

Biblical Astronomy

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BARLEY REPORT

Nehemia Gordon from Jerusalem, Israel compiled the following Barley Reports on March 30 and March 31, 2011.

Aviv Found in the Jordan Valley!

“On Wednesday March 30, 2011 Aviv was found in the Jordan Valley at Tel Malkoach south of Beth Shean. A search in the Northern Negev on Thursday March 31, 2011 only turned up cotton stage to worm stage barley but no Aviv. The Aviv in the Jordan Valley is enough for the wave-sheaf to be brought during Chag HaMatzot (Feast of Unleavened Bread) beginning April 18 at sunset.”

The picture below is Aviv barley found in Northern Negev on March 31, 2011.



NEW MOON REPORT

Nehemia Gordon from Jerusalem, Israel compiled the following New Moon Report for the month of April 2011 and the beginning of the First Month on the Biblical Calendar.

“On Monday April 4, 2011 the new moon was sighted from Israel. The moon was first sighted from Mount Hezekiah at 7:28 pm by Nehemia Gordon and at 7:29 pm by Yoel Halevi. The moon was also sighted from Ashdod by Magdi Shamuel at 7:40 pm.

A photograph of the moon sighted from Mount Hezekiah in the Eilat Mountains is posted at: <http://www.facebook.com/album.php?aid=293928&id=371892568628&l=117d55c868>

Chag HaMatzot (Feast of Unleavened Bread) will begin April 18 at sunset.

Looks like I messed up the dates on my last newsletter about finding Aviv barley on March 30 in the Jordan valley when it was in fact March 29. Thanks to Botaniska Föreningen for catching this oversight. This doesn't change the conclusions.”

The next new moon is expected to be visible from Jerusalem, Israel near sunset on May 4, 2011 when the moon will be 1.71% illuminated and 13.4° above the horizon at five minutes past sunset.

The Spring Feasts for 2011

Passover/First Day of Unleavened Bread

Sunset April 18 to sunset April 19.

Day of the Wave Offering

April 24th during the day.

Last Day of Unleavened Bread

Sunset April 24 to sunset April 25.

Shavuot – Sunset June 11 to sunset June 12.

NEW MOONS FROM APRIL 2011 TO MARCH 2012

The figures below represent the illumination of the moon (%) and the degrees above the horizon (⁰) the moon is at five minutes past sunset.

2011

| | | | | |
|--------------------|------------|----------------------|--|-----------------------------|
| April 4 | 1.01% ill. | 9.69 ⁰ ah | | Starts First Month |
| May 4 | 1.71% | 13.4 ⁰ | | Starts Second Month |
| June 3 | 3.3% | 16.13 ⁰ | | Starts Third Month |
| July 2 | 2.05% | 8.41 ⁰ | | Starts Fourth Month |
| August 1 | 4.97% | 10.23 ⁰ | | Starts Fifth Month |
| August 30 | 3.6% | 5.98 ⁰ | (August 31 – 9.34%, 13.66 ⁰) | Starts Sixth Month |
| Sept. 29 | 7.07% | 11.98 ⁰ | (Sept. 28 – 2.21%, 3.65 ⁰) | Starts Seventh Month |
| October 28 | 4.63% | 11.82 ⁰ | | Starts Eighth Month |
| November 26 | 2.43% | 11.29 ⁰ | | Starts Ninth Month |
| December 25 | 0.87% | 8.63 ⁰ | (December 26 – 4.19%, 19.97 ⁰) | Starts Tenth Month |

2012

| | | | | |
|--------------------|-------|--------------------|--|------------------------------|
| January 24 | 1.93% | 14.35 ⁰ | | Starts Eleventh Month |
| February 23 | 2.88% | 17.96 ⁰ | | Starts Twelfth Month |
| March 23 | 1.01% | 9.78 ⁰ | | Starts First Month |

The most likely date for when the new moon will be observable from Jerusalem is on the left. There are some interesting situations this year. The dates in parenthesis are the secondary dates in borderline situations.

