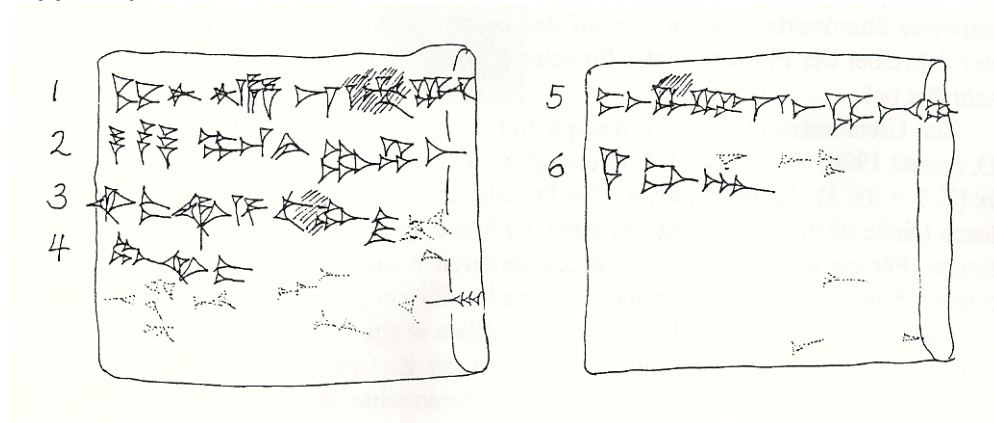


## Abbreviations

- DJVS de Jong T. & v. Soldt W. H., *The earliest known solar eclipse record dated*, Nature 338 (1989), p. 238-240
- DL Dietrich M. & Loretz O., *Der Untergang von Ugarit am 21. Januar 1192 v. Chr.?*, in: Ugarit-Forschungen 34, 2002, 53-74
- DMH De Meis S. & Hunger H., *Astronomical Dating of Assyrian and Babylonian Reports*, Roma 1998
- H Hunger H., *Astrological Reports to Assyrian Kings*, Helsinki 1992
- HDM Huber P. J. & De Meis S., *Babylonian Eclipse Observations from 750 BC to 1 BC*, Milano 2004
- H V Hunger H., *Astronomical Diaries and Related Texts from Babylonia*, Volume VI: Goal Year Texts, Wien 2006
- LBAT Sachs A. J., *Late Babylonian Astronomical and Related Texts*, Providence 1955
- Millard Millard A., *The Eponyms of the Assyrian Empire 910-612 BC*, Helsinki 1994
- Parpola Parpola S., *Letters from Assyrian Scholars to the Kings Esarhaddon and Assurbanipal*. Part I: Texts, Kevelaer 1970
- RMA Thompson R. C., *The Reports of the Magicians and Astrologers of Nineveh and Babylon I-II*, London 1900
- SH I Sachs A. J. & Hunger H., *Astronomical Diaries and Related Texts from Babylonia*, Volume I, Wien 1988
- SH II Sachs A. J. & Hunger H., *Astronomical Diaries and Related Texts from Babylonia*, Volume II, Wien 1989
- SH III Sachs A. J. & Hunger H., *Astronomical Diaries and Related Texts from Babylonia*, Volume III, Wien 1996

**KTU 1.78 Obv. 1-4 and Rev. 5-6**  
**transliteration & translation by DJVS (p. 239)**  
**copy: DL (p. 64)**

1223 BC March 5



Obv. 1: *btt.ym. ḥdt*

Obv. 2: *ḥyr. ṣrbt*

Obv. 3: *špš tgrh*

Obv. 4: *ršp*

Rev. 5: *kbdm tbqrn*

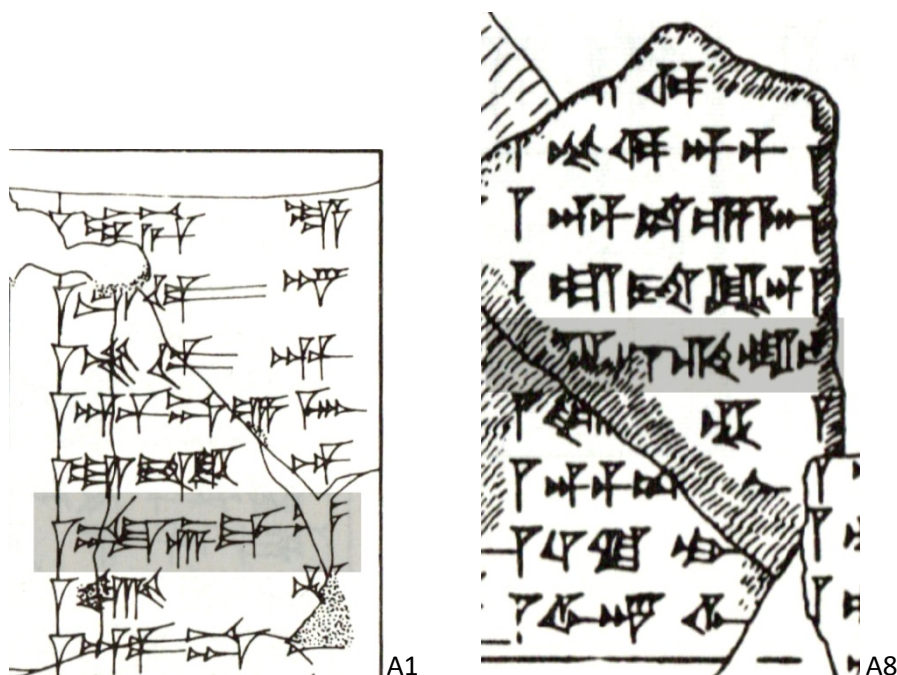
Rev. 6: *skn*

Obv.: On the ... day of the new moon in (the month) hiyaru the Sun went down, its gatekeeper was *Ršp*(Mars?).

Rev.: Two livers were examined: danger.

