amenophthis in Africanus were 'corrected' to 21, and Amenhotep III (as 'Horus- 37y', and 'Amenophis- 31y') as 'Amenophis' removed, giving a preference to him as 37 years for 'Horus', seeing that 'Acheres' (Akhenaten) had 32 years (a fot) allocated. Our manifest total of 164 years is so obtained, again!

[7] One more thing we ought to try is the stated total for Africanus (as 263), which differed from the 287 gotten by adding the numbers for Manetho in Julius Africanus:

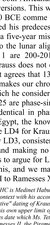
263 - (19 + 1 + 5 + 12 + 25 + 24 + 13) = 164 years, Exodus to Ramesses I
(The Chronology of the Old Testament, by D. R. Fotheringham, 1906, p. 122, Manetho-Josephus with removal of Reigns of Amenophath, Ramesses, Armesses, Acheres (12), Amos, Amenophthis (24), Misaphris, using the modern-day identification of Misaphris with Thutmose I and the BG identity of Thutmose I as Pharaoh of the Exodus)

The lower total of 263 allows us to imagine that there is no contribution to the total from 'Chebros', and we subtract the 24 years of 'Amenophthis' from Africanus. The 5 years of 'Armesses' are subtracted, yet 12 years ('Chebres') after 'Rathos' (Tutankhamun) seems enough, for 'Acheres' (as Akhenaten) has a generous 32 years. The total for Manetho-Africanus is also made to work!! How encouraging an exercise this has been, seeing that Manetho in the BG can always be made to add up to 164! If you think this works for any other number-- try it!



Above: Mould of Amenhotep I, Los Angeles County Museum of Art *(18th Dynasty, terracotta, 3.9' x 3.97 cm)*

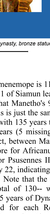
[8] Thus, from the time of the *Exodus*, we have seen Manetho supply us a tremendous amount of encouragement for our BG chronology, despite much obvious corruption in the widely differing versions of Manetho available. The "short, but sweet" 164 years from *Exodus* to Ramesses times are obtained as though by a miracle in Manetho, for although we are afforded some latitude in our calculation, a choice of random numbers will never add up to some required total, as anyone can tell you. If someone does not think this is a miracle, we invite them to try to do the same with some other chronology. Or they are welcome to join us in our 'bg' chronology. There is no copyright on the truth, and the ridiculous notion that a chronological theory needs copyright can be seen as an obvious fiction, in 'need' of copyright.



Above: The Chronology of the Old Testament by D. R. Fotheringham (1906), p. 123 *(Dynasties 19, 20, 21, Egyptian Pharaohs from Manetho, as seen recorded by Africanus, Josephus, and Eusebius)*

[9] Is there further encouragement for the BG, in Manetho? Dynasty 21 begins with Smendes, and is 130 years long. All three versions of Manetho have 130 for that total, although in Africanus the Reigns add up to merely 114. The total of 130 for all three versions is very strong evidence that it was the number Manetho also recorded. Now, according to the Biblical account, Zerah of Egypt (identified by us, as well as others, as Osorkon I) is killed in a battle with King Asa of Judah near Year 15 of Asa, but shortly before; we now suppose it Year 14. In the BG, Year 14 of Asa comes to 957 - 14 + 1 = 944. This number, 944 BCE, is the death of Osorkon I in BG. In Dynasty 22 of Manetho, Sesonchis (Sesonchosis) gets 21 years in both Africanus and Eusebius, and Osorthon, the successor to Sesonchis, 15 years in both versions. This would appear to date Shoshenq I 36 years prior to the death of Osorkon I (980 BCE comme Gerard Gertoux). The BG date for Shoshenq is 993 BCE, whereas we placed his predecessor, Psusennes II, in 1015, which seems to say that Psusennes died in 980, a five-year mistake if that Dynasty ended in 985, or 130 years after Smendes. According to the lunar alignments of Krauss, the years from Ramesses II Year 1 to Smendes Year 1 are 200-201, and from Smendes Year 1 to Amenemope Year 10 about 85.[1] Mr. Krauss does not consider a date as high as 1315 in his analysis of Year 1 of Ramesses II, yet agrees that 1314 (our 1315) is the sole prospect besides 1279 BC[2] This conveniently makes our chronology compatible with his within the period of the 19th-20th Dynasties which he considers, ours being 25 + 11 years higher and thus having lunar similarity (11 and 25 are phase-similar). Years differing by 25 years or by 11 years (or 36) are thus nearly identical in phase for the lunar position. Using a visibility arc of 11.10 deg at Memphis, Egypt, the known Piramesses date is the required Lunar Day 1.[3] The two graffiti that were LD4 for Krauss are now LD5. Five other graffiti mentioned by Mr. Krauss as LD2 are now LD3, consistent with the fifth (ie. 'DB 31') being written 'during the feast-offering' (ie. Sunset) when no mention of a god or offering (in harmony with MHC 159, that Krauss uses to argue for LD1/LD2 offerings only). Thus, our chronology is as good as or better than his, and we may even be able to use his relative chronology for the years from Ramesses II to Ramesses XI/Smendes.

[1]*Ancient Egyptian Chronology, 2006, p. 414; Note: MHC is Medinet Habu Calendar*
[2]*Ancient Egyptian Chronology, 2006, p. 417; his reviews which are incompatible: Table III, 8.31, this '1314' may be an error in the text, which treats 1304. Regardless, the "relative" dating of Krauss is used by us using 1315 as Ramesses II Year 1, and works, though Mr. Krauss actually may put his own chronology into the range of consideration at just 11 years lower. He also excludes 1304 Yr 1 on the basis that the Piramesses date which Mr. Tetley noted excludes 1279 (see below.)*
[3]*Lunar Day 1 of Peret (Mechetir) 27 Year 42 of Ramesses II, the Piramesses date, is valid for a range of arcus visionis values from 0 to 11.49 (Thebes), for 0 to 11.10 (Memphis), and 0 to 11.06 (Piramesses) with PESV 3.1 on 1264 and Dec 28 as Mechetir 27 in 1264 BCE, and the last visibility of the lunar crescent, as seen in Rita Gautschy's table (Memphis) is Dec 27 1264 BCE, Lunar Day 1 or one moon being the day after or Dec 28. (Gautschy's table from R. Gautsche, "Mondalter aus dem Archiv von Elephan. Chronologie des Mittleren Reiches" in the journal Zeitschrift für ägyptische Sprache und Altertumskunde 178, Ht. 1, 2011, 1-19, or an internet site www.gautschy.ch/~rita/archiv/mond/mondalog.html) Gautschy's tables include the lunar azimuth angle with respect to the Sun, which is independent of moon ages. To estimate the azimuth angle, we used Celestia 1.6.1, and obtained 3 degrees of horizontal azimuth on Dec 27 1264 BCE, as seen from Piramesses at sunrise that day. This also implies an arcus visionis of between 8.8 -- 8 (ag = -10 deg) and 10.2 -- 6 (ag = -9 deg), the middle of these two values of Schaefer's being 9.5 +- 2 degrees-- which is under 11.06 (Piramesses, above)-- thus within the 0 to 11+ degrees range for which LD1 holds, so BG, On the other hand, 1279 BCE in Year 1 Ramesses II does not meet this requirement, and is made to work only by changing the Piramesses date artificially; to the 28th day of Mechetir (Christine Tetley's book, p. 425).)*

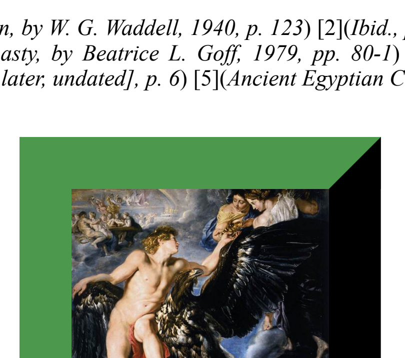


Above: Siamun *(21st Dynasty, bronze statue in form of sphinx)*

[10] The 85 years from 1 Smendes to 10 Amenemope is 1115 to 1030 in our last (B4) article, exactly 85 years, true. Also, 1024 as Year 1 of Siamun leads to 1015 Year 1 of Psusennes II, and a fascinating, needed characteristic that Manetho's 9 years for Siamun combines with the 35 for Psusennes II to give 44, and the 44 years is the same number of years as from Year 1 of Siamun to the end of Dynasty 21 (but with 135 years total for the Dynasty). We see now where the discrepancy is-- it was 41 years (5 missing years) for Psusennes I, or 46 in Africanus[1] The only differences, in fact, between Manetho as told by Africanus and by Eusebius are 5 years for Psusennes I (more for Africanus), and 21 years for Psusennes II, the difference between 35 or 14 years for Psusennes II seeming an eerie echo of the 21 years of Smendes I at the start of Dynasty 22, indicating a consistent number, 56 years, for a combination of Shoshenq and Psusennes. Note that the 14 for Psusennes II seems wrong, because it is at odds with the stated total of 130-- which now looks to be truly 135 (Smendes - Psusennes II = 10y). The 35 years for Psusennes II is obtained in Manetho, by being the maximum total time attested for each Reign!! This result is not entirely

unexpected for Dynasty 21, because we know that Siamun has a Year 17 attested and yet his Year 10 is the same as Year 1 of Psusennes II. Mr. Krauss has argued for 24 years for Psusennes II, a figure considerably less than 35, but it lines up well with the years 1015-980, his likely Reign, and is also close to 25 years for Psuenus from the Book of Sothis.[2] Because the Egyptian year is one quarter of a day less than our year, the date Dec 28 in Year 17 of Siamun is four days less and comes on Jan 01 in Year 1, meaning, the Dec 28 1009 Year 17 date was Jan 01, 1024, Year 1. This could have been Siamun's accession date for 1024! The 14 years of Psusennes II in Africanus may be taken to mean the death of Siamun in 1007, with Shoshenq I's Year 1 as 993 in the BG, thus 19 years for Siamun, the popular amendment to Manetho's 9 years (for Psinaches, the King believed to be Siamun) would appear as false. The highest attested date for Siamun's Reign, found on a pillar of the Middle Kingdom in Karnak, Year 17, has been confirmed in a graffito at Abydos, exceeding '9'.[3] Gertoux has the solution to this dilemna, in proposing that the death of Pinedjem (Pinudjem) II in Year 10 of Siamun marked the accession of his son, Psusennes III, who is identified later with Pharaoh Psusennes II, the successor of Siamun, so thought to be the same person.[4,5] With 1024-944 as the 80 years of Siamun, Psusennes II, Shoshenq I, and Osorkon I combined, Smendes at 1115 is 91 years earlier than Siamun, and Amenemope Year 10 is 6 years earlier than Siamun in 1030 and 85 years after Smendes Year 1 (1115), while the work of Krauss showed that Ramesses Year 1 to Smendes Year 1 is 200-1 years, in agreement with the BG date of 1315 Year 1 Ramesses.

[1](*Manetho, with an English translation, by W. G. Waddell, 1940, p. 123*) [2](*Ibid., p. 247*) [3](*Symbols of Ancient Egypt in the Late Period: The Twenty-first Dynasty, by Beatrice L. Goff, 1979, pp. 80-1*) [4](*Dating Shoshenq I's Campaign in Palestine, by Gerard Gertoux, 2012 [or later, undated], p. 6*) [5](*Ancient Egyptian Chronology, 2006, pp. 221-4*)



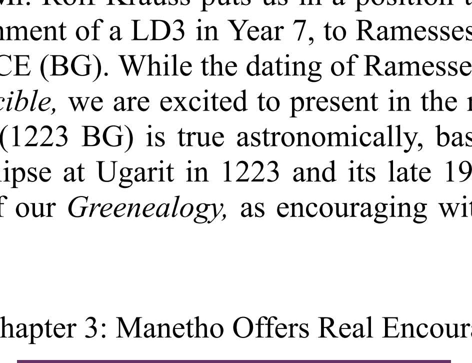
Above: The Abduction of Ganymede, Schwarzenberg Palace, Vienna *(1611-12 painting by Peter Paul Rubens, Oil on canvas, 203 x 203 cm)*

3[11] At some point we will summarize the lunar dates in the different Reigns which are known to confirm alignment, but the BG looks so far better than any we know about. Our detailed work is beyond the scope of this article. The 26 years Manetho gives for Smendes is encouraging, because there is a Year 25 for Smendes attested on the *Banishment Stela,* according to Tetley's p. 468. We are very grateful to Ms. Tetley, for her uncommonly thorough documentation of the lunar feasts is helpful. The lunar date is Apr 16 1091 BG, a LD4, III Shemu 29, and the nature of it called here a "feast of Amon-Re," seemingly appropriate on LD4, as we mention two above. We should perhaps save the discussion about Dynasty 20 for the next Chapter, for Manetho has scant data here. After Smendes, 26 years, Manetho puts 41 (Eusebius 46) years to the account of Psusennes I, who today has 46, by modern scholars who put him third after Amenemnisu. Amenemnisu is the King called Nephercheres by Manetho, and is given 4 years by him and by recent scholarship. Thus, 50 years are believed to pass after Smendes dies until Year 1 of Amenemope (cf. Krauss, 85 years Year 1 Smendes to Year 10 Amenemope), making his Year 1 1039.

3[12] Counting down from 1315 BCE, we have 200 years exactly (Krauss) to the last attested year of Ramesses XI (ie. Year 1 of Smendes 1115 BG). To reiterate, Krauss gives then 85 years remaining to Year 10 of Amenemope, 1030. This appears to be Year 1 of Osorkon the Elder 1030 BG and is followed by Year 1 of Siamun 1024 BG, as above. Manetho (in both versions) has 6 years, for 'Osochor.' The Year 2 I Shemu 20 priestly induction attested from the Reign of Osorkon the Elder becomes Jan 21 1028, in good agreement with Year 1 1030, and is a Lunar Day 2, seemingly quite appropriate for priestly inductions, a reference having been quoted by Kraus regarding LD1-2.[1] We merely use the relative dating of Krauss-- we state here that we have no affiliation with an Egyptologist. Unless, dare we say it, Manetho should qualify as one. Unlike the setting of the thermostat on a heater so as to cause it to produce a desired temperature, the date of a King cannot be set so as to produce a chronology, but rather is the chronology determined independently. The BG is obtained only by a combination of alignments using astronomy and the Reign lengths read in Manetho. Manetho aligns perfectly with a lunar relative dating. We would like to thank all of the modern Egyptologists who have contributed so much to our esteem of Manetho. The precise relative dating of Mr. Rolf Krauss puts us in a position to determine the beginning of Dynasty 20 by its assignment of a LD3 in Year 7, to Ramesses III. Thus, we have Year 1 of Ramesses III as 1223 BCE (BG). While the dating of Ramesses III has not changed since the publication of the *Crucible,* we are excited to present in the next Chapter evidence that this Year 1 for Ramesses (1223 BG) is true astronomically, based on the real connection between the total solar eclipse at Ugarit in 1223 and its late 19th Dynasty proximity. We show it as further proof of our *Greenealogy,* as encouraging with chronology as it is user friendly.

(*Medinet Habu Calendar, 159*)

end of Chapter 3: Manetho Offers Real Encouragement



Chapter 4: Ugarit Solar Eclipse Record Finds Realization In Egyptian Nineteenth Dynasty Late Years

For as the heaven is high above the earth, the Lord has so increased his mercy toward them that fear him.
(*Psalms 103:11, Septuagint by Sir Lancelot Charles Lee Brenton, 1851*)

For as the heaven is high above the earth, so great is his mercy towards them that fear him.
(*Psalms 103:11, Noah Webster, 1833*)

Albowiem jako są niebiosa wysokie nad ziemią, tak jest utwierdzone miłosierdzie jego nad tymi, którzy się go boją.
(*Psalms 103:11, Biblia Gdanska 1632. Revision 1738 also known as Biblia Krolewiecka, New Testament revised in 1881 (Polish)*)

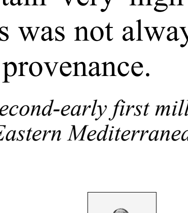
Above: Pharaoh Merneptah, Thorvaldsens Museum, Copenhagen, Denmark *(2012 photo of statue)*

4[1] Our last article featured a new founding date for Rome (842 BCE) in Chapter 4, a 'parallel universe' to this! We might hope that this article will be equally great. I was seeking destruction layer dating studies for any of the cities conquered by Shoshenq I on his campaign, dated by us in 973 BCE, and I came across the very low radiocarbon results from the city of Dor, on the coast of ancient Palestine, and apparently far from typical. Since Dor was a Mediterranean, coastal city, it became vital to understand the difference between coastal and inland cities with regard to trading, it being pottery that determines the relative context dating of a city. Eventually, I hope to get back to that research, which really focussed on the transitions between the pottery phases (Late Bronze, Early Iron etc...), and how phase transitions in city pottery assemblages may be able to show a trend in these phases as aligned to Shoshenq I. However, I was sidetracked in a wonderful way during a literature search, when I came across an article about radiocarbon measurements near the city of Tell-Tweini.[1] To make a long story short, not to ignore fascinating, climatic aspects of the analysis, the article proposes anchoring the dating of an invasion of the Sea Peoples to the collapse of the coastal city of Ugarit, a solar eclipse in "KTU 1.78," and to late 19th Dynasty Egypt.[2]

[1] (*Quaternary Research, Vol. 74, 2010, pp. 207-215 "Late second-early first millenium BC abrupt climate changes in coastal Syria and their possible significance for the history of the Eastern Mediterranean," by D. Kaniewski et al.*) [2] (*Ibid., p. 212, bottom right*)

4[2] Kaniewski correlates the period of climatic disruption occurring from the "late 13th/early 12th centuries BC" with the Greek Dark Ages, which he determines "drier," a discovery which may have profound implications to an extended study of this subject, but will have to wait.[1] In the meantime, a brief treatment of this work should include the fact that pollen counts were used together with core samples from river beds nearby to assess the climatic conditions, and radiocarbon dates were taken. If the Sea Peoples Invasion were correlated to the way that the climate appears "drier," then we would expect to see some climate change in 1216, which is Year 8 of Ramesses III in the BG and the date of their invasion. In Figure 3 of the cited article, reasonable agreement is forthcoming with the BG chronology date of 1216 BG.[2] For brevity, we propose 'BG' for us in place of 'BCE'. We are more interested in the eclipse KTU 1.78, as far as chronological accuracy is concerned, for this is an astronomical event that can obtain very high accuracy. The challenge always is, of course, that the recording of eclipses was not always good enough and the records were not always preserved nor found enough provenance.

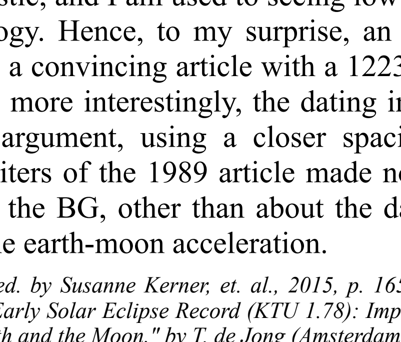
[1] (*Quaternary Research, Vol. 74, 2010, "Late second-early first millenium BC abrupt climate changes in coastal Syria and their possible significance for the history of the Eastern Mediterranean," by D. Kaniewski et al., p. 207*) [2] (*Ibid., p. 211*)



Above: Pharaoh Siptah's mummy *(without the shroud)*

4[3] The discussion of Mr. Kaniewski concerning the eclipse KTU 1.78 has already been quoted in a 2015 book, which promotes the lower dating, and which we do not feel is at all supported by the facts, which we shall explain. My initial reaction to the mention of KTU 1.78 was not overly optimistic, and I am used to seeing low dating, but am certainly far less convinced in low chronology. Hence, to my surprise, an immediate Google search with "KTU 1.78" in it turned up a convincing article with a 1223 BCE dated eclipse, said article dating from 1989.[2] Even more interestingly, the dating in 1223 BG gave an easier logic with a more presentable argument, using a closer spacing of events, and making no contradiction! Plus, the writers of the 1989 article made no comment, because they didn't know about our article, or the BG, other than about the dating of the eclipse and what it says for the constancy of the earth-moon acceleration.

[1](*Climate and Ancient Societies, ed. by Susanne Kerner, et. al., 2015, p. 165*) [2](*Jaarbericht Ex Oriente Lux, Vol. 30 (1987-88) pp. 65-77, "Redating an Early Solar Eclipse Record (KTU 1.78): Implications for the Ugaritic Calendar and for the Secular Accelerations of the Earth and the Moon," by T. de Jong (Amsterdam) and W.H. van Soldt (Leiden), 1989*)

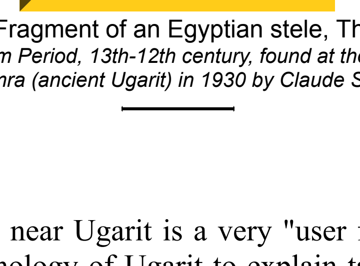


Above: Ras Shamra pot, The Louvre *(Late Bronze I Ugarit, terra cotta)*

4[4] In their article they reject the inviable 1192 eclipse based on the fact that it isn't total (Jan 21 1192 BCE annular, and not 'late Feb/early Mar'), and they argue against May 03 1375 BCE (total), as 1. wrong month, 2. unaccompanied by Mars, and 3. over early historically:

> Our reanalysis has led us to **reject** the identification of Sawyer and Stephenson [ed. **reject** May 03 1375 BCE] and to **redate the eclipse as the one having occurred in Ugarit on 5 March 1223** B.C. As we will show, this new date is more consistent with the astronomical information in the text and it is in good agreement with a dating of the tablet based on historical evidence **...the results of our analysis suggest that the secular deceleration of the rotation rate of the earth has changed very little over the past 3000 years.[1]**
> (Redating an Early Solar Eclipse Record (KTU 1.78): Implications for the Ugaritic Calendar and for the Secular Accelerations of the Earth and the Moon," by T. de Jong (Amsterdam) and W.H. van Soldt (Leiden), 1989, p. 66)

[1](*Jaarbericht Ex Oriente Lux, Vol. 30 (1987-88) pp. 65-77, "Redating an Early Solar Eclipse Record (KTU 1.78): Implications for the Ugaritic Calendar and for the Secular Accelerations of the Earth and the Moon," by T. de Jong (Amsterdam) and W.H. van Soldt (Leiden), 1989, p. 66*)



Above: Fragment of an Egyptian stele, The Louvre *(New Kingdom Period, 13th-12th century, found at the acropolis of Ras Shamra (ancient Ugarit) in 1930 by Claude Schaeffer)*

4[5] The 1223 BCE solar eclipse near Ugarit is a very "user friendly" eclipse, that does not require adjustment of the chronology of Ugarit to explain tablet 'KTU 1.78.' Furthermore, and most encouraging, the month of March, when the eclipse occurred, is compatible with the date given on the tablet, as is the time of day it appears. The thought occurs that this one, dated eclipse in the absence of any other proof, or given the choice, might be the only piece of evidence needed to anchor the BG.

The solar eclipse, Mar 05 1223 BCE ~1130 hrs UT (10:12 UT, NASA: Fred Espenak) north of Ugarit, provides us a candidate for KTU 1.78 which gives a viable seven-year window between it and Year 8 of Ramesses III (the BG)! Kaniewski et al. (2010) found a 1245 BCE 1 sigma upper limit date for the drought event associated by them to a 'Dark Age' c. 1200-825 BCE and Late Bronze collapse.[1]

[1](*Notebook 32, WG, p. 150, bottom of page*)

Above: Mycenaean stirrup vase from Ugarit, The Louvre *(14th-13th centuries BC, imported to Ugarit. Found in the acropolis of Ras Shamra (ancient Ugarit), tomb 37, excavated by Claude Schaeffer in 1936.)*

4[6] The by now key, decisive work of de Jong and van Soldt leads us to imagine that the solar eclipse was seen at a location close to Ugarit, in 1223 BCE, that KTU 1.78 had enough of a window to be written and be deposited, in the city before its destruction by the Sea Peoples.[1] In the simplest understanding the city of Ugarit would be destroyed about at the same time as the Sea Peoples invaded Egypt, which Ramesses III documents as Year 8.

[1](*Jaarbericht Ex Oriente Lux, Vol. 30 (1987-88) pp. 65-77, "Redating an Early Solar Eclipse Record (KTU 1.78): Implications for the Ugaritic Calendar and for the Secular Accelerations of the Earth and the Moon," by T. de Jong (Amsterdam) and W.H. van Soldt (Leiden), 1989*)

4[7] There is a 41-year difference between our date 1216 BG and 'a low' 1175 BCE Year 8 of

Ramesses III, so that a terminus post quem of 1190 BCE (+ 41 years) = 1231 BG. However, the eclipse itself differs by 1223-1192 = 31, and the BG is thus 10 years tighter than 'a low' time. 'Ras Shamra clay tablet 86.2230' is a letter sent from Beya 'Chief of the troops' of Egypt (who was killed by 'Pharaoh' in Siptah's 'Year 5') no later than 1222, to Ugarit's King Ammurapi, on the basis of which letter a date for Ugarit's destruction is put at 5 years before Year 8 of Ramesses III, which is agreeable to 1221 BG![1,2] This is especially interesting, two years after 1223!! Perhaps the best attestation of the BG, in that a date proposed in 'a low' chronology works better in the BG! Given that the destruction of Ugarit could date to any time up to Year 8 of Ramesses III, the BG determines a 7-year window for the arrival of 'KTU 1.78' at Ugarit, whereas it's a 'crude' 17-year window in 'a low' case. As usual, trying to make money only hurts "the truth."