On **August 30** the moon is only 5.98⁰ above the horizon at 5 minutes past sunset but it will be 3.6 percent illuminated at that time. It should be clearly visible if there is not much haze or clouds. Since it is in the month of August, which I believe is the hottest month in Israel, there may be a lot of particulates in the air because the evapotranspiration rate is tied to how high the temperature is. And you would be looking through miles and layers of thicker atmosphere when looking at objects close to the horizon. The closer to the ground the atmosphere is, the thicker it is and the farther from the ground the atmosphere is, the thinner it is. When looking say 25 miles straight across toward the horizon you would be looking through 25 miles of thick atmosphere. When looking 25 miles straight up, you would be looking through the thicker layer near the ground but thinner and thinner layers above that punchy. The illumination of the moon should punch through this haze, but we will have to wait to see if it does.

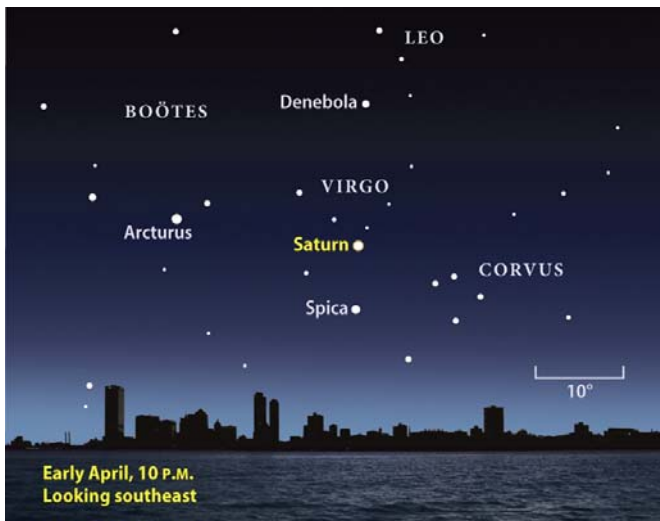
On **September 28**, the moon is 2.21% illuminated but only 3.65⁰ above the horizon at 5 minutes past sunset. There were similar situations two years ago. We will see what information we get this year to see if there is any chance that the moon can be seen in such conditions.

December **25/26** is a close borderline situation. On December 25, the moon will be 0.87% illuminated and 8.63⁰ above the horizon at 5 minutes after sunset. This would have been rounded off to 1% illuminated and 9⁰ above the horizon in the Dance of the Planets program which is the program I first used when I did the new moon charts for 1997 to 2009 twelve years ago. The skies are also clearer in December because of the cooler temperatures. This will still be a difficult crescent to spot with the unaided eye, just have to look hard.

SATURN AT OPPOSITION

Saturn reached opposition (opposite side of the earth as the sun and closest approach to Earth for the year) on April 4, 2011. The planet reached a brightness of magnitude 0.4. This was the closest approach of Saturn and it was at its brightest since early 2008.

The simulation of this event from Astronomy.com seen below shows Saturn in the Sign and constellation *Bethulah (Virgo)* at the time of its opposition.



Bethulah represents the faithful of the Tribes of Israel (the 144,000) and represents the woman and the woman's seed from Genesis 3:15 and Revelation 12. The woman's seed represents our Messiah Yahshuah and also the faithful of Israel (the remnant of the woman's seed that the dragon makes war against in Revelation 12:17).

Saturn represents Satan the dragon, and is in *Bethulah* during the planetary conjunctions and other celestial activity that will take place in *Pisces* in May.

ZEDEK AND SUN IN CONJUNCTION

Zedek and the sun came into conjunction (same right ascension to and in alignment with the Celestial North Pole) on April 6, 2011. This occurs once every year and Jupiter cannot be seen from Earth when it is at conjunction or near conjunction with the sun.

