Re-dating the Fall of Sardis *

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The shaky nature of the historical (and by association archaeological) dates in the Greek Archaic period (usually taken as ending with the Persian sack of Athens in 480 BC), is a well-known problem. Of course, some dates are less shaky than others. Perhaps every scholar will agree that the earliest, *indisputable*, absolute date in Greek history (that is to say textually based), is that of the death of Hipparchus son of Pisistratus I in 514/3 BC. He was assassinated at the Great Panathenaea, 'four years' before the expulsion of his brother Hippias in 511/0 BC (on inclusive reckoning), which was 'twenty years' (a round number) before the Battle of Marathon in 490 BC (Hdt. 5.56; Thuc. 1.20; 6.56, 59; Arist. *Ath. Pol*. 18.3; 19.2). A further deduction can be made: the death of Pisistratus I and the accession of Hippias occurred in 528/7 BC — as the latter ruled for 'eighteen years' (Arist. *Pol*. 5.1315b 29-34 — even if *Ath. Pol*. 19.6 says 'about seventeen years'). But there will be (and legitimately should be) disagreement between scholars in respect to any date earlier than Pisistratus' death.

An earlier point thought to be 'fixed', providing a link to the Athenian chronology, is the Fall of Sardis, the Lydian capital of the famous king Croesus. In the past, the date of this major international event used to be given very inconsistently (from as early as 557 BC to as late as 540 BC),[1] but in recent decades confidence has grown regarding the year

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1 The highest date of 557 BC was contrived by C.F. Volney (*Recherches nouvelles sur l'histoire ancienne*, vol. 1 [Paris, 1814], 306-309), and the lowest of 541/0 BC by G. Husing

546 BC. For example, the convenient second edition of *Early Greece* (1993) by Oswyn Murray says that Croesus, having crossed the Halys, 'met Cyrus in an indecisive battle in 547, and returned to winter at Sardis' to be followed by the Persian king who 'defeated him in battle and stormed the city'; so the end of Croesus' reign is placed by Murray in the following year, 546 BC.[2] This is presented as a date strongly supported by tradition, and one would have thought that 546 BC or technically 546/5 BC (as expressed earlier by Sumner and Rhodes) must at least be the 'unanimous' date as received from ancient Greek 'chronography' — despite the multiple dangers that the use of such a source entails. The same goes for the date of the event as given in the Babylonian 'Nabonidus Chronicle' which Murray further calls to his support. Since poor understanding is involved at all levels of these sources, the present paper will aim at their reconsideration. In the same order, let us first examine the position of Greek chronography followed by the Nabonidus Chronicle.

1. Eusebius and Jerome

The available Greek fragments of our primary source, the *Chronicle* of Eusebius (in fact a double work, which may better be called *Chronographia* and *Kanones*, composed some years before AD 311 and expanded shortly after AD 325) — representing the end-result of a long chronological enquiry which began seven centuries earlier in the Hellenistic period — unfortunately have not preserved the date for the Fall of Sardis;[3]

('Kroisos, 555-541', *OLZ* 18 [1915], 177-79; cf. S. Mazzarino, *Fra oriente e occidente* [Firenze, 1947], 162-64; W.A.P. Childs, 'Lycian Relations with Persians and Greeks in the Fifth and Fourth Centuries Re-examined', *AnatSt* 81 [1981], 55, n. 1; Idem, 'Herodotus, Archaic Chronology, and the Temple of Apollo at Delphi', *JDAI* 108 [1993], 402). Various dates in between have been proposed, e.g. 554 BC by Rawlinson (356); 545 BC by B.M. Mallowan ('Cyrus the Great 558-529 B.C.', *Iran* 10 [1972], 1-17); 544 BC by H.T. Wade-Gery ('Miltiades', *JHS* 71 [1951], 219, n. 38); cf. N. Cahill and J.H. Kroll, 'New Archaic Coin Finds at Sardis', *AJA* 109 (2005), 589-617, at 608.

2 O. Murray, *Early Greece* (London, 1993), 252, 247, 312; cf. selectively, R.M. Cook, 'The Francis-Vickers Chronology', *JHS* 109 (1989), 166; M.M. Austin, 'Greek Tyrants and the Persians, 546-479 B.C.', *CQ* 40 (1990), 289-306; C.H. Greenwalt, Jr., 'When a Mighty Empire was Destroyed: The Common Man at the Fall of Sardis, ca. 546 B.C.', *PAPS* 136 (1992), 247-71. The recent confidence regarding the year 546 BC (based on a mistake of F. Jacoby as explained by Mosshammer, 258, 346, n. 6) seems to begin with G.V. Sumner, 'Notes on Chronological Problems in the Aristotelian Ἀθηναίων Πολιτεία', *CQ* 11 (1961), 42-43, n. 4 (who says that 'there is nothing to prevent it [i.e. the missing date of the Fall of Sardis on the *Marmor Parium*] from having been the 546/5 of the rest of the tradition'), and continues with J.G.F. Hind, 'The "Tyrannis" and the Exiles of Pisistratus', *CQ* 24 (1974), 10, n. 4 (who says that 'The year 546 has the greater traditional support among the chronographers'), and with P.J. Rhodes 'Pisistratid Chronology Again', *Phoenix* 30 (1976), 232 (who says that 'there is no clear evidence for a date other than 546/5').

3 The Greek fragments, extracted mostly from George the Syncellus (ca. AD 800), George the Monk (9th century AD), George Cedrenus (11th/12th century AD) and the Paschal Chronicle (7th century AD), are found in J.-P. Migne, *Patrologia Graeca*, vol. 19 (Paris, 1857), 101-598; cf. the Excerpta Eusebiana in J.A. Cramer (ed.), *Anecdota Graeca e codicibus manuscriptis Bibliothecae Regiae Parisiensis*, vol. 2 (Oxford, 1839), 115-63

nor have the Syriac epitomes,[4] or the Armenian version in so far as it suggests only a broad date during Olympiads 58-59 (548-541 BC).[5] Yet the Latin edition of the second part of the *Chronicle* (the *Kanones*) by Jerome places the event precisely at 'Olympiad 58.1', and contrary to the current view this does not translate into 546/5 BC but into 548 BC two years earlier (see Fig. 1).[6] Assuming that this placement reflects the original Greek (as the scholarly battle between the Armenian and Latin versions seems to have been won by the latter), and given those sources of Eusebius which can be determined with any confidence, it is believed that the absolute date ultimately goes back to Apollodorus of Athens (*ca*. 140 BC).[7] This may well be so, but a corruption has to be assumed to have been made in later chronography (if it is not Eusebius' structural reckoning which is at fault), since Apollodorus apparently supported a date between that given by Eusebius (548 BC) and the current view (546/5 BC).

2. Apollodorus and Sosicrates

One of the surviving fragments from the chronological work of Apollodorus (*FGrH* 244 F 28 — *apud* Diog. Laert. 1.37-8) could be understood as indirectly dating the Fall of Sardis to 547/6 BC or 546/5 BC. It places the birth of Thales in 'Olympiad 35.1' (640/39 BC) and his death at the age of '78' in 'Olympiad 58' (548-545 BC), 'being contemporary with Croesus, whom he advised on how to cross the Halys without a bridge, by diverting the river.' Of course to be 78 years old sometime during the period 548-545, Thales should have been born in a later Olympiad than the one stated. Apollodorus must have originally written '39.1' (624/3 BC), which sets Thales' death at

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(repr. Hildesheim, 1967). As we shall see, these fragments at least preserve an important Lydian king list of 'non-Herodotean' origins, mentioned in the first part referred to here as *Chronographia* (thus also in the Armenian), and utilised in the second part *Kanones* (thus also gathered from Jerome's Latin translation).

4 For the main Syriac epitome, see C. Siegfried and H. Gelzer, *Eusebii Canonum Epitome ex Dionysii Telmaharensis Chronico petita* (Leipzig, 1884); and the Latin translation by J.-B. Chabot, *Incerti auctoris Chronicon Pseudo-Dionysianum vulgo dictum*, I (Louvain, 1949). It is now referred to as 'Pseudo-Dionysius' since it has been realised that this chronicle in four parts (Codex Zuqninensis) was written by a Syrian monk in AD 775 and not by Dionysius of Tel-Mahre (AD 818-45) — see W. Witakowski, *The Syriac Chronicle of Pseudo-Dionysius of Tel-Mahrē. A Study in the History of Historiography* (Uppsala, 1987). A recent view argues that while part 1 utilised Eusebius, and much of part 3 utilised John of Ephesus, parts 1 to 3 were compiled by one Joshua the Stylite who also wrote part 4 — see A. Harrak, *The Chronicle of Zuqnīn, Parts III and IV, A.D. 488-775* (Toronto, 1999).

5 For the revised edition of the Armenian version in German translation, see Karst, 189; the old edition by A. Schoene (*Eusebi Chronicorum Canonum* — reprinted in 1967 by Weidmann), which is commonly used, must not be trusted (see Mosshammer, 47). It should be noted that the chronological reckoning of the Armenian sets Olympiad 1.1 (776 BC) against 'Year 1240 of Abraham', whereas the Latin version sets it against 'Year 1241 of Abraham'. This means that the entries in the Armenian *Chronicle* (at least those not tampered with since Eusebius) run a year late compared to those in the Latin (Mosshammer, 79); but cf. Burgess, 41-42.

6 See the revised edition of Helm, 103a-b.

7 See Mosshammer, 158-66, 260.

547/6 (inclusively) or 546/5 (exclusively). The mistake would have occurred at an early stage in the process of copying his work, since Diogenes Laertius briefly adds that according to Sosicrates of Rhodes (an approximate contemporary of Apollodorus) the age of Thales was given instead as '90'. This has been assumed to be a correction on Sosicrates' part, if Apollodorus' reading of 'Olympiad 35.1' was to be sustained. But this is wrong. Thales at '90' in 547/6 or 546/5 BC would not have been born in Olympiad 35.1 but in 36.1 (636/5 BC), and thus Sosicrates must have claimed a different date for the Fall of Sardis. Indeed, another fragment of his (Diog. Laert. 1.95 — not yet in *FGrH* 461) puts Periander's death 'just before Olympiad 49', that is to say in Olympiad 48.4 (585/4 BC), '41 years before [the end of the reign of] Croesus'. This proves that Sosicrates dated the Fall of Sardis to 545/4 (inclusively) or 544/3 BC (exclusively), and therefore he did not follow Apollodorus.

