Moses, the Pleiades, and the Nebra Sky Disk

What did Moses see, and when did he see it?

Before the Exodus

Somewhere deep in the heart of the Nile Delta in Egypt, around the mid 1400's BC, the Israelites were about to gain their freedom after 430 years of captivity, as slaves to the Egyptians. It is approaching the time in bible and world history known as "The Exodus."

Just prior to the exodus, God gave Moses some instructions. In Exodus 12:2, God said to Moses, "You are to begin your calendar with this month; it will be the first month of the year for you." (CJB) We know this to be the spring of the year, at the time of the Passover, as the very next instructions were the preparation for, and the participation in, what would become a memorial for all time. This first month of the biblical year was known as Abib, meaning "green ears" or the time of the spring barley harvest. God's instruction to Moses begs the question, what did God show to Moses to indicate the beginning of the biblical year?

Beginning of the biblical year

What did God mean when He said, "You are to begin your calendar this month?" Obviously He demonstrated or showed Moses something, and the question since that time, about 3500 years ago is, what *did* God show *to* Moses so that he could reckon the first month of the biblical year? Not only reckon it at that time; but to possibly reckon it for all time. Since then, the moon has played an important role in God's sacred calendar. Not only has the moon played a part, but the sun and the stars as well. The heavenly bodies are each figured into God's calendar and set times. Whether they are called seasons, mo'ed's, appointed times, feasts, or holy days, they are all set forth by the celestial bodies.

Elements of God's calendar in the heavens

God said, "Let there be lights in the dome of the sky to divide the day from the night; let them be for signs, seasons, days and years; and let them be for lights in the dome of the sky to give light to the earth"; and that is how it was. God made the two great lights — the larger light to rule the day and the smaller light to rule the night — and the stars. Gen 1:14-16

How the months of the calendar are reckoned

For thousands of years, those following the biblical calendar have reckoned their months by the moon, and the years by the sun. Usually the month is begun following the first sighting of the visible crescent moon. The first day is celebrated as new moon day, then the 6 work days, followed by the 7th day sabbath. According to the criteria given throughout scripture, Sabbaths can be found on the 8th, 15th, 22nd, and 29th days of the month, following the new moon. Then the cycle begins again. Over the millennia, all calendars have undergone corruption and aberration. The 7th day sabbath has been celebrated by Jews and other Sabbathkeepers on the Roman Saturday since early Christianity, and certainly by the 4th century when the Jewish calendar was set in stone so to speak. The corruption of the calendars is a subject for another time. No matter what man has done to the calendars over the millennia, God is about to set it right. The original calendar of scripture is being restored to its rightful place.

Standards for reckoning the beginning of the year

In the paragraph above, we discussed the beginning of each month, but what about the first month of the year? Since scripture talks about the month of Abib, or green ears, one standard is held to be the barley harvest, when the barley has matured enough for the "wave sheaf" celebration on the 16th day of the first month, the day of the resurrection of Christ.

The other standards, which are more widely held today, is the visible crescent moon in relationship to the vernal equinox; meaning the point at which the sun crosses the equinoctial line, and the days begin growing longer, and the nights shorter. At about the moment of the equinox, the days and nights are equal length.

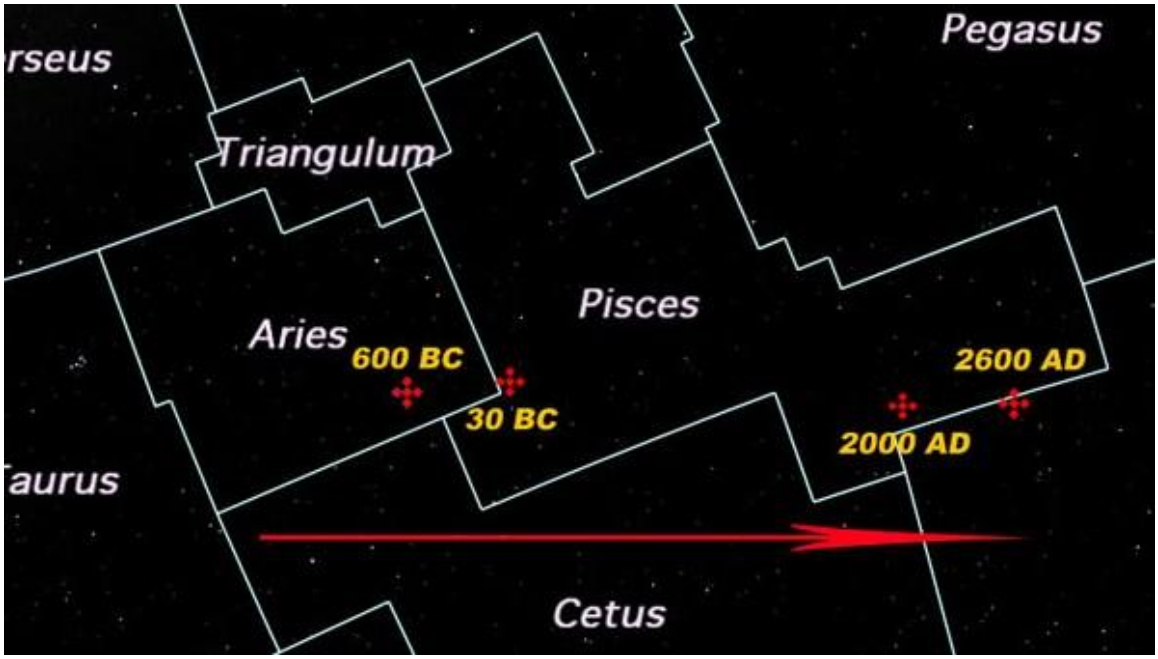
One standard says the new moon nearest the equinox; the other standard says the new moon after the equinox. With these two standards, each side is right some of the time, and one side is right all the time, depending on which side you're on. About half of the time, the new moon nearest the vernal equinox falls on the side after the equinox, so that puts that group in harmony with the other group. Then there is the standard that says Passover cannot fall before the vernal equinox. In other words, it's a mess, and it has gone on for hundreds of years, each camp saying the other camp is wrong. So is there truth to be found in any of this mess? Is the moon and its relationship to the equinox the final arbiter of the beginning of the year? Let's explore a little further to see.

