This is the second of two articles in consecutive issues of *The Watchtower* that discuss scholarly questions surrounding the date of the first destruction of ancient Jerusalem. This two-part series presents thoroughly researched and Bible-based answers to questions that have puzzled some readers.

When Was Ancient Jerusalem Destroyed?

PART TWO WHAT THE CLAY DOCUMENTS REALLY SHOW

Photograph taken by courtesy of the British Museum

PART ONE ESTABLISHED THE FOLLOWING POINTS:

- Secular historians say that Jerusalem was destroyed in 587 B.C.E.*
- Bible chronology indicates that the destruction occurred in 607 B.C.E.
- Secular historians base their conclusions on the writings of classical historians and on the canon of Ptolemy.
- Some writings of classical historians contain significant errors and are not always consistent with the records on clay tablets.#

THE Bible says that the Jewish captives were to be exiled in Babylon "until the seventy years were completed in fulfillment of the word of the LORD spoken by Jeremiah." When were they released? In "the first [regnal] year of Cyrus king of Persia." (2 Chronicles 36:21, 22, *New International Version*) Biblical and secular history agree that this exile in Babylon ended after Cyrus conquered Babylon and freed the Jews, who returned to Jerusalem in 537 B.C.E. Since the Bible explicitly says that the exile lasted for 70 years, it must have begun in 607 B.C.E.

However, most scholars date the destruction of Jerusalem at 587 B.C.E. This allows for only a 50-year exile. Why do they conclude that? They base their calculations on ancient cuneiform documents that provide details about Nebuchadnezzar II and his successors.[1] Many of these documents were written by men who lived during or close to the time of Jerusalem's destruction. But just how sound are the calculations that point to the date 587 B.C.E.? What do these documents *really* show?

To answer those questions, consider three types of documents that scholars often rely on: (1) The Babylonian chronicles, (2) business tablets, and (3) astronomical tablets.

* There are various ways of expressing dates. In this article, B.C.E. means "Before the Common Era."

See the article "When Was Ancient Jerusalem Destroyed?—Why It Matters, What the Evidence Shows" in our issue of October 1, 2011.

● The Babylonian chronicles.

What are they? The Babylonian chronicles are a series of tablets recording major events in Babylonian history.[2]

What have experts said? R. H. Sack, a leading authority on cuneiform documents, states that the chronicles provide an incomplete record of important events.* He wrote that historians must probe "secondary sources . . . in the hope of determining what actually happened."

What do the documents show? There are gaps in the history recorded in the Babylonian chronicles.[3] (See the box below.) Logically, then, the question arises, How reliable are deductions based on such an incomplete record?

● Business tablets.