**Assyrian Eponym lists (A) and Eponym Chronicles (B)**  
**transliteration & translation by Millard ( p. 41, 58, Plates 2, 8, 12 and 14)**

763 BC June 15





**BM 82-5-22,87 – RMA 277R Obv. 1-6 and Rev. 2**  
**transliteration & translation by H (p. 63-64)**

657 BC April 4  
(Akkullānu)

Obv. 1: 1 UD-28-KÁM 2 ½ KASKAL .G[ÍD UD-*mu* x x x x x]  
Obv. 2: *ina* IM.MAR.TU. KI [x x x x x x x]  
Obv. 3: *is-se-niš e-te-r[i-im* x x x x x]  
Obv. 4: 2 ŠU.SI *a-na* IM.[x x x x AN-KU<sub>10</sub>]  
Obv. 5: *is-sa-kan* IM.KUR.R[A x x x x x x x]  
Obv. 6: IM.SI. SÁ *it-ta-[lak an-ni-u pi-še-er-šú]*  
Rev. 2: 1 *ina* ITI.BARAG AN-KU<sub>10</sub> <sup>d</sup>[UTU GAR x x x x x x]

Obv. 1: On the 28<sup>th</sup> day, at 2½ double hou[rs of the day ...]

Obv. 2: in the west [...]

Obv. 3: it also cover[ed ...]

Obv. 4: 2 fingers towards [...]

Obv. 5: it made [an eclipse], the east wind [...]

Obv. 6: the north wind ble[w. This is its interpretation]:

...

Rev. 2: If [there is an eclip]se in Nisan (I) on the 28<sup>th</sup> day:

---

**K 815 – RMA 269 Obv. 9-11**  
**transliteration & translation by H (p. 220)**

669 BC May 27  
(Rašil)

9: 1 *ina* ITI.GUD UD-29-KÁM <sup>d</sup>UTU AN-KU<sub>10</sub> GAR *ina* IM.SI.SÁ SAR-*ma*  
10: *ina* IM.U<sub>18</sub>.LU GI.NA SI KAB-šú *ed-da-at*  
11: SI ZAG-šú GÍD.DA-*at* DINGIR.MEŠ UB.DA.LIMMÚ.BA LÙ.MEŠ

9: If there is a solar eclipse in Iyyar (II) on the 29<sup>th</sup> day,

10: it begins in the north and becomes stable in the south,

11: its left horn is pointed, its right horn is long:

---

**K 1188 – Parpola Nr. 83 Obv. 6-8**  
**transliteration & translation by Parpola (p. 56-57)**

657 BC April 4  
(Nergal-šumu-iddina)

5: [UD-29/30].KÁM <sup>d</sup>šá-*maš*  
6: [*ina m*]u-*šu-la-li*  
7: [AN-KU<sub>10</sub>] *i-sa-kan*  
8: [...] <*an*>-[*n*]a-*ka*

The Sun was [eclipsed on the 29/30]th, [in the m]iddle of the day. [...] here [...]

**BM 37097 + 37211: LBAT \*1404 + \*1405 Rev. 4'**  
**transliteration & translation by SH I (p. 124-125)**  
**photo: SH I, Plate 19**

369 BC April 11

4': [... UL]Ù ŠÁR ŠIR ina 6 UŠ ME <sup>1</sup>/<sub>3</sub> HĀB-rat ŠÚ-im

4': [...] gusty south wind ... in 6° daytime <sup>1</sup>/<sub>3</sub> of the disc was covered.

---

**BM 36913 Rev. 6-7**  
**transliteration & translation by SH I (p. 140-141)**  
**photo: SH I, Plate 22**

357 BC February 29

6: [...] <x> 16 ME ana ŠÚ-e šamáš šamáš AN-KU<sub>10</sub> Á[...]

7: [...] u ZALÁG ina AN-KU<sub>10</sub>-šú ULÙ šá [...]

6: [...] ... At 16° before sunset, solar eclipse on the [...] side [...]

7: [...] and clearing; during its eclipse, the south wind which [...]

---

**BM 71537 Rev. III'.1-4**  
**transliteration & translation by H V (p. 42-45)**  
**photo: H V, Plate 5**

339 BC September 4

1: [20 IZI ...]

2: x [...]

3: 2<sup>2</sup>-ú HĀB I DIR <xx> [...]

4: ULÙ u KUR ZALÁG 25 GAR u ZALÁG S[I<sup>2</sup> GIN<sup>2</sup>]

1: [(Year) 20, month V, ...]

2: ... [...]

3: it exceeded<sup>2</sup> a little one-x<sup>th</sup> of the disc ... [...]

4: it cleared in the south and east. 25° onset and clearing. The nor[th<sup>2</sup> wind blew<sup>2</sup>]

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**BM 45766: LBAT \*208 A Rev. 13'**  
**transliteration & translation by SH I (p. 208-209)**  
**photo: SH I, Plate 34**

323 BC October 7

13': [...] <Á> S[I u] <KUR> ana ZALÁG ki TAB-ú ina 9 UŠ ME al-la 2 SI i ana  
ZALÁG TAG<sub>4</sub> 5 <x> [...]

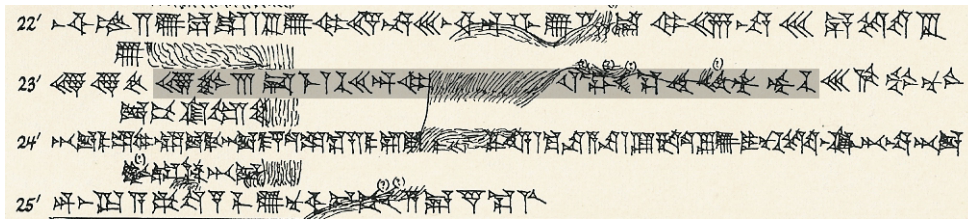
13': [... solar eclipse ...] when it began to clear on the no[rth-ea]st side, in 9° daytime a little more than 2 fingers remained to clear; 5 [...]

