

# *Biblical Astronomy*

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## **NEW MOON REPORT**

Nehemia Gordon from Jerusalem, Israel compiled the following New Moon Reports for the months of April 2008 and May 2008 and the beginnings of the First Month and Second Month on the Biblical Calendar.

**April** – “On Monday April 7, 2008 the new moon was sighted from several locations around Israel. The moon was sighted: from Eilat by Eli El-Tanani and Shai El-Tanani at 19:13; from Ashdod by Neriah Haroeh and Nilit Masliach at 19:15; from Mitzpeh Ramon by Bart Vangronsvelt and Ganneke Kunst at about 19:15; from Beersheva by Simchon Firouz, Kobi El-Tanani and Ovadiah Firouz at about 19:30; from highway 6 by Chad and Barbara Peterson at 19:39.

On the previous evening, Sunday April 6, the moon had a lagtime of 33 minutes and illumination of 0.52%, which means it was not visible under any circumstance from Israel.

**Shanah Toyah!  
Happy New Year!”**

**May** – “On Tuesday May 6, 2008 the new moon was sighted from Jerusalem by Nehemia Gordon at 19:34 and shortly thereafter by Devorah Gordon.”

The next new moon is expected to be visible from Jerusalem near sunset on June 4, 2008 when the moon will be 1.17% illuminated and 10.38° above the horizon at 5 minutes past sunset. In the event of thick atmospheric haze it will be visible the next evening, June 5, when it will be 5.13% illuminated and 22.46° above the horizon at 5 minutes past sunset.

The new moon will be clearly visible over the west-northwest horizon from areas with clear skies in the United States on June 4, 2008.

## **LUNAR ECLIPSES ON FEAST DAYS**

Speaking of the moon, in late April I started to receive a number of e-mail inquiries concerning a video produced by J.R. Church featuring a presentation by Mark Biltz on certain upcoming lunar eclipses occurring on the feast days of Passover and Sukkoth in the years 2014 and 2015. Also mentioned were upcoming solar eclipses over the next three years and others in the years 2014 and 2015 starting with the total solar eclipse that is to occur on August 1, 2008. First of all, Mark Biltz gave a real good presentation on the upcoming events. However, since I have received so many inquiries on it, I am dedicating most of this newsletter to present more facts of the mentioned eclipses as well as on other such eclipses in the last century and in this century. The links below are to the video presentations that Mark Biltz did on J.R. Church’s program “Prophecy in the News.”

<http://66.155.114.80/video/Dsl/5904-D.wmv>

<http://66.115.114.80/video/Dsl/5904-E.wmv>

I also received e-mails that added false info to Mark’s presentation, such as all the eclipses will be visible from Jerusalem and this will be the last time for hundreds of years that such a series of eclipses will be seen. Mark did not say these things in the presentations that I watched and the added info is just not true. Mark did say that the four total eclipses in 2014 and 2015 would be the last time this century to occur on Passover and Sukkoth. This may be true if you just use the Jewish Talmudic calendar which has its share of problems. There will also be a tetrad of four total lunar eclipses in the years 2032 and 2033. The first will occur on April 25, which may be Passover on the Biblical calendar if the barley is late in ripening that year. We will not know for sure until that time

comes. If that is the Passover, then the next total eclipse on October 18, 2032 will fall on Sukkot. The two total eclipses in 2033 will fall on Passover and Sukkot and there will also be two lunar eclipses on Passover (penumbral) and Sukkot (partial) in 2034. All six of these eclipses except for one, the total eclipse on October 8, 2033 (Sukkot), will be visible from Jerusalem and Israel.

There is another tetrad of four total eclipses that occur on Passover and Sukkot two years running in 2061 and 2062. This is according to the Hebrew calendar and most likely the Biblical calendar as well, but not all by the Jewish Talmudic calendar. All of these eclipses except for the one on September 29, 2061 are visible from Jerusalem and Israel.