In fact, it seems that the opposite is true, with Apollodorus writing later than Sosicrates and 'correcting' him.[8] Thales at '90' in 545/4 BC according to Sosicrates, would have reached his 'acme' (at the age of 40) in 595/4, which is a date that could be calculated from Herodotus' figures for the Lydo-Median war (at the time of Croesus' father Alyattes) that saw the famous eclipse of the sun said to have been predicted by Thales (Hdt. 1.74).[9] Evidently the real date of the eclipse, in 'Olympiad 48.4' (585/4 BC given later by Pliny *NH,* 2.53), was unknown to Sosicrates who ignored Thales, placing instead the death of Periander in that year. But Apollodorus must have come across what appears to have been new (astronomical) evidence concerning the date of the eclipse,[10] which made him put Thales' 'acme' at 40 in 585/4 BC, thus establishing his death at 78 in 547/6 BC.

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8 Apollodorus (*FGrH* 244 F 206) in a different context does quote Sosicrates (*FGrH* 461 F 5 — *apud* Strabo 10.4.3), as being an earlier writer.

9 The retro-calculation would be based on the year Calliades was archon of Athens in 480 BC (Hdt. 8.51), to which would be added 114 years as follows: 6 Xerxes (Hdt. 7.7, 20), 36 Darius (7.4), 8 Cambyses and Smerdis (3.66-7), 29 Cyrus (1.214), and 35 Astyages (1.130) — cf. P.J. Rhodes, 'Herodotean Chronology Revisited', in P. Derow and R. Parker (eds.), *Herodotus and his World* (Oxford, 2003), 71-72.

10 The date of the eclipse at 585/4 BC is not known to us prior to Pliny (AD 77), while a less precise version of it in 'Olympiad 49' (584-581 BC) is found later in Solinus (15.16) and John Lydus (*De ostentibus* 9). However, the source of Pliny, judging from the context of the passage (confirmed in Pliny's list of sources), is evidently Hipparchus (ca. 130 BC), from whom Apollodorus must have been informed if indeed this date was included in his work (as is the opinion of Mosshammer, 265, 272; though he fails to accept the astronomical connection). There is no earlier testimony giving a date for the event. Eudemus of Rhodes (4th century BC) knew of Thales' prediction, but did not date it (*apud* Dercyllides, *apud* Theon of Smyrna — Diels 17), and it is only Clement of Alexandria (ca. AD 200), referring to Eudemus (*Strom.* 1.15), who briefly adds 'about Olympiad 50' (580-577 BC). Now, from the time of Hipparchus (and Apollodorus, if so) it must have been realised that an eclipse in 585/4 BC, following the Median king list in Herodotus (or even that in Ctesias), cannot have ended the reign of Cyaxares anywhere close to that year (Hdt. 1.74-5), and this would be the reason why the name of the king in some later authors was substituted with his son 'Astyages' as a reconciliation (e.g. Cic. *De divin.* 1.112). The conventional absolute date of Thales' eclipse (28 May 585 BC) — doubted only by a few — and its basis on Babylonian evidence will have to be discussed elsewhere.

Therefore, in spite of Sosicrates and the ambiguity both of copying numbers in traditional chronography and of reckoning inclusively or exclusively, it may still be held that Apollodorus' date was 547/6 BC.[11] A second of Apollodorus' fragments (*FGrH* 244 F 29 — *apud* Diog. Laert. 2.2) seems to confirm this, as it says that Anaximander was '64 years old' in 'Olympiad 58.2' (547/6 BC) — a reference point apparently chosen due to the importance of the historical event *not stated*, that is to say the Fall of Sardis.[12] This is also understood from a third fragment (*FGrH* 244 F 66 — *apud* Diog. Laert. 2.3), which puts Anaximenes' birth (*gegenētai men*) 'around the time of the Fall of Sardis', without giving its date. Ironically, since the death (*eteleutēse de*) of Anaximenes in the last fragment is further placed in 'Olympiad 63' (528-525 BC), he could not have been more than 22 years old when he died. This is surprising, given the philosopher's status, and one may have thought that Apollodorus' number for the Olympiad has again been corrupted here, but it is more likely that it was Anaximenes' 'acme' (at the age of 40), not 'birth', which coincided with the Fall of Sardis according to Apollodorus. This makes sense in that Anaximenes was the pupil of Anaximander, and thus he could, in Apollodorus' scenario, have been 24 years younger than his teacher and could have therefore died at the age of sixty-two.

Yet while Apollodorus must have convinced himself — for good (astronomical) reasons — of Thales' 'acme' at 40 in 585/4 BC, why would he find it necessary to alter his age at death to 78 — placing it at 547/6 BC — instead of retaining his death at the age of 90, ascribing a later date to the Fall of Sardis, in 535/4 BC? Why was 547/6 BC important for him to defend? We know that Apollodorus largely adopted the chronological system of Eratosthenes (*ca*. 220 BC), but this does not prove that the particular date had originally been computed in third century BC Alexandria. How then did Apollodorus calculate it? Was 535/4 BC, for example, too 'low' a date to reconcile with the information in Herodotus (cf. below note 19)? The source material available for any calculation of the Lydian reigns (unlike Median, Assyrian or Egyptian ones) could

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11 It is very unlikely yet not inconceivable that Apollodorus' date could instead have been 545/4 BC matching that of Sosicrates. Thales at '78 years old' in 544 BC would have reached his 'acme' (at 40 years old) in 582 BC, which is precisely the year (582/1 BC) given by Demetrius of Phalerum (*FGrH* 228 F1) as that of the naming of the Seven Sages, first of whom was Thales. The difference between the dates 547 BC and 544 BC for the death of Thales at seventy-eight is the difference between the dates 585 BC and 582 BC for his 'acme' at 40. Both of the latter (the one marking his assumed prediction of the solar eclipse, the other his being named Sage) could have been used as 'acme' points by different authorities constructing a chronology for Thales.

12 The event involved, the Fall of Sardis, is confirmed in the Tabula Iliaca (Vasek Polak Chronicle = *IGUR* IV.1633, Column IIB, line 18) — even though the absolute date given there reads 551/0 BC ('561 years' before a baseline of AD 10/11, established by the subsequent entry of Cyrus' death, known then to be 530/29 BC and given as '540' years before the baseline). S.M. Burstein, 'A New *Tabula Iliaca*: The Vasek Polak Chronicle', *The J. Paul Getty Museum Journal* 12 (1984), 158, 160, dates the Fall of Sardis to '546/5 BC' assuming a later Roman baseline for this document, identical to that found in the Tabula Capitolina or Chronicum Graecum (*IGUR* IV.1629). But given the clear differences between the two documents, no reason can be found for this assumption which only amounts to a circular argument.

not have ignored Herodotus outright. The options available for explaining Herodotus' chronology become clear in Dionysius of Halicarnassus (late first century BC) which will be examined next.

3. Dionysius and Herodotus

In describing the time-frame of Herodotus' work, Dionysius (*Thuc.* 5) says that from the beginning of the Lydian dynasty until the Persian War, he covered the history of '240 years'.[13] Since the Persian War in Herodotus ends in 479/8 BC (Hdt. 9.117, 121), the beginning of the Lydian dynasty under Gyges goes back to 719/8 BC (exclusively) or 718/7 BC (inclusively) according to Dionysius. Now, the duration of the Lydian dynasty — or in other words the adding up of the figures found in Herodotus (1.15-6, 25, 86; necessarily exclusively here) — is 170 years (Gyges 38, Ardys 49, Sadyattes 12, Alyattes 57, Croesus 14), which places the Fall of Sardis between 550/49 and 548/7 BC, depending on reckoning. This is just within the range of 548 BC of the tradition in Eusebius/Jerome, and outside the 547/6 BC of Apollodorus.

But Dionysius also knows, and cannot ignore, a lower chronology based evidently on different figures than those of Herodotus for the Lydian dynasty. In another passage (*Epist. ad Cn. Pompeium* 3) he gives the history covered by Herodotus as '220 years'. This sets the beginning of Gyges' rule at 699/8 BC (exclusively) or 698/7 BC (inclusively), to which only the addition of a 'non-Herodotean' total for the Lydian kings would place the Fall of Sardis anywhere within the 540s. The question then is as follows: has such an alternative total been recorded anywhere? Indeed the Greek fragments (as preserved mostly in Syncellus) of the first part (the *Chronographia*) of Eusebius' work (see above note 3) give a 'non-Herodotean' list of Lydian kings, whose reigns add up to 153 years (Gyges 36, Ardys 38, Sadyattes 15, Alyattes 49, Croesus 15),[14] and which is utilised in the Greek fragments of the second part of Eusebius' work (the *Kanones*), with a single difference of what certainly seems to be a corruption of the reign-length of Alyattes given instead as 44 years. This 'non-Herodotean' list is verified in the Armenian translation of the *Kanones* (but with Gyges 35, Ardys 37 and Sadyattes 5 in the *Chronographia*),[15] and can be gathered from the Latin translation of the *Kanones* by Jerome (but with Ardys 37). With such a total of 153 years (which seems almost certain for the original Greek figure despite the variants), Dionysius would have placed the Fall of Sardis between 547/6 and 545/4 BC depending on reckoning.[16] This is now just

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13 The figure has been emended to '220' in the Teubner edition of *Peri Thoukydidou* by H. Usener and L. Radermacher (*Dionysii Halicarnasei quae exstant*, vol. 5 [Leipzig, 1899; repr. Stuttgart, 1965], 325-418), followed by S. Usher in the Loeb edition, presumably to match Dionysius' *Epist. ad Cn. Pompeium* 3 (see below); cf. Rawlinson, 354, nn. 3-4.