Before Zedek passed the sun, it was seen in the evening sky. Now, it is seen in the morning sky. Ancient astronomers paid particular attention to

Zedek when it first appeared in the morning sky in its heliacal rising in the East. Such was the case with the Magi when they reported on first seeing "His star" in the east or in its heliacal rising (Matt. 2:2). The word "east" in this verse is from the Greek word *anatole*, which is properly translated "rising." That of course is from the Greek text. I do not know the word from the Hebrew text since I do not have a copy of the Hebrew Matthew at this time. It would be interesting to see the Hebrew word for "east" here. *Anatole* is specifically an astronomical term for *in the rising* or *in the heliacal rising*. The astronomical meaning for the term *Heliacal Rising* is *the rising of a celestial body in the eastern sky shortly before dawn, before the sun obscures it by its brilliance*.

After *Zedek* passed the sun on April 4, it should first become visible to the unaided eye in its heliacal rising around May 1. As we follow it from its heliacal rising, we will see a lot of activity in the constellation *Pisces* in the early morning sky throughout May, including a fairly close and bright conjunction of *Zedek (Jupiter)* and *Nogah (Venus)* in the early morning sky on May 11. This would particularly grab the attention of the ancient Magi, especially since the Sign *Pisces* represents the nation of Israel, who is in a struggle with *Cetus (the beast from the sea)*.

At the time the Magi saw the events pointing to the birth of the Messiah, they saw *Zedek* in its heliacal rising in the Sign *Leo* or *the Lion of the Tribe of Judah*. Soon after there was a *Jupiter* and *Venus* conjunction and another one following a year later. Shortly after that the four planets *Jupiter*, *Venus*, *Mars* and *Mercury* were massed in the Lion, just as will happen in May in the Sign *Pisces*. There will be more on this in the May 2011 issue of *Biblical Astronomy*.

MARS AND MERCURY IN CONJUNCTION

In the early morning before sunrise on April 19, 2011 (the first day of Unleavened Bread), *Catab* (*Mercury*) will pass 0.8 degrees north of *Adom (Mars)*. This conjunction will take place in the Sign and constellation *Pisces*.

Chart 553 shows the close conjunction of *Mars* and *Mercury* in the constellation *Pisces* on April 19, 2011. The planets are most likely too close to the sun in their heliacal rising to be seen with the unaided eye through the solar glare.