Then there is a series of four lunar eclipses in 2079 and 2080, three total and one partial, all on Passover and Sukkot according to the Jewish Talmudic calendar.

You can check these all out from the links to NASA's eclipse web pages below. These are the web pages Mark speaks about in his presentation. I was unaware of these websites until I heard Mark's presentation.

One website is for Lunar Eclipses and the other is for Solar Eclipses. I believe they are relatively new. I wish they had them up years ago. It would have saved me many weeks in researching eclipses using astronomy programs and calendar programs. All the info one would want on eclipses over thousands of years are on those websites. I confirmed the accuracy of the info by spot-checking various eclipses with my astronomy and calendar programs. Info is shown on whether the eclipses are total or partial for lunar or solar eclipses as well as annular for solar. Click on the eclipse date and a page will pop up with a map that you can click on and zoom in to see where the eclipses will be visible from. It even has the Sari (plural for Saros) of all the eclipses. I will get into the Saros in a bit. The two NASA links are below.

<http://eclipse.gsfc.nasa.gov/lunar.html>

<http://eclipse.gsfc.nasa.gov/solar.html>

For subscribers who do not have internet access, the summary of Mark's presentation is concerning the total solar eclipse in August 2008 as a possible starting point of the last shabuah or seven years prior to Messiah returning at the end of that

seven year period and the total lunar eclipse on Sukkoth 2015 as marking the end of that seven-year period. He also states that the years 2014 thru 2015 is a sabbatical year. This is true according to the Jewish Talmudic calendar. However, I disagree with that calendar. My calculations show that 1996/1997 was a sabbatical year and 1997/1998 was a Jubilee year (1947/1948 as well). My calculations also show that the year 2032/2033 is a sabbatical year, the years that other eclipses occur. I could be wrong. In any event, Mark believes that the signs of these eclipses should put us on a tribulation watch (not warning). Mark may be on to something and it would do no harm to watch. I am always watching anyway, especially during the Spring Feasts and Fall Feasts every year.

Mark Biltz's presentation was focused on eclipses that occur on the feast days of Passover and Sukkot, especially those that occur in a string of four total lunar eclipses, which is called a tetrad. I do not know of any special significance in Biblical Astronomy of a tetrad over a string of four lunar eclipses with a mixture of total and partial eclipses. Though it is of course possible that there is certain significance to it. Of all the total lunar eclipses occurring in 2014 and 2015, only one is visible from Jerusalem, and that one is only partially visible from Jerusalem since it sets below the horizon shortly after it reaches totality. The solar eclipse on August 1 is also not visible from Jerusalem. It may be slightly but not noticeably visible from northern Lebanon. I do not know for sure if the eclipse needs to be visible from Jerusalem, but that is where Y'shua spoke the prophecy that "immediately after the tribulation of those days the sun will be darkened and the moon will not give its light." Also some key words here are "immediately after the tribulation of those days." That could mean a total solar eclipse just before the Day of Trumpets and a total lunar eclipse on Sukkoth immediately after the Great Tribulation. There is a total lunar eclipse on or near Sukkoth in 2015 and a solar eclipse on the eve of Tishri 1, 2015, but that solar eclipse is only a partial eclipse and is only visible from southern Africa and the Antarctic; hardly a big sign.

Furthermore, I do not believe what the Lord is talking about in that prophecy are eclipses but rather supernatural events, and events so awesome that people (those who are not believers) will be awestruck and frightened by them. Believers are not to be dismayed with such signs (Jer. 10:2).

This is not to say that certain solar and lunar eclipses are not signs of Messiah's return, since they certainly may be, but the events Jesus speaks of in the Gospel of Matthew are most likely supernatural events.

In looking up information on when strings of eclipses will be occurring this century I remembered an article that I did for the December 1996 issue of Biblical Astronomy which included a list of such eclipses in the 20<sup>th</sup> century. Below is that article. If [back page](#) in the below article does not link you with that list, just go to [www.biblicalastronomy.com](http://www.biblicalastronomy.com) and enter the site, then select newsletters and then scroll down and select 1996 newsletters and then December. You will be able to link to the list from there.

