

# Ancient Dates and Eclipses

China, Israel, Egypt

# The begin date...

Emperor Huangdi's 20<sup>th</sup> year was the new moon January 27, 2636 BC.

In Huangdi's 20<sup>th</sup> year brilliant clouds appeared...

“When he was sitting in a boat in the Yuen-hoo, above its junction with the Lo, there came together phoenixes, male and female.”

This is the new moon from which all eclipse dates in 60 day cycles and 60 year cycles were counted.

# Calendar Epoch

- "The Hong fan zhuan says: 'Calendrical records began with Emperor Zhuan Xu's Superiour Epoch of Grand Commencement in the year yanmeng shetige, in the month bizou, on the new moon day jisi [6], the Beginning of Spring, when the seven luminaries gathered at the fifth du of YINGSHI [LM 13].“ [*Xin Tang shu*], ch. 27
- February 15, 2467 BC, the new moon on day 6 of cycle; 2500 years from the full moon February 15, 2468 BC before the full moon April 3, 33 AD.
- He invented calendaric calculations and delineations of the heavenly bodies

## No eclipse on a day 47

“In his fifth year, in the autumn, in the 9<sup>th</sup> month, on the day kang-seuh, 47<sup>th</sup> of cycle, which was the first day of the month, there was an eclipse of the sun, when he ordered the prince of Yin to punish He and Ho.”

“On the first day of the last month of autumn the sun and moon did not meet harmoniously in Fang/Scorpio.”

“Upon which there was beating of drums, and a general commotion such as the Chinese usually make on the occasion of an eclipse of the sun.”

# Day and year given in cycle of 60

The first year of T'ea-keah was 18 in cycle of 60.

The new moon on the 12<sup>th</sup> lunar month, was also on day 18 of cycle.

November 9, 1653 BC.

This was one of the earliest recorded uses of the cycle 60 of days and 60 years.

Thus all of the chronology is right.

- **To this should be added a ' King Wu 1st-year' record in Yi Zhou shu which mentions a bingchen new moon in King Wu's first year and which accurately identifies 29 July 1049.<sup>51</sup> Even more striking is the '23rd-year' record in the 'Feng bao' chapter, mistakenly included among entries concerning King Wen's reign,<sup>52</sup> that correctly identifies gengzi as the cyclical date of the new moon day of the fourth month (26 April 1046) and describes how the lords of the various states allied with Zhou convened in Feng to be reconfirmed in their status as vassals by King Wu, which event we know took place just after the Conquest, hence in the 13th year, again impossible in Chou Fa-kao's, David Nivison's, or Edward Shaughnessy's account. Finally, as we saw earlier, 'Xiao kai' chapter contains a proven record from King Wen's 35th year, correct to the year, month, and cyclical day, of the total lunar eclipse of 12-13 March 1065.**

## Corrected:

Day Bingchen, day 53, was the new moon May 19, 1173 BC. 1<sup>st</sup> year of Wu.

23<sup>rd</sup> year of conquest is really 23<sup>rd</sup> year of cycle 60, 1174 BC the conquest.

Year 28<sup>th</sup> of cycle, Day Gengzi, day 37, was the new moon April 17, 1170 BC when vassals were reconfirmed.

“35th year of king Wen of Zhou, 1st month, day bingzi 13, during worship of the full moon the king announced, 'The many...eclipses are untimely, you should begin planning for the succession.’”

The lunar eclipse, day 13 of cycle, September 23, 1205 BC.

# 1174 BC Zhou dynasty evidence.

“In the first month, the day jin-shin, 29, immediately followed the end of the moon’s waning” began the first year of conquest of Wu.

March 1, 1174 BC is day 29 and was the last waning of the moon.

There was a new moon on Bingshen day 53 in Wu's first year as emperor as recorded. Fourth month, May 19, 1173 BC was the new moon on day 53. Omen. Total eclipse day 53, March 4, 1250 BC.

Jupiter was recorded to be in the Quail Fire constellation Leo just before Wu became emperor.

Jupiter was in the Quail Fire constellation between Hydrae and Crateris in 1177 BC in Wu's ninth year as recorded.



# Comet Halley

“When Duke Wen of Jin was about to battle King Cheng of Chu, a broom star emerged in Chu” 632 BC.

“19<sup>th</sup> year of King Zhao of Zhou, in spring, there was a fuzzy star in ZIWEI” 1021 BC. 56<sup>th</sup> of cycle 60 years. 60 year cycle added.

“When King Wu conquered King Zhou of Shang, a broom star appeared and tended its handle to Yin.” 1174 BC. 23<sup>rd</sup> of cycle 60 years. 60 year cycle added.

You can count 77.5 year orbits from 632 BC back to 1021 BC and back to 1174 BC.

# Earliest confirmed solar eclipses

The earliest confirmed solar eclipse was on 1<sup>st</sup> year of cycle 60, Day 28 of cycle 60, September 6, 776 BC.

It was only a 10% partial eclipse visible in northern China, but the day and year of cycle agree exactly.

The Chinese by starring at the sun they could observe even this tiny partial solar eclipse.

# Two Eclipses for February.

The next solar eclipse record was for year 57 of cycle

= 720 BC,

day 6 of cycle,

first month of spring,

= February 22, 720 BC which did occur early in the morning.

# Second Solar Eclipse full moon

“In his 51<sup>st</sup> year, in the spring, in the 2d month, on day 42 of cycle, there was an eclipse of the sun. In the 3d month on day 47 of cycle the king died.”