BM 34093: LBA 212 Rev. 23'

322 BC September 26

transliteration & translation by SH I (p. 226-227)

photo: SH I, Plate 38



23': 28 in 3 UŠ ME ana ŠÚ šamáš AN-KU<sub>10</sub> [x x x] MAR u SI ŠÁR ŠIR ád  
ŠÚ

23': The 28<sup>th</sup>, around 3° before sunset, solar eclipse [...] ... gusty west and north wind; it set eclipsed.

BM 41660: Rev. 9-10

281 BC January 30

transliteration & translation by SH I (p. 312-313)

photo: SH I, Plate 53

9: 29 <sup>d</sup>UTU [AN-KU<sub>10</sub> ki<sup>2</sup>] <E>-a 2 SI Á ULÙ a-dir ina 6 ME

10: [...] 20 ME GAR u ZALÁG ina AN-[KU<sub>10</sub>]-šú SI š[á ana x] šal-pu GIN ina  
AN-KU<sub>10</sub>-šú AN dele-bat <x> [x]

9: The 29<sup>th</sup>, [solar] eclipse; when the sun came out, 2 fingers were obscured on the south side; at 6° daytime,

10: [...] ... 20° daytime onset and clearing; during its eclipse, the north wind which was slanted to the [...] blew; during its eclipse, Mars, Venus, ...

transliteration & translation by SH II (p. 20-21)

photo: SH II, Plate 73

1': [...] <x> 32 GAR u <ZALÁG ina AN>-KU<sub>10</sub>-šú <SI šá PA> [...]

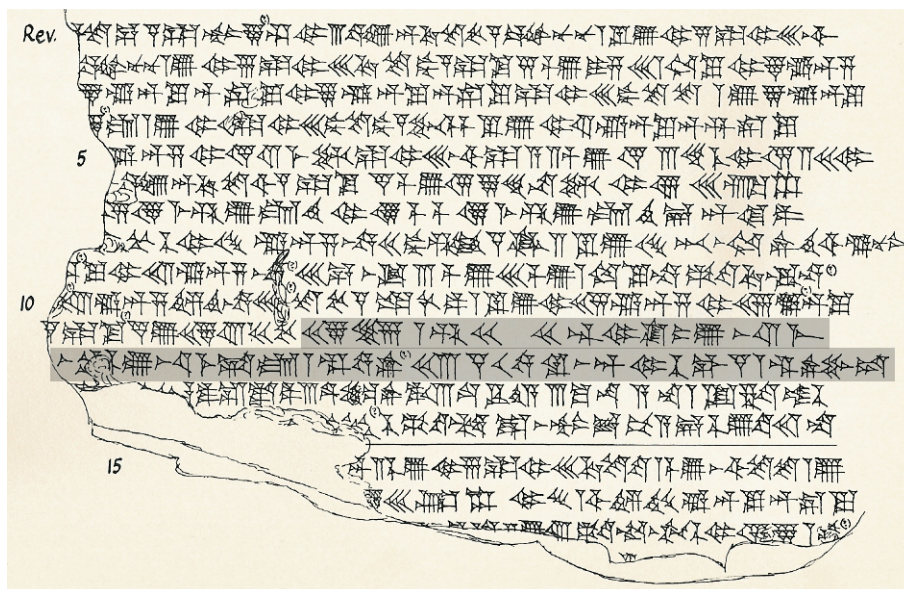
2': 2<sup>2</sup> SI ITU BI

1': [...] ... 32° onset and clearing; during ist eclipse, the north wind which [...]

2': [...] 2<sup>2</sup> fingers.

transliteration & translation by SH II (p. 28-29)

photo: SH II, Plate 75



11: 28 56 ME ana ŠÚ šamáš šamáš AN-KU<sub>10</sub> ki TAB-ú ina 12 ME

12: [...ZAL]ÁG <ki> TAB-ú ina 11 ME TA ULÙ ana SI ZALÁG-ir 23 GAR u

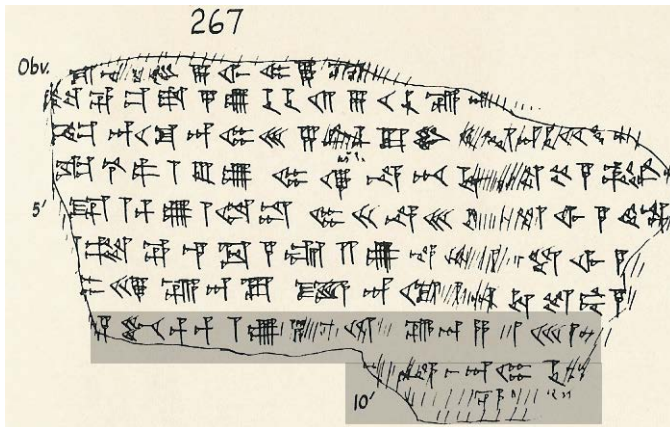
ZALÁG-ru ina AN-KU<sub>10</sub>-šú MAR šá ana SI šal-pu GIN

11: The 28<sup>th</sup>, 56° before sunset, solar eclipse; when it began, in 12° daytime

12: [...] when it began [to clear], it cleared from south to north in 11° daytime; 23° onset and clearing; during its eclipse blew the west wind which was slanted to the north.

**BM 45723: LBAT 267 Obv. 8'-9'**  
**transliteration & translation by SH II (p. 50-51)**  
**photo: SH II, Plate 79**

249 BC May 4



8': <28> DIR AN ZA 1,30 ME [... AN-KU<sub>10</sub> šamáš ...]

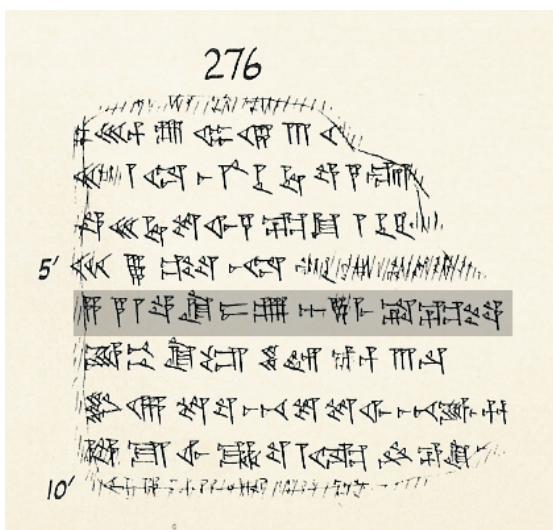
9': [...] (traces) [x x] <GAR?> u ZALÁG ina AN-KU<sub>10</sub>-šú[...]