The Equinox is not as it appears

Let's throw a "monkey wrench" in here. We'll plug in another factor that isn't often considered. When the instructions were given to Moses in about 1446BC (still disputed), the vernal equinox was in a different place in the heavens at the start of the biblical year

than it is now. In other words, when the sun crossed the equinoctial line in the heavens, it was in Aries. But it is not there today. Josephus, the noted historian tells us that the sun was in Aries at the time of the Passover in biblical times. So we know from history and scripture that at the time of the exodus, the sun and the visible crescent moon were in Aries, or that section of the heavens that has been labeled as Aries. It was still in the same relationship at the time of Christ. This is in the first month of spring, and the beginning of the biblical year.

Let me suggest a caveat in at this point. If you rely on the information from astrologers and the mainstream informational pundits, to tell you where the sun is in the heavens when it crosses the equinox, you're in trouble. The astrological prevaricators will tell you that the first sign on the spring side of the equinox is Aries. And 3500 years ago, they would be right; but not today. By the time the sun and the moon arrive in Aries today, the vernal equinoctial line is in Pisces, or the place in the heavens that astrologers have assigned to it. The equinox used to arrive in Aries around Mar 20 or 21. Today it doesn't arrive in Aries until April 18th. It's a shifting process called "precession of the equinox." It's what accounts for the wobble of the earth on its axis causing the equinox to drift backward in time. So the equinox is not the likely candidate to permanently reckon the beginning of the year.



This image shows the backward drift, or "precession" of the equinoxes. This affects both equinoxes and solstices, shifting these imaginary boundaries in the heavens out of place from their original locations. Currently, the vernal equinox has drifted backward into Pisces, and almost into Aquarius. Instead of the sun being in Aries when spring comes, it is in Pisces. The vernal equinox does not arrive in Aries with the sun until April 18th.

What about "...*and the stars?"*

It was about this time during my research that I realized that most of the focus of the celestial bodies of God's calendar is on the sun and the moon. I started asking what the role of the stars is in the calendar. ". . . the larger light to rule the day and the smaller light to rule the night — and the stars." But what were we doing to include the stars in the reckoning? It was like we were leaving out a third of the equation or formula. In reality, all three of the heavenly objects should be included in the calendar.

The Pleiades

When I started looking at this dilemma, I suspected there had to be something else that Moses would have seen, in addition to the visible crescent moon. And sure enough there is. In the Redshift astronomy program, I set the program to look at the evening sky at the time of the exodus, the first month and spring of the year, to see if I could see what Moses saw. It wasn't until I unplugged everything else that wasn't there at the time of Moses, that I saw what I believe he saw. When Moses looked at the sky at that time, he didn't know about the "astrological" signs, and all the other aberrations man has assigned. Granted there are references to celestial signs in scripture, i.e. Orion, Pleiades, and Arcturas, etc. But there were none of the labels of man's reckoning as we see today. If Moses wrote the book of Job, as some suggest he did, most definitely he would have known about these particular stars and their places in the sky.

It didn't take long to discover what I was fairly certain Moses saw. But I had to test the theory. So I began looking at the same time every year, by looking first for the new moon, then the visible crescent *after* the equinox. I used the new moon after the equinox as I believe the sun, as well as the moon, has to be fully out of winter in order to begin the New Year. The days must be longer than the nights. I believe this study will eventually bear that out. By the time I advanced the sun and the moon into Aries in the astronomy program, there it was; what I had been looking for. It was the Pleiades, in close proximity to the crescent moon. Now I needed to test the theory a little more and every time it has held up. At a point around the time of the first visible crescent after the equinox, the moon arrived in the vicinity of the Pleiades. It was the kind of evidence I was looking for. And so far, it appears that the same thing happens every year, in the first month of spring. So far, I've checked the last 10 years for starters and the Pleiades and the new crescent moon keep company usually around the end of March and into mid-April.

The Character of the Pleiades*: Now you see it; now you don't*

The Pleiades, also known as the "seven sisters", lies near the ecliptic plane of the sun, moon and the planets in the heavens. All of the celestial objects that travel in the ecliptic plane pass near the Pleiades at some point during the year.

The Pleiades is not visible all year; but it is visible when it is supposed to be, and needed for confirmation. The Pleiades is actually what is known as a star cluster, with 6 of the 7 main stars visible to the naked eye at various times. It looks very much like a “little dipper.” The most prominent star in the cluster is Alcyone, one of the “seven sisters” in Greek mythology, which is the third brightest star in Taurus. The remaining stars of the seven sisters are Electra, Celaeno, Taygeta, Maia, Merope, and Asterope, some of which form a big dipper pattern with other bright stars in the cluster, making it easy to recognize.

Visibility of the Pleiades varies throughout the year. The Pleiades start to rise in the night sky in June, just before sunrise, and they begin to rise a little earlier each morning afterwards. They are best viewed in December, when they rise as the sun is setting, and then set at sunrise, allowing them to be seen throughout the entire night. As the winter progresses, they begin to rise a bit later after sunset. By March and mid-April, you can only see them for a short time setting in the West, just after sunset. Since the Pleiades are located in the sign of Taurus, they are too close to the sun to be visible during May, when the sun is also in the same sign. On a clear night the unaided eye can usually spot at least six of the brightest stars in the cluster, but it actually consists of hundreds of stars.