## Lunar Eclipses On Holy Days

*December 1996* - Currently, we are in the midst of a string of Lunar eclipses falling on or within one day of the Jewish holy days of Succoth, Passover, and, or, Purim. Such a string of eclipses falling on or near these holy days occurs about every ten years. This is because when such strings occur, the eclipses are six months apart, and Passover and Succoth are six months apart. The moon is always full during an eclipse and during Passover or Succoth. When such a string starts on or near Passover or Succoth, then the other eclipses will follow suit. Not all of such eclipses are seen from Israel. In the past century there was only one other string (other than 1996/1997) where all the eclipses could all be seen from Israel on the holy days. This occurred in 1949/1950. In two such strings (1949/1950 and 1967/1968) Israel was at war with her enemies. Most of the eclipses in 1967/68 were not seen from Israel. There was a series of six lunar eclipses falling on the Holy days between 1930 and 1932. Two of those were not seen from Israel. Of course, Israel had not yet become a nation at that time. Hitler came into power in 1932.

The most dramatic of such strings is now occurring. All are seen from Israel, three of the eclipses are total. The partial eclipse, coming up on March 24, will be near total, but only will be seen 1/3 eclipsed from Israel before it sets. At least two of the eclipses are accompanied by two bright comets; Hyakutake on the Passover of 96, and Hale-Bopp on the Passover or Purim of 97 (Passover on Hebrew calendar, Purim on Jewish Talmudic). The

eclipse of September 27 (12 hours from Succoth) was in conjunction with Saturn, a rare event which hasn't been seen from Israel since the year 611. It remains to be seen if there are any other celestial surprises to occur with the eclipse on September 16, 1997.

The total eclipse that occurred on Passover, 1996 appeared blood red over Jerusalem. I do not know if any of the previous eclipses for this century appeared such a deep red color.

I have listed all of the lunar eclipses falling on or near Passover (Nisan 15), Succoth (Tishri 15), and Purim (Adar 14 or Adar II 14), for the 20th Century on the [back page](#) of this newsletter. Dates are given in both the Jewish Talmudic calendar and the Hebrew calendar. The Hebrew calendar is more ancient and uses different factors in calculating when the extra month is added in certain years. It is much too complex to go into the details of the two calendar systems in this newsletter. I will spare you the perplexity that comes with it.

In December 1996 I did not have access to new moon reports or barley reports. Michael Rood and I were in conference many times over many months over the phone from early 1997 about the Biblical calendar and how it would be nice to have reports from Jerusalem on sightings of the first crescent moon each month as well as barley reports each spring. Michael made his first trip to Jerusalem in the autumn of 1997 and ran into Nehemia Gordon. The rest is history.

To continue with the upcoming eclipses, I found it interesting that all of the eclipses that fell and are to fall on Passover in 1996, 2014, and 2032 are all of the same Saros (Saros 122), and ancients would consider them all the same eclipse. There will be more on what a Saros is soon to follow.

Also, all the eclipses that fall on Sukkot for 1996, 2014, and 2032 are the same Saros (Saros 127). All the eclipses that fall on Passover in 1997, 2015, and 2033 are the same Saros (Saros 132). All the eclipses that fall on Sukkot 1997, 2015, and 2033 are the same Saros (Saros 137). Check it out on the NASA Lunar Eclipse webpage.

