VAAS Website: home.comcast.net/~vaas/ November 2, 2014

Vandenberg Amateur Astronomical Society presents The Sidereal Times

Double Cluster (see page 5)

Meeting *News:*

At the October meeting we discussed various upcoming events such as Outreach for girl scouts and VAAS picnic and nominated new VAAS officers, except for President which is still pending. We welcomed 2 new members to VAAS, Tom Moulds and Louise Gray. We watched video about the Moon narrated by Dr. Alex Filippenko, thanks for the video Dave.

Reminder: VAAS meeting November 14th at 7:00 PM Manzanita school, Hope to see you there.

Lunar Calendar:

New Moon 22 November
Full Moon 6 November

A Little Humor

A Higgs Boson walks into a church and the priest says, "We don't allow Higgs Bosons in here". The Higgs Boson then replies, 'But without me, how could you have Mass?"

Presidents Message

The month of November will bring a shift back to standard time which means more time star gazing during fair weather. November will also have 2 meteor showers: South Taurids around Nov. 5 and 6 and the Leonids around Nov. 17 and 18. Both are expected to be average counts per hour at best, with the Leonids having less interference from the Moon. This month we'll try a different new moon star party location and join the Central Coast Astronomical Society. This would increase the number of folks showing up at a star party and perhaps provide some opportunities for other joint activities later. The VAAS pot-luck picnic has been scheduled for Saturday 08 November at Lompoc River Park. This is the same location as last year's picnic. All we need is lots of members with their family to show up and help out. Bring a side dish for all to share.

Finally, during October's meeting we received nominations for most of new VAAS officers. President- No one accepted nomination

Vice-President – Jana Hunking

Treasurer – Vince Tobin

Editor – Vahan Yeterian

The current officers of VAAS wish to thank the membership for their support. It makes the job much easier if all the membership help pitch in to organize the various events and activities.

As always, Clear Skies…Dave

Events

NOTE: VAAS Picnic is scheduled for November 8th at River Park in Lompoc. Tri Tip and Hot dogs supplied by VAAS. Bring a side dish, and what ever refreshment you like (No alcohol). Starts at Noon, (Includes family members).

November 1 and 29 ***Star Party at observatory.*** **November 1st** we are having a Girl Scout outreach event at the Observatory bring a scope and help make this a successful event.

November 5&6 Taurids Meteor Shower. The Taurids is a long running meteor shower producing only about 5 to 10 meteors per hour. It is unusual in that it consists of two separate streams. The first is produced by dust grains from Asteroid 2004 1G10. The second stream is produced by debris left behind by Comet 2P Encke. The shower peaks this year on the night of November 5. The full Moon may block out all but the brightest meteors.

November 15th ***Star Party at observatory***

November 17 & 18 Leonids Meteor Shower. The Leonids is an average shower up to 15 meteors per hour at its peak. This shower is unique in the it has a cyclonic peak about every 33 years where hundreds of meteors per hour can be seen. The last of these occurred in 2001. The Leonids is produced by dust grains left behind by comet Tempel-Tuttle which was discovered in 1865. It peaks this year on the night of the 17th and the morning of the 18th. The waning crescent Moon won't be much of a problem this year.

November 22nd Star Party **At the CCAS by Talley Vineyards (TBD): New Moon A South County location: a private rugby field facility owned by Talley Vineyards.**

November Rosetta Comet Landing. The European Space Agency's Rosetta space craft is scheduled to release its Philae lander some time this Month and attempt to land on Comet 67P/Churyumov-Gerasimenko. The lander is named after Philae Island in the Nile River where an obelisk was found that was used to decipher Egyptian hieroglyphics along with the famous Rosetta Stone.
The Lander will spend a week studying the comet and will send back images from the surface and try to determine what the comet is made of.

Star Party and Events

October 4th The Star Party at the observatory was attended by Dave Covey, Vince Tobin, Craig Fair and Vahan. The sky was clear, Moon was almost full. Vince did a star calibration on the 14 inch scope since we had changed out the Bios battery in the controller. Dave had his 8 inch SCT set up and imaged several celestial objects. Vahan and Craig just had fun viewing the various images in both scopes.