8': The 28<sup>th</sup>, clouds were in the sky; 90° daytime [... solar eclipse ...]

9': [...] ... [...] onset and clearing; during its eclipse [...]

**Rm 712: LBAT 276 Flake 6'**  
**transliteration & translation by SH II (p. 76-77)**  
**photo: SH II, Plate 84**

242 BC June 15





6': [... AN-KU<sub>10</sub> šamáš ... x] + <6> GAR ana ZALÁG ki TAB-ú ina 18 META  
MAR ana KUR ZALÁG

6': [... solar eclipse, ... x]+6° onset; when it began to clear, in 18° daytime it cleared from west to east.

---

Rm 720+: Obv. 3'

241 BC November 28

transliteration & translation by SH II (p. 78-79)

photo: SH II, Plate 85

3': [...] ZALÁG 30 GAR u ZALÁG ina AN-[KU<sub>10</sub> ...]

3': [...] cleared; 30° onset and clearing; during the eclips[se, ...]

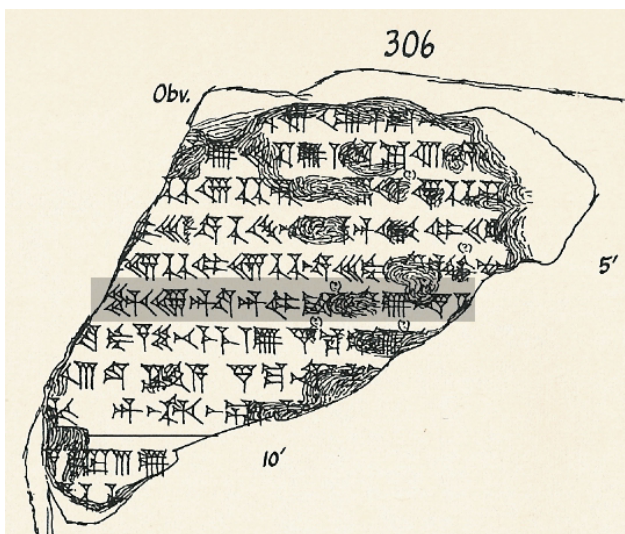
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BM 45635: LBAT 306 Obv. 6'

203 BC May 6

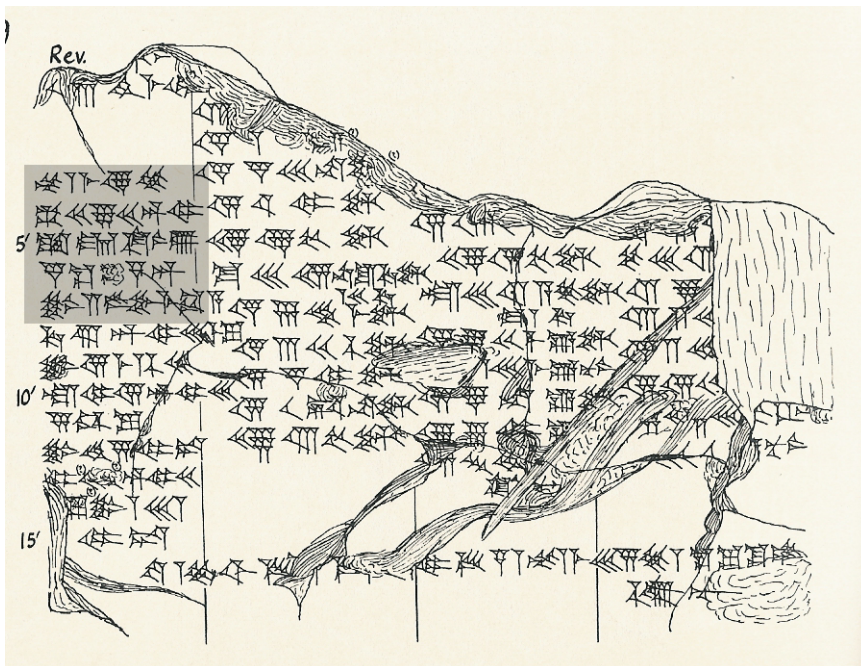
transliteration & translation by SH II (p. 208-209)

photo: SH II, Plate 110



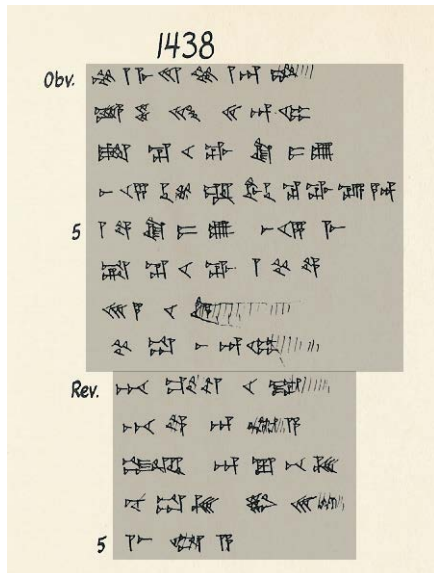
6': [...] muš 28 <sup>d</sup>UTU AN-KU<sub>10</sub> Á-KUR ki TAB-ú ina 14 <ME<sup>2</sup>> [...]

6': [...] measured. The 28<sup>th</sup>, solar eclipse; when it began on the east side, in 14° daytime<sup>2</sup> [...]



3': MU- 1-ME -1,17 KÁM  
 4': GU<sub>4</sub> 28 šamáš AN-KU<sub>10</sub>  
 5': id ULÙ ki TAB-ú  
 6': 4 SI GAR-an  
 7': in 2 DANNA ME NIM-a

3': Year 177,  
 4': month II 28, solar eclipse;  
 5': when it began on the south side,  
 6': it made 4 fingers.  
 7': At 2 *bēru* after sunrise.

