An Astronomical Fragment from Columbia University and the Babylonian Revolts against Xerxes

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In *JCS* 1 (1947), 349–50, A. Goetze published two late-Babylonian astronomical tablets from Babylon housed at the Butler Library at Columbia University in the very first installment of "Texts and Fragments."[1] The first of the two (*JCS* 1, 349) was later identified by A. Sachs in *JCS* 6 (1952), 106, as a Normal-Star Almanac for Seleucid Era 96, while the second was identified by A. Goetze himself in *JCS* 1, 350, as "a fragment of an astrological omen." This identification was later accepted by *HKL* I, 158, and III, 95, which list the fragment as astrological. However, further inspection of the fragment can no longer support this identification. Rather, the fragment seems to belong to an astronomical diary. An edition of this fragment is offered below.

A. Goetze, JCS 1, 350, no. 2 (collated)

1′. . . . .] × ti [. . .
2′ . . . .] × MU ŠA$_2$ T[I$^?$ . . .

3′. . . . .] × ^{itu}ŠU UD.5.KAM* [. . .
4′. . . . .] ana E^{ki} il-li-^{r}ku^1 [. . .
5′. . . . .] × ^{lu2}ERIN$_2$ KUR ELAM.MA^{ki} [. . .
6′. . . . K]I ša$_2$ ^{d}ṣal-bat-a-nu ša$_2$ ana × [. . .
7′. . . ^{d}ṣ]al-bat-a-nu ana ^{mul}AL.LUL K[U$_4$* . . .
8′. . .ip-par-š]i-id u ana ID$_2$ ŠUB-ut (imqut)-ma [. . .
9′. . .ana ^{uru}]BAR$_2$.SIPA DU-ku-nu(illikūnu) URU GUL U × [. . .
10′. . . .] × × × × × ^{r}TI$^{?1}$ [. . .

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1. For Babylon as the provenience of the two Columbia tablets, see A. Sachs, *JCS* 2 (1948), 272. The two tablets may have originally belonged to the same ancient archives as astronomical tablets that now form parts of the BM 77000 series (see Leichty *Sippar Cat.* 3, pp. xiii–xiv). For previous discussion of tablets at Columbia University, see I. Mendelsohn, *Catalogue of The Babylonian Tablets in The Libraries of Columbia University* (1943).

Translation

1′. . . . .]. .[. . .
2′. . . .]. . . . [. . .

3′. . . .] . the month of Tammuz, the fifth day [. . .
4′. . . .] to Babylon went [. . .
5′. . . .] . the troops of Elam [. . .
6′. . . . the reg]ion of Mars which to . [. . .[2]
7′. . . M]ars into Cancer ente[red . . .
8′. . . fle]d and into the river jumped and [. . .
9′. . . to] Borsippa went,[3] destroyed city . .[. . .[4]
10′. . . .]. . . . . .[. . .

The surviving ten lines of the Columbia fragment are divided into two sections by a dividing line after line 2′. The first two lines are too fragmentary to yield any information, but lines 3′–9′ seem to preserve two sections of historical notices (4′–5′, 8′–9′) separated by astronomical observations (6′–7′). The historical notices appear to be related to a conflict between Babylon and Elam (Ancient Iran = Elam, Media, Persia).[5] Line 3′ dates the second section to the summer month of Tammuz (Month IV = June/July). Line 4′ indicates that the troops, and/or others, went to Babylon. Line 5′ mentions the troops of Elam, and line 8′ apparently refers to a military defeat. Here someone flees and then jumps into a river.

A parallel is to be found in the annals of Assurnasirpal:[6]

. . . ^{m}Ša$_2$-du-[du] TA 70 ERIN$_2$ .MEŠ-šu$_2$ a-na šu-zu-ub
ZI.MEŠ-šu$_2$ a-na ^{id2}pu-rat-te im-qu-ut (*AKA* 351: 18–19)

. . . Šadudu, with 70 of his troops, jumped into the Euphrates
in order to save his life.

