

About traces of astrogeophysics/geoastrobiology and prehistoric catastrophism in Latvian folk poetry *dainas*

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Abstract: Latvians belong to oldest indoeuropean cultures. Despite centuries of oppression, Latvian folk poetry contains surprising information, what can be used for guessing about history of solar system and topics of similar weight.



Austras koks (Sun- or World tree Latvian ornament). *Credit: 9perkoni*

Latvians belong to oldest indoeuropean cultures (Chatterji, 1968), being part of language group of the Balts. This small group include Latvian, Lithuanian and (extinct) Prussian languages. Due to outstanding personality of Maria Gimbutas (1921-1994), Lithuanian archaeologist and anthropologist, the world knows about Balts more from Lithuanian side. More than 250 000 individual Latvian *dainas* and their versions are known, mainly as stanzas. Kursīte (1996, 1999) had shown, that *dainas* has specific construction and rhythmic so to distinguish sacred from profane here is possible. *Dainas* are rich in description of the Sun- connected things, as researchers noted already in 19-th century (Mannhardt, 1875). From other point, Brašņis felt, that principles and liturgy of old indo-aryan religion could be extracted from *dainas* (cf. Grīns and Grīna, 1992).

Latvian folk poetry was one of the first which has been analysed by PC (Vīķis-Freibergs, 1988). However work is complicated due to:

1. Taboo-like omission of real name of mythological character (like the Sun) and hidden meanings in text (cf. Kursīte, 1996, 1999),
2. Some changes and degradation during centuries of oppression in times without written Latvian language,
3. Difficulties of translation to English (cf. Auzina-Szentiavanyi).

Phenomenon of climate change had renewed interest in studying of ancient cultures. It has been shown, that comparable mythology could be valuable tool for study of prehistory (cf. di Santillana and von Deshen, 1969, cf. Velikovsky, 1950). Problem here is, that comparable mythology can question principles of mainstream science and science is not ready for such a competition (cf. Einstein, 1955). For example, detailed description of Flood in Genesis could be easily explained, if we assume, that once upon a time the Earth stopped self-rotate. In fact, God of Old Testament tells us this in plain English. We can even understand the role of Ararat Mountain in prehistoric Noah story. Looking into history of science, we can see, that astronomy has gone less categorical about some details of development of solar system as it was in 1950, but mentioned point still is taboo. Best wishes for emerging “geomythology” (Mayor, 2004; Vitaliano, 2007; Masse and Masse, 2007; Chester and Duncan, 2008; Hamacher and Norris, 2010; Reza, 2012; Nunn, 2016; Bates, 2018; Burbery, 2021) in this regard.

Author is outsider in field of mythology but found numerous examples from Latvian folk poetry worth analyzing for purposes, mentioned in title. I will give some basic facts about Latvian mythology important for our analysis and then discuss number of examples. Interesting data one can find also within other Latvian folk-lore material (like warning not to sow during solar eclipse- today these events could coincide maybe once in several centuries) but these traditionally are considered to be more international. *Dainas* are original creation, influences from Christian religion and times of feudalism could be separated from sacred base.

Traditional Latvian calendar is shown in fig.1. Nine-day weeks *savaites*. Five nine-day weeks forms one time (*laiks*). Eight times forms one year (360 days)- perhaps reminiscence from antediluvian world. *Ziemassvētki*- winter solstice, *Jāņi*- Summer solstice, *Lieldienas*- spring equinox, *Miķeļi*- autumnal equinox. Possible astronomic background for nine-days week (also seen in some other old cultures) is an intriguing idea.

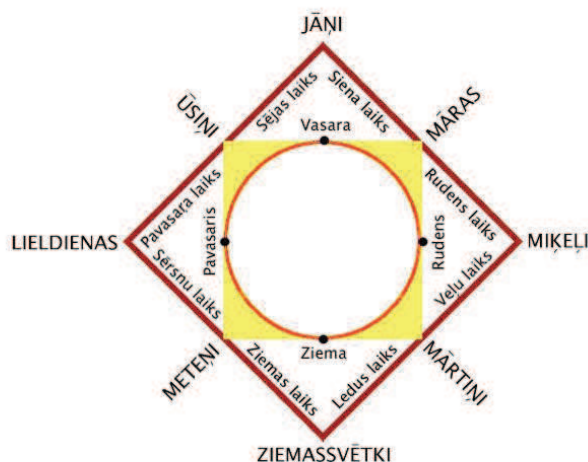


Fig.1 Traditional Latvian calendar.

