

ASTRONOMICAL DIARIES AND RELATED TEXTS FROM BABYLONIA

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Volume I Diaries from 652 B.C. to 262 B.C.

VERLAG DER OSTERREICHISCHEN AKADEMIE DER WISSENSCHAFTEN
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Nebukadnezar II year 37. I II III [] X XI XII

Copy E. F. Weidner, AfO 16 Tf. XVII

Transcription, translation, and commentary: P.V. Neugebauer and E. F. Weidner, Ein astronomischer Beobachtungstext aus dem 37. Jahre Nebukadnezar II. (-567/66) (= Ber. über die Verh. der Königl. Sachs. Ges. der Wiss., Phil.-hist. Kl. Bd. 67/2. 1915.

Obv'

- 1: Year 37 of Nebukadnezar, king of Babylon. Month I (the 1st of which was identical with) the 30th (of the preceding month), the moon became visible behind the Bull of Heaven; [sunset to moonset:] [...]
- 2: Saturn was in front of the Swallow. The 2nd, in the morning, a rainbow stretched in the west. Night of the 3rd, the moon was 2 cubits in front of [...]
- 3: it rained? Night of the 9th (error for 8th), beginning of the night, the moon stood 1 cubit in front of β Virginis. The 9th, the sun in the west [was surrounded] by a halo
- 3: [... The 11th]
- 4: or 12th, Jupiter's acronychal rising. On the 14th, one god was seen with the other; sunrise to moonset: 4°. The 15th, overcast. The 16th, Venus [...]
- 5: The 20th, in the morning, the sun was surrounded by a halo. Around noon, rain PISAN. A rainbow stretched in the east. [...]
- 6: From the 8th of month XII₂ to the 28th, the river level rose 3 cubits and 8 fingers, **b** cubits [were missing] to the high flood [...]
- 7: were killed on order of the king. That month, a fox entered the city. Coughing and a little *risitu*-disease [...]
- 8: Month II (the 1st of which was identical with) the 30th (of the preceding month), the moon became visible while the sun stood there, 4 cubits below β Geminorum; it was thick; there was earth shine [...]
- 9: Saturn was in front of the Swallow; Mercury, which had set, was not visible. Night of the 1st, gusty storm from east and south. The 1st, all day [...]
- 10: stood [... in front] of Venus to the west. The 2nd, the north wind blew. The 3rd, Mars entered Praesepe. The 5th, it went out of it. The 10th, Mercury [rose] in the west behind the [Little Twins ...]
- 11: The 15th, ZI IR. The 18th, Venus was balanced 1 cubit 4 fingers below α Leonis. The 26th, (moonrise to sunrise) 23°; I did not observe the moon. The 27th, 20+x [...]
- 12: Month III (the 1st of which was identical with) the 30th (of the preceding month), the moon became visible behind Cancer; it was thick; sunset to moonset: 20°; the north wind blew. At that time, Mars and Mercury were 4 cubits in front of α [Leonis ...]
- 13: Mercury passed below Mars to the East? ; Jupiter was above α Scorpii; Venus was in the west opposite ϑ Leonis [...]
- 14: 1? cubit. Night of the 5th, beginning of the night, the moon passed towards the east 1 cubit <above/below> the bright star of the end of the Lion's foot. Night of the 6th, beginning of the night, [...]
- 15: it was low. Night of the 8th, first part of the night, the moon stood 2½ cubits below β Librae. Night of the 9th, first part of the night, the moon [stood] 1 cubit in front of [...]
- 16: passed towards the east. The 9th, solstice. Night of the 10th, first part of the night, the moon was balanced 3½ cubits above α Scorpii. The 12th, Mars was **b** cubits above [α Leonis ...]

17: [....] The 15th, one god was seen with the other; sunrise to moonset: 7^o30'. A lunar eclipse which was omitted [....]

18: [.... the moon was be]low the bright star at the end of the [Lion's] foot [....]

19: [....] [....]

'Rev.

1': [....] first part of the night the moon was]

2': 1 cubit [above/below] the middle star of the elbow of Sagittarius [....]

3': When 5^o of daytime had passed, the sun was surrounded by a halo. The 19th, Venus was 2½ cubits below ? Capricorni. Night of the [....]

4': That month, the equivalent (of 1 shekel of silver was): barley, 1 kur 2 sut; dates, 1 kur 1 pan 4 sut; mustard, 1 kur [....]

5': Month XI (the 1st of which was identical with) the 30th (of the preceding month), the moon became visible in the Swallow; sunset to moonset: 14^o30'; the north wind blew. At that time Jupiter was 1 cubit behind the elbow of Sagittarius [...]

