

Vandenberg Amateur Astronomical Society
presents
The Sidereal Times



M16 Eagle Nebula (see page 5)

Meeting News:

At the February meeting we discussed some coming events for March and April. Discussed Ken's new CG5 mount. Then had an open chat session on varied subjects one of which was the new crater on Mars.

Reminder: VAAS meeting March 14th Manzanita School 7 PM See you there.



Lunar Calendar:

New Moon 1 & 30 March 2014
Full Moon 16 March 2014

Presidents Message

We had a small turnout at the 14 February meeting mainly because it was Valentine Day. We discussed the past star party results. It was a brief – all were cancelled because of cloudy conditions. We then turned a hopeful eye towards the upcoming February and March star parties to review their dates and locations. Hopefully we will have good weather and lots of members showing up at each. How many of us have seen a supernova? Well Vince suggested looking at M82 Galaxy through the observatory's 14" scope during the 01 February star party to find a supernova. We clearly spotted it within M82. Just to be sure, we looked at a photo of M82 and sure enough the spot we saw that night was not in the photo. We again checked M82 for the supernova during the 22 February and this time we couldn't spot it. Supernovas do happen on a fairly periodic basis but you must look for them soon after they are announced because they quickly fade away within a few days or weeks time. On a clear night this time of year the planet Jupiter is dominating the sky high overhead in the early to mid evening. During the 22 February star party we happened to see a shadow of one of Jupiter's moons crossing the lit face of Jupiter. Transit information is available on the Web. It helps to pack some patience and don't just settle for a quick peek at Jupiter. During the January get together a topic we discussed – how to get to know the night sky. Suggestion was to pick a small patch of the sky and just explore it with your eyes then binoculars and finally a scope. As you explore you'll start to know what constellations and brighter objects are in that patch of sky. The next time do the same with a different patch of sky. Keep on doing that and you will become more familiar with what the night sky has to offer..

As always, have fun and clear skies

Dave

Events

March 1 and 29 Star party at the Figueroa Mountain.

March 1 & 30th The New Moon will be directly between Earth and the Sun not visible, occurs at 08:00 UTC on the 1st and 18:45 UTC on the 30th.

March 8th Star party at the Observatory

March 16th Moon will be directly opposite the Earth from the Sun and will be fully illuminated, occurs at 17:08 UTC.

March 20th Vernal equinox (first day of Spring) the Sun will be directly over the equator and there will be almost equal amounts of day and night world wide.

Also on the 20th an extremely rare event will take place on the morning of March 20th. An asteroid known as 163 Eriqone will pass directly in front of the bright star Regulus in the constellation of Leo causing the star to disappear. The event will be visible along a 45-mile-wide path and is predicted to begin at 2:07 AM EDT. The asteroids shadow will move on a Southeast to Northwest path that will extend from New York city to Oswego in New York state and continue into Ontario Canada. For those in the center of this path the star will remain invisible For 12 seconds.

March 22nd Star party at the Observatory!

Star Party and Reports

Feb 1st star party at the observatory was held under clear dark Skies. Vince, Dave, Ken and Louise, Vahan and two guests were In attendance. For the most part all went well and some equipment setup lessons learned. Also had an observing chair incident which dumped Vahan on Terra Firma. No injury except for his pride.

Feb 8th star party was cancelled due to weather.

Feb 22nd. Dave, Vahan and Vince in attendance. Dave and Vahan on site about 5:00 PM. The observatory had been broken into. The door knob was ripped off of the steel door. We took an inventory of the interior and it does not appear that anything was stolen. The incident was reported to the Base Air Police they visited the observatory, took pictures and assisted Dave and Vahan in filling out incident reports. Vince on site about 8:30 Pm. Vahan departed at 8:45 Pm.

Star Party and Reports cont.

Feb. 23rd 9:30 AM Vahan and Dave McNally at the observatory to Install a new door lock assembly. Keys for the new lock assembly will be made and distributed. Parts of the old lock were found over the perimeter fence, recovered and will be taken to the Air Police for finger printing (per their request).

