

*M. S. Reinil  
with me*

14

*2-22  
M. J.*

# REVUE D'ASSYRIOLOGIE

ET

## D'ARCHÉOLOGIE ORIENTALE

PUBLIÉE

SOUS LA DIRECTION DE

V. SCHEIL  
MEMBRE DE L'INSTITUT

ET

F. THUREAU-DANGIN  
CONSERVATEUR-ADJOINT AU LOUVRE

SEPTIÈME VOLUME. — N° IV

EXTRAIT

SUN AND SATURN

by MORRIS JASTROW, JR.

PARIS

ERNEST LEROUX, ÉDITEUR

28, RUE BONAPARTE, 28

—  
1910

## CONDITIONS DE L'ABONNEMENT :

PARIS, 30 FR. — DÉPARTEMENTS, 31 FR. — ÉTRANGER, 32 FR.

*Aucun numéro ne se vend séparément*

La collection complète des 7 premiers volumes est offerte à nos Abonnés au prix net de 175 fr.

Adresser les manuscrits et les ouvrages destinés à la Revue à M. H. de GENOUILLAC,  
118, rue du Cherche-Midi, Paris, VI<sup>o</sup>

---

---

ERNEST LEROUX, ÉDITEUR

28, RUE BONAPARTE, 28

# MISSION FRANÇAISE DE CHALDÉE

## DÉCOUVERTES EN CHALDÉE

par Ernest de SARZEC

Publiées par Léon HEUZEY, de l'Institut

In-folio avec planches en héliogravure.

Livraisons I, II, III, IV. Chacune..... 30 fr.  
Livraison V, fascicule I..... 20 fr.  
— — II (*sous presse*).

## RESTITUTION MATÉRIELLE DE LA STÈLE DES VAUTOURS

Partie archéologique par L. HEUZEY. — Partie épigraphique par F. THUREAU-DANGIN

In-folio, 4 planches et figures..... 20 fr.

## UNE VILLA ROYALE CHALDÉENNE

VERS L'AN 4000 DE NOTRE ÈRE

par E. de SARZEC et L. HEUZEY

In-4, figures et plans..... 15 fr.

## NOUVELLES FOUILLES DE TELLO

par le Commandant Gaston CROS (1903-1909)

Publiées avec le concours de L. HEUZEY et F. THUREAU-DANGIN

In-4, en 3 livraisons, avec héliogravures et nombreuses figures dans le texte..... 40 fr.  
La livraison I vient de paraître.

## INVENTAIRE DES TABLETTES DE TELLO

CONSERVÉES AU MUSÉE IMPÉRIAL OTTOMAN

In-4, planches d'inscriptions.

Tome I. Textes de l'époque d'Agadé, par F. THUREAU-DANGIN..... 25 fr.  
Tome II. Textes de l'époque d'Agadé et de l'époque d'Ur, par H. de GENOUILLAC.  
Première partie..... 25 fr.

# SUN AND SATURN

by MORRIS JASTROW, JR.

---

Thompson<sup>1</sup> in his Introduction to his collection of astrological reports has noticed that the planet Saturn was also designated as Samaš, i. e. "sun" by the Babylonian-Assyrian astrologers and he quotes the statement of Hyginus to the effect that Saturn was called "the star of the sun"<sup>2</sup>. He has not, however, recognized quite a number of passages in his collection in which this usage occurs. The Reports Nos. 173-183B he has grouped under "Omens from the Sun", whereas it is clear that in Nos. 174, 174A, 175, 176, and 180<sup>3</sup>, Samaš must refer to Saturn, just as in Nos. 89 rev. 6; 90 obv. 3; 99 obv. 6; 101A obv. 5; 102 obv. 5; 107 obv. 3 (to be restored); 114A obv. 3; 115C obv. 3; 144 rev. 1 — many of which were correctly so regarded by Thompson<sup>4</sup>; also in Nos. 107 obv. 3 and 216B obv. 3. In almost all these cases the omen reads *enuma(il) Samaš ina tarbaš Sin izziš* (or *ititiš*)<sup>5</sup>, i. e. "when Samaš stands in the halo of the moon". Since this phenomenon can only occur at night, Samaš cannot of course be the sun. The proof that it is Saturn is furnished by the astrologers themselves:

(1) In Nr. 176<sup>6</sup> rev. 3 there is a gloss to the effect, (Mul) Lu-Bat Sag-Uš' Mul (*il*) *Samaš su-u*, i. e. "the planet Saturn is Shamash"<sup>7</sup>.

1. *Reports of the Magicians and Astrologers of Nineveh and Babylon*, II, p. xxv seq. The word « magicians » in this title is misleading. The collection consists exclusively of astrological reports.

2. Hyginus, *Astronomica* (ed. Bunte), II, 42, 6-10. See also Diodorus, *Bibl. Hist.*, II, 30, 3-4, who expressly states that the Babylonians called Saturn the "sun-star".

3. In the index however, vol. II, p. 142, he has noted Nos. 174, 174A and 180 as referring to Saturn. See also Jastrow, *Religion Babyloniens und Assyriens*, II, p. 483, note 4; 578, note 2, and 654, note 12. The statement p. 445, note 1, is to be corrected accordingly.

4. See *Index*, vol. II, p. 142. Nr. 136 S. obv. 8 (*Samaš* to be restored) also belongs to the group.

5. Cf. Harper, *Letters* Nr. 565, obv. 10; Thompson, *Reports* Nr. 180, obv. 8.

6. This text is not a report but clearly a fragment of an astrological schooltext with comments, like Virolleaud, *L'Astrologie chaldéenne*, Sin Nr. III; Ishtar Nr. XXV, etc. It no doubt formed part of the *Anu-Enlil* series like Thompson Nr. 192 which should also not have been included among reports. This latter fragment is properly incorporated by Virolleaud in his edition of the *Anu-Enlil* series, Ishtar Nr. XIX, and of which Virolleaud, *Supplement*, Nr. XLIII, rev. 21-26 is a duplicate.

7. On this name for Saturn and its significance, see the author's paper "Sign and Name for Planet in Babylonian" (*Proc. Amer. Philos. Society*, vol. 47, p. 155 seq.).

8. Thompson's rendering "Saturn is the star of the sun" (II, p. LXIII) is also possible. There is however

(2) In a number of cases the explanation is added :

(Mul) Lu-Bat Sag-Uš *ina tarbaš* Sin *izzaz*,

i. e. " Saturn stands in the halo of the moon ".

So in Nos. 90 obv. 5, 101A rev. 1-2 (to be restored); 144 rev. 3 (Lu-Bat Sag-Uš to be supplied); 180 obv. 5, and 8, and in the common source for these passages, Virolleaud, Sin Nr. III, 140-141, where the note reads : " The moon has a halo around it and Saturn (Lu-Bat-Sag-Uš) stands in it. "

(3) The occurrence of Lu-Bat Sag-Uš instead of Šamaš in the identical omen and with the same interpretation, e. g. Nr. 100 obv. 1-4, where the correct reading is clearly Lu-Bat [Sag-Uš], compared with Nr. 90 obv. 3-4, where we find Amna = Šamaš.

(4) In Nr. 175, where the omen reads " If Šamaš [(An) Ut] enters into the moon ", there is a note (obv. 7) " Saturn (Lu-Bat Sag-Uš) entered the moon ".