14 See also W. Adler and P. Tuffin, *The Chronography of George Synkellos* (Oxford, 2002), 288; cf. the identical list in the Excerpta Barbari, now published under Julius Africanus by Wallraff *et al*. (see F 63a, but the apparatus seems to have mistaken the figures in the Latin *Kanones* for Gyges and Ardys).

15 Karst, 32-33, 181-89.

16 The Latin Eusebius/Jerome puts Year 1 of Gyges in 'Olympiad 20.2' (699 BC) — see Helm, 92a-b.

within range of the 547/6 BC of Apollodorus, and outside the 548 BC of the Eusebius/Jerome tradition.

Therefore Dionysius, starting from the end of the Persian war dated to 479/8 BC in Herodotus, and being aware of two king lists — a Herodotean one of 170 years, and a 'non-Herodotean' one of 153 years — was obliged (evidently at different stages of his writing career) to set two beginnings for Lydia under Gyges: one at 719/8 BC (exclusively) or 718/7 BC (inclusively), and one at 699/8 BC (exclusively) or 698/7 BC (inclusively). The first showed Herodotus to be covering '240' years of history in Dionysius' understanding (*Thuc.* 5), the second '220' years (*Epist. ad Cn. Pompeium* 3). The first required Sardis to fall between 550/49 BC and 548/7 BC, the second between 547/6 and 545/4 BC. It thus looks most probable that Apollodorus, at an earlier stage, working in a similarly artificial way, and having reasons to disagree with Herodotus (as seen in the case of the eclipse of Thales), conceivably also adopted the alternative Lydian king list,[17] while keeping the Fall of Sardis as high as possible for balance. But could this shorter list have otherwise indicated a significantly lower date for this event? Indeed, can this list be older and arguably more accurate than the one in Herodotus?

4. Euphorion and the Parian Chronographer

We have already seen that there was a lower date available in the Hellenistic period for the Fall of Sardis, 545/4 or 544/3 BC, as suggested by Sosicrates. But another lower date can be found considerably before him. About the time when the Ptolemaic Library of Alexandria was put under the direction of Eratosthenes (*ca*. 245 BC), the Seleucid Library of Antioch had been put under the direction of Euphorion of Chalcis. The latter, in his lost work on the Thessalian dynasty of the Aleuadae (*apud* Clement, *Strom.* 1.117), puts the beginning of the reign of Gyges in 'Olympiad 18' (708-705 BC). Now, had Euphorion known the 'non-Herodotean' king list of Lydia (with a total of 153 years), he could have supported a date for the Fall of Sardis between 555-552 BC (exclusively) or 556-553 BC (inclusively). Such a high date in the 550s was not beyond the imagination of ancient (see note 12) or even modern chronographers (see note 1), for it was possible to work it out from the data in Herodotus by a different route (see note 9) to the one already described under Dionysius (giving a date between 550/49 and 548/7 BC).

The 'father of history' does not provide a direct date for the Fall of Sardis, but by placing Year 1 of Xerxes at 485 BC (implied in the equation of what would be his Year 6 with the Athenian archonship of Calliades in 480 BC — Hdt. 7.7, 20; 8.51), one could add to this the total (74 years) of the reign-lengths of the Persian kings (Darius 36, Cambyses etc. 9, Cyrus 29 — Hdt. 1.214; 3.66-7; 7.4) going back to the beginning of Cyrus' rule at 559 BC (exclusively).[18] Such a date in the mind of an ancient

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17 Mosshammer, 215-6 claims that Apollodorus followed Herodotus, but he adduces no evidence other than *FGrH* 244 F 28, which does not show what Mosshammer thinks it does (see above under Apollodorus).

18 While the reign-lengths of Darius and Cambyses are confirmed by the Babylonian sources, the length of Cyrus' reign is attested only since he conquered Babylon (539 BC). The length of his earlier Persian rule followed by modern scholars of Near Eastern Studies is unfortunately only an assumption based on Herodotus!

chronographer could have also determined the Fall of the Median king Astyages, and by an unwarranted conjecture from Herodotus' narrative (1.91) — that Apollo protected Croesus for 'three years' presumably thereafter — Sardis would be assumed to have fallen in 556 BC (exclusively). But it would be very odd for Euphorion to construct a Herodotean chronology by using a 'non-Herodotean' king list. Still, if this is what he might have done, then the 'non-Herodotean' king list is attested here already in the middle of the third century BC.

Alternatively, Euphorion could have used the Herodotean king list (170 years), but in inclusive reckoning, reign by reign, with 'non-accession year', rather than by the addition exclusively or inclusively of the added total.[19] The following schematic table illustrates the parameters in this case:

Gyges	(38)	708/705 - 671/668 BC
Ardys	(49)	671/668 - 623/620 BC
Sadyattes	(12)	623/620 - 612/609 BC
Alyattes	(57)	612/609 - 556/553 BC
Croesus	(14)	556/553 - 543/540 BC

Clearly, Euphorion could instead have dated the Fall of Sardis sometime between 543 and 540 BC. This may look a little fortuitous, but it is significant that a precise date within this low range can be verified for the 'non-Herodotean' king list in the earliest Hellenistic chronographic attestation at our disposal, even earlier than Eratosthenes and Euphorion, that is to say the Parian chronographer who left his work on the famous Marble (inscribed during the Athenian archonship of Diognetos, 264/3 BC — *FGrH* 239 A/1 introduction).

The reckoning used by the Parian chronographer in the different parts of his work has been a matter of dispute since the inscription became known.[20] However, for the sixth and the early fifth centuries BC, which concern us here, all entries ('epochs') can be taken to provide the correct absolute dates by consistently reckoning inclusively from the stated baseline of 264/3 BC (or exclusively from 263/2 BC).[21] The date for the Fall of Sardis is not preserved (*FGrH* 239 A/2, 42 = *MP* 42), but luckily it can be retrieved from contextual considerations (see Fig. 2). The previously dated event (partly restored, but necessarily correct due to the combination of the surviving digits) is that of Croesus' communication with Delphi, given as '292' years above the baseline (*MP* 41) — or in other words 555/4 BC. Since the reign of Croesus was not long, taking at first the

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19 Exclusive reckoning with the Herodotean total of 170 would produce a date between 538 BC and 535 BC, while inclusive reckoning would produce a date between 539 BC and 536 BC. Such dates lower than that of the Fall of Babylon (6 October 539 BC) would not have been supported by ancient chronographers for the Fall of Sardis; yet exceptionally, see Pompeius Trogus (first century BC), who refers to Cyrus attacking Sardis after he conquered Babylon (*apud* Justin 1.7.3-4)!

20 For a summary of the different views see T.J. Cadoux, 'The Athenian Archons from Kreon to Hypsichides', *JHS* 68 (1948), 83-86.

21 That is to say, for example, when the known archonship of Calliades in 480 BC is given as '217 years' before the time of the Parian chronographer (*FGrH* 239 A/2, 51 = *MP* 51), it means 264/3 + 217 – 1 = 480/79 BC (i.e. inclusively), or 263/2 + 217 = 480/79 BC (exclusively); see also comment with references in Kokkinos forth., 12, n. 25.

familiar figure of fourteen years in Herodotus (1.86), we can easily set the parameters. If the Delphi communication took place at the earliest in Year 1 of Croesus, then his Year 14 would be 542/1 BC. If the Delphi communication took place at the latest in Year 14, then his Year 1 would be 568/7 BC. So the broadest framework in which to fit the reign of Croesus is from 568/7 to 542/1 BC, with the Fall of Sardis thus being limited to between 555/4 and 542/1 BC. It may not look decisive at this point. However, the Parian chronographer earlier in his work had *crucially* registered the beginning of the reign of Croesus' father Alyattes (*MP* 35), given as '341' years before the baseline (partly restored but again necessarily correct due to the combination of the surviving digits) — in other words at 604/3 BC. Now, taking the figure of 57 years again in Herodotus (1.25), the last year of Alyattes would be 548/7 BC. But of course this is impossible if Croesus' reign had already begun in 555/4 BC (at the time of his communication with Delphi) according to the Parian chronographer. The conclusion is happily inevitable: the Parian chronographer was not using the figures of Herodotus for Lydia, but those of the 'non-Herodotean' king list.

Thus, accepting 49 years for the length of Alyattes' reign and 15 years for the length of Croesus' reign, as found in Eusebius (given above), we can finally retrieve the dating by the Parian chronographer: Alyattes 604/3-556/5 BC and Croesus 556/5-542/1 BC (in inclusive reckoning with non-accession year), or 555/4-541/0 BC (in inclusive reckoning with accession year).[22] His chronology could now be artificially projected back to the beginning of the dynasty, even though earlier reigns are not recorded in the *Marmor Parium*:

Gyges	(36)	690/89 - 655/4 BC
Ardys	(38)	655/4 - 618/7 BC
Sadyattes	(15)	618/7 - 604/3 BC
Alyattes	(49)	604/3 - 556/5 BC
Croesus	(15)	556/5 - 542/1 BC

The starting point of the dynasty cannot of course have any claim on veracity here, as some reign-lengths could gradually have been infected by the co-existing 'high' chronology of Herodotus or simply by textual corruption (for example see variants above: Gyges 35, Ardys 37, Sadyattes 5, Alyattes 44); in any case, the death of Gyges, even set as high as 655/4 BC, for the first time (working from within Greek chronography), comes extraordinarily close to historical reality. On the basis of Assyrian evidence we know that Gyges did indeed die sometime 'after 652 BC'.[23]

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22 Exclusive reckoning with the added total of 64 years for the two reigns counted from 604/3 BC would produce a date of 540/39 BC — but the Parian chronographer is not using an added total here.