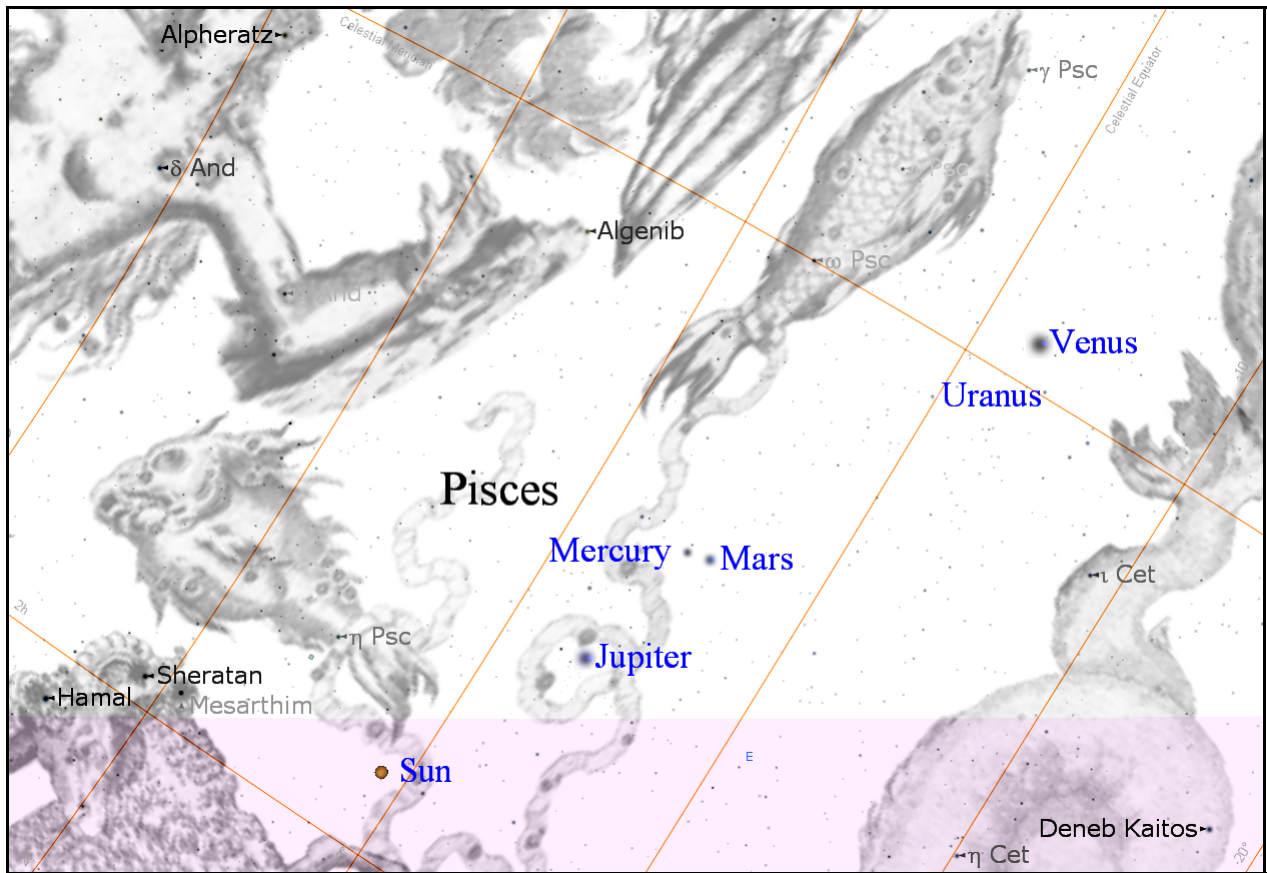


Chart 553 – Mars and Mercury in conjunction in Pisces on April 19, 2011 (Aviv 15) as seen from Jerusalem about ten minutes before sunrise.