(5) Nr. 176, where the omen reads (obv. 1-4) :

a) *enuma* (il) Šamaš *ina man-za-zi* (il) Sin *izziz sar māti ina kussī i-ka-na*;

b) [*enuma*] Rum-Me' *elānu Sin saplānu Sin izziz [sar māti] isid kussī i-ka-na* etc.

i. e. a) " When the sun stands in the place of the moon, the king of the country will be firm on his throne ".

b) " When a mock-sun stands over the moon (or) under the moon, the foundation of the king's throne will be firm. "

The explanation reads (rev. 2) " (Mul) Lu-Bat Sag-Uš approaches (il) Sin ". In view of this, it is quite certain that Saturn is also meant in Nr. 215A (where the same explanation is to be supplied rev. 3), 144 E rev. 6, as well as Nr. 177 obv. 1-4. In all these cases the sign noted is the position of Šamaš over or under Sin. On the other hand in Nr. 173 the omen :

" If Šamaš has a halo around it, there will be rain ".

The sun is meant. This is indicated by the interesting note :

*Samse u-mi*,

i. e. " Šamaš of the day " ,

a division mark in the original text between Mul (= *kakkab*) and Šamaš, so that if this second Mul is not a slip on the part of the scribe, the more accurate translation would be either " Planet Saturn (as a) star is Shamash " or " Saturn is the sun-star ".

1. Rum-Me (or Aš-Me) " a circle " is the designation of the mock-suns that through atmospheric effects appear in a halo around the sun. See below, p. 169, and Jastrow, *Religion*, II, p. 573, note 8 and 602, note 9, while *nadu*, which Thompson took to be the term for the parhelion, designates rays of light around or near the sun. See Jastrow, II, p. 477, note 2 and 581, note 1. Rum-Me occurs also Thompson, 176 obv. 6, and Nr. 177 obv. 1 and 4, and in the source for these omens, Virolleaud, Sin Nr. III, 64. The phonetic reading for Rum-Me is *schamschatu* " sun circle " as shown in the note referred to (Jastrow, *Religion*, II, p. 602) and where also Kugler's view (*Sternkunde*, II, 1, p. 107 folg.) is discussed. The fragments Virolleaud, Shamash Nos. II-IV, deal with these " mock-suns ". See below, p. 170.

2. See Jastrow, *Religion*, II, p. 583, note 4. On the other hand in Harper, Nr. 405 obv. 15, where we

the purpose of which is to make it clear that the sun light is meant and not Saturn, which is, as it were, the "sun of the night"<sup>1</sup>. Again in such a case as Thompson Nr. 195A obv. 1, "when Jupiter (Sag-Me-Gar) [stands] in the sun (An-Ut)", it is evident that Saturn and not Samaš is meant, since the phenomenon in question belongs to the night. The same applies to Nr. 89 rev. 6, and would apply to Nr. 215 obv. 5, provided the reading (An) Ut is correct<sup>2</sup>. Even so distinctive a term of the sun as the name of the ecliptic *ḥarran Samas*: "road of the sun"<sup>3</sup> was applied to Saturn. Thus in Thompson Nr. 103 rev. 4 we read<sup>4</sup>: *enuma* (Mul) Apin *ḥarran Samas*<sup>5</sup> *iksud*<sup>6</sup> *ḥusah bu-u-lim su-un-ku ibasi* "If Mars reaches the road of the sun, scarcity of cattle. There will be a famine." This is explained as equivalent to (Mul) Zal-Bat (*a-nu*) (Mul) Lu-Bat Sag-Uš *i-kaš-sa-ad-ma*, i. e. "Mars has reached Saturn"<sup>7</sup>. In view of this, it follows that in Nr. 88 obv. 5, *ḥarran Samas* is also Saturn, since the text deals with omens regarding Saturn and Mars.

The signs and the interpretations in Thompson's collection of astrological reports all represent quotations from the great Anu-Enlil series which appears to have been the one officially recognized<sup>8</sup>, and thanks to the improved edition of a large number of the fragments of this series by Virolleaud, we have now in many instances the source for the quotations in the Reports<sup>9</sup>. We should therefore expect to find

have the note *u-mu (il) Ša-maš*, the purpose is to indicate that *umu* in lines 9 and 12, is used in the sense of sun. See also Virolleaud, Adad Nr. XXXIII, where Ud stands throughout for sun or sun light. Similarly, Thompson, Nr. 270, rev. 10, where one might even translate Ud as "weather". See Jastrow, *Religion*, II, p. 578, note 4.

1. See Jastrow, *Religion*, II, p. 483, note 4; 578, note 4. See below, p. 171.

2. Thompson adds an interrogation mark.

3. Recognized many years ago by Sayce, *Monthly Notices of the Astronomical Society*, vol. 40, Nr. 3. See Kugler, *Sternkunde und Sternendienst in Babel*, I, p. 259.

4. Kugler, *Sternkunde*, II, I, p. 104, independently reached the same conclusion.

5. Kaskal Amna (Brünnow, Nr. 4457) with the gloss *ḥar-ra-na (il) Ša-maš*.

6. Kur (*ud*) with a gloss *ik-su-ud*.

7. In the source passage Virolleaud, Supplement Nr. XLIX, 9 (cf. also Supplement Nr. L, 28, LV, 27), the comment is omitted. That Apin = Mars is indicated by the comment to Virolleaud, Ishtar Nr. V, 16-17, and the list of Mars names CT., XXVI, 42, col. II, 10. See also Thompson, Reports, II, p. LV.

8. In the Astrological letters included in Harper's *Corpus* (Assyrian and Babylonian Letters), for a summary of which the reader is referred to Jastrow, *Religion*, II, p. 504, note, we likewise have quotations from this series, e. g. Nr. 679 obv. 9-12, which is taken from Virolleaud, Ishtar Nr. XX, 92-94, and Nr. 565 obv. 12-13 = Ishtar Nr. XIX, 1. See Jastrow, *Religion*, II, p. 630, for the former letter, and p. 644, for the latter. It is this series which in Harper Nr. 519 is three times referred to as Ku-Kar, i. e. "the series" *par excellence*, and in this instance two of the omens with interpretations quoted are entered as "not taken from the series" (*la sa* Ku-Kar) and while of the third it is stated that it is "written (*ina libbi* Ku-Kar *sa-tir*) in the series", i. e. represents a quotation. See Jastrow, *Religion*, II, p. 656-59. The subject will be more fully treated in a forthcoming article on the Anu-Enlil series.

9. E. g. Nos. 5 and 8 = Virolleaud, Adad Nr. XXXIII, 26; Nr. 25 obv. 3-5 and 27 rev. 1-4 = Virolleaud, Sin Nr. III, 68-69; Nr. 25 rev. 1-2 and 27 rev. 5 = Sin Nr. III, 71; Nr. 43 obv. 5 = Sin Nr. XVIII, 33; Nr. 82 obv. 1-2 = Sin Nr. III, 31, which enables us to correct the numeral 13 in Thompson's text to 16; Nr. 82 obv. 78-

in the fragments of this series some additional instances of the use of Sams̄ for Saturn. Such is indeed the case. Besides the source for Nr. 174 obv. 1-5, namely Virolleaud, Sin Nr. III, 140-141, and which embodies the explanatory note that "Sams̄ in the halo of the moon" means (l. 141) "Lu-Bat Sag-Uš, in the halo"<sup>1</sup> we have an interesting illustration in a list of omens connected with Dilbat. Virolleaud, Ishtar Nr. VI, 10-11, we read: *enuma* (Mul) Dilbat ana (an) Ut *it-ḫi sarru<sup>2</sup> i-gal-lil*, i. e. "If Venus approaches Sams̄, the King will perish". To this omen a note is added: *ana* Lu-Bat Sag-Uš *it-ḫi*, i. e. "approaches Saturn". Clearly, Venus cannot be said to approach the sun and the purpose of the note is to call attention to the fact that Saturn is intended. Sams̄ therefore in this instance is used for Saturn.