Latvian God (*dievs*) is more like certain Cosmic Reason, both on Earth and in space. Personifications of specific points of Sun's path around the Earth (in geocentric view) like *Metenis* and *Jānis* are sometimes called "sons of the God" (*Dieva dēli*). Similarly, we see certain uncharacterized "daughters of the Sun" (*Saules meitas*). Biezais (1998) after analysis considered, that with term "daughter of the Sun" is meant the Sun itself. Author feels, that one of explanations of "daughter of the Sun" characters could be- different nature of Sun during annual cycle due to its trinity (see below).

Pērkons (Thunder)- powerful character, creator and master of the world, Blacksmith of Heaven, occasionally also referred to God's son. Author feels, that in profane world here is clear parallels with worship of Jupiter that we see by other older cultures.

Ozols (oak)- could be symbol for World Tree, a year.

Environment of functioning of mythological characters has been described highly poetically:

33739-0

**Aiz Daugavas vara dārzs
Baltā smilšu kalniņā;
Tur ziedēja zelta rozes,
Sudrabiņa magoniņas.
Dieva dēli bāleliņi
Puškoj' savas cepurītes,
Saules meitas jumpraviņas,
Darināja vainadziņus.**

(Copper garden behind Daugava river in hill of white sand. There golden roses and silver poppies flower. God's sons decorated their hats, but daughters of the Sun- their crowns.) Humans are separated from the world of God's sons and daughters of the Sun by 1) mythical aspects of Daugava river (Kursīte, 1999) and 2) death (hill of white sand). Copper traditionally is connected with underworld (or, sometimes, afterlife).

Latvian calendar contains certain sacred points, as we see from, for example, following daina:

33754-2

**Dieva dēli klēti cirta,
Zelta spāres spārēdami;**

Saules meitas cauri gāja Kā lapiņas drebēdamas.

(God's sons are building with golden roof rafters. Daughters of the Sun are going through, trembling). In sacred world here is celestial marriage with some extatic trembling- in profane one- could be description of annual solar cycle (fig.1) with short-term astronomic solar libration.

1. We see, that our ancestors knew path of Moon and Sun well (geocentric view, Fig.2). They were concerned also about dangers of possible deviation of the Sun from its path during annual cycle as one can realize from following material.

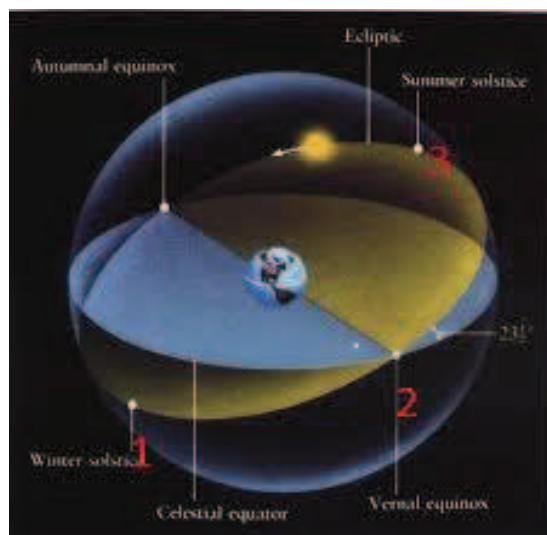


Fig. 2 Critical points for sympathetic magic for “control” of Sun’s annual path in the sky. Thanks for picture basics to conversation.salamzaban.com

During space-time 1 (winter solstice) the Sun has reached lowest point relative to Earth’s equator. Actions of sympathetic magic are 1) to maintain permanent movement and 2) to pull feasts on mountain. Mountain here symbolises the Earth itself (geocentric view).

33247-4

Ziemas svētki atnākuši,

Pastaliņu plēsējīņi:

Trīs dieniņas, trīs nakšņiņas

Ne miedziņa negulēju.

(*Ziemašvētki*- winter solstice- tears *pastalas*- simple, primitive shoes made of one piece of leather. Three days and three nights humans are dancing, moving, visiting relatives etc. (Small corrections on text of dainas cited are made by author to bring it closer to modern Latvian)).