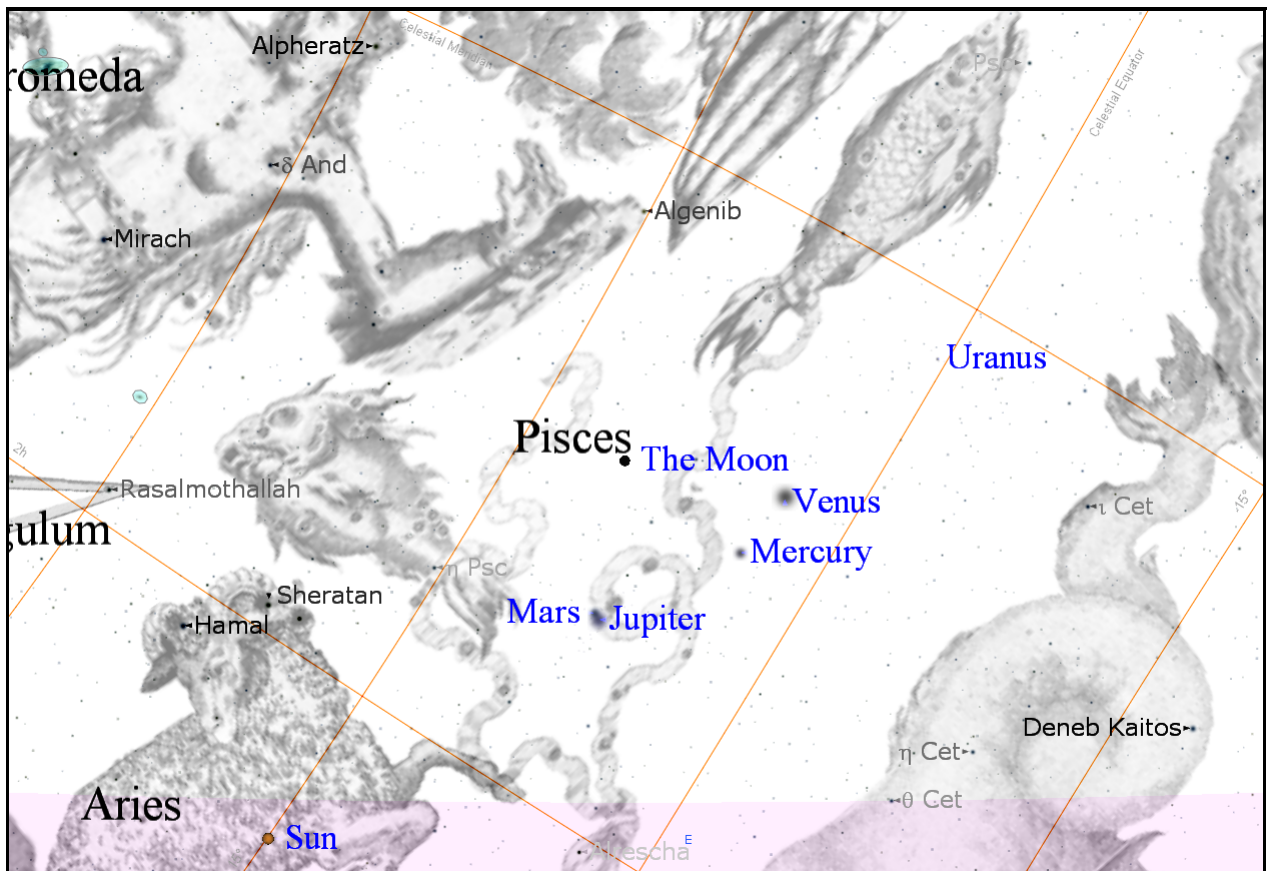


Chart 554 – Close conjunction of Jupiter and Mars in Pisces on May 1, 2011.

Adom (*Mars*) can represent Michael the warrior angel; blood and war; or the atoning blood of Messiah. *Catab* (*Mercury*) represents Gabriel the messenger angel. Gabriel may be sounding out to Israel to prepare for war.

PRAISE PREPARED FOR THE CONQUEROR

Every year on or around April 22/23, the Lyrid Meteor Shower peaks. This year April 22/23 is the fifth day of Unleavened Bread. The following is an article by Roan Kelly from Astronomy.com concerning this year's April shower.

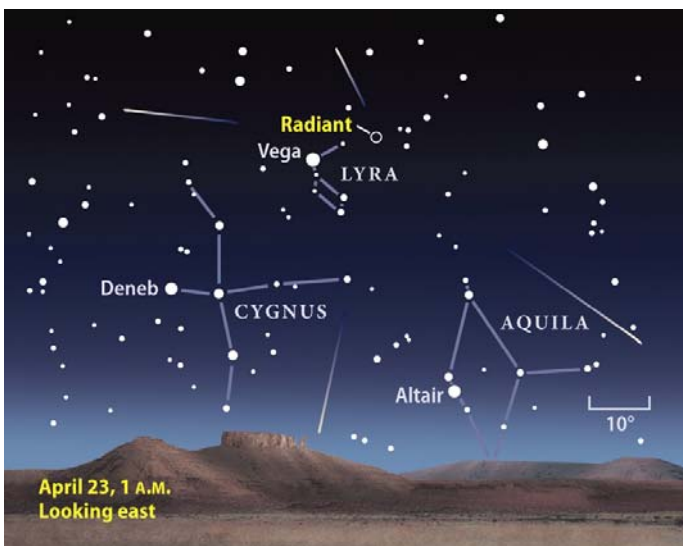
April's shower battles a gibbous Moon

“The annual Lyrid meteor shower typically generates up to 20 meteors per hour under optimal conditions. Unfortunately, 2011 won't be a favorable year. The shower peaks the night of April 22/23, when a waning gibbous Moon shines brightly and will drown out fainter meteors during the predawn viewing hours.

Still, observers should look for brighter shower members the morning of April 23. Lyrid meteors appear to radiate from the constellation Lyra, near the bright star Vega. This region climbs high after midnight and stands nearly overhead as dawn approaches.

For the best views, find an observing location well away from city lights. The Moon rises in the southeast around 1 a.m. local daylight time, so try to position yourself where a tree or building blocks the Moon's unwanted glow.”

