

Vandenberg Amateur Astronomical Society presents The Sidereal Times



(see page 5)

Meeting News:

The March meeting we talked about the upgrade to the 14" Gemini Controller and operation via a lap top for guiding. Reviewed the history of the VAAS. Discussed conducting an astronomy day for the public and conducting a Messier Marathon at our Figueroa mountain site 1.5.

**Reminder: VAAS meeting April 10th at 7:00 PM
Manzanita school, Hope to see you there.**



Lunar Calendar:

New Moon 18th

Full Moon 4th

Sunset at Figueroa site 1.5



Presidents Message

We have a busy month ahead of us in April: What with **ASTRONOMY DAY**, on **April 25 -Sat.** where we will gather at the Observatory to support the Girl Scouts and guide them through observing various celestial objects. As before we will hold a Q & A period with the Girl Scouts and their parents. All of this is tentative and dependant on weather. Hopefully we will have clear skies that night, and promote interest in astronomy and our club.

On May 1st- a Friday night, Vince Tobin is looking for any help with the huge turnout for Allen Hancock's Science night. He needs members with their scope or someone to point out constellations, and generally help him. It will be from 6- 9pm at the Santa Maria campus, near the science building.

Last month, I gave a talk about the history of VAAS, complete with albums, and news articles to view and we had a good turnout for that. I still am looking for presenters for any interesting Astronomy subject for our monthly meetings. The length can vary from 10 min to 20, and of course, visuals are always welcome.

This month's presentation will be one from our club's Hubble Telescope DVD, after we discuss our events coming up. Hope to see you all there.

Clear skies and Good seeing.....Jana

Events

April 4th Total Lunar eclipse, this eclipse will be visible throughout most of North America, South America Eastern Asia and Australia. Eclipse start 3:16 AM PDT Totality start 4:58 AM PDT.

April 11th *Star party at the Observatory.*



April 18th *Star party at Figueroa Mountain site 1.5.*



April 22nd & 23rd Lyrids Meteor shower. The Lyrids are an average meteor shower producing about 20 meteors per hour. It is produced by dust particles left behind by Comet C/1861/ G1 Thatcher it peaks on the night of the 22nd and morning of the 23rd.

April 25th *Star Party at the Observatory.*



April 25th International astronomy day an annual event intended To provide a means of interaction between astronomy groups and organizations and the general public. The theme is "Bring Astronomy to the People." Organizations should schedule events such as Side Walk Astronomy for the public.



Star Party and Events

March 14th Star party at the Observatory. Weather was not favorable but Dave Covey, Vince Tobin, Vahan Yeterian and a new member Justin Graves on site. The Mosquitoes were in attack mode so we retreated to the observatory and closed the door. About 7:30 the bugs departed and some stars and planets peeked through the overcast. We fired up the Observatory 14 inch and observed Jupiter and Venus. Venus was slightly over half and Jupiter and its moons were visible. The bands were clear but no red spot. Three Moons were visible and it appeared that we could see the shadow of Io on Jupiter's surface. It cleared a little more and soon Pollux, Castor and Orion were just visible so M42 was another target. About 9:00 pm we buttoned up, considering the initial conditions it was a good but short night under the foggy stars.