In line 9′ a group of people go to Borsippa. Lines 6′–7′ date these events to a year when the planet Mars was observed in the vicinity of Cancer during the month of Tammuz. Observations of Mars in this context may be more than coincidental

2. For *KI* = *qaqqaru*, "the region surrounding a star, constellation, or planet," see *CAD* Q, 121, and W. Horowitz, *Mesopotamian Cosmic Geography* (forthcoming). For planets in particular, see F. Rochberg-Halton, *ZA* 77 (1987), 213: 5–6, 219 n. 5; *AfO.* Beih. 22, 285: 29.

3. The sign *nu* at the end of the verb is the Late Babylonian ventive (*An.Or.* 33, no. 82 d). For Borsippa written ^{uru}*bar$_2$.sipa*, see *RGTC* 8, 68–70. Writings of city-names with determinative *URU*, but without *KI*, are common in late-Babylonian astronomical diaries. Cf. Sachs-Hunger *Diaries* I, 190 –328, 27′, 344 –273, 35′, II, 32 –253 B$_1$ 6′. However, note II, 332 –187, 17′ ^{uru}*bar.sip$_3^{ki}$*.

4. Perhaps read *uru.gul umun* as an incipit of a city and temple lament, "O Destroyed City, O Lord," of the type published by M. E. Cohen in *The Canonical Lamentations of Ancient Mesopotamia* (see pp. 791–98 for incipits, p. 790 for ritual attestations) and *Sumerian Hymnology: The Eršemma* (= *HUCA* supp. 2; see pp. 7–17 for incipits). For religious ceremonies in astronomical diaries, see W. Horowitz, *RA* 85 (1991), 75–77; *NABU* 1991, 52–53, no. 80. Alternatively, *URU GUL* might refer to an earlier Persian destruction in Babylonia.

5. For Elam = Persia in the Achaemenid Period, see, e.g., *TCS* 5, 111:24–26. For further examples of Elam as a name for Iran after the fall of Elam, see *RGTC* 8, 130–32.

6. Compare also *ABL* 942, rev. 12: [*a-n*]*a pu-rat-ti in-da-qu-tu*, "They jumped into the Euphrates," and cf. *AfO* 23, 42:18; Oppenheim *Dreams* 327:52–53; 343:II 2.

since the planet Mars is not only the planet of Nergal, the Babylonian god of war, but is also often associated with Elam in astrology.[7]

As preserved, lines 3′–10′ present three main elements that may help us identify the fragment:

1. Date:	Fifth of Tammuz—unknown year
2. Historical Background:	Apparent conflict between Babylonia and ancient Iran
3. Astronomical Information:	Mars enters Cancer[8]

A fourth factor in identifying the nature of the fragment is the explicit preterite verbal form in line 4′, *il-li-ku*, "he went (subjunctive), they went." This would indicate that *ŠUB-ut* in line 8′ is to be read *imqut*, "jumped," rather than a present-fugure form *imaqqut* "jumps, will jump." The combination of these elements (historical information, astronomical data, preterite verbs) suggests that the fragment is part of an astronomical diary.[9]

Historical Notices in Astronomical Diaries

A number of Late Babylonian astronomical diaries edited by H. Hunger and A. Sachs in Sachs-Hunger *Diaries* I–II preserve historical notices that may be compared with lines 4′–5′ and 8′–9′ of the Columbia fragment. For example, Sachs-Hunger *Dairies* I –330, rev. 6′–15′, preserves Alexander the Great's entrance to Babylon in 331 B.C.E., and a diary for 164–163 B.C.E. records the arrival of the corpse of Antiochus IV at Babylon.[10] The physical format of the Columbia fragment also fits the genre of astronomical diaries since astronomical diaries are written in Late Babylonian script on tablets that are divided into monthly sections by dividing lines such as the one drawn between lines 2′–3′. Here, a section of a diary now

7. *SAA* VIII, 114:6 (= *Thompson Reports* 232); *BPO* 2/2, 40, III 11a; *ACh. Ištar* XL A* 66, 70, 76–77; *ACh. Supp.* XLIX 15–17. Cf. Weidner *Handbuch* 9:16; *MSL* XI; 40:37; cf. *SAA* VIII, 143 (Mars and Tammuz).