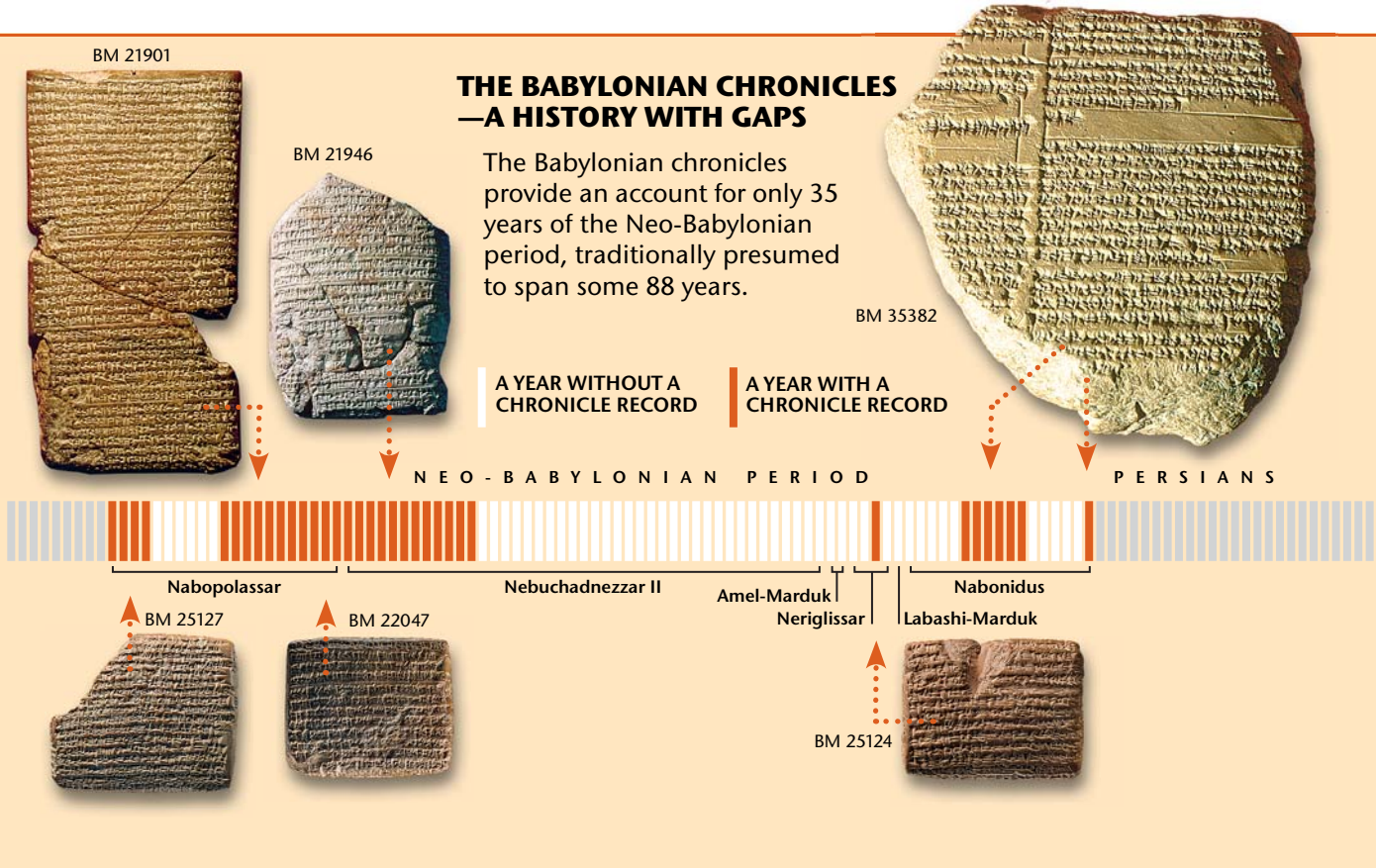
What are they? Most business tablets from the Neo-Babylonian period are legal receipts. The tablets were dated to the day, month, and year of the reigning king. For example, one tablet states that a transaction took place on "Nisan, the 27th day, the 11th year of Nebuchadrezzar [also known as Nebuchadnezzar II], king of Babylon."[4]

When the king died or was removed and a new king came to the throne, the remaining months of that regnal year were considered the accession year of the new ruler.*[5] In other words, the transition of one king to the next took place in the same Babylonian calendar year. Accordingly, tablets of the new ruler's accession year should logically be dated during months after the last month of the former king.

What have experts said? R. H. Sack examined numerous business tablets from the Neo-Babylonian period. In 1972, Sack wrote that new unpublished British Museum texts placed at his disposal "completely upset"

* **Note:** None of the secular experts quoted in this article hold that Jerusalem was destroyed in 607 B.C.E.

* An accession year was not counted toward the years of a king's rule; it referred to the remaining months of the year until the new king was officially enthroned.



previous conclusions regarding the transition of rule from Nebuchadnezzar II to his son Amel-Marduk (also known as Evil-merodach).[6] How so? Sack knew that tablets showed Nebuchadnezzar II to be still ruling in the sixth month of his last (43rd) year. But these newly deciphered tablets from the accession year of the following king, Amel-Marduk, were dated to the *fourth* and *fifth* months of what had been assumed to be the same year.[7] Clearly, there was a discrepancy.

What do the documents show? There are further discrepancies in the transition of one king to another. For example, the documents show that Nebuchadnezzar II was still ruling in his tenth month—six months after his successor is assumed to have begun reigning.[8] A similar discrepancy exists with the transition between Amel-Marduk and his successor, Neriglissar.[9]

Why are these discrepancies significant? As mentioned earlier, gaps in the history documented by the Babylonian chronicles suggest that we may not have a continuous chronological record.[10] Could others have ruled between the reigns of these kings? If so, additional years would have to be added to the Neo-Babylonian period. Therefore, neither the Babylonian chronicles nor the business tablets provide a basis to establish with certainty that Jerusalem was destroyed in 587 B.C.E.*

● Astronomical tablets.

