VAAS Website: home.comcast.net/~vaas/ October 2, 2015

Vandenberg Amateur Astronomical Society presents The Sidereal Times

Horsehead (see page 5)

Meeting *News:*

The September meeting we talked about when to schedule our VAAS family picnic. Had a light discussion about the summer break and star party activity during summer break. Discussed various events of the past operating year. Viewed a video about the New Horizons spacecraft to X planet Pluto.

Notice: October 31st, Mark that date it is our VAAS family picnic date and will be held at River Park in Lompoc. Bring something to share with the group. VAAS is supplying the Tri-tip and hotdogs garlic bread and beans..

Reminder: VAAS meeting October 9th at 7:00 PM Manzanita school, Hope to see you there.

Lunar Calendar:

New Moon Oct 12th
Full Moon Oct 27th

Presidents Message

The Super Moon Eclipse took place on **Sept. 27** for most of North America. The media has dubbed the large Moon " Super "because it is 14 % more diameter than a normal Moon size, appearing that way because it is at a closer position to the Earth. Astronomers call this **Perigee Syzygy-** perigee meaning close to earth, and syzygy meaning a lineup of 3 celestial bodies.

We saw the Total Eclipse of the Moon- rising in the East with a partial red haze. During our moonrise time of near 7 pm, and before 8pm it reached totality with the Earth's shadow covering it completely. Our skies were quite overcast so most photos were taken through clouds. We had a great turnout at the observatory 7 VAAS members and 7 guests. VAAS members and guests photographed the eclipse as the Moon peeked out through the clouds..

Friday, Oct. 16 - Martian Winery is offering wine tasting and Dinner for our members who can help with their telescopes or otherwise. This is located in Alisos Canyon Road about half way between Hwy 101 and Foxen Canyon Rd. Let us know if you are interested.

Our Annual VAAS Picnic will be held at River Park- on Oct 31st (Halloween Day) time 12:00 (Noon). The Lutheran Pavilion is located almost at the very end of the park, and it has its own parking area next to it.This is the one we have had for years for our picnic. We provide steak BBQ beans and bread, **and ask our members to bring a salad, snack, or a dessert, and a non-alcoholic beverage of their choice.** We will provide water, plates, cups, and utensils. We hope for a good turnout.

Jana

Events

Oct 1st Comet C/2013US10 Catalina a newly discovered comet may reach eye visibility on Oct 1st. The comet will continue to brighten and could reach magnitude 5 by Nov 6th.

Oct 3rd ***Star party at the observatory.***

Oct 8th Draconids meteor shower is a minor shower producing about 10 meteors per hour. Best viewing is early evening.

Oct 10th ***Star party at Figueroa Mountain site 1.5.***

Oct 11th Uranus is at opposition and at its closest approach to Earth. It will be brighter than any other time and will be visible all night long.

Oct 16th Mercury will be at greatest Western elongation at 18.1 degrees from the Sun. Best time to view is in the morning before sunrise.

Oct 17th ***Star party at the observatory.***

Oct 21-22 Orionids meteor shower is an average shower producing up to 20 per hour at its peak. It is produced by dust grains left over from Comet Halley. It peaks on the night of the 21st and morning of the 22nd.

Oct 26th Venus at greatest western elongation of 46.4 degrees from the Sun. Best time to view is in the early morning sky in the east.

Also on the 26th will be a conjunction of Venus and Jupiter where the two planets will be within 1 degree of each other in the early morning Eastern sky just before sunrise.

Oct 28th There will be a conjunction of Venus, Jupiter and Mars, a rare 3 planet conjunction. They will be visible in the early morning sky. They will form a tight 1 degree triangle just before sunrise in the East.

Girl Scouts Outreach event

Star Party and Events

Sept 5th Star party at the Observatory. Craig Fair, Jon Walke, Dave Covey, Dave McNally, Louise Gray Vince Tobin, and Vahan Yeterian on site. Jon, Craig and Vahan set up their scopes and equipment. Vince manned the observatory along with Dave Covey and Dave McNally. Louise did a lot of viewing with the scopes. Craig and Jon were trouble shooting some problems with Craig's computer program. Seeing conditions were Ok but there were problems with Dewing. Vahan was testing his equipment and doing some Astrophotography with Dave McNally helping out. It was another good night under the Stars.