My calculations show that two of these series of eclipses fall in a Sabbatical year, 1996/1997 and 2032/2033. Seven years from 2033 brings us to the year 2040 when a very rare celestial event is to occur in *Bethulah (Virgo)* on the Day of Trumpets (September 8, 2040). The first crescent

new moon will be in the midst of the five bright planets that will be in a Grand Massing (a one in twenty-six thousand to fifty-two thousand year event in *Bethulah* on the Day of Trumpets). My calculations show this date to be exactly 6,000 years from the creation of Adam and the beginning of the Biblical Year 6001 from the creation of Adam. I still believe that Messiah will return in the Fall Feasts of 2047, which is the next Jubilee and 6,000 years from the fall of Adam, but I could be wrong. At any rate if the events of the last of the last days do not unfold by 2040 or sooner, we still have 2047 to look forward to.

Below is an excerpt of an article from E.W. Bullinger's *The Witness of the Stars*, pp. 177, 178 concerning Signs for Seasons and Sari.

### "For Signs and For Seasons"

We have seen the great truths which are taught from the position, and forms, and names of the heavenly bodies. There are also truths to be learnt from their *motions*.

When God created them and set them in the firmament of heaven, He said, in Genesis 1:14--

"Let them be for signs and for seasons."

Here the word "signs" is *othoth* (plural of *oth*, from the root *to come*). Hence, *a sign of something or some One to come*. In Jeremiah 10:2 Jehovah says, "And be not dismayed *at the signs* of the heavens, for the heathen are dismayed at them." The word "seasons" does not denote merely what we call the four seasons of the year, but *cycles* of time. It is *appointed time* (from the verb *to point out, appoint*). It occurs three more times in Genesis, each time in connection with the promised Seed--

Genesis 17:21, "At this *set time* in the next year";

Genesis 18:14, "At the *time appointed* I will return"; and

Genesis 21:2, "At the *set time* of which God had spoken."

Genesis 1:14 is therefore, "They (the sun, moon, and stars) shall be for signs (things to come) and for cycles (appointed times)."

Here, then, we have a distinct declaration from God, that the heavens contain not only a Revelation concerning *things to come* in the

"Signs," but also concerning *appointed times* in the wondrous movements of the sun, and moon, and stars.

The motions of the sun and moon are so arranged that at the end of a given interval of time they return into almost precisely the same position, with regard to each other and to the earth, as they held at the beginning of that interval. "Almost precisely," but not quite precisely. There will be a slight outstanding difference, which will gradually increase in successive intervals, and finally destroy the possibility of the combination recurring, or else lead to combinations of a different character.

Thus the daily difference between the movement of the sun and of the stars leads the sun back very nearly to conjunction with the same star as it was twelve months earlier, and gives us the cycle of the year. The slight difference in the sun's position relative to the stars at the end of the year, finally leads the sun back to the same star at the same time of the year, viz., at the spring equinox, and gives us the great precessional cycle of 25,800 years.

So, too, with eclipses. Since the circumstances of any given eclipse are reproduced almost exactly 18 years and 11 days later, this period is called an *Eclipse Cycle*, to which the ancient astronomers gave the name of *Saros*; \* and eclipses separated from each other by an exact cycle, and, therefore, corresponding closely in their conditions, are spoken of as being one and the same eclipse. Each *Saros* contains, on the average, about 70 +/- eclipses. Of these, on the average, 42 +/- are solar and 28 +/- are lunar. Since the *Saros* is 11 days (or, more correctly, 10.96 days) longer than 18 years, the successive recurrences of each eclipse fall 11 days later in the year each time, and in 33 *Sari* will have traveled on through the year and come round very nearly to the original date.

But as the *Saros* does not reproduce the conditions of an eclipse with absolute exactness, and as the difference increases with every successive return, a time comes when the return of the *Saros* fails to bring about an eclipse at all. If the eclipse be a solar one before this takes place, a new eclipse begins to form a month later in the year than the old one, and becomes the first eclipse of a new series.

\* General Vallancey spells *Saros* sin, ayin, resh, vav, tzadai, which amounts to 666 by Gematria! Viz., sin=300 + ayin=70 + resh=200 + vav=6 + tzadai=90 = 666.

