

DATING METHODS DURING THE EARLY HELLENISTIC PERIOD

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During the Neo-Babylonian and Achaemenid periods, cuneiform documents were dated by numbered royal regnal years. The same method was used after Alexander conquered the Achaemenid Empire. Because of the rapid and frequent political changes during the early Hellenistic period, the dating systems used in the cuneiform sources can be confusing.

In this article I describe the various dating systems used during the early Hellenistic period. These are most clear in king lists that compile the length of each king's reign, in astronomical and historical texts dealing with events that span several reigns (especially if every single year of each king is mentioned), and in date formulas on contemporary cuneiform texts (legal and administrative documents and colophons of literary texts). The dates recovered from these sources are correlated with the corresponding dates of our chronological system of the Christian era.

The basic work on the chronology of cuneiform texts from the Neo-Babylonian period onwards remains Parker and Dubberstein's *Babylonian*

*Chronology*¹ from 1956. Since the appearance of that volume important studies on early Hellenistic chronology have been published by Oelsner,² Joannès,³ Van der Spek,⁴ and Grzybek.⁵ The publication of new tablets and a better understanding of already published cuneiform texts justify a new study of the early Hellenistic chronology. To obtain a complete overview of the chronological problem, I will evaluate all documents known to me, including texts known for a long time, more recently published ones, as well as those that remain unpublished.

Traditionally, three cuneiform texts have been used as the basis of a relative chronology of the early Hellenistic period: two king lists (*Iraq* 16, pl. 53 from Babylon⁶ and *BaM Beih.* II 88 from

1. R. A. Parker and W. H. Dubberstein, *Babylonian Chronology 626 BC–AD 75*, Brown University Studies 19 (Providence: Brown University, 1956).

2. J. Oelsner, "Keilschriftliche Beiträge zur politischen Geschichte Babyloniens in den ersten Jahrzehnten der griechischen Herrschaft (331–305 v.u.Z.)," *AoF* 1 (1974) 129–51.

3. F. Joannès, "Les successeurs d'Alexandre le Grand en Babylonie," *Anatolica* 7 (1979/80) 99–115.

4. R. J. van der Spek, "Nippur, Sippar, and Larsa in the Hellenistic Period," in *Nippur at the Centennial*, Occasional Publications of the Samuel Noah Kramer Fund 14, ed. M. DeJong Ellis (Philadelphia: The University Museum, 1992), 243–49.

5. E. Grzybek, "Zu einer babylonischen Königsliste aus der hellenistischen Zeit (Keilschrifttafel BM 35603)," *Historia* 41 (1992) 190–204.

6. A British Museum tablet published by A. Sachs and D. J. Wiseman, "A Babylonian King List of the Hellenistic Pe-

Abbreviations follow those used in the *Chicago Assyrian Dictionary*. Other abbreviations: *AD* = A. Sachs and H. Hunger, *Astronomical Diaries and Related Texts from Babylonia* 1–3, Österreichische Akademie der Wissenschaften. Philosophisch-historische Klasse. Denkschriften 195/210/247 (Vienna: Österreichischen Akademie der Wissenschaften, 1988–1996), *AJA* = *American Journal of Ancient History*, *SE* = Seleucid Era, *TAPS* = *Transactions of the American Philosophical Society*.

Uruk),⁷ and the so-called *Saros Canon* (ZA 10 66-67 = *LBAT* 1428⁸).

The Uruk list recounts the successive rulers and the number of their regnal years (*BaM Beih.* II 88). The data of the early Hellenistic period (Rev. 3'–6') are listed in Table 1.

TABLE 1. Relative Chronology in the Uruk King List.

Alexander III	7 years
Philip	6 years
Antigonos	6 years
Seleucus I	31 years

The *Saros Canon* provides a survey of months with possible lunar eclipses between -400 and -271 (Artaxerxes II 4 until 40 SE). Since this phenomenon can occur twice, or occasionally even thrice a year, every year between 401/0 and 272/1 BC is represented on the tablet. The passage concerning the early Hellenistic period is well-preserved and contains the same relative chronology as the Uruk king list.⁹

riod," *Iraq* 16 (1954) 202-211 and immediately accepted as a major source for Hellenistic chronology. Parker and Dubberstein used the tablet extensively in their *Babylonian Chronology*. A new reading for the lines Obv. 3-5 was proposed by Grzybek (see n. 10).