59<sup>th</sup> of cycle = 718 BC day 42 = March 20, 718 BC the full moon.

A year later on day 47 of cycle on the last day of the lunar month, March 20, 717 BC, king Ahaz in Israel died, and tradition holds this was a day of darkness, Sanhedrin 96a.

Hezekiah's 14<sup>th</sup> year was in 704 BC when Sennacherib came, thus his first year in 717 BC when Ahaz died March 20 day 47 of cycle.

# Fall of Jerusalem on a jubile

2 Kings 19:29 And this *shall be* a sign unto thee, Ye shall eat this year such things as grow of themselves, and in the second year that which springeth of the same; and in the third year sow ye, and reap, and plant vineyards, and eat the fruits thereof.

Thus year 49 of the 49<sup>th</sup> year jubile and the 50<sup>th</sup> year were 703 BC and 702 BC, then left Sennacherib and they were not taken into captivity on this jubile and were free to sow and reap.

There were 37 eclipse records from 776 BC to 494 BC.

In this period there is only one that definitely does not match:

September 7, 591 BC was on day 40 of cycle, year 6 of cycle, sixth month.

# The 591 BC solar eclipse record

In 591 BC there was a solar eclipse record on day 40 of cycle in the sixth month, September 7, 591 BC

At the same time in Israel was the fall of Jerusalem on the seventh day of the week and seventh day of the fifth lunar month, September 7, 591 BC.

This may be a coincidence of scribal errors on the same date because there can be no solar eclipse on the seventh day of the lunar month.

Nevertheless, this was to be a day of darkness in Jerusalem.

# Fall of Jerusalem

2 Kings 25:8 And in the fifth month, on the seventh *day* of the month, which *is* the nineteenth year of king Nebuchadnezzar king of Babylon, came Nebuzaradan, captain of the guard, a servant of the king of Babylon, unto Jerusalem:

2 Kings 25:9 And he burnt the house of the LORD, and the king's house, and all the houses of Jerusalem, and every great *man's* house burnt he with fire.

Amos 8:9 And it shall come to pass in that day, saith the Lord GOD, that I will cause the sun to go down at noon, and I will darken the earth in the clear day:



# Dating the 430<sup>th</sup> year of Exodus.

Exodus 12:40 Now the sojourning of the children of Israel, who dwelt in Egypt, *was* from the four hundred and thirtieth year.

Exodus 12:41 And it came to pass at the end of the four hundred and thirty years, even the selfsame day it came to pass, that all the hosts of the LORD went out from the land of Egypt.

The sojourn was from the 430<sup>th</sup> year sothis, 2307 BC.

The end of the sothis was the end of the 430<sup>th</sup> year sojourn.

The end of the sothis was at the death of Pharaoh Mernetpah 1281 BC.

# The Exodus, then the first year of 50.

The Exodus occurred at the end of the 430 years.

The pharaoh was Merneptah.

The end of the 430 years was the end of the sothis cycle of 1460 years

Jacob entered Egypt in the sothis year 430, 2307 BC.

The sothis cycle matches the end of the 1460 years and Merneptah's last year = 1281 BC.

The first of the sothis cycle was 2737 BC.

The cycle lasted 1456 years because Sirius appeared a day earlier; July 17, 1282 BC and not July 16, 1282 BC.

# The NASA Five Millennium Canon of Solar Eclipses

The following three maps show the eclipse paths over Egypt.

The eclipse records were mistaken with solar eclipses that occurred 76 years later exactly in the same phase.

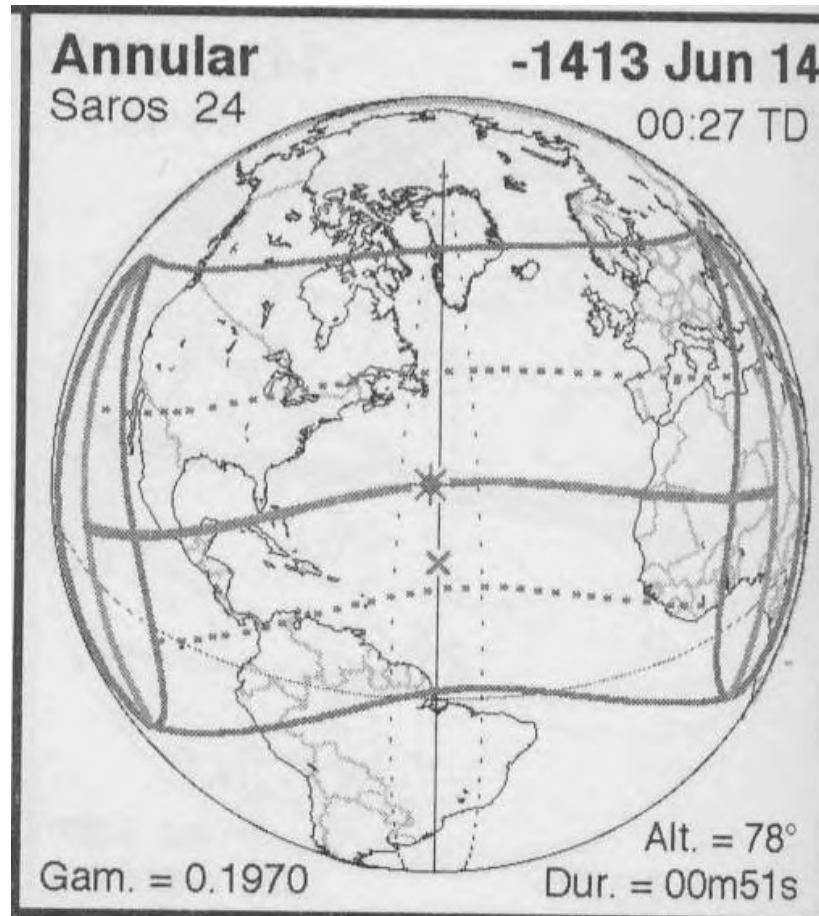
Thus these are the correct eclipses that were recorded in Egypt.

three seasons of akhet (Inundation), peret (Growth - Winter) and shemu (Harvest - Summer). 4 X 30 days each = 360 days.