What role do the Pleiades play in the heavens?

It seems to be somewhat commonly known that the Pleiades signaled the time of planting in the spring, and the time to harvest in the fall. So it makes sense that it would be visible with the new crescent at the beginning of the year in spring. Not only is it visible with the crescent in the spring to signal the beginning of the planting season, it is also visible in the 7^{th} month of the biblical year, the harvest season, when it is a full moon; i.e. “harvest moon.” I’m convinced that one of the reasons that night watches were held in ancient times is that someone could observe and record what was happening with the moon and the stars at night.

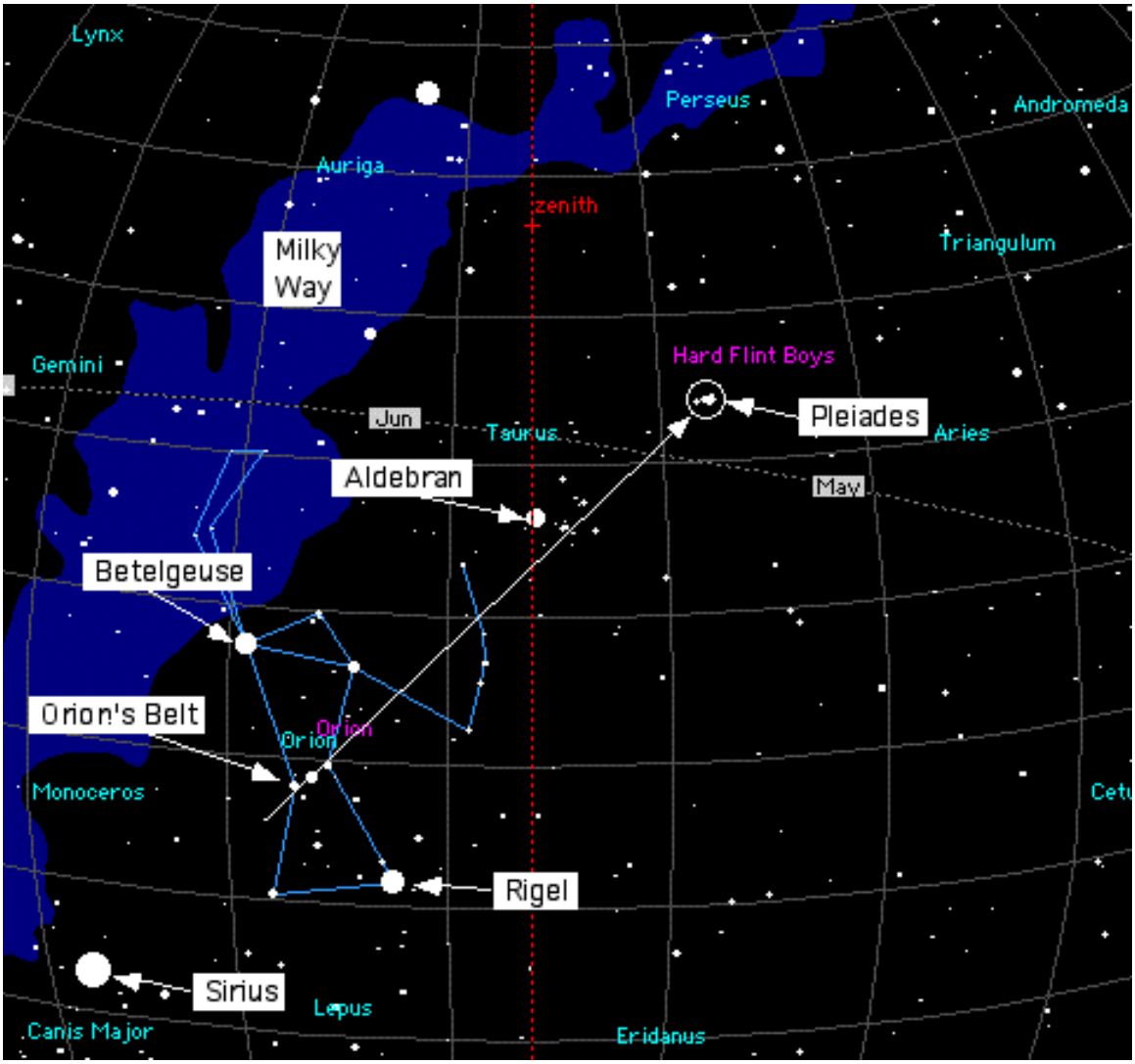
Almost all ancient cultures watched and had a name for Pleiades, usually associated with agriculture and moisture/rainfall. The ancients knew this cluster as the "rainy stars" because their rising heralded the beginning of autumn and the onset of the rainy season in many parts of the world. Inca farmers watched Pleiades to assess future crops. Early Greek seamen knew them as the "sailing stars" and would only sail when the stars were visible at night. One of the Navajos' names for the group is the "Hard Flint Boys," and Subaru is the Japanese name for Pleiades (note the Subaru logo).

Where is the Pleiades anyway?

It depends on the time of year. Pleiades lies near the ecliptic (the path of the sun). Around the first of November it will be rising in the east (about where the sun did) just

at twilight. In early February the Hard Flint Boys will be directly overhead at twilight. By early May they'll be setting just at twilight, ahead of Orion. During May and early June Pleiades is absent from the sky--it can't be seen because it's too close to the sun. Then it appears (and remains) as a morning star until November. Between November and May watch for the Hard Flint Boys dancing and scuffling along the ecliptic.