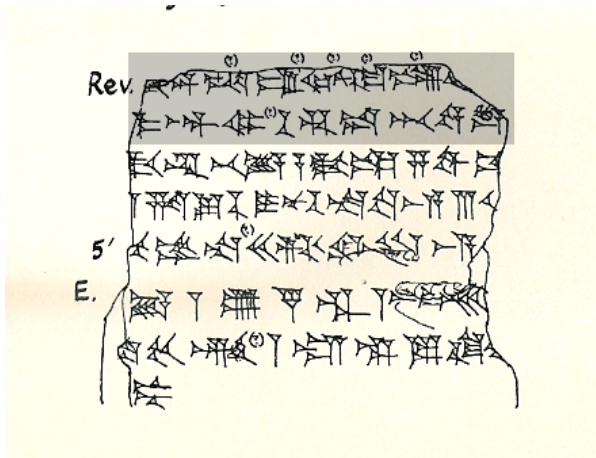


- Obv. 1: MU-1-me-21-KÁM <sup>1</sup>an LUGAL  
 2: <sup>itu</sup>ŠE 29 šamáš AN-KU<sub>10</sub>  
 3: Á SI u MAR ki TAB-ú  
 4: ina 15 ME al šal-šú ḪAB-rat DIR GAR-an  
 5: ana ZALÁG ki TAB-ú ina 15 ME  
 6: TA SI u MAR ana KUR ZALÁG  
 7: 30 GAR u [ZALÁG ina AN-KU<sub>10</sub>-šú]  
 8: KUR GIN ina AN-KU<sub>10</sub>-[šú ...]  
 Rev. 1: dele-bat GU<sub>4</sub>-UD u GENNA [GUB<sup>meš</sup>]  
 2: ina TIL ZALÁG AN È-a  
 3: ÍB-TAG<sub>4</sub> <sup>d</sup>UDU-TIL<sup>meš</sup>  
 4: NU GUB<sup>meš</sup> in 30 DANNA  
 5: ME NIM-a

- Obv. 1: Year 121, king Antiochus,  
 2: month XII, the 29<sup>th</sup>, solar eclipse.  
 3: When it began on the north and west side,  
 4: in 15° of daytime more than one third of the disc was eclipsed.  
 5: When it began to clear, in 15° of daytime  
 6: it cleared from the north and west to the east.  
 7: 30° onset and [clearing. In its eclipse]  
 8: the east wind blew. In [its] eclipse,  
 Rev. 1: Venus, Mercury, and Saturn [stood there;]  
 2: At the end of clearing, Mars came out;  
 3: the remainder of the planets  
 4: did not stand there. At 30°, i.e. one *bēru*,  
 5: after sunrise.

BM 34773A: LBAT 348 Rev. 1'-2'  
 transliteration & translation by SH II (p. 398-399)  
 photo: SH II, Plate 146

180 BC August 17

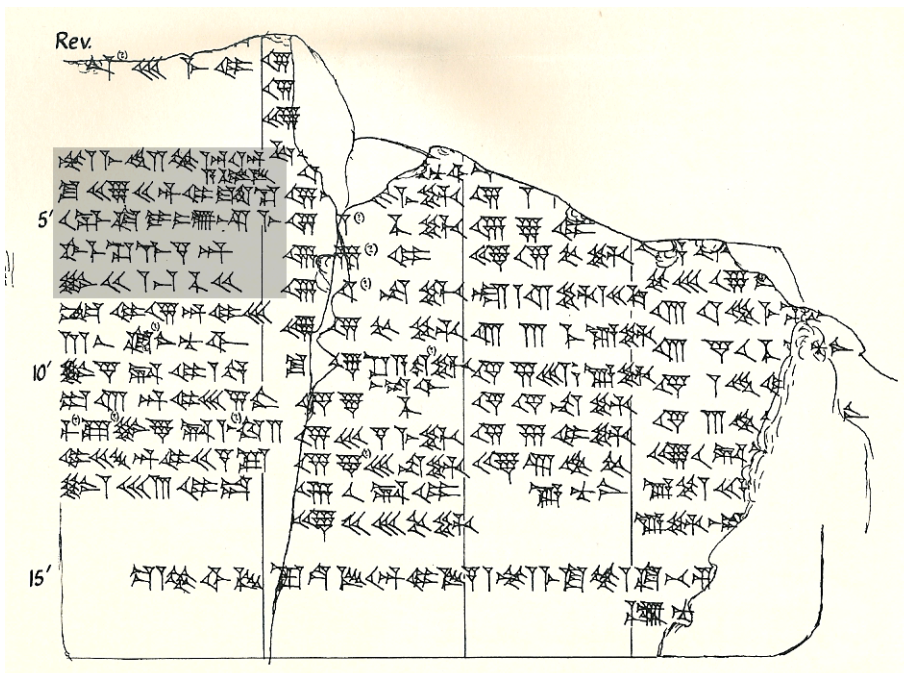


1': [...] A ULÙ u MAR<sup>2</sup> ki TAB-ú [...]  
 2': [...] ina AN-KU<sub>10</sub>-šú MAR GIN ina TIL ZALÁG-r[u ...]

1': [...] when (the eclipse) began on the south and west<sup>2</sup> side [...]  
 2': [...] ... in its eclipse the west wind blew; at the end of the clearing [...]

BM 34603: LBAT 1263 Rev. 3'-7'  
 transliteration & translation by HDM (p. 165)

170 BC July 28



3': MU-1-me-42-KÁM 'an u 'an A-šú LUGAL-MEŠ  
 4': ŠU 28 šamáš AN-KU<sub>10</sub> id SI  
 5': u MAR ki-i TAB-ú ina 12 ME  
 6': šal-šú HĀB-rat GAR-an  
 7': in 20 ME ana ŠÚ šamáš

3': Year 142 of the king An(tiochus) and An(tiochus) his son,  
 4': month IV 28 solar eclipse, beginning on the  
 5': north-west side. In 12° day  
 6': it made one third of the disk.  
 7': At 20° day before sunset.