At the end of the sothis cycle, IV Shemu 30 = July 16. I Akhet 1 = July 17.

This leaves 5 leftover days of New Years beginning with the first appearing of Sirius in the east at dawn 4 AM July 16.

# Total Eclipse Akhet Aten 25 Shemu II year 2



# All eclipses 76 years earlier

This eclipse was assumed to be May 14, 1338.

But was June 14, 1414 BC.

Thus was 76 years earlier.

Thus we can date Merneptah's death

76 years earlier than 1205 BC to

April 1281 BC

# Sothis cycle ended 40 years later

Eclipses occurred 76 years earlier and the sothis cycle ended 40 years later.

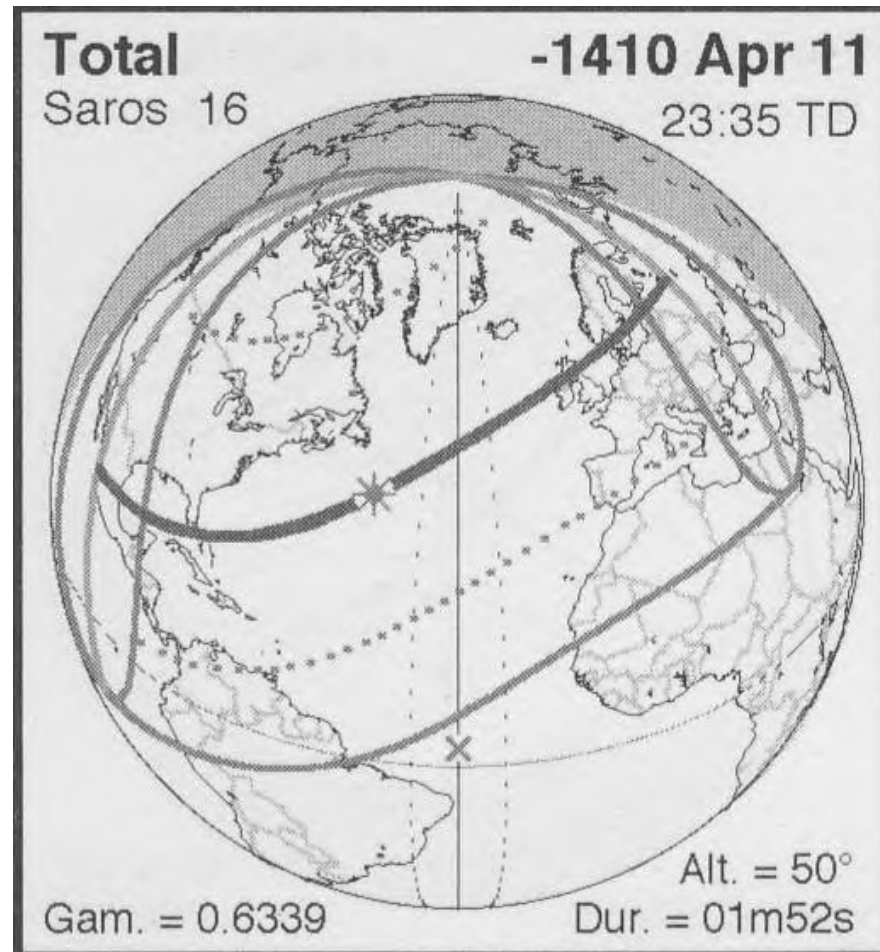
$76 + 40 = 116$  years,  $116 \text{ years} / 4 = 29$  days.

The Egyptian months were 30 days each.