8. The formula of the astronomical observation in line 7′, "Planet *ana* Star/Constellation KU_4 (*erēbu*)," is also attested twice in the astronomical diary for –567 (–567:10 *AN ana ALLA* KU_4, "Mars into Praesepe"; –567 rev. 19′: *DIL.BAD u* GU_4.*⟨UTU⟩ ana DUR* $ša_2$ *SIM.MAH* KU_4, "Venus and Mercury into the 'Band' of the Swallow entered"). Cf. Sachs-Hunger *Diaries* I –289:16′ and see Sachs-Hunger *Diaries* II, p. 163, "Date" for the later Seleucid period formula "Planet Zodiac-Sign *KUR* (*kašādu*)."

9. Chronicles are also written on Late Babylonian fragments in the format of *JCS* 1, 350 no. 2, but I know of no chronicle that preserves astronomical observations such as those in lines 6′–7′. Prophecies likewise may be ruled out by the preterite verb although the Columbia fragment is similar in some respects to the "prophecy" *LBAT* 1543 edited by R. Biggs in *Iraq* 29 (1967), 129–32.

10. F. Stephenson and C. Walker, *Halley's Comet in History*, 32: 17′–18′. For historical notices in astronomical diaries, see Sachs-Hunger *Diaries* I, p. 36; W. Van Soldt, *ZA* 81 (1991), 154–55; F. Rochberg-Halton, *JAOS* 111 (1991), 325, and the following passages in the diaries: Sachs-Hunger *Diaries* I –651 iv 18′–19′; –369 rev. 8′–9′; –366 ii 2–10; –330 14′–18′, rev.; –328 rev. 26′–27′; –322 B 8′; –309 14; –273 rev. 29′–39′; –270 rev. 13′–17′; –261 B 1′–3′; Sachs-Hunger *Diaries* II –255 rev. 14′–15′; –253 A_1 11, A_2 3′, B_1 6; –251 upper edge 3; –249 A rev. 6′; –247 B 4′; –245 11–13; –237 13′; –187 rev. 17′–18′; –183 rev. 11′–13′; –168 A 14–15; –164 B 15′–C 13′–14′; *Halley's Comet in History*, 33: 36′–38′. For a notice of the death of Xerxes in the lunar eclipse tablet BM 32234 (= LBAT *1419), see M. Stolper, *JHS* 108 (1988), 196–98.

represented by lines 3′–10′ would relate to the month of Tammuz, while lines 1′–2′ before the dividing line would belong to the previous month Sivan (Month III).

In astronomical diaries, historical notices follow astronomical observations.[11] Thus, the preserved sections of lines 4′–5′ presumably followed astronomical data for the first days of Tammuz. Likewise, it may be assumed that the observations of Mars in lines 6′–7′, and the following historical notice in lines 8′–9′, date to a later part of Tammuz.[12] However, before searching for the historical context for the events of lines 3′–9′, let us sum up what we know, may infer, and do not know from the fragment. We know that lines 3′–9′ date to events during a summer that Mars entered Cancer during the month of Tammuz after the fifth of Tammuz, that these events apparently involved the army of "Elam" and the cities of Babylon and Borsippa. We do not know from the surviving fragment itself in what year the events that may be recorded in the tablet occurred, nor can we be completely sure if the fragment records a Babylonian victory or defeat, since we are not told who flees and jumps into the river in line 8′.

