

The background of the entire image is a close-up photograph of an ancient Egyptian stone wall. On the left, a large, weathered stone head of a pharaoh is visible, showing the eye, nose, and part of the beard. To the right of the head, there are several columns of hieroglyphs carved into the reddish-brown stone. The lighting is warm, highlighting the textures of the stone and the relief of the carvings.

Pekka Mansikka

NEW CHRONOLOGY
using solar eclipses

Volume III

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Pekka Mansikka

**New chronology using
solar eclipses,
Volume III**

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Prologue

To begin with, a word about this new edition. Four new chapters have been added and some chapters and annexes of minor importance have been excluded here. As for the content, this corresponds to the 2nd edition in Finnish, published at approximately the same time.

What are the reasons for making this very extensive study to remedy chronologies of ancient peoples? There are at least two reasons for this.

Firstly, professional researchers have done nothing to correct chronologies to match solar or lunar eclipses observed in ancient times. Of these, solar eclipses have naturally attracted the biggest attention. Here are a few:

1. Solar eclipse in Ashur-Dan III's 9th regnal year.
2. Solar or lunar eclipse during Esarhaddon campaign against Egypt.
3. Solar eclipse in the 7th year of Shimbar-Shipak.
4. Solar eclipse in circa the 17th year of Pharaoh Shoshenq I.
5. Solar eclipse in the 10th year of Mursili II, king of the Hittites.

However, some suggestions about them have all been to what solar eclipses could respond to them. But there is no suggestion that the chronology should be corrected accordingly. One might ask, is it not the eclipse first mentioned currently already applied to the right place in the chronology on 763 BC? The answer is: it is not. The theory that a solar eclipse observed in 763 BC would correspond to the solar

eclipse of Ashur-Dan III's 9th year, was introduced in 1867, over 150 years ago. But the Assyrian chronology has never been corrected there, but that the year 763 BC is there in the 11th regnal year of Assur-Dan III. The attitude has been similar towards those other eclipses that cannot be found in the current chronology of those times. None of the existing chronologies has been corrected for the purposes of fitting more closely in the solar eclipses recorded in ancient times.

Secondly, in the current chronologies there are major errors when examining their suitability for ancient astronomical observations and also some major contradictions in the history of other peoples (such as Elam). Although the year 763 BC in the current chronology is not targeted at Ashur-Dan III's 9th regnal year, that solar eclipse has similarly become the basic pillar of historical chronology.

It may occur that the overthrow of this basic pillar of ancient history and the calculation of a new foundation could be a very challenging project for many researchers. In addition, examining chronological timing from a purely scientific point of view may seem a fresh alternative. Namely, it excludes all possible previous interpretations of the kind that long time ago a recorded solar eclipse had never happened since it was not found in the current old chronology of the desired time. Secondly, it excludes the theory that, for example, The Babylonian calendar would have been able to transfer about a month away only on the grounds that some archaeological finding was to have forced timing into a particular year.

The abbreviated name of this new thesis could be "Solar-chronology".

The astronomy of Babylonia

Ancient Babylonian astronomers were very competent. They had the ability to study the times of lunar eclipses and, on the basis of the eclipse time, they could later establish it for a certain regnal year of a king of Babylon. If they had a

proper understanding of the times of the reign periods of the kings of Babylonia, then with these lunar eclipses, the kings of Babylonia and Assyria can obtain their right place in the chronology of the 8th century BC. Even though these astro-nomers were actually astrologers, this book will later refer to this option as the astronomy of Babylonia.

Babylonian commercial documents

In addition to solar and lunar eclipses, one should take into consideration the numerous discovered commercial documents written by the Babylonians, dated according to a regnal year of a reigning king.

The current chronology does not consider them at all. The evident reason for this is that the current old chronology was made long before these clay tablets were found and has not been corrected since then. The biggest change in this new edition is the effect of these business records written by Babylonians.

New studies

This study also introduces a new research of Egyptian hieroglyphs, which makes it possible to find several solar eclipses in Egypt's history, from the period of the Pharaohs reigning between 1510 and 610 BC. This new study is based on the Sed festival celebrations of the Pharaohs and it was performed by Egyptian astronomer Aymen M. Ibrahim. His research work has been very valuable for the timing of the new Egyptian chronology.

Shortcomings of current chronology

When looking at the solar eclipses recorded in ancient times, one can observe some shortcomings in the current chronology.

The eclipse during Esarhaddon's during his Egyptian campaign

This is not found in the current chronology's reign period.

It has been suggested that, the this solar eclipse was place in 669 BC. However, this interpretation is distracted by an error of the present chronology in the reign period of Esarhaddon's predecessor - Sennacherib.

The reign period of Sennacherib, which appears in our calendar for 24 years, contradicts the chronologies of Elamite and Babylon. It is true that ABC1 Chronicle reports his reign period for 24 years, but is this number rounded up or down?

ABC1 Chronicle and the Assyrian limmu-list report Sennacherib's reign period within 1 day accuracy. He reigned 5 months and 8 days over a certain year. According to the chronology currently used, Sennacherib reigned 23 years and 5 months.

When that Sennacherib's reign period is prolonged by a year, the contradictions with the chronologies of Elamite and Babylon are eliminated. As a result, however, Esarhaddon's reign period would occur one year later.

Solar eclipse in Ashur-Dan III's 9th regnal year

It is supposed to have occurred in 763 BC. For this to be accurate, the Assyrian chronology should be moved to two years later. How would this move work? To begin with, there would occur a small contradiction to the chronology of Babylon.