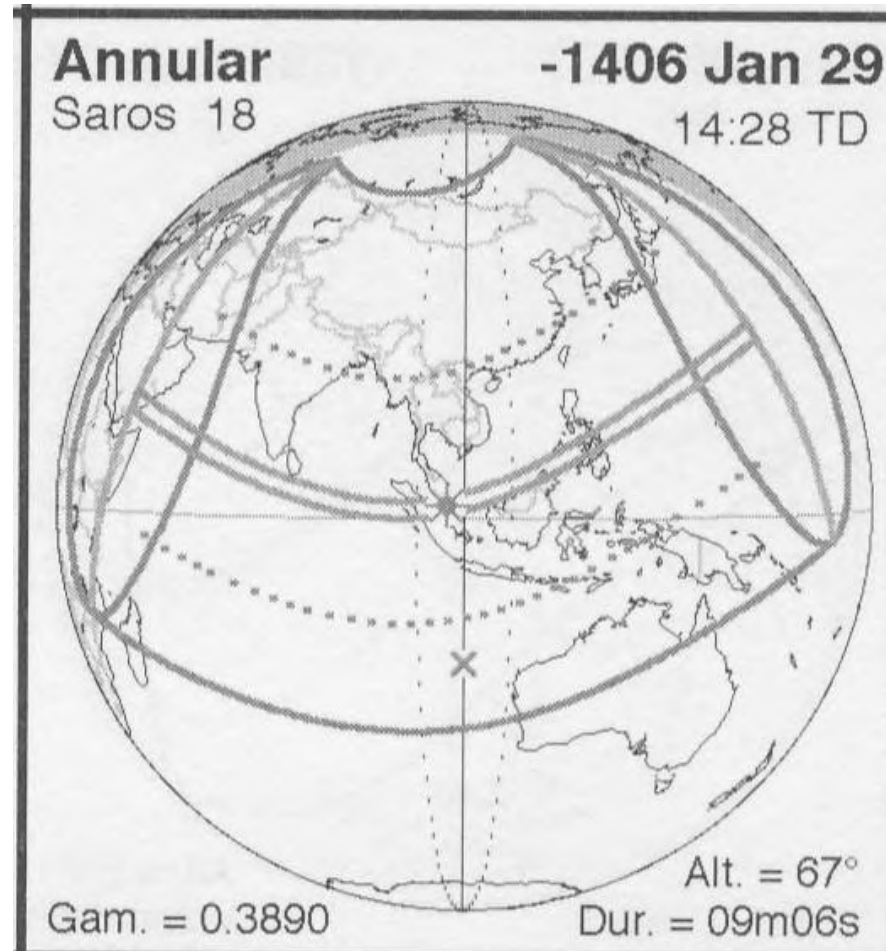
Thus the eclipses fell on the same date of 30 same month of 30.

Thus we can move the end of the sothis cycle from 1321 BC to 1281 BC.

# Total Eclipse 24 Peret IV year 5



# Annular Eclipse 12 Peret II year 9





# 76 years earlier

Ramses II reigned 66 years

Merneptah reigned 10 years

This equals 76 years.

This means 1281 BC did not mark the death of Seti I

But marked the death of Merneptah.

Thus the Israelite slaves built Ramses the palace of Ramses II.

# 25 Shemu II year 2

This chronology means the new sothis cycle began the year of the Exodus 1281 BC.

This because II Shemu 25 was June 14, 1414 BC. IV Shemu 30 must end July 16.

Thus IV Shemu ended June 14 + 5 + 30 + 30 = August 17, 1414 BC.

Then back from August 17 to July 16 is 33 days.  $33 \times 4 = 132$  years.

$1414 \text{ BC} - 132 \text{ years} = 1282 \text{ BC}$  the year of the new sothis cycle.

Thus the Exodus was the beginning of the new sothis cycle of 1460 years in Egypt in March 30, 1281 BC

# 1460 year sothis cycle

The Egyptians did not keep leap year like we do on February 29.

They let the year back up one day every 4 years.

So in  $4 \times 365$  years = 1460 years, the calendar had backed up from July 16, July 15,...to July 16 again.

Only Sirius appears before the sun at dawn 4 AM July 17, 1282 BC one day before the July 16 date.

Thus the sothis cycle is 4 years less,

And was 1456 years not 1460 years from 2737 BC to 1281 BC.

# Why Merneptah?

After Pharaoh Merneptah Egypt fell into ruin.

Adding the reigns of the pharaohs back does not work because some reigns may have been omitted, especially after the collapse.

Thus Merneptah may not have died in 1205 BC,

But in 1281 BC.

Lunar dates match Egyptian dates every 19 years.

Thus  $4 \times 19 = 76$  years.

76 years back from 1205 BC is 1281 BC.

# Sothis cycle ended with Merneptah

Matching several Egyptian eclipse records with Merneptah 76 years earlier,

We have all exact matches to the moving Egyptian calendar.

These dates move 30 days. Thus the date of the Egyptian calendar month is the same.

Only there were solar eclipses 76 years further back.

This means the sothis end of the calendar must move from 1322 BC to 1281 BC to match the day of the new year.

This was the last day of Shemu IV, new years, July 17, 1282 BC.

# First year of Joshua's conquest 1241 BC

The Exodus was March 30, 1281 BC.

Then they were 40 years in the wilderness.

The first year of 50 year jubile was in August/September 1241 BC.

The first year of 49 year jublile was in February/March 1241 BC

# Darius becomes emperor of Persia

Cyrus had a 31 year reign from 549 BC to 518 BC.

There was a solar eclipse record day 30 of cycle, July 18, 549 BC when there was no eclipse.

Amasis, in Egypt, died in 517 BC when Cambyses became emperor of Persia and invaded and conquered Egypt.

Cambyses had an 8 year reign to 509 BC.

Darius became emperor in 509 BC.

# Sothis end 1281 BC not 1322 BC

- year 44 of Amasis, the first date (II Shemu 13) is lunar and the second
- (I Shemu 15) is civil and as the civil date fell on 21 September 558 BCE the lunar date fell on 9 (= 21 – 12) September 558 BCE which was a full moon day according to astronomy, not 1<sup>st</sup> invisibility "shining ones"!
- 41 years later the 1<sup>st</sup> invisibility of the moon was on II Shemu 13 September 9 should move 10 days later in the month. 201 days – 191 days = 10 days.