What are they? Cuneiform tablets that contain descriptions of the positions of the sun, moon, planets, and stars, coupled with such historical information as the regnal year of a particular king. For instance, the astronomical diary shown below records a lunar eclipse that occurred in the first month of the first year of King Mukin-zeri's reign.[11]

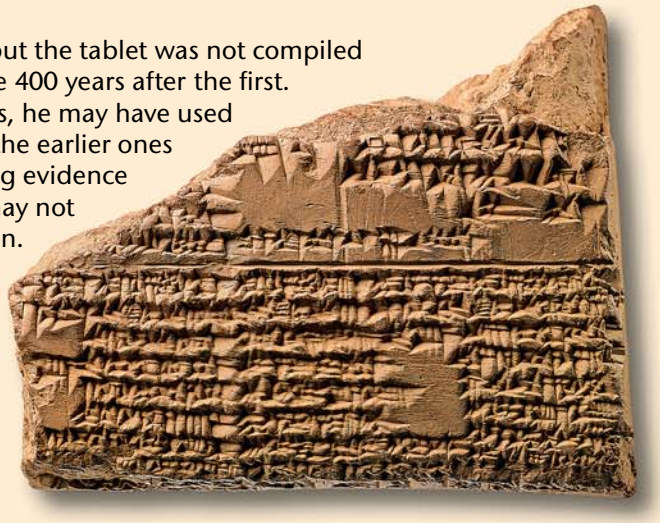
What have experts said? Experts agree that the Babylonians had developed extensive charts and schemes to predict when eclipses would most likely occur.[12]

But could the Babylonians project backward to calculate when eclipses had occurred in the past? "It is possible," states Professor John Steele, "that some of the earliest predictions could have been made by projecting the scheme *backwards* when the text was compiled." (Italics ours.)[13] Professor David Brown, who believes that the astronomical

* Business tablets exist for all the years traditionally attributed to the Neo-Babylonian kings. When the years that these kings ruled are totaled and a calculation is made back from the last Neo-Babylonian king, Nabonidus, the date reached for the destruction of Jerusalem is 587 B.C.E. However, this method of dating works only if each king followed the other in the same year, without any breaks in between.

ASTRONOMICAL DIARY BM 32238

This tablet contains a record of lunar eclipses, but the tablet was not compiled until after the last eclipse, which occurred some 400 years after the first. Since the scribe did not observe all those events, he may have used mathematical calculations to determine when the earlier ones took place. Unless there is additional supporting evidence confirming his conclusions, such calculations may not be a source of reliable chronological information.



charts included predictions made shortly before the recorded events, acknowledges that it is conceivable that some of these were *"retrocalculations* undertaken by scribes in the 4th and later centuries BC."[14] If these are retrocalculations, could they really be considered absolutely reliable unless corroborated by other evidence?

Even if an eclipse did occur on a certain date, does this mean that the *historical* information the writer of the tablet assigns to that date is accurate? Not necessarily. Scholar R. J. van der Spek explains: "The compilers were astrologers, not historians." He describes sections of the tablets that contain historical records as "more or less casual," and he warns that such historical information must "be used with caution."[15]

What do the documents show? Consider the example of VAT 4956. The opening line of this tablet reads: "Year 37 of Nebukadnezar, king of Babylon."[16] Thereafter, it contains detailed descriptions of the position of the moon and planets in relation to different stars and constellations. Also included is one lunar eclipse. Scholars say that all these positions occurred in 568/567 B.C.E., which would make the 18th year of Nebuchadnezzar II, when he destroyed Jerusalem, 587 B.C.E. But do these astronomical references irrefutably point *only* to the year 568/567 B.C.E.?

