

King Esarhaddon reigned from 634/'33 until 622/'21 B.C.

This document demonstrates with the help of original astronomical information that King Esarhaddon did not reign from 681/'80 until 669/'68 B.C., but from 634/'33 until 622/'21 B.C.

The information is derived from:

<http://www.livius.org/cg-cm/chronicles/abc14/esarhaddon.html>

<http://knp.prs.heacademy.ac.uk/lettersqueriesandreports/> (see SAA 8 and SAA 10)

http://knp.prs.heacademy.ac.uk/downloads/parpola_las2a_part5.pdf

And the partially reproduced book on internet *Letters from Assyrian Scholars to the Kings Esarhaddon and Assurbanipal* by Simo Parpola.

The astronomical program 'Planetary, Lunar, and Stellar Visibility 3' has been used in the processing of the information. This program is free to download from:

<http://www.alcyone.de/PVis/english/index.html>

TEXT	WRITER	DATA	DATE (B.C.)
LAS 105	[.....]	report on a lunar eclipse on 14 Sivan[1]	23/24 May 632
RMA 272	Bel-usezib	Venus in Sagittarius; Mars between Libra and Scorpio; Jupiter in Leo, retrograde; lunar eclipse predicted for months Kislev and Sivan	Nov.632 15/16 Nov.632 12/13 May 631
RMA 235A	Bel-suma-iskun	Mars 7 months in Gemini; lunar eclipse in month Bul affecting Assyria[2]	Oct.631-April 630 5/6 Nov.631
ABL 765	Bel-naser	calculated solar eclipse on 28 Tishri; lunar eclipse in month Bul was not visible	10/11 Oct.630 (not visible) 25/26 Oct.630
RMA 277R	Akkullanu	report on a solar eclipse on 28 Nisan at 2½ double hours of the day[3]	5/6 April 629
RMA 183	Bel-leï	morning visibility of Jupiter begins in month Bul	~ 23/24 Oct.629
RMA 274	Bel-usezib	lunar eclipse and a potential solar eclipse in month Adar	10/11 March 628 25/26 March 628 (not visible)
RMA195A	Nergal-eter	evening visibility of Jupiter ends on 10 Kislev	17/18 Nov.627
RMA 272B	Nergal-eter	lunar eclipse not affecting Assyria on 14 Adar in the evening watch; Jupiter and Venus were not present during the eclipse[4]	18/19 Febr.626

RMA 174A	Rasi-ili	morning visibility of Venus ends in month Nisan	~ 22/23 March 626
RMA 207B	Nergal-eter	evening visibility of Venus begins in month Sivan; Venus will reach Cancer in 6-7 days	~ 2/3 June 626
RMA 30	Nergal-eter	moon becomes visible on 1 Elul; prediction of a lunar eclipse in month Elul	1/2 Aug.626 13/14 Aug.626
LAS 31	Adad-sumu-usur	reference to an alarming lunar eclipse[5] in month Elul	13/14 Aug.626
LAS 325	Balasi	request for intercalation of the year in month Shebat; decision for intercalating delayed until visibility of Jupiter begins	Jan.625 ~ 30/31 Jan.625
RMA 225	Nergal-eter	evening visibility of Mercury begins in Pisces; moon becomes visible on day 1 of the second month Adar[14]	~ 23/24 Jan.625 23/24 Febr.625 (yr.8 of Esarh.)
ABL 276	Kudurru	reference to an eclipse in month Tammuz[6]	7/8 July 624
LAS 104	[.....]	the unknown writer of letter LAS 104 writes that Akkullanu wrote to him about a solar eclipse at sunrise with an eclipse diameter of 2 fingers[6]	7/8 July 624
RMA 181A	Nergal-eter	left side sun eclipsed at sunrise[6]	7/8 July 624
RMA 186	Nergal-eter	morning visibility of Jupiter begins in month Iyar	16/17 April 623
RMA 162	Nergal-eter	Jupiter goes with Venus on 16 Iyar; moon becomes visible on 30 Iyar[7]	16/17 April 623 30 April/1 May 623
LAS 289	Mar-Istar	morning visibility of Jupiter begins on 22 Iyar [due to location and visibility conditions dates can differ several days]	22/23 April 623
LAS 290	Mar-Istar	morning visibility of Jupiter begins under Chariot; last visibility moon on 27 Sivan; watch for a solar eclipse on 28, 29 and 30 Sivan; moon becomes visible on 1 Tammuz	22/23 April 623 26/27 May 623 28/29 May 623 (not visible) 30/31 May 623