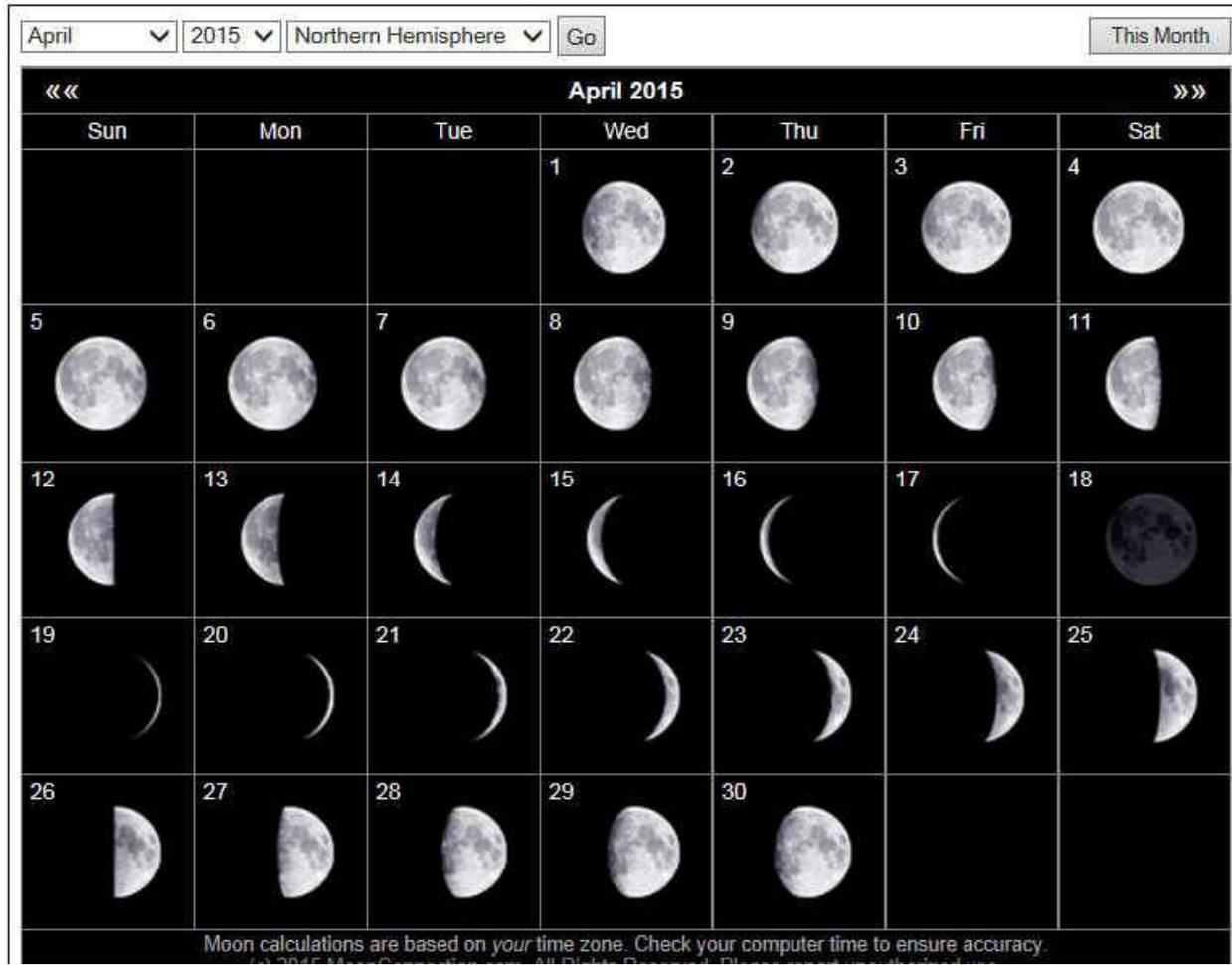
March 21st Star Party Figueroa Mountain site 1.5. The skies showed signs of moisture with low clouds to the West and South. The sky was not very dark. Seeing conditions were less than ideal, a bit windy. Craig and guest Dennis, Justin and friend Mark, Jon and wife Margaret, and their dog Winston, and Vince were in attendance. Three people showed up for a short time that spoke Chinese but English with us. Jon and Craig were star hopping with their scopes but it was too windy to do photography. Craig did do some Messier objects but had trouble with power cables that cut short the effort. Jon did some Messier objects also and helped Justin and Mark set up their scope. Vince was able to do half a Messier Marathon but had trouble navigating the Virgo Cluster with his 16inch Dob. Craig and Jon departed at midnight, Vince departed at 0400 hrs. Justin and Mark were still going strong at 0400 with coffee and burgers. It was a good night under the stars.