The tablet mentions a lunar eclipse that was calculated as occurring on the 15th day of the third Babylonian month, Simanu. It is a fact that a lunar eclipse occurred on July 4 (Julian calendar) of this month during 568 B.C.E. However, there was also an eclipse *20 years earlier,* on July 15, 588 B.C.E.[17]

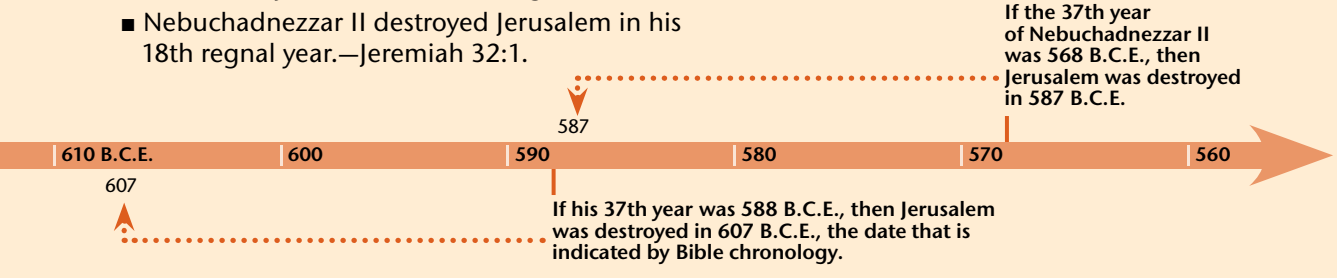
If 588 B.C.E. marked the 37th year of Nebuchadnezzar II, then his 18th year would be 607 B.C.E.—the very year indicated by the Bible's chronology for the destruction of Jerusalem! (See the time line below.) But does VAT 4956 provide further corroborating evidence for the year 607 B.C.E.?

In addition to the aforementioned eclipse, there are 13 sets of lunar observations on the tablet and 15 planetary observations. These describe the position of the moon or planets in relation to certain stars or constellations.[18] There are also eight time intervals between the risings and settings of the sun and the moon.[18a]

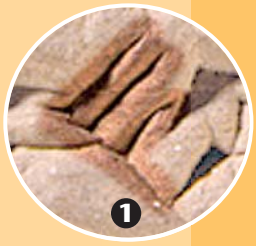
Because of the superior reliability of the lunar positions, researchers have carefully analyzed these 13 sets of lunar positions on VAT 4956. They analyzed the data with the aid of a computer program capable of showing the location of celestial bodies on a

VAT 4956 POINTS TO WHICH YEAR FOR JERUSALEM'S DESTRUCTION —587 B.C.E. OR 607 B.C.E.?

- The tablet describes astronomical events that occurred in the 37th year of the rule of King Nebuchadnezzar II.
- Nebuchadnezzar II destroyed Jerusalem in his 18th regnal year.—Jeremiah 32:1.



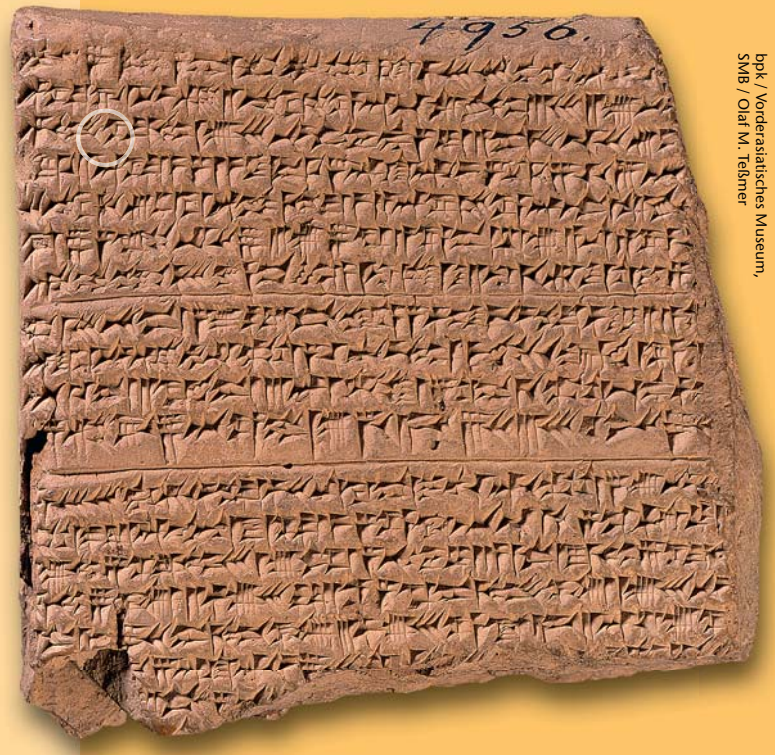
- VAT 4956 points more convincingly to 607 B.C.E.