Ai, lielie Ziemašvētki,

Lejiņā nobraukuši.

Tekam, jauni, tekam, veci,

Velkam svētkus kalniņā!

(Winter solstice feast has drive to low place, people are asked for help to pull feast in the mountain).

Several dainas speak about both critical points No1 and No2 (fig.1)- winter solstice and spring equinox (*Lieldienas*).

33293-1

Ziemas svētki, liela diena,

**Tie Dievam lieli svētki;
Ziemas svētki vīzināmi,
Liela diena šūpojama.**

(Both winter solstice and spring equinox are great feasts for God. During winter solstice one should travel, during spring equinox (*Liieldienas*)- to swing (in order to help the Sun to pass potentially critical space-time points-E.A.)).

32300-1

**Četras māsas lieldienīgas,
Četri brāļi ziemas svētki,
Astoņām dieniņām
Daram saldu alutiņu.**

(Magic rites should be continued for four days both in spring equinox and winter solstice time).

In rich folklore material about summer solstice festivity *Jāņi* (point 3 in Fig.1, around June, 21) here are some intriguing details. First, during all summer solstice night bonfires should be maintained. Second, in the morning *Jānis* (the Sun) should be driven away:

54287.

**Dienu, nakti Jānīt' dzinu,
Nu aizdzinu uz Rīdziņu:
Ej projām nu, Jānīti,
Nu mēs tevi negribam;
Nāc atkal citu gadu,
Tad mēs tevi gaidīsim.**

In short, here are reminiscences about 1) day(s) without a Sun, 2) “the day the Sun stood still” and 3) disordered Earth’s orbit cases. This topics has been mentioned in diverse cultures and first taken seriously by Velikovsky in “Worlds in collision” (1950). Mythological travel of the Earth between different larger planets could offer possibilities for all mentioned extremas. Labor's fruit of Newton does not allow this? Not really (see Alksnis, 2015).

2. Seemingly absurd dainas about punishment of the Moon by the Sun because he do not give light during day:

33925-0

**Saule kūla Mēnestiņu
Ar sudraba čakārņīti.
- Ai, Saulīte, nekul mani,
Tev dieniņa, man naksnīņa.**

Commentators of dainas were puzzled by this celestial conflict. Right answer probably could be sourced in Velikovsky’s “In the beginning”- many ancient cultures have reported brighter Moon. “The Babylonian astronomers computed the visible diameter of the Sun as only two-thirds of the visible diameter of the Moon. This measure surprised modern scholars, who are aware of the exactness of the measurements made by the Babylonian astronomers and who reason that during the eclipses one can easily observe the approximate equality of the visible disks” (Weidner, 1915).

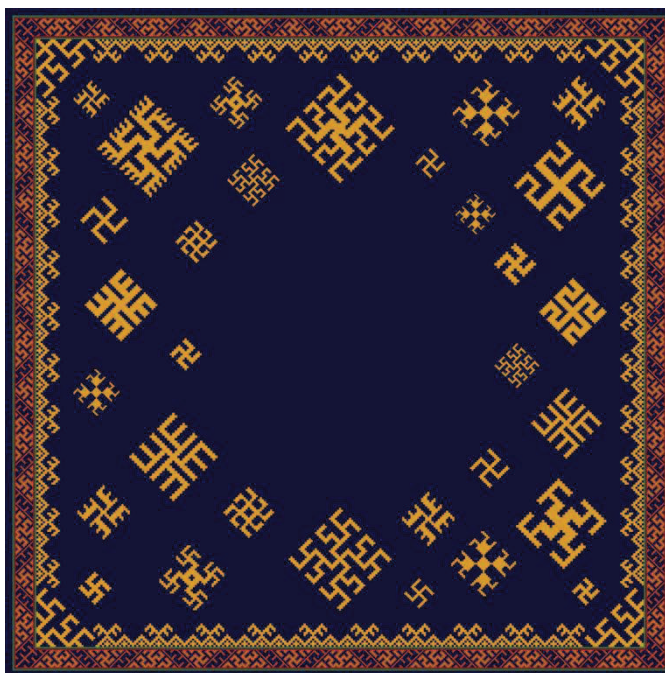
3. Notices about strange physical performance of *Auseklītis* (Venus planet)

We see by several ancient cultures story about extraordinary birth of Venus. Mythologies remembers times, when Venus looked like comet and it’s close encounter endangers the Earth. In dainas we see intriguing celestial bath description. Vīķe-Freiberga (2016) considered this celestial bath as a non-ordinary event. *Auseklis* (Venus planet) is between mythological characters, which are pouring water over hot stones, to get steam.