23 A.J. Spalinger, 'The Date of the Death of Gyges and its Historical Implications', *JAOS* 98 (1978), 400-09. Following earlier work by H. Gelzer based on the Assyrian Annals, Jacoby 1941, 99, dated Gyges between 687 and 652 BC using precisely the reign-length (Armenian 35 years) of the 'non-Herodotean' king list found in Eusebius. Tatian the Assyrian (*ad Graec*. 31) in his address to the Greeks (ca. AD 165) referred to early Greek writers who dated Gyges 'about the 23rd Olympiad' (688-685 BC), '500 years after Troy' (1183 – 500 = 683 BC).

Summing up to this point, and in the chronological order of the ancient sources, we have the following dates for the Fall of Sardis in Greek chronography:

(264/3 BC)	Parian Chronographer:	542/1 or 541/0
(*ca*. 245 BC)	Euphorion of Chalcis:	543-540 or 556-553/555-552
(*ca*. 150 BC)	Sosicrates of Rhodes:	545/4 or 544/3
(*ca*. 140 BC)	Apollodorus of Athens:	547/6
(*ca*. 20 BC)	Dionysius of Halicarnassus:	550/49-548/7 and 547/6-545/4
(AD 10/11)	Vasek Polak Chronicle:	551/0
(*ca*. AD 325)	Eusebius:	548 (Latin) and 548-541 (Armenian)

This table suggests that a 'low' date in the late 540s BC came first, based on a 'non-Herodotean' king list of Lydia known in the Early Hellenistic period, to be raised to 547/6 BC and slowly thereafter over the 550s BC mark, with various combinations evidently addressing Herodotus, until a compromise date of 548 BC was achieved in the Late Roman period. Nevertheless, the question remains: from where did the 'non-Herodotean' list come?

5. Porphyry and Xanthus

In discussing the sources of Eusebius' *Chronicle*, Alden Mosshammer suggested that his Oriental king lists (Assyrian, Median, Lydian and Persian) will have been copied from Porphyry's assumed *Chronicle*.[24] Porphyry of Tyre, the Neoplatonist philosopher whose work *Against the Christians* (*ca*. AD 270-295) was savagely destroyed by the Christian Church,[25] will have excerpted all of this material from Castor of Rhodes. The latter's *Chronika* (*ca*. 60 BC), which became an ancient handbook of chronography, included king lists from the East and the West in a synchronistic world history, for the first time extending back before the Trojan War. However, given the existence of different versions of these lists, it sounds simplistic to suppose that they would have been transferred *en bloc* from Castor to Porphyry to Eusebius. To begin with, Julius Africanus in his *Chronographiai* (*ca*. AD 220), another notable source of Eusebius, had drawn on various sources, and so it is possible that he was responsible for part of the transmission. Robert Drews, in his review of Mosshammer, pointed out that the role of Julius Africanus has been minimised, and that Eusebius may owe more to this earlier Christian chronographer.[26] To complicate the matter, Brian Croke — in arguing that Porphyry actually never wrote a *Chronicle*, and that his chronographical fragments belong to his works *Against the Christians* and *History of Philosophy* — suggested that the 'Median,

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24 Mosshammer,145-46.

25 On the date currently accepted for this work with recent bibliography on the question of the fragments, see E. DePalma Digeser, 'Lactantius, Porphyry, and the Debate over Religious Toleration', *JRS* 88 (1998), 129-46, at 134; cf. M. Edwards, *Neoplatonic Saints. The Lives of Plotinus and Proclus by their Students* (Liverpool, 2000), xxxiii-xxxiv, n. 87.

26 R. Drews, 'Review of A. A. Mosshammer's *The Chronicle of Eusebius*', *CP* 77 (1982), 178-83, at 182. In fact, if the Lydian list in the Excerpta Barbari (which is identical to that of Eusebius — cf. note 14 above) does belong to Julius Africanus, as now published by Wallraff *et al*., F 63a, then it must have come to Eusebius from Africanus either directly or via Porphyry.

Lydian, and Persian king-lists' will have been taken by Eusebius directly from Castor.[27] Yet, only the Assyrian king list can justify Croke's case, since Castor, in his construction of an inflated antiquity for the Greeks, had naturally used the 'high' Assyrian chronology of Ctesias (also found in Diodorus of Sicily, *ca*. 50 BC).[28] The other lists, and especially the Lydian which follows a 'low' chronology, would still have had to have come from Porphyry.

It may be true that Porphyry's chronological arguments can hardly be understood as anything but a counterblast against Christian chronographers (and thus a good reason for many of them to be found in his *Against the Christians* rather than in an assumed *Chronicle*); but this does not mean that he would have reacted by supporting the inflated chronology of the Greek past.[29] Porphyry's purpose was rather to show that the antiquity of Biblical events had been overestimated when measured against his *own* cultural background, as shown by the Phoenician, Babylonian, Persian and Hellenistic records. In the case of the last, we have the evidence of Porphyry's attack on the Book of Daniel, which presents itself as belonging to the sixth century BC, but which Porphyry showed as dating to the second century BC, thus exposing its 'prophecies' as *vaticinia ex eventu*.[30] Among the sources on Hellenistic history which he used in his attack on Daniel (including Polybius, Diodorus and Sutorius Callinicus), as mentioned by Jerome (*Commentarii in Danielem*, prol.), there is a reference to Posidonius of Apamea (135-51 BC), who happens to be the earliest source we know to have transmitted Berossus' *Babyloniaka* (*ca*. 270 BC).[31] This fact should account also for the Babylonian and Persian lists in Porphyry. The Phoenician list (the so-called Tyrian Annals linked to

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27 Croke, 183-84.

28 B.Z. Wacholder, 'Biblical Chronology in the Hellenistic World Chronicles', *HTR* 61 (1968), 451-81, at 464-65; Drews 1973, 104; W. Adler, *Time Immemorial: Archaic History and its Sources in Christian Chronography from Julius Africanus to George Syncellus* (Washington, DC, 1989), 17; N. Kokkinos, 'Second Thoughts on the Date and Identity of the Teacher of Righteousness', *SJC* 2 (2003), 7-15, at 9, n. 9; T. Cole, 'Ovid, Varro, and Castor of Rhodes: The Chronological Architecture of the "Metamorphoses"', *HSCP* 102 (2004), 355-422, at 357-58; for the persistent use by the Greeks, down to the Hellenistic and Roman periods, of the fantastical scheme of Ctesias, see Kokkinos forth., 9-11.

29 Porphyry's lost date for the Fall of Troy is being wrongly assumed by way of the figures given in the Suda (*FGrH* 260 F 19) and Eusebius (*FGrH* 260 F 34). Even Croke, 172, n. 29 (based on R. Goulet), who seems to have realised that there is a problem, could not see farther (cf. A. I. Baumgarten, *The* Phoenician History *of Philo of Byblos* [Leiden, 1981], 62; Burgess, 42, n. 15). This date will have to be discussed elsewhere (cf. Kokkinos forth., 15-16).

30 *FGrH* 260 F 35; see P.M. Casey, 'Porphyry and the Origin of the Book of Daniel', *JTS* 27 (1976), 15-33; Croke, 172-76; F. Millar, 'Hellenistic History in a Near Eastern Perspective: The Book of Daniel', in P. Cartledge, P. Garnsey, and E. Gruen (eds.), *Hellenistic Constructs: Essays in Culture, History, and Historiography* (Berkeley, CA, 1997), 89-104 = now in F. Millar, *Rome, the Greek World, and the East*, vol. 3 (Chapel Hill, NC, 2006), 51-66.

31 G.P. Verbrugghe and J.M. Wickersham, *Berossos and Manetho* (Ann Arbor, MI, 1996), 27-31.

Judah and Babylon imposing a 'low' chronology on the biblical kingdom until today),[32] must surely have been familiar to him from compatriot and other writers of Greek *Phoinikika* — such as Menander of Ephesus (*ca*. 200 BC), Laitus (*ca*. early second century BC), Dius (*ca*. second century BC), Philostratus (*ca*. first century BC), Hestiaius (*ca.* first century AD) and Hieronymus the Egyptian (*ca*. first century AD).[33] Jerome (as above) indeed does mention 'Hieronymus', whom scholars assume to be Hieronymus of Cardia (*ca*. 300 BC), but who should rather be the so-called Egyptian, who wrote on *Phoenician Antiquities* (*FGrH* 787). Besides, of course, we know that Porphyry in his *Against the Christians* (*FGrH* 260 F 34), as well as *On Abstinence* (*FGrH* 790 F 3), made use of the *Phoinikika* of another compatriot, Herennius Philo of Byblus (*ca*. AD 60-140).[34]

The Medians and the Lydians would have appeared appropriately in Porphyry's *History of Philosophy*, where he covered the chronology of Thales (*FGrH* 260 F 1 and F 5 — Jacoby attributes the first fragment to the assumed *Chronicle*), as well perhaps as partly in his *Philosophy from Oracles* (*apud* Euseb. *P.E.* 9.10.1-5), where he presented the Lydians, among other eastern peoples, as knowing the true road to the gods testified by Apollo himself. So, granted that Porphyry could have communicated the Lydian 'non-Herodotean' king list to Eusebius, from where would he have copied it? A number of authors had referred to Lydia up to his time,[35] but if one looks directly for the earliest possible author, one cannot miss Xanthus the Lydian. On the basis of what we know of Xanthus, and following ancient understanding in the *locus classicus* found in Dionysius of Halicarnassus (*Thuc*. 5.1),[36] we can reasonably say that he was an older contemporary of Herodotus. But there is no evidence that Herodotus in his *Lydiakoi Logoi* followed or copied Xanthus's *Lydiaka*. On the contrary, in whatever instances the two accounts may be compared, they clearly differ.[37] While the opinion of Ephorus of Cyme (*ca*. 350 BC) that Xanthus was older and had provided Herodotus with *aphormai* for his own work (*FGrH* 70 F 180 — *apud* Athen. 12. 515D) could imply that Xanthus became the model for Herodotus, it can equally be taken as an assumption made by Ephorus after observing differences rather than similarities between the two. The word *aphormē* or *aphormai*

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32 See recently W.H. Barnes, *Studies in the Chronology of the Divided Monarchy of Israel* (Atlanta, GA, 1991); G. Galil, *The Chronology of the Kings of Israel & Judah* (Leiden, 1996).