Solar eclipse in Shimbar-Shipak's 7th regnal year

Researchers have generally estimated that this eclipse would have occurred in 1012 BC. Applying this would necessitate to reduce the Babylonian chronology by seven years. This would cause some contradiction. Ninurta-apal-Ekur's reign period of approx. three years would have moved to end in 1178 BC or 1177 BC. Then the reign period of Meli-Shipak II, King of Babylon, his coeval, would have begun in 1179 BC One might try to apply the 7th regnal year of Shimbar-Shipak also to the eclipses occurred in July 1015 BC and in June 1024 BC. However, they have their

own drawbacks as well.

Solar eclipse in the 10th regnal year of Mursili II

In the current chronology, it occurred in 1312 BC, and other alternatives to the current chronology cannot be applied. However, this is connected to some detailed information. Archaeology reports that Mursili II's predecessor, Suppiluliuma I died soon after the death of an un-named Pharaoh. According to the current chronology, Suppiluliuma I died in 1322 BC, while Pharaoh Tutankhamun died in 1324 BC. This two-year difference in their death dates is somewhat contradictory to the archaeological discovery mentioned above.

Solar eclipse during Pharaoh Akhenaten's reign

This is usually applied to the solar eclipse occurring in 1352 BC. This would mean that it only happened a few months after Akhenaten had become Pharaoh. This early time may cause some contradiction, as it was said he took the name Akhenaten as a result of a solar eclipse he saw.

Lunar eclipse in the 15th regnal year of Takelot II

This lunar eclipse observed sets detailed conditions for the chronology timing, as the exact date of the lunar eclipse is provided. It occurred approx. 5 days before the beginning of the 16th regnal year of Takelot II.

No "sound" alternatives to this lunar eclipse have been found, as the proposed alternatives would require the reign period of Takelot II to be shifted a lot away from its current position. However, there is apparently no justification for his having reigned much later than expected.

Lunar eclipses of Neo-Babylonian era

They have been commonly assessed as lunar eclipses observed in real time. However, it is noteworthy how, in this

new study, one can observe that, in applying the old chronology, the beginning of the reign period of Nebuchadnezzar II should be moved by two years in order to correspond to archaeological discoveries. This contradicts the current interpretations of lunar eclipses in the Neo-Babylonian era.

Guidelines for a new chronology

Thus, we realise that it makes no sense to start making some minor changes to the chronology as mentioned above. Instead, the correction of chronology should start with a clean slate. It is also useful to compare the new studies that have been performed about solar eclipses, whether they are justified or not. This is closely related to the studies by Egyptian astronomer Aymen M. Ibrahim. In this studies, he has listed four new solar eclipses in Egyptian history, which have been carefully timed for a particular Pharaoh's regnal year. In addition, he has referred to three other solar eclipses.

Thus, it can be realised that in the event of many individual years, the chronologies begin to resemble a spider's web filled with "traps", solar eclipses, where the "flies", the regnal years of certain kings, become caught.

We can see that the correction of chronology needs to emanate from an open-minded attitude, as the reign periods of kings may have to be moved a lot from their present places. But when we think of it as solving puzzles, we get all of the tens of pieces of information in place.

1. Esarhaddon's eclipses

From time to time have researchers, somewhat incidentally, made some statements about the current chronology. Most of them have been praising, especially related to the solar eclipse of 763 BC. However, there have been some discords.

Scientist David Brown, who does presumably belong to a “younger generation of researchers” (born in 1968) wrote in his thirties that perhaps some of the lunar eclipses recorded by Babylonian astrologers were recorded only in the 4th century BC.¹ This is a consistent conclusion, especially since some lunar eclipses were recorded using the Egyptian calendar. This would seem to indicate that Egyptian culture had a very strong impact on Babylon during the time when the lunar eclipses in question were recorded. Egypt is not known to have had any effect on the Babylonian culture in the 6th to 8th centuries BC.

Another discord was involuntarily spotlighted when professor Sidney Smith translated the cuneiform of Esarhaddon Chronicle in 1924. He translated the event that occurred in the 1st regnal year of Esarhaddon, in the Tashritu month so that it could be interpreted as meaning the solar eclipse.² However, it was never thought to refer to any solar eclipse because it was not found in autumn 680 BC. Finally, after a long time, researcher A. K. Grayson performed a new translation of Esarhaddon Chronicle.³ But Sidney Smith's “witticism” preserved and due to this is known that the autumn of Esarhaddon's first regnal year could easily

Perhaps everyone interested in reading, for example, the history of Assyria, Babylon and Egypt, has at some point noticed some references to solar eclipses observed at that distant time.

Taking a glance at the chronologies of those peoples, it can be stated that the solar eclipses observed cannot be found in the reign periods of those kings.

The Author has discovered this scientific vacuum and he has considered it to be an appropriate opportunity to specify the chronologies of the peoples reigning in the Middle East in 1600-530 BC in connection with accordance of the observed eclipses.

This study raises justified questions: did the solar eclipse observed in Ashur-Dan III's 9th regnal year in 800 BC or in 809 BC? Or could it have happened in 791 BC?

This study presents a new feature of applying new studies by Egyptian astronomer Aymen M. Ibrahim for the first time in practice to the history of the peoples.

This new study can be regarded very exceptional, as this is the world's first major encouragement of how a chronology can be timed using solar eclipses.

This Book includes 74 images and more than 40 tables and text boxes.