**Dieva dēli pirti dara
No sīkiem olišiem;
Saules meitas pērties gāja,
Zelta slotas padusē;
Auseklītis garu lēja
Ar sudraba biķerīti.
Leji, leji, auseklīti,
Izpatapu siltumiņu!**

(Bath is made by sons of God. Daughters of the Sun are going to bath with golden brooms. *Auseklis* is pouring water with silver cup). Sometimes with pouring of water are busy also the Moon and sons of God. *Pērkons* (Thunder) appears here only in exceptional cases.

4. Poetic description of astronomic events



Woman's clothing piece from Stāmeriena, 19th century.

It is not always easy to resolve between description of seemingly ordinary events (like change of a seasons or period of non-visibility of *Auseklis*- Venus planet) and several not so clear motifs.

34047-17

**Visas zvaigznes izskaitiju,
Ausekliša vien nevaids.
Auseklīts aizteceja
Saules meitas lūkatos.
Pērkons brauca pa debesim,
Ar Sauliti bārdamies:
Saule viņu neklausija,
Izdev' meitu Auseklām.
Pērkons, Saulei tītidams,
Nosper zelta ozoliņu.
Saules meita gauži raud,
Zelta zarus lasidama.
Visus zarus salasija,
Galotnites vien nevaids.**

Ceturtdā gadiņā Dabuj' pašu galotniti.

This daina is a combination of several popular themes: first, *Auseklis* (planet Venus) is invisible for observation (moves to look for daughter of the Sun). Second, *Pērkons* (Thunder) is angry about this (occultation?) and strikes golden oak (World Tree? Sun Tree?). Daughter of Sun is collecting golden branches, but it takes four years to get the top of oak. It look like similar to horror stories of mythologies of other ancient cultures where celestial thunder could be Jupiter. By the way, mythology ascribed transfer of power over the Earth from Saturn to Jupiter (Velikovsky, "In the beginning") correctly from the point of vortical celestial mechanics.

In other occasions we see, that the Sun is in hatred with God or sons of God.
In evening, Sun has to cross nine spaces.

5. World Tree

Here are actually several World Trees in dainas. First tree is mainly Sun- connected:

33748-2

**Bērziņš auga ceļmalā
Trejādām lapiņām:
Pirmajā Saule lēca,
Otrā Saule norieteja,
Trešajā lapiņā
Zelts, sidrabis laistijās.**

(Birch rises near the road with three leafs. In first Sun is rising, in second- setting. In third leaf gold and silver are [shining]).

Than follows more astrogeophysic World Trees:

33885-0

**Ozols auga Daugavā
Ledainām lapiņām;
Tur Saulīte miglu meta,
Vai bij ziema, vai vasara.**

Oak (symbolises year) grows in Daugava river with icy leafs. There the Sun is throwing fog in winter or summer. Mytical aspects of Daugava river could be compared with Styx. Certain energetic process is ascribed.

34066-15

**Sen dzirdēju, nu redzēju,
Rīgā zaļu ozoliņu:
Vara saknes, zelta zari
Sudrabiņa lapiņām.**

Most popular World Tree- green oak with copper roots, golden branches and silver leafs. Parralels with *Monas Hieroglyphica* from John Dee (1564) is easy to be seen. This tree is supposed to be energetic and in fact describe influence of astrogeophysics to human body (cf. Campbell, 2012).

6. Different roles of silver in dainas

Gold in dainas always is connected with divine. Roles of silver here are more nuanced. Proportion of gold and silver colors in dainas are approximately 3:2. Within Sun-dainas this proportion is 2:1. In dainas about God and the Moon- 1:2 (Kursīte, 1996).

Silver can be connected with afterlife (silver hill), World Tree (silver oak), divine part of *Pērkons* (thunder) lightning, also with son of God, *Jāni*, *Māru*, *Laimu*, *Dēklu* (presumed aspects of God). Silverlight of stars are considered beneficial for human life-forces.