33 See *FGrH* 783-794; cf. N. Kokkinos, *The Herodian Dynasty* (Sheffield, 1998), 90, n. 18.

34 Cf. Baumgarten (n. 29 above), 88-91; H.I. MacAdam, 'Philo of Byblos and the *Phoenician History*: Ethnicity and Culture in Hadrianic Lebanon', in N.J. Higham (ed.), *Archaeology of the Roman Empire* (Oxford, 2001), 189-204, at 192; M.J. Edwards, 'Philo or Sanchuniathon? A Phoenicean Cosmogony', *CQ* 41 (1991), 213-20, at 219; F. Millar, 'Porphyry: Ethnicity, Language, and Alien Wisdom', in J. Barnes and M. Griffin (eds.), *Philosophia Togata II: Plato and Aristotle at Rome* (Oxford, 1997), 241-86, at 245 = F. Millar, *Rome, the Greek World, and the East*, vol. 3 (Chapel Hill, NC, 2006), 331-50, at 335.

35 For a collection of sources, see J. Griffiths Pedley, *Ancient Literary Sources on Sardis* (Cambridge, MA, 1972).

36 On this passage see particularly the discussions of D.L. Toye ('Dionysius of Halicarnassus on the First Greek Historians', *AJP* 116 [1995], 279-302) and of Fowler (62-64).

37 Pearson, 123-32.

(plural) can denote 'a starting-point' or 'the source of inspiration', but also literally 'the reasons for', that is to say reasons for writing his own work, presumably to present an alternative view. Although Xanthus may have had motives for exaggerating the antiquity of his own nation, the inflated figures of Herodotus for Lydia probably reflect a different contemporary source, oral or written, such as for example the *Peri Lydias* of Hellanicus (*FGrH* 4 F 58). Thus it may make better sense to connect the deflated figures of the 'non-Herodotean' king list to Xanthus.

Drews' suggestion[38] that Xanthus largely confined his account to the Heroic Age, and ignored the reigns of more recent Lydian kings such as Gyges and Croesus, cannot be accepted. Dionysius of Halicarnassus (*Rom. Ant.* 1.28) called him 'second to none in establishing the history of his own country', and the impression one gains from the entry in the Suda (*s.v. Xanthos*) is that Xanthus covered events at least to the Fall of Sardis — a position arguably supported by the surviving fragments in Nicolaus of Damascus (*ca.* 14 BC).[39] But would the original work of Xanthus (rather than the 'Pseudo-Xanthus' of one Dionysius Scytobrachion) have survived the classical period to reach Nicolaus in the Early Imperial period? The answer is that it certainly managed to reach the Early Hellenistic period, either in complete form or through the epitome of a Menippus (earlier than the synonymous Cynic philosopher of Gadara, and thus of the fourth century BC) known to Diogenes Laertius (6.101). Eratosthenes (*ca.* 220 BC) mentioned Xanthus (*FGrH* 765 F 12 — *apud* Strabo 1.3.4) describing a great drought in Asia Minor in the reign of Artaxerxes (and thus 464 BC is a *terminus a quo* for dating the Lydian author as well as the extent of his work, *contra* Drews), while Eratosthenes' pupil, Mnaseas of Patara (*ca.* 200 BC), referred to Xanthus' story about Atargatis and Ascalon (*FGrH* 765 F 11 — *apud* Athen., 8. 346E). Therefore the 'non-Herodotean' king list, assuming that it drew from Xanthus, and clearly available (even if only in part) at the time of the Parian chronographer (264/3 BC), must have survived through some channel or channels to as late as the time of Porphyry (*ca.* AD 270). In any case, we do know that intermediary writers, between the Hellenistic and Roman periods, specialising in Lydia (but not including universal historians such as Nicolaus), did exist, as for example one Xenophilus who wrote the *Lydi(a)kai Historiai* (*FGrH* 767).

6. Archilochus

In the suggested connection between the 'non-Herodotean' king list and Xanthus, one piece of evidence seems to provide an extraordinary link. Clement of Alexandria (*Strom.* 1.131) cites Xanthus for the date of the foundation of Thasos in Olympiad 18 (708-705 BC). Of course, Xanthus could not have used Olympiad reckoning (that is to say before the first Olympic list had been created by Hippias of Elis in *ca.* 400 BC), and this must be a later construction by some chronographer.[40] But we cannot fail to notice, as we saw

38 Drews 1973, 100-03.

39 Jacoby 1941, 105; Pearson, 122-23; M. Toher, 'On the Use of Nicolaus' Historical Fragments', *ClAnt* 8 (1989), 159-72.

40 In agreement with Fowler (64 n. 14), against Pearson, that the fragment is genuine and that the Olympic date would simply be someone else's calculation; on the Olympiad reckoning within Greek chronography, see Kokkinos forth.; and now generally P. Christesen, *Olympic Victor Lists and Ancient Greek History* (Cambridge, 2007); cf. P.-J. Shaw, *Discrepancies in*

earlier, that Clement (*Strom*. 1.117) also cited Euphorion for the beginning of the reign of Gyges in Olympiad 18 (708-705 BC). Can it be a coincidence that the foundation of Thasos is presented here as contemporary with Gyges? Surely the equation is justified by the fact that the early iambic poet Archilochus, whose family was connected to this specific colonisation (Critias *apud* Aelian, *V.H*. 10.13; Oenomaus *apud* Eusebius, *P.E*. 6.7.8), had sung about Gyges (Hdt.1.12; Arist., *Rhet*. 3.17/1418b 28; Plut., *De tranqu. animi* 10.470b-c; cf. Hippias *apud* Hypoth. Sophocl., *O.R.* = *FGrH* 6 F 6). Can it further be a coincidence that Archilochus came from Paros, the very island of our Parian chronographer, whose inscribed marble may have stood in the local 'Archilocheion' (cf. *lithos* in *SH* 997 with *SEG* 15.517, Col. II, 16-19),[41] and who may even be identified with the Early Hellenistic chronographer working there under the name 'Demeas' (*IG* 12.5.445)?[42] Surely it is now legitimate to suggest that the 'non-Herodotean' king list, which may be older and superior to the Herodotean one, and at least parts of which (Gyges, Alyattes and Croesus) were known at different times in Paros, could ultimately have been extracted from a Lydian source (that is to say Xanthus), and thus have had sufficient reputation to stand up to Herodotus through the centuries.[43]

What is more, the 'acme' (at the age of 40) of Archilochus is set by the Latin version of Eusebius at Olympiad 29.1 (664 BC), a date which manages conveniently to overlap with the last year of Gyges' reign in his own chronology (699-664 BC). Yet this puts the birth of Archilochus back to 704 BC, which almost touches the beginning of Gyges (708-705 BC) in the chronology of Euphorion, betraying, if not how it could have come about, how it may have broadly served Euphorion to arrive at a 'low' date for the Fall of Sardis (543/540 BC), by using the figures of Herodotus, already mentioned. Of course in Euphorion's chronology, an 'acme' of Archilochus in 664 BC would have had to fall after the death of Gyges (671/668 BC), partly defeating his scheme (even though historically Archilochus seems to have outlived Gyges). Eusebius, basically in the footsteps of Apollodorus concerning the date of the Fall of Sardis (548 as against 547/6 BC), must also have adopted the 664 BC date from him. This means that Apollodorus must have been aware of the 'non-Herodotean' king list (as we saw), and must have been the first to improve on Euphorion by overlapping the 'acme' of Archilochus at least with the last year of Gyges. That Eusebius found the 664 BC date in Apollodorus is almost certain, as it conceivably exists in the *Chronica* of Cornelius Nepos (*ca*. 55 BC), who based himself on Apollodorus (*apud* Gell. *NA*, 17.21.8). Obviously the 664 BC date could not be excised or tampered with: indeed it fits much more comfortably into the scheme of the Parian chronographer, whose use of the 'non-Herodotean' king list would have placed the death of Gyges at 655/4 BC.[44]

Olympiad Dating and Chronological Problems of Archaic Peloponnesian History (Stuttgart, 2003).

41 Cf. E. Vanderpool, 'New Inscriptions concerning Archilochus', *AJP* 76 (1955), 186-88, at 186.

42 My suggestion about Demeas seems to have been noted previously, as mentioned by A.J. Podlecki, 'Archilochus and Apollo', *Phoenix* 28 (1974), 1-17, at 6 n. 36.