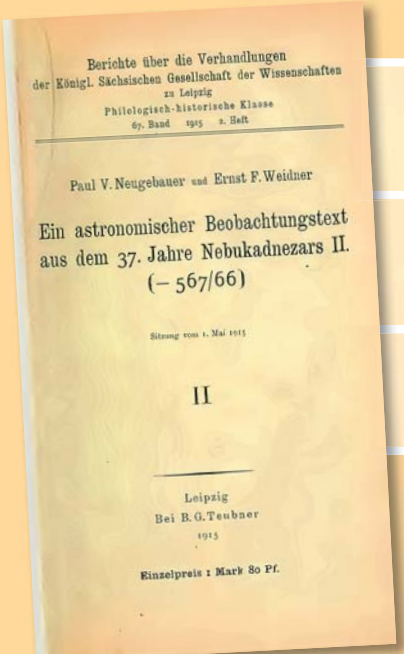
Added by JWSTRS editor: The 9 is drawn with three oblique wedges.

WHAT DOES VAT 4956 *REALLY* SAY?

Why an issue? The third line on this tablet reads that on the "night of the 9th" during the first month (Nisanu/Nisan), the "moon stood 1 cubit in front of ß Virginis." However, Neugebauer and Weidner wrote in 1915 regarding the year 568 B.C.E. (which would point to 587 B.C.E. for Jerusalem's destruction) that "the moon stood 1 cubit before this star on 8 Nisan, and *not on 9 Nisan.*" (Italics ours.) However, there was an exact match of the moon's position for 588 B.C.E. on Nisan 9, which points to the date 607 B.C.E.



bpk / Vorderasiatisches Museum, SMB / Olaf M. Teßmer


Berichte über die Verhandlungen
der Königl. Sächsischen Gesellschaft der Wissenschaften
zu Leipzig
Philologisch-historische Klasse
67. Band 1915 2. Heft

Paul V. Neugebauer und Ernst F. Weidner

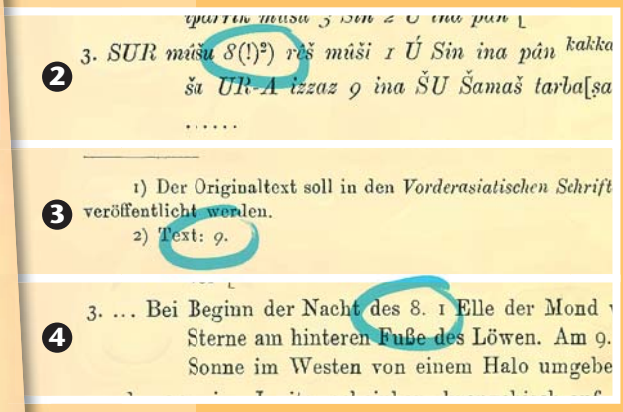
Ein astronomischer Beobachtungstext aus dem 37. Jahre Nebukadnezars II. (– 567/66)

Sitzung vom 1. Mai 1915

II

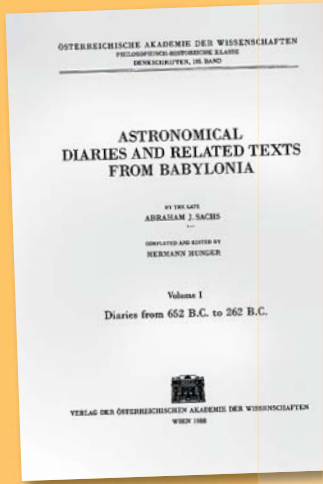
Leipzig
Bei B. G. Teubner
1915

Einzelpreis 1 Mark 80 Pf.


3. *SUR mûšu 8(!)[2] rêš mûši 1 Ú Sin ina pân kakka*
ša UR-A izzaz 9 ina ŠU Šamaš tarba[ṣa
.....

1) Der Originaltext soll in den *Vorderasiatischen Schrift*
veröffentlicht werden.
2) Text: 9.