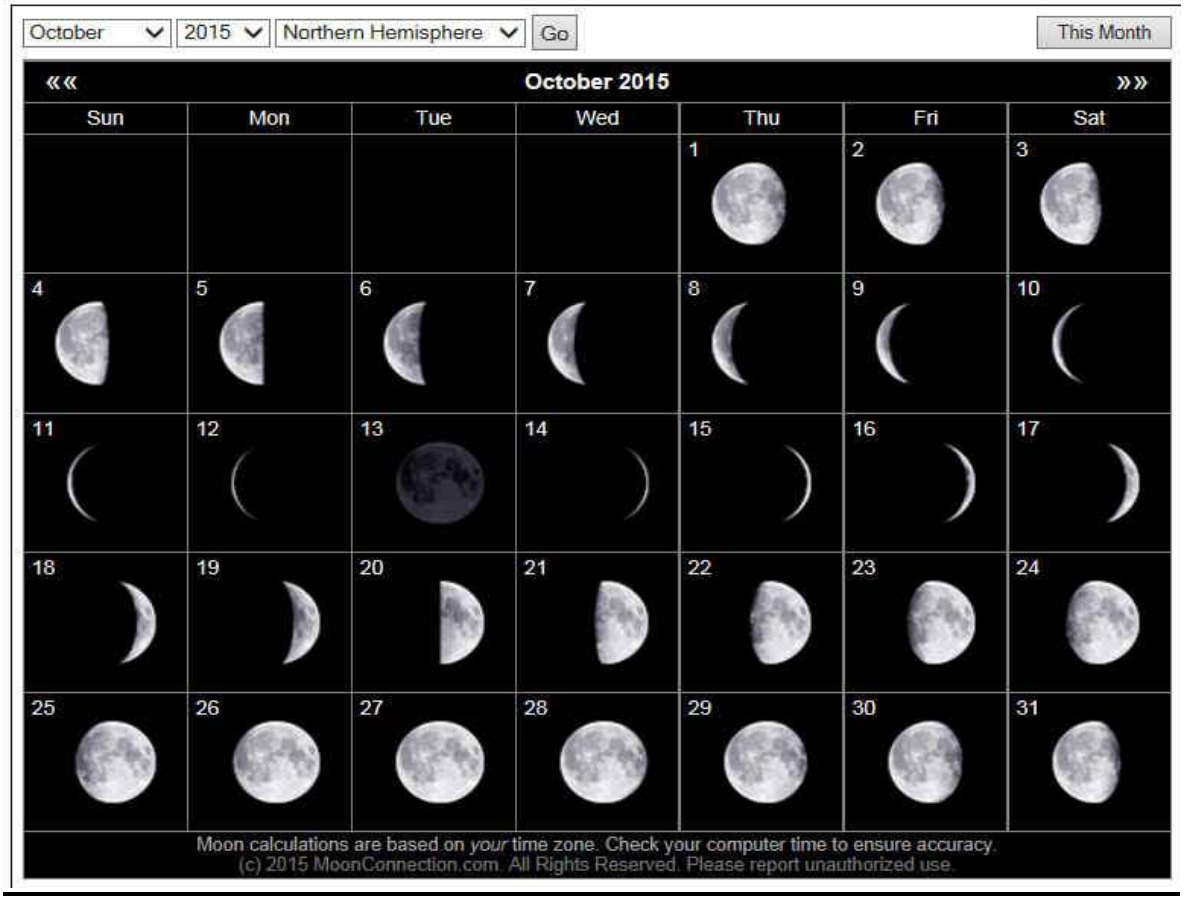
Sept 12th Star party at Figueroa Mountain. Event cancelled due to weather.


Grrrrr!

Sept 19th Star party at the observatory.
Dave McNally, Dave Covey, Craig Fair, Vince Tobin and Vahan Yeterian on site. Clear sky no wind or bugs and the temperature was mild at 63 degrees F. It was a bit bright due to 1st quarter Moon. Thanks go to Dave McNally for contacting Lompoc City Maintenance and requested the Observatory area be mowed and cleared of brush and weeds. Dave McNally and Craig Fair were doing some astrophotography. Preliminary images looked good. Dave Covey and Vince were doing visual observing with their scopes set up for photo work later in the evening. Covey and Craig set Craig's camera on Covey's scope to capture some M31 images. Vahan discussed some astronomy and observed some photo results but he had to leave early. All had a successful evening and it was another good night under the Stars.