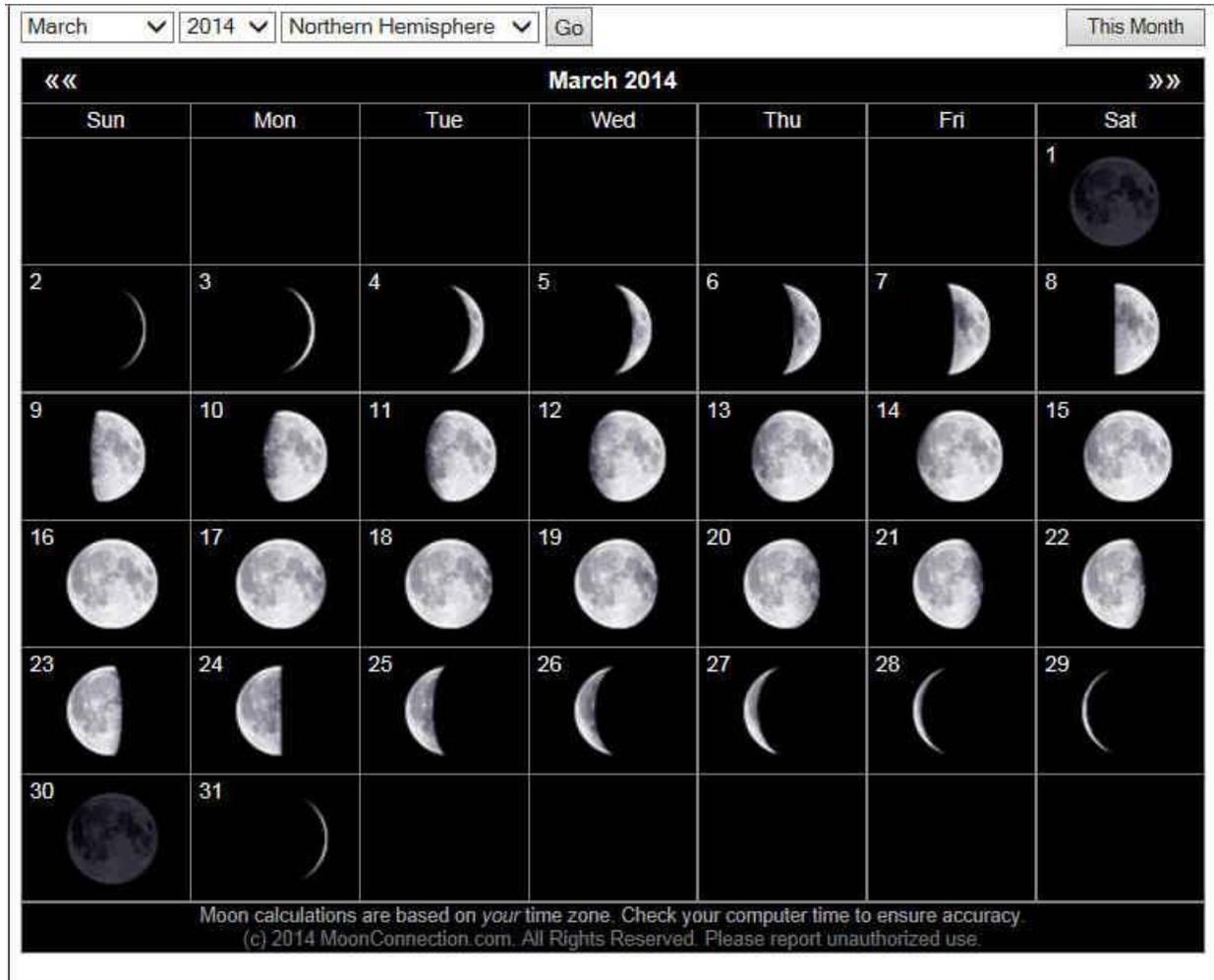
Polaris: Polaris is getting brighter after dimming over the past two centuries and is brightening rather dramatically. Polaris is a pulsating class of star known as a Cepheid Variable. Unlike most Cepheid Variables Polaris pulses are very small. Cepheid's are prized because even though they pulsate they are consistent. This consistency has dubbed them as Standard Candles whose known brightness allows scientists to accurately measure distances across space. Cepheid's are very luminous variable stars that are 4 to 20 times more massive than the Sun and up to 100,000 times more luminous. They are yellow super giants and their radii change by millions of kilometers during a pulsating cycle that can be days to months.