Finding the Pleiades in the night sky

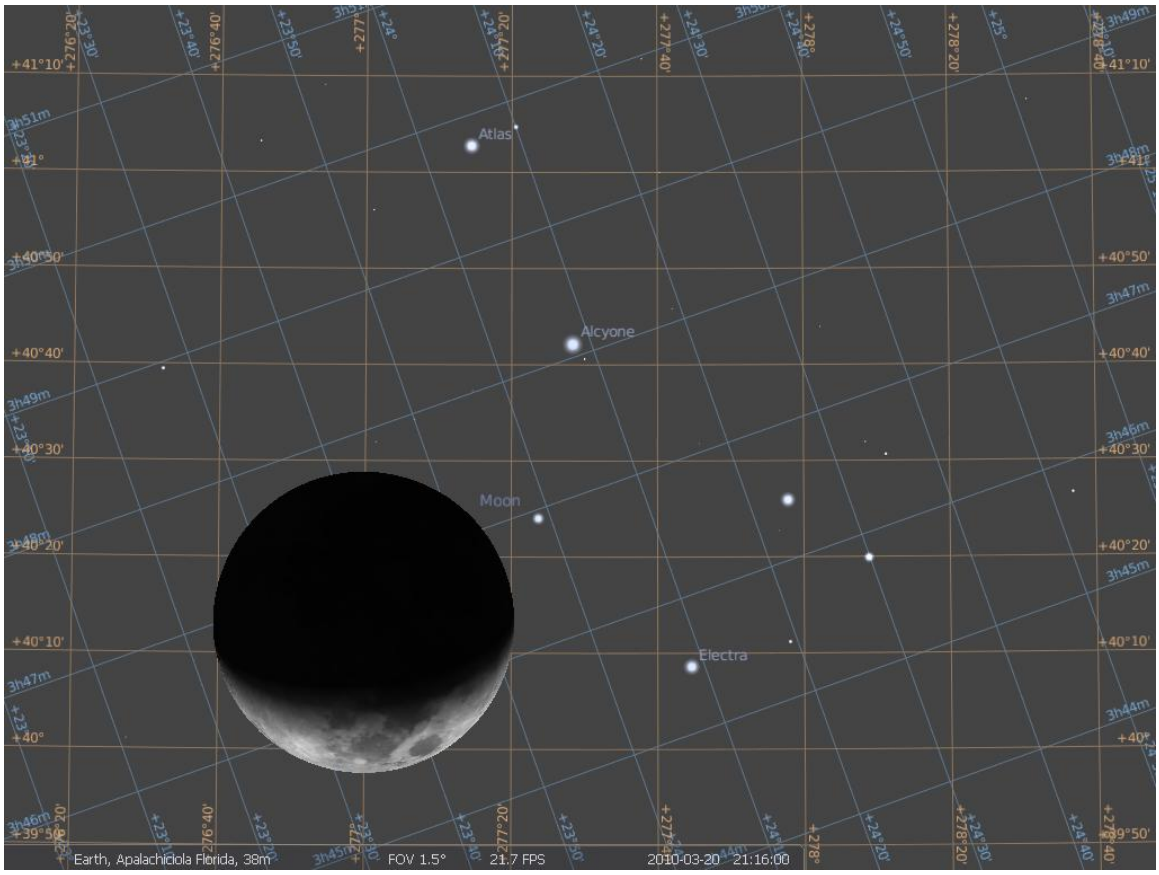


Pleiades can be a little hard to see, and to many it appears as a small cloud. Its appearance varies from night to night depending on atmospheric viewing conditions. Sometimes, when conditions are good, you can see all the 'Seven Sisters' twinkling. First find Orion's Belt--the three stars, close together, in a straight line. Then following the indicated line in the figure below, passing just below Aldebaran, as it points to Pleiades. The figure below is Orion and Pleiades when they're high overhead.

The crescent's last crossing of the Pleiades till 2023

The Pleiades and the crescent moon made a spectacular showing in the evening sky on Saturday March 20, 2010, when the moon occulted (moved in front of) some of the stars in the Pleiades cluster. Normally, only in close proximity, the moon does occasionally move in front of part of the cluster. It's quite a sight. We won't see that occultation again for another 13 years, till 2023.

Note: Although it is reported that this is the last occultation of the moon across the Pleiades until 2023, some astronomy sites and articles are reporting that a similar scenario will occur on April 16, 2010. Only visual observation will confirm this predicted scenario.



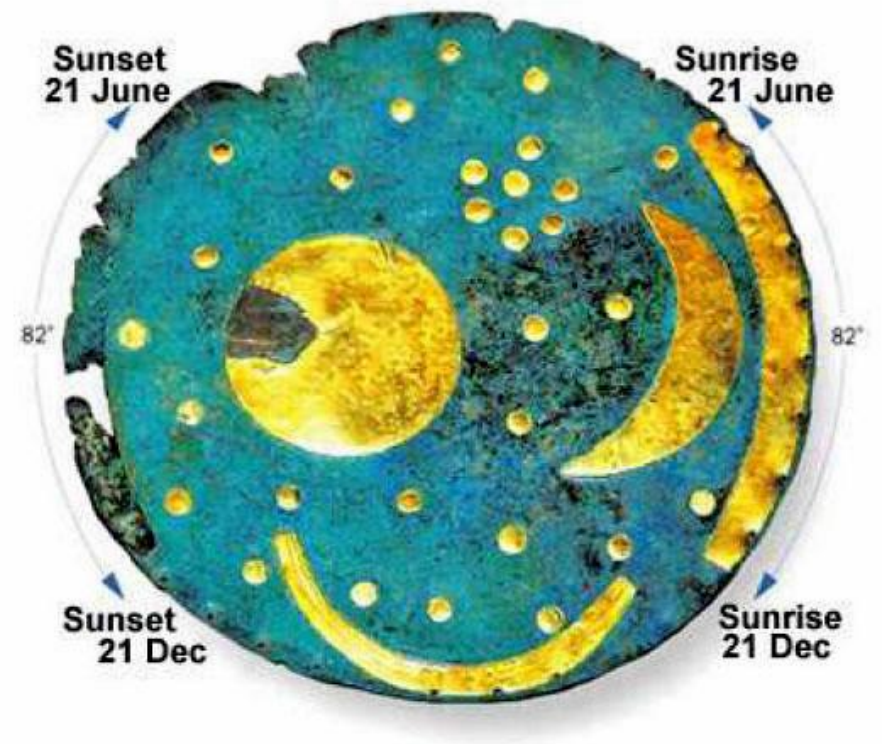
This is an image from the astronomy program Stellarium (free at Sourceforge) on the night of March 20, 2010 when the moon occulted the Pleiades. Notice that it strongly resembles the little dipper. This image is as you would see from earth. If you rotate the image 90 degrees left, you will see the same image that is represented on the Nebra Sky Disk.