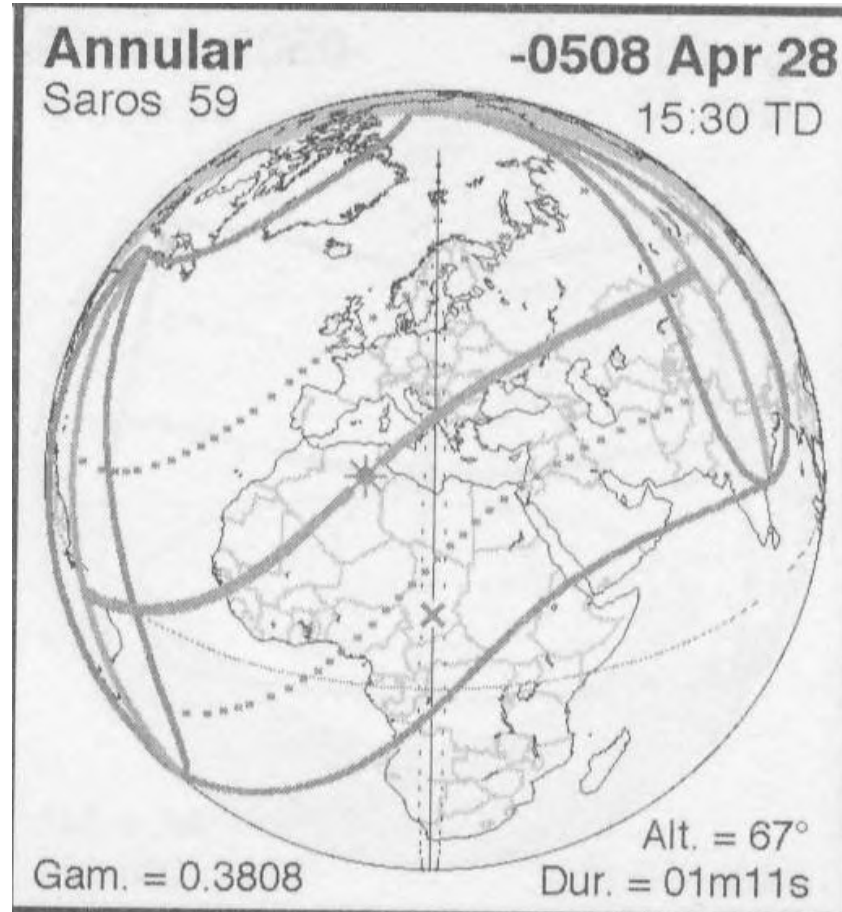


# Calculate

- Add from July 17 backwards:
- $1281 \text{ BC} - 517 \text{ BC} = 764$ ,  $764 / 4 = 191$  days
- $5 + 17 + 30 + 31 + 30 + 31 + 28 + 29 = 201$ ;  $201 - 191 = 10$  days.
- January 2 = 191 days = IV Shemu 30
- December 3 = III Shemu 30
- November 3 = II Shemu 30
- October 4 = I Shemu 30
- September 4 = 1 Shemu 1



# Eclipse seventh year of Cambyses, Darius



# Jubile construction of Temple

Ezra 4:24 Then ceased the work of the house of God which *is* at Jerusalem. So it ceased unto the second year of the reign of Darius king of Persia.

Darius' second year was in 507 BC.

507 BC was the 49<sup>th</sup> year of jubile.

Work continued night and day till the sixth year of Darius.

In 505 BC the Milky Way was not visible in the sky.

504 BC when the temple was finished.

33<sup>rd</sup> year of cycle 60 = 504 BC

Ezra 6:15 And this house was finished on the third day of the month Adar, which was in the sixth year of the reign of Darius the king.

Darius' sixth year in 504 BC from 509 BC.

There was a solar eclipse, day 48 of cycle, February 16, 505 BC.

the 33<sup>rd</sup> year of cycle 60 from 2636 BC China was 504 BC.

Temple finished, day 48 of cycle, February 10, 504 BC.

# Eclipses dating Darius and Xerxes

Darius from 509 BC.

Lunar Eclipse in Darius' 20<sup>th</sup> year September 17, 488 BC.

Battle of Marathon Lunar Eclipse, September 7, 479 BC.

Lunar Eclipse Darius' 31<sup>st</sup> year, August 28, 478 BC.

Xerxes' first year 477 BC, after 31 years Darius.

Battle of Salamis Eclipses in 470 BC.

Xerxes died between two lunar eclipses 458 BC.

# Partial Eclipse September 12, 470 BC

In the seventh book of Herodotus, in early spring, while Xerxes was at Sardis, preparing to set out on the Grecian expedition, “the Sun leaving his seat in heaven became invisible, and instead of day it became night.”