RMA 274E	Nabu-ahhe-eriba	predicted non-visibility of a lunar eclipse in month Tammuz	12/13 June 623
RMA 231	Asaredu qatnu	morning visibility of Mars begins in month Tammuz (in Gemini)	~ 26/27 June 623
RMA 235	Akkullanu	Mars moves to Cancer without stopping there; month Ab	July 623
LAS 287	Mar-Istar	written on day 6 of the second month Elul; reference to the intercalation of the year[14]	31 Aug./1 Sept.623 (yr.11 of Esarh.)
LAS 41	Balasi	king worried about a solar eclipse at sunset on 29 Bul	21/22 Nov.623 (not visible)
RMA 274G	Nabu-ahhe-eriba	report on the not observed solar eclipse; written in month Kislev	21/22 Nov. 623 Nov./Dec.623
LAS 62	Nabu-ahhe-eriba	prediction of a lunar eclipse in month Kislev; the writer refers to the solar eclipse expected in LAS 41	6/7 Dec.623
LAS 173	Marduk-Sakin-Sumi	lunar eclipse on 15 Kislev; the lunar quadrant Amurru[8] was eclipsed	6/7 Dec.623
LAS 45	Balasi	Mars having a great luminosity from Adar till Iyar	Febr.–April 622
RMA 44	[...]	Mercury visible in Aries; written on 30 Adar; reference to military operations in Egypt	20/21 March 622
LAS 46	Balasi	Mercury shining brightly; written on 1 Nisan; the month Adar having 30 days	21/22 March 622
LAS 289	Mar-Istar	evening visibility of Jupiter ends on 29 Nisan; Jupiter stayed away 1 month and 5 days; morning visibility of Jupiter begins on 6 Sivan in the region of Orion	18/19 April 622 24/25 May 622
RMA 67	Suma-iddin	conjunction of Venus and Saturn on 1 Sivan	19/20 May 622
RMA 246G	Nabu-ahhe-eriba	morning visibility of Mercury begins on 16 Sivan	3/4 June 622

RMA 86	Nergal-eter	Venus standing in front of Orion in month Ab	July 622
RMA 88	Balasi	conjunction of Mars and Saturn on 16 Adar	24/25 Febr.621
LAS 65	Nabu-ahhe-eriba	Mercury visible, Venus not yet visible; written on 27 Adar	6/7 March 621
LAS 291	Mar-Istar	Scorpius approached the moon on 10 Tammuz; Venus in Leo on 10 Tammuz	16/17 June 621
LAS 324	Balasi	morning visibility of Jupiter begins on 20 Tammuz	26/27 June 621
RMA 187	Asaredu	morning visibility of Jupiter begins in front of Cancer	26/27 June 621
ABL 1113	[...]	morning visibility of Mars begins in month Ab	~ 24/25 July 621
LAS 120	Adad-sumu-usur	reference to a not observed solar eclipse; Venus about to reach Virgo; visibility of Mercury expected	6/7 May 621 July 621 Aug. 621
RMA 208	Nergal-eter	evening visibility of Jupiter ends in month Ab; morning visibility of Jupiter begins in month Ab (in Leo)	~ 27/28 June 620 ~ 22/23 July 620
LAS 286	Mar-Istar	lunar eclipse expected in month Tishri; intercalation of the year referred to	5/6 Oct.620
LAS 277	Mar-Istar	written on 12 Tishri; Mars moving towards Sagittarius, having left Scorpio; intercalation of the year [14] and a lunar eclipse referred to	3/4 Oct.620 (yr.2 Ashurb.) 5/6 Oct.620
RMA 272A	Akkullanu	report on a lunar eclipse in month Tishri	5/6 Oct.620
LAS 61	Nabu-ahhe-eriba	report on a lunar eclipse in month Nisan [9]	31 March/1 April 619
LAS 40	Balasi	report on a lunar eclipse in month Nisan [9]	31 March/1 April 619
LAS 299	Akkullanu	reference to a partial lunar eclipse in month Nisan [9]	31 March/1 April 619