The Nebra Sky Disk

While researching the relationship of the new crescent moon and the Pleiades, I inadvertently learned of a relatively new celestial reckoning device of sorts that was discovered around 1999, quite by accident. A couple of treasure hunters in the vicinity of Nebra, Germany, found the disk and several other ancient and valuable artifacts with the help of metal detectors. They tried to make off with their loot, and fence it for profit. But as luck would have it, authorities caught up with them and retrieved the disk. No one knew for sure what they had when they recovered it.

The disk has been tested, deciphered, validated, and proven that it is authentic in terms of age and composition. It is estimated to have been buried around 1600BC, and it may have originated as far back as 1700-2100 BC. It is said to be at least 3600 years old. It may well be the oldest calendar or astronomical artifact known to date. This is the easy part.

What is not so easy is the interpretation of exactly what the disk shows. Even though it has been examined for 10 years now, it is still highly controversial as to its full intended meaning. One thing I noticed in reading several papers, articles and reviews, is that the authenticators seem to be missing a piece from their understanding, consideration and reviews. That piece is God's sacred calendar of scripture. This is where it gets really interesting.

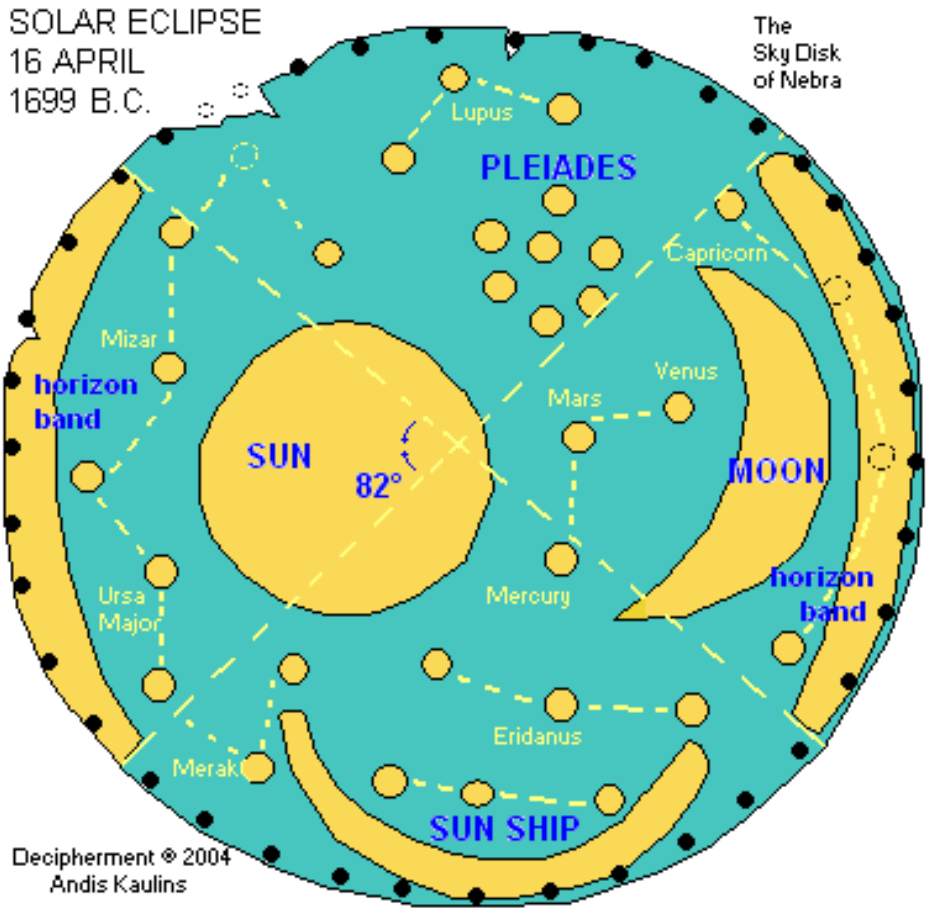


The main areas of dispute seem to be that the markings appear that they should be from Egypt or Mesopotamia. But the artifact was found in Germany. Researchers state that Germany would not have followed a celestial reckoning such as this. The materials have been authenticated to have originated locally, meaning that the device was probably not made or fabricated in Egypt or Mesopotamia and brought to Germany. It remains somewhat of a mystery even today.

Some of the parts are fairly easily identified, and agreed upon. One that seems to be agreed on is the crescent, and the group of stars to the upper left of the crescent, which most scientists and researchers have identified as the Pleiades. One of the main disputes is over what the round object is on the left. Some say it is the sun, some say it is the moon. It appears to be inconclusive to some if the portrayal is daytime or nighttime.

The disc was originally smeared with rotten eggs. These would have caused a chemical reaction on its bronze surface, which would have turned the disc's background a deep violet color simulating a night sky out of which the gold-embossed stars would have shone.