Star Party and Events Cont.

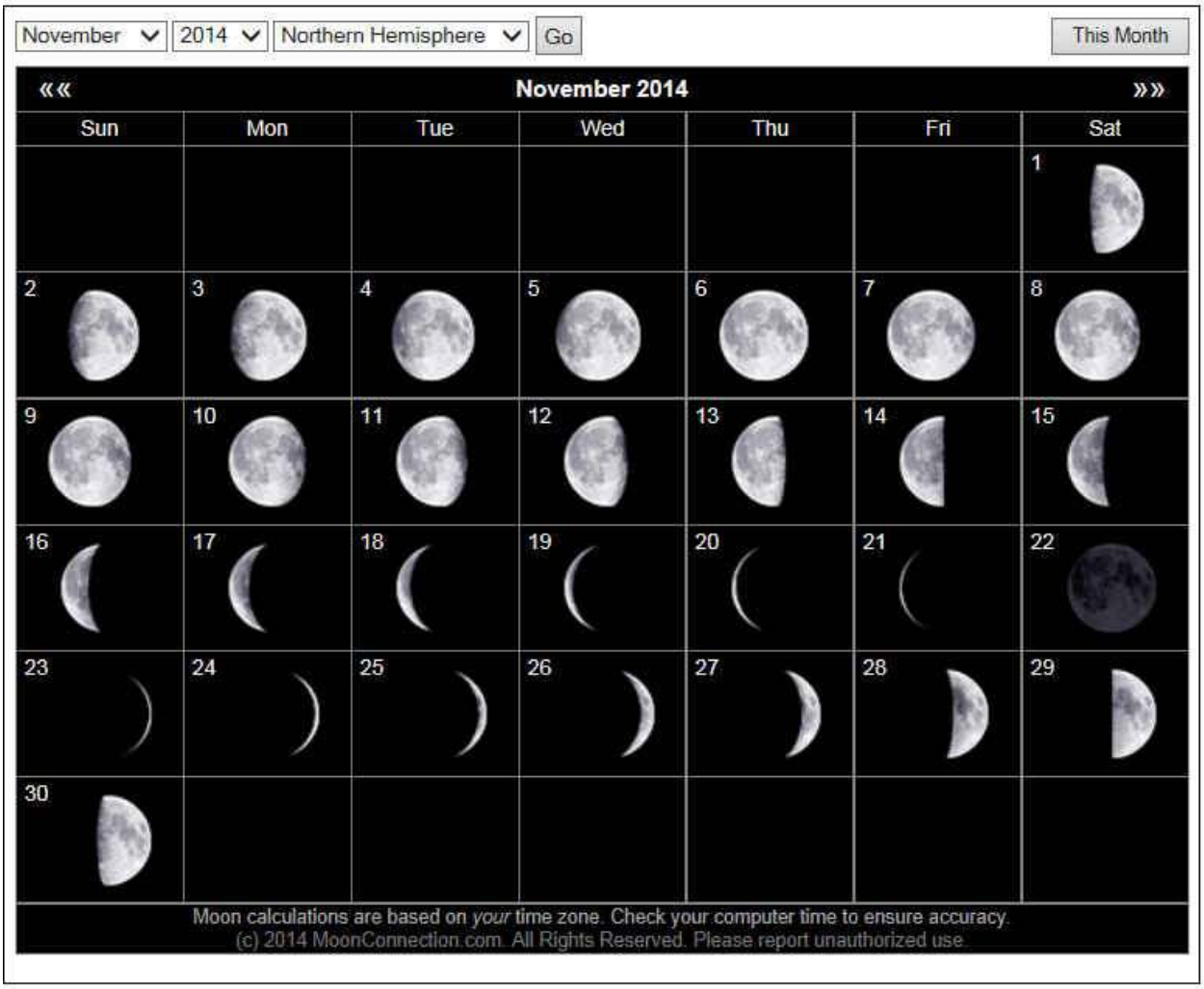
October 11th Vince Dave and Vahan attended a function at the Claiborne & Churchill winery's annual astronomy night and dinner. We augmented the function setting up our scopes with the Central Coast Astronomy Society presentation. After the lecture and dinner the attendees made the rounds of the 4 telescopes Vince's 16 inch Dob, Dave's 8 inch SCT and my 4 inch refractor plus one 11 inch SCT from the San Lewis club. Lots of Q& A from the crowd, upwards of 60 people they all seemed to enjoy seeing the stars real time. Seeing conditions were fair, high thin clouds and some moisture. We secured at about 9:45Pm.