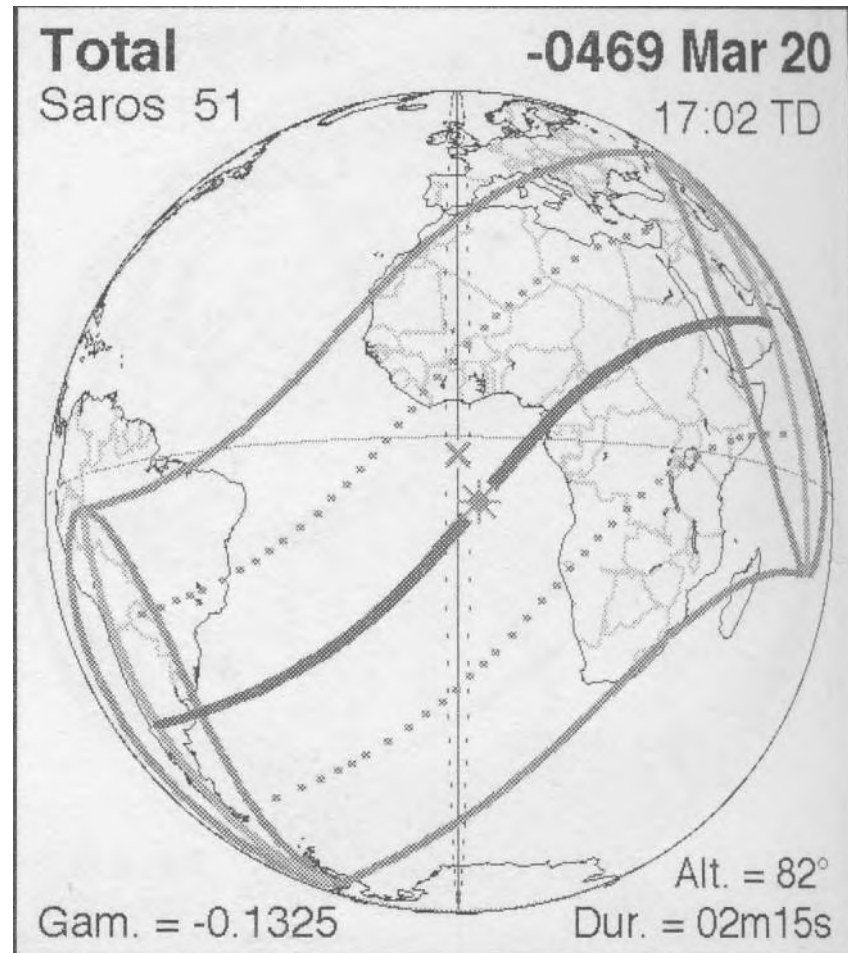
March 20, 470 BC.

“While King Cleombrotus was sacrificing, there was a partial eclipse.”

Bad Omen, Spartans did not harass Xerxes when retreating.

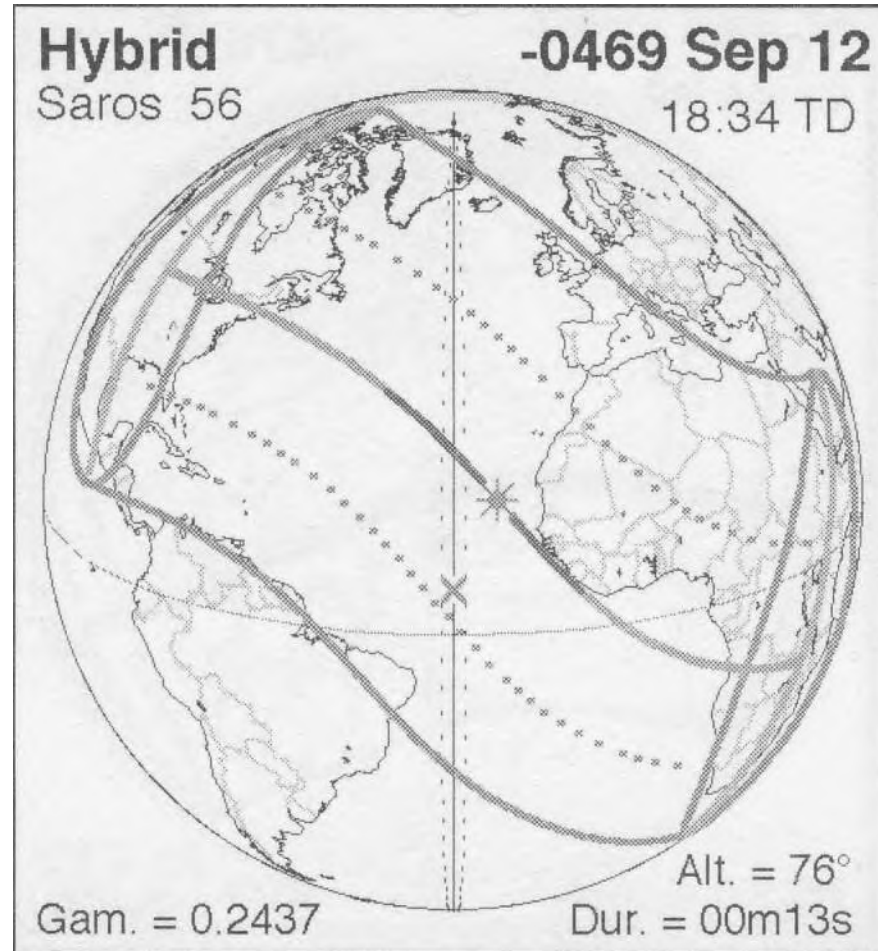
September 12, 470 BC.

Xerxes set out in spring, solar eclipse in Egypt.





On retreat in September, partial solar eclipse.



# Xerxes from 477 BC to 457 BC.

The battle of Salamis was in 470 BC and not 480 BC.

The battle of Salamis was in Xerxes' 7<sup>th</sup> year.

Therefore Xerxes reigned in Shushun from 477 BC.