Elements of the Nebra Sky Disk



Star positions according to Milton D. Heifetz, Precession of the Equinoxes, Historical Planisphere, Learning Technologies, Somerville, MA, http://www.starlab.com and Starry Night Pro, http://www.starrynight.com/

Some authenticators and researchers insist that the round object to the left of center labeled sun is in fact the sun. Because of that, it is said the device is probably only valid as a marker for a solar eclipse as indicated. Others say the round object is the moon, but seem to be without further explanation.

Since I am not an authority in such matters, I will not attempt to dispute what researchers, deciphering experts, and others have said. I will simply give my opinion based on how I see this device fitting into the overall picture of God's sacred calendar.

I won't deal with the planets shown near the crescent except to say when you set the astronomy program to the parameters given, i.e. April 16, 1699BC; those planets are part of the heavenly picture.

I agree that the crescent moon is in fact the crescent moon, and that the Pleiades are as shown. What is interesting is the relationship between the two. To demonstrate this point, here's an image from an astronomy program taken on the evening of Saturday March 20 2010. It clearly demonstrates what the Nebra Sky Disk is showing.

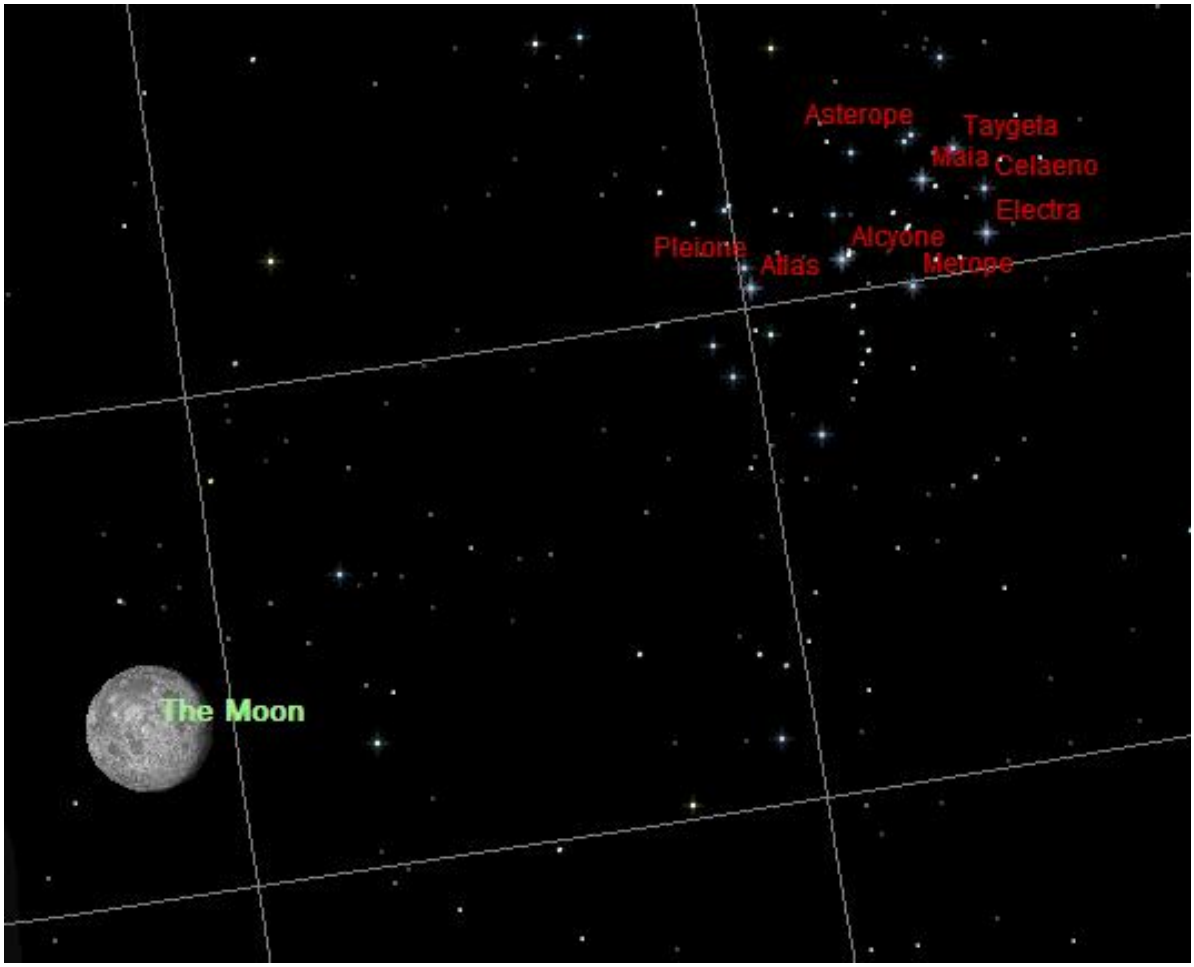
This image is from Redshift Astronomy program and is taken on March 20 2010 about 2130 hours. This would be about the time the moon passed in front of the Pleiades. What is most astounding about the crescent and the Pleiades on the disk, is that that at least one researcher says that it is portrayed in the position as it would be seen if a 13th month would need to be intercalated. This image is as you would see it from earth. If you rotate the image 90 degrees counter-clockwise, you will see the image as it is represented on the disk. Interestingly, this biblical year, 2009-2010 needed a 13th month inserted. Notice the similarity between the astronomy program image and the representation on the disk. Whether it is true in the end remains to be seen. But it does seem to be a little more than coincidental.

It is at this juncture the point needs to be made or at least mentioned. The fact that the disk may suggest the insertion of a 13th month, and this year a 13th month needed to be inserted, it has to be considered that the beginning of the year is affirmed to start after the vernal equinox, and not before. In the end, this evidence could serve to eliminate the confusion of multiple Passovers, and whether the year should be started with the

new moon nearest the vernal equinox. The equinox seems to have “drifted” out of the picture.