[1](*On the Skirts of Canaan in the Iron Age: Historical and Topographical Researches, by Edward Lipinski, 2006, p. 24*) [2](*From the text of an ostracon that read: "Year 5 III Shemu the 27th. On this day, the scribe of the tomb Paser came announcing 'Pharaoh LPH, has killed the great enemy Bay.'" (sm3 Pr-'3 '.w.s. khrw '3 B3y), with the Year 5 as applying to Siptah described as 'certain,' Wikipedia, 'Bay (chancellor)'; primary source: Grandet, BIFAO 100, abstract)*)

4[8] We will perhaps reserve judgment regarding whether the Ugarit Solar Eclipse (USE 1223 BG) is on face the best proof of the BG chronology, or whether we look better. Meanwhile, in 1223 BG the Israelites had Judge Gideon.[1] The beauty of the alignment of Year 2 of Midian, 1245, with Year 5 of Merneptah, was one, incredible example![2] Actually, the events at the end of Dynasty 19, we see, are intertwined with the Ugarit Solar Eclipse Record. The USER is a rare example of an absolutely dated (or at least to 'within' about 7 years) ancient artifact. The USER itself was burned badly in a fire, and found (reportedly) in a burned section of the royal palace.[3]

[1](*B4 Chronology-- Boundless Blessings Beyond Belief, by Ward Green et al., 2015, Chapter 1 end, Table 1, column 3, Israel*) [2](*The Crucible of Credible Creed, by Ward Green et al., 2012, Chapter 12, par. 4*) [3](*Aula Orientalis, Vol. XXX/2-2012, "Rašpu-Mars, the red planet. A new reading of KTU 1.78:5," by Gregorio del Olmo Leteby, 2012*)

4[9] It is a downright lie that Ugarit was destroyed in the early 12th century-- it was the late 13th century BCE! The date of the USER makes this a veritable certainty. Ugarit was an Amorite centre in the 2nd millenium BCE.[1] The name of its King, 'Ammurapi,' fits well with this. In one Amorite calendar, the 12th month is Ajaru, this corresponding to Adar in the Jewish calendar, in early Mar/late Feb (cf. hiyaru or hyr in ancient documents). De Jong and van Soldt have decided this by examining a collation of the calendar month sequences and starting the year with the month 'ris yn', nearest the autumnal equinox according to De Moor (1971, 57ff. and 245ff.). Thus they show how it is a mistake to think 'hiyaru' has a correspondence to the Babylonian 'ajjaru' (cf. Iyyar). As Amorite 'hiyaru' is 'Adar' and 'ajjaru' is 'Iyyar,' so 'ajjaru' is a Babylonian month corresponding to the Amorite month 'gaunu,' two months later than 'hiyaru.' The USE is concerned with the month 'hiyaru,' Feb/Mar. This in fact rules out the 1375 and 1192 BCE eclipses.

[1](*Wikipedia, 'Ugarit'*)

4[10] There is some interesting discussion about the mention of the planet Mars in KTU 1.78 USE, although it is not certain whether this adds anything to the eclipse, the meaning of the text being not entirely known, although this element favours the USE date of 1223 BCE also, in that Mars is very near the sun and would appear during a total solar eclipse, such as the rare event of 1223. Thus, even more weight can be added to favour 1223 BG:

> **At (the wake) six of the new moon of hiyyaru**
> **set Sapsu,**
> **her gatekeeper (was) Raspu**
> **and it turned red.[1]**
> (Aula Orientalis, Vol. XXX/2-2012, "Rašpu-Mars, the red planet. A new reading of KTU 1.78:5," by Gregorio del Olmo Leteby, 2012, p. 366)

[1](*Aula Orientalis, Vol. XXX/2-2012, "Rašpu-Mars, the red planet. A new reading of KTU 1.78:5," by Gregorio del Olmo Leteby, 2012, p. 366*)

Above: Sun and Mars on Mar 05, 1223 BCE
(from Egyptian Delta, Celestia 1.6.1, Mars invisible since it rises after the Sun, and looks about the same from Egypt as from Ugarit, since it is so far from Earth -- however, during the solar eclipse later that day Mars is calculated to have become visible to one looking toward the Sun during totality as viewed from near Ugarit)

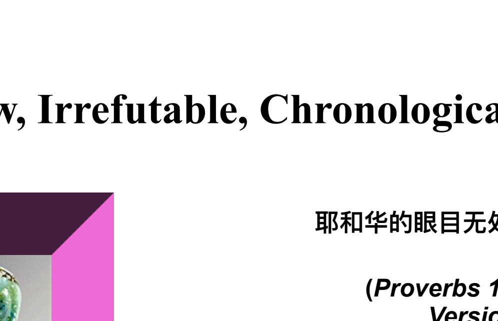
4[11] Favourable circumstances involved in KTU 1.78 USE are:

1. Start of year new moon near autumnal equinox (4 days)
2. Month clearly identified as 'hiyaru' (late Feb/early Mar)
3. Totality of the solar eclipse Mar 05 1223 BCE
4. Time of the eclipse sixth hour or sixth watch recorded
5. Mars mentioned as near, visible during totality
6. Unusual danger implied by two liver inspections agrees
7. Mars as gatekeeper appearing red, fearsome
8. Precedes destruction of Ugarit by less than 8 years
9. Sea Peoples destroy Ugarit before Year 8 of Ramesses III
10. Year 1 of Ramesses III is 1223 BG, same as KTU 1.78 (USE)
11. Historical provenance favours eclipse recent when Ugarit burnt

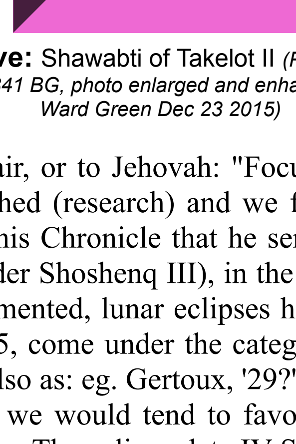
4[12] The number 'six' given in KTU 1.78 can be taken either as the sixth hour of the day counting from dawn, or as the sixth 'double hour' counting from midnight, and in both cases the interpretation is very nearly accurate. This greatly increases the probability of the record's interpretation as a record of this eclipse, but it may not differentiate between two eclipses that share such a characteristic-- at least not based upon that alone. Both the 1223 and 1192 eclipses share the time of day, differing by perhaps twenty minutes at their midpoint. However the 1192 is annular while 1223 is total and in 1192 the eclipse fell on Jan 21; it's the wrong month! In 1223 it is in the right month and USE became total! While the Bible has preserved for us the chronological linkages necessary, given in previous articles, needed to obtain congruence in 1223 with USE, it has not been the same for the Jewish traditions, as the Bible says: "They did not remember the abundance of your reproof."[1] Consequently, the Jewish tradition did not preserve an accurate chronology, whilst the BG is "user friendly." As inaccurate as many chronographers are, we owe them, because in USE, we offer a singularly great discovery. As great as it is, though, we may have something more. The lunar alignments that we used to find Takelot II's Year 1 in our *B4* article shifted up by 25 years as in the revised versions of the BG called *TWT* (also in the *B4* article, Table 1 and Chapter 8) found Year 1 of Takelot II to be 863 BCE, something we wish to amend slightly, and in a most convincing way-- in Chapter 5 we present new, irrefutable evidence that Year 1 of Takelot is 866 BCE, an absolute date as seen from two immovable eclipses of the moon, and resulting in a series of improvements in lunar alignments and in the reckoning by Manetho and the Ethiopian Kings List.[2] We are slowly approaching the *BG's* finest hour.

[1](*Psalms 106:7, translated by Ward Green*) [2](*Gertoux and others have also used a date near 865 BCE for Year Takelot II, based on an 851 eclipse.*)

end of Chapter 4: Ugarit Solar Eclipse Record Finds Realization In Egyptian Nineteenth Dynasty Late Years



Chapter 5: New, Irrefutable, Chronological Environment



Above: Shawabti of Takelot II *(Pharaoh r. 866-841 BG, photo enlarged and enhanced by Ward Green Dec 23 2015)*

> **耶和华的眼目无处不在；恶人善人，他都鉴察。**
> **(*Proverbs 15.3, 1919 Chinese Union Version (Simplified) in Modern Punctuation*)**
>
> **The eyes of the Lord behold both the evil and the good in every place.**
> **(*Proverbs 15:3, Septuagint by Sir Lancelot Charles Lee Brenton, 1851*)**

5[1] We know that we accomplish things and that we discover things, but how often do we take accurate notes of it? The only reason I am pausing my research to write this article is for documenting work, the importance of it. Research without documentation is like a stagnant air, or to Jehovah: "Focus on your life and your teaching."[1] We have searched and searched (research) and we found! The High Priest of Amun (HPA) Prince Osorkon stated in his Chronicle that he served from Year 11 to 25 of the Reign of King Takelot II (more under Shoshenq III), in the performance of which duties he recorded one of the very few documented, lunar eclipses having provenance. But what makes this eclipse, recorded in Year 15, come under the category of irrefutable, the date being also commonly read as '25,' but also as: eg. Gertoux, '29?' The "get me to the church on time" theme is recurrent. In this case, we would tend to favour Gertoux, but for reasons best seen in this, our *NICE* chronology. The eclipse date IV Shemu 29 is Mar 17 in 851 BCE, and the record is that the "sky did not swallow the moon." As others also have, I rejected it because I didn't in my heart of hearts believe that it was an eclipse, the record of it being negative ("did not swallow") and it being the 'wrong' day when read as IV Shemu '25,' with the actual lunar eclipse dated as Mar 16 851 BCE, etc. On Nov 27 2015 CE, I made note of **another** lunar eclipse, in 'Year 11' of Takelot II, ostensibly, and a visible, nearly total one at Thebes on Dec 03 856 BCE.[2] Some details of these eclipses are extremely important as they relate to an absolute chronology for Egypt, so we will slow down somewhat in the subsequent analysis.

[1](*1Timothy 4:16, God's Word, 1995*) [2](*Notebook 32, WG, p. 172, discovered 1255 hrs Nov 27 2015*)

5[2] The general gist of the discovery is this: Pedubaste I was a rival King who made two attempts against Thebes, in these same Years 11 and 15 of Takelot II, and while his second attempt succeeded (he ousted Prince Osorkon from Thebes 851 BG) and corresponds to a total eclipse of the moon (the first failed and was nearly total), a correpondence between military actions and eclipses is also a common element in ancient societies like Egypt, although it would be unlikely that beliefs and outcome of actions taken on those beliefs would always concur. It is very likely that they did agree on occasion, and in this case we have a case that matches perfectly, as though Pedubaste I failed in 856 BCE because he didn't believe as strongly as he would in a total eclipse, or conversely that he succeeded only by the total eclipse of Mar 851, the sort of event aligned in the mind of a man like Pedubaste with a failure of government power. Indeed, when we study the two eclipses, as viewed from Thebes, one (851) is total, but the first (856) isn't, the 856 eclipse barely missing being considered total. The probability of this happening and being aligned in this way with the events of record is extremely small. None of this matters, though, if the rest of the dates are not compatible with this understanding of Takelot. Based on Year 1 Takelot 866 BG, adjusted from B4 by an interval of three years (ie. from 863 in TWT version), causes an adjusted result for lunar alignments, and we may spend years and develop all of the nuances, but it looks 'absolutely' as true in its chronology as it was in its gist, and we hope to document it in brief here. First, we consider Pedubaste I and Shoshenq III, Kings whose Year 1's have an established relation to 863 BG.

FIT Four-Induction Tip

5[3] Egyptologists generally hold now that Year 5 Pedubaste I = Year 12 Shoshenq III = Year 15 Takelot II, or say:

> **1 Pedubaste I = 8 Shoshenq III = 11 Takelot II, in basic terms.**
> (Ancient Egyptian Chronology, 2006, p. 251)

This is a generally useful relation for these Kings; a group of four dates for induction or Tepi Shemu feast:[1]

FIT Four-Induction Tip:

1. Pachon 11, Year 11 of Takelot II (856-5 BG), Tepi Shemu.
2. Pachon (1), Year 7 of Pedubaste I (850-49 BG), induction.
3. Pachon 19, Year 8 of Pedubaste I (849-8 BG), induction.
4. Pachon 26, Year 39 of Shoshenq III (825-4 BG), Tepi Shemu.

[1](*Ancient Egyptian Chronology, 2006, p. 409*)

Kraussian Method

5[4] Krauss takes a shotgun approach to this dating problem wherein he considers all years as statistical targets, then finds the best fit to a lunar alignment 'scheme.' In his scheme, Krauss prefers inductions on LD 1 to 5. Using his approach, Takelot II Year 1 845 BCE is best. This differs from 866 BG by 21 years, or perhaps it is Ad Thijs (Takelot II Y1 770) with whom we compare 866.[1] We believe, however, that Mr. Krauss uses bad judgment in implementing a statistical approach to the problem. Firstly, lunar months are never exactly the same; they vary enough to make lunar day determinations insecure. Secondly, Egyptian religion as we 'know' it is founded on Sir Alan Gardiner's "rags and tatters," as depicted in a famous comment on Egypt's proud, ancient history. Thirdly, we are dealing with humans, and although I am convinced that statistical analysis plays a large role in historical studies, an idiosyncratic and unreliable element of human nature has to be allowed-- or sought. Fourthly, and finally, religious preferences vary from individual to individual, as considering Akhenaten and his overthrow of the conventional religion will surely draw attention to, as an extreme example, in a minute. Different Pharaohs likely had different "preferences." Likewise, the preference of chronologers is the factor deciding the chronology they do promote, nothing more.

[1](*Zeitschrift für aegyptische Sprache und Altertumskunde, Vol. 137, pp 171-190, "The Lunar Eclipse of Takelot II and the Chronology of the Libyan Period," 2010, p. 182*)

Osorkon II

5[5] Egyptologists make a lot of assumptions, some of which are necessary, one of which is the assumption that any date written without its day number implies: 'Day #1.' I happen to agree with this particular assumption, but only because a very remarkable thing happened with it. There are two dates known from the 'collection' having no day numbers, showing the throne name of Osorkon II.[1] I'm going to talk about this first because it preceded the Reign of Takelot II, whose Year 1 was some 3 years prior to that of Shoshenq III, Osorkon II's successor. Osorkon II, we might mention, is the son of Takelot I, and succeeded him in the Delta of northern Egypt, with the 'three other Kings' of Manetho preceding Takelot I for '25' years in Manetho after Osorkon I died 944 BG. If Manetho were correct (fat chance!) we would see the Year 1 of Takelot I in 944 - 25 = 919 BG, and the Year 1 of his son Osorkon II in 919 - 13 = 906 BG, since in Manetho (all versions) Takelot I is assigned 13 years. Wouldn't it be a miracle if the two dates in the Reign (possibly) of Osorkon II without day numbers could get lunar alignments with his Year 1 as 906 BCE in the BG? That was my reasoning, and I didn't really believe it. But, if it works, could we learn something from it-- I mean, if it works, then perhaps those lunar alignments could be precedent-setting in our understanding of the way in which events were set in the Egyptian religion. Actually, I had none of such thoughts, on Nov 27 2015:

1. Year 14 I Shemu (Pachon) 1 Tepy Shemu Nov 29 892
   (Osorkon II) Lunar conjunction Nov 25 (1912 UT) 892
2. Year 23 I Shemu (Pachon) 1 Tepy Shemu Nov 27 884
   (Osorkon II) Lunar conjunction Nov 27 (0417 UT) 884

--"Year 1 of Osorkon II is thus proven to be 906 BCE."[2]

This cannot be obtained with a shotgun approach, which is probably a good reason to avoid such crude methods. The two dates were distinctly different, one being the same day as lunar conjunction (Nov 27 884), and if the Year number is counted from before I Shemu 1 (or maybe that day), after 22 years is exactly where Year 23 is. The other date (Nov 29 892) is Lunar Day 5 and is more problematic, coming 14 years after 906 and in Year 14, but because the lunar conjunction may be considered as the salient feature of the dating, and the

date has no day number, perhaps it refers to a backdated new moon. We might furthermore infer from this single perturbing instance of record that I Shemu 1 is possibly the date from which Year numbers were counted, unless it may be true that I Shemu 1 is 'accession day' for Osorkon II.

[1](*Quote from Ian Onvlee in an online forum:*

> *...The third example comes from KPA fragment 5. This fragment is problematic for the chronology of the TIP as it stands. There are 5 successive entries, all of which are only partly preserved. The order is:*
>
> *(i) .....King [O]sorkon [MeryAmun?], day of [induction or promotion?]*
> *(ii) Y 14, Tepy Shemu, of King UsermaatRe SetepenAmun, son of Re [nomen lost...]*
> *(iii) Y 23, Tepy Shemu, of King UsermaatRe [Setepen]A[mun...]*
> *(iv) Repetition of favour in year 11, Tepy Sh[emu...of name lost]*
> *(v) [Year lost...of User]maatRe SetepenRe son of Re Sheshong MeryAmun SiBast, God, Ruler of Heliopolis, [...day of induction of name lost] to be Vizier of the Southern City...*
>
> *The chronological reconstruction of this sequence is difficult, as there are a number of possibilities. The last ruler is without doubt Sheshong III... [end of quote]*)

[2](*Notebook 32, WG, pp. 175-6, discovered between 2315 hrs Nov 27 2015 and 0452 hrs Nov 28 2015*)

Epilogue

5_6 There is another possibility, and that is that I Shemu 1 represented a religious 'year' of sorts, there being a running total of 'I Shemu years' concurrent with the Regnal years of the Pharaoh, and that whenever I Shemu 1 fell within the first 5 Lunar Days, a feast was held and the date noted as simply "I Shemu," any other date having the calendar date for Day 1 of the lunar month. Since Tepy Shemu is a celebration of summer (Shemu), a logical interpretation is that of a lunar celebration, one in which the month I Shemu was involved, but where the festival started up to 4 days before I Shemu, say. In this way the festival could include a secular first day of summer (I Shemu 1) at the Lunar Day 1 festival! There are endless possibilities, in fact, and we don't have the insight to consider them all right now, since we are limited by the nature of these two dates alone. The probability of our success here was certainly low! Yet we apparently (possibly) succeeded, with bells on! Now we can only proceed to see which other dates work. We should reserve our conclusions until later, when we apply the interpretation of Tepy Shemu festival dates.

New, Irrefutable, Chronological Evidence (NICE)

5_7 A rising of Sothis on a calendar day Thoth 01, the New Year's Day of the Egyptian calendar, was celebrated in the Reign of a Pharaoh only once, because it signalled the rebirth of the Phoenix and the calendar beginning. Seti I observed such an event in his Year 4, and it is the Year 1315 BCE, meaning that Seti I Year 1 is 1318. The Year 2 of Ramesses I then puts Horemheb's death in 1320, which is 26 years after the death of Tutankhamun (whose death we now take to be two years later, 1346).[2] Although we moved little, such dates are not absolute. There is inexactness in the date of the Sothic rising. Yet, we are still very positive about the Amarna time. Takelot II, on the other hand, living 500 years later, is linked to much more precisely dated lunar eclipses! The chronology of Takelot's time is so truly absolute. But we still need to consider the induction dates seen above, paying attention to the Tepi Shemu feast dates:

FIT Four-Induction Tip, paragraph 5_3 above:

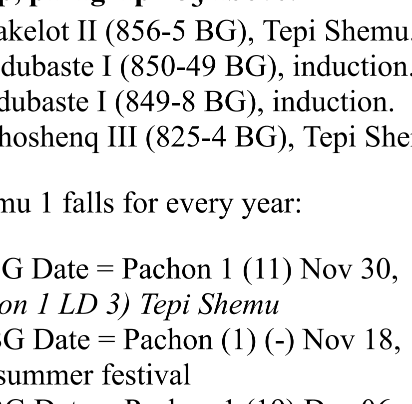
1. Pachon 11, Year 11 of Takelot II (856-5 BG), Tepi Shemu.
2. Pachon (1), Year 7 of Pedubaste I (850-49 BG), induction.
3. Pachon 19, Year 8 of Pedubaste I (849-8 BG), induction.
4. Pachon 26, Year 39 of Shoshenq III (825-4 BG), Tepi Shemu.

So, let's examine when I Shemu 1 falls for every year:

1. Nov 20 = LD 03 : 856 BG Date = Pachon 1 (11) Nov 30, *Takelot II Year 11 (Pachon 1 LD 3) Tepi Shemu*
2. Nov 18 = LD -11: 849 BG Date = Pachon (1) (-) Nov 18, Pedubaste I Year 7 -not summer festival
3. Nov 18 = LD -01: 848 BG Date = Pachon 1 (19) Dec 06, Pedubaste I Year 8 -not summer festival
4. Nov 12 = LD 08 : 825 BG Date = Pachon 1 (26) Dec 07, *Shoshenq III Year 39 (LD 4) Tepi Shemu*

--"New, Irrefutable, Chronological Evidence"[1]

[1](*Notebook 32, WG, p. 176, 0452 hrs Nov 28 2015*) [2](*See footnote [1] in Chapter 2 paragraph 12*)



Above: The Nile Delta, northern Egypt *(Satellite photo, NASA)*

Waxing Moon

5_8 Pachon (I Shemu) 1 is the first day of the first month of summer (Shemu), and is celebrated in the above four cases only two out of the four years, in both of those years falling on a positive lunar day, or waxing moon. The other two years (Pedubaste I Years 7, 8) on waning moons can also imply that Pedubaste I's accession came late in our year (after Nov 18) for his Year 1 856 BG. This would be concisely explained by the lunar eclipse of Dec 03 856 at the time of his failed rebellion, the time in Year 11 of Takelot that marked his own Year 1. While he failed to take Thebes in 856, he was crowned. The priestly inductions of Years 7 and 8 of Pedubaste, while not accompanied by Tepi Shemu feasts (in Year 7, I Shemu lacks a day date) could both have been waxing. With Pachon 13 a LD1, Pachon 01 was a LD-11 in Year 7, yet the induction event could fall Pachon 13 or later. Year 8, LD-1 may have been a 'negative error' for LD1. For these four dates, we did explain the lowest Regnal Year numbers (7 years lower than his accession year in Year 7, 8 in Year 8, perhaps etc... instead of 6 Years lower in Year 7, 7 in Year 8, as usual for dates later in the Julian Year) for Pedubaste I as being due to an accession date correlated with the Dec 03 856 eclipse. But the first new moon in Pachon could have marked the beginning of a new religious year; we can't know that. Their religious rites and customs were secret, anyway. Comparing these four induction dates with the two from the Reign of Osorkon II, we find that Osorkon's Pachon 1 dates were both waxing moon (favourable) situations, implying that the accession date is accounting for it, or perhaps dates before I Shemu 1 antedate by one year (ie. his Year 14 extended to Pachon 1 of 'Year 15', or Tepy Shemu year counts measure from Tepy Shemu dates), and year count was determined by the closest new moon. Pretty simple explanations-- could it get much better? We temper our emotions as we turn to dated Osorkon III records, one of a temple flood in Year 3, and Year 18.

Osorkon III Flood Date

5_9 First, we do the calculation of Year 1 of Osorkon III. Osorkon III became King after 25 years for his father, plus another 17 years (39 - 22) for Shoshenq III, with Year 25 of Takelot being equal to Year 22 of Shoshenq. Year 1 of his father, Takelot II, is 866 BG, and thus:

866 - 25 - (39 - 25) - 3
= 866 - 25 - 17
= 824 BG Year 1 Osorkon II (QWP)
"Oct 04 822 Year 3, lunar conjunction Phamenoth 22 exact correspondence, perfect confirmation of Takelot II cf. TWT Oct 01 819 lunar conj. (date of Oct 03, calendar)"[1]

A procession of Amun is mentioned in Year 3 of Osorkon III, on Phamenoth (III Peret) 22, and there is a dated Tepi Shemu feast which might be his, noted from a Year 18, Pachon (I Shemu) 06 (Year 1 824 BG in *QWP)*.[2] According to Borchardt, line 5 of the inscription gave this information about the procession of Amun, Year 3.[3] But Krauss says that according to MHC 135 the feast of the valley began on LD1 in II Shemu and: "Amun crossed the Nile... in a procession," then spending the night, received offerings on LD1 and LD2 (this from MHC 159).[4] Hence, the procession of Amun on LD1 Oct 04 822 BCE in Year 3 of Osorkon III is "an improvement on the former *TWT* date," confirming 866 BG Year 1 Takelot II.[5] There is the festival procession on LD1 in II Shemu 22 and an exact lunar conjunction, we find, in our BGQWP.