43 Intriguingly, Porphyry (*in Hom. Iliad* 9.90) also knew Archilochus!

44 Yet the *Marmor Parium* surprisingly does not include an entry on Archilochus, and only one damaged entry, dated to 681/0 BC (*FGrH* 239 A/2, 33 = *MP* 33), has been suggested as

But what did the 664 BC date really represent? The computation of this date has greatly troubled modern chronographers. Felix Jacoby, who was the first to understand that Eusebius took it from Apollodorus, could not explain its origins.[45] He tried to look into the chronology of 'musical history' and the relative position of Archilochus to Terpander, in reference to Glaucus of Rhegium (*ca*. 400 BC), who mentioned both, and who seems to have been one of Apollodorus' sources. But Jacoby's results lacked any precision.[46] Mosshammer agreed that Eusebius took the 664 BC date from Apollodorus, thinking however that Apollodorus followed the Herodotean 'high' chronology for Lydia (see above under Dionysius and note 17) — placing Gyges between 719 BC at the earliest and 679 BC at the latest — he claimed that Apollodorus could not have usefully synchronised Archilochus and Gyges, as in his scheme the former's 'acme' fell after the latter's reign.[47] Mosshammer went on to argue that Apollodorus simply projected 40 years (inclusively) back from the 'acme' of Thales in 585 BC, to arrive at the birth of Thales (624 BC), and then again projected 40 years (inclusively) back to the 'acme' of Archilochus in 663 BC. Although fortuitously close, the numbers do not precisely add up, and exclusive reckoning cannot help as the total would become 665 BC. Besides, the second 40 years (before the birth of Thales) do not really make sense in chronographic practice. Why would Archilochus have been at his 'acme' 40 years before the birth of Thales (especially since there is no evidence that he was thought, artificially, to have died at 80 years old)? Unsatisfied (if slightly confused) by both Jacoby and Mosshammer,[48] B.M. Lavelle believed that he found an alternative and a simple explanation for the 664 BC date. He chose the obvious argument, claiming that the date represents the beginning of the Egyptian 26th Dynasty, and since Archilochus mentions 'Carian' mercenaries (F 216 West/Gerber — *apud* Schol. Plat. *Lach*. 187b), who are thought by Lavelle to have arrived in Egypt at the beginning of the reign of Psammetichus, the problem is solved. What Lavelle of course forgot is that the beginning of the 26th Dynasty as '664 BC' has been worked out by modern scholars only (not to mention how poorly-based this date is, and the likelihood that the true beginning could lie at least a few years later).[49] Ancient chronographers, following the 'high' figures of Herodotus, would have begun the 26th Dynasty (146 years long in exclusive reckoning)

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a possible place for him but rejected as 'unprofitable' by Jacoby 1941, 99, n. 1. It would be preferable to imagine that the Parian chronographer, if indeed it was Demeas, had saved all of his material on Archilochus (and Paros) for a separate inscription (as known to Sosthenes in *ca*. 100 BC, see *SEG* 15, no. 518) which would have stood next to the *Marmor* in the island's Archilocheion.

45 F. Jacoby, *Apollodors Chronik* (Berlin, 1902), 150; Jacoby 1941, 101 n. 1.

46 Jacoby 1941, 100.

47 Mosshammer, 215-16.

48 B.M. Lavelle, 'The Apollodoran Date for Archilochus', *CP* 97 (2002), 344-51, at 345 n. 6.

49 The conventional date has recently been supported by L. Depuydt, but only by mental gymnastics, and with an admission that he is lacking competence in the Greek chronographic tradition ('Egyptian Regnal Dating under Cambyses and the Date of the Persian Conquest', in P. der Manuelian and R. Freed [eds.], *Studies in Honor of William Kelly Simpson*, vol. 1 [Boston, 1996], 179-190, at 188).

in 671 BC, or following Manetho/Eusebius (135 years long) in 660 BC, or Manetho/Africanus (130 years long) in 655 BC.[50]

Thus we are none the wiser. Yet Mosshammer's reference to Thales, whose solar eclipse can claim a Babylonian chronological connection (see note 10), is interesting in another way. Archilochus is also famed for observing an eclipse (F 122 West/Gerber — *apud* Stob., *Anth*. 4.46.10), which, since Jacoby's time, has conventionally been identified with that of 6 April 648 BC (astronomical -647).[51] While this total eclipse does indeed present the best fit in terms of totality, timing at midday (as mentioned by Archilochus), with central path through the middle and northern Aegean (see Fig. 3a), under Gyges (that is to say post *ca*. 685 BC according to any realistic chronology), there were other solar eclipses variously affecting Greece and the Near East, two total and five annular:[52]

1) 28 August 683 BC (-682 annular) — central path through central Africa, but partly affecting Mesopotamia, Anatolia and the Aegean.
2) 17 June 679 BC (-678 annular) — central path through central Asia, but partly affecting Mesopotamia, eastern Anatolia and partly the Aegean.
3) 28 August 664 BC (-663 total) — central path through Scandinavia and Russia, but partly affecting Greece, Anatolia and Mesopotamia.
4) 27 June 661 BC (-660 annular) — central path through northern Aegean, Lydia, southern Anatolia and Mesopotamia.
5) 15 April 657 BC (-656 total) — central path through middle Anatolia and Cyprus, affecting Greece and Mesopotamia.
6) 7 June 651 BC (-650 annular) — central path through northern Greece, Thrace and the Black Sea.
7) 21 November 650 BC (-649 annular) — central path through southern Aegean, Crete, Cyprus and Eastern Anatolia.

Given these astronomical data, the total eclipse of 664 BC (Fig. 3b) may now be considered as lying behind the calculations of the 'acme' of Archilochus. It does not matter whether Archilochus actually observed the eclipse of 648 BC. What matters is whether any of the other eclipses, and in context that of 664 BC, could have been recorded during the reign of Gyges, upon which a Greek chronographer might later have

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50 For the individual figures, see Hdt. 2.157, 159, 161; 3.10, 14; Manetho/Eusebius (F 69 Waddell); Manetho/Africanus (F 68 Waddell); according to Manetho, Cambyses invaded Egypt in his 'Year 5' (i.e., March/April 525 to March/April 524 BC in the Babylonian calendar known to us independently of Manetho), and the last year of the 26th Dynasty is placed appropriately by Latin Eusebius/Jerome at Olympiad 63.4 = 525 BC (see Helm, 104a-b).

51 The connection between this eclipse and Archilochus was already supported by W.T. Lynn, 'Archilochus and the Eclipse of B.C. 648', *The Observatory* 29 (1906), 326-27, who also refers to earlier authorities. Note that while A.R. Burn (*The Lyric Age of Greece* [London, 1960], 159), together with the eclipse of 648 BC, considered one of '660 BC' (probably meaning that of 661 BC), G.L. Huxley (*The Early Ionians* [London, 1966], 60 with 175, n. 60) preferred the eclipse of '657 BC'.

52 For all eclipses, see now the official data and maps in F. Espenak and J. Meeus, *Five Millennium Canon of Solar Eclipses: -1999 to +3000* (NASA Technical Publication TP-2006-214141).

based his computation for Archilochus. That such eclipses were recorded in Mesopotamia is clearly shown in the surviving Assyrian eponym list, which has the total eclipse of 15 June 763 BC (-762 Total) under the year of Bur (Ishdi)-Sagale, governor of Guzana.[53] Let us not forget that Apollodorus of Athens (d. *ca*. 120 BC) would not only have known Hipparchus (d. *ca*. 126 BC), who used Babylonian evidence while working on the island of Rhodes (see note 10), but as the student of Diogenes the Babylonian (d. *ca*. 150 BC), director of the Stoic school in Athens, he was also a fellow-student of Panaetius of Rhodes (d. *ca*. 110 BC), who was the teacher of Posidonius (d. 51 BC), founder of the Rhodian branch of the Stoic school, and our earliest informant on Berossus the Babylonian (*ca*. 270 BC), who had earlier moved to Cos next to Rhodes.[54] The Babylonian link to the Dorian islands is striking throughout.

Summing up again, before moving to the last section, it seems that while Eusebius obtained the Assyrian king list (with its 'high' figures) from Castor, who followed Ctesias, he found the Lydian king list (with its 'low' figures) in Porphyry, who may have followed Xanthus indirectly. Thus the Lydian 'non-Herodotean' king list, being as early as Xanthus, would have been respectable enough to counter Herodotus, whose figures created much trouble for ancient chronographers. While this list could reveal the Fall of Sardis as having taken place in 542/1 BC (or 541/0 BC), supported by the Parian chronographer of the Early Hellenistic period, a higher date later became necessary to balance both Herodotus' figures and new evidence of an astronomical type. The synthesis was carved out by Apollodorus, who was responsible for communicating to subsequent chronographers two absolute dates, arguably based on Babylonian material: the solar eclipse of Thales in 585 BC and that of Archilochus in 664 BC. While the first is one to be accepted even today (although we will never know how old Thales really was at this point, and it would be a great coincidence if he had happened to be 40), the second seems to have been the wrong choice (as Archilochus probably observed the eclipse of 648 BC), but this does not matter here. Between these two dates and with the 'non-Herodotean' king list in hand, Apollodorus built his Lydian chronology (placing the last year of Gyges in 664 BC) and, with an eye to Herodotus, set the Fall of Sardis at 547/6 BC, followed closely by Eusebius at 548 BC.[55] The modern view of 546/5 BC for this event, is thus neither the 'unanimous' date of ancient Greek chronography as

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53 D.D. Luckenbill, *Ancient Records of Assyria and Babylonia*, vol. 2 (Chicago, 1927), 435.

54 The move of Berossus to Cos is testified by Vitruvius (*De arch*. 9.6.2), while Pliny (*NH*, 7.123) reports that the Athenians, on account of his *diuinae praedictiones*, erected a statue with *inaurata lingua* — presumably 'a gilt tongue' to underline his 'marvellous predictions', thus becoming literally *chrysostomos* or golden-mouthed; see R. Drews, 'The Babylonian Chronicles and Berossus', *Iraq* 37 (1975), 39-55, at 50-54; A. Jones, 'The Adaptation of Babylonian Methods in Greek Numerical Astronomy', *Isis* 82 (1991), 440-53, at 443; for a convenient summary of intellectual Rhodes and the Babylonian link, see E.M. Craik, *The Dorian Aegean* (London, 1980), 140-46; for the biographical details of Apollodorus through Pseudo-Scymnus, see R. Pfeiffer, *History of Classical Scholarship: From the Beginning to the End of the Hellenistic Age* (Oxford, 1968), 253-57.

55 The Latin version of Eusebius gives the following dates for the Lydian kings in exclusive reckoning: Gyges (36) 669-664 BC, Ardys (37) 663-627 BC, Sadyattes (15) 626-612 BC, Alyattes (49) 611-563 BC, Croesus (15) 562-548 BC.

claimed, nor the oldest and conceivably the historically correct one — that is to say 542/1 BC (or 541/0 BC).

