

# Vandenberg Amateur Astronomical Society presents The Sidereal Times



Flame nebula (see page 5)

### Meeting News:

The October meeting we talked about the scheduled family picnic at River Park scheduled for 31 October. Watched a video about Mars rovers and water, thanks Dave Covey.

**Reminder: VAAS meeting November 13th at 7:00 PM  
Manzanita school, Hope to see you there.**



### Lunar Calendar:

New Moon Nov 11th  
Full Moon Nov 25th

Martin Winery 16 October 2015



### Presidents Message

Our annual **VAAS Picnic** will be held on Halloween Day- **Oct 31<sup>st</sup>** of this year- **starting at noon** at the last picnic area (Lutheran Pavilion) at the end of the road at River Park just off Hwy 246. The club is providing BBQ steak, beans, bread, and water, plates, silverware, etc. We plan to eat by 12:30. It is open for members and their families and we are asking members to bring a salad, snacks, or a dessert. I plan to bring chocolate cupcakes for all. This is a great time to get together to relax and visit with each other, and with our new members of this year.

The **Martian Winery Event** near Los Alamos on Oct. 16 was well attended by our members, and thanks to Dave C., Vince, and Craig, we had some great scopes to use and look at....Nan, the owner of the Winery had graciously asked us to her home to dine with her and others. Pearl, Nan's Mother and her two friends were visiting from Cape Cod and they joined us for Wine, tasty cheese crackers and fruit, then pizza was served on their patio overlooking the valley. The salads added flair to the dinner, as one presented octopus, and another with a mushroom stuffing. Dave Covey brought extra club t-shirts for the hostess and guests, which were received with enthusiasm. We really enjoyed the visit, but all were disappointed when the marine layer appeared at dusk, preventing us to view the stars and planets. We want to thank Nan for a very pleasant evening of wine, food and wonderful hospitality for our VAAS members.

An outreach event is coming up Friday, **Nov. 20- at Clarence Ruth School** where we need VAAS telescopes for viewing on their Astronomy night. Consider helping us out on that date

Happy Thanksgiving to members and families.

Jana

## Events

**Nov 5 & 6** Taurids meteor shower. The Taurids is a long running shower producing about 5 to 10 meteors per hour. It is unusual in that it contains two separate streams. The first by dust grains left behind by asteroid 2004 TG10 and the second by Comet 2P-Encke. It peaks this year on the night of November 5<sup>th</sup>. Best viewing is just after midnight.

**Nov 7<sup>th</sup>** *Star party at the observatory.*



**Nov 14<sup>th</sup>** *Star party at the Observatory.*



**Nov 17-18<sup>th</sup>** Leonids meteor shower. It is an average meteor shower producing up to 15 meteors per hour at its peak. It is a unique shower in that it has a cyclonic peak about every 33 years where hundreds of meteors per hour can be seen. The last occurred in 2001. Leonids are produced by dust grains left over by comet Temple-Tuttle. It peaks on the night of the 17<sup>th</sup> and morning of the 18<sup>th</sup>.

**Nov 21<sup>st</sup>** *Star party at the observatory.*



Martin Winery October 16th



## Star Party and Events

**Sept 27<sup>th</sup>** Lunar eclipse. Jana, Craig, Vince, Vahan, Dave Covey, Dave McNally, Jon Walke and 7 guests gathered at the observatory to observe and to record the Lunar eclipse. The weather was not cooperative, heavy overcast skies. Several VAAS members brought their scope, mounts and cameras. We also opened the observatory to use the 14 inch scope. About 7 PM a pink glow was just barely visible from behind the clouds. Camera shutters clicked, some clicks were from cell phones. Once in a while the sky just, ever so slightly, cleared so some good photos were captured. Much later in the evening the sky cleared a bit more and the 14 inch was used for viewing the Moon and Saturn. The sky closed up completely with thick clouds, secured and departed about 10:30 (See page 6 photos).