[1](*Notebook 32, WG, p. 174, 1444 hrs Nov 27 2015*) [2](*Ancient Egyptian Chronology, 2006, pp. 372-3*) [3](*Ibid., p. 373, footnote 25*) [4](*Ibid., p. 414; Note: MHC is Medinet Habu Calendar*) [5](*Notebook 32, WG, p. 174, 1444 hrs Nov 27 2015*)

Year 18

5_{10} If we had any doubt about the two lunar eclipses, this puts it completely beyond question, and since we place Takelot II at 21 and 32 years higher than Krauss, both 845 and 834 are 'wrong,' seeing as 21-year and 32-year intervals actually both "can't match" our lunar phase.[1] In summary, one considers also the Year 18 Tepi Shemu:

1. Oct 04 = LD 01 : 822 BG Date = Phamenoth 22 *Osorkon III Year 3 (Phamenoth 22 LD 1) Procession of Amun*
2. Nov 13 = LD 09 : 806 BG Date = Pachon 6 *(Osorkon III) Year 18 (Pachon 01 LD 4) Tepi Shemu*

Item 2. above looks correct for a Tepi Shemu feast, as we saw for Takelot II an example in Year 11 Pachon 11, where Pachon 01 was within the range of LD1 to LD5, as it is also for this case, of Year 18 "of Osorkon III." In other words, as we saw earlier, Pachon 01 fell in a 'waxing moon' phase as it did in Year 39 Shoshenq III. This, with our limited sample size, appears to prove a correlation between waxing moon phases and Tepi Shemu. It is a fascinating discussion, but we've got two more paragraphs to sum up the overall impact of *QWP*.

[1](*Ancient Egyptian Chronology, 2006, p. 410*)

QWP

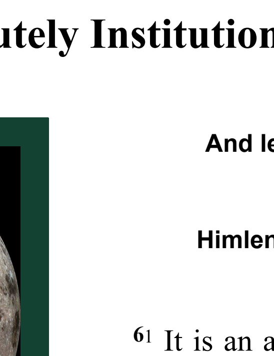
5_{11} It's so good there's literally too much to talk about. The three years after Shoshenq V in the B4 TWT waiting for the campaign of Piye is now eliminated by shifting Osorkon III and his father up three years, and it also means that Tefnakht, assumed to be ruling from 770 QWP (was 767 TWT) is still interrupted by Piye's campaign, in Year 20 of Piye 769 QWP (was 764 TWT), now up about 5 years, although Shoshenq V doesn't move even a year. At 805 QWP (same in TWT), Year 1 of Shoshenq V is even with 20 of Osorkon III (Year 1 824 QWP-- was 821 TWT), and Takelot III dies in 788 QWP (was 784 in TWT), Year 1 of Piye being now 788 BG QWP, moving Alara to 756, a position well suited to the death of Shabaka after the 50 years of Herodotus, about 706 QWP (Dan'el Kahn), to make Shabaka's Year 1 about 720 QWP (721, Dan'el Kahn) and thus Bocchoris dies 719 QWP making 44 years of 763 Year 1 for Bocchoris (Eusebius), Tefnakht Year 1 seven years earlier, as above, and seeming brilliance to it. The time that elapsed from Year 1 of Takelot II to the discovery of his Year 1 in our absolute chronology QWP is 866 + 2014 (since year 0 doesn't exist) = 2880, and 2880 = 12 x 12 x 2 x 10-- a divinely organized number. The Apis bull in Year 28 of Shoshenq III which dies in Year 2 of Pami at age 26 now starts three years sooner in QWP (Year 1 863, for Shoshenq III, was 860 in TWT), and this allows Pami to have a longer Reign, ~7 years:

805 + (7 - 2) + 26 + (28 - 1)
= 805 + 58
= 863 BG Year 1 Shoshenq III (QWP)

5_{12} By now we've had just about enough of this nonsense of chronologies that don't add up, nor tie up loose ends. This evidence that we've presented here does appear to be new, irrefutable, chronological evidence to savour! The next chapter will discover yet another remarkable, seemingly irrefutable, featured date of *BG QWP*. I owe this date reference to the late, great Christine Tetley, and her thrilling book (an Apis installation).[1] She died in 2013, only 16 days after her Preface date. Because of an Apis installation lunar alignment we now will be presenting additional, "irrefutable evidence."

[1](*The Reconstructed Chronology of the Egyptian Kings, by M. Christine Tetley, 2014 posthumously, p. 512, Shoshenq V Year 12 Apis Installation on a full moon, IV Peret 4 [ed. we would give a different year than Ms. Tetley]*)

end of Chapter 5: New, Irrefutable, Chronological Environment

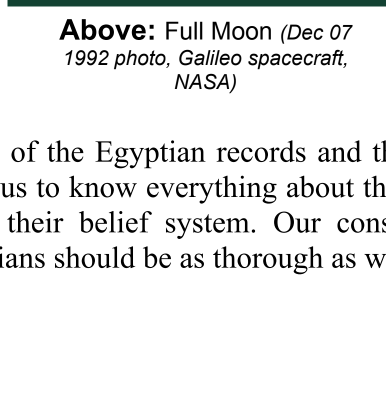


Above: Pasenhor Stela *(fractal trace)*

Chapter 6: Absolutely Institutional Moon Secured

And let the heaven reveal his iniquities, and the earth rise up against him.
(*Job 20:27, Brenton*)

Himlen bringer hans Brøde for Lyset, og Jorden rejser sig mod ham.
(*Job 20:27, Danish Bible, 1933*)



Above: Full Moon *(Dec 07 1992 photo, Galileo spacecraft, NASA)*

6_1 It is an aspect of Egyptian religion that an Apis bull is always installed on the religious full moon (LD15), defined as 14 days after the first day it's invisible. The day of invisibility is thus Lunar Day 1, and after 14 more days comes the "religious" full moon, an event which differs from an astronomical opposition (or full moon) by as much as one day or two, as it is observed. The fragmentary nature of the Egyptian records and the distance of time separating us from them may not allow us to know everything about their religious system, so we need to make assumptions about their belief system. Our consideration of the Apis installation ceremony of the Egyptians should be as thorough as we can make it.

6_2 The details of the priests' daily duties we will leave for later consideration at some more appropriate time. We will assume that the priests kept accurate records. This is because everything about the Apis bull in fact was done with, we believe, the utmost care, viewing as they did this animal with awe, as they made him a god. We are interested in the care that the priests took in the performance of their office, in this instance, for it has potential relevance to the reliability of dates that were recorded with respect to Apis installations. We are most interested in the date of installation, as regards one IV Peret 4 in Year 12 of Shoshenq V, a day recorded as a day on which an Apis bull was installed. In order to translate that Egyptian calendar date into our ancient Julian calendar, it is necessary to get an alignment with a religious full moon on that same day. The astronomical lunar conjunction date was found as a starting point, from which we calculated Lunar Day 15.

6_3 Since the ancient Egyptian calendar has come down from antiquity, we are not sure about whether the Egyptians really used it without correcting for the seasons, and so the assumption is generally made that they did not. However, the Egyptian calendar had 365 days, including 12 months of 30 days each, in 3 seasons of four months each, and an Epagomenal month of 5 days at year's end. These three seasons are: Season of Inundation (Akhet), Season of Emergence (Peret), and Season of Harvest, an enthusiastically celebrated season in many cultures as we know, called summer (Shemu)-- each lasted 120 days. Since the calendar altogether had 365 days after the 5 days were added at the end of the year, it was about a quarter of a day short of the standard Julian year, as it then was, which adds an extra day every four years. Thus, assuming that we are right that in Egypt no days were ever added to the Egyptian calendar, the calendar was forever drifting through the seasons at a constant rate of (approximately) one day every four years, this being also century-adjusted in our Gregorian calendar. It is this drift of the Egyptian secular calendar that causes Sothis to rise heliacally on Thoth 1 every 1460 years, being detected on that day just before sunrise.[1] Since we have seen some success in the BG by assuming, as many do, that the calendar drifts, we continue this search for the Apis installation date in the same

do, that the calendar drifts, we continue this search for the Apis installation date in the same way.[2]

[1](*Each year Sothis rises progressively earlier after its first heliacal rising of that year, until it begins to set just before dawn some months later (late in Nov at Egyptian latitudes, ~Nov 28/29 for 885/884 BCE), which is called its 'cosmical setting' (when rising Jul 17). It then rises acronychally (just after sunset) after a wait of three and a half weeks (Dec 23) and continues, rising at sunset until late spring (~May 10/11), where it vanishes until its next, heliacal rising (~Jul 17), when it continues rising just before dawn (until Nov). The Sothic Cycle has very nearly the same Julian dates each year, while moving through the Egyptian calendar, for Thoth 1 gets progressively earlier as Julian years advance, seeing as the Egyptian year is shorter, while Sothis rises later in the Egyptian calendar each year, eventually, after 1460 years, returning to be Thoth 1. The first heliacal rising of any year is welcome as it always comes after a time of 10 weeks of invisibility.*)
[2](*In this case we are searching a very specific Egyptian calendar day in the drifting Egyptian calendar, and we convert it to the Julian calendar because lunar phases of that era are tabulated only in the Julian calendar. We know that the Egyptian calendar drifts with respect to the Julian calendar, but we need an alignment date, and alignment of the Julian calendar is determined for 'all times past and future' with the Egyptian calendar by Ptolemy's putting Thoth 1 as Jul 21 for 132-135 CE.*)

Above: Summer, Royal Collection, Windsor *(1620's painting by Peter Paul Rubens, oil on canvas, 142.8 x 222.8 cm)*

6[4] These two points form the basis of the synchronization of the Apis installation date in Year 12 of Shoshenq V with the cycles of the moon, which in modern astronomy are calculated rather precisely, as are the new moons. The last day of visibility of a waning lunar crescent, it is believed, precedes by one day the 'Lunar Day 1'. I have used PLSV 3.1.0 to verify all lunar visibility, and in the following Lunar Day 15 is always full moon. The full moon was used for religious purpose in Egypt, and the actual full moon often arrived after the LD15. We assume that the Apis bull was installed, during the year in question, exactly on (religious) Lunar Day 15.

6[5] There are many circumstances that, together, determine the appropriate way to approach a statistical problem. When variables are well-determined as to expectations, the shotgun approach (brute force method) can be used. The shotgun approach may actually be good in our case, seeking an exact religious full moon, as computed from the exact day of conjunction, on a date of IV Peret 4. The reason is that the lunar day is assumed to be more specific for an Apis installation, and when we believe that it *must* have been Lunar Day 15 (except for the outside possibility of low atmospheric visibility, which has a low likelihood in Egypt), for LD15 to have to fall on IV Peret 4 in the Egyptian calendar is one, big ask-- it may not happen strictly for some decades.

6[6] Any year in which the full moon falls on IV Peret 4 is an important candidate year for Year 12 of Shoshenq V. Normally, this would be a foolhardy exercise, but here there is a very small probability of finding anything, because the lunar cycle never repeats any day exactly. The problem with the shotgun method is that it has too much success, gathering too much information, which is the reason it is well suited to low probability cases. It still may seem foolhardy to use a method with a low probability of finding anything, but this is precisely what we want: to test the rigorous success of the BG. Will the BG QWP succeed where many others have failed?

6[7] A literature search shows that an Apis installation in Year 12 of Shoshenq V is not too often cited in print, surprisingly, since it is chronologically so valuable. Christine Tetley mentions it in her book pp. 512, 545.[1] Wikipedia, too, gives the data in 'Stela of Pasenhor.'[2] The *Pasenhor Stela* is the source of the record. Full disclosure: My literature searches are done these days with a single, or perhap more, Google search(es). Almost no chronologies consider the Apis installation, a most serious shortcoming, as synchronizing it with a full moon would narrow its place in time considerably. The problem, it seems, is that it weakens their cause.

[1](*The Reconstructed Chronology of the Egyptian Kings, by M. Christine Tetley, 2014 posthumously, pp. 512, 545*) [2](*Wikipedia, 'Stela of Pasenhor'*)

6[8] In 783 there is a Pharmouthi 4 possible full moon (not exact) Oct 06 with conjunction September 23 (0830 NASA or 1456 Solex 11.0 UT) possibly too late, and PLSV 3.1 shows it to be LD14 with arcus visionis from 3-15 deg.[1,2] So far as we know, 794 is not favoured by anyone to be Year 1 of Shoshenq V, and raising the chronology in BG by 25 years is not workable with the known Reign spans of 32, 23, 13 years (Piye, Alara, Kashta), not adding.[3] PLSV 3.1 shows that Sep 23 or 24 are the only days, in Sep 783 BCE, when the moon is invisible, making Oct 06 (Pharmouthi 4) either LD13 or LD14 so 783 fails, based on the religious requirement of the Apis installation.

[1](*Notebook 32, WG, p. 181, 2139 hrs Nov 29 2015*) [2](*Notebook 33, WG, p. 8, 2235 hrs Dec 16 2015*) [3](*see par. 6-10 for Year 1 819 discussion*)

6[9] As I noted on Nov 29 2015, Pharmouthi 4 falls upon Oct 02, in 769 BCE, and some more recent calculations show that it is a borderline case, vascillating at an arcus visionis of 9.26-9.27 between success and failure, and since the arcus visionis for this case is estimable at about 10.8+-.8 degrees above the horizon (Schaefer for azimuth, from Celestia 1.6.1, of 1 degree interpolated between 0 deg and 10 deg of azimuth during September), based on the 9.26-9.27 above (Memphis, PLSV 3.1.0), it fails as a LD15, and must be taken instead to be LD16.[1-3] In agreement with LD16, Gautschy's tables give, in 769 BCE, Sep 16 as last visibility and Sep 17 as new moon. This date represents the lower chronology (BG) as well as Christine Tetley's Year 12 for Shoshenq V (c. 780).[4,5] Somewhat borderline, the year 769 BCE (BG), one should be warned, is subject to a one-day shift of Pharmouthi 4 to LD15 should visibility conditions be exceptional.

[1](*Notebook 32, WG, p. 181, 2139 hrs Nov 29 2015*) [2](*Notebook 33, WG, p. 8, 0248 hrs Dec 17 2015*) [3](*Ancient Egyptian Chronology, 2006, p. 397*) [4](*B4 Chronology-- Boundless Blessings Beyond Belief, by Ward Green et al., 2015, Chapter 1 end, Table 1, column 6, Egypt*) [5](*The Reconstructed Chronology of the Egyptian Kings, by M. Christine Tetley, 2014 posthumously, pp. 512, 545*)

6[10] Some other prospects:

1. The full moon of Oct 15 819 is a virtual, viable LD15. However, it antedates the QWP by 25 years, and is thus involving a higher chronology, not 'fitting' our data. For example, we can reckon from 856 Year 1 Pedubaste I to 720 Year 1 Shabaka using the 92 years for Manetho's Dynasty 23 and the 44 years of Manetho's Dynasty 24-E:[1]

   856 - 92 - 44 = 720 BCE
   Year 1 Shabaka (QWP)

   For another example, we can reckon from Piye's Year 21 Victory Stela in 767 to Darius Year 1 521 plus a year:[2]

   767 - 44 - 44 - 151 - 6 = 522 BCE
   Year 1 Darius is 521 (QWP)

   The 819 Year 12 date would be 25 years higher than us.

2. The full moon of Oct 14 816 is a LD18, and thus fails.
3. The full moon of Oct 12 808 is a Lunar Day 14 (fails), but were bad atmospheric conditions to raise the arcus visionis to 10.63 (from the expected ~8.8), it is then a LD15, and thus, under certain conditions, is viable. However, we know that there are other factors making a chronology, and this would be 14 years higher than us.
4. The full moon of Oct 11 805 is a LD17, and thus fails.
5. The full moon of Oct 05 780 is a LD17, and thus fails.

Thus, none of these chronologies appear so good to us. On the other hand, our *QWP* is absolutely great.

[1](*Manetho, with an English translation, by W. G. Waddell, 1940, p. 161, Dynasty 23 Africanus with 34 years for Zet, pp. 165, 167 Dynasty 24 Eusebius and Armenian version with 44 years for Bocchoris*) [2](*Manetho, with an English translation, by W. G. Waddell, 1940, pp. 165, 167 Dynasty 24 Eusebius and Armenian version with 44 years for Bocchoris, pp. 167, 169 Dynasty 25 Eusebius and Armenian version with 44 years for Ethiopian Dynasty, pp. 170, 171 Dynasty 26 Africanus with 151 years total, p. 175, Dynasty 27, 6 years for Cambyses*)

6[11] In QWP Year 12 of Shoshenq V is 805 - 11 = 794 BG QWP. In 794, IV Peret (Pharmouthi) 4 is Oct 09, and looking at the NASA tables, Sep 25 is the lunar conjunction of import-- 14 days later, Oct 09 is religious full moon! PLSV 3.1 shows that Sep 24 as 'last day of visibility' is unshakeable, for arcus visionis values of 3 to 15!! Pharmouthi 4 in 794 appears to work in all conditions! Thus, our QWP chronology already works perfectly here. We will attempt to summarize the basis of this belief, by quoting from WG Notebook 32, Nov 29 2015, p. 181-b.[1]

[1](*Notebook 32, WG, p. 181 bottom of page, 2139 hrs Nov 29 2015*)

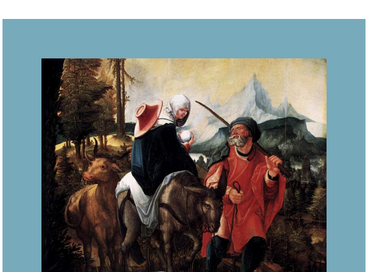
6[12] *There is a solid (if not rigid) relationship between the time of the Reign of Takelot II and that of Shoshenq V, based on inscriptional evidence, and we may confidently conclude from the two time-aligned and geographically coherent lunar eclipses in Years 11 and 15 of Takelot II and their exact relationship in lunar phase to the Year 12 full moon during the Reign of Shoshenq V,* ***the only irrefutable date for this Apis bull installation on a precise religious and astronomical full moon day (Lunar Day 15),*** *that the BG dates of 866 as Year 1 Takelot II and 805 Year 1 Shoshenq V are absolute!* [1]

[1](*Notebook 32, WG, p. 181 bottom of page, 2139 hrs Nov 29 2015*)

end of Chapter 6: Absolutely Institutional Moon Secured

Above: Planetary Nebula NGC 2818
(A Hubble Space Telescope photo of one of few planetary nebulae in the Milky Way residing inside a star cluster, NASA)

Chapter 7: Piye's Accession Year



Above: The Flight into Egypt, Staatliche Museen, Berlin *(1525-30 painting by Wolf Huber, Linden panel, 56 x 57 cm)*

Since there are no true 'absolute dates'... there is room for revision... for all pharaonic periods."
(Gae Callender, Oxford History of Ancient Egypt, ed. by Ian Shaw, 2000, p.138)

Very good audio, I can tell from the sound of it.
(2015-10-13 1842 hrs, Notebook 33, WG, p. 152)

Chronological Implications

7[1] We need to consider the implications of Piye's Year 1. *QWP* puts Year 1 in 788 BG, beginning at the end of the Reigns of Osorkon III and Takelot III, who rule for a combined 36 years, after Osorkon III Year 1 824. The *Book of Sothis* gives 13 years to Takelothis (although the preceding two Kings make this a possible repeat of Dynasty 22's Shoshenq, Osorkon, Takelot) but Year 28 Osorkon III = Year 5 Takelot III, according to Jansen-Winkeln a "completely unambiguous" coregency in the Third Intermediate Period, and Year 13 is attested for Takelot III on a stela from Ahmeida (in the Dakhla Oasis, and discovered in 2005) and 8 more after 28, to make 13 for Takelot, makes 36 combined, 824-788 (QWP).[1,2] According to Taharqa (691-664), Piye was not the great source of his power, but Alara who founded the Dynasty of Nubian Kings had conferred power on his sister, and she became the mother of Taharqa's mother, and source. Although Usimare Piye had invaded northern Egypt, his purpose was to quell an uprising by Tefnakht, who had risen up against Shoshenq V in the Delta, and when he had done so he returned to the south, remaining there for 12 more years, until Alara began to Reign, in 756 (788 to 756 is 32 years for Piye, on the *EKL*). Broekman has argued that Shoshenq VII 'most probably' ruled after Takelot III (so concurrent with Usimare), as we mentioned in *B4* (footnote Chapter 7-5b). Tetley's book mentions a possible Year 25 of Shoshenq VII, which from 788 is 764, 44 years (recall 44 years for Bocchoris in Manetho-Eusebius) before 720 BCE (or 719 if starting from 763), simply our Year 1 Shabaka. This is consistent with Tefnakht Year 1 770 (in QWP).

788 - 25 = 764 BCE
Year 1 Bocchoris (763 QWP)

[1](*Ancient Egyptian Chronology, 2006, p. 252 bottom of page.* The same book *Ancient Egyptian Chronology* dates the Reigns of Alara through Taharqa in Part IV, section 3, p. 496, as follows: Alara (785-765) Kashta (765-753) Piye (753-722) Shabaka (722-707) Shebitku (707-690) Taharqa (690-664)) [2](*Tetley, p. 518*)

7[2] Going back 3 years from TWT to QWP in the BG, we have brought dates that were Lunar Day 4 onto Lunar Day 1. This is because the lunar year is less than the solar year by 11 days, which in three years is 33 days, and the addition of an extra lunar month reduces it to 3. Osorkon III's Reign was aligned by this change, yet a challenge remains of determining the time after Piye. Kings who ruled after Takelot III will be instructive in filling the gaps in our knowledge of this century. With Alara ruling 23 years, Kashta began his Reign in 733 BG, ruling for 13 years to Year 1 Shabaka 720 BG. These Regnal years are from the Ethiopian Kings List:

788 - 32 - 23 - 13 = 720 BCE
Year 1 Shabaka (QWP)

Broekman has argued that Shoshenq VII 'most probably' ruled after Takelot III (so concurrent with Usimare), as we mentioned in *B4* (footnote Chapter 7-5b). Tetley's book mentions a possible Year 25 of Shoshenq VII, which from 788 is 764, 44 years (recall 44 years for Bocchoris in Manetho-Eusebius) before 720 BCE (or 719 if starting from 763), simply our Year 1 Shabaka. This is consistent with Tefnakht Year 1 770 (in QWP).

7[3] From the dated Victory Stela of Piye, Year 21, I Akhet (Thoth) 1 ie. Mar 03 767 to Pedubaste I Year 1 we have only the 89 years of Manetho-Africanus for Dynasty 23:

767 + 89 = 856 BCE
Year 1 Pedubaste I (QWP)

Here, too, Dynasty 24 according to Manetho-Eusebius is allowing 44 years for Bocchoris before Shabaka Year 1

767 - 44 = 723 BCE
Year 1 Shabaka (720 QWP)
(cf. Dan'el Kahn: 721 BCE)

This, too, of course, is consistent with the fact that it was Alara who 'founded' the Dynasty--and not Piye!

7[4] Since Iuput II was an ally of Tefnakht against Piye, a Year 1 for Iuput II synchronized with Year 1 Tefnakht, 770 BG, with the 39 years Grimal allows Iuput II, say:

770 - 39 = 731 BCE
Year 1 Osorkon IV (QWP)

(cf. Redford, Arnold, Dodson: 730 BCE)

Osorkon IV has betimes been said to be the "Shilkanni" recorded by Sargon II of Assyria as sending: "12 large horses of Egypt without equals in Assyria," in Year 7, which is nearly 716 BCE, depending on Sargon's Year 1. Supposedly, Hanno, King of Gaza, called for assistance from Osorkon IV about 720 BCE, and some postulate that Osorkon is the "So" of the Bible to whom Hoshea called for aid against Assyria prior to the siege of Samaria. With that siege beginning in 722 BG, and with "So," as recipient of pleas from Israel, perhaps a new King, we may consider another possible way of dating the Reigns of Shoshenq VII, Iuput II, and Osorkon IV in sequence:

788 - 25 - 39 = 724 BCE
Year 1 Osorkon IV (QWP)

In this scenario, it is not clear whether Iuput II can be the "ally" of Tefnakht against Piye, so it is weak, but he may have been a young ally of near 30 years old in 768, living 44 years more, to die at the age of 74.

First, Absolute, Chronological Truth

7[5] Since we are confident we have the absolute dating for the Reign of Shoshenq V, any insecurity must lie in an uncertainty regarding Tefnakht's rise to power in Year 36 of a King whose name was deliberately left blank on the donation stela, and who we have been supposing was Shoshenq V, simply because of the high year number and a Year 37 attested for an Apis burial, for Shoshenq V. However, the witness of both Herodotus and Manetho (in Eusebius) that Shabaka dealt with a King of Egypt over a 50-year period (44 Eusebius cf. 6 Africanus) who was called Anysis in Herodotus and Bocchoris in Manetho is in agreement with the absolute chronology we maintain. Shoshenq V died thus near the time of Piye's campaign, as appears to be evidenced by the fragmentation of the 22nd Dynasty in the Delta after Piye's returning home. So we believe that the facts are consistent with Piye, returning to Nubia, maintaining some control over many factions in the north, at a great distance, and having more control over Thebes in the south, which situation would persist until the Reign of Kashta, whose control was exercised from Napata in Nubia, further south, but whose Royal cartouche was found at Elephantine not far from Thebes, and who ruled for 13 years, from the EKL. Although Shabaka is given only 12 years on the EKL, it may be explained by Shebitku being coregent, beginning in 708, which may explain his being "crowned as King," in his own "Year 3" on Pachon 05, a LD7 Oct 18 706 BG, and Pachon 01 a LD3 that year (similar to Tepi Shemu). Thus, the 12 years of Shabaka could end in 708 BCE, at least from the standpoint of Manetho, who has 12 years for 'Sabacon,' from Eusebius (8 years from Africanus). This seems promising, but there appears to be in point of fact nothing certain from Piye to Taharqa in 691-0.

