

Vandenberg Amateur Astronomical Society
presents
The Sidereal Times



Messier 17 (see page 5)

Meeting News:

At the November meeting we discussed Nomination of VAAS Officers. Talked about Girl Scout Outreach. Watched A video about the stars by Dr. Alex Filippenko. Noted that we should have our annual Xmas party in Jan 2014.

**Reminder: VAAS meeting December 13th
Manzanita school, Hope to see you there.**



Lunar Calendar:

New Moon 3 Dec
Full Moon 17 Dec



Presidents Message



The nominations for club Officer were again not held during the 8 November meeting due to the lack of a quorum. We need a quorum of at least 2/3 of the "active" membership for official business (defined as paid dues and capable of attending the meetings). Several attempts were made to "create" a quorum using new math or as one member suggested revising the Club's Constitution. However, until we achieve a quorum no official club business can be conducted. Does it seem like we been here before? We will try again at the 13 December meeting.

Comets are in the news lately with Comet ISON (C/2012 S1) and Comet Lovejoy (C/2013 R1) both in the pre dawn sky. After the Comet ISON's November 28th perihelion the main question is did the comet survive intact? Various conflicting reports indicate that they're not sure if the comets nucleus is breaking up. Try looking for Comet ISON (C/2012 S1) about 30 minutes before sunrise in the East near the ecliptic. Try looking for comet Lovejoy (C/2013 R1) about 30 to 60 minutes before sunrise in the North near the Big dipper, (Ursa Major).

We'll be gathering at the Observatory on the Saturday closest to the New Moon and 3rd quarter Moon through the rest of the winter season. Please do make an effort to come to either the New Moon or 3rd quarter Moon star parties. It is always good to have other members share their experiences and view through different scopes.

As always Have fun and clear skies.

Dave



Dec 7th Star party at Observatory

Dec 13,14th Geminids meteor shower. The Geminids is the King of meteor showers. It is considered by many to be the Best shower in the heavens producing up to 120 meteors per Hour at its peak. It is produced by debris left behind by an Asteroid known as 3200 Phaethon which was discovered in 1982. It peaks on the night of the 13th and the morning of the 14th. The waxing gibbous Moon will block out some of the meteors this year. Meteors will radiate from the constellation of Gemini but can appear anywhere in the sky.

Dec 17th Full Moon occurs at 09:28 UTC.

Dec 21st December Solstice occurs at 17:11 UTC. The South Pole of the Earth will be tilted toward the Sun which will have reached its Southernmost position in the sky and will be directly over the Tropic of Capricorn at 23:44 degrees South latitude. This is the first day of winter in the Northern Hemisphere and the first day of summer in the Southern Hemisphere.

Dec 21st ,22nd Ursids Meteor Shower. The Ursids is a minor shower producing only about 5 to 10 meteors per hour. It is produced by dust grains left behind by comet Tuttle which was discovered in 1790. It peaks this year on the night of the 21st. This year the second quarter Moon will be bright enough to hide all but the brightest of the meteors. Best viewing will be just after midnight. Meteors radiate from the constellation of Ursa Minor. They can appear anywhere in the sky.

Dec 28th Star party at Observatory.

Santa is watching you so be good!



Some star parties were cancelled due to weather.



Star Party

November 2nd. Dave Covey, Ken and Louise Spraker and Vahan Yeterian met at the observatory around 5:00 PM The weather turned foul with a solid overcast of clouds and fog. Ken set up his new scope just for drill and strangely enough it cleared to the South West just long enough for Ken to get first light on planet Venus with his new scope. Shortly after we packed up and departed.