RMA 236G	Nabu-ahhe-eriba	Mars in Scorpio; retrograde; month Iyar	April 619
RMA 233	Nabu-iqbi	morning visibility of Mars begins in month Elul	~ 24/25 Aug.619
RMA 189	Nabu-iqisa	morning visibility of Jupiter begins in month Elul (in Leo)	~ 28/29 Aug.619
RMA 101A	Nabu-iqbi	conjunction of Jupiter and Mars	~ 8/9 Sept.619
RMA 98	Nabu-ahhe-eriba	conjunction of Jupiter and Mars in Leo	~ 8/9 Sept.619
RMA 216	Asaredu	morning visibility of Saturn begins in month Ab (in Leo)	~ 21/22 July 618
RMA 210	Asaredu	morning visibility of Venus ends in month Kislev	~ 16/17 Nov.617
ABL 137	Zakir	lunar eclipse on 15 Shebat[10]	28/29 Jan.616
LAS 110	Akkullanu	reference to a solar eclipse in month Nisan that did not touch the lower quadrant of the sun[11]; visibility of Jupiter ends 15 days later; morning visibility of Mars begins on 26 Iyar at the feet of Perseus	6/7 April 610 (not visible) 21/22 April 610 3/4 May 610
LAS 344	Nabu'a	vernal equinox on 6 Nisan	26/27 March 603
RMA 269	Rasi-ili-panu	solar eclipse expected in the morning of 28 Iyar	17/18 May 603
LAS 109	[.....]	when the day had advanced [x hours] the radiance of the sun was diminished[12]; Mars in Capricorn, halted there, and is shining very brightly; written on 29 Iyar	17/18 May 603 (± 73%) May/June 603 18/19 May 603
LAS 28	Istar-sumu-eres	reference to an observed solar eclipse in month Iyar	17/18 May 603 (± 73%)
LAS 345	Nabu'a	vernal equinox on 15 Nisan	25/26 March 602
LAS 25	Istar-sumu-eres	forecast of a lunar eclipse in month Sivan	3/4 June 595
RMA 268	Munnabitu	report on a lunar eclipse on 14 Sivan[13]	3/4 June 595

Notes

[1] All month names are rendered by their Biblical equivalents. The month Kanunu is rendered as Shebat (month XI). In the usual chronology this month is wrongly rendered as Tebeth (month X).

From the writer of LAS 105 we have the following information about the eclipse on 14 Sivan:

- a) Only the southern quadrant of the moon was eclipsed.
- b) The eclipse diameter was 2 fingers (that is 1/6 of the apparent lunar diameter).
- c) The eclipse took place in Scorpio.
- d) The eclipse ended in the morning watch.

The eclipse of 23/24 May 632 B.C. fits exactly with this information. In the usual chronology there is no eclipse that fits.

[2] The lunar eclipse on 5/6 Nov.631 B.C. in month Bul was total. The last part that became eclipsed was the lower quadrant of the moon, the quadrant that signified Assyria according to RMA 268. So it (also) affected Assyria. In the year 676 B.C., the year in which Mars began to stay in Gemini, or in the year 675 B.C., the year in which Mars' stay in Gemini ended according to the usual chronology, there is no lunar eclipse in month Bul.

[3] The solar eclipse on 6/7 April 629 B.C. at 2½ double hours of the day (is 5 hours after sunrise) was only visible in the southeastern part of the Assyrian empire.

<http://eclipse.gsfc.nasa.gov/SEatlas/SEatlas-1/SEatlas-0639.GIF>

[4] The lunar eclipse on 18/19 Febr.626 B.C. in month Adar was partial. The eclipse moved southwards but turned southwest when it reached the lower quadrant of the moon that signified Assyria. So it did not affect Assyria. The partial lunar eclipse on 27/28 Febr.673 B.C. from the usual chronology is not possible, because Venus was present during the first part of the eclipse.

[5] This lunar eclipse on 13/14 Aug.626 B.C. in month Elul was alarming because only the lower quadrant of the moon that signified Assyria was eclipsed. The total lunar eclipse on 3/4 Sept.674 B.C. from the usual chronology is also possible, but less likely, because due to its totality it was not so alarming for Assyria.

[6] Kudurru wrote during the reign of Esarhaddon: "after the king, my lord, went to Egypt and an eclipse occurred in the month Du'uzu" (Tammuz). Esarhaddon went to Egypt in year 10 and 12 of his reign. But only in year 10 did he go to Egypt before the month Tammuz. So the text must refer to year 10 of his reign, the year 624/23 B.C. In month Tammuz of that year there was a total lunar eclipse on 23/24 June (14 Tammuz) of which only the last part was visible at moonrise, and a partial solar eclipse on 7/8 July (28 Tammuz) of which also only the last part was visible at sunrise. The last part of the sun that was eclipsed was the left side (see RMA 181A). And the eclipse diameter measured 2 fingers (see LAS 104; 2 fingers is 1/6 of the apparent sun diameter). In the usual chronology there is no eclipse of which the left side of the sun was eclipsed at sunrise.