Again, when it is said in connection with the obscuration (*atalū*) of the sun, that "Venus and Jupiter are seen with it"<sup>3</sup> (*itti-schu*), it is clear that Saturn is meant and the usage is interesting as showing how interchangeably the one term is used for the other. On the same way, we can account for the alternative explanation give to the phenomenon of a "sun-crown", (*agū samsi*) above Venus as being due either (a) to the fact that "Saturn (Sag-Uš) stands in front of her", or (b) that Venus<sup>3</sup> "approaches

= Sin Nr. III, 39; Nr. 83 = Sin Nr. III, 22; Nr. 85 obv. 1 = Sin Nr. III, 89; Nr. 88 obv. 5 = Ishtar Nr. XX, 104; Nr. 90 obv. 3-4 = Sin Nr. III, 140; Nr. 119 obv. 4-8 = Sin Nr. IV, 11-12; Nos. 120-123 obv. 1-5 = Sin Nr. IV, 14; Nr. 124 obv. 6-9 = Sin Nr. IV, 15-16; Nr. 126 = Sin Nr. III, 62; Nr. 144 obv. 8-9 = Sin Nr. III, 63; Nr. 153 obv. 1-3 = Sin Nr. III, 37; Nr. 153 obv. 4-6 = Sin Nr. III, 34 (to be completed accordingly); Nr. 153 obv. 7-8 = Sin Nr. III, 46; Nr. 164 obv. 5-7 = Sin Nr. III, 30; Nr. 166 rev. 2-3 = Sin Nr. IV, 2; Nr. 174 obv. 1-5 = Sin Nr. III, 140-141; Nr. 184 obv. 6-7 = Ishtar Nr. XXIV, 15; Nr. 185 obv. 1-2 and 186 obv. 1-2 = Ishtar Nr. IV, 34 = Supplement Nr. XLIV, 1-2; Nr. 185 obv. 3-13 and 271 obv. 11-15 = Ishtar Nr. XVII, 10-14; Nr. 186 obv. 5-6 = Ishtar Nr. XVII, 9; Nr. 200 rev. 7-9 = Sin Nr. XIX, 16; Nr. 205 obv. 2 = Ishtar Nr. V, 1; Nr. 209 obv. 4-6 = Ishtar Nr. II, 23; Nr. 217 obv. 7-9 = Ishtar Nr. XX, 102; Nr. 221 obv. 4-7 = Ishtar Nr. XXXII, 5-7 and Nr. XXX, 1; Nr. 224 obv. 3-4 = Ishtar Nr. XX, 10; Nr. 227 obv. 6-7 = Ishtar Nr. XXV, 15; Nr. 246 B obv. 1-3 = Ishtar Nr. XXXIV, 6; Nr. 255 obv. 5-6, and 257, and 258 obv. 4-5 = Adad Nr. IX, 18; Nr. 256 B obv. 6-7 = Adad Nr. XXXV, 32; Nr. 256 C obv. 1-2 = Adad Nr. I, 5; Nr. 258 rev. 3-5 = Adad Nr. IX, 6; Nr. 262 D, 263 = Adad Nr. XX, 51; Nr. 265 A rev. 3-5 = Adad Nr. XX, 39; Nr. 265 C obv. 1-2 = Adad Nr. XX, 42; Nr. 266 rev. 1-2 = Adad Nr. XX, 45; 26; Nr. 266 rev. 3-4, and 267 rev. 1-2 = Adad Nr. XX, 52; Nr. 267, 14-15 = Adad Nr. XX, 46. Through these parallel passages the text in many of the Reports can be restored, and *vice versa* passages in the series can be completed through the Reports.

1. In view of this passage, it is likely that a few lines further up (Sin III, 134) where the case is put of "either the moon or the sun having a halo", Saturn is also meant, which is confirmed by Thompson Nr. 176 obv. 6, where we have instead Rum-Me. See below, p. 169, and Jastrow, *Religion*, II, p. 577, note 1.

2. Variant *sar kiššali* "king of world-rule" meaning the king of Babylonia and Assyria. See also Jastrow, *Religion*, II, 629, note 5-6, and 670, note 2.

3. Virolleaud, Shamash Nr. X, 34 and 58, but in the parallel passage Nr. IX, 39 *itti-schu* is omitted.

4. Virolleaud, Supplément Nr. XXXVI, 14.

5. *Ib.*, I. 20. These "crowns" above Venus, of which various kinds are mentioned in the Anu-Enlil series — dark, white, green, dark-red, broad, small, "rain-bow crown", "sun crown", "moon crown", "Jupiter crown" (Virolleaud, Ishtar Nr. II, 19-25; Supplement Nr. XXXVI, 8-23) — clearly refer to rays above Venus,

Samaš". Venus, of course, can only be said to approach a planet or a star, so that the two expressions must be taken as synonymous. The same usage underlies the statement<sup>1</sup> that Venus (Dilbat) "enters Samaš" or "approaches Samaš" — which naturally can only apply to a night phenomenon. A "Samaš" crown above the moon<sup>2</sup> is explained as "Lu-Bat [standing] by the moon" by which again Saturn is meant<sup>3</sup>.

We can now understand the statement in a fragment furnishing names of planets<sup>4</sup>, to

(An) Sag-Uš<sup>5</sup> (An) UT  
i. e. Saturn = Samaš.

The close association of the sun with Saturn is further illustrated by a number of passages in an astrological school text, dealing exclusively with phenomena of the moon and characterized by the comments added to every sign noted and which furnish the explanation for the same.<sup>6</sup> Line 63 of this text reads: *enuma Sin u Samas šu-ta-tu-u sar māti uzna urappas*. "If the moon<sup>7</sup> and sun are visible", the king of the

the different colors being ascribed to different planets standing in front of her, green = Mars, dark-red = Mercury, while other designations, similarly, describe the supposed specific causes, a "rain-bow" crown being due to the rain-bow, a "moon" crown to the moon etc. See Jastrow, *Religion*, II, p. 637 seq. The moon too is frequently spoken of as having a "crown", for the explanation of which see Jastrow, *Religion*, II, p. 460, note 3. See the interesting texts, Virolleaud, Supplement Nos. I-VI, where all kinds of crowns above the moon are spoken of. According to Nr. V, the number of these crowns above the moon may range from one to four, while in the case of Venus we never hear of more than two (e. g. Virolleaud, *Ishtar* Nr. III, 3, VII, 29; Supplement Nr. XXXVI, 18) cf. Kugler's remarks in *Sternkunde*, II, 1, pp. 101-103, and Jastrow, *Religion*, II, p. 638, note 2.

1. Virolleaud, Supplement Nr. XXXVI, 27-28.

2. Supplement, Nr. I, 29-30.

3. For Lu-Bat = Saturn, see below, p. 174, note 6.

4. II R., 49, Nr. 3, 41 (more fully reproduced by Lenormant, *Choix de Textes cuneiformes*, Nr. 23), and of which, II R. 51, Nr. 2, 58-71, is a partial duplicate. The list contains 11 names of Mars (II, 30-40) followed by 3 names of Saturn whereupon Mercury is taken up. Preceding Mars, the names of Jupiter were recorded, and probably at the beginning of the tablet Venus. The planets are enumerated here in the order of importance in astrology. See also Jastrow, *Religion*, II, p. 483, note 4.

5. (An) Sag-Uš for (Mul) Lu-Bat Sag-Uš is occasionally found in astrological texts, e. g. Thompson, Nr. 167 rev. 4, whereas rev. 9, the other form is used. Also, in the parallel passage to Nr. 167 rev. 4, namely Nr. 172 rev. 2. Lu-Bat Sag-Uš is found.

6. For a translation of the greater part of the text with full explanations see Jastrow, *Religion*, II, p. 568 seq.; for the passage under discussion, see p. 573, note 7.

7. The moon always precedes the sun — even in the latest texts of all kinds — a survival of the usage in astrology where the moon plays the more important role. See Jastrow, *Religion*, II, p. 457.