Star party and Girl Scout Outreach

The 9 November star party and Girl Scout Outreach was a big success. We had over 40+ children and adults attending. Vince Tobin, Dave Covey, Ken & Louise Spraker, Vahan Yeterian and Jon Walke set up the displays and Scopes. The compliment of telescopes were Schmidt Cassegrain, Newtonian, Dobsonian and Refractor. Also a pair of large binoculars mounted on a spring and balance support system. Included in the display was Vahan's lap top computer that contained a large selection of photos of various celestial objects to be viewed by the attendees. The visitors began arriving about 5:00 PM, with some late arrivals at 7:00 PM.. Although the weather was not very cooperative the Moon and Venus were the early objects of observation. Later in the evening it cleared somewhat to the North and East and some other objects like the Double cluster and M45 were observed. There were a lot of good questions fielded by the children and parents. The Star Party Staff answered them to the apparent satisfaction of the guests (see page 6 for photos).

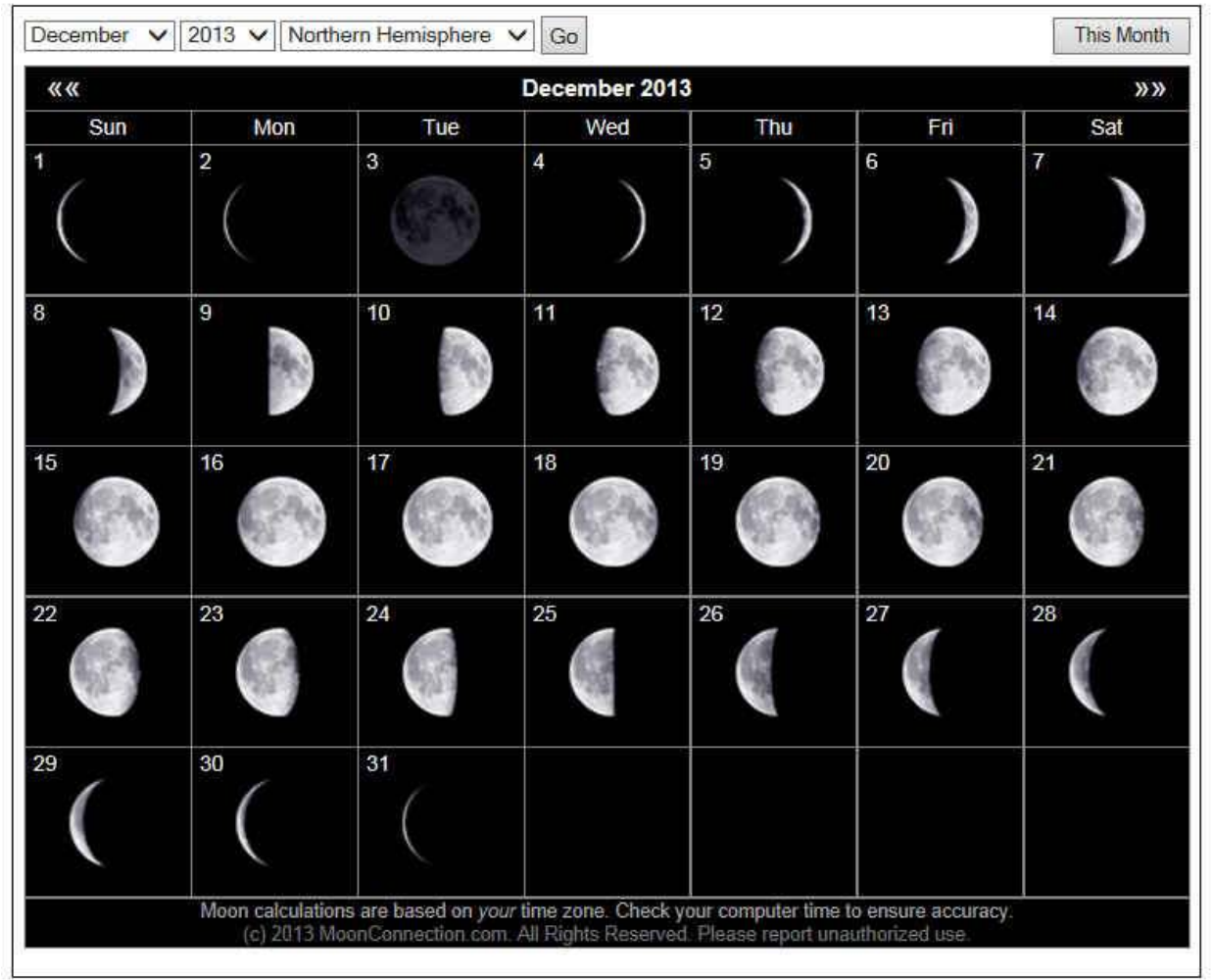
Star Party 23 Nov. Observatory

Vince Tobin was the only VAAS member attending this scheduled event. He looked into tracking satellites with the 14 inch scope, results were questionable.