Despite these uncertainties, a historical context can be proposed for lines 3′–9′. Again, if one assumes that the fragment preserves an astronomical diary with historical notices, then the events in lines 3′–9′ must belong to the seventh century or later since the earliest known diary dates to the 652 B.C.E. (see Sachs-Hunger *Diaries* I, p. 42). If so, the events in the fragment—an apparent conflict between Babylonia and Elam (Ancient Iran) during the summer month of Tammuz—would seem to fit best one of the two Babylonian revolts against Xerxes in the summers of 484 and 482 B.C.E., led by the rebel kings of Babylon Bel-šimanni and Šamaš-eriba, respectively.[13] The astronomical data (Mars enters Cancer in the month of Tamuz, but later than the fifth of Tammuz) suits the revolt of Šamaš-eriba of 482 B.C.E. better than that of Bel-šimanni in 484 B.C.E., but cannot be used to eliminate the revolt of 484.[14]

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11. For the sequence of topics in astronomical diaries, see Sachs-Hunger *Diaries* I, p. 13.

12. Here the format of the Columbia Fragment differs from later astronomical diaries, where historical notices almost always occur at the very end of monthly sections (cf. n. 11 above). However, there is no reason to believe that this convention was observed during the early fifth century since both surviving astronomical diaries from before the reign of Xerxes preserve monthly sections that interpose astronomical observations and historical notices; see Sachs-Hunger *Diaries* I, -651 iv; -567 rev. 8′–10′. For a later deviation from the standard sequence of topics, compare Sachs-Hunger *Diaries* I, -322 B′ obv.′ (the notice of the death of Alexander the Great).

13. For studies of the Babylonian revolts against Xerxes, see most recently A. Kuhrt and S. Sherwin-White, *Achaemenid History* II, 69–78; M. Dandamaev, *A Political History of the Achaemenid Empire*, 183–87 (both with further bibliography for classical authors and modern research). For earlier studies, note in particular *CAH* IV², 73–75, 133–35; F. Bohl, *Bi.Or.* 19 (1962), 110–14 and G. Cameron, *AJSL* 58 (1941), 319–25. The reference to the fifth of Tammuz (early summer) in line 3′ rules out the revolts of "Nebuchadnezzar III–IV" against Darius in 522 and 521 B.C.E. since the former occurred during the fall of 522 and the latter began late in the summer of 521 (see Dandamaev, *Political History*, 114–15, 122–23). Likewise, Cyrus' conquest of Babylon in 539 B.C.E. can be excluded since the Battle of Opis was not fought until the month of Tishre (Month VII) and "The Nabonidus Chronicle" dates Cyrus' "liberation" of Babylon to the third of Araḫšamnu (Month VIII); see *TCS* 5, 109–10; Dandamaev, *Political History*, 47).

14. The westernmost prominent star in the modern constellation Cancer is Beta Cancri, whose longitude in -480 was 89.6°. The ancient zodiacal sign, however, began with Beta Geminorum, whose

The Revolt of Bel-šimanni in 484 B.C.E.

The Babylonian revolt against Xerxes of 484 B.C.E. (Xerxes Year 2) has long been known from classical sources and from three Babylonian economic documents bearing date-formulae of Bel-šimanni that attest to rebel control over at least some of the cities of Babylonia.[15] Of the three tablets, two are dated. The earlier of the two, *Amherst* 248 from Borsippa (E. Unger, *AfO* 19, 78), is dated to the 14th or 15th of the month of Av (Month V), while the later, from Dilbat (*VS* 6, 331), is dated to the first day of Month VI, Elul. The third tablet, *VS* 3, 180, also from Borsippa, does not preserve a complete date.[16] These documents demonstrate that the revolt of Bel-šimanni cannot have began any later than V 14/15.[17]

Based on this data and the events on and/or later than the fifth of Tammuz (Month IV) in the Columbia fragment, the following chronology can be proposed for the revolt of Bel-šimanni of 484 B.C.E. if one assumes that the Columbia tablet dates to this year. The revolt may begin in Babylon as early as the fifth of Tammuz

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longitude in −480 was 79.2°; cf. P. Huber, *Centaurus* 5 (1958), 205. The arrival of Mars at these longitudes for 484 and 482 B.C.E. can be computed as follows.