8. *Šu-ta-tu-u*. In a recent discussion of this difficult term (Jastrow, *Religion*, II, p. 472, note 6) I connected it with *suttu* and *suttatu* "hole", and explained it as referring to the phenomenon that at the time of the full moon, moon and sun were not seen together. This, however, is an error which I should like to correct. A further study of the passages in which *suttatu* occurs in astrological texts convinces me that it is synonymous with two other phrases descriptive of the opposition of the moon and sun at the time of full moon: (a) "moon and sun are seen together", and (b) "moon and sun are balanced". The former is the more frequent of the two (*itti aḥamiš innamrū* or *innamar*), e. g. Thompson, Nos. 119-125; 127-138 A; 142-144 A; 146-148; 152; 155 etc., but

land will be wise". To this omen two explanatory comments are added: (1) that "on the 14th day of the month god is seen with god" (i. e. moon with sun)' or (2) "Saturn (Lu-Bat Sag-Uš) on the 14th day goes with the moon" (cf. Virolleaud, *Supplement*, Nr. XV, 27 and 29). These comments represent varying explanations taken from different school texts and here united by the compiler, with the intimation that either one fits the conditions. Since the omen itself clearly reads "moon and sun" it follows that the sign for *Samaš*<sup>2</sup> may be interpreted either literally as the sun, or that the sign may be taken as standing for Saturn. This passage is quoted in

the latter (*sitkulu*) also occurs quite often, e. g. Nos. 127-129; 131, 135 A, 136, 136 B, 136 E, 136 F, 136 H; 136 I, 136 L; 136 M, 136 T, 137-138; 139, 141 etc. The difference between the two is that the former as the more general phrase may refer to an early opposition on the 12th day (e. g. Thompson, Nr. 119 obv. 4) or 13th day (Nos. 120-123 A) or to a belated opposition on the 15th or 16th day (Nos. 156-165 A; 166-167; Harper, Nr. 359 obv. 14) as well as to the timely opposition on the 14th day (Nos. 124-136 etc.), whereas "balanced" is limited to the opposition on the 14th day and is the specific term for the appearance of the full moon at the normal time. In view of this, the figure 15th day in Nr. 160 A obv. 5, must be a mistake for 14. In the same way, *suttatu* is applied to the opposition on the 14th day only (Nos. 126, 128, 130, 131, 134, 135, 135 A, 136, 136 B, 136 E, 136 F-136 U, 137-138 A; 143-144 A, 144 D-151, 154 etc.), and since it is explained as referring to "the moon and sun appearing together on the 14th day" (e. g. Nos. 126, 128, 130, 131, 134, 136 B, 136 F, 136 I, 136 K, 136 T, 138 A, 144, 144 A, 144 D, 145) (*sutatū* and *sitkulu*), there can be no doubt as to the interpretation. There must, however, be some nuance between *sutatū* and *sitkulu*, for with the exception of Nr. 145, there is no case in which the comment just quoted is added in the case of *sitkulu*, and since the interpretation given to *sitkulu* in this case is the one belonging to *sutatū*, to wit "the king will be wise" (obv. 6), it is reasonable to suppose that *sitkulu* here is an error for *sutatū*. The interpretations for *sutatū* and *sitkulu*, it should be added, as in the case of other terms, are consistently the same. See Jastrow, *Religion*, II, p. 473. It would appear then that *sutatū* and *sitkulu* both refer to full moon on the 14th day, but the former indicates in addition that moon and sun are actually seen together on the day. As for the term *suttatu*, I would propose to identify it with one of the equivalents to the ideographic combination I-Gi-In-Zu in the syllabary V. A. Th. 244 published in ZA., IX, p. 159 seq. and which is written precisely as our word. See Meissner, *Assyr. Ideogr.*, Nr. 2648. The meaning is without doubt "visible", and contrary to what I formerly supposed, may be traced back to or connected with *atū* as Muss-Arnolt, *Assyr. Dict.*, p. 1138 a assumed. By the side of this *suttatu* there is however another word in the sense of "hole", and this meaning I would still propose for the passage, IV R.<sup>2</sup>, Pl. 24, Nr. 1, 36-37, quoted by me, Jastrow, *Religion*, II, p. 472, note 6.

[See now Jastrow, *Religion*, II, p. 573, note 6, and 642, note 13, where I refer to the fact that Kugler, *Sternkunde*, II, 1, p. 55, had independently reached the same conclusion in regard to *suttatu*, without, however, the further differentiation here proposed between the three terms.]

1. *Ilu itti ili* is used interchangeably with *Sin itti Šamas*. Cf. Thompson, Nr. 124 obv. 5 and 12; 126 obv. 3; 134 obv. 8; etc., with Nr. 144 obv. 4; 136 F rev. 1; 136 I rev. 3; Harper, Letters Nr. 359 obv. 14, we have *ilāni* for moon and sun.

*Sa-nis* "secondly", frequently used in astrological texts (e. g. Thompson, Nr. 88 obv. 8, *sa-ni-is*) to introduce a second explanation. Correct Kugler, *Sternkunde*, II, 1, p. 55, accordingly, who through a slip misread the two signs as *sa Šamas*. A similar comment is found Thompson, Nr. 180 obv. 6-8, where after explaining the introductory statement "[The moon] was seen on the 13th day. If the sun stands in the halo of the moon" etc., in the usual way that this means that "Saturn stands in the halo of the moon", the further comment is added "The sign corresponds to the 13th day. That the moon was seen (*sc.* in opposition with the sun) corresponds to Saturn in the halo of the moon". See Jastrow, *Religion*, II, p. 661, note 9.

2. Anna (Brinnow. Nr. 9960).

one of Thompson, Reports, Nr. 144, obv. 8-9<sup>1</sup>, and the interpretation of Šamaš = Saturn accords with rev. 1-3 where the omen "Šamaš standing in the halo of the moon" necessarily refers to Saturn, and is so explained in the comment to the passage<sup>2</sup>. In view of this, the other instances in this report in which Sin and Šamaš occur (obv. 1, and 4) may also refer to Sin and Saturn so that the entire text<sup>3</sup> would refer to the position of Saturn by the moon at full-moon time. This same omen, that "on the 14th day Saturn stood by the moon", is found Thompson Nr. 176 obv. 3-5; Nr. 177 (without comment); Nr. 144 E. rev. 6-7 (to be restored accordingly) = Sin Nr. III, 64, in connection with a sign, which reads as follows: *enuma Rum-Me elānu Sin u saplānu Sin izziš, sar māti išid kussi-su ikān<sup>4</sup> u sar māti ina kit-ti-su izzaš*, i. e. "if a mock-sun stands above the moon or below the moon, the throne of the king of the land will be firm and the king of the land will remain steadfast". To this the comment is added in Sin III, 65: "Saturn stands by the moon on the 14th day", whereas in Thompson, Nr. 176 obv. 3-5, where it is said "that the mock-sun and moon appear together" (*su-ta-tu-u*), the explanation (rev. 1-3) is that "on this night Saturn approached (or "was near" *ik-ti-ri-ib*) the moon".

It would appear, therefore, that the association of sun with Saturn was carried to the extent of using even the term which stands for an image of the sun due to atmospheric conditions to represent Saturn. Naturally a "mock-sun" or parhelion cannot stand above or below the moon or be seen anywhere near it. The term was intended to apply to a "mock-moon" and this phenomenon of a second moon was explained as due to the presence or reflection of Saturn near or standing by the moon. I venture to think, that we have in this naive explanation of an atmospheric phenomenon which seems simple enough to the modern astronomer, a suggestion as to the origin and meaning of this interesting association of the sun with Saturn, leading to the wide spread usage of the signs for Šamaš (An-UT and Amna) to represent Saturn. Strange

1. *Ša-nis* or *U* is evidently to be supplied in the gap left by Thompson.