**Oct 3<sup>rd</sup>** Star party at the observatory. Cancelled due to weather.

**Oct 10<sup>th</sup>** Star Party Figueroa Mountain. Vince Tobin, Craig Fair and his friend Dennis, Jon Walke, Geza and Robert on site. Craig did mostly visual observing looking at M13, M31, Lagoon, eagle and M27 to name a few. Jon Walke was into the astrophotography mode concentrating on M27. Geza was photographing dark nebula. Vince and Robert did visual using an OIII filter and getting some good results. Weather was good and the seeing was good. Some departed early and others departed about 2:00AM. Jon and Geza stayed on. It was a good night under the stars.

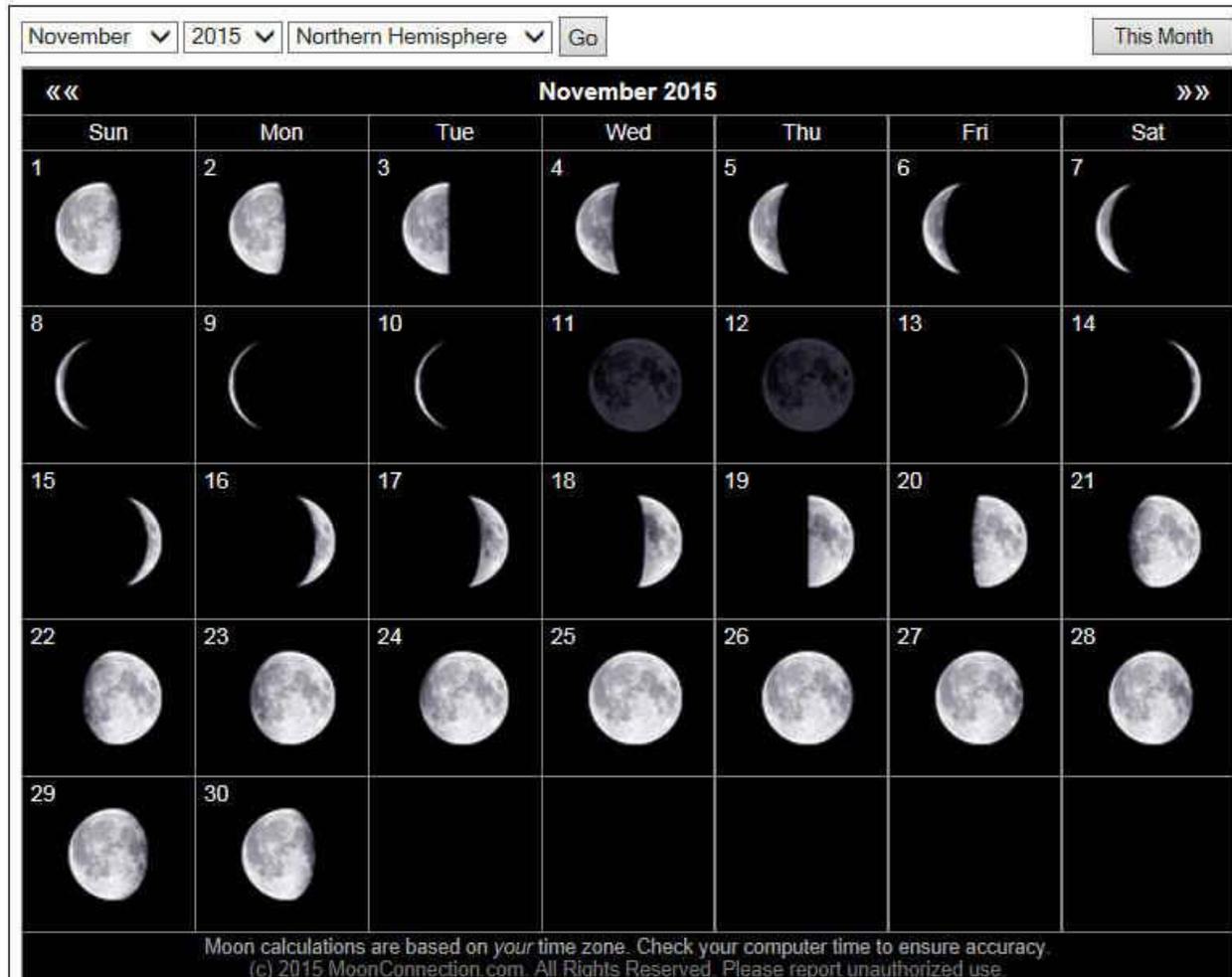
**Oct 16<sup>th</sup>** Invite to the Martin winery. Nice place, set up our scopes. Sky overcast, no stars. Had dinner and lots of interaction with the owners. We are to be invited back again. Attended by Vince & wife, Dave, Jana, Craig & wife, Susan, Justin & wife and Louise Gray.