	484 B.C.E.
Beta Geminorum	Av (V) 27
Beta Cancri	Elul (VI) 17
	482 B.C.E.
Beta Geminorum	Tammuz (IV) 28
Beta Cancri	Av (V) 14

Although the above computations would appear to eliminate 484 B.C.E. from consideration, since the earliest arrival of Mars in Cancer occurs late in the month of Av (the month after Tammuz), it is not certain where early fifth century Babylonian astronomers would have placed the borders of the constellation Cancer. Note, for example, that a late copy of a seventh century *ziqpu*-star text (AO 6478 = *TCL* 6, 21 = *RA* 10, 216–17 = Weidner *Handbuch*, 132–33) measures the interval between Cancer (^{mul}*al.lul*) and the preceding star, ^{mul}*maš.tab.ba arki*, "the Rear Gemini," as 2/3 *bēru* = 20° (cf. F. Rochberg-Halton, *JAOS* 111, 327). The computed dates for 482 B.C.E. fall closer to the fifth of Tammuz and are therefore better for the astronomical observations in lines 6′–7′. There is no longer any evidence that the summer of 484 B.C.E. included an intercalary Elul (see n. 15 below).

15. For the economic tablets dating to both revolts, see the Appendix below, F. Bohl *Bi.Or.* 19, 110–14; J. Oelsner, *WO* 8 (1975/76), 312–13. For economic tablets from the reign of Xerxes, see Oelsner, *ibid.*; S. Graziani, *I testi mesopotamici datati al regno di Serces* with tablets from Xerxes Years 2–4 on pp. 24–40; and additional tablets now listed in Leichty *Sippar Cat.* 1–3. *VS* 5, 118, which is dated to an intercalary Elul, can no longer belong to Xerxes Year 2 (as in Graziani, *Testi*, 30; Oelsner *WO* 8, 313). A recent collation confirms Ungnad's copy (i.e., *VS* 5, 118: 23 preserves "Xerxes Year 6 + x"; see A. Kuhrt, *Achaemenid History* II 72). Likewise the date "Xerxes Year 4?" for this same tablet in San Nicolo-Ungnad, *NRV* 128, no. 91 must be abandoned. The Butler Library collections also include a number of published and unpublished Achaemenid Period economic tablets that may belong to the same group(s) of texts as the astronomical fragment edited here (cf. n. 1.).

16. As copied, the month-names in *VS* 3, 180: 19 may be *ŠU*, *KIN* or DU_6, i.e., Months IV, VI, VII. F. Bohl in *Bi.Or.* 19, 112 (Berlin no. 464) reads Ab or Elul (Month V, VI). Note the reference to ^{itu}*APIN* (Month VIII) in *VS* 3, 180: 5.

17. Two tablets from the late spring of 484 B.C.E. are dated to III 14 Xerxes Year 2. The first *VS* 6, 181 is from Bab-surri (cf. *RGTC* 8, 61) and the second BM 78090 (= 86-6-17, 6; Leichty *Sippar Cat.* 3, 131) belongs to a collection of tablets that was purchased by the British Museum from J. M. Shemtob and so would appear to be from Babylon or Sippar (see Leichty *Sippar Cat.* 3, pp. xi, xiv).