March 28th Star party at the observatory. Dave Covey, Craig Fair, Louise Gray and Vahan on site. Had some scattered thin clouds no wind and good seeing. Had a little trouble with mosquitoes. Craig and Dave had their 8 inch SCT's operational. Jupiter Venus and the Moon looked good. Looked at M42. Some contrast problems were caused by bright 3rd quarter Moon. Dew became heavy, departed at 10pm It was a good night under the stars.



April Moon



Full 4th, New 18th, 1st Quarter 12th, Last Quarter 26th

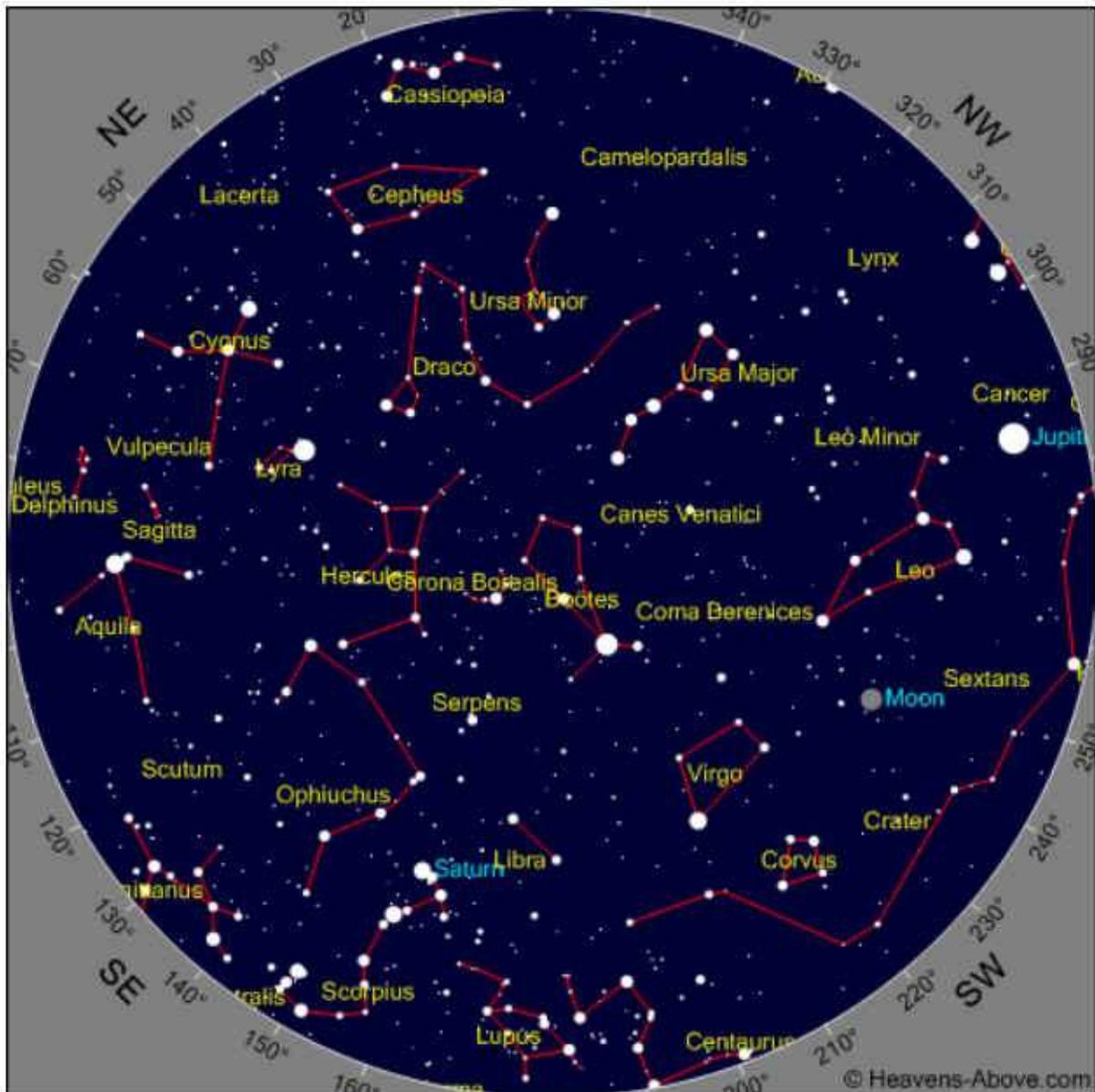
Moon Folklore

April 4th Full Moon occurs at 12:05 UTC. The full Moon was known by early Native American tribes as the Full Pink Moon because it marked the appearance of the moss pink or wild ground Phlox which is one of the first spring flowers. It was also known as Sprouting Grass Moon, growing Moon, Egg Moon and the Full Fish Moon because this was the time the Shad swam upstream to spawn.



April Sky

Some Objects of interest, Jupiter, Moon, M57, M13



Time

Year	2015	Month	4	Day	2	Hour	11	Minute	8
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Photo Courtesy Dave McNally



The Horse head nebula known as Bernard 33 NGC 2023 (IC434) is a dark nebula in the constellation of Orion. It is approximately 1500 light years distant and is located just south of the star Alnitak in Orion's belt. It is part of the much larger Orion Molecular Cloud Complex where star formation is taking place. This Stellar nursery can contain over 100 known organic gasses as well as dust consisting of large and complex organic molecules. The red or pinkish glow originates from the hydrogen gas behind the nebula ionized by the nearby bright star Sigma Orionis. Magnetic fields channel the gasses leaving the nebula shown as streaks in the background glow. A glowing strip of hydrogen gas marks the edge of the massive cloud and the densities of stars are noticeably different on either side. The heavy concentrations of dust in the Horse Head nebula region and neighboring Orion Nebula are localized resulting in alternating sections of nearly complete opacity and transparency. The darkness of the Horse Head is caused mostly by thick dust blocking the light of stars behind it. The visible dark nebula emerging from the gaseous complex is an active site of formation of low mass stars. Bright spots in the Horse heads nebula base are young stars just in the process of forming. Image capture using Meade LX 200 10" f/6.3 classic, Canon T3i Baader modified and a Celestron CGEM hypertuned mount. Frames 12x300" integration time 1 hour, software DSS 3.3.4