7. Dainas about connection of solar activity with wars (!?)

32151-0

**Saule gaisu sajaukuse,
Aizasprieda ozolā;
Kungi, karu sacēluši,
Sauca manus bāleliņus.**

32152-0

**Saule, gaisu sajaukuse,
Ielien pate debešos;
Kungi, karu sacēluši,
Aiziet paši Vāczemē.**

(The Sun has mixed the air and has get stucked in oak [year]. Feudal lords are made a war and call my brothers. Version: Sun is sneaking into sky (could be connection of solar activity with clouds from Atlantic storms?-E.A). Some centuries before advent of heliobiology.

8. Daina about precession of equinoxes?

31348-0.

**Melna čūska miltus mala.
Vidū jūras uz akmeņa.
Tos būs ēst tiem kungiem,
Kas bez saules strādināja**

(Black snake is grinding flour in the middle of see on a stone). We could see traditional imagination of precession of equinoxes as a mill (cf. di Santillana and von Dechen). Second part of stanza has been transformed as a curse.

9. Possible knowledge about Ice Age?

33929-0

**Saule leca, Mēness leca,
Spīd Saulīte, spīd Mēness;
Tik tie mums nespīdēja
Aiz lieliem led's kalniem.**

Sun and Moon are rising and shining- but not for "us"- behind large ice mountains. In order to write this, writer should perhaps been situated in Hyperborea (cf. Tilak, 1903). Here is another complementary daina, now written as a curse:

**Uz akmeņa malku cirtu,
Strautā kūru uguntiņu;
Lai sildāsi tie ļautiņi,
Kas man laba nevēlēja...**

(I cut wood on a stone and made bonfire on a creek). If one had been in mountains of Arctic tundra, these operations do not look extraordinary.

10. Hidden aspects of the Sun, solar trinity

Scientists have concluded, that some unaccounted solar energy likely exist (Connolly et al, 2021). So it was interesting to see, could we observe notices about certain hidden aspects of the Sun, similarly with examples from Egyptian, Indian and Chinese cultures.

First, here is repeating phrase **Saule sēja sudrabiņu** (the Sun is sowing silver). Likely here is understanding, that solar impact to fertility goes trough the water.

Second, here could be seen understanding about certain prolonged solar effects to fertility:

5965

Kur Saulīte, darbu ņēmi

**Tādu garu vasariņu
-Pinu rožu vainadziņu
Apkārt miežu līdumiņu**

**Aiz Daugavas melni meži,
Sarkanām odziņām
Tās nebija zemes ogas
Tās saulītes asariņas.**

Thus in first daina the Sun is bridging a (protective and energetic) rose wreath around barley clearing (Vīķe-Freiberga, 2016).

Second daina speaks about non-earthly red berries, tears of the Sun, which grows in black forests behind a mythical river Daugava. Forests are black, so here is not meant plain sunlight.

Sunset, for example, is pictured as a complex phenomenon:

**Noiet saule vakarāi
Šķindēdama, žvarkstēdama
Noiet zeltu sijādama,
Sudrabiņu vētdama**

Sunset is connected with gold and silver. Moreover, the Sun is making noise. One noise (rumble) could be characterised as pleasant, second (approximate translation- clanging, squeaking)- likely not.

Solar trinity as likely an atmospheric phenomenon typically is characterised with colors blue, green, red. However dainas speak also about Suns, which are rising during short summer solstice night:

33207-0

**Es redzēju Jāņu nakti
Trīs saulītes uzlecām:
Viena zelta, otra vara,
Trešā tīra sidrabiņa.**

One of these Suns is from gold, second- from copper and third- from silver. Here possibly hidden solar aspects are mentioned, like tidal force and vortical field. As force of components of solar power are changing during year, we in fact have different Sun's in each 45 day period what mythology is reflecting.

Ancient people have lived, so to speak, not on Earth but in Universe. Daina pictures **six** copper (thus- Earth connected) gates for movement of the Sun, the Moon and (God's aspect) Māra.

33845-0

**Maza maza man mājiņa,
Divtrejādi vara vārti:
Par vieniem Saule lēca,
Par otriem Mēnestiņš,
Pa trešiem Māra jāja
Ar pelēku kumeliņu.**

Conclusion

Despite centuries of oppression, Latvian dainas contain surprising information, which could be used in guessing about history of solar system and other questions. Deciphering of Latvian folk poetry is not easy task, however.

