

Vandenberg Amateur Astronomical Society  
presents  
**The Sidereal Times**



Double Cluster (see page 5)

**Meeting News:**

At the March meeting we discussed the possibility of having a public outreach event, side walk astronomy. Scheduling a time to hold a class on operating the observatory for those that are interested. Did a little side walk astronomy with Vince's 16 inch Dob.

**Reminder: VAAS meeting April 11th at 7:00 PM  
Manzanita school, Hope to see you there.**



**Lunar Calendar:**

New Moon 29th  
Full Moon 15<sup>th</sup>

**Thought:** With 25 thousand billion, billion star systems Out there, it is an incredible conceit to think that Earth is the only planet in the whole universe nesting life.

**Presidents Message**

We had a very small turnout at the 14 March meeting. We discussed the past star party results, future star parties dates and locations and recent near term astronomical events. It was a brief meeting. Vince did a show and tell with his 16 inch Dob in the parking lot after business items were done.

On a clear night this time of year the planet Jupiter is almost directly overhead. The great Orion Nebula and the Pleiades are in the Southwest quadrant of the early evening sky. The planet Mars pokes up about 10PM and Saturn follows about an hour later. These are all easy objects to find. For those who get out before sunrise they will find a bright Venus in the eastern sky.

I encourage the membership to come out to the star parties even if you don't have scopes. Just bring yourselves, and binoculars if you have one. I'm sure other members with scopes will share their views and the observatory will likely be open. The star party events are meant to be fun, educational and in a friendly atmosphere where members are helping other members.

At this time Vince is the only fully trained observatory operator. Vahan and I have some training but the observatory scope's hand controller software is different from the Meade scope's controller. Enough difference that I am not comfortable with the observatory controller. I suggest that after a few of the membership meetings we gather at the observatory for some operator training provided that Vince can support.



As always have fun and clear skies.....Dave

## Events

**April 5<sup>th</sup>** *Star party at the Observatory.*

**April 8<sup>th</sup>** Mars at opposition. The red planet will be at its closest approach to Earth and its face will be fully illuminated by the Sun. Best time to view and photograph.

**April 15<sup>th</sup>** The full Moon occurs at 07:42 UTC. Also there will be A total Lunar eclipse that will be visible throughout most of North America, South America and Australia.

**April 19<sup>th</sup>** *Star party at the Observatory.*

**April 22-23** Lyrids meteor shower, averages about 20 meteors per hour at its peak. It is produced by dust particles left behind by Comet C/1861 G1 Thatcher. Peaks on night of 22<sup>nd</sup> and morning of The 23<sup>rd</sup>.

**April 26<sup>th</sup>** *Star party at Figueroa Mountain site 1.5.*

**April 29<sup>th</sup>** New Moon occurs at 06:14 UTC. Best time to view and photograph deep space objects. Also There will be an annular solar eclipse. This type of eclipse occurs when the Moon is too far away from Earth to completely cover the Sun. The path will begin off the coast of South Africa and move across Antarctica and into the coast of Australia.

Some star party Pictures (March).



## Star Party and Events

The March 1st star party was cancelled due to weather, solid overcast and rain.



March 8<sup>th</sup> Star Party was held under partly cloudy skies and was attended by Vince Tobin, Dave Covey, Ken Spraker and Vahan Yeterian. Vince brought his 16 inch Dob. Vahan and Vince spent about ¾ hour collimating the scope. Still needs a touch up but images of M42, the Moon, various clusters Jupiter and Mars were observed. Dave set up his 8 inch SCT and tested his Canon DSLR camera to photograph M42. Test went well and some good images were achieved. It began to cloud up a bit more so about 10:00 PM we decided to call it a night.