3. ... Bei Beginn der Nacht des 8. 1 Elle der Mond
Sterne am hinteren Fuße des Löwen. Am 9.
Sonne im Westen von einem Halo umgebe


ÖSTERREICHISCHE AKADEMIE DER WISSENSCHAFTEN
PHILOSOPHISCH-HISTORISCHE KLASSE
DENKSCHRIFTEN, 191. BAND

ASTRONOMICAL DIARIES AND RELATED TEXTS FROM BABYLONIA

BY THE LATE
ABRAHAM J. SACHS

COMPLETED AND EDITED BY
HERMANN HUNGER

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

VERLAG DER ÖSTERREICHISCHEN AKADEMIE DER WISSENSCHAFTEN
WIEN 1988

certain date in the past.[19] What did their analysis reveal? While not all of these sets of lunar positions match the year 568/567 B.C.E., *all 13 sets* match calculated positions for 20 years earlier, for the year 588/587 B.C.E.

One of the places where the lunar observations fit 588 B.C.E. even better than 568 B.C.E. is shown in the tablet reproduced on these pages. On line 3 of that tablet, we read that the moon was in a certain position on the "night of the 9th [of Nisanu]." However, the scholars who first dated the event to 568 B.C.E. (astronomical -567) acknowledged that in 568 B.C.E., the moon was in that position on "the 8th of Nisanu and not on the 9th." To support dating the tablet to 568 B.C.E., they postulated that the scribe erroneously wrote "9" instead of "8."[20] But the lunar position in line 3 finds an *exact match* on Nisanu 9 of 588 B.C.E.[21]

Clearly, much of the astronomical data in VAT 4956 fits the year 588 B.C.E. as the 37th year of Nebuchadnezzar II. This, therefore, supports the date of 607 B.C.E. for Jerusalem's destruction—just as the Bible indicates.

Why Trust the Bible?

At present, the majority of secular historians believe that Jerusalem was destroyed in 587 B.C.E. However, the Bible writers Jeremiah and Daniel clearly state that the Jews were in exile for 70 years, not 50 years. (Jeremiah 25:1, 2, 11; 29:10; Daniel 9:2) Those statements strongly indicate that Jerusalem was destroyed in 607 B.C.E. As the above evidence shows, that conclusion has some secular support.

Secular experts have repeatedly questioned the Bible's accuracy. Yet, when more evidence is uncovered, the Bible record has time and again been vindicated.* Those who trust the Bible have good reason to do so. They base their opinion on proof that the Bible is historically, scientifically, and prophetically accurate. That evidence leads them to believe the Bible's claim that it is the inspired Word of God. (2 Timothy 3:16) Why not investigate the evidence for yourself? You may well come to the same conclusion.

* For specific examples, see chapters 4 and 5 of the book *The Bible —God's Word or Man's?* published by Jehovah's Witnesses.

Should it be the 9th day or the 8th day?

(1) As shown in the accompanying photograph, the Akkadian symbol for the number 9 is clearly seen.

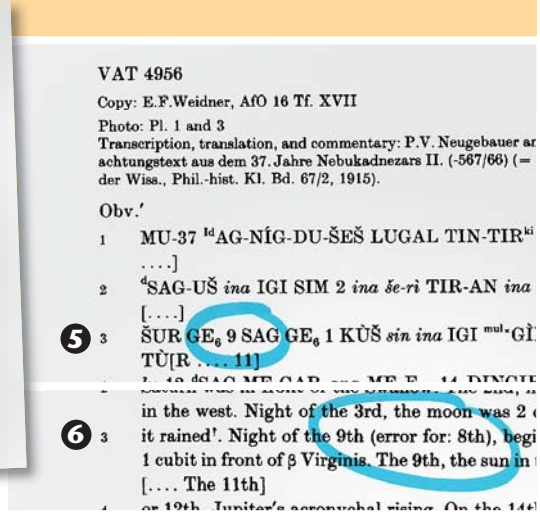
(2) In their transliteration of this cuneiform text, Neugebauer and Weidner changed the "9" to an "8."

(3) Only the footnote indicates that there was a "9" in the original text.

(4) Even in their German translation, they put "8."

(5) In 1988, Sachs and Hunger published the text as it actually reads, with a "9."

(6) Yet, they preserve the alteration in their English translation, calling the "9th" an "error for: 8th."



VAT 4956

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

Photo: Pl. 1 and 3

Transcription, translation, and commentary: P.V. Neugebauer ar
achtungstext aus dem 37. Jahre Nebukadnezars II. (-567/66) (=
der Wiss., Phil.-hist. Kl. Bd. 67/2, 1915).

Obv.'