October 17th The Clarence Ruth Elementary school had astronomy day. VAAS was requested to assist. Five class rooms and approximately 70+ students and parents were in attendance. Dave, Vince, Jana, Vahan and Craig Fair & wife participated setting up scopes to provide images to Students, Parents and Teachers. Jana worked the classroom groups with lectures and pictures. The weather was not cooperative, high clouds obscured the stars but there were moments where a slight brief clearing allowed viewing of some objects like Alberio and Polaris. All-in-all it was a successful astronomy day event and well received by the Parents, Teachers and Children..

October 18th Dave Covey, Craig Fair and Vahan gathered at the observatory for the scheduled star party. Dave and Craig had their 8" SCT's set up. The weather was good and not a cloud in the sky. The Milky Way was very prominent. Craig's SCT needed collimation so Vahan assisted in the task. Many Messier and Caldwell Objects were observed. Seeing was very good but dew shields were required.

October 25th Star Party at Figueroa Mountain site 1.5. Dave, Vahan and Craig on site. Clear, a bit cool and no clouds. Set up scopes and started alignment on Polaris. Looked at a few objects and in a matter of minutes it was overcast obscuring all but a few bright stars. About 40 minutes later it cleared up, stars all over the place. Lots of Dew so Dew shields and heaters were necessary. It started getting windy to a point where images in the eye pieces were dancing around. Clouds started moving in again, the temperature was below 49 degrees but the wind chill made it a bit miserable. We called it quits at 9:00 PM