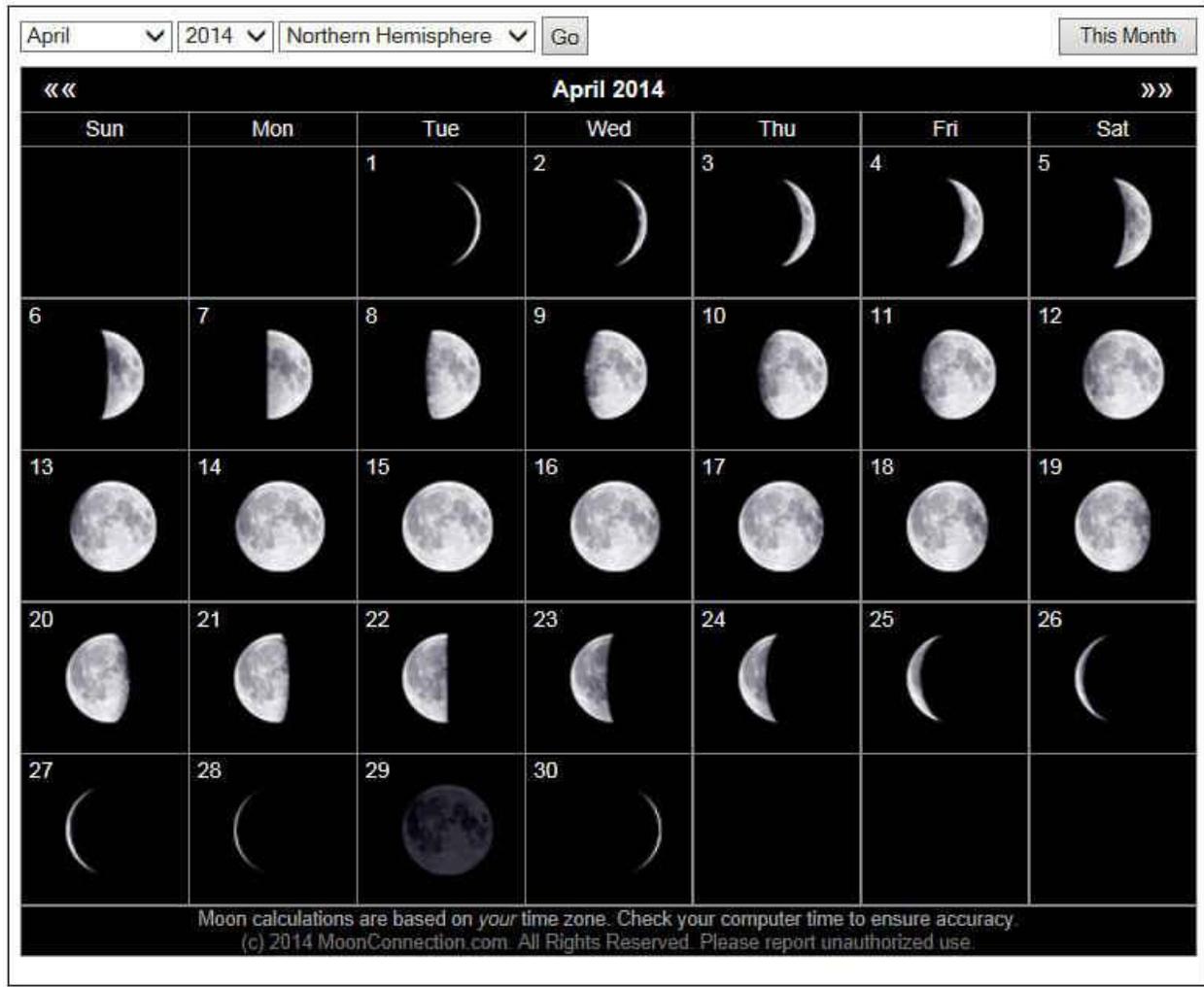
The March 22<sup>nd</sup> star party at the observatory was attended by Dave Covey and Vahan Yeterian arriving at 6:30PM. Dave set up his 8" scope to try out a new Solar System CCD camera. After some fiddling around we got it to image Jupiter. We left before 10:00PM because of the cold (40°F) and heavy Dew conditions. Vince arrived just as we were pulling out. Vince indicated that he was going to open the observatory and do some viewing. Not sure when Vince left that night.

This first attempt to hold a star party at our Figueroa Mountain Site was cancelled due to stormy weather.