7. Found in Uruk in winter 1960 by the German Warka expedition. A first copy and transliteration was made by Van Dijk in *UVB* 18 pl. 28 (W 20030, 105). The final publication in *BaM Beih.* II appeared in 1980.

8. The first transliteration, translation, and study of the *Saros Canon* was published in 1893 by J. Epping and J. N. Strassmaier, "Der Saros-Canon der Babylonier," *ZA* 8 (1893) 149-78. The first copy appeared in J. N. Strassmaier, "Der Saros-canon Sp. II, 71," *ZA* 10 (1895) 64-69. Another copy by Pinches was published by Sachs in *LBAT*. The last elaborate study (with some corrections) appeared in A. Aaboe, J. P. Britton, J. A. Henderson, O. Neugebauer and A. Sachs, *Saros Cycle Dates and Related Babylonian Astronomical Texts*, TAPS 81,6 (Philadelphia: American Philosophical Society, 1991), 13-22.

9. Only the end of Seleucus' reign is not clear in the *Saros Canon*: after Seleucus' death the numbering of years continued without mentioning the name of the new king instead of

The information on Alexander the Great and Philip Arrhidaeus in the Babylon king list is limited to their names (*Iraq* 16, pl. 53). The number of their regnal years is not preserved (obv. 1-2). The chronology of the other regnal years in the Babylon king list (Table 2) differs completely from the Uruk king list and the *Saros Canon*.

TABLE 2. Relative Chronology in the Babylon King List.

No king (lugal <i>ina</i> kur nu tuk)	[x+] 1 year(s)
Alexander IV	6 years
Seleucus I	25 years

During the "kingless" period Antigonos Monophthalmus ruled as "strategos and satrap" (obv. 3-4).¹⁰ Alexander's 6 and Seleucus' 25 regnal years can be harmonized with the information above: the Uruk list and the *Saros Canon* begin Seleucus' reign with his reconquest of Babylon (311 BC), while the Babylon king list only mentions those rulers who used the title "king." This means that the 31 regnal years of Seleucus attested in the Uruk list and the *Saros Canon* were distinguished into 6 years of Alexander IV, a minor infant who was only theoretically king and never possessed any real power, and 25 years of Seleucus,

starting all over again. The same method of dating was used in the cuneiform documents. This way the Seleucid Era was created.

10. According to E. Grzybek, *Historia* 41 (1992) 191-92 obv. 3-5 should be read "When there was no king in the land, Antigonos (was) strategos (and) satrap of Alexander, son of Alexander, (for) 6 years." From a grammatical point of view this translation is quite plausible since *mum-ma'-ir* could be a construct state. [*u*]₄-*mu* instead of [x+]1-kám in obv. 3 is equally possible. The chronological implications of this translation are less likely. Since Antigonos Monophthalmus ruled in Babylon until 311 BC and *Iraq* 16, pl. 53 obv. 6 immediately mentions the first year of Seleucus I as king (305/4 BC), this would mean that the intermediate years, when Alexander IV was theoretically king, are not in the list. I accept the traditional view that obv. 3-4 and obv. 5 refer to two different regnal periods.

who accepted the royal title in 305 BC. The description of Antigonos' rule as a period without king proves again that the Babylon list was composed as a real "king list" and not as an enumeration of persons who wielded power in Babylonia.

Both Hellenistic king lists and the *Saros Canon* only provide the order and length of the reigns during the early Hellenistic period. Contemporary dating habits from this period can be found in one historical and two astronomical tablets treating several successive years.