1 MU-37 ^{Id}AG-NÍG-DU-ŠEŠ LUGAL TIN-TIR^{ki}
....]

2 ^{d}SAG-UŠ *ina* IGI SIM 2 *ina še-rì* TIR-AN *ina*
[....]

5 3 ŠUR GE_6 9 SAG GE_6 1 KÙŠ *sin ina* IGI ^{mul}-GÌ
TÙ[R .... 11]

in the west. Night of the 3rd, the moon was 2

6 3 it rained'. Night of the 9th (error for: 8th), begi
1 cubit in front of β Virginis. The 9th, the sun in
[.... The 11th]

Notes for "When Was Ancient Jerusalem Destroyed?—Part Two"

1. Cuneiform is a wedge-shaped form of writing. It was produced by a scribe pressing various signs into the surface of a soft clay tablet, using a sharp stylus with a wedge-shaped point.

2. *Assyrian and Babylonian Chronicles,* by A. K. Grayson, published 1975, 2000 reprint, page 8.

3. The Neo-Babylonian period began during the seventh century B.C.E., when the Chaldean dynasty of kings ruled the Babylonian Empire. The first ruler was Nabopolassar, the father of Nebuchadnezzar II. The period ended when the last king, Nabonidus, was overthrown by Persian King Cyrus in 539 B.C.E.

4. *Neo-Babylonian Business and Administrative Documents,* by Ellen Whitley Moore, published 1935, page 33.

5. *Archimedes, Volume 4, New Studies in the History and Philosophy of Science and Technology,* "Observations and Predictions of Eclipse Times by Early Astronomers," by John M. Steele, published 2000, page 36.

6. *Amel-Marduk 562-560 B.C.—A Study Based on Cuneiform, Old Testament, Greek, Latin and Rabbinical Sources. With Plates,* by Ronald H. Sack, published 1972, page 3.

7. The tablets BM 80920 and BM 58872 are dated in Evil-merodach's fourth and fifth months of his accession year. These were published by Sack in *Amel-Marduk 562-560 B.C.—A Study Based on Cuneiform, Old Testament, Greek, Latin and Rabbinical Sources. With Plates,* pages 3, 90, 106.

8. The tablet in the British Museum (BM 55806) is dated to the tenth month, 43rd year.

9. Tablets BM 75106 and BM 61325 are dated in the seventh and tenth months of what is considered the last (second) year of the ruling king Evil-merodach. However, the tablet BM 75489 is dated in the *second month* of the accession year of Neriglissar, his successor.—*Catalogue of the Babylonian Tablets in the British Museum,* Volume VIII, (Tablets From Sippar 3) by Erle Leichty, J. J. Finkelstein, and C.B.F. Walker, published 1988, pages 25, 35.

Catalogue of the Babylonian Tablets in the British Museum, Volume VII, (Tablets From Sippar 2) by Erle Leichty and A. K. Grayson, published 1987, page 36.

Neriglissar—King of Babylon, by Ronald H. Sack, published 1994, page 232. The month on the tablet is Ajaru (second month).

10. Consider the example of Neriglissar. A royal inscription regarding him states that he was "the son of Bêl-shum-ishkun," the *"king of Babylon."* (Italics ours.) Another inscription calls Bêl-shum-ishkun the "wise prince." The original word rendered "prince," *rubû,* is a title also meaning "king, ruler." Since there is an obvious discrepancy between the reign of Neriglissar and his predecessor, Amel-Marduk, could this "king of Babylon," Bêl-shum-ishkun, have ruled for a time between the two? Professor R. P. Dougherty acknowledged that "the evidence of Neriglissar's noble ancestry cannot be disregarded."—*Nabonidus and Belshazzar—A Study of the Closing Events of the Neo-Babylonian Empire,* by Raymond P. Dougherty, published 1929, page 61.

11. *Astronomical Diaries and Related Texts From Babylonia,* Volume V, edited by Hermann Hunger, published 2001, pages 2-3.

12. *Journal of Cuneiform Studies,* Volume 2, No. 4, 1948, "A Classification of the Babylonian Astronomical Tablets of the Seleucid Period," by A. Sachs, pages 282-283.

13. *Astronomical Diaries and Related Texts From Babylonia,* Volume V, page 391.

14. *Mesopotamian Planetary Astronomy-Astrology,* by David Brown, published 2000, pages 164, 201-202.