2. See above, p. 164, Lu-Bat-Sag-Uš is of course to be supplied.

3. There are six signs noted in all: (1) "Sin surrounded by a halo" explained as "Saturn in the halo", (2) "Sin and Šamaš seen together" (stated as a fact obv. 1 and as an omen quoted from the Anu-Enlil series obv. 4), (3) "Sin resting in his course" explained as "visible the 14th day", i. e. with the sun or Saturn, (4) "Sin and Šamaš seen together" (*su-ta-tu-u* explained as either "god with god is seen" or "Saturn with moon on 14th day" (Thompson's text has erroneously 15), (5) "Šamaš in the halo of moon" explained as "Saturn in the halo of moon" and again, (6) "Šamaš (to be supplied) in halo of the moon" (rev. 4).

4. Gub (*an*) here, as well as Thompson, Nr. 177 obv. 3, is to be read *ikān*, as is shown by the phonetic writing in Thompson, Nr. 176 obv. 4 and also Thompson, Nr. 144 rev. 5. The interpretation in this latter passage is also identical with Sin Nr. III, 64, and the line is accordingly to be completed [*šar māti išid*] *kusst i-ka-na*, while in the preceding line we must evidently supply Šamaš, and in the explanatory comment ["(Mul) Lu-Bat Sag-Uš ina tarbas"] *Sin izzaš*.

as it may seem to us, the planet Saturn appears to have been regarded as "the sun of the night" corresponding to Samaš as "the sun of the daytime"<sup>1</sup> and the cause of such light as the night furnishes. It was argued, that since there was a sun furnishing the light of day, so there must be some corresponding power which causes the illuminations of the heavens at night. Saturn was chosen — in preference even to the moon — because of the slowness of its movement, which made it visible continuously for a long period<sup>2</sup>, while Jupiter, Mars and Venus disappeared frequently during the same period, and the moon for several days at the end of each month; Mercury owing to its position near the sun was visible only for very short periods<sup>3</sup>. The moon, moreover, altered its phases while Saturn as its name Lu-Bat Sag-Uš, i. e. the "steady" planet indicates, remained "constant" — at least for a long period. The light of the moon as of the planets and stars was ascribed to Saturn, and in the appearance of "mock-moons" above and below the satellite a confirmation of the theory was seen. These "night suns" were ascribed to the presence of the great night sun — Saturn — near the moon, just as the mock-suns of which there might be as many as seven<sup>4</sup> were regarded as secondary to the great "day sun" — Samaš — and, therefore, likewise associated with Saturn — as the "lieutenant" of Samaš.

Turning now to the astrological texts<sup>5</sup>, in which omens connected with the "mock-suns" are set forth, it can hardly be accidental that we find these mock-suns qualified as Sag-Uš<sup>6</sup>, precisely as Saturn is described as the Lu-Bat Sag-Uš; and the proof that this qualification is to be taken in the sense of "steady" is furnished by the variant reading Gi-Na(a)<sup>7</sup> = *kénu* (Brünnow, Nr. 2424) — the common term for "steady". We are told e. g.<sup>8</sup> *enuma* Rum-Me Sag-Uš *izziz-ma istén* Rum-Me *ina imitti izziz sarru sa illatē-su kussâ isabat*, i. e. : "If there is a steady mock-sun, one mock-sun standing to the left, the king through his forces will seize the throne."

If a "steady mock-sun" stands to the left, the omen is unfavourable<sup>9</sup> : "thy forces will be against the throne, the king of Amurru will advance and seize the throne"; if there is one to the right and one to the left, "though king, city and people strive for peace, cities will be devastated, walls destroyed and people wiped out" — also unfavourable therefore. In the same way omens are recorded for "mock-suns" to the number of seven,

1. See above, p. 164.

2. See Flammarion and Gore, *Popular Astronomy* (English translation), p. 432. The revolution of Saturn as seen from the earth takes about 29 1/2 years and it is visible annually for several months without interruption.

3. Flammarion and Gore, *l. c.*, p. 350. See also Jastrow, *Religion*, II, p. 664.

4. See Virolleaud, *Shamash* Nr. II, 22-34.

5. Virolleaud, *Shamash* Nos. II-IV.

6. Nr. II, 6-11.

7. Nr. III, 9 and 12.

8. Virolleaud, *Shamash* Nr. II, 9.

9. *l. c.* 10-11.

the interpretations varying for the various months and according to the days of the month when the phenomenon occurs, — 1st, 11th, 12th, 14th, 15th, 20th, or 30th day<sup>1</sup>. It is hard to resist the conclusion that this Sag-Uš, when added as a qualification to Rum-Me, is not in some way to be associated with Sag-Uš added to Lu-Bat as the specification to indicate the planet Saturn. One might be inclined to suppose that the Rum-Me, without qualification refers to a mock-sun, whereas the Rum-Me Sag-Uš, i. e. a Sag-Uš or “Saturn” mock-sun refers to the phenomenon when due to Saturn — or in other words to a night mock-sun. This supposition, however, meets with an objection through Nos. 176 and 177 of Thompson's Reports where Rum-Me without qualification is explained as due to the nearness of Saturn to the moon — therefore a “night mock-sun”. Without further material, the problem involved cannot be satisfactorily solved, but so much may be put down as plausible if not certain that there was supposed to be some connection between the mock-suns and the planet Saturn, and, tentatively, I should like to raise the question whether the appearance of mock-suns may not have suggested to priests of a speculative turn of mind, but ignorant of the laws of the heavens, the idea that Saturn was a “steady” or “permanent” mock-sun — performing the same function of furnishing light at night that Samaš performed during the day. Being inferior in strength to Samaš, it was natural that his light should be considerably weaker, but such light as the night had was supposed to be due to the “lieutenant” of the great orb of the day — to the brilliant planet, uninterruptedly conspicuous for an extensive and continuous period in the heavens. It must be born in mind that in the southern hemisphere, the nights — even when the moon is not visible — are far more brilliantly illuminated than in northern climes. The heavens are aglow with light and really dark nights such as we experience are the exception rather than the rule. This factor needs to be taken into consideration to account for the rise of a naive theory that there was a “night-sun” as well as a “day sun”<sup>2</sup>. Be this as it may, all the evidence points to the existence of such a theory in Babylonia. This theory appears to underlie the association of sun with Saturn in astrological texts and leads to the situation which confronts us in a study of the Babylonian-Assyrian astrological system of the interchangeable application of the term Samaš to either the great orb of the day or to the planet Saturn.

Starting from this interchange, we can follow the further association of ideas which led to the identification of the planet Saturn with Ninib<sup>3</sup>. In the older Baby-

1. Nr. II, 23-34, for the first two months. The rest of the text is broken off.

2. [Kugler, *Sternkunde*, II, 1, p. 105, makes the same suggestion, though without any reference to the connection between mock-suns (and mock-moons) and the planet Saturn].

3. See Jastrow, *Religion*, II, p. 442, and 445.

Ionian pantheon Ninib is the most important personification of the sun by the side of the cult of Šamaš — the latter appearing under the forms A-UT and Babbar in centers of sun worship — Sippar and Larsa. Since the *Anu-Enlil* series reverts to the period beyond Hammurabi<sup>1</sup>, the identification of Saturn with Ninib reflects the conditions existing in the period before the absorption of the local sun-cults by that carried on at Sippar. The center of the Ninib cult was the very ancient city of Nippur and there are good reasons for believing that Ninib was at one time the chief deity of the district of which Nippur was the center, but that he was obliged to yield the prerogative to the "Sumerian" intruder Enlil and became the latter's son. As a survival and a concession to this former position, he was accorded the privilege of being a second Šamaš — a "lieutenant" of the later sun-god *par excellence*. Ninib, himself being a sun-god, this association with Šamaš was particularly appropriate — Šamaš becoming, as it were, the greater, and Ninib the lesser sun, and the two together forming the two chief lights of the heaven, one to serve during the day and the other at night<sup>2</sup>. Thompson, Nr. 174 obv. 5 — quoted from Virolleaud, *Sin* Nr. III, 140 — furnishes the definite proof for the identification of Ninib with Saturn, since in the report, we have the frequent omen "of the sun standing in the halo of the moon" explained (obv.) as "Ninib standing therein", whereas the source-passage has Lu-Bat Sag-Uš. There is, therefore, no doubt, that Kugler<sup>3</sup> is correct in explaining the phrase "the planet (Lu-Bat) whose name is Ninib" occurring in an astrological text<sup>4</sup> dealing with Saturn, Mars and Mercury omens as referring to Saturn.