The so-called Chronicle of the Successors (*TCS* 5 10) mentions the years Philip 5 to 8 on the obverse and Antigonos 7 followed by Alexander IV 7 on the reverse. The astronomical tablet *LBAT* 1397 (observations of the planet Jupiter) presents valuable information for contemporary dating practices for the beginning of the reign of Alexander the Great: his seventh, eighth and ninth regnal year appear right after the fifth year of the last Achaemenid king Darius III.

The recently edited astronomical tablet *TAPS* 81,6 24 has turned out to be crucial for the chronology of the early Hellenistic period. Its editors call the text *Solar Saros*¹¹ because it lists months with possible solar eclipses for the years -347 to -258 (Artaxerxes III 11 to 53 SE). The early Hellenistic period is again completely incorporated. The most interesting aspect of the *Solar Saros* from a chronological point of view is that it uses contemporary dating habits and does not begin every new reign from year 1 onwards (as is the case in the *Saros Canon*). The only exception is the reign of Alexander the Great, where the *Solar Saros* mentions the years 2 to 7 and contemporary documents dated from year 7 onwards (see above *LBAT* 1397). Since solar eclipses can occur twice or thrice a year, every year between -347 and -258 is attested (except for the gaps in the middle of each column). *TAPS* 81,6 24 lists the following regnal years for the kings of the early Hellenistic period:

TABLE 3. Rulers and their Regnal Years According to the *Solar Saros*. (*TAPS* 81,6 24).

Alexander III	year 2 until 7 (col. II ll. 4–16)
Philip	year 7 and 8 (col. II ll. 29–32)
Antigonos	year 3 until 6 (col. II l. 33–col. III l. 3)
Alexander IV	year 6 until 11 (col. III ll. 4–15)
Seleucus	starting from year 7 (col. III l. 16)

The lacuna at the top of column II (ll. 2–3) must have contained Alexander 1, and the large gap in the middle of the same column (ll. 17–28) undoubtedly listed Philip 1–6. Since contemporary date formulas are used, it is now certain that Philip 8 is followed by Antigonos 3 (col. II ll. 31–33), Antigonos 6 by Alexander IV 6 (col. III ll. 2–4) and Alexander IV 11 by Seleucus 7 (col. III ll. 14–16).

A single chronological point of departure suffices to transform this relative chronology into an absolute one. The best-known historical reference point is Alexander's death: since we know Alexander died in June 323 BC, the year 323/2 BC must have been Philip 1. This means the chronological frame in Table 4 can be reconstructed on the basis of the *Solar Saros* (*TAPS* 81,6 24).

TABLE 4. Chronology on the Basis of the *Solar Saros*. (*TAPS* 81,6 24)

330/29–324/3 BC	Alexander 1–7
323/2–316/5 BC	Philip 1–8
315/4–312/1 BC	Antigonos 3–6
311/0–306/5 BC	Alexander IV 6–11
305/4 BC	Seleucus 7 (= 7 SE)

This order and number of regnal years is confirmed by two astronomical texts mentioning Antigonos Monophthalmus. The so-called *Saros Tablet* (*PSBA* 6 202) gives regnal years with an 18-year interval (= the Saros cycle). The date mentioned after Antigonos 3 is 15 SE,¹² or exactly

11. A. Aaboe, *et al.*, *Saros Cycle Dates*, 24–31.

12. Collation in the British Museum made clear that the date was copied correctly by Pinches in *PSBA* 6 202. The re-

18 years later. BM 33809, on the other hand, contains a list of years in which an intercalary month Ululu was inserted.¹³ Since this happened in the Hellenistic period once in a 19-year cycle, this tablet presents regnal years with a 19-year interval. The date mentioned after Antigonus 5 is 18 SE, or exactly 19 years later.

Finally, the chronology based on the *Solar Saros* can be compared with the practice found in contemporary tablets: with date formulas in legal and administrative documents and with colophons on literary texts. For the rulers from the early Hellenistic period the regnal years in Table 5 are attested in contemporary tablets:

TABLE 5. Rulers and their Regnal Years According to Cuneiform Documents and Colophons from Literary Tablets.