**Oct 17<sup>th</sup>** Star Party at the Observatory cancelled due to weather.

Martin Winery



## November Moon



Full 25th, New 11th, 1<sup>st</sup> Quarter 19th, Last Quarter 3rd

### Moon Facts

Apollo astronauts used seismometers during their visits to the moon and discovered that the gray orb isn't a totally dead place, geologically speaking. Small moonquakes, originating several miles (kilometers) below the surface, are thought to be caused by the gravitational pull of Earth. Sometimes tiny fractures appear at the surface, and gas escapes.

Scientists say they think the moon probably has a core that is hot and perhaps partially molten, as is Earth's core. But data from NASA's Lunar Prospector spacecraft showed in 1999 that the moon's core is small — probably between 2 percent and 4 percent of its mass. This is tiny compared with Earth, in which the iron core makes up about 30 percent of the planet's mass.



Photo Courtesy Vahan Yeterian



#### Fame Nebula

The Flame nebula, NGC 2024 and Sh2-277 is an emission nebula in the constellation of Orion. It is about 1200 light years distant. The bright star Alnitak, the eastern most star in the belt of Orion, shines energetic ultraviolet light into the flame and this knocks electrons away from the great clouds of hydrogen gas that reside there. Much of the glow results when the electrons and ionized hydrogen recombine. Additional dark gas and dust lies in front of the bright part of the nebula and this is what causes the dark network that appears in the center of the glowing gas. The Flame nebula is part of the Orion molecular cloud complex, a star forming region that includes the famous Horsehead nebula. At the center of the Flame nebula is a cluster of newly formed stars 86% of which have circumstellar disks. X-ray observations show several hundred young stars out of an estimated population of 800 stars. X-ray and infrared images indicate that the youngest stars are concentrated near the center of the cluster. Image capture was with a Meade 12 inch SCT and Meade DSI-2 ccd camera and Autostar Suit. Exposure time 60 seconds.

### **For What its Worth**

Messier 13 (M13) NGC 6205 also known as the Great Globular Cluster in the constellation of Hercules. The cluster has an apparent magnitude of 5.8v and lies at a distance of 22,200 light years, (6800 parsecs) from Earth. M13 is one of the brightest and best known clusters in the Northern sky. It has an estimated age of 11.65 billion years and contains about 300,000 stars. The estimated mass of the cluster is about half a million solar masses. The cluster stretches across 20 arc minutes of sky which corresponds to a linear diameter of 145 light years. The brightest star in M13 is V11, a red giant classified as a Cepheid variable. V11 has a visual magnitude of 11.5v and lies approximately 25,100 light years from earth. The cluster also contains an unusually young B2 type star, designated Barnard 29. The star does not really belong to the cluster but was presumably picked up by M13 on its orbit around the Milky Way. Other stars in the cluster only have about 5% of the suns iron content as they were formed before the stars in our galaxy created metals. M13 also contains 15 blue stragglers, old stars that appear younger and bluer than their neighbors. M13 is a class V globular cluster, one with an intermediate concentration of stars toward the center. It has a densely packed central region with a cube only 3 light years on a side with up to 100 stars populating the cube.

### **Eclipse Photos, courtesy Craig Fair.**

Eclipse sky 27 Sept (By Jana)



Total (Craig)



Total ending (Craig)



Partial ending (Craig)



## *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 Nov 13th 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/Mini