7[6] Our justification for Year 1 of Piye is a challenging, important point of departure for the chronology, since radiocarbon measurements are of no use for this period (the calibration curve is too flat to discern dates in the age range of about 780 BCE down to about 550 BCE). However, our treatment in the earlier chapters of this article have proven that it is an absolute chronology, and we are looking for mere confirmation of some kind. We have already seen a great deal of encouragement for the belief in Piye Year 1 788 BCE, and we must be very wary of ever comparing our chronology with those other chronologies, which abound, in which details are lost.[1] Basically, it is agreed among scholars today (and they are not in possession of our absolute chronology) that Taharqa represents the oldest certain dates for Egypt, and preceding Taharqa there are no dates of consensus. One of the great quotes in Egyptology is one in Shaw's *Oxford History of Egypt* where Callender states:

> **Since there are no true 'absolute dates' yet established in Egyptian history (apart from the radiocarbon-based chronologies) until the late New Kingdom at the earliest, and since argument still persists regarding the high, middle, and low dating schemes, there is room for revision in the chronologies for all pharaonic periods.**
> *(Gae Callender, Oxford History of Ancient Egypt, ed. by Ian Shaw, 2000, p.138)*[2]

It is true that the chronology of earlier periods does 'trickle down' to the later dates (but not necessarily in every case), and this is a reasonably strong way to argue in favour of our date of 788 for Piye, seeing as we have found an absolute chronology that predates him by a mere 78 years with Takelot II at 866 (see above). Usually, Manetho's godlike stature is enough to prompt any chronographer to see whether the numbers do tally. Except, we ourselves have raised the founding of Rome. It was we who found the true date of *The Exodus* to be of some antiquity 50 and more years before most.[3,4] We did it with the help of a great many chronographers of both ancient and modern times, and we are grateful. Manetho is yet, in fact, most would agree, so immense. Perhaps someone is faithful enough (me) to use Manetho to confirm an absolute chronology and stand by a vote. This is the 'first' absolute chronology time ever had.

[1](*Galatians 6:4*) [2](*Oxford History of Ancient Egypt, ed. by Ian Shaw, by Gae Callender, 2000, p.138*) [3](James Ussher (1581-1656) dated the Exodus 1491 BCE in his (Latin) 1650 book, posthumous English Version: *The Annals of the World, by James Ussher, 1658, section 190., '1491 BC,'* but he knew nothing about lunar alignment with the Sabbath on Iyyar 22 or with the day of Moses' death 40 years later on Adar 07, also a Sabbath according to Jewish tradition.) [4](*Someone using the name 'Lujack Skylark' had the date of 1495 BCE (no lunar alignments) for the Exodus, and before the publication of our own, 1493 date.*)

Superb, Egyptian Timeline

7[7] Chronographers are supposed to be calculating and cool founts of neverending and accurate times and verities.[1] Like Shoshenq I Year 1 993 BG, taken together with the totals of Manethan Dynasties 22 and 23 from Africanus:

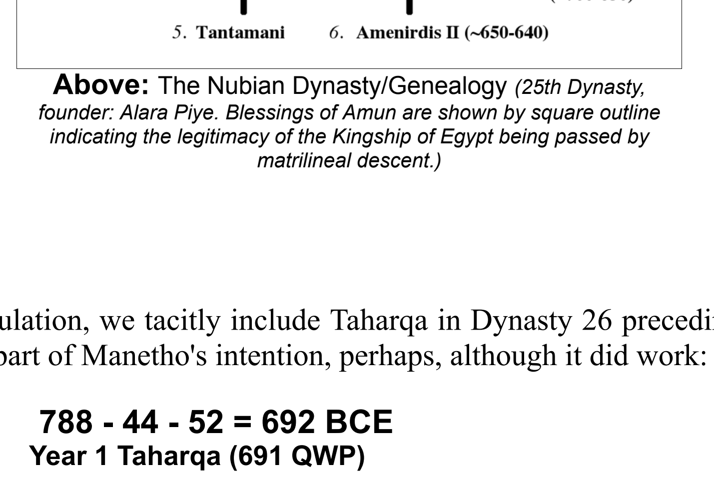
993 - 116 - 89 = 788 BCE
Year 1 Piye (QWP)

With Pedubaste I at the top of Dynasty 23, ruling from Thebes, the last King of Dynasty 23 is (ie. logically) Takelot III, its last, well-documented, Egyptian King. In some way, Manetho has conveyed the same 89 years of Dynasty 23 to us in relation to Piye's Year 1, whereas we had previously seen it relate to his Victory Stela. It doesn't add up to 856 Year 1 Pedubaste I (as 877 is incorrect) at the midpoint of 788 + 89, but works some sort of miracle total of 205, from Shoshenq I to Piye! Thus, there is a 21-year tension in Manetho caused, it appears, by the 21 years between Piye's Year 1 and his *Victory Stela,* and it leads to 44 years for the Ethiopian Dynasty 25, a number that could use raising, considering that Alara rules 23 years, and Shabaka has an attested Year 15, while Shebitku in ruling from 706 has 15 years of his own (a QWP sum total of 52 years). Using 167 years of Manetho-Eusebius (Armenian) for the total of Dynasty 26, and 44 for Dynasty 24, we reckon:

788 - 44 - 52 - 167 = 525 BCE
~Year 1 Cambyses (QWP)

In the above scenario, there is a result or assumption that Bocchoris rules from 788 (instead of 763 QWP), so it is again incredibly miraculous that it should work! Kenny Venturi said: You couldn't walk it out there any better than that, Jimmy! (translation: "Good drive!"). Many of us who try this know it's not as easy as that.

[1](*Notebook 33, WG, p. 11 bottom of page, 0231 hrs Dec 19 2015; cf. Daniel 7:25*)



Above: The Nubian Dynasty/Genealogy *(25th Dynasty, founder: Alara Piye. Blessings of Amun are shown by square outline indicating the legitimacy of the Kingship of Egypt being passed by matrilineal descent.)*

Generations

7[8] In the last calculation, we tacitly include Taharqa in Dynasty 26 preceding Psammeticus I, something not part of Manetho's intention, perhaps, although it did work:

788 - 44 - 52 = 692 BCE
Year 1 Taharqa (691 QWP)

From the death of Usimare Piye to the death of Taharqa is three generations, to judge the average generation:

(756 - 664) ÷ 3 = 30.7 years
per generation (QWP)
Usimare Piye to Taharqa

For the death of Usimare Piye to the death of Shebitku is three generations, to judge the average generation:

(756 - 691) ÷ 3 = 21.7 years
per generation (QWP)
Usimare Piye to Shebitku

We see that there is a range with an average of about: (31.7 + 21.7) ÷ 2 = 26.7 years per generation, or near the usual average generation for a firstborn son, made slightly lower by one female generation for each.

Kashta

7[9] With Piye dying in 756 BG, and passing his Kingship to Alara, he in turn at his death in 733 BG passing it to Kashta by his prayer, Kashta receiving it by virtue of his marriage to Alara's sister, Kashta reigns: 733 BG.

788 - 32 - 23 = 733 BCE
Year 1 Kashta (QWP)

However, since Alara ruled only in the south, in Nubia (Sudan), it appears reasonable that he, relegating the north to Kashta, Kashta in turn to Shabaka, was happy, even though Shabaka was Kashta's son some time before, and this son had not been born to the sister of Alara. Thus, from 756 BCE, Shabaka may have Reigned the north of Egypt and, as we believe he died in 706 at the time of the coronation of Shebitku, ruled for some 50 years consistent with Herodotus' account of Shabaka's Reign. Remarkably, Kashta's Year 1 733 also has some relation to Manetho's Dynastic durations in the QWP chronology:

733 + 44 + 89 = 866 BCE
Year 1 Takelot II (QWP)
44 : Dyn. 24, Euseb.+A., and 89 : Dyn 23, Afric.

733 - 44 - 163 = 526 BCE
~Year 1 Cambyses (QWP)
44 : Dyn. 25, Euseb.+A., and 163 : Dyn 26, Euseb.

[1](*Also:*

733 - 40 - 167 = 526 BCE
~Year 1 Cambyses (QWP)
40 : Dyn. 25, Africanus, and 167 : Dyn 26, Euseb.+A.)

Victory Stela

7[10] In his Victory Stela, Piye mentions the first month of the inundation, Day 9, and March 11 (when we interpret the date given as Thoth 09) in Year 19 of Piye's Reign (according to Christine Tetley, campaign Year 1), this being taken as 769 QWP, was a LD17 (ie. Mar 11), which is a waning moon, with uncertain significance for now. But when we take Day 9 as intended for LD9, assuming a Day 1 for the secular month of Thoth, then it can only mean "the Year in which Thoth 01 fell on LD9," and the Year in question is actually the same Year as 769 QWP! PLSV 3.1 was used to compute LD1 for Feb 769 and found Feb 24, with arcus visionis of 8.3 (Feb 23 az. 16 deg, Celestia 1.6.1, Schaefer ~8.3 a.v), the result holding with an a. v. as high as 10.08, at Thebes, in 769 BCE. Gautschy's tables agree with our date of LD1 (Feb 24), for Feb 22 last visibility (cf. Feb 23, PLSV 3 above). 769 BCE is considered a leap year (astronomically -768 for mathematic simplicity), and so there are 5 days to Feb 29 (LD6) and 3 more days to Mar 03 (LD9), which is exactly the same as Thoth 01 in the Egyptian year 769! Only in 'poor' visibility could this same LD9 occur on Thoth 01 in 744 BCE ('Schaefer ~8.5 a.v.' cf. 8.90 min for last visibility on Feb 16; any lower then Feb 17). In 744 BCE Thoth 01 is Feb 25, and Feb 17 moon azimuth of 6 deg gives a.v. of ~10.1+-.9 from Schaefer's table for Mar/Sept, and ~9.4+-.8 for Dec, and with Mar 28 as vernal equinox in 744 BCE, and Dec 28 Winter solstice, we interpolate at least one third of 0.7 from 10.1, to get 9.8 or 9.9+-.9 (Celestia 1.6.1 has visual ~8 deg). Both results being ambiguous, neither one is favoured. Gautschy's tables for 744 give Feb 17 as new moon late in the evening, as does Espenak, which are borderline. Gautschy favours Feb 17 in 744 as LD1, but in PLSV 3.1 we found last visibility as Feb 16 only with a.v. 8.90 or higher, so a.v. of 8.5 meant it failed, but barely, with the error limits permitting visibility on Feb 16. Visibility only slightly better than Schaefer's values estimate may have made the moon visible on Feb 17, and then Feb 18 was 1st invisibility, and Feb 25 thus LD8. The higher probability is thus the Year 769, our year![1]

[1](*In the chronology of the book "Ancient Egyptian Chronology," Piye's Year 1 is 753, and it's found that once again, only in poor visibility and only in 733 is Thoth 01 exactly LD9 (ie. 9.16 cf. Schaefer 7.6 a.v.). This is different also in being Year 20-- not Year 19. In 733 BCE Thoth 01 is Feb 23, and the Feb 15 moon has an azimuth, from Celestia 1.6.1, of ~15 degrees, which for Feb from Schaefer is ~8 deg a.v. (~5.5 in Celestia 1.6.1 appears to be thus not enough elevation to see); the Feb 14 moon, in Celestia, with an azimuth near ~25 deg, from Schaefer is extrapolated to a.v. ~6.3 (while in Celestia visually ~12 is thus plenty of elevation). Gautschy gives Feb 16 733 as (middle of day) new moon, even though Feb 14 she also tables as last visibility. Espenak concurs with a midday, Feb 16 733 conjunction. In PLSV 3.1 last visibility changes to Feb 14 for a.v. > 9.15, compared to ~8 (above), but with est. error of 1.2 this also might agree with Feb 14 last visibility. More importantly, LD1 is established as firmly Feb 16. So the 1st invisibility is Feb 16 and Feb 23 is LD8, a Day number which fails the criterion of LD9, by a day. The highest probability is thus by this criterion 769. We should, however, be cautious about exactness, here, as "planetary orbits" in Celestia have been "accurate" only "within a few thousand years of the present day." Piye Year 1 "Ancient Egyptian Chronology," p. 494*)

7[11] There are three dates in the Victory Stela of Piye, so we now turn to the second date of interest, which is a mention of Piye's intention to celebrate "afterwards:"

> **Now, afterward when the ceremonies of the New Year are celebrated, I will offer to my father, Amon, at his beautiful feast, when he makes his beautiful appearance of the New Year, that he may send me forth in peace, to behold Amon at the beautiful Feast of Opet; that I may bring his image forth in procession to Luxor at his beautiful feast (called): "Night of the Feast of Opet," and at the feast (called): "Abiding in Thebes." which Re made for him in the beginning; and that I may bring him in procession to his house, resting upon his throne, on the "Day of Bringing in the God," in the third month of the first season, second day; that I may make the Northland taste the taste of my fingers."**
> *(Piye's Victory Stela)*

Applying the same theory as we did above for the Thoth 01 Lunar Day 09, which apparently worked, we see: "the third month of the first season, second day," when the 'second day' relates to "Lunar Day 02" (although also, possibly, referring to the second day of the festival) and we take the 'third month' to be Hathyr 01, with no day number required for calendar 1 (we assume 'day' as meaning 'Lunar Day' for this discussion), and the Year "afterwards" as being the next occurrence of Hathyr 01 after the publication of the Victory Stela on Thoth 01 of Year 21 of Piye (the third date, to be considered), we find Hathyr 01 is May 02 in 767 BCE, which we take. Thus, Piye's stela is dated as approximately two years after the first mentioned date of the campaign, as was Tetley's opinion, and new moon suited new inscriptions as regards the time of their designation, as we assume in our previous work, always wary of such assumptions.

> *This is, as it happens, completely consistent in 767 with the conveying of Amun to rest in the third month of the inundation on the* ***second day,*** *since Hathyr 1 fell on May 2 in 767, the day of the same procession seeing as May 1 is the first day of invisibility and conjunction! The words of Piye quoted on his Year 21 Stela thus are prophetic at the time he utters them in Year 19 (not 20)! Otherwise, why mention it, except for the benefit of those with religious knowledge who knew the lunar date in that year?*

From this discussion and confirmation of Piye in 788, we learn also of the use of the calendar month names to refer to (calendar) day 1, and the use of the lunar calendar to correlate and possibly corroborate those dates.
(Notebook 32, WG, p. 184, 2015-12-01 1508 hrs)

7[12] Finally, the Victory Stela of Piye in his "Year 21" is dated: "Year 21, first month of the first season," and Thoth 01 in the Year 767 BCE is an exact Lunar Day 01! Since the calendar day is not mentioned, we take it as Thoth 01, which is truly a new moon in the year given. It falls on Mar 03 767 BCE, which is 20 years and some months after the rising of Sothis in July of 788, when we take the Regnal years as counting from Sothic rise. Probability favours Year 21 in early 767 also assuming an accession after early March 788, and its reckoning. Thus, in many ways, 788 is a suitable, fitting Year 1.

end of Chapter 7: Piye's Accession Year

Above: Joseph Interprets the Dreams of the Pharaoh's Servants Whilst in Jail, Private Collection *(1726-31 painting, by Alessandro Magnasco, oil on canvas, 134 x 177 cm)*

Chapter 8: B4 Affirms Carbon-14 Kings

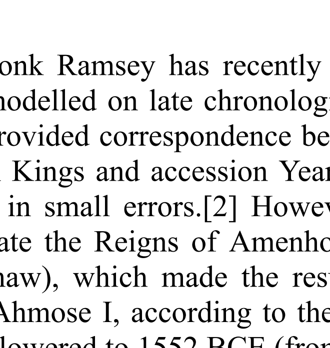
The absolute dates... are systematically earlier than the conventional chronologies of southern Greece by between 79 and 100 years.
(Kenneth Wardle, Dating the End of the Greek Bronze Age: A Robust Radiocarbon-Based Chronology from Assiros Toumba, PLOS one, Sept 15, 2014, Abstract)

There's a lot in the future for radiocarbon.
(*Ward Green, 1115 hrs, 2015-08-18*)

Above: Joseph Interpreting Pharaoh's Dream, Nationalgalerie, Berlin *(1816-17 painting, by Peter Cornelius, fresco with tempera, 236 x 290 cm)*

8[1] There are many time periods for which radiocarbon data are valuable, something Tetley's book fails to embody.[1] Wardle's work at Assiros Toumba addresses the new data showing that the results of the Thera volcano are real and that absolute dates are generally decades too low. As we know, this would agree with B4 and the BG, also. The dates of Egypt's New Kingdom and the *Exodus* are included in the period of the proposed adjustment, affecting the middle of the 2nd millenium (~1500 BCE). One of the consequences of raising the dating for this era is that, interestingly, the pottery which had been previously associated with the New Kingdom of Egypt is now clearly updated to the Hyksos Dynasty, interesting in that Late Minoan IA, contemporary with the time, is also "considered a high point of Minoan civilization."[2] Manning would date the LM IA 80 years higher at least, dates P. Betancourt derived 15 years earlier (in 1987) working backwards from the LH IIIA:2 sherds at Amarna. Late Helladic (LH in Greece) shares Late Minoan (LM in Crete) ordinal numbering: [LM, LH] IA to [LM, LH] IIIB (*except for LM IB = LH IIA and LM II = LH IIB*). Betancourt's LM IA (LH IA) was "tentatively" 1700-1610 BCE and his LM IIIB (LH IIIB) dated ca. 1365-1200 BCE. Basically, the dates of some pottery periods are being raised by 50-150 years by these retrospective studies, where radiocarbon is now contextually well understood. In this regard, we will consider some radiocarbon data to see how the *B4-BG-QWP* chronology affirms it.

[1](*In the introduction to her book, Tetley is brief on 14C, and puts it 11th on her list of chronological resources for Egypt: '11. Scientific studies, such as carbon-14 dating, tree-ring counting (dendrochronology), and ice-core testing, can supply approximate dates to a given time period.' From "The Reconstructed Chronology of the Egyptian Kings," by M. Christine Tetley, 2014 posthumously, p. 4*) [2](*Notebook 32, WG, p. 123*)



Above: Ganymede (Jupiter's largest moon)
(Mar 04 1979 photo from Voyager 1, NASA, enlarged and enhanced by Ward Green Dec 23 2015)

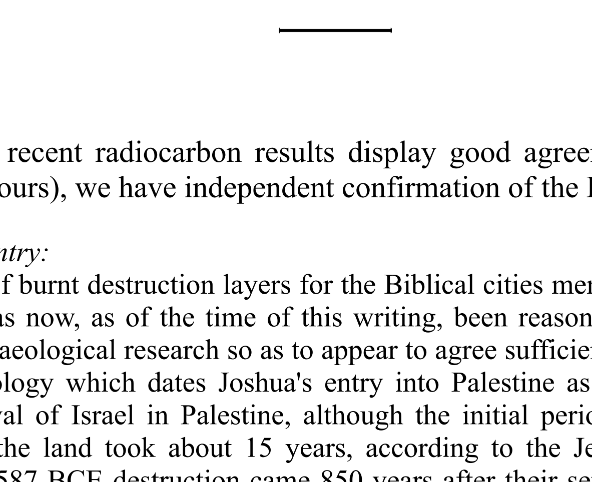
8[2] The radiocarbon work of Bronk Ramsey has recently been receiving attention in the media, and it statistically was modelled on late chronologies of Shaw and Hornung.[1] A landmark study by Ramsey, it provided correspondence between the radioactive dating for Old, Middle and New Kingdom Kings and accession Years based on chronology, and the Bayesian method used resulted in small errors.[2] However, for the New Kingdom, too many years were used to separate the Reigns of Amenhotep I and Thutmose III (in our chronology 32, vs. their 46, Shaw), which made the resulting dates model too low for Thutmose III and too high for Ahmose I, according to the BG chronology. With a 7-year adjustment, Ahmose I would be lowered to 1552 BCE (from 1559, 1 sigma mean), the Year 1 we have determined in our present work (within a year 1552/1). Stuart Manning stated (2003, 2007) regarding Ahmose I:

> **All modern discussions of the last two decades place the beginning of the 18th Dynasty around 1550-1540 BC.**
> *(Stuart W. Manning, Vienna, 2003, 2007)*

Likewise, raising the accession of Thutmose III by the same 7 years as we lowered Ahmose I, it becomes 1496/5 BCE (from 1489/8, 1 sigma mean), not more than 3 years higher than his true Year 1 date in the QWP, 1493 BCE. Such close agreement shows that using the QWP to model the radiocarbon data would have greatly improved them, and that the radiocarbon results are greatly affirmed! A chi-squared fit showed a 29% improved probability of a linear fit to the data using our QWP (B4), vs. Shaw, and we represent this by a graph (Fig 8.1, see below):

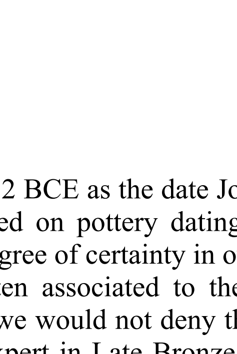
[1](*Science, Vol. 328, pp. 1554-1557, Radiocarbon-Based Chronology for Dynastic Egypt, by Christopher Bronk Ramsey et al., 2010*) [2](*Ibid., p. 1556*)

Figure 8.1: B4 Affirms Carbon-14 Kings *(Ward Green et al., 2015)*



8[3] Since the most recent radiocarbon results display good agreement with chronological theory (especially ours), we have independent confirmation of the BG chronology.

> *Notebook entry:*
> The dating of burnt destruction layers for the Biblical cities mentioned in the Book of Joshua has now, as of the time of this writing, been reasonably resolved from modern archaeological research so as to appear to agree sufficiently with our Green 2009 chronology which dates Joshua's entry into Palestine as 1452 BCE, as the earliest arrival of Israel in Palestine, although the initial period of conquest and division of the land took about 15 years, according to the Jewish tradition that Jerusalem's 587 BCE destruction came 850 years after their settlement. In our B4 modern context of this Jewish tradition, we believe that Jericho, Hazor, and Ai are adequately fitted, with each of these sites possessing a burnt destruction as attested by their stratigraphies at appropriate levels in terms of the pottery now believed to correspond in dating. A second burning of Hazor has likewise been assessed as early 13th century BCE, which would appear to also agree sufficiently with our Crucible dating of Deborah's Rule of Israel as from 1286-1246 BCE (Crucible, Green et al. 2012). The dating is from pottery and C14, by Zuckerman 2007. Hazor was the city of Jabin (Judges 4:23-24), who is described as 'cut off' after his defeat (1286 BCE, C3, B4 us). The rebuilding of Jericho (1Ki 16:34) is recently confirmed. Jericho's rebuilding in Ahab's time (920-900, us) is seen as 'early Iron Age II' (2011 excavation cf. also Toffolo 2014).
> (Notebook 32, WG, p. 129, 2015-08-16 1219 hrs)



Above: Fountain near Jericho *('Tradition says that by a miracle the prophet Elisha purified the waters of this fountain. Excavations on the hillside above have uncovered the foundations of the old city walls of Jericho, over which Rahob let down the two spies of Joshua,' photo from "The Holy Land and Syria," 1922, p. 124)*

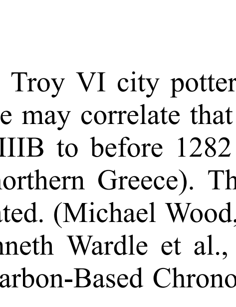
8[4]

> *Notebook entry:*
> As certain as we may be of 1452 BCE as the date Joshua burned Jericho, to a fairly minor degree is our view based on pottery dating, and our view is made more critical since we have a high degree of certainty in our dating of the event. Level IV at Jericho, the burnt layer often associated to the Joshua destruction (by early Exodus proponents), although we would not deny that many disagreed, is assigned by Mr. Bryant G. Wood (an expert in Late Bronze Canaanite pottery) to the very end of Late Bronze I pottery, the absolute dating of which has in 2014 been raised to 1460 BCE by Toffolo et al. at Megiddo, in harmony (independently) with the 1452 BCE date. ("Absolute Chronology of Megiddo, Israel, in the Late Bronze and Iron Ages: High-Resolution Radiocarbon Dating," Fig 8, Radiocarbon 56, no. 1 pp. 221-244 (2014) by Michael B. Toffolo, Eran Arie, Mario A. S. Martin, Elisabetta Boaretto, Israel Finkelstein)
>
> In his excavation of Tell es-Sultan (ancient Jericho), Mr. John Garstang dug 13 times the area dug by Dame Kathleen Kenyon, and based his assessment that Level IV pre-dated 1400 on the lack of any Mycenaean pottery, thus he believed that Joshua had burned the Level IV city before 1400 BCE, a belief also harmonizing with our own dating.
>
> Now that the arrival date for the arrival of Mycenaean wares in Palestine would logically be raised by 50-100 years from radiocarbon dating for Thera's eruption and its consequences, essentially fullfilling Mr. Betancourt's 1987 proposal, it can be seen that Mycenaean LH IIIA:1 pottery beginning in 1490 (in Betancourt 1987) appears to consolidate 1452 BCE, and to invalidate c. 1400 BCE, as the date of Joshua's destruction.[1]
> (Notebook 32, WG, p. 133, 2015-08-23 1445 hrs)

Betancourt 1987 Table 1
Tentative chronology for the Aegean

Crete	***Greece***	***Dates***
LM IA	*LH IA*	*c. 1700-1610 B.C.*
LM IB	*LH IIA*	*c. 1610-1550 B.C.*
LM II	*LH IIB*	*c. 1550-1490 B.C.*
LM IIIA:1	*LH IIIA:1*	*c. 1490-1430/10 B.C.*
LM IIIA:2	*LH IIIA:2*	*c. 1430/10-1365 B.C.*
LM IIIB	*LH IIIB*	*c. 1365-1200 B.C.*