**BM 32844: LBAT \*376 Obv. A14**  
**transliteration & translation by SH II (p. 486-487)**  
**photo: SH II, Plate 163**

166 BC May 17

A1: [M]U-1-me-46-⟨KÁM⟩ 'An-ti-'u-uk-[su ...]  
 A14: ⟨ina⟩ 13 ME al-la šal-šú ⟨HĀB-rat⟩ [...]

A1: [Y]ear 146, [king] Antiochus, [...]  
 A14: in 13° daytime more than one third of the disk [...]

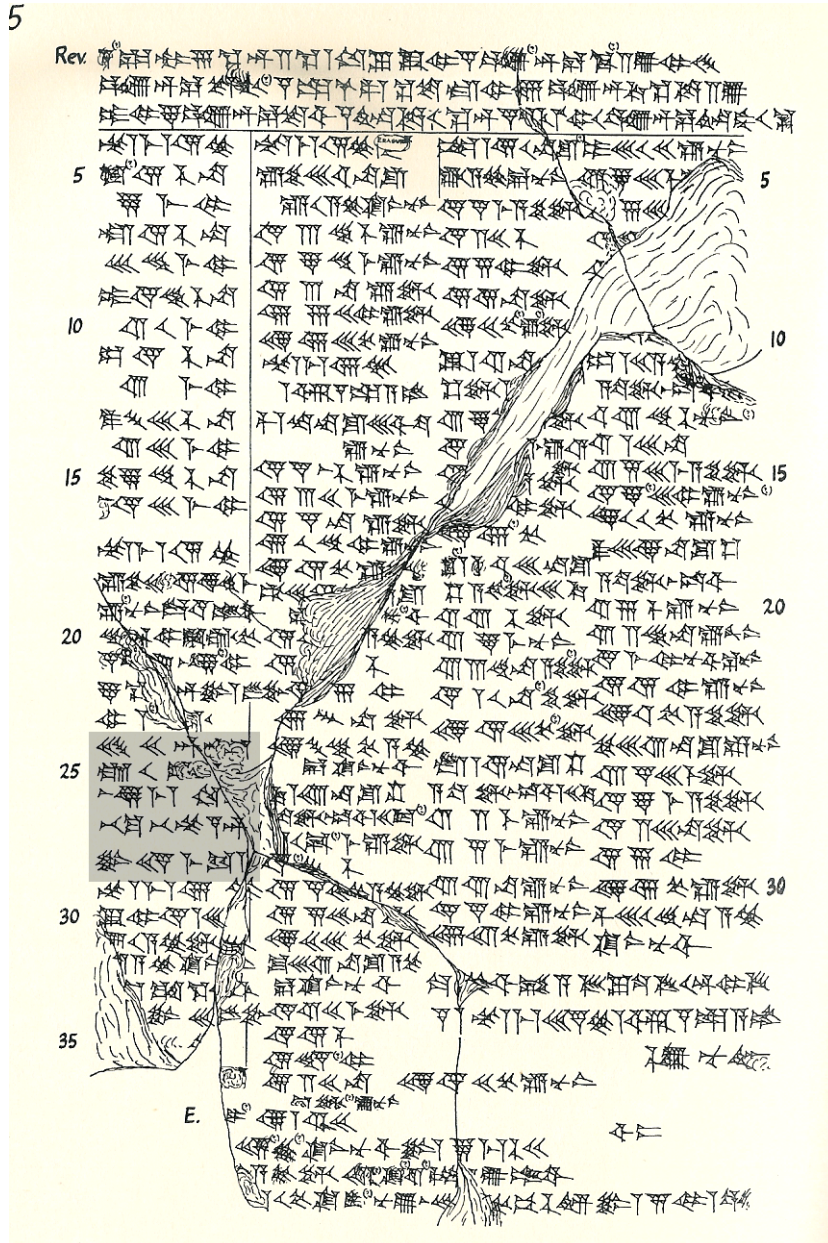
**BM 45745: LBAT \*429 Rev. 13'-15'**  
**transliteration & translation by SH III (p. 184-185)**  
**photo: SH III, Plate 207**

136 BC April 15

13': 29 24 NE NIM-a šamáš AN-KU<sub>10</sub> Á ⟨ULÙ⟩ [u] ⟨MAR⟩ ki-i TAB-[ú ...]  
 14': [dele]-bat GU<sub>4</sub>-UD u MÚL ŠID<sup>meš</sup> IGI<sup>meš</sup> MÚL-BABBAR u AN šá ina  
 bi-ib-lu ina AN-KU<sub>10</sub>-šú IGI<sup>meš</sup>[ ...]  
 15': TA MAR u ULÙ ana SI u KUR iš-ta-*ḫaṭ* 35 GAR ÍR u ZALÁG-ru ina  
 AN-KU<sub>10</sub>-šú SI šá P[A MAR<sup>?</sup> GAR GIN ...]

13': The 29<sup>th</sup>, at 24° after sunrise, solar eclipse ; when it began on the south and west side, [...]  
 14': [Ven]us, Mercury and the Normal stars were visible; Jupiter and Mars, which were in their  
 period of invisibility, were visible in its eclipse [...]  
 15': it threw off (the shadow) from west and south to north and east; 35° onset, maximal phase,  
 and clearing; in its eclipse, the north wind which was set [to the west<sup>?</sup> side blew ...]