New impact crater on Mars approx 30 meters diameter with ejecta out to 15 + kilometers was discovered by NASA'S Mars Reconnaissance Orbiter on November 19th, 2013. The crater is only a few years old. The image was taken by the High Resolution Imaging Science experiment (HIRISE) camera on the orbiter.



20 February 2014: Dave Covey and Vahan Yeterian performed Maintenance on the Observatory. The interior was vacuumed, floor and all nooks and crannies removing cobwebs, dust and dirt. The Dome Shutter was cleaned of mold and mildew using a strong solution of bleach and water. At some future time some paint touch up will be necessary on the observatory base.

March Moon



New Moon 1st & 30th, Full Moon 16

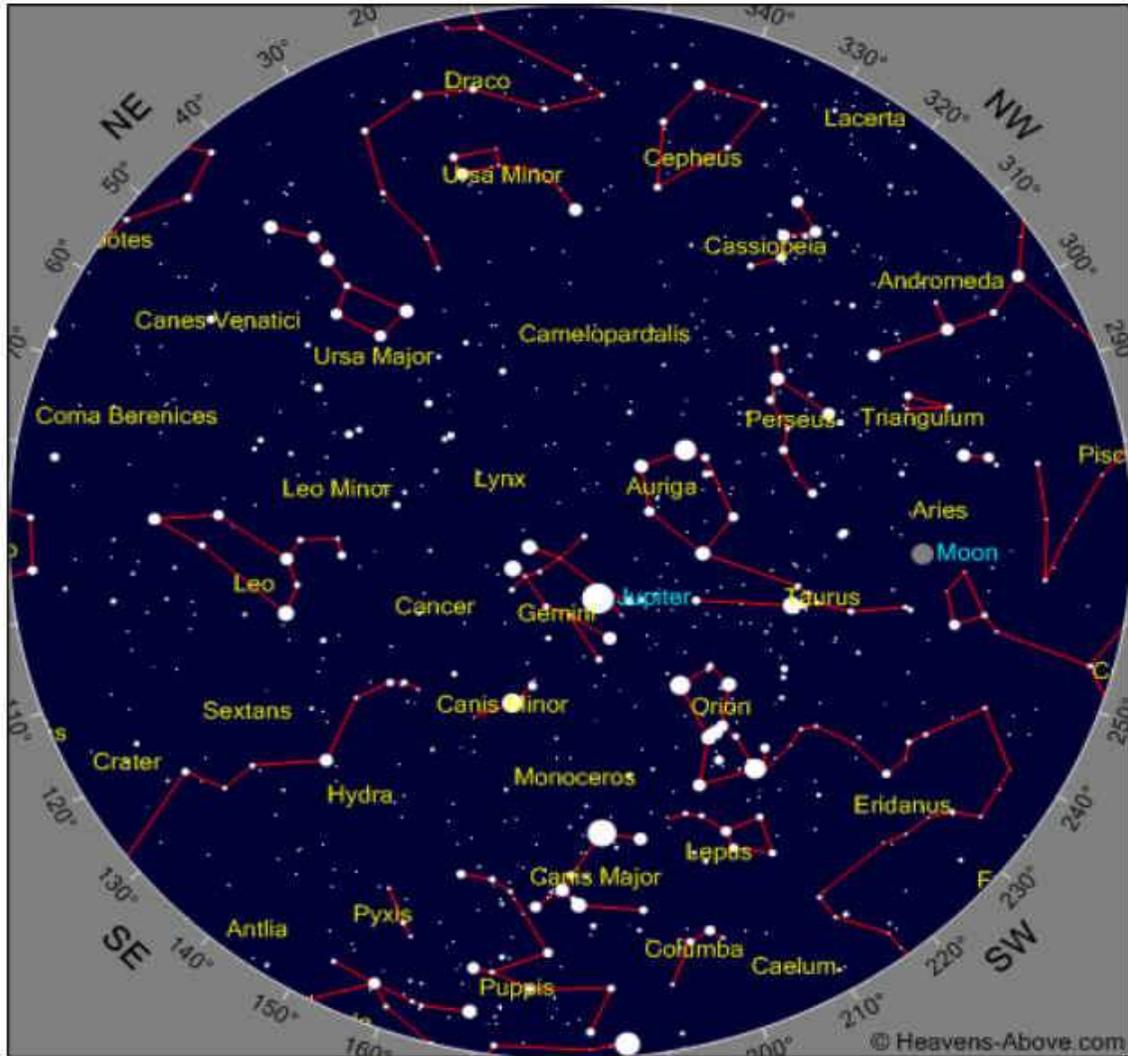
Moon Folklore

People once believed the Moon was made of silver, so they would ask the Moon to help jingle the change in their pockets as they gazed at its glory.

Legend says that to cure warts, catch some Moon beams in a metal basin and wash your hands in it saying, I wash my hands in thy dish O man in the Moon, do grant my wish and come take this away.

Canis Lunus, the full moon during January is the Wolf Moon. Native Americans named it after packs of Wolves they once heard singing in the deep snows of January.

March Sky
Objects of interest: M1, Jupiter, Mars



Time

Year	2014	Month	3	Day	5	Hour	20	Minute	10
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Photo Courtesy Gary Satterfield



M16 NGC 6611 7000 Ly distant is an example of a galactic HII region, which is to say that most of the emission comes from the red light of ionized (electrically charged) hydrogen gas. The nebula shines because of the energy provided by the cluster of hot blue and white stars. These stars are about two million years old, which is quite young for a star (our own middle-aged Sun clocks in at over four billion years). However, these O and B stars are considerably heavier than our Sun, since they contain some thirty times as much matter, and this extra weight shortens their lifetime to just a few million years in total. The brightest stars, such as the conspicuous double of O stars, are concentrated toward the north-west (the top right of this picture). The cluster also contains a large number of faint red stars, which are probably reddened by absorption in the dust surrounding them. M16 is in a late stage of its evolution, where the hot stars have blown away the closer material and now shine in a cavity surrounded by an expanding complex of neutral lumps, which show bright edges due to shock waves created as the outwardly flowing material hits other gas.