15. *Bibliotheca Orientalis,* L N° 1/2, Januari-Maart, 1993, "The Astronomical Diaries as a Source for Achaemenid and Seleucid History," by R. J. van der Spek, pages 94, 102.

16. *Astronomical Diaries and Related Texts From Babylonia,* Volume I, by Abraham J. Sachs, completed and edited by Hermann Hunger, published 1988, page 47.

17. *Babylonian Eclipse Observations From 750 BC to 1 BC,* by Peter J. Huber and Salvo De Meis, published 2004, page 186. According to VAT 4956, this eclipse occurred on the 15th of the third Babylonian month, which suggests that the month of Simanu began 15 days earlier. If the eclipse fell on July 15, 588 B.C.E. according to our Julian calendar, then the first day of Simanu would be June 30/July 1, 588 B.C.E. Therefore, the first Babylonian month (Nisanu) would have started the new year two months earlier, on May 2/3. While normally the year of this eclipse would have begun on April 3/4, VAT 4956 states on line 6 that an *extra month* (intercalary) was added *after* the twelfth (last) month (Addaru) of the preceding year. (The tablet reads: "8th of month XII_2.") Therefore, this made the new year actually not start until May 2/3. Thus, the date of this eclipse in 588 B.C.E. well fits the data on the tablet.

18. According to *Berichte über die Verhandlungen der Königl. Sächsischen Gesellschaft der Wissenschaften zu Leipzig* (Reports Regarding the Discussions of the Royal Saxonian Society of Sciences at Leipzig); Volume 67; May 1, 1915; in the article *"Ein astronomischer Beobachtungstext aus dem 37. Jahre Nebukadnezars II"* (An Astronomical Observer's Text of the 37th Year Nebuchadnezzar II), by Paul V. Neugebauer and Ernst F. Weidner, pages 67-76, there are 13 sets of observations of the moon wherein it is described in relationship with a certain star or constellation. They also list 15 sets of planetary observations. (Pages 72-76) Though the cuneiform sign for the *moon* is clear and unambiguous, some of the signs for the names of the planets and their positions are unclear. (*Mesopotamian Planetary Astronomy—Astrology,* by David Brown, published 2000, pages 53-57) Because of this, the planetary observations are open to speculation and to several different interpretations. Since the moon can easily be tracked, the positions of those other celestial bodies mentioned on VAT 4956 and connected to the moon can be identified and their positions dated with a good measure of certainty.

18a. These time intervals ("lunar threes") are the measurement of time from, for example, sunset to moonset on the first day of the month and during two other periods later in the month. Scholars have tied these time measurements to calendar dates. ("The Earliest Datable Observation of the Aurora Borealis," by F. R. Stephenson and David M. Willis, in *Under One Sky—Astronomy and Mathematics in the Ancient Near East,* edited by John M. Steele and Annette Imhausen, published 2002, pages 420-428) For ancient observers to measure this period required some sort of clock. Such measurements were not reliable. (*Archimedes, Volume 4, New Studies in the History and Philosophy of Science and Technology,* "Observations and Predictions of Eclipse Times by Early Astronomers," by John M. Steele, published 2000, pages 65-66) On the other hand, calculating the *position* of the moon in relation to other celestial bodies was done with greater certainty.

19. This analysis was made with the astronomy software entitled TheSky6®. In addition, the analysis was augmented by the comprehensive freeware program Cartes du Ciel/Sky Charts (CDC) and a date converter provided by the U.S. Naval Observatory. Because the cuneiform signs for many of the planetary positions are open to speculation and to several interpretations, these positions were not used in this survey to pinpoint the year intended by this astronomical diary.

20. *Berichte über die Verhandlungen der Königl. Sächsischen Gesellschaft der Wissenschaften zu Leipzig* (Reports Regarding the Discussions of the Royal Saxonian Society of Sciences at Leipzig); Volume 67; May 1, 1915; *"Ein astronomischer Beobachtungstext aus dem 37. Jahre Nebukadnezars II, (-567/66)"* (An Astronomical Observer's Text of the 37th Year Nebuchadnezzar II), by Paul V. Neugebauer and Ernst F. Weidner, page 41.

21. VAT 4956 reads on line three: "The moon stood 1 cubit [or 2 degrees] in front of ß Virginis." The previously mentioned analysis concluded that on Nisanu 9, the moon was 2°04′ in front of and 0° below the star ß Virginis. It was considered an exact match.