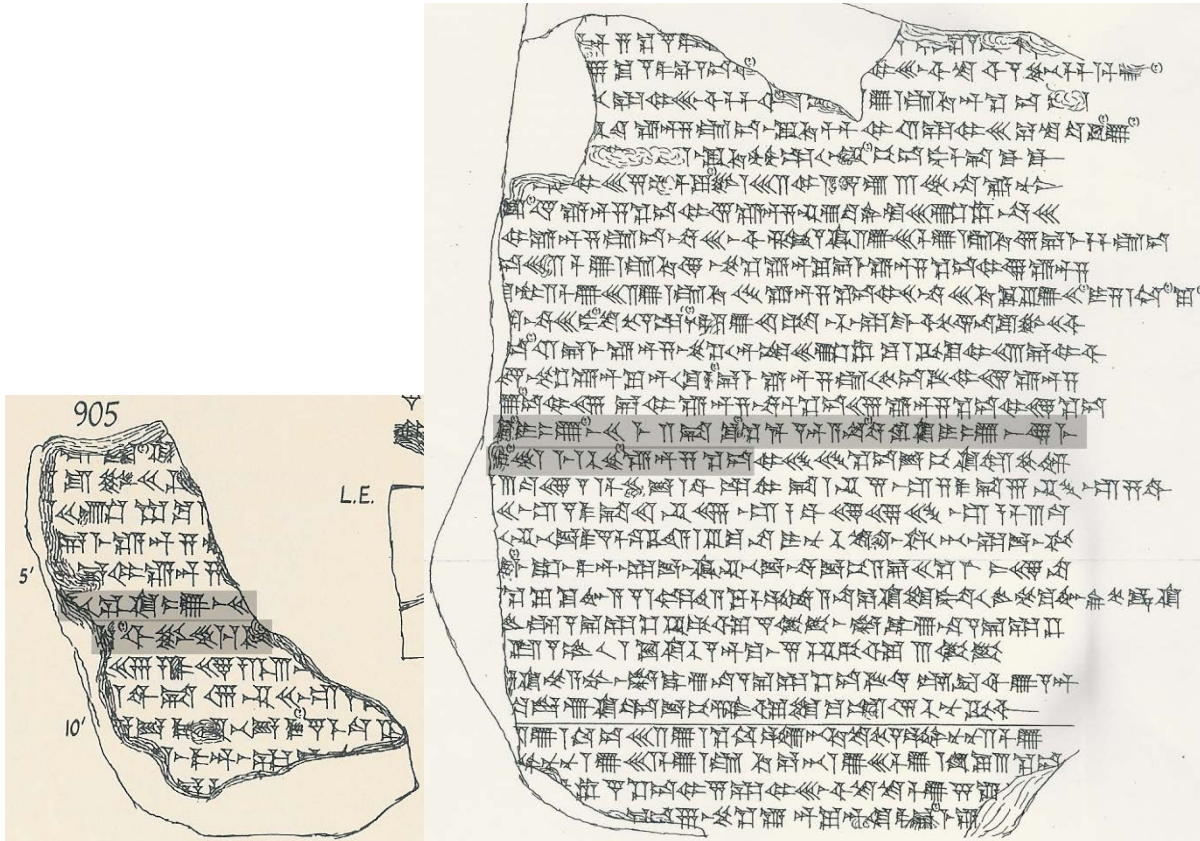
5



- 24: (DIR-ŠE) 29 šamáš AN-[KU<sub>10</sub> i]d
- 25: ULÙ u MAR [ki TAB-ú]
- 26: ina 18 ME ana NIM [...]
- 27: TIL-ma TIL MU GAR-an
- 28: IN 24 ME NIM-a

- 24: (Month XII<sub>2</sub>) 29 solar eclipse, [beginning] on the
- 25: south-west side.
- 26: In 18° day ...
- 27: it became completely total (?).
- 28: At 24° after sunrise.

BM 34175 (B1) + BM 34039 (B2) + BM 41888 (C): LBAT •437 + •436 + 905 Obv. 16'-17'  
 transliteration & translation by SHIII (p. 202-203)  
 photo: SH III, Plate 214, 215



Composite text:

16': [...] u MAR ki-i TAB-ú ina 20 ME 2-ta ŠU<sub>II</sub> ḪAB-rat GAR-an a-na  
 ZALÁG-ru ki-i TAB-ú ina 18 ME

17': [...] <x> IGI in 51 (var.: 50) ME ana ŠÚ šamáš DIR AN ZA SI GIN

16': [... solar eclipse;] when it began [on the ...] and west side, in 20° of day it made two thirds of the disc; when it began to clear, in 18° of day

17': [...] ... was visible<sup>2</sup>; at 51° (var. 50°) before sunset; clouds were in the sky, north wind blew.

BM 45708: LBAT •447 Rev. 17'

126 BC September 19

transliteration & translation by SHIII (p. 262-263)

photo: SH III, Plate 234



17': [...]ZALÁG-ir 35 GAR u <ZALÁG<sup>2</sup>> [...]

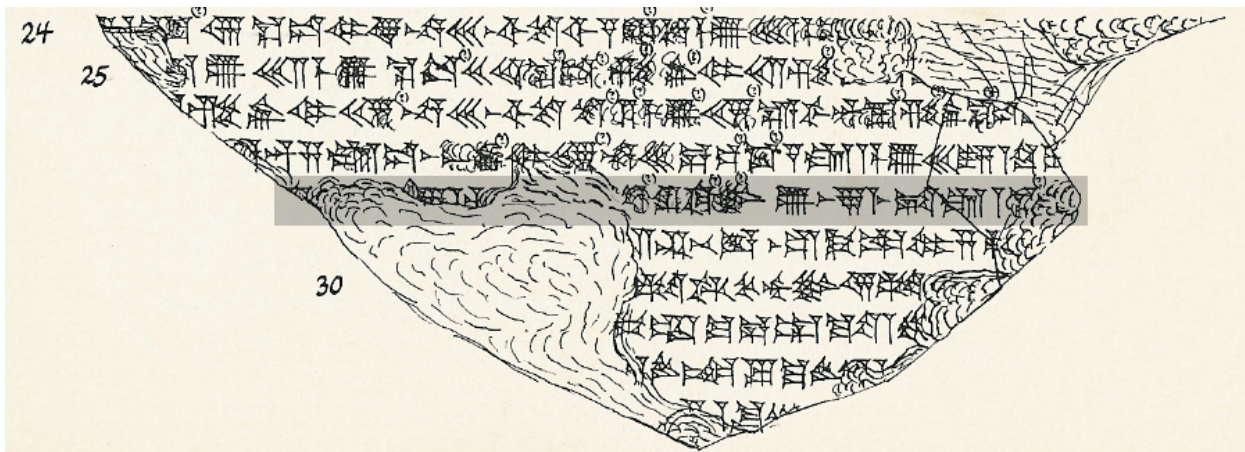
17': [...] it cleared; 35° onset and clearing [...]