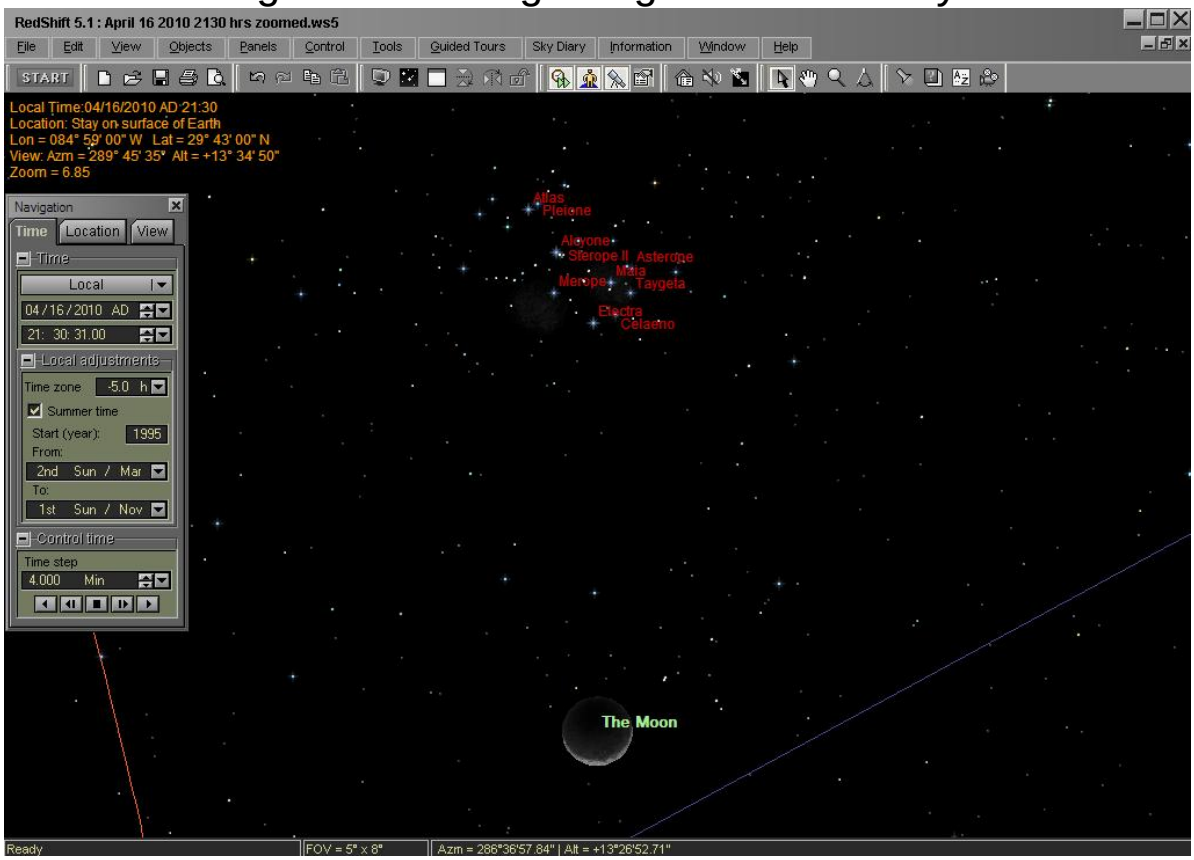
As far as the identity of the other object, I believe it is the moon; the full moon, and here’s why. If the disk portrays the crescent moon and the Pleiades, then it has to be considered that it is at least after sunset, and probably dark or nighttime. That being the case, why would not the other object be representative of nighttime? I also believe its position in relationship to the Pleiades is portraying what it might appear like in the harvest season. Again, it seems to be a bit more than just coincidence to not have some merit. (See image below)

Harvest Moon and the Pleiades in the 7th month



Here’s an image from Redshift astronomy program for October 25 2010, as it would appear from earth. This would be about the 18th day of the 7th biblical month in 2010, following the harvest season of scripture. Note the relationship of the round object to the Pleiades similar to how it is shown on the Nebra Sky disk. This is why I suspect that the round object on the disk may be the moon and not the sun.