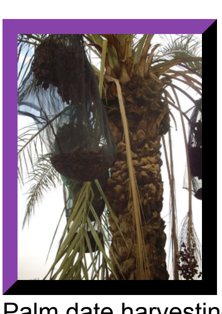
[1](*This is specifically so because at Hazor, as we mentioned in our "Crucible" C3 article, there is a gap after Mycenaean LH IIIA:1 until the late IIIA:2 as was noted by Yadin in stratification in a cave near Hazor, with only a "few" IIIA:1 vessels being found, and thus the destruction of 1452 BCE in the BG could explain an interruption after the start of IIIA:1 in c. 1490 BCE. The "large group," then, of "vessels of the late stage of IIIA:2" that were found would be from the last part of 1430-1365 BCE (Betancourt's 1987 LH IIIA:2 limits), which appears to correspond to 1386 BCE, which we gave as the end of Moabite oppression of Israel, they being at peace for 80 years until 1306 (C3), when Jabin rose up again at Hazor 146 years after Joshua destroyed it. Thus the "gap" that Yadin referred to as the middle of the 15th century at Hazor can be due to Joshua and his 1452 destruction of Hazor, with abandonment 1452-1386. It is the lack of early-to-middle stage IIIA:2 pottery which suggests abandonment of the site-- or cave-- but the fact that Jabin rose up again at Hazor does imply, in a way, that Israel had left the site untended. When the LH IIIA:1 pottery ended (as Betancourt said, 1987) in 1430/1410, it's less likely Hazor ended in c. 1400, with a few LH IIIA:1 and no early IIIA:2 vessels!*)



Above: Portrait of John Garstang (at 80) *(Jul 15 1956 photo, enlarged and enhanced by Ward Green Dec 23 2015)*

8[5]

> *Notebook entry:*
> Mr. Michael Wood writes that Troy VI city pottery imports included Mycenaean IIIB wares near its end, and we may correlate that finding to the recent Wardle et al. radiocarbon dating of LH IIIB to before 1282 BCE at Assiros, Greece (95% confidence, ie. 2 sigma and northern Greece). Thus, the 1275 BCE dating of a Trojan War is firmly substantiated. (Michael Wood, "In Search of the Trojan War," p. 164 (1985, 1998), and Kenneth Wardle et al., "Dating the End of the Greek Bronze Age: A Robust Radiocarbon-Based Chronology from Assiros Toumba," p. 7 (2014))
>
> Since Mr. Wardle's work (Ibid) significantly raises LH IIIC from the conventional date of 1200 BCE to at latest 1282, IIIB pottery chronology is reduced from the proposed 165 years duration of P. Betancourt (1987) to a more reasonable 83 years (or less), and ends before 1275 BCE, the date we give for the end of the above-dated Trojan War.
> (Notebook 32, WG, p. 132, 2015-08-22 1300 hrs)
>
> It appears clear from the "robust" radiocarbon chronology of Mr. Wardle (above) that Troy VI city level corresponds to the time of Pharaoh Ramesses II, and fell in 1275 BCE. The low authority of pottery for dating purposes, however, is hardly a threat to the B4 chronology based on the success of B4 in all areas, supported by pottery and radiocarbon, but being based of the Highest Authority, Jehovah, aligning dates with remarkable precision, with known history in the harmonizing of the Bible with the national traditions of all. The Jubilee Cycle of 50 years beginning 1422 BCE is able to account for Jewish tradition and the Bible effortlessly.
> (Notebook 32, WG, p. 132, 2015-08-23 1400 hrs)



Above: Palm date harvesting *(Jericho)*

86

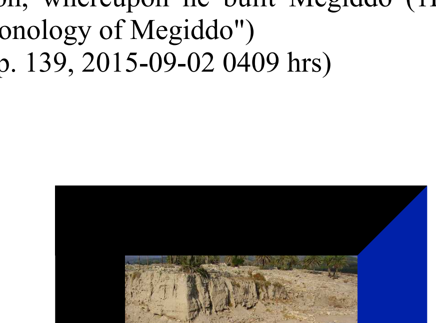
Notebook entry:

Gezer VIII, and Tel Rehov VI, both Iron IIA cities of the time immediately following Iron IB, may be readily seen as of King Solomon's day, as established by architecture at Gezer and radiocarbon measurements at Tel Rehov.

The radiocarbon measurements from Tel Rehov (Mazar et al. 2005) strongly support the 973 BCE B4 date for the Shoshenq I incursion into Palestine during Tel Rehov city VI, the time of Solomon agreeable to the earlier phase of this Stratum VI at Tel Rehov, as appears correct.

It is becoming clear that 'B4' is the true conventional chronology, rather confusingly so, as the middle of the Reign of Ramesses III is placed near 1200 BCE in 'B4,' at a time when Mycenaean IIIC pottery is found, at the early phase of Iron I, in phase S-4 at Beth Shean, dated 46 years lower (c. 1160) by pseudo-conventional datings. (Mazar, A. 2006 "Debate Over Chronology," Ch. 2 'Bible & C14') So, 'B4' agrees with Myc. IIIC pottery beginning in 1200 BCE (ie. the same date as is assigned by the pottery convention).

The work of Toffolo in 2013 ("Towards an Absolute...") maintains the commencement of LH IIIC at 1200 BCE, so it is relevant to this discussion to note that Mr. Toffolo in 2014 (Chronology of Megiddo) dated a Levantine city Iron Age transition (ie. I/II) to c. 950 BCE using radiocarbon ages. Iron IIA, as determined by one sample from H-7 (2808 BP), yields nearly 1030 BCE for the upper 95% confidence limit. The destruction of the preceding level (H-9) may thus have come before King Solomon, whereupon he built Megiddo (1Ki 9:15). (Toffolo et al. 2014, "Absolute Chronology of Megiddo")
(Notebook 32, WG, p. 139, 2015-09-02 0409 hrs)



Above: Rounded altar in Canaanite temple in Megiddo
(2008 photo courtesy of Avishai Teicher)

87

Notebook entry:

That Iron Age IIA corresponded to the architecture of King Solomon, with casemate walls and six-chambered (or four-entry way) gates being constructed under his administration, is an association originally proposed by Yigael Yadin, and after consequent debate concerning Yadin's theory that gates for Hazor, Megiddo, and Gezer were built by a solitary plan by one architect, remains sound as to its Solomonic association, with which assertion by Ms. Suzanne Richard all scholars agree ("Near Eastern Archaeology," (2003), p. 375, par. 4).

In other words, Solomon and IIA are firmly associated. As a result, the conventional date of Iron IIA is 46 years higher in 'B4,' based on authentic Biblical tradition, as opposed to the compromise 'convention' of Edwin Thiele.

2003 Gilboa ("An Archaeological Contribution") p. 43 makes the assertion that at the city of Dor:

> **"At Dor, the only vessels reflecting the LC IIIB (and possibly slightly later) horizon were in the late Ir Ia [Iron IA]"**

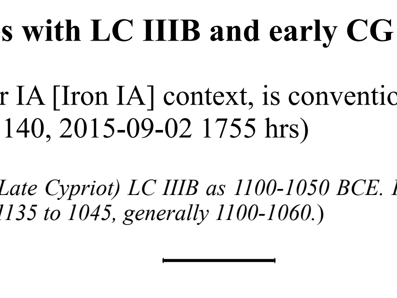
Thus, at Dor the strata agree with Iron IA ending before 1050 BCE, and the Iron IB at Dor was (Ibid.) "early or mid-CG I," by convention (B.M.) 1050-1025 BCE. Typologically, therefore, Dor presents us with no problems.

Gilboa (Ibid.) p. 65 notes at Dor two vessels with:

> **"affinities with LC IIIB and early CG I [ideas]."**

The area, G-9, a late Ir IA [Iron IA] context, is conventionally right.[1]
(Notebook 32, WG, p. 140, 2015-09-02 1755 hrs)

[1](*The British Museum chart gives (Late Cypriot) LC IIIB as 1100-1050 BCE. Iron IA is called Late Bronze III in Toffolo 2014 and he dates its end to between 1135 to 1045, generally 1100-1060.*)



Above: Tel Megiddo *(Photo, aerial view)*

88

Notebook entry:

Megiddo VII, which was covered in debris up to four feet deep, is described by excavation pottery expert Geoffrey M. Shipton as Late Bronze II (1350-1170 BCE), ending in the 'early' 20th Dynasty of Egypt (cf. Ramesses VI 1181-1173).

With Megiddo Stratum VIII the 'best defined LB I stratum so far excavated in Palestine' ("Notes on Megiddo Pottery," by G.M. Shipton (1939), p. 10), according to Shipton, we may be reassured by Dame Kathleen Kenyon's assessment of the destruction of the Jericho site as at the end of Middle Bronze, by owning the comparison to Megiddo Stratum IX: Stratum IX at Megiddo is beneath VIII, and IX we date as 1550-1450, reflecting Israel as destroyer in 1450 (c. [actually 1452]). Thus IX may be considered 'Middle Bronze II' or 'the end' of the period MB II, and is thus classified by Mr. Shipton.

Stratum VIII at Megiddo contains Mycenaean sherds (Ibid., p. 11), which means it ended after 1400 BCE (ie. 1350 BCE) and the subsequent (ie. on top) level VII had cartouches of Ramesses III and VI (1223-1173 BCE).

Stratum VI was Canaanite in its pottery, and was followed by Israelite pottery in layer V, although a sizable (50 years, say) occupational gap is seen between VI and V, after VI was destroyed under a layer of three feet of ash, possibly by an earthquake in ca. 1100 BCE (Egypt Dyn. 20, Ibid. p. 4, Table).

It has been proposed that King David destroyed VI at Megiddo, consistent with radiocarbon dating of its destruction to 1034 +/- 28 (90%) BCE (Megiddo 3, Timothy P. Harrison (2004) Final Report Stratum VI).
(Notebook 32, WG, p. 141, 2015-09-03 1216 hrs)

89

Notebook entry:

"Dor and Iron Age Chronology: Scarabs, Ceramic Sequence and 14C," by Gilboa et al. asks:

> **"Could a Siamun scarab in a Palestinian context paralleling the end of Megiddo VIA or slightly later be squared away with the conventional wisdom that Megiddo VIA was destroyed by David and that IVB-VA was built by Solomon and destroyed by Shoshenq I?"**

In B4, our chronology, the answer is "easily."

Reading further in the same article, and in the context of 'B4' chronology, "one can still argue that all it proves is that the Iron Age I ends somewhat after" 1025 BCE (Siamun Year 1, 'B4').

Iron Age IIA, as noted on p. 135 (this), is correlated with Megiddo level V and its 'Israelite fabrics,' which logically implies that King David destroyed the 'Canaanite' city VI Megiddo, which was later replaced by the Israelite city V under Solomon the King of Israel, as recorded at 1Kings 9:15 with regard to the building of the wall of Megiddo.

Mr. A. Mazar (2006) confirms the Iron IIA nature of Megiddo V, with the conventional date of Iron IIA's beginning at 1000 BCE also agreeing with Solomon ruling from 1017 to 977 BCE (B4 dates). "The Debate...," Table 2.2, confirms Hazor X also as Iron IIA (Ibid.) (see p. 135 also, this notebook).
(Notebook 32, WG, p. 138, 2015-09-01 2025 hrs)

That Israelite pottery 'fabrics' are not found in Megiddo VI in Shipton (1939) at all, but appear first in V therein, is well-correlated in Toffolo (2014) and Levy (2010, 2005) to (according to both) Iron Age IIA, the four-chambered gate of Levy's Stratum 3 at Khirbet en-Nahas area M being in the 'Founding Phase' of the copper mine, there, having its beginning, as dated by both Solomon's Temple (B4 1014- 1007) and the underlying Stratum 4 at KEN, in the last two decades of the 11th century BCE, a remarkable and very convincing proof, especially considering that such gates have been associated with King Solomon in other locations, for example Megiddo IVA, Gezer VIIB (Ortiz 2012) (six-ch.), Megiddo VA-IVB (six-ch.) (Knoppers 2000), Hazor X. Iron IIA contexts include Hazor X and Megiddo (VA-IVB). (The Bible and Radiocarbon Dating (2005) Levy & Higham).
(Notebook 32, WG, p. 135, 2015-08-27 1127 hrs)

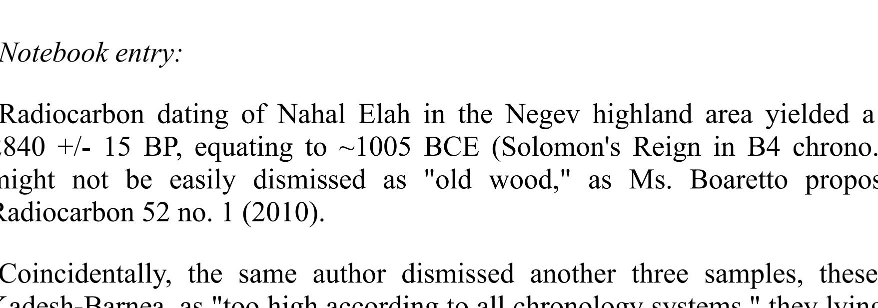


Table 1. Correlation of Megiddo Iron Age Phasing Schemes

Tell el-Mutesellim II (Watzinger 1929)	OIC 4 (Fisher 1929)	OIC 9 (Guy 1931)	*Megiddo 1* (Lamon and Shipton 1939)	*Megiddo 2* (Loud 1948)	Megiddo Expedition Chronology (B.C.)
—	I	I	I	I	600–350
—	II	II	II	II	650–600
VI	—	Sub-II	III	III	780–650
—	Ahab	III	IV	IVA	925–800
V (ninth–eighth century)	Solomon	IV (dated 925 B.C.)	IVB	VA/IVB[6]	1000–925
—	III (800–600 B.C.)	—	V	VB	1050–1000
Brandschicht (d. 925)	—	V	VI	VIA	1150–1100
—	—	—	—	VIB	—
IV (tenth century)	—	—	—	—	—

Megiddo 3 Final Report: Table 1. (from Harrison, 2004) *(University of Chicago)*

810

Notebook entry:

Radiocarbon dating of Nahal Elah in the Negev highland area yielded a value 2840 +/- 15 BP, equating to ~1005 BCE (Solomon's Reign in B4 chrono.), and might not be easily dismissed as "old wood," as Ms. Boaretto proposed in Radiocarbon 52 no. 1 (2010).

Coincidentally, the same author dismissed another three samples, these from Kadesh-Barnea, as "too high according to all chronology systems," they lying in an Iron Age context (Negev) with a radiocarbon value "in the middle of the 2nd millenium BCE," exactly the time of the Exodus in 1493 in our chronology, importantly.

In our Greeneology (B4 2015), Shishaq's invasion is precisely dated to 2811 BP (973 BCE, sic), and this is in excellent agreement with the latest values (Gilboa et al., Tel Aviv 36 (2009), Fig. 1) from Level 4 of Kadesh-Barnea, 2826 +/- 10 (1 sigma) (+/- 20, 2 sigma) BP.

According to Lester Grabbe, "Israel in Transition 2: From Late Bronze II to Iron IIA," p. 77 (2010), there is 'wide agreement' that "Arad XII and related Negev sites are to be related to Shoshenq's invasion," and the "sites most uncontroversially associated with the campaign of Shoshenq are found in the Negev."

Yokneam Level XVII is paralleled by Megiddo VI (slightly pre-Solomon), and has been radiocarbon BP dated to 2866 +/- 14 and 2816 +/- 20 (Sharon et al. 2007), or 1042 +/- 17 BCE and 978 +/- 25 BCE calibrated (by me). (Yokneam XVIIb, olive pits, reported also by Finkelstein, 2007). This dates to pre-Solomonic times and to Shoshenq (B4).
(Notebook 32, WG, p. 136, 2015-08-29 1327 hrs)

> **"These cities peaked in prosperity in late Iron I--the horizon of Stratum VIA at Megiddo-- and were then destroyed in a violent conflagration. Radiocarbon dates from Tel Rehov, Dor, Yokneam, Megiddo, and contemporary Tel Hadar put this destruction sometime in the 10th century B.C.E. (Boaretto et al. 2005; 965 +/- 40 in Finkelstein and Piasetzky in press)."**
> (publ. 2006 in "Essays on Ancient Israel in Its Near Eastern Context: A Tribute to Nadav Na'aman," ed. by Yairah Amit, Ehud Ben Zvi, Israel Finkelstein, and Oded Lipschits)

The above destruction date (remaining cautiously optimistic) of 965 +/- 40 BCE (Finkelstein (2006) p. 181) agrees with a date in our B4 of 973 BCE for Shishak's (Shoshenq I's) incursion into Israel in Year 5 of King Rehoboam, and it likewise (Finkelstein et al. 2008, "Three Snapshots of the Iron IIa," p. 35) best exemplifies the end of Iron I from Tel Rehov VII D-3, dated 1001-971 (Mazar et al.) and 975-905 (Finkelstein and Piasetzky, 1 sigma) from radiocarbon data.
(Notebook 32, WG, p. 137, 2015-08-30 1832 hrs)

811

Notebook entry:

While the 2004 Megiddo 3 report included a 10% probability for a date of 1112-1102 BCE for Stratum VI's destruction, more recent measurements by Toffolo et al. (2014) indicate that Megiddo VI (early Iron I - early Iron II), with its ash destruction layer (max. 1 meter thick), ended in 973 BCE. Figure 8 of Toffolo 2014 shows that 973 BCE is close to correct for the Iron I-II transition, and Figure 6 shows a destruction of H-9 (Iron I late) at 1000 BCE, with a post-destruction occupational phase dated 980 +/- 10 (1 sigma). H-9 was destroyed by fire, and the post-destruction phase is coincident with the 973 BCE Shoshenq I incursion date. H-10 (Stratum VIB, oldest part of VI level) was also dated. Since the 'floor' of H-10 was found by five measurements to date between 1125 and 976 within 1 sigma, 1050 BCE being the common mean, it becomes logical to state and discuss whether H-10 was built by King David, and H-9 Solomon.

The reconstruction of Megiddo VI after 973 BCE is clearly demarcated by the 980 +/- 10 BCE C14 date for re-occupation eliminating some of the old wood effect in the destruction date, seeing also as 973 would be when Shoshenq would have had our terminus post quem for erecting his 10-foot high stela, post-destruction VI. The exact provenience of the stela is unknown, except that it was found in a dump from excavations above (ie. before the excavation of) Megiddo VI, meaning that reoccupation coincided with both our chronology for this incursion and with the stela, a fact hard to fully ignore. Logic then further dictates that half of VI was built by King David (ie. H-10 c. 1058-1018, King David's Reign) and the later half (H-9, destroyed by Shoshenq) by King Solomon, meaning city levels V-IV are not by Solomon.
(Notebook 32, WG, p. 142, 2015-09-03 1418 hrs)

812

Notebook entry:

The problem of the 9th century dating of the pottery found in Megiddo V-IV buildings, called by Dame Kenyon a difference between 'Building Period' and

'Pottery Period,' is now resolved by the attribution of V-IV to the period of the Divided Kingdom, this city ending c. 925 at Megiddo (when we accept the radiocarbon dating, with Shoshenq Pc incursion in 973 BCE), which date in 'B4' is lowered by Thiele's compromise to c. 880 BCE (ie. 9th century).

Correction to previous paragraph regarding the end of V-IV at Megiddo: Radiocarbon dating of this level places its destruction between 880 and 820 BCE (Toffolo 2014), and there is a 50-year gap dividing our 973 VI and until level VB (Megiddo Expedition Chronology), thus in our chronology would be c. 923 BCE for level VB start. This is Ahab's time (920-900 BCE) in our 'B4,' and it might be Jehu who established VA/IVB with its great architecture c. 887-859 BCE (Jehu's B4 Reign), with it ending c. 850 (not likely) or ending after 75 years (as per Harrison 2004 Table 1., Megiddo 3 Report) it would have (ie. V/IVB) began c. 920 with Ahab as King in the northern Kingdom after only 53 years for VB and any occupational gap (all told lasting 120 years instead of 175 years from Shoshenq I as per Harrison (ed. J). The end of V/IVB in this case is not well defined yet, so that the total period might be 90 up to 150 years. The so-called 'stables of Ahab' in IVA are now dated to later than 880 BCE (c.), and thus may become the 'stables of Jehu' and of his sons (in the case of 90 yrs), or the 'stables of Jeroboam' (in the case of 150 years total). More study of various scenarios can be considered with regard to the length of the different periods concerned.
(Notebook 32, WG, p. 143, 2015-09-04 0143 hrs)

The Omride enclosure at Jezreel exhibits pottery very similar to that of its own constructional fill, both typologically similar in turn to the pottery assemblages of Megiddo Stratum VA-IVB, (Lester L. Grabbe, "Ahab Antagonists: The Rise and Fall," p. 304, 2007)

This 'Solomonic mirage' of Yadin's proposal regarding certain architectural styles is mentioned and dismissed by Finkelstein and Silberman ("David and Solomon...," App. 3, p. 288, 2006), who note that similar masons' marks are borne by the ashlar blocks in the palace at Samaria and the southern palace at Megiddo, an unmistakable similarity first noted by the early excavators and subsequently (conveniently) forgotten in deference to Mr. Yadin.

Cities and their strata at the time of Shishak's incursion (left):

City	Stratum
Tel Rehov	VI
Taanach	IIA
Hazor	XI
Megiddo	VI
Gezer	[IX]
Arad	[XII]
Lachish	[V]
Yokneam	[XVI] XVII-XV
Tel Keisan	9

Megiddo Stratum	Megiddo Expedition (BCE)	B4 Chronology (BCE)
IVA	925-800	887-800
VA/IVB	1000-925	973*-887
VB	1050-1000	973-932
VIA	1150-1100	1150-973

*as low as 932 BCE

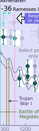
Our dating Megiddo VI as ending in 973 BCE is in agreement with the statement by Mr. Harrison in the official Megiddo 3 Final Report on the Stratum VI Excavations:

> **"The accumulated evidence continues to have a late eleventh or early tenth century date for this transition."**
> (p. 12, last sentence)

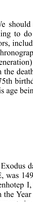
(Notebook 32, WG, p. 144, 2015-09-04 1557 hrs)

Megiddo is the King of context among Levantine cities, which makes its radiocarbon results (Toffolo) reported weightier, one would expect, than many from elsewhere, and the study of its Strata is likewise much improved. Notwithstanding this, B4 upholds C-14 in all contexts. So, the B4 chronology (aka QWP BG) affirms radiocarbon dating on many levels, and places Shoshenq in 973 BCE!

end of Chapter 8: B4 Affirms Carbon-14 Kings



Chapter 9: Radiocarbon Egypt's Archaeometric Logic



Above: The Medinet Habu Calendar *(Year 4 Ramesses III, 1220 BCE)*

> **Happy is the man that keeps on enduring trial, because on becoming approved he will receive the crown of life, which Jehovah promised to those who continue loving him.**
> **(*James 1:12, New World Translation, 1984*)**
>
> **Now you have a surfboard!**
> **(*Tony Robbins*)**

9: Shaw's chronology (2000) and our chronology differ for the Egyptian Kings by 14 to 46 years, for the range in Dynasties 18 through 21 of Manetho, from 1493-993 BCE. Figure 8.1 (see below) shows the comparison for Shaw's chronology vs. ours (B4) using the recent, radiocarbon results of Bronk Ramsey (2010, Science 328 1554, SOM). We have already compared them using a chi-squared fit, as discussed above, for a linear-modelled calibration. The improvement of 29% we reported is visible from the Figure 8.1 as a shifting of points closer to the line, specifically by raising the dates by the delta amount, which go from 14 for Thutmose III to 46 for Amenemope. The corrected values are in colour with white in back. The Trojan War (1285-1275) of the time of Ramesses II, and Battle of Megiddo (Thutmose III, 1468) are marked. For our detailed chronology, our previous B4 is valid.

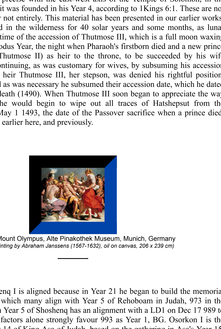
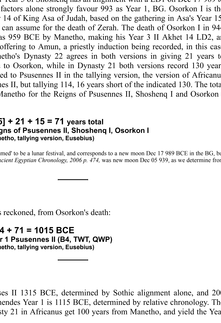


Figure 9.1: Radiometric Egypt's Archaeometric Logic
(simple model translation. B4 (2015) chronology vs. Shaw (2000))

9: We should explain the reasoning behind our chronology. In fact, our chronology had nothing to do with carbon. B4, also called BG, TWT and QWP incorporated all known factors, including astronomic alignment and science of human birthing cycles, often missed by chronographers. For example, the average age of a father for the birth of a firstborn son (a generation) is near 27-28 years. For the case of Shoshenq I to Pasenhor, 9 generations, from the death of Shoshenq in 959 BCE to the estimated death of Pasenhor (assuming that his 75th birthday was 55 years after an installation of an Apis bull in Year 37 of Shoshenq V, his age being 20 at its installation and 75 at his death, or 35 and 90, etc...), we reckon:

> **(959 - 805 + 37 + 55) ÷ 9 = 27.3 years/gen.**
> **ave. generation, death-to-death (TWT, QWP)**
> **Year 1: Shoshenq I 993, Shoshenq V 805**
> **Birth: Shoshenq I 1049, Pasenhor 788**
> **(1049 - 788) ÷ 9 = 29 years/generation, birth to birth**

The Exodus date determined from the Bible, starting at the destruction of Jerusalem in 587 BCE, was 1493 BCE. This date agreed with the Sothic rising read in Year 9 (Epeiphi 9) of Amenhotep I, but referring back to Year 1 of his Reign, which began in 1526/5 BCE and from the Year 1526/5 the Year 1 of Ahmose by Manetho is 1552/1. There are specific lunar alignments in 1493, we found.