Figueroa Mountain VAAS Site 1.5

## April Moon



Full 15th, New 29th 1<sup>st</sup> Quarter 7th, Last Quarter 22nd

### Moon Folklore

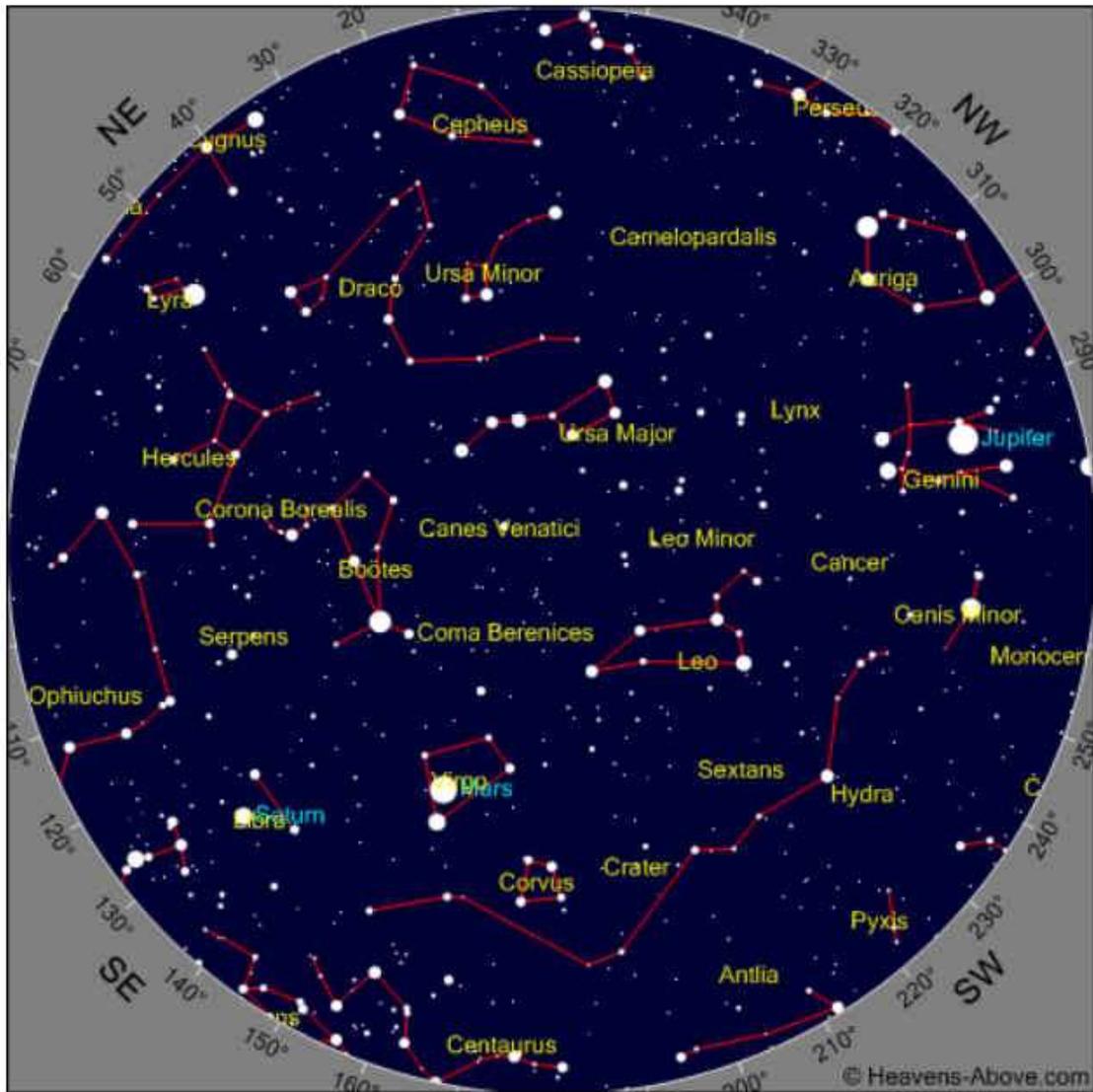
This full Moon was known by Native American tribes as the Full Pink Moon because it marked the appearance of the Moss Pink or Wild Ground Phlox, which is one of the first spring flowers. This Moon has also been known as the Sprouting Grass Moon and the Growing Moon.

Fence posts should be set in the dark of the Moon to resist rotting.

Ozark lore says that fence posts should always be set as the tree grew. To set with the root end up makes for a short lived fence.

## April Sky

Objects of interest M1, M13, Jupiter, Mars and Saturn



### Time

|      |      |       |   |     |   |      |   |        |    |
|------|------|-------|---|-----|---|------|---|--------|----|
| Year | 2014 | Month | 4 | Day | 2 | Hour | 8 | Minute | 30 |
|------|------|-------|---|-----|---|------|---|--------|----|

Photo Courtesy Vahan Yeterian



The Double Cluster NGC 869 and NGC 884 (h & X Persei) are a few light years apart in the constellation of Perseus. The distance from us is approximately 7500 light years. NGC 869 has a solar mass of 3700 and 884 weights in at 2800 solar masses. The latest research shows that both clusters are surrounded with a very extensive halo of stars giving the total mass of the complex of at least 20,000 solar masses. It is a relatively young group, about 12.8 million years old. There are more than 300 blue-white super giants in each cluster. The clusters are Blue-shifted and are approaching Earth at 39 Kilometers per second (24 miles per sec). The hottest main sequence stars are of spectral class B0. The cluster lies within the Perseus arm of the Milky Way galaxy. Our solar system resides within the Orion arm. Therefore, when we look at the cluster we are looking through our local spiral arm and all the way to the next spiral arm outward from the galactic center. Image capture was with a Celestron Omni XLT102 (4 inch) 900 mmFL refractor and a Canon T3 Rebel (modified). Ten Light frames at ISO 1600, 30 seconds per frame and 3 Dark frames were all processed using DSS software and PSP-9 software. All images were unguided.



### **For What it's Worth**

**Brocken-Specter-** A phenomenon observed when shadows of aircraft, or of people high on a mountain, are cast on a cloud below. An observer's own shadow appears vastly magnified, this is an optical illusion. Those of others appear to the observer surrounded by rings of color due to diffraction by water droplets in the cloud.

**Corrector Plate-** A thin lens or combination of lenses placed at the front of a Catadioptric telescope to correct the spherical aberration of the primary mirror. It is also known as a correcting lens.

**Figuring-** The final stage of grinding a mirror or lens to give it the exact shape required. After figuring a mirror is ready to be polished and coated.

**Spherometer-** A spherometer is an instrument used for measuring the radius of curvature of a spherical surface. It isn't the radius of the lens or mirror itself which is of primary importance, but the radius of the sphere to which the curved surface of the lens belongs. This is the quality of the sphere that is measured by the spherometer.

**Wollaston Prism-** A device that separates randomly polarized and unpolarized light into two orthogonal linearly polarized beams that exit the prism by an angle determined by the wavelength of light and length of the prism. Wollaston prisms are used in various types of polarimeters.



Observatory's 14 inch scope

## 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 April 11th 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.