Image captured in fairly dark skies with an AT8RC and a Hypercams modified Canon 500D riding on an auto guided hyper tuned Celestron CGEM mount. A total of 4 X 10 minute frames at ISO 800 were dark calibrated in Images Plus after initial adjustments, transferred to CS2 for final tweaks.

Star Party February



For What its Worth

Brewster's Law: The maximum polarization of a ray of light reflected from a transparent surface occurs when the reflected and refracted rays are at right angles. (Named after the discoverer David Brewster).

Resolving Power: The ability of a telescope to distinguish between two closely separated objects. It is ultimately limited by diffraction but, in the case of ground-based instruments, it is also compromised by the smearing effect of Earth's atmosphere. The use of interferometers and adaptive optics allows dramatic improvement in resolving power.

Barlow Lens: A diverging lens placed in the focal plane of a telescope that increases both the magnification and eye relief when used in conjunction with an eyepiece. Magnification is typically doubled at the cost of a fainter image.

Complementary Colors: Any two colors that combine to make white light. Any color can be described in the terms of red, green or blue (the "additive" primary colors) that has the same effect on the eyes. Since red, green and blue in the right proportions add to make white it follows that the complementary colors of red is blue-green (cyan), of blue is yellow, which is produced by red and green combined, and of green is magenta (red-blue). In painting combination of colors gets darker not lighter. It remains true that complementary colors tend to neutralize each other.



Endeavor Center Observatory Operated and Maintained by VAAS personnel

Club Officers



President
Dave Covey



Vice President
Monica LeClair



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

Club meeting 14 March 2014 7 PM
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.