INFO: Lunar features. Latin to English translation.

Mare Humorum.....	Sea of moisture
Mare Imbrim.....	Sea of Showers
Mare Procellium.....	Ocean of storms
Sinus Roris.....	Bay of Dew
Mare Nubium.....	Sea of Clouds
Mare Frigoris.....	Sea of Cold
Mare Serenitatis.....	Sea of Serenity
Mare Tranquilitatis.....	Sea of Tranquility
Mare Vaporis.....	Sea of Vapors
Mare Insularim.....	Sea of Islands
Sinus Iridium.....	Bay of Rainbows
Mare Australe.....	Southern Sea
Mare Crisium.....	Sea of Crisis
Mare Orientale.....	Eastern Sea

December Moon



Full 17th, New 3rd, 1st Quarter 9th, Last Quarter 25th

Moon Folklore

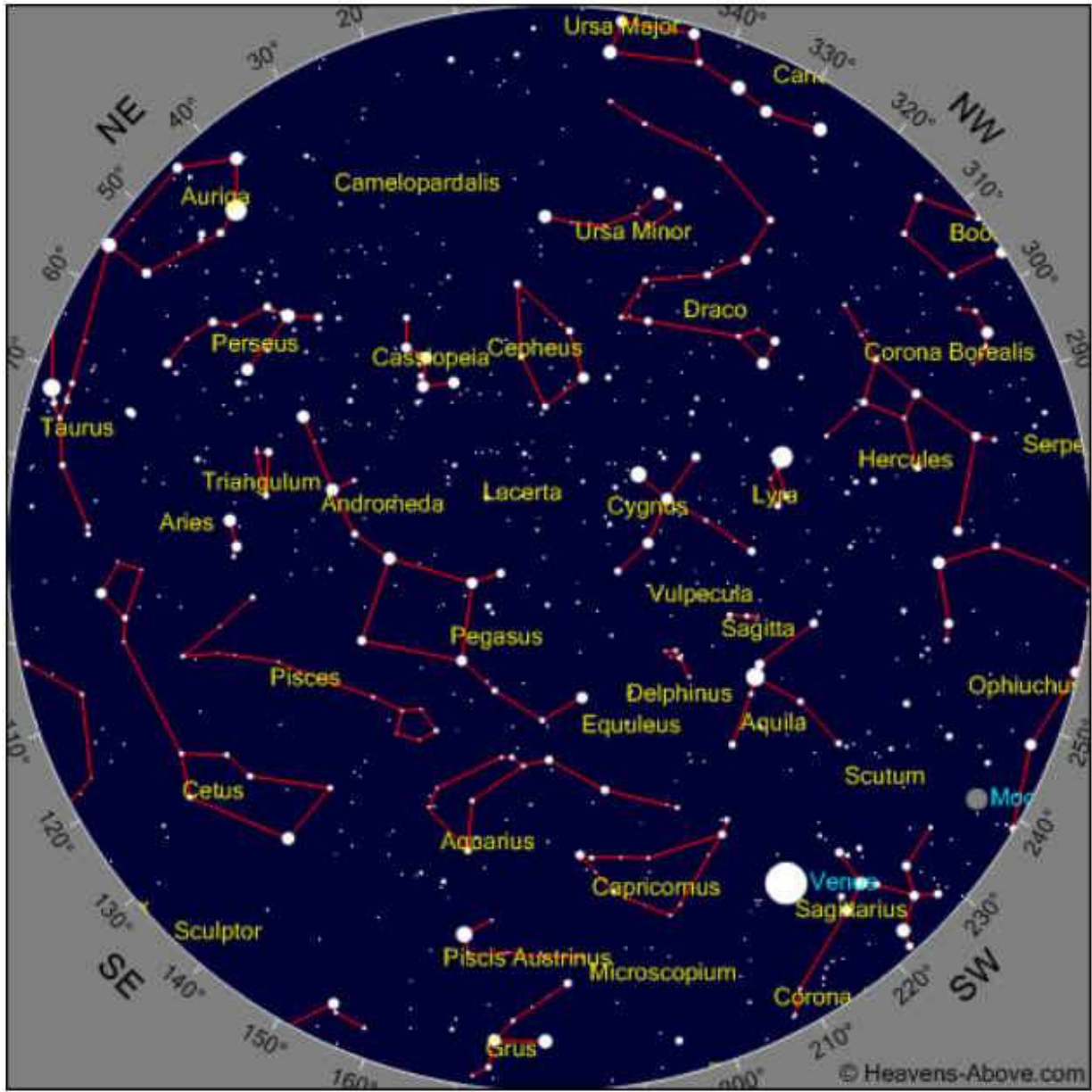
The first time you see a crescent Moon for the month take all your spare coins out of your pocket and put them in the other pocket. This will ensure good luck for the rest of the month.