(Columbia fragment line 3′), and then following the defeat of the "Elamites" at Babylon (perhaps it is a Persian official who flees and jumps into the river in Columbia fragment 8′), the revolt spreads to Borsippa (Columbia fragment 9′), where Bel-šimanni is in control by V 14/15 (*Amherst* 248):

Chronology

Month III 14	Last Xerxes tablet at Babylon
Month IV on/after 5	Revolt at Babylon—Columbia Fragment 4′–5′
Month IV after 5	Mars enters Cancer
	Revolt spreads to Borsippa—Columbia Fragment 8–9′
Month V 14/15	Bel-šimanni tablet at Borsippa
Month VI 1	Bel-šimanni tablet at Dilbat

The Revolt of Šamaš-eriba 482 B.C.E.

The revolt of 482 B.C.E. (Xerxes year 4), like that of 484 B.C.E., is known both from classical sources and Babylonian economic tablets.[18] Economic tablets dating to Šamaš-eriba from Babylon are attested from the 4th of Ab (Month V 4, *LB* 1718; see F. Bohl, *Bi.Or.* 19, 110–12) through VII 22 (*ZA* 3, 157–58 no. 16), while the spread of the revolution of 482 B.C.E. to Borsippa is proved by a number of tablets dating to months VI and VII from this city (see Appendix). The latest known Xerxes tablet from Babylon before the revolt is BM 54063, which dates to III 22.[19] This evidence also allows for a Babylonian revolt against Xerxes in the Columbia Fragment in early Tammuz and the spread of the revolt in this same month from Babylon to Borsippa later in the month.

Chronology

Month III 22	Last Xerxes Tablet at Babylon
Month IV on/after 5	Revolt at Babylon—Columbia Fragment 4′–5′
Month IV after 5	Mars enters Cancer
	Revolt spreads to Borsippa—Columbia Fragment 8–9′
Month V 4	Šamaš-eriba tablet at Babylon
Month VI–VII	Šamaš-eriba tablets at Borsippa

Conclusion

Despite the uncertainties outlined above, the Columbia Fragment may provide the first cuneiform evidence for events of the Babylonian revolts against Xerxes of

18. For the modern studies and classical sources, see n. 13 above. For the economic tablets dating to the reign of Šamaš-eriba, see n. 15 and the Appendix.

19. = 82–5–22, 183 (Leichty *Sippar Cat.* I, 131). For the provenience of this tablet as Babylon, see ibid., p. xxxvii.

484 and 482 B.C.E. that play so prominent a part in the classical histories of Babylon and Babylonia. Unfortunately, given the poor state of preservation of the Columbia Fragment, we may never know for certain if the fragment is, or is not, part of an astronomical diary, or does, or does not, preserve parts of historical notices relating to the Babylonian uprisings against Xerxes. Thus, it is perhaps fitting to close with an invitation to readers to search for further materials that may shed light on these matters.

Appendix: Tablets Dating to the Reigns of Bel-šimanni and Šamaš-eriba

King	Tablet	Provenience	Date
Bel-šimanni			
	Amherst 248 (*AfO* 19, 78)	Borsippa	V 14/15
	VS 6, 331	Dilbat	VI 1
	VS 3, 180	Borsippa	—
Šamaš-eriba			
	LB 1718 (*Bi.Or.* 19, 110ff.)	Babylon	V 4
	VS 3, 178	Borsippa	VI 25
	VS 3, 179	Borsippa	VI —
	VS 5, 116	Borsippa	VII 21
	ZA 3, 157–58 no. 16	Babylon	VII 22
	VS 6, 173	Borsippa	VII 23
	VS 6, 174	Borsippa*	VII 29
	VS 6, 175	Borsippa*	—

Related Tablets Dating to the Reign of Xerxes

484 B.C.E. = Xerxes Year 2		
OECT 12, 182	Borsippa	II 22
VS 6, 181	Bab-surri**	III 14
BM 78090	Uncertain**	III 14
BRM 1, 85	Borsippa	IV 6
482 B.C.E. = Xerxes Year 4		
BM 54063	Babylon ***	III 22

*See F. Böhl, *Bi. Or.* 19, 113 (*VS* 6, 174–75 = Berlin Nr. 785–86).
**See note 17.
***See note 19.