It is equally certain that Virolleaud, *Sin* Nr. X, 18, Ninib stands for Saturn<sup>5</sup> and on the basis of a comparison with Thompson Nr. 174, obv. 5, the line is evidently to be restored "If the moon etc. has a halo around it and Ninib [stands therein]" etc. Ninib also occurs Virolleaud, *Supplement*, Nr. VII, 40. The line is defective but there is no reason to question that Ninib = Saturn also in this passage.

The association of Saturn with the sun, whose chief role in the Babylonian-Assyrian theology is that of a judge, dispensing justice<sup>6</sup> has its outcome also in giving to

1. See Jastrow, *Religion*, II, p. 503, note 2, and an article by the writer *The Hittites in Babylonia* in the *Revue semitique*, vol. 18, p. 87-96.

2. My colleague Prof. J.-A. Montgomery raises the interesting question whether in *Genesis*, 1, 16, the two "lights" may not at one time have referred to the Sun and Saturn?

3. *Sternkunde und Sterndienst in Babel*, I, p. 221 seq.

4. Virolleaud, *Ishtar* Nr. XX, 20. It also occurs Virolleaud, *Sin* Nr. XIX, 14, but in a fragmentary passage from which no conclusions can be drawn.

5. In the same way, Nebo is used for Mercury. See below, p. 178, note 1.

6. See the hymns to Šamaš in Jastrow, *Religion*, I, pp. 426-436, e. g. IV R<sup>2</sup>, 28, Nr. 1, beginning "the law of mankind dost thou direct, eternally just in heaven art thou (*i-sa-ru ina same ka-a-ma-nu at-ta*), justice and wisdom for all lands — thou (*hit-tum bi-rit us-ni sa mūtati at-ta*)".

Saturn the designation of *ki-tum* "justice", e. g. Virolleaud, *Ishtar* Nr. XXV, 26 and XXX, 20. The proof that Saturn is meant is furnished by the explanation added in the latter passage

(Mul) *ki-tum* = (An) Sag-Uš,

and in addition we have in the explanatory list above quoted<sup>1</sup>, II R. 47, Nr. 3, 41, the equation :

(Mul) Gi-gi = (Mul) *kit-ti* u *me-šar*<sup>2</sup> = (An) Sag-Uš (An) Ut,

i. e. "The star Gi-gi<sup>3</sup> = star of justice and righteousness = Saturn (and) Samas".

Ningirsu who is absorbed by Ninib and becomes a form of the latter<sup>4</sup> is also encountered twice in astrological texts. Unfortunately both the passages are fragmentary<sup>5</sup>, but in one of them (Sin Nr. XIX, 22) we have the equation :

Ningirsu = (An) Lu-Bat,

i. e. Ningirsu is a planet. Now since Ningirsu is identical with Ninib, we may conclude that Lu-Bat in this case stands for the planet Saturn, so that Ningirsu, as a kind of "double" of Ninib, is also used to designate the planet Saturn. This leads us to the last point to be considered here — the use of Lu-Bat for Saturn.

According to the syllabary II R. 49, Nr. 3, 44, Lu-Bat with the phonetic reading *bi-ib-bu* is the equivalent of (An) Gu-ud which is Mercury<sup>6</sup>. This is confirmed by CT. XIX. Pl. 19, 56 = II R. 48, rev. 53, where

1. Above, p. 167.

2. The terms *ketu* and *mesaru* are clearly designations of the sun-god in his capacity as dispenser of "justice and righteousness", but which in accordance with the character of the Babylonian-Assyrian theology were personified and given the rank of attendants of Samas. See Zimmern, *Beitrage*, p. 90, and 104; Jastrow, *Religion*, I, pp. 175-176. In our passage, is clearly *ketu* made the equivalent of Saturn, while *mesaru* is equated with Samas, but the main result is that Saturn and Samas are synonymous. Another designation for Saturn occurring in astrological texts is *lu-lim* "ram", e. g. Virolleaud, *Supplement*, Nr. L, 9-10 and where the explanation is again added: *lu-lim* = (an) Lu-Bat Sag Us. This is confirmed, moreover by II R., 48, rev. 52 (= CT. XIX, 19) : (an) *lu-lim* = (an) Lu-Bat Sag-Uš, but *lu-lim* appears to be a designation applied like Lu-Bat (see below, p. 174) to Saturn, Mars or Mercury. At all events Virolleaud, *Ishtar*, Nr. XXV, 72, (Mul) *lu-lim* is equated with (Mul) A-nim which is a designation of Mars (Jastrow, *Religion*, II, p. 658, note 7.) Still another designation of Saturn is En-Me Šar-ra ("Lord of the law of the universe") which in V R. 16, Nr. 1, obv. 21, is entered as the equivalent of (Mul) *lu-lim*. Cf. Virolleaud, *Ishtar*, Nr. XXX, 16 = Thompson, Nr. 181, obv. 6. See Jastrow, *Religion*, II, p. 669, note 7.

3. The common value of Gi is *kēnu* or *kānu* (Brünnow, Nr. 2391; Meissner, *Assyr. Ideogr.*, 1395).

4. Jastrow, *Religion*, I, p. 56 seq.

5. Virolleaud, Sin Nr. XIX, 22, and *Ishtar* Nr. XXXIII, 11.

6. (An) Gu-ud is used for (Mul) Lu-Bat Gu-ud, precisely as (an) Sag-Uš for (Mul) Lu-Bat-Sag-Uš. See above, p. 167, note 5, and for other examples of (An) Gu-ud, Virolleaud, *Ishtar* Nr. XXX, 4, 13, 15, 17, 21, etc.; Thompson, Nos. 105 obv. 8; 109 obv. 3, etc. For Lu-Bat Gu-ud = Mercury, and the meaning of the ideographic form, see Jastrow, *Religion*, II, p. 447 seq., and *Sign and Name for Planet in Babylonian* (*Proc. Amer. Philos. Society*, vol. 47, p. 182 seq.). For II R. 39, Nr. 5, 62, (il) *bi-ib-bu* = (An) Lu-Bat, see below, p. 177, note 5.

(il) *bi-ib-bu* = (An) Lu-Bat-Gu-ud<sup>1</sup>.

On the basis of passages like these it was natural to conclude that Mercury was for some reason regarded as the planet *par excellence*. I accepted this view<sup>2</sup> and for the later period it appears indeed to be correct. Traces of the special position accorded to Mercury are to be seen in the multifarious traits with which he is endowed in Greek and Mediæval astrology. He is the only one of the planets who is conceived as both male and female and embodies, as it were, a summary of the qualities of all the planets<sup>3</sup>. On the other hand, it was difficult to find a satisfactory reason for this supposed preëminence granted to the smallest of the planets and the one most difficult of observation, whose actual role, moreover, in Babylonian-Assyrian astrology does not at all suggest that the omens connected with Mercury had any *special* significance. Moreover, in the older enumeration of the planets Mercury always occupies a place behind Saturn<sup>4</sup>, while in the later<sup>5</sup> he precedes Saturn but is still behind Jupiter and Venus. This precedence over Saturn is not without significance, as we shall presently see, and reflects the apparently higher position accorded to Mercury in later days, but on the other hand, the circumstance that in the older enumeration, Mercury has a position next to the last is also sufficient to show that it could not have been regarded in the older period at least as the planet *par excellence*.