6. The Nabonidus Chronicle

We saw at the outset that apart from Greek chronography, Murray also invoked the Nabonidus Chronicle to support his date of 546/5 BC for the Fall of Sardis. This is another weak argument, since serious reservations had already been published in 1976 by Jack Cargill.[56] The clay tablet concerned (BM 35382) is a cuneiform record of the deeds of Nabonidus (556-539 BC), the last king of Babylon, up to the Persian conquest by Cyrus.[57] As a Babylonian chronicle recording the Persian period, it is thought to date from around 500 to 400 BC, although a date as low as some time in the Hellenistic period, after 305 BC, has also been suggested.[58] But the local evidence collected in this chronicle was clearly archival in nature, and so there is no reason to doubt its accuracy. Unfortunately, the chronicle is damaged, and there are problems of order in the annual entries (see Fig. 4), as much as in the readings of specific words. In any case, in the entry which almost certainly seems to belong to Year 6 (550/49 BC — Col. II, lines 1-4), there is testimony to the Fall of Astyages (Ishtumegu) and his Median capital Ecbatana (Agamtanu), correcting once and for all the 'high' date which could have been worked out from Herodotus (559 BC — see above under Euphorion and note 18). In the entry for Year 9 (547/6 BC — Col. II, lines 16-18), by coincidence appropriate for Apollodorus' date for the Fall of Sardis, the chronicle mentions an attack by Cyrus in the month 'Iyyar' (*ca*. May 547 BC), after crossing the Tigris below Arbela, in a land the name of which is damaged, and the king of which is killed (or defeated) during this attack. Cyrus subsequently takes possession of the conquered kingdom and stations his own garrison there.

For years the suggestion had been that the traces of the damaged toponym should be read as 'Lu[du]' for Lydia, conveniently for Apollodoran chronology, and this is what Murray accepted. However, after a period of uncertainty and many objections, including the fact that Croesus was not killed when Sardis fell, the toponym has now been re-read as 'U[rashtu]' and so the attack seems to concern the kingdom of Urartu.[59] Consequently no evidence is any longer to be found in the Nabonidus Chronicle for the Fall of Sardis, other than that it must have occurred after 550/49 BC (= Year 6) when Ecbatana fell, and certainly not between 549/8 and 545/4 BC (= Years 7-11) — thus excluding 547/6 BC (= Year 9) — during which period there is no recorded mission to Lydia. The chronicle

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56 J. Cargill, 'The Nabonidus Chronicle and the Fall of Lydia: Consensus with Feet of Clay', *AJAH* 1 (1976), 97-116.

57 A.K. Grayson, *Assyrian and Babylonian Chronicles* (Locust Valley, NY, 1975), no. 7; for the reign of Nabonidus, see P.-A. Beaulieu, *The Reign of Nabonidus King of Babylon* (New Haven, CT/London, 1989).

58 D.J. Wiseman, *Chronicles of Chaldaean Kings (626-556 B.C.) in the British Museum* (London, 1956), 3; S. Smith, *Babylonian Historical Texts Relating to the Capture and Downfall of Babylon* (London, 1924), 98.

59 Based on J. Oelsner, see R. Rollinger, 'The Median "Empire", the End of Urartu and Cyrus the Great's Campaign in 547 B.C. (Nabonidus Chronicle II 16)', *Ancient West and East* 7 (2008), forthcoming.

continues to the Fall of Babylon in 539/8 BC (= Year 17), but unfortunately the years in which we should have expected the reference to Sardis (that is to say either Year 14 = 542/1 BC or Year 15 = 541/0 BC) are both missing. Thus no Babylonian confirmation of the Parian chronographer is at the moment possible, although real confidence has surely now been gained for his choice.

In conclusion, in the historical (as opposed to archaeological) chronology of the Greek Archaic period, the first date which can potentially be fixed in absolute time before the end of Pisistratus I's rule (placed almost certainly in 528/7 BC), is that of the Fall of Sardis. The current view, presenting 546/5 BC as traditionally the strongest date for this event, lacks justification. If anything, it is 548 BC (Latin Eusebius/Jerome) or 547/6 BC (Apollodorus) which can claim support from tradition. But an analysis of all the preserved, relevant fragments of ancient Greek chronography, actually shows that before the compromise that had been gradually achieved between the Late Hellenistic and the Late Roman period (with a combination of Herodotean, non-Herodotean and astronomical evidence), there existed a lower date for the Fall of Sardis. This was based on a Lydian king list different from the one in Herodotus, known in the Early Hellenistic period, and evidently guiding the Parian chronographer to set the event as low as 542/1 BC (or 541/0 BC). The origins of this list, through Porphyry rather than Castor, may ultimately go back to Xanthus, who was reckoned to be an older contemporary of Herodotus, and as a native of Lydia, sufficiently trustworthy to construct it with more accuracy. The appeal of the current view to the Nabonidus Chronicle for support of the 'traditional' date now also lacks justification. A new reading of the damaged toponym in the entry for Year 9 (547/6 BC) reveals that Cyrus attacked 'U[rartu]' — not 'Ly[dia]'. Further, as the chronicle also excludes Lydia in the subsequent Year 10 (546/5 BC) and Year 11 (545/4 BC), and given that by Year 17 (539/8 BC) Babylon had fallen to Cyrus (the conceivable *terminus ante quem* for advance into Lydia), the Fall of Sardis can only have taken place between 544/3 and 540/39. Under the circumstances it would be very unwise not to give credit to the date given by the Parian chronographer as restored here.

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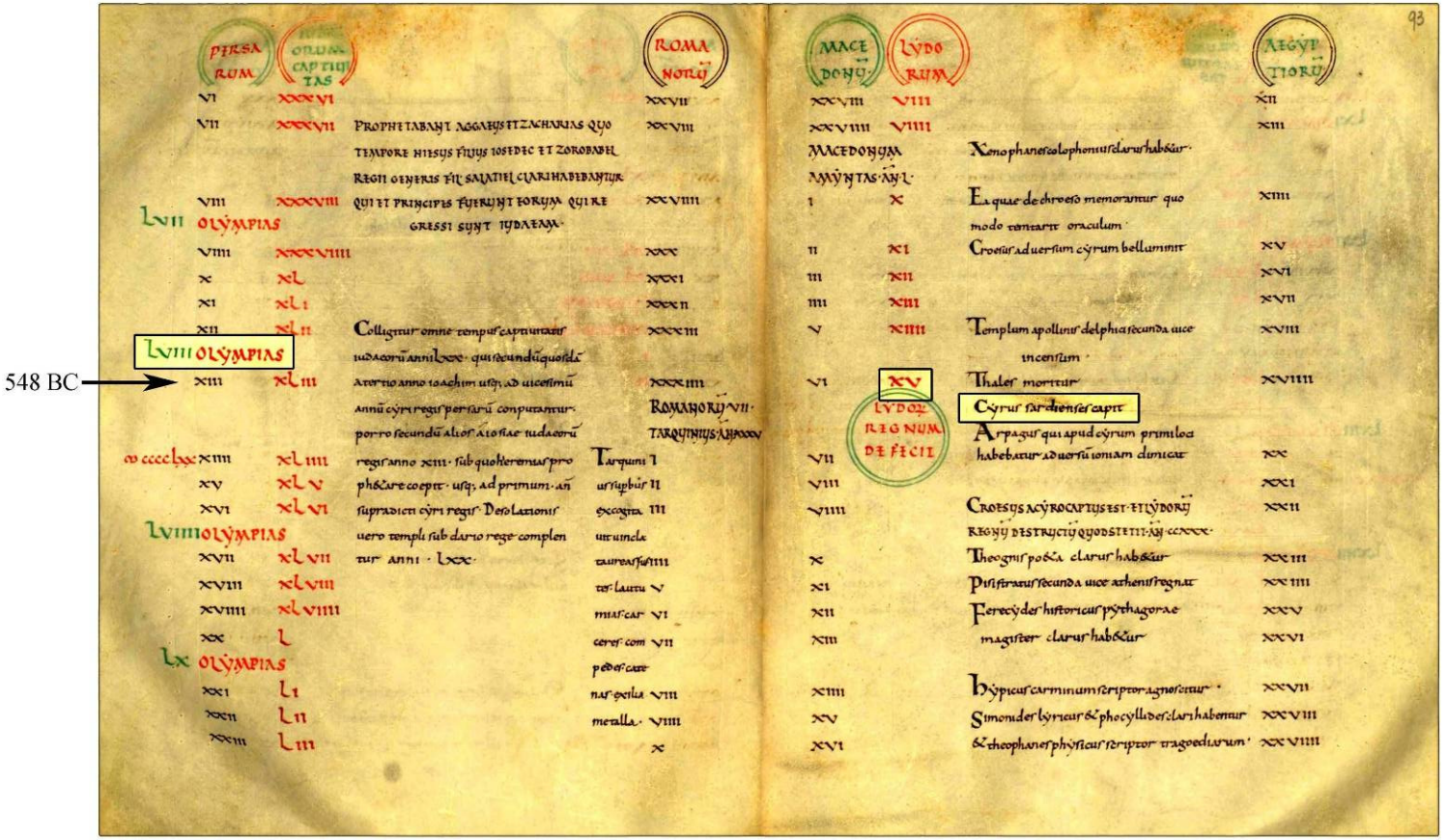
Fig. 1: Chronicle of Eusebius/Jerome
(Merton MS 35; 92 recto & 93 verso; 9th century AD)



After Merton College Website, Oxford 2007; set here by Frank Domingo

Fig. 2: Parian Marble (*FGrH* 239) - A/2 (895-355 BC)