References

Alksnis E. (2015) Deciphering forces of celestial mechanics. *General Science Journal*.
Auzina-Szentiavanyi I. <https://www.latvianwitandwisdom.com/>

- Biezais H. *Seno latviešu debesu dievu ģimene*. R., 1998.
- Bates K. (2018) *Geo-mythology*. Internet.
- Brašiņš E. see <https://drive.google.com/file/d/0ByB5owRdQQreWjVtRXhQWENNR0E/view>
- Burbery T. (2021) *Geomythology: How Common Stories Reflect Earth Events*. Routledge.
- Campbell A. (2012) The reception of John Dee's *Monas hieroglyphica* in early modern Italy: The case of Paolo Antonio Foscarini (c. 1562–1616) *Studies in History and Philosophy of Science Part A*, **43**, 519-529.
- Chatterji S. (1968) *Balts and Aryans in Their Indo-European Background*. Indian Institute of Advanced Study.
- Connolly R. et al (2021) How much has the Sun influenced Northern Hemisphere temperature trends? An ongoing debate. *Research in Astronomy and Astrophysics*, in press.
- de Santillana G., von Dechen H. (1969) *Hamlet's Mill: An Essay Investigating the Origins of Human Knowledge And Its Transmission Through Myth*. Boston: Gambit.
- Einstein's letter to Velikovsky, 17.III, 1955 (English translation)
 "Dear Mr. and dear Mrs Velikovsky!
 At the occasion of this unpropitious birthday you have presented me once more with the fruits of an almost eruptive productivity. I look forward with pleasure to reading the historical book that does not bring into danger the toes of my guild. How it stands with the toes of the other faculty, I do not know as yet. I think of the touching prayer: "Holy St. Florian, spare my house, put fire to others!"
 I have already carefully read the first volume of the memoirs to "Worlds in Collision," and have supplied it with a few marginal notes in pencil that can be easily erased. I admire your dramatic talent and also the art and straightforwardness of Thackrey who has compelled the roaring astronomical lion to pull in a little his royal tail without showing enough respect for the truth..."
- Gimbutas M. (1963). *The Balts*. London : Thames and Hudson, Ancient peoples and places 33.
- Grīns M, Grīna M. (1992) *Latviešu gads, gadskārtā un godi*. Everest.
- Hamacher D., Norris R. (2010) Australian Aboriginal Geomythology: Eyewitness Accounts of Cosmic Impacts? *Arxiv.org*
- Khoshraftar R. (2012) Geomythology: earth sciences and oral culture- case study of the north west of Iran. *Geographic Space*, **11**, 211-234.
- Kursīte J. (1996) *Latviešu folklorā mītu spoguļi*. Rīga, Zinātne.
- Kursīte J. (1999) *Mītiskais folklorā, literatūrā, mākslā*. Rīga, Zinātne.
- Mannhardt W. (1875) Die lettischen Sonnenmythen. *Zeitschrift fuer Ethnologie*, **7**, 73, 209, 282.
- Masse W., Masse M. (2007) Myth and catastrophic reality: Using myth to identify cosmic impacts and massive Plinian eruptions in Holocene South America. *Geological Society London Special Publications* 273(1):177-202.
- Mayor A. (2004) Geomythology. in *Encyclopedia of Geology*, ed R. Selley, R. Cocks, and I. Palmer. Elsevier.
- Nunn P. (2016) Australian Aboriginal Traditions about Coastal Change Reconciled with Postglacial Sea-Level History: A First Synthesis. *Environment and History* 22(3):393-420.
- Tilak B. (1903) *The Arctic home in the Vedas*.
- Vitaliano D. (2007) Geomythology: Geological origins of myths and legends. *Geological Society London Special Publications* 273(1):1-7.
- Vīķis-Freibergs V. (ed) (1988) *Linguistics and poetics of Latvian folk songs*. Montreal: McGill-Queens University Press.
- Vīķe-Freiberga V. (2016) *Trejādas Saules. Mitoloģiskā Saule*. Pētergailis.
- Vīķe-Freiberga V., Freibergs I. (1988) *Saules dainas*. a/s "Grāmata".
- E. F. Weidner, *Beitraege zur Assyriologie* VII, Heft 4 (1911), p. 99; cf. idem, *Handbuch der Babylonischer Astronomie* (1915), p. 131