As I wrote earlier, a series of eclipses do not necessarily need to be all total eclipses to be a sign. There was such a string of eclipses at the time of the captivity of the ten northern tribes of Israel, but they were not all total. It is most likely from these eclipses and what happened to Israel at that time that the sages got their understanding on what such lunar eclipses may mean. Those eclipses fell about a month before the feast days of Passover and Sukkot but occurred in the constellations *Bethulah* and *Pisces*. *Bethulah* (*Virgo*) represents the faithful of Israel and *Pisces* represents the nation of Israel, with one fish representing the ten northern tribes and the other the tribes of Judah and Benjamin. *Pisces* portrays Israel going into bondage or coming out of bondage. At this current epoch of time, and because of the precessional cycle of the earth, when lunar eclipses occur on Passover or Sukkot they occur in the constellations *Bethulah* and *Pisces*.

The four eclipses around the time of the captivity occurred on **March 19, 721 BC** (Total Blood Red Moon Eclipse in Bethulah); **September 12, 721 BC** (Total Blood Red Moon Eclipse in Pisces); **March 8, 720 BC** (Partial Lunar Eclipse in Bethulah); **September 28, 720 BC** (Partial Lunar Eclipse in Pisces).

The above dates are Julian calendar dates. To calculate what day of the month they would fall on the corrected Gregorian calendar (the calendar we now use) subtract 9 days. Example: March 19, 721 BC on the proleptic Julian calendar is the same solar day as March 10 on the corrected Gregorian calendar. Also, if you look for these eclipses on the NASA webpage, -719 is 720 BC. There is no year 0, so 0 becomes 1 BC in calendar as well as astronomy programs. If you wish to look at the eclipses for 721 BC, look at the year -720 on the NASA webpage. You will also need to go to the 5,000 year catalog on the webpage to access info on these eclipses. If memory serves me right, all of those eclipses were visible from Israel.

Another interesting series of eclipses occurred on Passover and Sukkot at or around the time of the Exodus. I have the Exodus occurring in 1453 BC but in case of the very slight possibility that I am wrong, there was a series of four of eclipses beginning on April 26, 1449 BC and ending on October 9, 1448 BC which may have marked the event of the Exodus. I am writing of this here even though it is contrary to the date of the Exodus according to overwhelming calculations that puts it 5 years earlier, so you can have all the

information for that time period and can have fun speculating.

I believe all of these eclipses were visible from Egypt and the rest of the Mideast. I know for certain that the main ones in 1448 BC were. For that time period you need to subtract 14 days from the proleptic Julian calendar which are the dates given below in order to get the same solar day as the corrected Gregorian calendar. For example: April 15, 1448 BC on the Julian calendar is the same day of the year as April 1 on today's calendar.

The first lunar eclipse to occur in this series was a partial lunar eclipse on April 26, 1449 BC. The second was a partial lunar eclipse on October 29, 1449 BC. The third (and possibly the first Passover) was a total blood red eclipse on April 15, 1448 BC. The fourth was another total blood red eclipse on October 9, 1448 BC. If it is really a fact that the blood red eclipse that occurred on April 15, 1448 BC indeed was the first Passover, then the blood red moon would have represented the blood of the lamb that was put on the door posts and mantel of the homes of Israel to protect them from the "Angel of Death" and the curse that came on Egypt with the dying of all the firstborn. Of course, a blood red moon now represents the atoning blood of Y'shua Messiah, our Passover.

If you have ever watched the movie *The Ten Commandments* you may notice that on the evening of the Passover Joshua looks up at a crescent moon that is high in the sky. At first look, there is something really odd with that picture. A crescent moon can only be the new moon or a waning old moon and is never seen in mid-sky high above. The Passover moon is always a full moon. Cecil B. DeMille and his crew of experts could not have made such a mistake. Many ancient historical records from such historians as Josephus and Philo as well as the Holy Scriptures were used in the making of the film. The only thing that I could think of, of why that scene had a thin crescent moon high in the sky on Passover was that they were most likely trying to show the moon going into an eclipse and it was not yet totally covered with the shadow of the earth as the cloud came from where the moon was seen and came down to the earth (the cloud represented the "angel of death" that came upon Egypt and passed over the children of Israel doing no harm to them). If this is not what the filmmakers had in mind, they appear to be a bunch of complete idiots. But I do not think that is the case.