Note:
Dave Covey and Vahan checked out several picnic grounds for our October VAAS family picnic. Beatty Park, Ken Adams Park and River Park to name a few. It was decided that River Park was the better of the selections. We held our last 2 picnics there and all worked well for parking shelter and BBQ pits.

OctoberMoon



Full 27th, New 13th, 1st Quarter 20th, Last Quarter 5th

Moon Facts

Perhaps the coolest thing about the moon is that it always shows us the same face. Since both the Earth and moon are rotating and orbiting, how can this be?

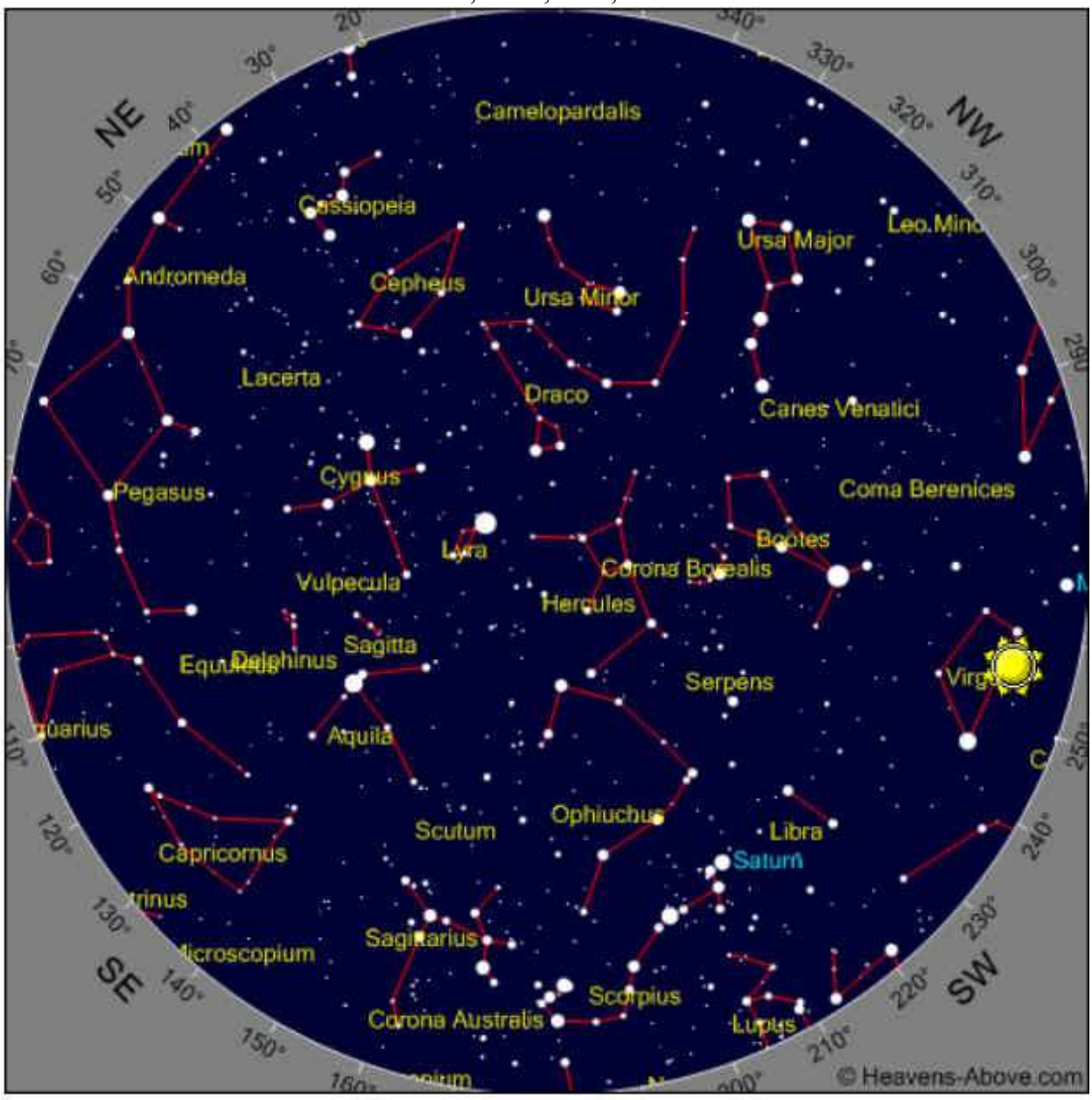
Long ago, the Earth's gravitational effects slowed the moon's rotation about its axis. Once the moon's rotation slowed enough to match its orbital period (the time it takes the moon to go around Earth) the effect stabilized. Many of the moons around other planets behave similarly.