Above: Mount Olympus, Alte Pinakothek Museum, Munich, Germany
(c. 1815 painting by Abraham Janssens (1567-1632), oil on canvas, 205 x 239 cm)

9a: The Year 1 of Shoshenq I is aligned because in Year 21 he began to build the memorial relief to his campaign, which many align with Year 5 of Rehoboam in Judah, 973 in the BG, while a rys feast in Year 5 of Shoshenq has an alignment with a LD1 on Dec 17 989 to the very day.[1] These factors alone strongly favour 993 as Year 1, BG. Osorkon I is the Zerah who died in Year 14 of King Asa of Judah, based on the gathering in Asa's Year 15, the lowest date that we can assume for the death of Zerah. The death of Osorkon I in 944 determines his Year 1 as 959 BCE by Manetho, making his Year 3 II Akhet 14 LD2, an appropriate day for an offering to Amun, a priestly induction being recorded, in this case Jun 01 957 BCE. Manetho's Dynasty 22 agrees in both versions in giving 21 years to Shoshenq and 15 years to Osorkon, while in Dynasty 21 both versions record 130 years total, 35 of those allowed to Psusennes II in the tallying version, the version of Africanus allowing 14 for Psusennes II, but tallying 114, 16 years short of the indicated 130. The total of the years given by Manetho for the Reigns of Psusennes II, Shoshenq I and Osorkon I tallied, is:

> **[35] + 21 + 15 = 71 years total**
> **Reigns of Psusennes II, Shoshenq I, Osorkon I**
> **(Manetho, tallying version, Eusebius)**

[1]The well (sic) feast was 'assumed' to be a lunar festival, and corresponds to a new moon Dec 17 989 BCE in the BG, but for Krauss and Warburton, in *Ancient Egyptian Chronology, 2006 p. 174*, was new moon Dec 05 938, as we determine from their Year 1 of 943 BCE.)

9b: Psusennes II Year 1 is reckoned, from Osorkon's death:

> **944 + 71 = 1015 BCE**
> **Year 1 Psusennes II (B4, TWT, QWP)**
> **(Manetho, tallying version, Eusebius)**

9c: Siamun (Psinaches) Year 1 is determined, from Manetho:

> **1015 + 9 = 1024 BCE**
> **Year 1 Siamun (B4, TWT, QWP)**
> **(3-10 this; Manetho, both versions (Psinaches 9))**

From Manetho in Africanus, we logically adduce that 14 years before Shoshenq Year 1 993 BCE, Siamun dies, and Psusennes II accedes in 1007, meaning Siamun has 16-17 years after Year 1, and has a doubly attested Year 17!

9d: What we offer serves to show how the BG chronology may be independently established, and was, before any work was done comparing it to Egyptian radiocarbon results. Amenemope Year 1 1039 is 76 years after Shoshenq Year 1 in the lunar chronology of Krauss (par. 3-11, this).[1]

[1]*Ancient Egyptian Chronology, 2006, p. 414*)

9e: Manetho's Dynasty 21 has 135 years in total with every Reign maximally allowed according to the two versions, and thus Dynasty 21 ends in 980 BCE, a date which fell 21 years before the Reign of Osorkon I, providing here the reason, at last, for the '21' years of Shoshenq I!

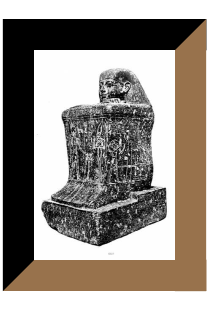
9f: Now, the *Banishment Stela* is an excellent piece of evidence, in showing a Year '25' followed by a Year of unknown but small ordinal number ('5' or lower), as adjudged by the space allocated to write five strokes. The Year 25 of an unnamed King is unanimously Smendes, whereupon the feast date, as Epeiph 29, is Lunar Day 4 exactly Apr 16 1091 BCE, Year 25 Smendes, where Year 1 Smendes = 1115 BCE (~ 24 years and some days earlier).

9[1]: Here once again, a second reference to a Year 25 finds the consensus view that it belongs to Smendes, Thoth 4 or 5 being attested in that Year 25, which in our case is 1091 BCE, and Thoth 05 in 1091 is LD15 (our BG), an auspicious day of religious full moon, and the priest, Menkheperre, is summoned to Thebes on this actual day, and made High Priest and Commander-in-Chief of Armies.

912 Last, the *Banishment Stela* refers to a feast of Amon "at the New Year" and states that it was also the "fifth day of the (feast)," Ms. Tetley arguing with us that the feast began on the second epagomenal day, the fifth epagomenal day being the fourth of the feast and the last day of the year (p. 469, Tetley's 2014 Book). This is the entry with the short, missing Year number, which followed a Year '25,' agreeably Smendes, and the argument of Ms. Tetley (p. 469) is that Amenemnisu did succeed Smendes directly and ruled four years, meaning circumstances favoured Amenemnisu (as Kitchen stated). When we are humble, we will acknowledge that there are possibly an infinite number of reasons we could invoke to explain a feast Day 5 falling on New Year's Day, or it might be that Epagomenal 2 was LD1 May 18 1086 BCE. This is true, that a Day 5 of a feast beginning on LD1 Epagomenal 02 does arrive on New Year's Day, as given, and the Year 1086 BCE is Year 4 of Amenemnisu in BG as he reigned from 1089 to 1085, Year 4 being below 5, so the requirement of a low year number is met by Year 4. In the *Crucible* article, we left Amenemnisu out of the chronology, so we could have missed this jewel. The rarity of specificity is making this alignment one in six as believable to have occurred by chance alone. Therefore, radiocarbon and archaeometric logic go hand in hand and are not separable, as God shows in our BG. This might be comparable to attempts to force religion into a box, although it makes no partial distinctions.[1]

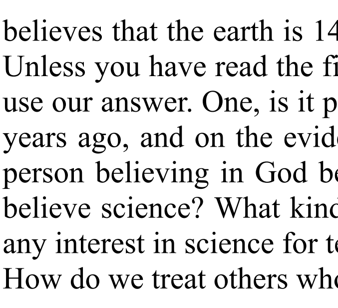
[1](*James 3:17, New World Translation of the Holy Scriptures, 1984*)

end of Chapter 9: Radiocarbon Egypt's Archaeometric Logic



Above: Hor IX block statue, Cairo Museum
(Reign of Pedubaste I, speckled granite, 110 cm tall, found in Karnak Cachette Jan 06 1904, by Georges Legrain)

Chapter 10: Whitelaw On Real Life Deluge Attested in *Radiocarbon* Study



Above: Whitelaw's Chart of Radiocarbon Dates *(from Whitelaw, R. L., "Time, Life and History in the Light of 15,000 Radiocarbon Dates," Creation Research Soc. Quart., Jun 1970)*

Beware lest any man spoil you through philosophy and vain deceit, after the tradition of men, after the rudiments of the world, and not after Christ.
(*Colossians 2:8, King James Version, 1769*)

あなたがたは、むなしいだましごとの哲学で、人のとりこにされないように、気をつけなさい。それはキリストに従わず、世のもろもろの霊力に従う人間の言伝えに基くものにすぎない。
(*Colossians 2:8, (Kougo-yaku) Colloquial Japanese Bible, 1954-55*)

101 Nuclear physicist Robert Whitelaw was a creationist, a believer in creation by God, rather than by evolution. This to evolutionists made him appear to be a fanatic. Anyone who believes that the earth is 14 billion years old finds it hard to believe that it is a lot younger. Unless you have read the first chapter, or in Genesis. There are several questions that could use our answer. One, is it possible to believe that the earth was only created a few thousand years ago, and on the evidence? Is it possible to be a real scientist and creationist? Can a person believing in God be an objective student? How does a person own their faith and believe science? What kind of science would God be wanting us to learn? Does God have any interest in science for teaching us? Are creationists scholars of serious scientific works? How do we treat others whose beliefs differ from ours?

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102 It is not the objective of this chapter to answer only these questions, but to examine the faith creationism. Whitelaw did something that no one had done before, by examining the radiocarbon work of all other scientists and cataloguing it according to the 14C ages obtained. "Pay constant attention to yourself," was the message, and, "Treat others how you would have them treat you."[1,2] Scientists who reject creationism are exercising their free will to choose what they believe, though Whitelaw saw value in their work, and sought to embrace it all. The publication *Radiocarbon* is a world-renowned journal that reports on work done by carbon-14 dating, and there were 30,000 results that had been published, at the time that Whitelaw catalogued all the findings. The results he obtained were interesting, because they showed that not all radiocarbon ages occurred with the same frequency, as they would in a truly random world.

[1](*1Timothy 4:16, New World Translation of the Holy Scriptures, 1984*) [2](*Matthew 7:12, translated by Ward Green*)

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103 What Mr. Whitelaw found was that there is an abundance of life at a certain point of history, which he called correctly the time preceding the global deluge, and it all disappeared at that time, then slowly was restored in time corresponding to the radiocarbon measurements. The radiocarbon gave him the time scale for a catalog.

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104 We post the results of Whitelaw's work in Figure 10.1:

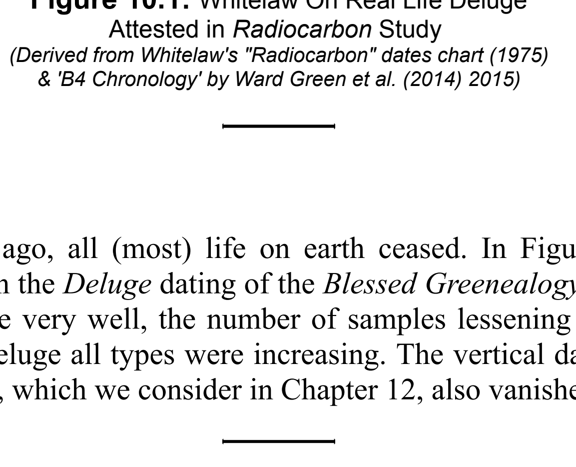

Figure 10.1: Whitelaw On Real Life Deluge Attested in *Radiocarbon* Study
(Derived from Whitelaw's "Radiocarbon" dates chart (1975) & 'B4 Chronology' by Ward Green et al. (2014) 2015)

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105 About 5000 years ago, all (most) life on earth ceased. In Figure 10.1, we compare Whitelaw's catalog with the *Deluge* dating of the *Blessed Greenealogy* (3282 BCE) in order to show that they agree very well, the number of samples lessening sharply at that point, whereas prior to the Deluge all types were increasing. The vertical dashed line at 5231 BP is seen as global. Trees, which we consider in Chapter 12, also vanished.

---

106 What is not shown in the graph above is that Whitelaw, in plotting the data, was correcting for the variation in the level of radiocarbon in the air over the period of time before and after the Deluge, which affects the amount of radiocarbon (14C) in samples, and thus, age. These corrections are larger the further back you date the samples, as is indicated in our Table 10.1, below:

Table 10.1
Radiocarbon Corrections of Robert L. Whitelaw

Corrected Age (years BP)	Uncorrected Age (years BP)
1,000	1,115
1,500	1,730
2,000	2,310
2,500	2,900
3,000	3,500
3,500	4,110
4,000	4,725
4,500	5,350
(Flood) 5,000	5,990
5,500	8,860
6,000	12,530
6,500	19,100
7,000	Infinite

---

107 The graph in Figure 10.1 shows marine specimens 50 ft. above sea level immediately after the Deluge, which is exactly what one would expect with the water above the tops of the mountains, as the Bible described (Gen 7). About a thousand years after the Deluge, the number of these marine specimens is reduced to none, as compared to all of the other marine specimens (E) which remain.

---

108 The numbers of men and animals in America decreases on the post-Diluvial side, compared to the Afro-Eurasian. The dots on the graph show the numbers of samples that are found in each 500-year period, and were published, while the curves are an estimate of the yearly number.

---

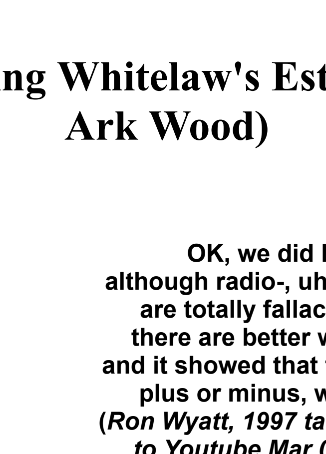
109 The assumption is that the age of the samples found is completely randomly distributed, so that the number is thus indicative of the population present at the time. In the absence of proof to the contrary, this is true. What the graph then represents is proof of the Deluge.

1010 According to the BG chronology, we may agree that this date for the Deluge agrees well with our own, and thus the correction of Whitelaw for the time of the Deluge.

1011 We would probably disagree with Whitelaw's corrections for the dates at the time of Jericho, since that would make our date for Jericho 500 years lower, which could hardly improve on our results, which may mean that the correction from the time of the Deluge is due to brief transient effects, or things that remain to be proven.

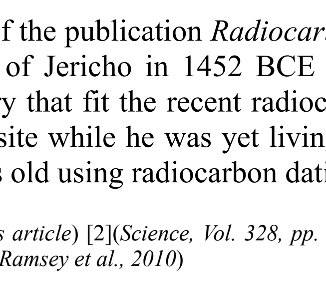
1012 In the meantime, one would like to put Mr. Whitelaw's theory to use at the time of the Deluge, by trying to date wood found by Mr. Wyatt (at the Durupinar) site. We set aside Chapter 11 for this brief consideration.

end of Chapter 10: Whitelaw On Real Life Deluge Attested in *Radiocarbon* Study



Above: Robert L. Whitelaw as presented by T.V. Oomen *(Digitized by Ward Green)*

Chapter 11: Adjusting Whitelaw's Estimate (Radiocarbon Ark Wood)



Above: Petrified Ark Wood *(Found by Ron Wyatt on the site of Noah's Ark National Park in Turkey during a public ground-breaking ceremony)*

OK, we did have a radiocarbon dating done, although radio-, uh..., radioisotope dating methods are totally fallacious, no value at all, you know... there are better ways... uh... We did have it done, and it showed that the material was 5700 years old, plus or minus, which is certainly in the ballpark.
(*Ron Wyatt, 1997 talk in Chico, California, uploaded to Youtube Mar 02, 2009, 8 of 8, 2:37-3:03 min. of 7:48 [min:sec] talk clip*)

So that men may see that you only, whose name is Yahweh, are Most High over all the earth.
(*Psalms 83:18, Bible in Basic English, 1949/1964*)

111 We have seen previously how radiocarbon results out of the publication *Radiocarbon* present the Deluge. The corrections of Whitelaw for the time of Jericho in 1452 BCE did not work for us because we already had an excellent theory that fit the recent radiocarbon data.[1,2] Mr. Ron Wyatt, who worked at the Noah's Ark site while he was yet living actually found a piece of wood which then dated to 5700 years old using radiocarbon dating. We evaluated this finding in light of Whitelaw's work.

[1](*this article*) [2](*Science, Vol. 328, pp. 1554-1557, Radiocarbon-Based Chronology for Dynastic Egypt, by Christopher Bronk Ramsey et al., 2010*)

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112 The corrected results are shown in Figure 11.1, below.

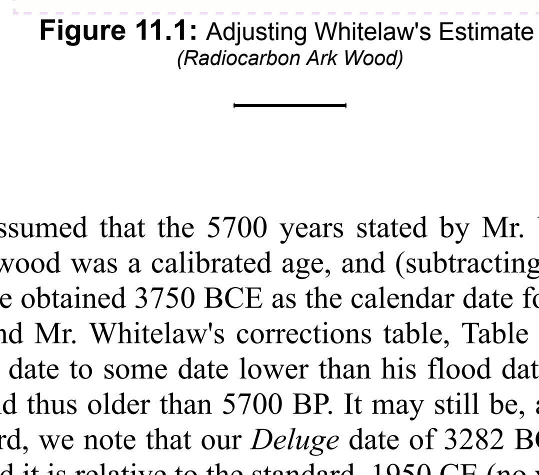

Figure 11.1: Adjusting Whitelaw's Estimate
(Radiocarbon Ark Wood)

---

113 At first, we had assumed that the 5700 years stated by Mr. Wyatt as the radiocarbon dated age of the Ark wood was a calibrated age, and (subtracting 1950, the usual standard year of calibration), we obtained 3750 BCE as the calendar date for the tree being cut down ('Ark'). Using 5700 and Mr. Whitelaw's corrections table, Table 10.1 (Chapter 10, above) would then lower this date to some date lower than his flood date of 5000 BP, seeing that that date is at 5990 and thus older than 5700 BP. It may still be, as Mr. Wyatt said, "in the ballpark." In this regard, we note that our *Deluge* date of 3282 BCE (BG) is equal to 5231 BP calibrated years and it is relative to the standard, 1950 CE (no year '0').

---

11 4 More recently, we adjusted our assumption that 5700 BP was a calibrated age, and assumed that it was now raw. We searched Mr. Wyatt's website looking for specifics. Not finding any information online, and not wishing to trouble anyone, we decided to model it hypothetically. Based on this new assumption, we produced Figure 11.1. Fairbanks (2005) online calculator was used to get the calibration for the date 5700 BP and produced 6485 BP. However, That was July 07 2015, and the calibration of Fairbanks no longer goes back to 5700 BP, so we used a calibration by Stuiver and Reimer from Queen's Belfast Ireland to calibrate 5700 +/- 100 BP to 4624-4454 BCE, 1 sigma at 80% total probability, for a mean 4539 BCE, adding 1949 to get a calibrated age of: 6488 years BP.[1,2]

[1](*Notebook 33, WG, p. 13, 0343 hrs Dec 22 2015*) [2](eg. *Radiocarbon, Vol. 40, No. 3, 1998, pp. 1127-1151, "High-Precision Radiocarbon Age Calibration for Terrestrial and Marine Samples," by Minze Stuiver, Paula J. Reimer and Thomas F. Braziunas*)

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11 5 We didn't use this method for the graph, but we can do an interpolating from both sides of Whitelaw's numbers to get the corrected year for 6488, and then calculate the corrected year as an average of those two numbers:

Linear from the high side:
(6488 - 5990) ÷ (8860 - 5990) x 500
= 86.8 years
(ie. 5086.8 in Whitelaw's Corrected Age Column)

Linear from the low side:
(6488 - 5990) ÷ (5990 - 5350) x 500
= 389.1 years
(ie. 5389.1 in Whitelaw's Corrected Age Column)

Average of the two:
(5086.8 + 5389.1) ÷ 2 = 5238.0 BP calibrated
(wood is cut 7 years before 5231 BG)

In the BG chronology the Ark wood is cut (or, the wood begins to lose radiocarbon by radioactive decay) right about 7 years before the Deluge itself, in this model.

---

11 6 A second-order interpolation accounts for the changing increments in Whitelaw's 'Uncorrected Age' column: 615 (4110 from 4725), 625 (4725 from 5350), 640 (5350 from 5990), so that the next increment we can guess at 660. Since 6488 minus 5990 is 498 and not 660, there should be an adjustment downward of the 660 using their ratio to reduce the difference of 660 and 640 to 20x498/600, or 17, say, making 657 instead of 660, which we add to 5990 to get 5990 + 657 = 6647, to interpolate as 6488:

Linear from the low side (second order):
(6488 - 5990) ÷ (6647 - 5990) x 500
= 379.0 years
(ie. 5379.0, 2nd order Corrected Age)

Similarly, with the high side, 8860 from 12530 is near 3700, and 5990 from 8860 is near 2900, so we guess the next one would be about 2000 and it affects 6488 by an interpolated amount between 2900 and 2000, about 2500:

Linear from the high side (second order):
(6488 - 5990) ÷ ((2900 - 2000) x (6488 - 5990) ÷ (5990 - 3090) + 2500) x 500
= 93.8 years
(ie. 5093.9, 2nd order Corrected Age)

Average of the two (second order):
(5379.0 + 5093.8) ÷ 2 = 5236.4 BP calibrated
(wood is cut 5 years before 5231 BG, 2nd order)

---

11 7 In the second order calculation, in the BG chronology, the Ark wood is cut a fraction more than 5 years prior to the Deluge, and according to the Book of Jasher the Ark is built in "5 years," an incredible result, which suggests kiln drying of wood or advanced technologies.[1] The success must be tempered by the fact that we don't know for certain whether the 5700-year age reported by Wyatt was calibrated or not, but this kind of accuracy would tend to imply a divine influence on the numbers, and that the said 5700 years actually is uncalibrated.

[1](*Book of Jasher 5:34*)

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11 8 Whitelaw's numbers don't look too bad at the Deluge it would appear, but Ron Wyatt I would hope is resting in peace after the calculation that used his wood dating. The Ark wood that was dated for this purpose, and that showed the 5700-year age was actually a glue-laminated piece of timber, and the word "gopher" that is used in the Bible to describe it is said to mean exactly that, "laminated," in the Aramaic tongue from which it came.

---

11 9 I should give what we know about the provenance of the Ark wood, a piece of fossilized wood actually found at a "ground-breaking" ceremony which Mr. Wyatt attended, and was unearthed during the "breaking of the ground." The public nature of the discovery gave it provenance. The dripping material on the outer edge of the wood is now believed to be glue, after the cutting of sections in the wood revealed it to be an actual lamination, so it looks like Noah used lamination in the Ark's parts.

---

11 10 The Durupinar site is near Uzengili in Turkey, and now is called officially: *Noah's Ark National Park.* It is near Mount Ararat, an area which draws very much attention over the fact that the Bible says Noah's Ark came to rest in the "mountains of Ararat," rather than "Mount Ararat," a place frequently sought by hopefuls. We are greatly indebted to the late Ron Wyatt, for his tireless work in bringing us Noah's Ark-- we love you!

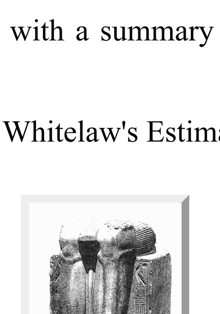
---

11 11 In our second order approximation, then, correcting by interpolating the amounts given by Robert L. Whitelaw, we obtained a 5-year construction from woodcut to Ark, something that brought to mind the Book of Jasher, and how in 5:34 the Ark could begin with 5 years to spare.

---

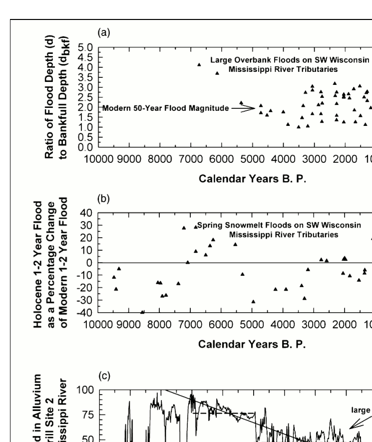
11 12 We hope to conclude our article with a summary of each of the 12 Chapters thereof, with the beauty of a tree.

end of Chapter 11: Adjusting Whitelaw's Estimate (Radiocarbon Ark Wood)



Above: Pharaoh Khyan Statue (lower part), Egyptian Museum, Cairo *(15th Dynasty, Hyksos, Bubastis, found in the Great temple in 1887, reproduction by Edouard Naville)*

Chapter 12: Trees Represent Empirical Evidence



Above: Mississippi River Proxy Palaeoflood Histories *(Figure 9.6 from Large Rivers - Geomorphology and Management edited by Avijit Gupta 2007, p. 157)*

He will certainly become like a tree planted by streams of water, that gives its own fruit in its season, and the foliage of which does not wither, and everything he does will succeed.
(*Psalms 1:3, New World Translation, 1984*)

So they grow strong, like a tree planted by a stream-- a tree that produces fruit when it should and has leaves that never fall. Everything they do is successful.
(*Psalms 1:3, Easy-to-Read Version, 2008*)

12 1 A global deluge such as that described in the Biblical record on a scale sufficient to kill all living things on the surface of the earth would kill plants as well. Thereafter, the trees which grew independently of some subterranean root system would require time to regrow. Of the trees taking root immediately in the dry earth, these would multiply and each would die in time, while the oldest of these we possibly have on record, today. Assuming that the oldest trees date to the time of the Deluge itself, there should be none any older than it. Thus, the earthly tree register of ancient trees has a role to play in proving the actual date of the Deluge. A tree begins with the destructive act of a seedburst.[1] Rings in a tree record its age, and echoes a Big Bang. In Chapter 1, we saw how time is viewed relative to an observer's frame of reference, so that at the energies required for protons and neutrons to form (until now), only 5.5 days have passed in our time, the time having been dilated to manage our background radiation today.