November Moon



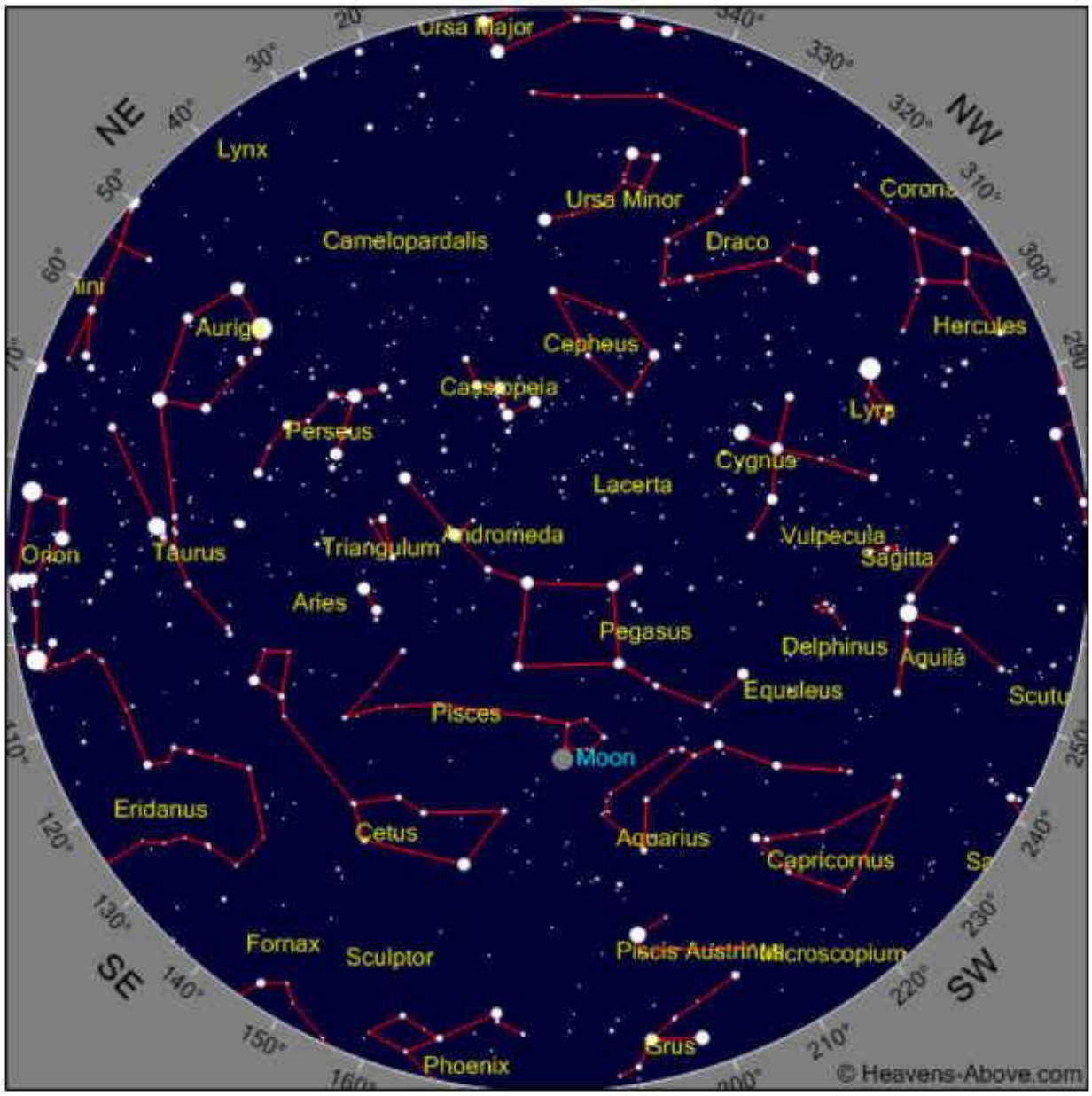
Full 6th, New 22nd, 1st Quarter 14th, Last Quarter 29th

Moon Folklore

- From full Moon through the last quarter, or the dark of the Moon, is the best time for killing weeds, thinning, pruning, mowing, cutting timber, and planting below-ground crops.
- The time just before the full Moon is considered particularly wet, and is best for planting during drought conditions.
- The New Moon and first quarter, or waxing phases, are considered fertile and wet.

November Sky

Some Objects of interest, M31, M57, M27, Moon



Time

Year	2014	Month	11	Day	3	Hour	5	Minute	00

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 its worth

Accurate Polar Alignment of your telescope

The "declination drift method" is the most accurate way to accomplish this. The method is straightforward, but it does require some time and patience.

First aim the mount's polar axis roughly at Polaris. Now point the telescope at a star that's somewhat above the celestial equator and as close to south as you can judge by looking opposite Polaris. Put in a high-power eyepiece. If the eyepiece has cross hairs, center the star on them. Otherwise put the star on the north or south edge of the field and defocus it a little. Turn on the clock drive, and ignore any east-west drift.

If the star drifts *south* in the eyepiece, the polar axis is pointing *too far east*.

If the star drifts *north*, the polar axis is *too far west*.

Shift the polar axis left or right accordingly, until there is no more drift.

Now aim at a star that's near the celestial equator low in the eastern sky.

If the star drifts *south*, the polar axis points *too low*.

If the star drifts *north*, the polar axis points *too high*.

Again, shift the polar axis accordingly.

Now go back and repeat from the beginning, because each adjustment throws the previous one slightly off. When all visible drift is eliminated the telescope is very accurately aligned, and you can take long deep-sky exposures.

If your eastern sky is blocked, you can use a star low in the west and reverse the words "too high" and "too low" in the above instructions. If you're in the Earth's Southern Hemisphere, reverse the words "north" and "south."

When followed, you will end up with accurate polar alignment to help your astrophotography - enjoy!

Winery

Winery

Clarence Ruth Elementary

Club Officers

President
Dave Covey

Vice President
Jana Hunking

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 November 14th 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.