BM 34096: LBAT 462 line 28

112 BC June 18

transliteration & translation by SHIII (p. 340-341)

photo: SH III, Plate 253





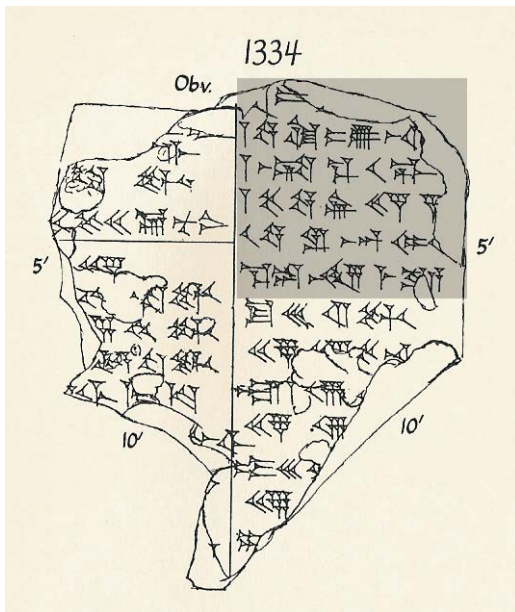
28: [...] ZALÁG-ru ki-i TAB-ú ina 8 ME TA ULÙ ana SI [ZALÁG-ir ...]

28: [... solar eclipse ...] when it began to clear, in 8° daytime from the south to the north [...]

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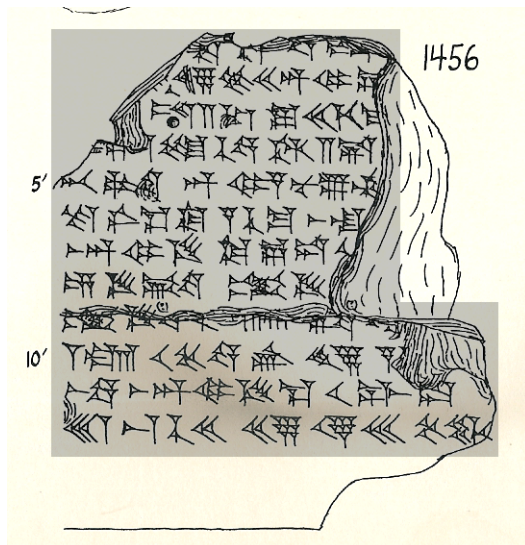
**BM 34963 + 35198 + 35238: LBAT 1334 + 1435 + 1443 Obv. V'.1'-6'**  
**transliteration & translation by HDM (p. 172-173)**

89 BC September 29



1': [...] TAB [...]  
2': ana ZALÁG ki TAB-ú ina 12<sup>2</sup>  
3': ME TA SI u MAR  
4': ana KUR ZALÁG-ir 24 GAR  
5': u ZALÁG-ru ina AN-KU<sub>10</sub>-š[ú]  
6': SI GIN ina 45 ME NIM-a

1': [...] it began [...]  
2': when it began to clear. In 12°(?) (or 11, 13)  
3': from northwest to east  
4': it cleared. 24°  
5': onset and clearing. During its eclipse  
6': north(wind) blew. At 45° after sunrise.



1': [x x x] <x 'Ar<sup>2</sup>-šá<sup>2</sup>>-k[a<sup>2</sup> ...]  
 2': [x x x] <x> 28-KÁM šamáš AN-KU<sub>10</sub> T[A ...]  
 3': [x x] TAB 23 ME ana ŠĀ<sup>2</sup> šamáš DA[R<sup>2</sup> x x]  
 4': [x (x)] <UŠ<sup>2</sup>> TU-šú ZALÁG<sup>2meš</sup> 2 UŠ [ÍR]  
 5': ~~dele~~-bat GU<sub>4</sub>-UD AN MI GAR-nu šit-ti<sup>2</sup> [...]  
 6': <sup>mú</sup>KAK-SI-SÁ šá ŠÚ-ma ina la [...]  
 7': ina AN-KU<sub>10</sub><sup>meš</sup> DI IR GUB <u<sup>2</sup>> [...]  
 8': UN<sup>meš</sup> DUG.SILÀ GAZ<sup>meš</sup> [...]  
 9': GAZ<sup>meš</sup> ina 23 ME TA SI [u MAR]  
 10': ana ULÙ u KUR ZALÁG-ir 48 GAR [ÍR]  
 11': u ZALÁG ina AN-KU<sub>10</sub><sup>meš</sup> SI u MAR GIN  
 12': 1,30 ME ana ŠÚ šamáš 28 17,30 KUR MUŠ

1': [...] Arsa[es<sup>2</sup> ...]  
 2': [...] the 28<sup>th</sup> day, solar eclipse; from [...]  
 3': [...] it began; 23° of day to the inside of the sun ... [...]  
 4': [...] its ... were clear<sup>2</sup>; 2° [maximal phase<sup>2</sup>];  
 5': Venus, Mercury, Mars<sup>2</sup> ... the remainder<sup>2</sup> [...]  
 6': Sirius, which had set, in its non-[...]  
 7': In its eclipse, ... stood there<sup>2</sup> ... [...]  
 8': people broke pots [...]  
 9': they broke. In 23° of day it cleared from north [and west]  
 10': to south and east. 48° onset, [maximal phase,]  
 11': and clearing. In its eclipse, the north and west winds blew.  
 12': At 1,30° of day before sunset. The 28<sup>th</sup>, 17;30 KUR measured.