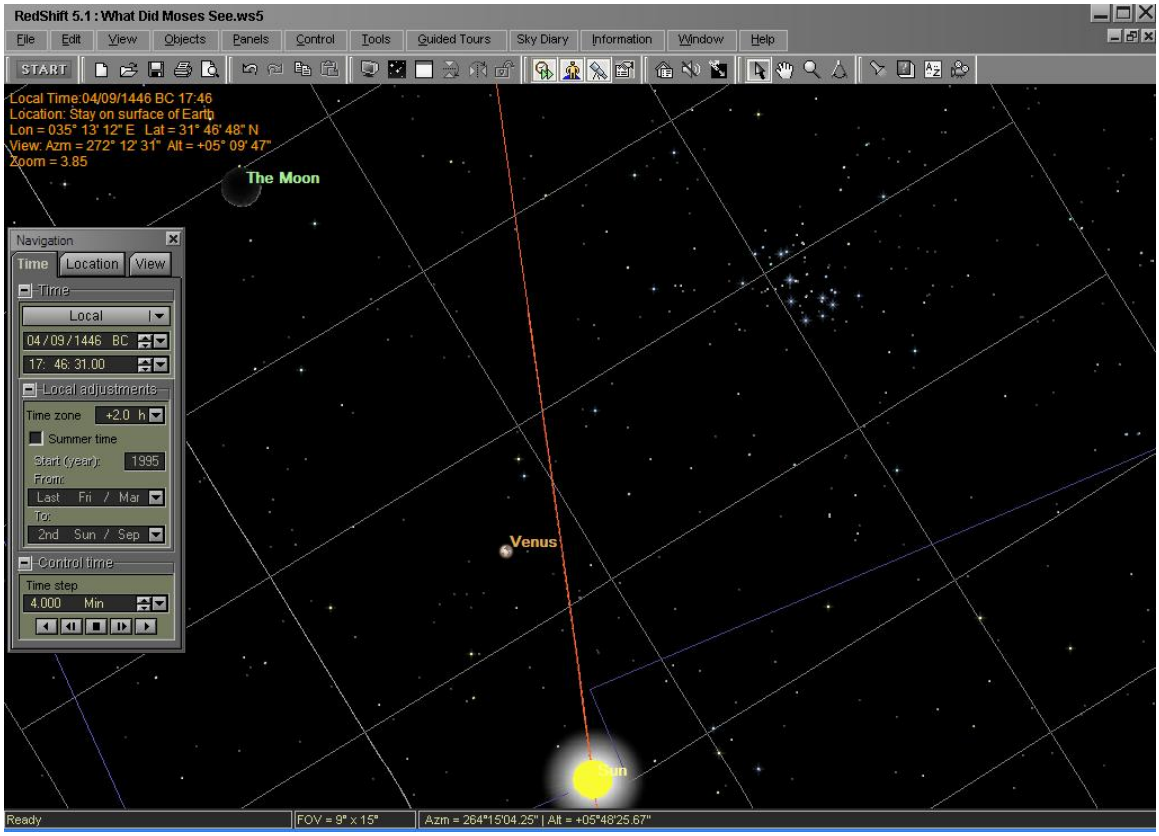
Watch for the crescent and the Pleiades on April 16 2010
This is the “sign” for the beginning of the biblical year



Here’s an approximation of how the moon will appear in proximity to the Pleiades on the night of April 16, 2010, at about 2130 Hrs. The moon will be approximately 20 degrees above the horizon at 8:50PM, about 45 min after sunset. The Pleiades is just about 2 degree above that. You should be able to see the Pleiades without the aid of binoculars, but have them for a more spectacular sight

For those that observe the new moon *nearest* the vernal equinox, or the bowl crescent level with horizon as the beginning of the biblical year, a problem is presented in that the moon is nowhere near the Pleiades on the evening of the visible crescent. It is still in Pisces on the night of 16th and possibly into Aries on the night of the 17th. The moon did not arrive in the vicinity of the Pleiades until the evening of March 20 2010 when it passed across (occulted) the front of some of the stars in the Pleiades. It was at this time that the moon, in relationship to the Pleiades, as shown on the Nebra Sky Disk, indicated that a 13th month needed to be inserted into the biblical year.

What did Moses see in the sky in the first month of the year just before the Exodus?



This image from Redshift Astronomy program shows an approximation of what the sky might have looked like on April 9 1446 BC from the approximate location in Egypt where the Israelites were slaves. Note the Pleiades or “seven sisters” in the upper right of the image.

Time and date are approximate and the sun has been left shown to show the relationship of the sun, moon and Pleiades. It is only an estimation of visibility as the moon is only a little over 5 degrees above the horizon which means limited visibility. Note the relationship of the moon and the Pleiades.

Conclusions

- Astronomy programs have confirmed the occurrence of this annual event for the last decade, as well as the next, including various points in history.

- When Moses looked at the sky at the time of God's instructions, the Pleiades were in the sky, in close proximity to the visible crescent. (see earlier image)

- The Pleiades appears annually in close proximity to the visible crescent moon, just after sunset, in the spring, at the beginning of the first biblical month.

- The Pleiades, in harmony with the visible crescent, must be considered as visual evidence for the beginning month of the year.

- The vernal equinox has shifted backwards through the heavens to no longer be valid as a reference point for the biblical new moon to begin the New Year.

- The beginning of the biblical year in the spring must be considered as being fully after the vernal equinox, when the sun and the moon are in Aries and the crescent moon is in proximity to the Pleiades.

- Visual observations need to be confirmed, but the beginning of the biblical year should be considered when the visible crescent and the visible Pleiades are in close proximity, but a month later when indicated that a 13th month should be inserted.

- The Nebra Sky Disk confirms the validity of the use of the Pleiades in the visual sighting for the beginning of the biblical year.

- Since the Nebra Sky Disk predates the time of the calendar given to Moses, the barley harvest has to be considered as secondary to obvious hard evidence i.e. the Pleiades; otherwise as confirmation.

- The Nebra Sky Disk, even with its controversies, presents coincidences with the calendar of scripture to not be considered as valid for review and possible use.

- And finally, isn't it just like God to use a heavenly marker like a cluster of "seven" stars to lead us in His way?

LINKS AND NOTES:

Several excerpts from Archaeology and Astronomy publications on Nebra Sky Disk
http://www.donsmaps.com/skydisc.html

Review of Nebra Sky Disk by Andis Kaulins, deciphering expert; pros and cons
http://ancientworldblog.blogspot.com/2006/03/nebra-sky-disk-eclipse-erroneously.html#

Article by Roarie Starbuck on history of Hebrew words of Pleiades
Depictions of Pleiades absent from Jewish history prior to time of Christ

creation.com/images/pdfs/tj/j20_2/j20_2_100-103.pdf

Article by Olga Morales on Pleiades
Meaning of Pleiades to Freemasonry, Mayan, mythology, JW's, astrology and Mazzaroth
http://www.hiddenmysteries.org/mysteries/whatsthis/33.html

Inquiries have been submitted to astronomers, USNO, and Nebra Sky Disk project for confirmation.

You can Google "crescent moon Pleiades" and you will find web articles about this annual event for nearly every year for the last decade.