The simulation below from Astronomy.com shows the radiant of the Lyrid meteor shower.



The radiant of this shower is in the constellation *Lyra, the harp*. The main theme for this constellation is **Praise prepared for the conqueror**, such as Rev. 11:17; 19:7; Psalm 21:1, 8, 10-13; the conqueror here being Yahshuah. The brightest star in this constellation is *Vega*, which means *He shall be exalted*.

When I see meteors shoot forth from Lyra I think of praises going forth before Him and to Him.

JUPITER AND MARS IN CONJUNCTION

Adom (*Mars*) will pass 0.4 degrees north of *Zedek* (*Jupiter*) in the Sign and constellation *Pisces* on May 1, 2011.

Chart 554 shows the positions of *Jupiter* and *Mars* in the Sign and constellation *Pisces* at the time of conjunction as seen from Jerusalem at 20 minutes before sunrise on May 1.

Both of the planets are in the band that is tied to the fish representing the House of Judah. The band is bound to *Cetus*, but *Aries* the Lamb is seen breaking the bands with His left foreleg. The planets *Nogah* (*Venus*) and *Catab* (*Mercury*) are also shown on the chart in *Pisces* at the time of the conjunction, as well as the moon. *Uranus* is also shown, but that is a recently discovered planet (discovered by Sir William Herschel on March 13, 1781) and was not known by the Patriarchs. There is no Biblical meaning to its name that I am aware of.

The planet *Mars* can represent Michael the warrior angel, or blood and war, or the atoning blood of Messiah, depending on the circumstance. It is also represents the atoning blood of Messiah here who gave his life on Aviv 14, 28 (1,983 years ago). It is through His atoning blood and sacrifice that His people are saved and His enemies are destroyed.

Zedek means *righteousness* and represents *The Lord Our Righteousness*. He is righteous in all of His judgments. This conjunction may represent a righteous war and judgment against the enemies of Israel. The enemy is represented by *Cetus, the beast from the sea*, whose tail is seen on the lower right side of the charts.

HUGE COMET TO IMPACT EARTH?

Well no, not really. But that is the hype that is going around about the recently discovered Comet Elenin. Actually, I believe it was discovered in December 2010. Some have given it a ridiculous diameter of 3,000 miles. And of course, the usual

conspiracy crap is going around about NASA hiding pictures and other information on the comet.

The following article or blog on the comet is by Kelly Beatty, Sky & Telescope.com, December 24, 2010

Bright Prospects for Comet Elenin?

“It doesn't look like much now — just a tiny, 19th-magnitude smudge tucked away in southwestern Virgo — but a newly discovered comet could become something special 10 months from now.

Comet Elenin (C/2010 X1) made its debut on December 10th when Leonid Elenin, an observer in Lyubertsy, Russia, remotely acquired four 4-minute-long images using an 18-inch (45-cm) telescope at the [ISON-NM observatory](#) near Mayhill, New Mexico. Follow-up images by Aleksei Sergejev and Artyom Novichonok at [Maidanak Observatory](#) in Uzbekistan revealed more about the new find: it had a teardrop-shaped, very diffuse coma just 6 arcseconds across and a tiny tail.

What's gotten hearts beating a little faster since the discovery is that Comet Elenin is still more than 4 astronomical units (375 million miles) from the Sun and headed inbound. It's still early, and the calculated orbit is certain to change in the weeks ahead as more position measurements are made, but right now it appears that the comet's perihelion will occur well inside Earth's orbit, about 0.45 a.u. (42 million miles) from the Sun, next September 5th.

Right now, odds are that Comet Elenin will become an easy target for binoculars around mid-August and reach naked-eye visibility for a couple of weeks around perihelion. The comet's elongation from the Sun [shrinks to just 1°](#) following perihelion, but soon thereafter the comet gets enough separate to position itself nicely for viewing in the predawn sky.