[1](*1Corinthians 15:36*)

---

12 2 Chapter 2 showed us a truer Sothic alignment of Egypt. We use astronomy to help us with our chronology, since God gave us luminaries in the heavens for timekeeping.[1] Similarly, trees have been with us from our beginning.[2] With this in mind, we present a graph showing the tree population today as a function of age for older trees:

[1](*Genesis 1:14*) [2](*Genesis 1:12*)

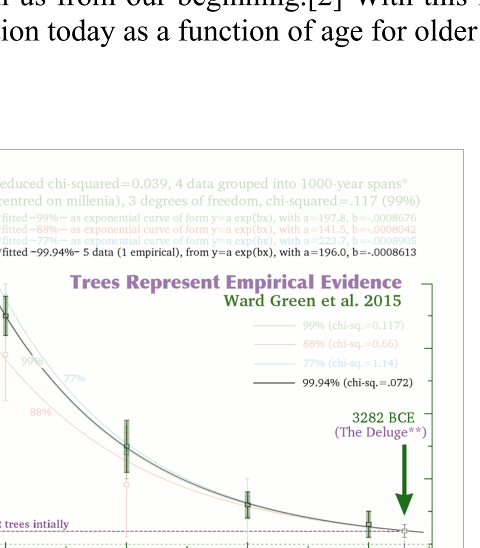


Figure 12.1: Trees Represent Empirical Evidence *(Dendrochronology)*

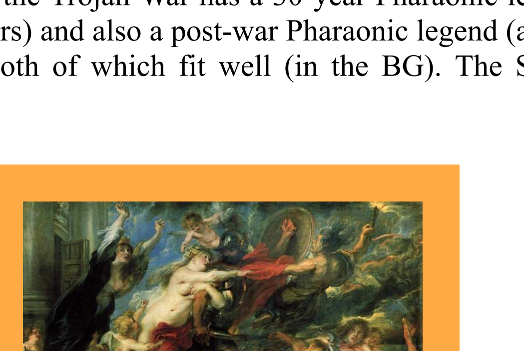
Note that in the graph above the years are to 2015 CE, and all of the trees known from today are seen grouped into millenium-sized age brackets, and a curve fitted.

---

12 3 In Chapter 3, we took much encouragement from Manetho, showing how his account of the Kings of Dynasty 18 may be found consistent with the 164 years of the BG, from the Exodus to Ramesses I, using all Manethan versions. We also saw the harmony between Manetho and the BG for Dynasty 21 and the BG death date of Osorkon I 944 BCE, and how the BG 'adopts' the relative dating of Krauss.

---

12 4 Manetho's encouragement extends to the time at Ugarit, when a documented total solar eclipse occurred in 1223 BCE (called by us *Ugarit Solar Elipse,* or USE). Only in Chapter 4 do we read the details of the USE, a solar eclipse at Ugarit in 1223 BCE, there identified, the KTU 1.78 USER favouring 1223 BCE for many reasons. Through the proof it offers of the QWP chronology that was identified even as early as the C3 article, we saw how the official Beya (Bay) of Egypt wrote to Ugarit a few years before that city's destruction (RS 86.2230), with KTU 1.78 being burned in a fire around that time. In our chronology (C3-QWP), events that were otherwise difficult to sort, become much more easily understood. This is because the 19th Dynasty and early 20th can be represented in a tighter time frame in our chronology. USER eclipse has a direct connection to BG Dynasty 19. Year 7 of Thuoris, "...in whose reign Troy was taken," mentioned in Manetho's Dynasty 19 (although, "in Homer is called Polybus, husband of Alcandra"), unmistakably refers to Twosret (cf. Thuoris) the wife of Siptah who is Pharaoh from 1227 BCE (C3) after Siptah (1334-1227) dies (in Manetho-Eusebius, for 7 full years) although she subsumed his Reign and continued to 1226, and such relative dating is exactly shown by Krauss (AEC p415). Thus, in our chronology she began to rule in 1227 BCE, and since she ruled 7 years (including Siptah's years) her Year 7 could possibly be seen as roughly 1220 BCE. This is the exact average date for the Fall of Troy as taken from the nine most authoritative ancient sources (Ephorus 1135... Sosibius 1172... Eratosthenes 1184... Timaeus 1193... 'The Parian marble' 1209...Dicaearchus 1212... Herodotus 1250... Eretes 1291... Douris 1334). Since 1220 BCE falls during Year 4 of Ramesses III, it is during the Time of the Sea Peoples' Invasions, only 3 years after the Ugarit Solar Eclipse of Mar 05 1223! The fall of Ugarit is believed to have occurred in the period 1223-1216, which nearly coincides with the 1220 date of Troy's Fall, although they were derived almost independently and both at the time of the Sea Peoples. 1220 is 30 years after Merneptah Year 1, also 30 Years before Ramesses IV Year 1 (1249 and 1191 respectively) and the Trojan War has a 30-year Pharaonic legend (ie. prior to the war, a Pharaoh ruled 30 years) and also a post-war Pharaonic legend (after the war the same King ruled many years), both of which fit well (in the BG). The Sea Peoples can thus 'explain it all' in 1220 BCE.



Above: The Consequences of War, Galleria Palatina, (Palazzo Pitti), Florence *(1637-38 painting by Peter Paul Rubens, oil on canvas, 206 x 342 cm)*

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12 5 From Chapter 5, the chronology of QWP is now absolute! The Year 14/23 Tepy Shemus of Osorkon II now prove it. The death of Osorkon I in 944 BCE confirms Osorkon II. The newly discovered lunar eclipse of 856 BCE makes it now irrefutable that Year 1 of Takelot II is absolute, with 856 as Year 11, and a lunar eclipse of Year 15 as recorded on Mesore 29 shortly after the war broke out. The four days from Mesore 25, the record date accepted by most, to an actual eclipse occurrence on Mesore 29, formerly what prevented us from accepting it, may have resulted from the confusion of the events of the night of the eclipse, during which time Pedubaste I defeated the forces of Osorkon the High Priest (record keeper), ousting him from Thebes, and prevented record keeping. In retrospect, Osorkon III (as he later became known), in his capacity as Pharaoh, likely restored the record of that night as best he could, from his recollection. This would explain the date given for the

might as best he could, from his recollection. This would explain the date given for the insurrection as being too early for the eclipse date, as during the war it may have seemed that more days passed than did. The absolute dating of the Year 1 of Takelot as 866 is not proven by the eclipse date alone, but by very many other dates that are aligned with it, before and after it which had, due to time, been, formerly, overlooked. The irrefutable nature of it includes a Year 3 date at Karnak of Osorkon III (II Akhet 14 822 BCE LD1) and an Apis installation in Year 12 of Shoshenq V: full moon. Year 1 of Piye is raised to 788 BCE, allowing the time required for the few last years of Pami (807-805 BCE).

---

12 6 The 'discovery' of Chapter 6 is that the Apis bull, as always installed on an exact religious full moon LD15, in Year 12 of Shoshenq has a 794 BCE IV Peret 04 date! The dates of the *Blessed Greenealogy* are really absolute, but we owe many debts to fine Egyptologists.

---

12 7 Chapter 7 reconciles the Year 1 of Piye at 788 BCE, by dead reckoning and lunar alignments of the inscription of Piye found on his *Victory Stela,* dated Thoth of his Year 21 (Thoth 01 implied), dated by us as 767. The Ethiopian King List is consistent with such dates, and Taharqa later identifies Alara as Dynasty founder. We pray that Jehovah will continue to give us guidance for insight into the chronology of any obscure period.

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12 8 Detailed study of the radiocarbon work published up to 2015 has revealed an excellent agreement with our own. Consideration of Jericho and many other ancient cities proves that confidence in our chronology is justified. This is the work of Chapter 8, with notebook excerpts.

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12 9 The details of the chronology of the BG as compared to Shaw (2000) are seen for Dynasties 18-21 in Chapter 9. One includes proof of a very specific lunar alignment.

---

12 10 The greatness of Chapter 10 is that Whitelaw's efforts proved the Deluge using only the journal publications. The date of the Deluge he obtained agrees with our BG.

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12 11 We arrive at some fantastic conclusion, in Chapter 11, that the *Book of Jasher,* in 5:34, had it right: Noah's Ark, we calculate, was really built in 5 years. We find this using Whitelaw's correction Table and the radiocarbon date for the Ark wood stated by Ron Wyatt.

---

12 12 Dendrochronology, or the study of annual tree rings to date events, is used to calibrate radiocarbon numbers. As we gather in paragraph two, there are no trees that may be known today that are any older than the Deluge.[1]

[1]Studies of the sediments of river Deltas have shown that these, too, do not date to earlier than 3282 BCE.

end of Chapter 12: Trees Represent Empirical Evidence

Trojan War—

Year End Report

(Quilt Work Patch)

Rolf Ward Green · Ralph Ellis Green
Rolf Ward Green · Anne Ruth Rutledge
Rolf Ward Green · Flora Marie Green

Historical Notes:

Some images may have been restored.

Astronomy professor Bradley E. Schaefer wrote in 2000:

> In summary, sadly, I conclude that the current large uncertainties in predicting lunar visibility and in ancient Egyptian procedures do not allow for any possible astronomical solution of Egyptian absolute chronology with lunar dates.
> *("The Heliacal Rise of Sirius and Ancient Egyptian Chronology," Journal for the History of Astronomy, Vol. 31 (2000), Part 2, p. 154)*

M. Christine Tetley quotes from Erik Hornung regarding his proposal to abandon previously held dates in favor of lower ones, in Egypt, and to leave astronomy alone, he stating, in going along with a general 'consensus:'

> Egyptology has relied too much for a long time on so called absolutely fixed astronomical data.
> (*The Reconstructed Chronology of the Egyptian Kings, by M. Christine Tetley, 2014 posthumously, p. 9,* primary source: *"E. Hornung's Paper," High, Middle or Low? University of Gothenburg, Sweden, international colloquium on absolute chronology Aug 20-22 1987 Part 3, 34-35*)

At the Gothenburg colloquium of August 20-22, 1987, it was decided by a vote in favour of low Egyptian dates. Krauss concluded that Ramesses II's accession could be lowered to 1290, 1279, or 1276 (from 1304), while Erik Hornung shockingly wrote of a low Egyptian chronology:

> We have not to rely on kinglists like Manetho or the Turin Canon and we have not to rely on astronomical computation for the famous Ebers' datum or for lunar dates of the New Kingdom...
> I think it is now very clear that Ramesses II cannot have started his reign before 1279 and Thutmosis III before 1479...
> So I think our chronology of the New Kingdom is fairly well established without all the problems connected with astronomical data.
> (*The Reconstructed Chronology of the Egyptian Kings, by M. Christine Tetley, 2014 posthumously, p. 9,* primary source: *"E. Hornung's Paper," High, Middle or Low? University of Gothenburg, Sweden, international colloquium on absolute chronology Aug 20-22 1987 Part 3, 34-35*)

Erik Hornung wrote later (ie. in 2006), on Gothenburg:

> Already at Gothenburg, there was general agreement about the dates for beginnings of the New Kingdom. Helk, Kitchen and Hornung/Krauss all worked with the very narrow range of 1540 to 1530 for the start of the reign of Ahmose, and after some debate, there is now general acceptance for the reign of Ramesses II at 1279–1213 BCE. Although we must be wary of confusing consensus with actual fact, for the New Kingdom we now have such a fine mesh of relative dates which are themselves woven into NE dates that major adjustments can probably be excluded. While there is room for minor cosmetic corrections, we are relatively confident about the framework.
> (*The Reconstructed Chronology of the Egyptian Kings, by M. Christine Tetley, 2014 posthumously, p. 13,* primary source: *Ancient Egyptian Chronology, 2006, p. 13*)

The preposterous notion that Egyptologists would agree to abandon Manetho and astronomy in favour of (what is left?) dead reckoning from fragmented, partial records of Kings Reigns by a 'consensus' of opinion is at odds with the idea of using every resource available to us.
(*cf. Proverbs 15:22; 11:14; 20:18.*)

Dead reckoning itself is fraught with compounded error the further back you go from a known date, and is thus precisely the least accurate of all available methods. To their credit, however minimal, some did warn of the danger of confusing consensus with fact (eg. Kitchen).[1]
[1](*The Reconstructed Chronology of the Egyptian Kings, by M. Christine Tetley, 2014 posthumously, p. 9,* primary source: *Idem, "Supplementary Notes on 'The Basics of Egyptian Chronology'," High, Middle or Low? University of Gothenburg, Sweden, international colloquium on absolute chronology Aug 20-22 1987 Part 3, 158.*)

Without a continuous sequence of Years for any, single King, Mr. Jansen-Winkeln called the TIP (the period in Egypt following the New Kingdom) "imprecise" in dates, while: "The general framework of this age is certain." It is clear that the Assyrian Eponym Canon with a date thereby derived as 926/925 BCE for Shoshenq's invasion on Judah comprises, for many, the "general framework."
(*The Reconstructed Chronology of the Egyptian Kings, by M. Christine Tetley, 2014 posthumously, p. 13,* primary source: *Ancient Egyptian Chronology, 2006, pp. 235, 264*)

Ms. Tetley, like us, would differ significantly, here, she taking 977 and we 973 BCE for Shoshenq's invasion.
(*The Reconstructed Chronology of the Egyptian Kings, by M. Christine Tetley, 2014 posthumously, pp. 1, 18*)

Table Supplementary:
Proposed Titles For This Article

(August 10, 2015 — December 24, 2015 CE) Note 32 p. 120 — Note 32 p. 182		
1.	Not Impossible Chronology	The Purpose of Faith
3.	Storm of Descent	Post-Potigraphic Parametrics
5.	Markers of Pleasantness	Measures of Pleasantness
7.	Tripping Over Perfection	Temporary Of Perfection
9.	Temper Of Perfection	Natural Israelite Chronology Embraced: Measures Of Pleasantness
11.	Modern Egyptology Sadly Sacrilegious	Natural Israelite Chronology Embracing Measures of Pleasantness
13.	Moon Over Thebes	Moon Over Ancient Thebes
15.	Moon At Ancient Thebes	Moon Above Ancient Thebes
17.	Alara's Authority Assures Apt Ancestry	Quilt Work Patch
19.	Ancient Installation Moons Synchronized	The Installation Moon Egypt
21.	Apis Installation Moon	Now Investigating Contextual Egypt
23.	Nerds Investigate Contextual Egypt	Nudging Into Contextual Egypt
25.	Trojan War — *Year End Report* (Quilt Work Patch)	

RECENT ARTICLES:

Now in PDF Format (Web versions in REFERENCES: below):
The order of the articles written by Rolf Ward Green is:

1. Harald **2.** Skjold **3.** Valdr **4.** Smith **5.** Green **6.** Joseph **7.** On **8.** Phoenix **9.** Moses **10.** Ark **11.** Crucible **12.** B4

1. Harald Hildetand and Rollo in the Trojan House of Charlemagne (Dec 25, 2007)

2. Skjöldings (Sep 17, 2008)

3. Valdr (Oct 09, 2008)

4. Smith (Nov 1-6, 2008)

5. Green (Nov 23, 2009) (Easter calculator first used and cited) (mod. Mar 02, 2010 Title illus., Hippocrates)

6. Joseph (Dec 24-29, 2009) (Easter calculator used) (mod. Mar 02, 2010 Title illus.)
(Easter calculator used and stopped working before Feb 28, 2010)

7. On (Feb 28-Mar 05, 2010)

8. Phoenix (with A. R. Rutledge; Apr 01-06, 2010)

9. Moses (with A. R. Rutledge; Jul 31-Sep 23, 2010)

10. The Ark of Urartu (with A. R. Rutledge; Dec 24, 2010–Jul 11, 2011)

11. The Crucible of Credible Creed (with R. E. Green and A. R. Rutledge; Apr 07, 2012–Jun 20, 2013)

12. B4 Chronology (with R. E. Green, M. F. Green (Skanes), and A. R. Rutledge; Jan 01, 2015–Nov 12, 2015)

13. Trojan War (with R. E. Green, M. F. Green (Skanes), and A. R. Rutledge; Dec 25, 2015–Sep 05, 2020) (the present article)

- **Dec 25, 2015 par. 2-2 Thoth is Jul 20 in [136-139] CE, because the years CE are not affected by '0' year; par. 2-6 in a graffito is now dated [ed. grammar fix]; par. 2-7: [25 years] of Ahmose I, we would set Year 1; par. 2-8 the upper one, had fallen over the outer one; par. 4-2m that the climate [appears] "drier," then we; par. 5-8s-2 moons [can] also imply that Pedubaste I's; ending for par. 6-2 [same day. T]he astronomical lunar conjunction date was [found] as a starting point, from which [we calculated] Lunar Day 15. [ed. grammar fix]; par. 7-6 missing ref. # [2] added; par. 7-7= ref. [1]; par. 7-9 with Herodotus[' account of] Shabaka's Reign; par. 8-5s-1 that finding to the recent [Wardle] et al; par. 8-6-p-3s-1 middle of the Reign of [Ramesses III]; par. 8-9-p-5s Mr. A. Mazar (2006) [confirms] the Iron; par. 8-10b Tel Rehov VII D-3, [dated] 1001-971 (Mazar;**
- **Dec 26, 2015 par. 8-12m as per Harrison [ed.)] and 8-12m who [note] that similar masons' marks are borne; 9-3 had treated him, he would begin to wipe [out] all; 10-5s-3 [dashed] line at 5231 BP [is seen as global].; 11-0 [ed. Ron Wyatt quote] we did have it [done], and; 11-11b ...the Ark could [begin] with 5 years to spare; 12-12 [Studies of the sediments of river Deltas have]; 2-4m or it is 1460 years before or after [1525], when; 2-7 Thutmose I-[12y, for] all three Manethan versions [converge with] 25 years for Ahmose I, and... pundits; [ed. ...] and modern pundits [do agree] that Thutmose; 2-9m is [not without interest, as he] has been a very; 5-5b The other date (Nov 29 892) [is Lunar Day 5 and]; 5-8m [ed. rewrite: "The priestly... bad to record it"] [The priestly inductions of Years 7 and 8 of Pedubaste, while not accompanied by Tepi Shemu feasts (in Year 7, I Shemu lacks a day date) could both have been waxing. With Pachon 13 a LD1, Pachon 01 was a LD-11 in Year 7, yet the induction event could fall Pachon 13 or later. Year 8, LD-1 may have been a 'negative error' for LD1.]**
- **Dec 27, 2015 par. 4-10 added eclipse illustration;**
- **Dec 28, 2015 par 6-8 added footnote [3] (to 6-10); 8-7m As [a] result, the conventional date of Iron IIA; 8-3b ['Tradition says that by a miracle the prophet Elisha purified the waters of this fountain. Excavations on the hillside above have uncovered the foundations of the old city walls of Jericho, over which Rahob let down the two spies of Joshua,' photo from "The Holy Land and Syria," 1922, p. 124]**
- **Dec 29, 2015 par 8-7 ...Archaeology," (2003[)], p; added footnote [1] BM dating LC IIIB as 1100-1050 BCE. Iron IA is called Late Bronze III in Toffolo 2014, who dates its end 1135 to 1045, more generally 1100-1060.; 8-9-p-1...or slightly later be [squared] away with...; 8-12-p-2...[be] Jehu who esta[b]lished VA/IVB with...; 8-12-p-5 early tenth century...(p. 12,... [sentence]); 9-6 [With Year 1 Ramesses II 1315 BCE, determined by Sothic alignment alone, and 200 years in the interim, Smendes Year 1 is 1115 BCE, determined by relative chronology.] 9-10-p-1s-1 [of evidence, in showing a Year '25' followed by a Year] 9-11-p-1s-1 [Here once again, a second reference to a Year 25 finds] 9-12-p-1s-2 [This is the entry with the short, missing Year number, which followed a Year '25,' agreeably Smendes, and the argument of Ms. Tetley (p. 469) is that Amenemnisu did succeed Smendes directly and ruled four years, meaning circumstances favoured Amenemnisu (as Kitchen stated).] 5-9 'Osorkon III Flood Date' relative position, fixed; 7-5 'First, Absolute Chronological Truth' also, fixed; all headings made as the above, par no. after heading;**
- **Dec 30, 2015 par 2-3 added footnote [3] Mr. Huber: [[3](*Journal of Egyptian History, Vol. 4, Issue 2, pp. 172-227, "The Astronomical Basis of Egyptian Chronology of the Second Millennium BC," by Peter J. Huber, 2011*)] 7-6 added footnotes [3] James Ussher: [[3](James Ussher (1581-1656) dated the Exodus 1491 BCE in his (Latin) 1650 book, posthumous English Version: *The Annals of the World, by James Ussher, 1658, section 190.,* '1491 BC,' but he knew nothing about lunar alignment with the Sabbath on**

"1491 BC," but he knew nothing about lunar alignment with the Sabbath on Iyyar 22 or with the day of Moses' death 40 years later on Adar 07, also a Sabbath according to Jewish tradition.)] and [4] Lujack Skylark: [[4] (*Someone using the name 'Lujack Skylark' had the date of 1495 BCE (no lunar alignments) for the Exodus, and before the publication of our own, 1493 date.*)] 8-4 date on John Garstang photo [taken July 15, 1956]; added footnote [1]: [

Betancourt 1987 Table 1
Tentative chronology for the Aegean

Crete	Greece	Dates
LM IA	LH IA	c. 1700-1610 B.C.
LM IB	LH IIA	c. 1610-1550 B.C.
LM II	LH IIB	c. 1550-1490 B.C.
LM IIIA:1	LH IIIA:1	c. 1490-1430/10 B.C.
LM IIIA:2	LH IIIA:2	c. 1430/10-1365 B.C.
LM IIIB	LH IIIB	c. 1365-1200 B.C.

[1](*This is specifically so because at Hazor, as we mentioned in our "Crucible" C3 article, there is a gap after Mycenaean LH IIIA:1 until the late IIIA:2 as was noted by Yadin in stratification in a cave near Hazor, with only a "few" IIIA:1 vessels being found, and thus the destruction of 1452 BCE in the BG could explain an interruption after the start of IIIA:1 in c. 1490 BCE. The "large group," then, of "vessels of the late stage of IIIA:2" that were found would be from the last part of 1430-1365 BCE (Betancourt's 1987 LH IIIA:2 limits), which appears to correspond to 1386 BCE, which we gave as the end of Moabite oppression of Israel, they being at peace for 80 years until 1306 (C3), when Jabin rose up again at Hazor 146 years after Joshua destroyed it. Thus the "gap" that Yadin referred to as the middle of the 15th century at Hazor can be due to Joshua and his 1452 destruction of Hazor, with abandonment 1452-1386. It is the lack of early-to-middle stage IIIA:2 pottery which suggests abandonment of the site-- or cave-- but the fact that Jabin rose up again at Hazor does imply, in a way, that Israel had left the site untended. When the LH IIIA:1 pottery ended (as Betancourt said, 1987) in 1430/1410, it's less likely Hazor ended in c. 1400, with a few LH IIIA:1 and no early IIIA:2 vessels!*)]

- **Dec 31, 2015** illustrations normalized in browsers; added Peter Paul Rubens paintings, throughout article; fixed errors in font tags affecting IE v.8 font sizes; 12-3 ...we took much encouragement from Manetho[, showing how his account of the Kings of Dynasty 18 may be found consistent with the 164 years of the BG, from the Exodus to Ramesses I, using all Manethan versions. We also saw the harmony between Manetho and the BG for Dynasty 21 and the BG death date of Osorkon I 944 BCE, and how the BG 'adopts' the relative dating of Krauss.] 12-12...we [gather] in paragraph two, there are no...; 7-1 footnote [1], added: [The same book *Ancient Egyptian Chronology* dates the Reigns of Alara through Taharqa in Part IV, section 3, p. 496, as follows: Alara (785-765) Kashta (765-753) Piye (753-722) Shabaka (722-707) Shebitku (707-690) Taharqa (690-664))]
- Jan 01, 2016 par. 9-4 added footnote [1]: [[1](The wrš (sic) feast was 'assumed' to be a lunar festival, and corresponds to a new moon Dec 17 989 BCE in the BG, but for Krauss and Warburton, in *Ancient Egyptian Chronology, 2006 p. 474,* was new moon Dec 05 939, as we determine from their Year 1 of 943 BCE.)]
- Jan 03, 2016 par. 4-4 eratum 1192 eclipse was Jan: [based on the fact that it isn't total (Jan 21 1192 BCE annular, and not 'late Feb/early Mar'), and they argue against May 03 1375 BCE (total), as 1. wrong month, 2. unaccompanied by Mars, and 3. over early historically:] 4-5-p-1s-3 occurs that this one, dated eclipse in the; 5-3 beginning missing Roman numerals, also reworded: [Egyptologists generally hold now that Year 5 Pedubaste I = Year 12 Shoshenq III = Year 15 Takelot II, or say: 1 Pedubaste I = 8 Shoshenq III = 11 Takelot II, in basic terms.] 5-5-p-1s-4 improved sense: [I'm going to talk about this first because it preceded the Reign of Takelot II, whose Year 1 was some 3 years prior to that of Shoshenq III, Osorkon II's successor.] 5-5 renumbered footnote [1] as [2]-- new footnote [1]: [[1] (*Quote from Ian Onvlee in an online forum:*

  > *...The third example comes from KPA fragment 5. This fragment is problematic for the chronology of the TIP as it stands. There are 5 successive entries, all of which are only partly preserved. The order is:*
  >
  > > *(i) .....King [O]sorkon [MeryAmun?], day of [induction or promotion?]*
  > > *(ii) Y 14, Tepy Shemu, of King UsermaatRe SetepenAmun, son of Re [nomen lost...]*
  > > *(iii) Y 23, Tepy Shemu, of King UsermaatRe [Setepen]A[mun...]*
  > > *(iv) Repetition of favour in year 11, Tepy Sh[emu...of name lost]*
  > > *(v) [Year lost...of User]maatRe SetepenRe son of Re Sheshonq MeryAmun SiBast, God, Ruler of Heliopolis, [...day of induction of name lost] to be Vizier of the Southern City...*
  >
  > *The chronological reconstruction of this sequence is difficult, as there are a number of possibilities. The last ruler is without doubt Sheshonq III... [end of quote]*)