For what its worth

Albedo A measure of the reflecting power of a nonluminous object such as a planet, moon or asteroid. Albedo (from the Latin Albus for "white") is expressed as the fraction of light and/or other radiation falling on an object that is reflected or scattered back into space; its value ranges from 0, for a perfectly black surface to 1 for a totally reflective surface.

Image Tube A vacuum filled tube with a photo cathode at one end used to amplify faint images. Electrons, released when light forms an image on the photo cathode, are accelerated by magnetic coils around the tube so that they form a second brighter image when they strike a second phosphor screen. Also known as an image intensifier tube.

Depth Perception The ability of the eyes to locate the position of objects in three-dimensional objects. The retina is two-dimensional so information about depth is created in the brain. The brain uses depth clues that include such factors as linear perspective, parallax, relative size and the slightly different view each eye has of the object.

Focal Ratio The ratio of the focal length (F) of a mirror or lens to its diameter (D) expressed as a number (also called the f-number or f-stop) $F\# = F/D$, it is a measurement that describes the relative opening or aperture. For example, a lens with a 50mm focal length with the aperture set at F/2 indicates an aperture diameter of 25mm, where as f/4 indicates an aperture of 12.5mm. Borrowing the language of photography, small focal ratios, below about f/6 are said to be fast and result in a brighter image for a given aperture. Large focal ratios equal to or greater than f/8 are said to be slow.



Club Officers



President
Jana Hunking



Vice President
Dave Covey



Treasurer
Vince Tobin



Newsletter Editor
Vahan Yeterian

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



Club Meeting

Reminder Club meeting April 10th 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](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/](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.