Another interesting fact of the total eclipses of 1448 BC is that the second eclipse on Tabernacles went into eclipse as it came into conjunction with the planet *Saturn*. This is a very rare celestial event, especially for it to occur on Sukkot or even Passover. These two eclipses are almost identical to the eclipses that occurred on Passover and Sukkot in 1996. The blood red Passover eclipse of April 3/4, 1996 was followed by a total lunar eclipse as it went into conjunction with *Saturn* on September 27, 1996. Before that, the last time this was seen from Jerusalem was in the year 611 and that was not a feast date. There is a very high probability that the only times that there were blood red moons on the Passover followed by a total lunar eclipse on Sukkot as it went into conjunction with Saturn, only occurred in 1448 BC and 1996.

These are certainly exciting times.

## THE NORTH STAR IS WINKING AT US

The following article is from a Sky & Telescope news bulletin posted by Alan MacRobert on April 28, 2008 concerning the North Polar Star *Polaris*. All the stars of the northern hemisphere revolve around this star.

### Polaris's Pulsations Pick Up

Polaris is important not just because it's the North Star. It also happens to be the brightest and nearest Cepheid variable star, 430 light-years away. Cepheids, a special class of pulsating giants, have provided astronomers with a [crucial link](#) in the cosmic distance scale for almost a century. But Polaris isn't just any Cepheid. It has been changing its period and especially the amplitude of its pulsations.

Polaris varies in brightness only slightly, by just a few percent across its 3.97-day cycle. Moreover, the pulsations steadily diminished for decades: from 0.12 magnitude per cycle a century ago — almost enough to see by eye — to a mere 0.02 magnitude per cycle in the mid-1990s. Astronomers wondered if Polaris was about to stop pulsing completely.

Apparently not. Four years ago Edward F. Guinan (Villanova University) and several colleagues [reported](#) that Polaris's fluctuations bottomed out in the mid-1990s and had started increasing again, to 0.038 magnitude per cycle in

2004. Now an international team of nine astronomers finds the trend continuing. From 2003 to 2007, says the team, Polaris's brightness pulsations increased by an additional one-third.

The group used instruments aboard satellites to monitor Polaris almost continuously for 4.5 years. Based in this very high-quality data, they suggest that Polaris is not evolving away from the "instability strip" due to long-term, one-way stellar evolution as astrophysicists thought, but instead is showing some kind of centuries-long, periodic behavior and no evolution at all.

So the mysteries of the North Star continue. The group's paper will appear in the *Astrophysical Journal*. You can read it as a [preprint](#) on the [Astroph preprint server](#), which has been taking over from traditional journals as the main place where astronomy researchers share their news.

## BIBLICAL ASTRONOMY SUBSCRIPTIONS

It is nearly that time of the year again to renew your subscriptions for the *Biblical Astronomy* newsletter. Next month's issue will be the last issue for the July 2007 to June 2008 subscription year. If you subscribe to the online version of the newsletter, please wait until at least mid-June before you re-subscribe. I should have the new passwords for you in latter June. You will not need to use them until July. At the beginning of July all of the newsletters from July 2007 to June 2008 will go on the regular web page and will be free to view without a password. You will need a new password, however, to view the July 2008 to June 2009 newsletters online. If you are a postal subscriber, you can also view the newsletters online for no extra fee, but please write down your e-mail address so I can send you your password. The subscription fee for online subscribers is \$12.00 for the July 2008/June 2009 subscription year.

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**YHVH bless you richly through His Son Y'shua, Jesus Christ.**