As a result of my researches in Babylonian-Assyrian astrology, which have occupied me for over two years, it can now, I think, be definitely stated that Lu-Bat was originally used as a general designation for *either of the three planets* — Saturn, Mercury or Mars. The detailed proof for this thesis will be set forth in a separate article<sup>6</sup>.

It would appear that at first only Jupiter and Venus were specifically distin-

1. See also Thompson, Nr. 184 obv. 4, (Mul) *bi-ib-bu* = Mercury, by the side of Lu-Bat Gu-ud (obv. 3 and rev. 1) and Mul Marduk (obv. 1) "star of Marduk" another designation of Mercury, for which see Kugler, *Sternkunde*, II, 1, p. 77 folg., and the same author's *Im Bannkreis Babels*, p. 124, note 1, with further examples in Jastrow, *Religion*, II, p. 666, note 2.

2. Jastrow, *Religion*, II, p. 446.

3. See Bouché-Leclercq, *L'Astrologie grecque*, p. 101: 321-23.

4. The order in texts before c 400 B. C. is Jupiter, Venus, Saturn, Mercury and Mars. This order is found e. g. in Harper, *Letters* Nr. 648 obv. 8-11.

5. Jupiter, Venus, Mercury, Saturn, Mars. See Kugler, *Sternkunde*, I, p. 13.

6. To be published under the title Lu-Bat in *Babyloniaca*, vol. IV. See meanwhile *Religion*, II, p. 663 seq. For Lu-Bat = Saturn, see e. g. Thompson, Nr. 103 obv. 6. "If the moon is surrounded by a halo and Lu-Bat stands within it" etc., to which the comment is added (l. 8) "Lu-Bat Sag-Uš (i. e. Saturn) stood in the moon". For Lu-Bat = Mars, see e. g. Thompson, Nr. 101, dealing throughout with Mars phenomena and where we find obv. 5-6, "If the moon is surrounded by a halo and Lu-Bat stands within it, the king will be shut in by his army". See also Virolleaud, *Ishtar* Nr. XXX, 24, 30, 31, where Lu-Bat is explained as the equivalent of (An) Zal-Bat (*a-nu*). In l. 32 (An) Dil-Bat is probably a slip for Zal-Bat (*a-nu*). For Lu-Bat = Mercury, it is sufficient to note, Thompson, Nr. 199 A. obv. 5, Lu-Bat by the side of Lu-Bat Gu-ud (obv. 2).

guished among the planets. This is indicated by the fact that both in the older and in the later enumeration of the planets, they always occupy the first place. In keeping with this we find the phenomena connected with these planets playing a far more important part in the astrology of the Babylonians and Assyrians than the remaining three. One can also understand why Jupiter and Venus should have been the first to be singled out. Jupiter was the brightest of the stars, whose course could be more easily followed, and Venus was singled out by virtue of the striking phenomenon of being an evening star during one part of the year and a morning star during the other. The other three planets were simply known as Lu-Bat, of which fact we find abundant traces both in the astrological reports and in the fragments of the Anu-Enlil series, from which the omens in the reports, as we have seen, were taken. A second stage of differentiation was reached when with the better knowledge of the movements of these planets they were distinguished by descriptive epithets added to the Lu-Bat, namely: —

Lu-Bat Sag-Uš for Saturn,  
Lu-Bat Dir' for Mars,  
Lu-Bat Gu-Ud for Mercury,

i. e. Saturn was distinguished as the "steady", Lu-Bat because of the slowness and regularity of its movements, Mars the "dark-colored" planet because of its color and in part perhaps because of the gloomy association of ideas with this planet, while Mercury was the "checkered" planet because of its irregular movements'. That these three planets were regarded as forming a class by themselves, quite apart from Jupiter and Venus, is shown by the fact that Lu-Bat is *never* attached to any of the designations of Jupiter or Venus, but only to Saturn, Mercury or Mars. We never

1. See e. g. Thompson. Nos. 146 rev. 6, and 195 rev. 2, where a note expressly states Lu-Bat Dir = Zal-Bat (*a-nu*), i. e. Lu-Bat Dir = Mars. See also Viroilleaud, Ishtar Nr. VI, 26 [likewise Dir = Zal-Bat (*a-nu*)]; VIII, 16 [Lu-Bat Dir = *sum* (An) Zal-Bat (*a-na*)], i. e. Lu-Bat Dir = name of Zal-Bat (*a-nu*); XX, 53-62; XXV, 72-74. The name (Dir = *sānu*) signifies the "dark-coloured planet", and was appropriately given to Mars because of his dark-red colour. In later times, the more common designation of the planet is Mul (or An) Zal-Bat (*a-nu*) to be read *mutānu* on the basis of Thompson, Nr. 232 obv. 3, ([Zal-Bat (*a-nu*)] *a-na mu-ta-ni ka-bi*), i. e. "the death planet" because of its illboding character. See Jastrow, *Religion*, II, p. 650, note 16. Mars is in Babylonian-Assyrian astrology as among the Greeks and in Mediaeval astrology the "unlucky" planet *par excellence*. The explanation of Zal-Bat (*a-nu*) as *muštābarrū mutānu* furnished in V R., 46, Nr. I rev. 42, i. e. "satiated with death", appears to be fanciful as are the other explanations of stars in this text. Cf. the explanation of Nebo-Mercury as *muštābarrū salīmi* "satiated with grace" (V R., 43 rev. 39). Besides Lu-Bat-Dir and Zal-Bat (*a-nu*) there are many other names for Mars occurring in astrological texts. See an article by the writer on "Sigus and Names of the planet Mars" to appear in the *American Journal of Semitic Languages*, vol. XXVII, Nr. 1.

2. Gu-ud = *sahātu* "check, hinder" etc. (see Jastrow, *Religion*, II, p. 366, note 9) represents a contrast to Sag-Uš = *ka-ma-a-nu* "steady". A different explanation but which does not seem more satisfactory is given by Kugler, *Sternkunde*, II, 1, p. 125, note 1.

encounter Lu-Bat Sag-Me Gar or Lu-Bat Dun-Pa-Uddu etc. for Jupiter, or Lu-Bat Dil-bat or Lu-Bat-Dar etc. for Venus. This in itself is sufficient to show that Sag-Uš, Gu-ud and Dir are merely descriptive epithets added at a time when with increasing knowledge these planets were more sharply differentiated and it became desirable, or if you choose necessary, to specify which Lu-Bat was meant. The *Anu-Enlil* series being a composite production, the component parts of which date from different periods, reverts in part to the period *before* the differentiation among the three planets had been introduced, in part however *after* this period. We therefore find numerous passages in which Lu-Bat is used for either of the three planets, others in which the qualifying epithets are added, while the comments added in the former instances to make clear which Lu-Bat is meant likewise date from the later periods. What applies to the series applies of course to the extracts from the series in the Reports and Letters. Of the three planets, Saturn appears to have been regarded as the most important, as is indicated by the older enumeration, Saturn, Mercury and Mars'. Hence at this stage if there was any Lu-Bat *par excellence* it was Saturn and the equation above quoted Nimib = Lu-Bat = Saturn would therefore be a usage surviving from this period. Midway between this stage and the later one in which each of the three planets had a descriptive epithet attached to it, is the condition indicated by the use of Samas for Saturn, which is based, as we have seen, on a naive theory regarding the function of this planet. This juxtaposition of Sun and Saturn is at once a testimony to the prominence accorded to the planet among the trio which were grouped together, and at the same time represents the first attempt to mark off Saturn from the two other Lu-Bat. As between Mercury and Mars, the testimony of the astrological texts is equally decisive in giving Mars the preference. When e. g. two stars<sup>2</sup> are referred to, it is Saturn and Mars that are meant. The proof for this is furnished by the fact that in the cases in question, Mars and Saturn form the subject of the omens<sup>3</sup> introduced. For this reason it is *a priori* likely that when in an