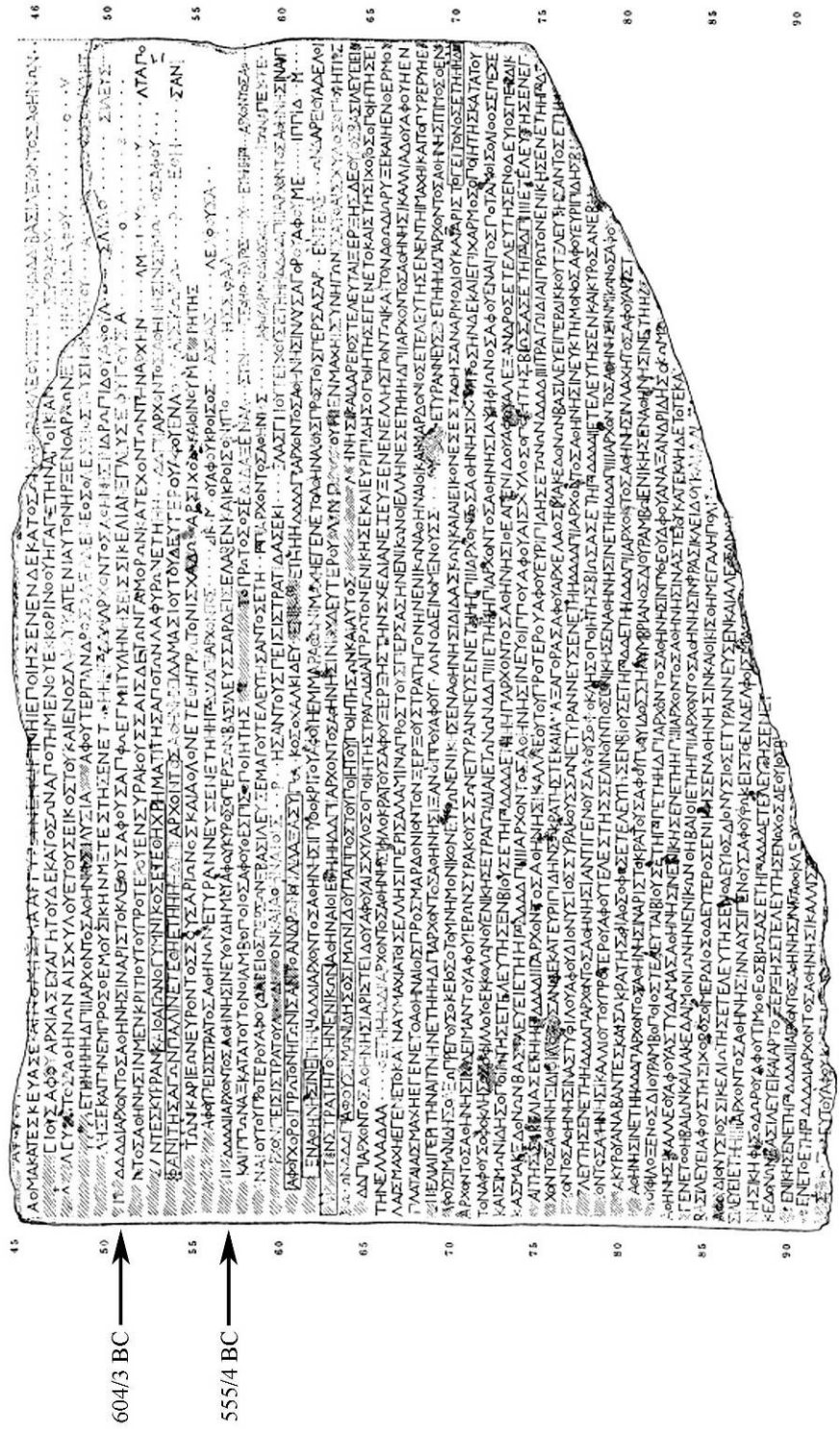
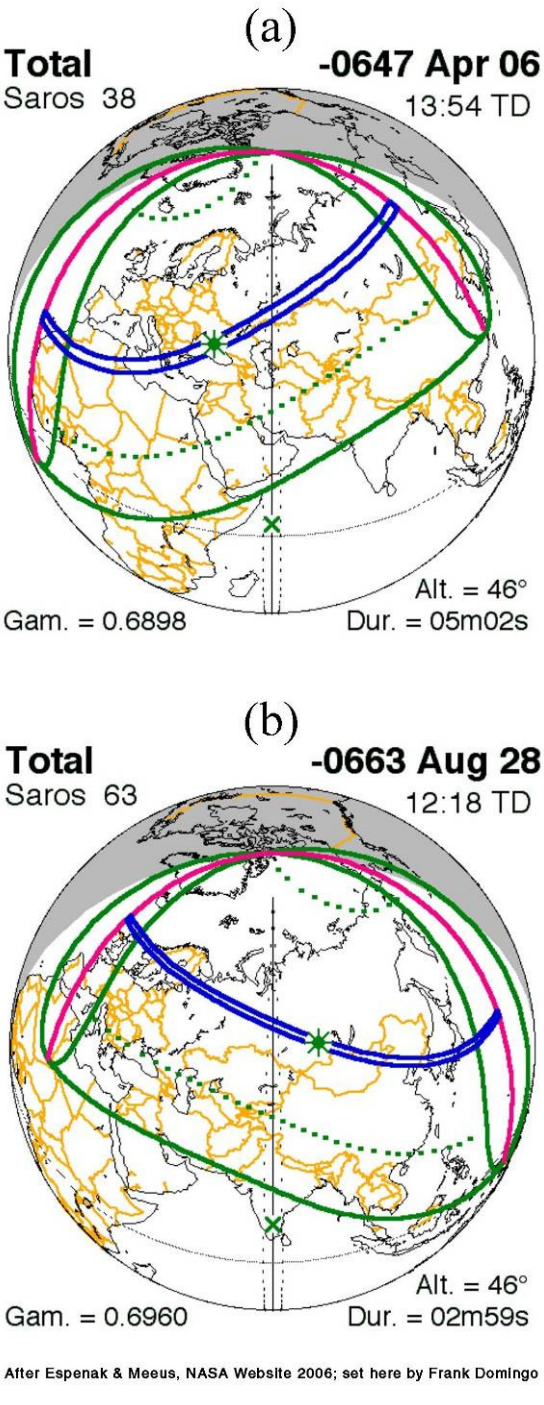
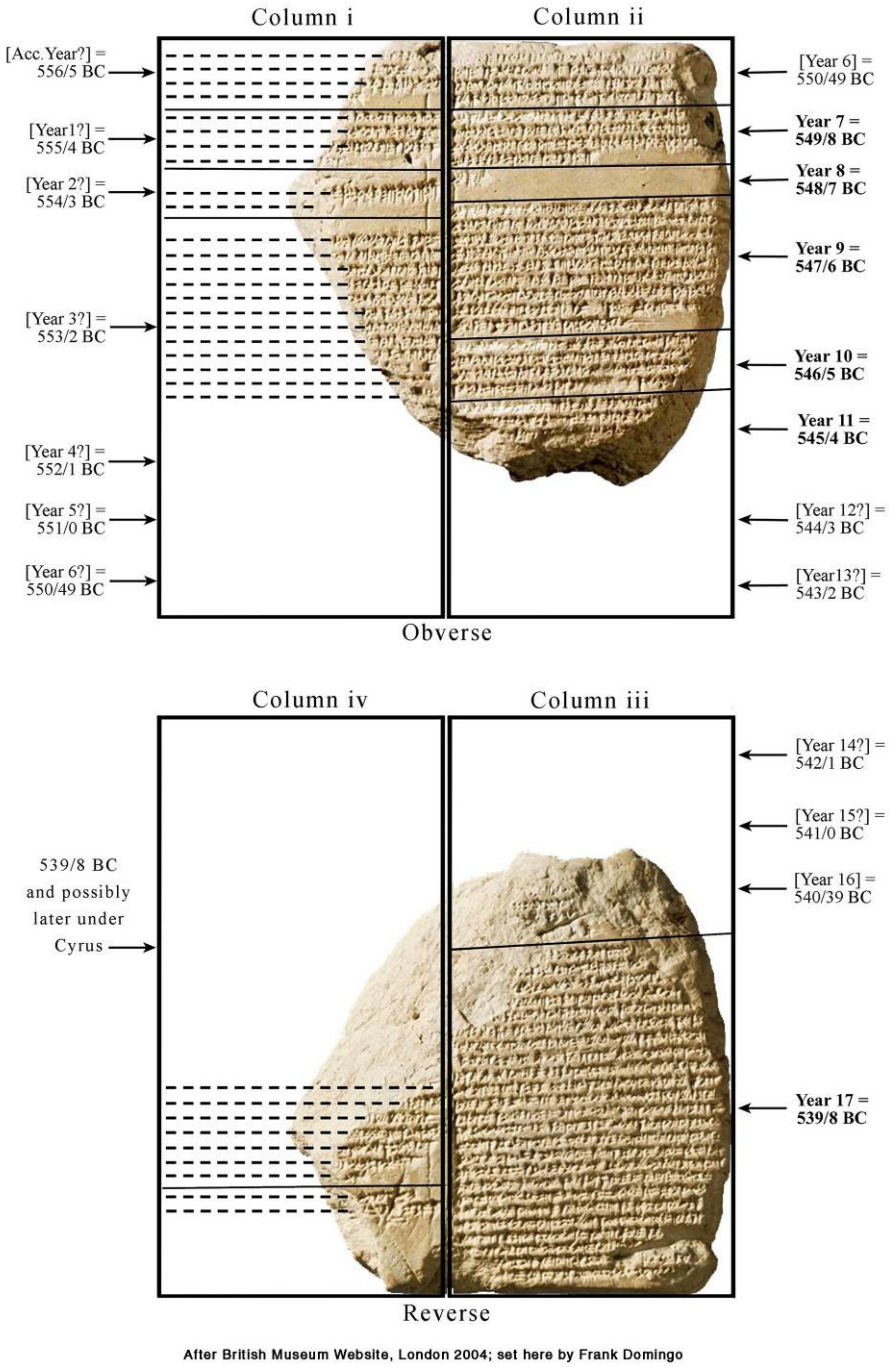


Fig. 3: Paths of the Solar Eclipses
648 BC (-647) and 664 BC (-663)



After Espenak & Meeus, NASA Website 2006; set here by Frank Domingo

Fig. 4: Nabonidus Chronicle (556-530s BC) - BM 35382



After British Museum Website, London 2004; set here by Frank Domingo