6': The 4th, the river level rose. The 4th, Venus was balanced ½ cubit below (*sic*) Capricorn. Night of the 6th, first part of the night, the moon was surrounded by a halo; Pleiades, the Bull of Heaven, and the Chariot [stood in it]

7': the moon was surrounded by a halo; Leo and Cancer were inside the halo; α Leonis was balanced 1 cubit below the moon. Last part of the night, 3^o of night remaining, [....]

8': sunrise to moonset: 17^o; I did not watch. The sun was surrounded by a halo. From the 4th to the 15th, the river level rose 1½ cubits. On the 16th, it receded. Night of the 18th (and) the 18th, rain PISAN DIB [....]

9': when the [....] of Bel was cut off from its place, two boats went away?. The 2nd, overcast. Night of the 23rd, [.... Mars?]

10': was balanced above (*sic*) the small star which stands 3½ cubits behind Capricorn. Night of the 29th, red glow flared up in the west, 2 double-[hours]

11': barley, 1 kur?; dates: 1 kur 1 pan 4 sut; mustard, 1 kur 1 pan; sesame, 4 sut; cress, [....]

12': Month XII (the 1st of which followed the 30th of the preceding month), the moon became visible behind Aries while the sun stood there; sunset to moonset: 25^o, measured; earth shine; the north wind blew. At that time, Jupiter [.... Mercury and Saturn, which had set]

13': were not visible. The 1st, the river level rose. Night of the 2nd, the moon was balanced 4 cubits below η Tauri. Night of the 3rd, beginning of the night, 2½ cubits [....]

14': From the 1st to the 5th, the river level rose 8 fingers; on the 6th it receded. Night of the 7th, the moon was surrounded by a halo. Praesepe and α Leonis [stood] in [it]

15': the halo surrounded Cancer and Leo, it was split towards the south. Inside the halo, the moon stood 1 cubit in front of < α Leonis >, the noon being 1cubit high. Night of the 10th, first [part of the night]

16': Night of the 11th, overcast. The 11th, rain DUL. Night of the 12th, a little rain, The 12th, one god was seen with the other, sunrise to moonset: 1^o30'; [....] Mercury]

17': was in front of the "band" of the Swallow, ½ cubit below Venus, Mercury having passed 8 fingers to the east; when it became visible it was bright and (already) high. 1 ? [... Saturn]

18': was balanced 6 fingers above Mercury and 3 fingers below Venus, and Mars was balanced **b** cubits below the bright star of < > towards [...]

19':,, The 21st, overcast; the river level rose. Around the 20th, Venus and Mercury entered the "band" of the Swallow. From [.... Jupiter,]

20': which had passed to the east. became stationary. At the end of the month it went back to the west.

Around the 26th, Mercury and Venus [came out] from the "band" of Anunitu [....]

21': the river level receded 8 fingers. That month, on the 26th, a wolf entered Borsippa and killed two dogs; it did not go out, it was killed [....]

Lower edge

1: Year 38 of Nebukadnezar, month I, the 1st (of which followed the 30th of the preceding month): dense clouds so that [I did not see the moon]

2: Year 37 [....]

Comments

1: The last sign visible can be any number from 14 to 18.

5: UGU-ME occurs also in rev. 16' and 19'. It cannot designate a part of the day (as suggested by P.V. Neugebauer and E. Weidner) because in rev. 16 it appears during the night as well as during daytime. It is rather another weather phenomenon, mentioned side by side with rain.

10: ALLA is used here not for the whole zodiacal constellation Cancer but only for Prasesepe since Mars can pass through it within two days, as was remarked by P.V. Neugebauer and E. Weidner.

11: A translation "was balanced" for LÁL was proposed by A. Sachs. This expression seems to occur mostly (but not only) in those cases where both celestial bodies compared have the same longitude. It is restricted to the oldest diaries preserved so far. It probably went out of use because it was redundant: if no difference in longitude was mentioned one could conclude that there was none. - *sin* may be a mistake for the missing sign KUR "moonrise to sunrise".

13: One is inclined to regard *ser-tam* DIB as an equivalent of *ana* NIM DIB, but this is rendered uncertain by the occurrence of the latter expression in line 14 and elsewhere; in addition, *ana serti* is expected.

5': The "elbow of Sagittarius" was identified as the cluster of stars around π Sagittarii by P.V. Neugebauer, *op.cit.*, 50f.

13': in the broken part at the end of the line, a reference to the moon being close to the Normal Star α Tauri is expected.

15': The broken star name must have been α Leonis.

17': According to computation, Saturn has to be restored at the end of the line.

Calendar

Nebukadnezar II	year 36	XII ₂ 0	-567	Mar 23/24
	year 37	I 0 = XII ₂ 29		Apr 21/22
		II 0 = I 30		May 21/22
		III 0 = II 29		Jun 19/30
		X 0 = IX 30	-566	Jan 13/14
		XI 0 = X 29		Feb 11/12
		XII 0 = XI 30		Mar 13/14
	year 38	I 0 = XII 29		Apr 11/12