What about phases? Here's how they work: As the moon orbits Earth, it spends part of its time between us and the Sun, and the lighted half faces away from us. This is called a new moon. (So there's no such thing as a "dark side of the moon," just a side that we never see.)

As the moon swings around on its orbit, a thin sliver of reflected sunlight is seen on Earth as a crescent moon. Once the Moon is opposite the Sun, it becomes fully lit from our view — a full moon.

October Sky

Some Objects of interest,
M27, M 13, M31,M57



Time

Year	2015	Month	10	Day	6	Hour	17	Minute	44

Photo Courtesy of Dave McNally

The iconic Horsehead Nebula (also known as Barnard 33) looks like an apparition rising from whitecaps of interstellar foam. It is a Dark Nebula in the constellation of Orion and is located just South of the bright star Alnitak. The Nebula is part of a much larger Orion Molecular cloud complex. It is approximately 1500 light years from Earth and is a star forming nursery. This stellar nursery can contain over 100 known kinds of organic and inorganic gasses as well as dust. The red pinkish glow originates from hydrogen gas behind the Nebula and is ionized by nearby bright star Sigma Orionis. Magnetic fields channel the gases into streams shown as streaks in the background glow. A glowing strip of hydrogen gas marks the edge of the massive cloud and the densities of nearby stars are noticeably different on either side. In the Dark Nebula base are bright spots that are young stars just in the process of forming.
Image capture using a Meade LX200 10 inch f/6.3 SCT. Imaging camera, Canon T3/I Baader modified. The mount is a Celestron Hypertuned CGEM. Guide scope is a Meade 50mm finder and guide camera a QHY5L-11-MQHY5L mono. Image processing software DSS 3.3.4.

For What its Worth

Messier 57, Ring Nebula in Lyra is located south of the bright star Vega which forms the Northwestern vertex of the summer triangle asterism. The nebula lies about 40% the distance between Beta and Gamma Lyra. The nebula is approximately 2300 light years from Earth and its visual magnitude is 8.8v. Photographs taken over a period of 50 years exhibit a rate of expansion of 1 arcsecond per century which corresponds to spectroscopic observations as 20-30 Km/sec^-1. M57 is illuminated by a central white dwarf star of +15.75v visual magnitude. The interior parts of the nebula have a blue green tinge caused by doubly ionized oxygen emission lines in conditions of very low density containing only a few atoms per cubic centimeter.

Within the last 2000 years the central star of the Ring Nebula has left an asymptotic giant branch after exhausting its supply of hydrogen fuel. It no longer produces energy by nuclear fusion and in evolutionary terms is now becoming a compact white dwarf star. The central star now consists primarily of carbon and oxygen with its outer layers composed of lighter elements. It has a surface temperature of 125,000 +/- 5000 degrees Kelvin. It is 200 times more luminous than our Sun but its apparent magnitude is +15.75v.

Sunset Figueroa site 1.5

Figueroa Site 1.5

Our President and

VAAS Officers at an Outreach event

"Astronomy compels the soul to look upward, and leads us from this world to another". (Plato)

Club Meeting

Reminder Club meeting October 9th 7 PM Manzanita school.
Hope to see you there…….

Star Parties (as always weather permitting)

Other Astronomy Club Meetings

Central Coast Astronomical Society
Link to web site…
http://www.centralcoastastronomy.org/

Santa Barbara Astronomical Unit
Link to web site…
http:// www.sbau.org/#AU_EVENTS_Calendar

Night Time Bright Objects (no scope required)

Link to "Heavens Above" web site
http:// www.heavens-above.com/
(Iridium Satellite)
(ISS Visible Pass)
Be sure to set the nearest location from their pull-down menu.

The web site link below will take you to some Great Milky Way interactive images and how It was developed. (Type it in the search box.)
http://skysurvey.org/
VAAS.

Dave McNally is the VAAS Web Site Serf/Minion