Alexander III	year 8 until year 13 (and accession year)
Philip	year 1 until year 8
Antigonus	year 3 until year 9
Alexander IV	year 1, 2 and 4 and year 6 until year 11
Seleucus	starting from year 8

In contrast to the *Solar Saros*, contemporary cuneiform tablets dated Alexander's reign according to his Macedonian regnal years and not from his conquest of Babylonia onwards. Since Alexander's father Philip died in 336 BC, the years from 330/29 to 324/3 BC correspond to Alexander 7–13. Apart from Alexander 7 all these dates are found in contemporary documents. One cuneiform document (BM 87241) follows an older chronological tradition by dating according to Alexander's accession year (mu sag ^mA-lek-sa-an-da-ri-is), indicating the period between the instal-

lation of the new king and the end of the Babylonian year.¹⁴

Philip's 8 years attested in the *Solar Saros* can be found in documents from the period. Since Philip was murdered in the summer of 317 BC, this means that cuneiform tablets were dated posthumously over more than a full year.¹⁵

Similar to the *Solar Saros*, cuneiform legal and administrative documents do not mention the first and second year of Antigonus. Probably Antigonus antedated his reign: he situated his hypothetical first two years before his actual accession to rule in Babylonia, probably in order to link his reign with the true date of Philip's death. The documents from the end of Antigonus' reign require some explanation. Whereas the *Solar Saros* situates the

14. BM 87241 is a ration list from the Late Achaemenid/Early Hellenistic Esagil archive. It was first mentioned by R. Zadok, review of M. Sigrist, H. H. Figulla and C. B. F. Walker, *Catalogue of the Babylonian Tablets in the British Museum* 2 (London: British Museum Publications, 1996), *AfO* 44/45 (1997/98) 303. Zadok dated the text to the reign of Alexander's son Alexander IV and restored the date formula as A-lek-sa-an-da-ri-is lugal [dumu šá? A-le]k-sa-an-da-ri-is lugal. Comparison with other ration lists from the Esagil archive suggests that the date should be restored as: [m]u sag ^mA-lek-sa-an-da-ri-is lugal en til [... ^mA-le]k-sa-an-da-ri-is lugal. This means that Zadok's identification of the king as Alexander IV is by no means certain. On the basis of the spelling ^mA-lek-sa-an-da-ri-is it is more likely to date the tablet to the reign of Alexander the Great. In AD –330 'Rev.' 11' and *AJA* 2 145 (l. 8', first part broken) the name of Alexander the Great is written ^mA-lek-sa-an-dar-ri-is, whereas Alexander IV always appears as ^mA-lek-sa-an-dar. On the other hand, the formula "ta month+year+king en til month+year+king" appears at the beginning and the end of all ration lists from the Esagil archive. My thanks are due to C. Wunsch for discussing this tablet and its date.

15. The last tablet dated to Philip Arrhidaeus is *AION Suppl.* 77 79 (BM 79012): 18.VII.8 = 9.X.316 BC. A. B. Bosworth, "Philip Arrhidaeus and the Chronology of the Successors," *Chiron* 22 (1992) 75–79 tried to shorten the period when documents were dated posthumously by proposing the hypothesis that Philip Arrhidaeus was "king of Babylon" during the lifetime of Alexander the Great and Philip 1 was 324/3 BC instead of 323/2 BC. The information present in the *Solar Saros* clearly proves that Philip 1 was not identical with Alexander 13 (7 in the system used by the *Solar Saros*), but that Philip 1–8 followed Alexander 13.

editions by Strassmaier (*ZA* 7, 199–200 and *ZA* 8, 106) are wrong in copying Antigonus 2.