<http://eclipse.gsfc.nasa.gov/SEatlas/SEatlas-1/SEatlas-0639.GIF>

[7] At this time it was also usual to speak of a thirtieth day of a month like Iyar which has 29 days. This thirtieth day was the same as the first day of the following month. Therefore in RMA 162 30 Iyar is the same as 1 Sivan.

[8] The lunar eclipse on 6/7 Dec.623 B.C. in the month Kislev was partial. The eclipse moved southwestwards and eclipsed the upper quadrant of the moon, the quadrant that signified Amurru according to RMA 268. The lunar eclipse on 16/17 Dec.670 B.C. from the usual chronology was also partial, but did not eclipse the upper quadrant of the moon.

[9] Nabu-ahhe-eriba wrote about this lunar eclipse: "The eclipse in the month Nisan moved from the east and left out (not 'settled over') the entire west (left). Jupiter and Venus were present during the eclipse until it cleared." From Balasi (LAS 40) we know that Saturn was also present during the eclipse. The partial lunar eclipse on 31 March/1 April 619 B.C. fits with this information. The lunar eclipse on 21/22 April 667 B.C. from the usual chronology does not fit with this information, because this eclipse was not partial. Also the date is too late for the second year of Ashurbanipal, because in this year a second month Elul was intercalated. The other possibility sometimes given in the usual chronology is the partial lunar

eclipse on 10/11 April 666 B.C. This eclipse also does not fit, because it did not move from the east and Venus was not present during the eclipse.

[10] Zakir wrote about the eclipse on 15 Shebat: "The moon was eclipsed in the middle watch of 15 Kanunu, beginning in the east and moving westward." The total lunar eclipse on 28/29 Jan.616 B.C. fits with this information. The total lunar eclipse on 27/28 Dec.671 B.C. from the usual chronology also fits, if month Kanunu is month Tebeth.

[11] The solar eclipse on 6/7 April 610 B.C. was not visible in Assyria because there just the lower quadrant of the sun was not eclipsed. As for the solar eclipse on 14/15 April 657 B.C. from the usual chronology, a part of the lower quadrant of the sun was eclipsed.

<http://eclipse.gsfc.nasa.gov/SEatlas/SEatlas-1/SEatlas-0619.GIF>

<http://eclipse.gsfc.nasa.gov/SEatlas/SEatlas-1/SEatlas-0659.GIF>

[12] The solar eclipse on 26/27 May 650 B.C. from the usual chronology was not visible in Assyria.

<http://eclipse.gsfc.nasa.gov/SEatlas/SEatlas-1/SEatlas-0619.GIF>

<http://eclipse.gsfc.nasa.gov/SEatlas/SEatlas-1/SEatlas-0659.GIF>

[13] From Munnabitu (RMA 268) and Zakir (Rm 193) we have the following information about the eclipse on 14 Sivan:

- a) The calculated eclipse moved toward the south and the west (left).
- b) The moon was covered completely and started to clear from the north and the east (right).
- c) Jupiter and Venus were present during the eclipse.
- d) The eclipse ended at the beginning of the middle watch.

The total lunar eclipse on 3/4 June 595 B.C. fits exactly with this information. The total lunar eclipse on 22/23 May 678 B.C. from the usual chronology does not fit with this information, because this eclipse drifted toward the south and Venus was not present during the eclipse.

[14] In the years above the vernal (spring) equinox fell on 27 or 28 March.

The Julian dates for 1 Nisan for the above years are:

12/13 March 632 B.C.

1/2 March 631 B.C. (yr.3 of Esarhaddon with a second Elul)

20/21 March 630 B.C.

9/10 March 629 B.C. (yr.5 of Esarhaddon with a second Adar)

28/29 March 628 B.C.

17/18 March 627 B.C.

6/7 March 626 B.C. (yr.8 of Esarhaddon with a second Adar; see RMA 225)

24/25 March 625 B.C.

13/14 March 624 B.C.

2/3 March 623 B.C. (yr.11 of Esarhaddon with a second Elul; see LAS 287)

21/22 March 622 B.C.

10/11 March 621 B.C.

28 Febr./1 March 620 B.C. (yr.2 of Ashurbanipal with a second Elul; see LAS 277*)

19/20 March 619 B.C.

8/9 March 618 B.C. (yr.4 of Ashurbanipal with a second Adar)

25/26 March 617 B.C.

9/10 March 610 B.C.

21/22 March 603 B.C.

11/12 March 602 B.C.

23/24 March 595 B.C.

* Because the usual chronology places letter LAS 277 in year 10 of Esarhaddon, the usual chronology has in year 10 and 11 of Esarhaddon a second month Elul, which is not very likely.