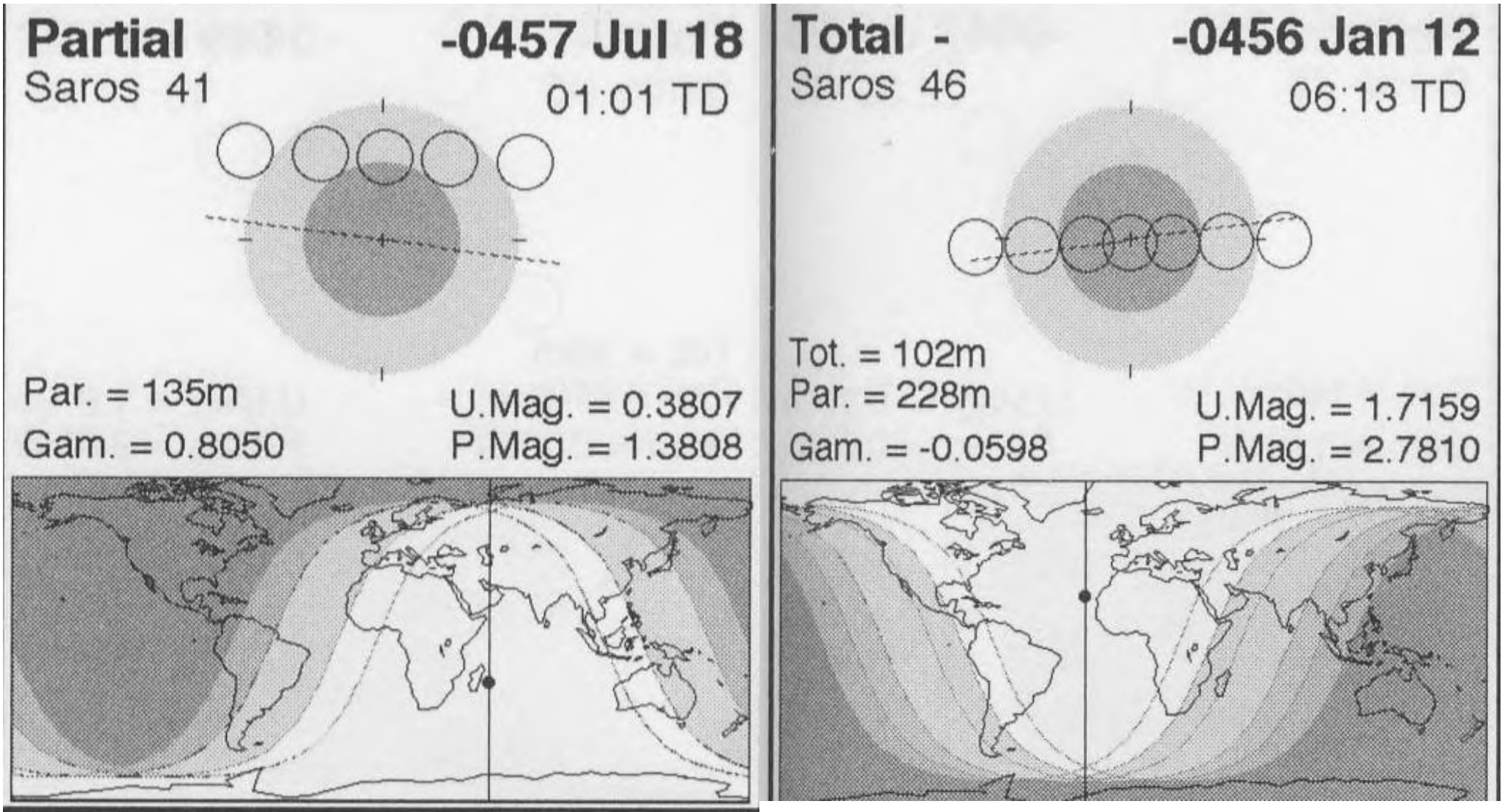
And his 20<sup>th</sup> year was in 458 BC.

# Xerxes' 20<sup>th</sup> year was 458 BC

Nehemiah 5:14 Moreover from the time that I was appointed to be their governor in the land of Judah, from the twentieth year even unto the two and thirtieth year of Artaxerxes the king, *that is*, twelve years, I and my brethren have not eaten the bread of the governor.

Nehemiah 6:15 So the wall was finished in the twenty and fifth *day of the month* Elul, in fifty and two days.

# Xerxes died between two lunar eclipses



$$70 \times 7 = 490 \text{ years}$$

Daniel 9:24 Seventy weeks are determined upon thy people and upon thy holy city, to finish the transgression, and to make an end of sins, and to make reconciliation for iniquity, and to bring in everlasting righteousness, and to seal up the vision and prophecy, and to anoint the most Holy.

458 BC – 33 AD = 490 years.

# The last 50 year jubile in 29 AD

Counting from 1241 BC

50 year cycles to 591 BC,

less 70 years captivity from 591 BC to 521 BC,

from 521 BC 50 year cycles to the 50<sup>th</sup> year in 29 AD.