13. I owe this reference to C. B. F. Walker who kindly showed me BM 33809 in the British Museum.

beginning of Alexander's reign after Antigonus 6, a few contemporary cuneiform texts have a later date: *CT* 49 50¹⁶ from Antigonus 7, *TBER* 88 (AO 26765)¹⁷ from Antigonus 8, and BM 105211¹⁸ from Antigonus 9. Antigonus 7 can be explained by the fact that Seleucus reconquered Babylonia around May 311 BC: until that moment documents from 311/0 BC were dated as Antigonus 7 (*CT* 49 50 dates from Ayaru 12 = May 13); after the change of government the same year was called Alexander IV 6 in cuneiform documents.¹⁹ The appearance of Antigonus 8–9 must be interpreted against the background of the political circumstances of that time. During several years there was an enormous turmoil because Antigonus' son Demetrius tried to reconquer Babylonia. The documents from Antigonus 8 and 9 were probably composed in a place that was at that moment in Demetrius' range of influence.²⁰

The dates of Alexander IV 1–2, 316/5 and 315/4 BC are found on two cuneiform documents:

16. Text from the "brewer archive" from Borsippa.

17. *TBER* 88 (AO 26765) is a ration list from the Esagil archive. The date is clearly visible (l. 2'), but the royal name is only partly preserved (^man-[]). F. Joannès, *Textes économiques de la Babylonie récente*, Études Assyriologiques (Paris: Éditions Recherche sur les civilisations, 1982), 350 proposed two possible interpretations for the royal name: Antigonus or a Neo-Babylonian king (^{md}[]). He preferred the last solution, and argued that Antigonus reigned only seven years. Thanks to the existence of BM 105211 dated in Antigonus 9 (see below) the interpretation "Antigonus" cannot be ruled out. In addition, the fact that *TBER* 88 (AO 26765) belongs to the Late Achaemenid/Early Hellenistic Esagil archive makes "Antigonus" more probable than a Neo-Babylonian king.

18. BM 105211 is a rental contract from Larsa. The text was first mentioned by J. Oelsner, "Recht im hellenistischen Babylonien: Tempel-Sklaven-Schuldrecht-allgemeine Charakterisierung," in *Legal Documents of the Hellenistic World*, eds. M. J. Geller and H. Maehler (London: The Warburg Institute, 1995), 118 n. 72.

19. The earliest cuneiform document dated to Alexander IV is BM 22022 (Ayar 10/19 = May 11/20 311 BC).

20. The chronology of Antigonus' reign was a matter of debate during the first half of the twentieth century.

BM 78948 and *CT* 49 13.²¹ At first sight there is no place for these dates in this chronological system since Philip 8 is immediately followed by Antigonus 3 in the *Solar Saros* and both dates are confirmed by contemporary documents. The direct succession in the date formulas of the documents needs closer inspection: the latest tablet of Philip is *AION Suppl.* 77 79 (BM 79012) from 18.VII.8 (= 9.X.316 BC), and the first attested tablet dated to Antigonus was written in the month Kislimu of Antigonus 3 (December/January 315/4 BC; *CT* 49 34).²² The interval between October 316 and December 315 BC leaves enough time for dates mentioning Alexander IV 1–2. Despite original scepticism against these early dates for Alexander IV, three ration lists from the Esagil archive mentioning the same persons now clearly prove that the years Alexander IV 1–2 existed.²³

H. Bengtson, *Die Strategie in der hellenistischen Zeit. Ein Beitrag zum antiken Staatsrecht I*, Münchener Beiträge zur Papyrusforschung und antiken Rechtsgeschichte 26 (Munich: Beck, 1964²), 111–12, presented a survey of the years identified with year 1 of Antigonus: 317/6 BC on the basis of the *Saros Canon*, 316/5 BC on the basis of the *Saros Tablet* (called "18 year list" by Bengtson) and 315/4 BC based on the astronomical tablet *LBAT* 1216. Since 316/5 BC was the result of Strassmaier's wrong reading (2 instead of 3) of the *Saros Tablet* (see above and n. 12) this possibility can be ignored. 315/4 BC rested on Kugler's interpretation of *LBAT* 1216, a goal year text for year 81 SE. Comparison with other goal year texts edited in *LBAT* now clearly proves that Kugler's theory was incorrect. A separate article (to be published in *JAOS*) will be devoted to the wrong chronological interpretations of *LBAT* 1216 and the *Saros Tablet*. On the basis of the chronological information of the *Solar Saros* it is now clear that Antigonus 1 equals 317/6 BC.