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.



December Sky

Objects of interest M31, Jupiter, M42, M1, Uranus



Time



Year	<input type="text" value="2013"/>	Month	<input type="text" value="12"/>	Day	<input type="text" value="3"/>	Hour	<input type="text" value="17"/>	Minute	<input type="text" value="15"/>
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Photo Courtesy David McNally



Messier 17_NGC 6618 the Omega Nebula located in the constellation of Sagittarius is approximately 5500 light years distant. It is a massive star forming region. The interstellar matter of which this nebula is part of is roughly 40 light years in diameter and has a mass of 30,000 solar masses. Its local geometry is similar to the Orion nebula (M42) except that it is viewed edge on rather than face on like the Orion nebula. An open cluster of 35 stars lies embedded in the nebulosity and causes the gasses in the nebula to shine due to the radiation from those hot young stars. The actual number of stars in the nebula number approximately 800. It is one of the youngest clusters known with an age of about one million years. This nebula is also referred to as the Swan nebula, Horseshoe nebula and the Lobster nebula depending on where you are located on Earth. The luminous blue variable HD168607, located in the south-east part of the Omega nebula is generally assumed to be associated with it, and its close neighbor the blue Hypergiant HD168625.

This image of M17, the Omega nebula was taken with a stock Canon T3 DSLR camera and Meade 10" Wide Field f/6.3 SCT. The image is actually a composite of 6 images that were stacked and processed using Deep Sky Stacker. Each image was a 30 second exposure.

Star Party And Girl Scout Outreach.



For What it's Worth

Brewsters 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.

Coma Optical: A defect of an objective mirror or lens in which the rays of light striking the objective away from the optical axis are not brought to focus in the same image plane. In the case of an astronomical telescope, for example, the result is that star images toward the edge of the field of view appear to have comet like tails spreading radially out from the optical axis (negative coma) or in toward the optical axis (positive coma).

Focal Plane: The flat plane at right angles to the optical axis on to which a lens will focus an image. Curvature of field results in an extended image forming on a curved surface known as the focal surface. A focal plane scale is the relationship between angles on the sky, in arcseconds, and millimeters of size at the focus of the telescope, i.e. the number of arcseconds per millimeter.

Depth of Field: In an imaging system, the distance in object space over which the system delivers an acceptably sharp image. In a camera the available Depth of Field depends on the quality of the lens and the aperture stop. The greater the aperture the lower the F-number the shorter the depth of field and vice versa.



Note: No trees were killed to generate this newsletter, but a large number of Electrons were terribly inconvenienced.



Club Officers



President
Dave Covey



Treasurer
Liberty Partridge



Vice President
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 13 December 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.

Have a Merry Christmas, Health and Happy.