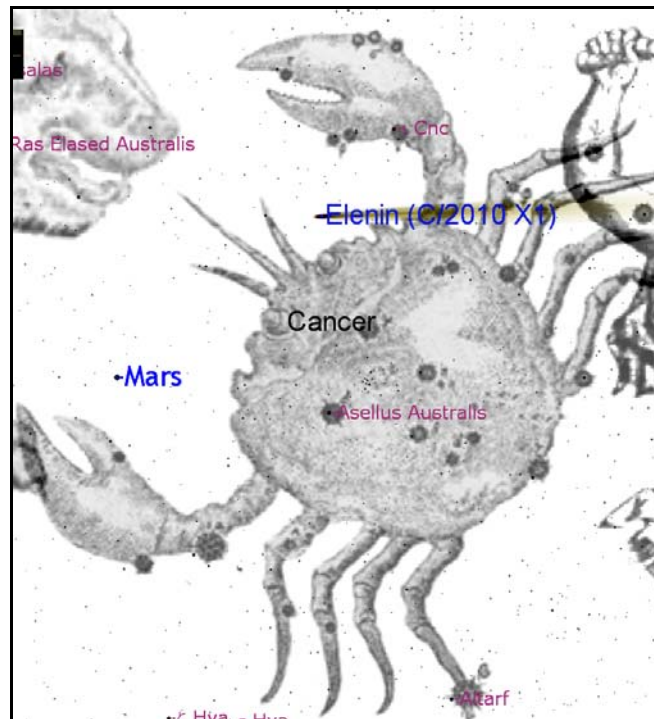
Moreover, it's traveling very near the ecliptic plane, and as it sweeps close to the Sun its sky location won't stray far from the ecliptic until mid-September, when the path arcs slowly northwestward through Leo. That's a plus for skywatchers in the Northern Hemisphere.

Finally, because Comet Elenin passes between the Sun and Earth, there's a chance its dust tail might "light up" (via forward-scattered light) due to the large Sun-comet-Earth angle and put on a really good show. The last interloper to do this, Comet McNaught, [dazzled southern skygazers](#) in January 2007.

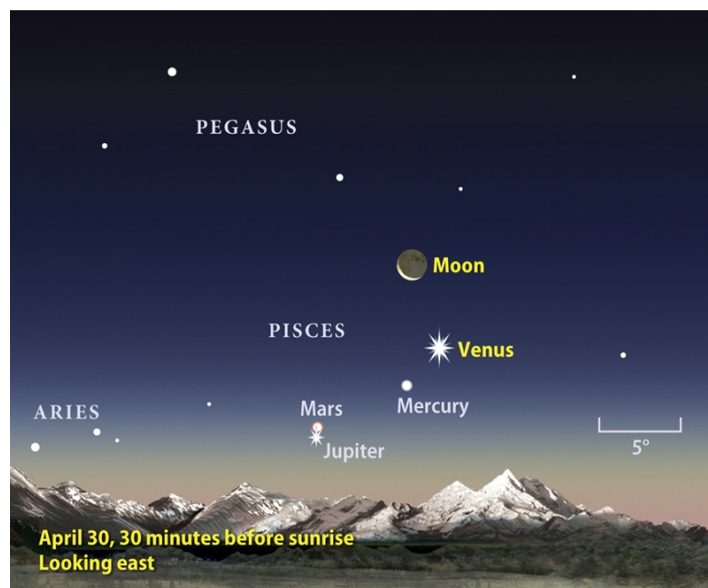
I'll update this story once the calculated orbit settles down, so please check back for the latest details.”

The last info I saw on this comet from NASA puts its closest approach to Earth around 21 million miles, which will occur in October 2011. We may or may not have a bright to very bright comet to observe during the Fall Feasts.

I just ran an orbital analysis on the comet and it shows the comet in the constellation *Cancer* at its closest approach to earth (21,726,000 miles) on October 17, 2011 (see the chart below). For now, it shows the comet not much lower than magnitude 6 at its brightest. It will most likely not be seen with the unaided eye. But this is a bit early. We will see what happens



The simulation below shows a real neat bright crescent moon and bright Venus along with the planets Jupiter and Mars on April 30, just prior to their closest approach to each other on May 1.



May Yahweh bless you and watch over you.