  ]

- Jan 07, 2016 par. 4-9 3rd last sentence had a typo in 'Babylonian' so that now the sentence is rewritten: [As Amorite 'hiyaru' is 'Adar' and 'ajjaru' is 'Iyyar,' so 'ajjaru' is a Babylonian month corresponding to the Amorite month 'gaunu,' two months later than 'hiyaru.'] 6-12 footnote number [1] as too small font, now fixed; 7-10 [Only in poor visibility could this same LD9 occur on a Thoth 01 in 744 BCE (ie. a 9.0 cf. Schaefer 7.1 a.v.). In 744 BCE Thoth 01 is Feb 25 and Feb 17 moon is 20:52 (hr:min) old, giving an azimuth of about 21 deg, which for Feb at 7.3 interpolated for 20 deg becomes 7.1 for 21 deg azimuth, only changing to Feb 16 with a.v. 8.9, so the 1st invisibility is Feb 18 and Feb 25 is LD8, a Day number which fails the criterion of LD9, normally. The higher probability is thus the Year 769, our year!] should say this, with sincerest apologies for mistake: [Only in 'poor' visibility could this same LD9 occur on Thoth 01 in 744 BCE ('Schaefer ~9.1 a.v.' [cf. 8.89] - vernal equinox Mar 28/winter solstice Dec 28, in 744). In 744 BCE Thoth 01 is Feb 25 and Feb 17 moon is 20:52 (hr:min) old, giving an azimuth of about 11 deg, which for Feb at 9.2 interpolated for 10 deg is near 9.1 for 11 deg azimuth, only changing to Feb 16 with a.v. 8.90 or higher, in PLSV 3.1, meaning it passes, but barely, so the 1st invisibility is Feb 17 and Feb 25 is LD9, a Day number which is normally the case, but borderline. Visibility only slightly better than Schaefer's values estimate may have made the moon visible on Feb 17, and then Feb 18 was 1st invisibility, and Feb 25 thus LD8. The higher probability is thus the Year 769, our year!] 7-10 added a sentence about Schaefer's error estimate: [ed. unaltered] ... invisibility, and Feb 25 thus LD8. [sentence] [Schaefer's tabulated values are +- 0.9 for this range, thus making the probability of a 0.2 error quite high.] The higher probability is thus the ...[ed. unaltered];
- Jan 08, 2016 par. 6-3 2nd last sentence rewritten: [It is this drift of the Egyptian secular calendar that causes Sothis to rise heliacally on Thoth 1 every 1460 years, being detected on that day just before sunrise.] 2-1 Table 1 renamed as Table 1.1, text edited 'right': [as demonstrated in Table 1.1 (see right) using PLSV, a] 6-3 added footnotes [1] and [2], as follows: [

  [1](*Each year Sothis rises progressively earlier after its first heliacal rising of that year, until it begins to set just before dawn some months later (late in Nov at Egyptian latitudes, ~Nov 28/29 for 885/884 BCE), which is called its 'cosmical setting' (when rising Jul 17). It then rises acronychally (just after sunset) after a wait of three and a half weeks (Dec 23) and continues, rising at sunset until late spring (~May 10/11), where it vanishes until its next, heliacal rising (~Jul 17), when it continues rising just before dawn (until Nov). The Sothic Cycle has very nearly the same Julian dates each year, while moving through the Egyptian calendar, for Thoth 1 gets progressively earlier as Julian years advance, seeing as the Egyptian year is shorter, while Sothis rises later in the Egyptian calendar each year, eventually, after 1460 years, returning to be Thoth 1. The first heliacal rising of any year is welcome as it always comes after a time of 10 weeks of invisibility.*)

  [2](*In this case we are searching a very specific Egyptian calendar day in the drifting Egyptian calendar, and we convert it to the Julian calendar because lunar phases of that era are tabulated only in the Julian calendar. We know that the Egyptian calendar drifts with respect to the Julian calendar, but we need an alignment date, and alignment of the Julian calendar is determined for 'all times past and future' with the Egyptian calendar by Ptolemy's putting Thoth 1 as Jul 21 for 132-135 CE.*)] 7-10 added footnote [1] about AEC, p. 494, as follows: [

  [1](*In the chronology of the book "Ancient Egyptian Chronology," Piye's Year 1 is 753, and it's found that once again, only in poor visibility and only in 733 is Thoth 01 exactly LD9 (ie. 9.16 cf. Schaefer 7.6 a.v.). This is different also in being Year 20-- not Year 19. In 733 BCE Thoth 01 is Feb 23 and Feb 15 moon is 35:45 (hr:min) old, giving an azimuth of about 18 deg, which for Feb at 7.3 interpolated for 20 deg becomes 7.6 for 18 deg azimuth, only becoming Feb 14 with a.v. > 9.15, so the 1st invisibility is Feb 16 and Feb 23 is LD8, a Day number which fails the criterion of LD9, normally. The highest probability is thus by this criterion 769. Piye Year 1 "Ancient Egyptian Chronology," p. 494*)]

- Jan 09, 2016 par. 2-4b [ed. fixed] III Peret [21]; added footnote [1], as follows: [

  [1](*Ancient Egyptian Chronology, 2006, p. 199*)] 4-4 [ed. extra that] of our analysis suggest that the; 7-9 added footnote [1], as follows: [

  [1](*Also:*

  > *733 - 40 - 167 = 526 BCE*
  > *~Year 1 Cambyses (QWP)*
  > *40 : Dyn. 25, Africanus, and 167 : Dyn 26, Euseb.+A.*)

  ]
- Jan 10, 2016 par. 8-1 added footnote [1], as: [

  [1](*In the introduction to her book, Tetley is brief on 14C, and puts it 11th on her list of chronological resources for Egypt: '11. Scientific studies, such as carbon-14 dating, tree-ring counting (dendrochronology), and ice-core testing, can supply approximate dates to a given time period.' From "The Reconstructed Chronology of the Egyptian Kings," by M. Christine Tetley, 2014 posthumously, p. 4*)]

- Jan 12, 2016 par. 1-1 renamed Table 1.1 to 2.1 and added footnote to Table 2.1, as follows: [

  *Dates of Jul 18 and Jul 17 in this column using arcus visionis of 9.12 in PLSV 3.1.0 (Nov 20, 2006), cf. Bradley E. Schaefer, p. 150 Sothic rising Jul 17.8 in 1500 BC, and Jul 17.2 in 1000 BC, in "The Heliacal Rise of Sirius and Ancient Egyptian Chronology," *Journal for the History of Astronomy,* Vol. 31 (2000), Part 2, pp. 149-155.] 2-2 removed sentence [Corrections had to be made ...]; 2-12 added footnote [1], as follows: [

  [1](*In this article in Chapter 5 paragraph 7, there is presented another possible interpretation of Seti's Year 1 as in 1318 BCE, and this puts Ramesses I Year 2 II Peret 20 date in 1318 (Jan 04) and as a LD-1, early by one day for LD1, yet still potentially a stela date (possibly as a negative error for LD1) as indicated, a situation which puts Year 1 of Ramesses I in 1320 BCE, as is likely, with Horemheb's death at near that time. However, it should be noted here also that the Year 27 for Horemheb is believed to be a 'burial' date, and as such is customarily not 'lunar influenced' since these funeral events were typically 70 days after the death. There is thus little reason to expect lunar alignment, for Horemheb's burial date, nor to rule it out either. Horemheb could have acceded in 1341 BCE and Ay in 1346 on the death of Tut, I noted in Book 33 p. 10, Dec 18, 2015, which makes Horemheb's dates LD3, LD3 and LD5 as from Years 1, 3 and 6 respectively (with Year 1 1341), while Horemheb's Year 27 burial date could assume Ay's Year 1 (ie. the usurping of Ay's Reign) in 1346, which with the death of Tut in early January 1346 is Year 27 at a Julian date up to 6 days earlier in January 1320. With I Shemu (Pachon) 9 as Mar 24 1320 for Horemheb's, dated burial, 70 days earlier is his death thus on Jan 13 of 1320 BCE, making Tut's death before Jan 19 1346. When, as was considered at length in the 'B4' article, Tut acceded in late summer 1355, the Year 9 Wine label attributed to him is later dated to autumn of 1347, so that his death in Jan 1346 is apparently fitting.*)] 5-7 is now amended (with footnote [2], added) to read: [1320, which is 26 years after the death of Tutankhamun (whose death we now take to be two years later, 1346).] 5-7 added footnote [2], as follows: [[2](*See footnote [1] in Chapter 2 paragraph 12*)] 2-12 moved last sentence into the paragraph formation.

- Jan 13, 2016 par. 2-12 renamed footnote [1] to: *, and edited footnote (in sentence 1 and last sentence):

  [Later in this article, in Chapter 5 paragraph 7, ...]

  [When, as was considered in our 'B4' article, par. 2-11 (see Chart 1, par 1-2b, 2-1b and Table 3, 2-8, 7-7-b), Tut acceded in late summer 1355, the Year 9 Wine label attributed to him is now here dated autumn of 1347 and his death (which we put previously in Jan 1348) is now apparently fitting (so remarkably neatly) in Jan 1346.] 2-12 reworded sentence 2 to improve sense, as follows:

  [such is customarily not 'lunar influenced,' with these funeral events held precisely 70 days after the death.]

  Recent articles updated to include PDF file format and thumbnail images added corresponding to articles 1-13.

- Jan 14, 2016 par. 3-9 added footnote [2] as shown:

  [[2](*Lunar Day 1 on II Peret (Mecheir) 27 Year 52 of Ramesses II, the Piramesses date, is valid for a range of arcus visionis values from 0 to 11.40 (Thebes), for 0 to 11.10 (Memphis), and 0 to 11.06 (Piramesses) with PLSV 3.1 in 1264 and Dec 28 as Mecheir 27 in 1264 BCE, and visibility of the lunar crescent on Dec 27 is, for a moon age of 27:10 (hr:min, PLSV 3.1, 27.16667 ÷ 24 ÷ 29.530 x 360 = 13.8 deg azimuth) at 13.8 deg of azimuth interpolated from Schaeffer's values as 7.8 arcus visionis (with an error of +-0.8 deg) in Dec, so the error limit of 8.6 degrees of visibility is within the 0 to 11+ degrees range for which LD1 holds, in BG. On the other hand, 1279 BCE as Year 1 Ramesses II does not meet this requirement, and is made to work only by changing the Piramesses date artificially, to the 28th day of Mecheir (Christine Tetley's book, p. 425).*)] 3-9 footnote [2] [Schaeffer,Schaefer] [values,numbers]:

  [of azimuth interpolated from Schaefer's numbers as 7.8] 11-4 footnote [2] [Brazi Unas, Braziunas]['']' to ',']:

  [[2](eg. *Radiocarbon, Vol. 40, No. 3, 1998, pp. 1127-1151, "High-Precision Radiocarbon Age Calibration for Terrestrial and Marine Samples," by Minze Stuiver, Paula J. Reimer and Thomas F. Braziunas*)] Historical Notes: added Bradley E. Schaefer quote:

  [In summary, sadly, I conclude that the current large uncertainties in predicting lunar visibility and in ancient Egyptian procedures do not allow for any possible astronomical solution of Egyptian absolute chronology with lunar dates.]

  Historical Notes: added Erik Hornung quotes by Tetley, and dates of Krauss at the 1987 Gothenburg colloquium, as well as Hornung's later comments from AEC (2006) on Gothenburg, our analysis, Jansen-Winkeln's conflicting comments in AEC, our date for Shoshenq (and Tetley's).

- Apr 04, 2016 typo 'PLSV 3.0.1' corrected to 3.1.0.

- Dec 29, 2016 rewrite sections about lunar azimuth:

  1. Last part of note [2] paragraph 3-9, is:

  [[
  and the last visibility of the lunar crescent, as seen in Rita Gautschy's table (Memphis) is Dec 27 1264 BCE, Lunar Day 1 or new moon being the day after or Dec 28. Gautschy's tables include the lunar azimuth angle with respect to the Sun, which is independent of moon ages. To estimate the azimuth angle, we used Celestia 1.6.1, and obtained 5 degrees of horizontal azimuth on Dec 27 1264 BCE, as seen from Piramesses at sunrise that day. This also implies an arcus visionis of between 8.8+-.8 (az.= 10 deg) and 10.2+-.6 (az.= 0 deg), the middle of these two values of Schaefer's being 9.5+-.7 degrees-- which is under 11.06 (Piramesses, above)-- thus within the 0 to 11+ degrees range for which LD1 holds, in BG. On the other hand, 1279 BCE as Year 1 Ramesses II does not meet this requirement, and is made to work only by changing the Piramesses date artificially, to the 28th day of Mecheir (Christine Tetley's book, p. 425).)
  ]]
  and was:
  [
  and visibility of the lunar crescent on Dec 27 is, for a moon age of 27:10 (hr:min, PLSV 3.1, 27.16667 ÷ 24 ÷ 29.530 x 360 = 13.8 deg azimuth) at 13.8 deg of azimuth interpolated from Schaefer's numbers as 7.8 arcus visionis (with an error of +-0.8 deg) in Dec, so the error limit of 8.6 degrees of visibility is within the 0 to 11+ degrees range for which LD1 holds, in BG. On the other hand, 1279 BCE as Year 1 Ramesses II does not meet this requirement, and is made to work only by changing the Piramesses date artificially, to the 28th day of Mecheir (Christine Tetley's book, p. 425).)
  ]

  2. Last part of the body of paragraph 6-9 is:

  [[
  about 10.8+-.8 degrees above the horizon (Schaefer for azimuth, from Celestia 1.6.1, of 1 degree interpolated between 0 deg and 10 deg of azimuth during September), based on the 9.26-9.27 above (Memphis, PLSV 3.1.0), it fails as a LD15, and must be taken instead to be LD16.[1-3] This date represents the lower chronology (BG) as well as Christine Tetley's Year 12

represents the Lower Culmination (LC) as well as Christine Tetley's Year 12 for Shosheng V (c. 780).[4,5] Somewhat borderline, the year 769 BCE (BG), one should be warned, is subject to a one-day shift of Pharmouthi 4 to LD15 should visibility conditions be exceptional.
]]
and was:
[
7.6 deg (moon age 44 hours, 44+24+29.5x360 = 22 deg azimuth approx., Schaefer gives 7.6 for Sep and 20 deg of azimuth in Egypt, AEC p. 397), it is a LD15.[1-3] This date represents the lower chronology (BG) as well as Christine Tetley's Year 12 for Shosheng V (c. 780).[4,5] PLSV 3.1 shows no day of invisibility for this period, and the last day before conjunction is a Lunar Day 30, based on the earlier 1st day of invisibility (Aug 19). Although successful, the year 769 BCE (BG), one should be warned, is subject to a one-day shift of Pharmouthi 4 to LD16, should bad atmospheric conditions raise the arcus visionis to only 9.27 degrees, a potential fail.
]

3. Last part of the body of paragraph 7-10 is:
[[
PLSV 3.1 was used to compute LD1 for Feb 769 and found Feb 24, with arcus visionis of 8.3 (Feb 23 az. 16 deg, Celestia 1.6.1, Schaefer ~8.3 a.v), the result holding with an a. v. as high as 10.08, at Thebes, in 769 BCE. Gautschy's tables agree with our date of LD1 (Feb 24), for Feb 22 last visibility (cf. Feb 23, PLSV 3 above). 769 BCE is considered a leap year (astronomically -768 for mathematic simplicity), and so there are 5 days to Feb 29 (LD6) and 3 more days to Mar 03 (LD9), which is exactly the same as Thoth 01 in the Egyptian year 769! Only in 'poor' visibility could this same LD9 occur on Thoth 01 in 744 BCE ('Schaefer ~8.5 a.v.' cf. 8.90 min for last visibility on Feb 16; any lower then Feb 17). In 744 BCE Thoth 01 is Feb 25, and Feb 17 moon azimuth of 6 deg gives a.v. of ~10.1+-.9 from Schaefer's table for Mar/Sept, and ~9.4+-.8 for Dec, and with Mar 28 as vernal equinox in 744 BCE, and Dec 28 Winter solstice, we interpolate at least one third of 0.7 from 10.1, to get 9.8 or 9.9+-.9 (Celestia 1.6.1 has visual ~8 deg). Both results being ambiguous, neither one is favoured. Gautschy's tables for 744 give Feb 17 as new moon late in the evening, as does Espenak, which are borderline. Gautschy favours Feb 17 in 744 as LD1, but in PLSV 3.1 we found last visibility as Feb 16 only with a.v. 8.90 or higher, so a.v. of 8.5 meant it failed, but barely, with the error limits permitting visibility on Feb 16. Visibility only slightly better than Schaefer's values estimate may have made the moon visible on Feb 17, and then Feb 18 was 1st invisibility, and Feb 25 thus LD8. The higher probability is thus the Year 769, our year![1]
]]
and was:
[
PLSV 3.1 was used to compute LD1 for Feb 769 and found Feb 24, with arcus visionis of 7.6 (38.82 hr moon age= 20 deg azimuth, Schaefer ~7.6 a.v), the result holding with an a. v. as high as 10.08, at Thebes, in 769 BCE. 769 BCE is considered a leap year (astronomically -768 for mathematic simplicity), and so there are 5 days to Feb 29 (LD6) and 3 more days to Mar 03 (LD9), which is exactly the same as Thoth 01 in the Egyptian year 769! Only in 'poor' visibility could this same LD9 occur on Thoth 01 in 744 BCE ('Schaefer ~9.1 a.v.' [cf. 8.89] - vernal equinox Mar 28/winter solstice Dec 28, in 744). In 744 BCE Thoth 01 is Feb 25 and Feb 17 moon is 20:52 (hr:min) old, giving an azimuth of about 11 deg, which for Feb at 9.2 interpolated for 10 deg is near 9.1 for 11 deg azimuth, only changing to Feb 16 with a.v. 8.90 or higher, in PLSV 3.1, meaning it passes, but barely, so the 1st invisibility is Feb 17 and Feb 25 is LD9, a Day number which is normally the case, but borderline. Visibility only slightly better than Schaefer's values estimate may have made the moon visible on Feb 17, and then Feb 18 was 1st invisibility, and Feb 25 thus LD8. Schaefer's tabulated values are +- 0.9 for this range, thus making the probability of a 0.2 error quite high. The higher probability is thus the Year 769, our year![1]
]

4. Note [1] paragraph 7-10, is:
[[
[1](*In the chronology of the book "Ancient Egyptian Chronology," Piye's Year 1 is 753, and it's found that once again, only in poor visibility and only in 733 is Thoth 01 exactly LD9 (ie. 9.16 cf. Schaefer 7.6 a.v.). This is different also in being Year 20-- not Year 19. In 733 BCE Thoth 01 is Feb 23, and the Feb 15 moon has an azimuth, from Celestia 1.6.1, of ~15 degrees, which for Feb from Schaefer is ~8 deg a.v. (~5.5 in Celestia 1.6.1 appears to be thus not enough elevation to see); the Feb 14 moon, in Celestia, with an azimuth near ~25 deg, from Schaefer is extrapolated to a.v. ~6.3 (while in Celestia visually ~12 is thus plenty of elevation). Gautschy gives Feb 16 733 as (middle of day) new moon, even though Feb 14 she also tables as last visibility. Espenak concurs with a midday, Feb 16 733 conjunction. In PLSV 3.1 last visibility changes to Feb 14 for a.v. > 9.15, compared to ~8 (above), but with est. error of 1.2 this also might agree with Feb 14 last visibility. More importantly, LD1 is established as firmly Feb 16. So the 1st invisibility is Feb 16 and Feb 23 is LD8, a Day number which fails the criterion of LD9, by a day. The highest probability is thus by this criterion 769. We should, however, be cautious about exactness, here, as "planetary orbits" in Celestia have been "accurate" only "within a few thousand years of the present day." Piye Year 1 "Ancient Egyptian Chronology," p. 494*)
]]
and was:
[
[1](*In the chronology of the book "Ancient Egyptian Chronology," Piye's Year 1 is 753, and it's found that once again, only in poor visibility and only in 733 is Thoth 01 exactly LD9 (ie. 9.16 cf. Schaefer 7.6 a.v.). This is different also in being Year 20-- not Year 19. In 733 BCE Thoth 01 is Feb 23 and Feb 15 moon is 35:45 (hr:min) old, giving an azimuth of about 18 deg, which for Feb at 7.3 interpolated for 20 deg becomes 7.6 for 18 deg azimuth, only becoming Feb 14 with a.v. > 9.15, so the 1st invisibility is Feb 16 and Feb 23 is LD8, a Day number which fails the criterion of LD9, normally. The highest probability is thus by this criterion 769. Piye Year 1 "Ancient Egyptian Chronology," p. 494*)
]

- **Dec 31, 2016 add par 3-9 note [2] Gautschy source: (Gautschy's table from R. Gautschy, "Monddaten aus dem Archiv von Illahun: Chronologie des Mittleren Reiches" in the journal: Zeitschrift für Ägyptische Sprache und Altertumskunde 178, Vol. 1, 2011, 1-19, or an internet site www.gautschy.ch/~rita/archast/ mond/mondeng.html)**
- **Jul 24, 2017 Chapter 2 starting quotes, added name of M. Christine Tetley (last name Tetley was missing); par. 2-10 correct [Akenaten being] [[Akhenaten also]]; par. 6-11 note [2] renamed, now numbered as: note [1]; par. 3-9 increased width Siamun image to 39% from 29%; fixed centring of Title Illustrations, top and bottom.**
- **Mar 16, 2018 add to 3-5 Fotheringham p. 122 image; add note [2] to 3-9 regarding the 1314 date of Krauss; add 3-9 p. 123 of Fotheringham's Chronology OT, image; 3-10s5 amend text [totals of 130,] [[total of 130--]]; 3-11-last3rd reverse word order [him put] [[put him]].**
- **Mar 30, 2018 8-5s1 [radicarbon] = [[radiocarbon]].**
- **Jun 15, 2019 8-3 fixed: [Crucible, Green 2012 BCE] 2012 article aka "C3" [[Crucible, Green et al. 2012]]; 9-2 [, at the birth of his firstborn son (generation)] - [[for the birth of a firstborn son (a generation)]].**
- **Jun 18, 2020 12-5 typo in 'occurrence' [the actual eclipse occurence] ~ [[an actual eclipse occurrence]].**
- **Jun 24, 2020 5-5 typo ' ['Day '1.'] [['Day #1.']].**
- **Sep 05, 2020 3-2 Book of Sothis is also associated with him. [has been assocated] [[is also associated]].**

REFERENCES:

Own Work:

(1) ('B4.Chronology'_by.Rolf.Ward.Green_Ralph.Ellis.Green_Anne.Ruth.Rutledge.and.Flora.Marie.Green)
(2) ('The.Crucible.of.Credible.Creed'_by.Rolf.Ward.Green_Ralph.Ellis.Green_and.Anne.Ruth.Rutledge)
(3) ('The.Ark.of.Urartu'_by.Rolf.Ward.Green.and.Anne.Ruth.Rutledge)
(4) ('Moses'_by.Rolf.Ward.Green.and.Anne.Ruth.Rutledge)
(5) ('Phoenix'_by.Rolf.Ward.Green.and.Anne.Ruth.Rutledge)
(6) ('Oh'_by.Rolf.Ward.Green)
(7) ('Joseph'_by.Rolf.Ward.Green)
(8) ('Green'_by.Rolf.Ward.Green)
(9) ('Smith'_by.Rolf.Ward.Green)
(10) ('Valdr'_by.Rolf.Ward.Green)
(11) ('Skjöldings'_by.Rolf.Ward.Green)
(12) ('Harald.Hildetand'_by.Rolf.Ward.Green)

Unique Source Material:

(13) (Synchronology_1839_Cambridge.University.Press._by.Charles.Crosthwaite)
(14) (Ancient.Egyptian.Chronology_2006_ed._by.Erik.Hornung_Rolf.Krauss_and.David.A._Warburton)

Odysseus and Circe by Salomon de Bray, 1650-55 CE

The lines have fallen to me in the best places, yea, I have a most excellent heritage.

(*Psalms 16:6; Brenton*)

Trojan War—

Year End Report

(Quilt Work Patch)

Chapter 1: Relativistic Earthly Age Lesson
Chapter 2: Chronology Aligned Under Sothic Egypt
Chapter 3: Manetho Offers Real Encouragement
Chapter 4: Ugarit Solar Eclipse Record Finds Realization In Egyptian Nineteenth Dynasty Late Years
Chapter 5: New, Irrefutable, Chronological Environment
Chapter 6: Absolutely Institutional Moon Secured
Chapter 7: Piye's Accession Year
Chapter 8: B4 Affirms Carbon-14 Kings
Chapter 9: Radiocarbon Egypt's Archaeometric Logic
Chapter 10: Whitelaw On Real Life Deluge Attested in *Radiocarbon* Study
Chapter 11: Adjusting Whitelaw's Estimate (Radiocarbon Ark Wood)
Chapter 12: Trees Represent Empirical Evidence