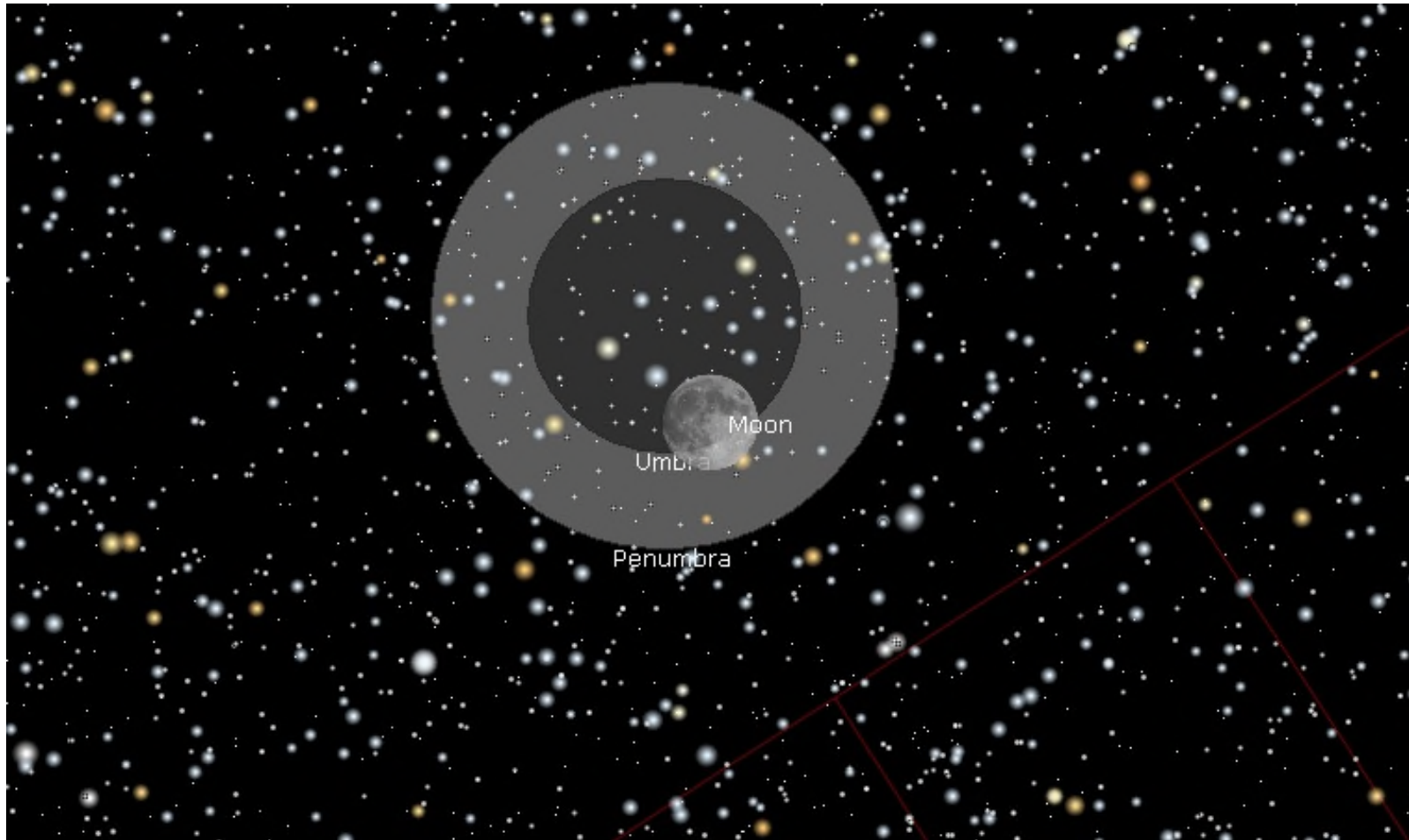
# The last 49 year jubile

49 year jubiles were counted from 1241 BC throughout the 70 year captivity to Sunday, April 5, 33 AD.

Thus there were 26 X 49 year jubiles.

And there were 24 X 50 year jubiles.

# Partial Lunar Eclipse April 3, 33 AD





# Darkness at noon and at the full moon

Matthew 27:45 “Now from the sixth hour there was darkness over all the land unto the ninth hour.”

The sixth hour was counted from sunrise.

Thus the sixth hour is 12 PM noon

And the ninth hour is 3 PM.

China would see the setting sun suddenly darkened, then see the rising moon eclipsed.

# Chinese Lanterns - day into darkness

There is a Lantern Festival in China for the full moon on the vernal equinox March/April. China would experience the same darkness and lunar eclipse April 3, 33 AD.

Lanterns would be for light, and after the three hours of darkness noon Israel, sunset China, people would be coming out of their houses.

There is a Pure Brightness festival Qingming Festival April 5, 104 days after the winter solstice.

# The Pure Brightness Festival Origin

To memorialize Jie Zitui when Duke Wen came to power in 636 BC in year yih-yew, 20 of cycle 60.

This fifteenth day of the month was April 9, 636 BC when Josiah made a great passover in the 18<sup>th</sup> year of his life.

April 9, was 104 days from the winter solstice December 26, 637 BC.

645 BC, 13<sup>th</sup> year of cycle, 5<sup>th</sup> month, tiny partial eclipse in the far north, Aug 28, 645 BC recorded in the year Josiah became King.

# The Lantern Festival

Which was 104 days from the winter solstice he recorded on the new moon December 25, 105 BC which also was day 1 of cycle 60.

Thus Emperor Wudi fixed the calendar from this date.

The Lantern Festival was to be held on the 15<sup>th</sup> day of the first month of Spring.

Emperor Wudi began this festival and began the new year on the full moon April 7, 104 BC; 104 days from the winter solstice December 25, 105 BC.

# 104 BC - addition

Hyranicus forces the Galileans to convert to Judaism.

The reason Wudi marked the year may be from a sun miracle God gave to prepare a people, the Galileans, to receive his Son.

Jupiter appears each year one sign back from 104 BC to 101 BC in the Chinese Classics.

Perhaps earth was in a reverse orbit and Jupiter orbiting like normal, would appear one sign earlier instead of one sign later.

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