1. Diodorus, as quoted above (p. 163, note 2) also indicates that the reason why the Chaldeans called Saturn by the name of the Sun was because it was the most "prominent" of the five planets or stars and more largely used than the others in divination. It is interesting also to note that Hyginus, quoting Eratosthenes (above p. 163, note 2), identifies Saturn with Phaethon, the unfortunate son of the Sun who, for his rashness in endeavouring to drive the chariot of his father, was struck by Jove's lightning and degraded from his high position to be placed among the stars. In this way — recounting the well-known tale which Ovid, *Metamor.*, II, 1-356, gives in detail — he would account for the association of Saturn with the sun since Phaethon is also used for the sun itself. This phase of the subject pointing distinctly to Babylonian influences I must reserve for a special article.

2. E. g. Thompson, Nos. 99 rev. 3; 101 A rev. 4; 102 obv. 8; and 115 C obv. 6.

3. In Nr. 115 C, the reference to Mars is missing, owing to the defective character of the text, while Samas in this text designates Saturn.

astrological text' we read of an omen "When Lu-Bat approaches Lu-Bat", we can interpret this as referring to Saturn and Mars, and similarly when the phrase that "Dilbat is decked with two crowns"<sup>2</sup> is explained as referring to "Two Lu-Bat' standing in front of her", the two planets are in all likelihood Saturn and Mars. Mercury as the smallest of the planets and as the most difficult to observe was clearly the one that played the least significant role in the older period of the Babylonian-Assyrian astrology. The reasonable conclusion is that it was the last to be specifically differentiated<sup>3</sup>. Overshadowed by Saturn and Mars, it became known as *the* Lu-Bat not because of its importance, but on the contrary because in consequence of its comparative insignificance, it was a *residuum*. With Saturn distinguished as the "steady" Lu-Bat and Mars, apart from other names, as the "dark-colored" Lu-Bat, Mercury could dispense with any descriptive epithet, since it was *the only other Lu-Bat left*. If, therefore, in later times Mercury is designated as Lu-Bat and receives the designation *bibbu*, i. e. "planet" in general<sup>4</sup>, it is not because Mercury was ever the planet *par excellence* but because as the *least significant* of the planets it was considered sufficient to designate it as merely Lu-Bat — a planet without any special prerogatives or standing. For all that, it benefited by this general title that was given to it, and when the planet became identified with the god Nebo and the planet Jupiter with Marduk, the close association of Marduk and Nebo in the cult of Babylonia, after Babylon with the adjacent Borsippa (the seat of the Nebo cult) had become the political and religious center of the Euphrates Valley, found its outward expres-

1. Virolleaud, *Ishtar*, XX, 47 = Supplement, Nr. XLIX, 3 (also l. 1). I cannot therefore agree with Kugler, *Sternkunde*, I, p. 221, note, who wishes to render "one planet approaches the other". Hommel, *Aufsätze*, p. 454, was at least right in supposing that two specific planets were meant.

2. Virolleaud, *Ishtar* Nr. VII, 29, and Supplement, Nr. XXXVI, 18.

3. Written Lu-Bat with plural sign.

4. That despite the fact, Mars was assigned the last place in an enumeration of the planets was probably due to the circumstance that it was the "unlucky" planet. Moreover, the oldest witness to this order is in tablets of Asurbanapal's library (II R., 48 rev. 48-54; III R., 57, Nr. 6, 65-67; Harper, *Letters* Nr. 648 obv. 8-11) and may therefore date from a period when although Saturn still retained his position as the chief of the three Lu-Bat, Mercury had already by virtue of his identification with Nebo (as the son and associate of Marduk) risen to greater importance. See p. 178, note 1.

5. It is to be noted, however, that *bibbu* does not always designate Mercury. In Virolleaud, *Ishtar* Nr. XXVIII, 40, the context points to its being Mars, just as V R. 21, Nr. 1, 27 c-d, *bi-ib-bu* is entered as the equivalent of Nin-Gir-Ban-da, a designation of Nergal with whom the planet Mars was identified (Jastrow, *Religion*, II, p. 442 and 445). It is therefore natural to find *bibbu* also entered as the equivalent of Lu-Bat (e. g. II R. 39, Nr. 5, 62) which according to the explanation above set forth means that *bibbu* can stand for Mars, Saturn or Mercury. See Jastrow, *Religion*, II, p. 663, note 1. In Rm. 301 (Virolleaud, *Babyloniaca*, III, p. 301) *bi-ib-[bu]* probably stands for Mercury, to which therefore it was more particularly applied, *after* Lu-Bat had become the designation specifically for this planet.

sion in raising Mercury to a rank above Saturn and Mars<sup>1</sup>. At the same time, owing to the conservative force of established tradition, it is not until a very late period that the logical step is actually taken of changing the order in the enumeration of the planets and of placing Mercury immediately behind Jupiter and Venus. It is also to the later period of Babylonian-Assyrian astrology that the usage belongs which extended the application of Lu-Bat to any of the five planets and even to the sun and moon. The original restriction to Saturn, Mars and Mercury lost its *raison d'être* when specific names were found for these planets, and the element Lu-Bat was naturally looked upon as a general designation for "Planet". Hence in portions of the Anu-Enlil series, Lu-Bat with the plural sign is introduced as a designation of all the five planets<sup>2</sup>, while in astrological lists we encounter Moon, Sun and the five planets designated collectively as the seven Lu-Bat<sup>3</sup>.

1. An interesting illustration and expression of this association between Jupiter-Marduk and Mercury-Nebo which led to giving Mercury a place immediately after Jupiter is to be found in a letter of Balasî (Harper Nr. 354. rev. 9-10) in which Mercury (Lu-Bat Gu-Ud) is equated with "the son of the king" — the complement, therefore, to Jupiter as the "king" star (*sarru*) which in fact is one of the designations of Jupiter. See Jastrow, *Religion*, II, p. 643, note 2, and 652, note 13. In view of this, we need not hesitate to equate (Mul) *Na-bu-u* (Virolleaud, *Supplement*, Nr. VIII, 7) with Mercury — there contrasted with Dun-Pa-Ud-Du (or Dun-Pa-ê) = Jupiter.

2. E. g. Virolleaud, *Ishtar* Nr. XXV, 41, Lu-Bat (Mes) *i-ba-il-u-ma*, i. e. "Planets are bright" is the explanation for *lal.labî isarribû* "stars shine strongly" in the preceding line. Similarly in l. 48 "stars of heaven" are entered as equivalent to Lu-Bat (Mes), i. e. "planets". Other passages for Lu-Bat (Mes) in the general sense of planets are Virolleaud, *Ishtar* Nr. VII, 11; Sm. 2074 (Bezold, *Catalogue*, p. 1529), and the interesting definition of planets in Thompson, Nr. 112 rev. 7-8, that "Lu-Bat (Mes) are such stars as pass beyond one another along their paths".

3. 7 Mul Lu-Bat (Mes) (III R., 57, Nr. 6, 65-67 = CT. XXVI, 45, 19-21). Other passages will be found Jastrow, *Religion*, II, p. 663, note 4.

[This article was sent to the *Revue* in October 1909, but owing to the death of the editor M. Ledrain, its publication has been delayed. A number of additions were made in the proof including references to Kugler, *Sternkunde und Sterndienst in Babel*, II, 1, which had not yet reached me when the article was written. M. J., Jr.]