21. Both texts are ration lists from the Esagil archive; for the date of BM 78948 see M. Jursa, "Neu- und Spätbabylonische Texte aus den Sammlungen der Birmingham Museums und Art Gallery," *Iraq* 59 (1997) 133; for the date of *CT* 49 13 see below n. 23.

22. This is an interest-bearing promissory note from Babylon; see M.W. Stolper, *Late Achaemenid, Early Macedonian, and Early Seleucid Records of Deposits and Related Texts*, *AION Suppl.* 77 (Napoli: Istituto Universitario Orientale, 1993), 53–54.

23. *CT* 49 13, *Iraq* 59, 170–71 and HSM 1893.5.6; see T. Boiy, "Dating in Early Hellenistic Babylonia: Evidence on

Probably also Alexander IV 4 is attested in the partly preserved colophon of *AION Suppl.* 77 87 (ll. 19–20):

ⁱⁱⁱzíz ud-11-k[ám] mu-4-kám šá ši-i [mu-5(?) -kám]
[^mA]n-tu-g[u-n]u-su ⁱⁱgal [ú-qu]

The phrase šá ši-i (“which is”) means there must have been a double dating in this text. Alexander IV 4 is the most logical choice since in no other dating scheme can a fourth year be linked with any regnal year of Antigonos. According to the editor of the tablet,²⁴ the scribe combined Antigonos’ fourth year with some other form of dating because of the political instability of the time. Alexander IV 6–11 is found both in the *So-*

lar Saros and in cuneiform documents. After the reconquest of Babylonia in 311 BC Seleucus abandoned the date formula of Antigonos and went back to dating texts according to the regnal years of “king” Alexander IV, who was but a minor at the time. This means that the seventh year of Antigonos was replaced by the sixth year of Alexander IV. Even when this last king was murdered, tablets still used his name and regnal year in date formulas until 306/5 BC because of lack of an heir.

No contemporary cuneiform texts from 305/4 BC were dated according to Seleucus. The earliest known document with Seleucus as king is Seleucus 8.²⁵

the Basis of *CT* 49 13, 1982.A.1853 and HSM 1893.5.6,” *N.A.B.U.* 1998/134.

24. M. W. Stolper, *Records of Deposits*, 88.

25. *CT* 4 29d: 3.I.8 SE = 16.IV.304 BC. A complete study of this tablet was published by G. J. P. McEwan, “The First Seleucid Document from Babylonia,” *JSS* 30 (1985) 169–80.

TABLE 6. Chronology of the Early Hellenistic Period
(Numbers in *italics* are regnal years not attested in the cuneiform sources.)

date BC	Alexander the Great	Philip	Antigonus	Alexander IV	Seleucus I	Solar Saros (TAPS 81,6 24)	Saros Canon (ZA 10, 66–67)	King list from Uruk (BaM Beih. II, 88)	King list from Babylon (Iraq 16, pl. 53)	
330/29	7					[Alex.] I	Alex. 1	Alexander the Great	? / kingless	
329/8	8					2	2			
328/7	9					3	3			
327/6	10					4	4			
326/5	11					5	5			
325/4	12					6	6			
324/3	13					7	7			
323/2		1				[Phil.] I	Phil. 1	Philip		
322/1		2				2	2			
321/0		3				3	3			
320/19		4				4	4			
319/8		5				5	5			
318/7		6				6	6			
317/6		7				7	Antig. 1			Antigonus
316/5		8				8	2			
315/4			3			Antig. 3	3			
314/3			4			4	4			
313/2			5			5	5			
312/1			6			6	6			
311/0			7	6		(Alex.) 6	[Sel.] I	Seleucus	Alexander IV	
310/09			8	7		7	2			
309/8			9	8		8	3			
308/7				9		9	4			
307/6				10		10	5			
306/5				11		11	6			
305/4					7	Sel. 7	7		Seleucus	Seleucus
304/3					8	8	8			
303/2					9	9	9			
302/1					10	10	10			
301/0					11	11	11			