

Vandenberg Amateur Astronomical Society presents The Sidereal Times



Messier 27 (see page 5)

Meeting News:

At the December meeting we discussed the up coming Xmas Party. Reviewed membership for presidency, Dave C is interim President until someone qualified is elected. Power was out so the meeting was held using flash lights, 6 in attendance, Dave C, Jana H., Selmer G., Louise G, Vahan Y and Vince T.

Reminder: VAAS meeting January 9th at 6:00 Pm to be held at Mi Amore pizza in Lompoc. Hope to see you There.



Lunar Calendar:

New Moon 20th
Full Moon 5th



Presidents Message

Our President is apparently still on holiday / vacation. So I will try and fill in for him for this month's Presidents message.

We have had an active 2014 operating year covering a multitude of events. We have provided Outreach support for various groups like Girl Scouts, Elementary schools and Winery astronomy events. We have held our club meetings at Manzanita school and Star Parties each month at the Observatory and Figueroa mountain. Weather has cancelled some of the Star parties but that can be expected. During the 2014 operating year we held a VAAS picnic at river park in Lompoc and also a Holiday party at one of the local Pizza houses. Participation (by the membership) in these events has been good. At the picnics and pizza events the turn out was good but at star parties it is always the same 3 or 4 members that attend. Additionally, attendance at club meetings has been a bit on the lean side. There are many factors that create some of the membership a problem attending star party and other events. However, if one can attend club meetings your input is most welcomed and at star parties the exchange of ideas and observing technique are helpful in getting the most out of observing with various instruments.

Lets all try and make the 2015 a successful operating year with more participation in events by the membership.

As always have fun. Vahan: (News Letter Editor)

Events

January 3 & 4: Quadrantids meteor shower is an above average shower with up to 40 meteors per hour at its peak. It is thought to be produced by dust grains left behind by an extinct comet known as 2003 FH1 that was discovered in 2003. The shower runs annually from January 1-5. It peaks this year on the night of the 3rd and morning of the 4th. The nearly full Moon will block all but the brightest meteors this year. They will radiate from the constellation of Bootes but can appear anywhere in the sky.

January 5th: Full Moon, the Moon will be directly opposite Earth from the Sun and will be fully illuminated as seen from the Earth. This phase occurs at 04:53 UTC. This Moon has been known as the Old Moon and the Moon after Yule.

NOTE:

January 9th VAAS Xmas / Holiday party to be held at Mi Amore pizza restaurant in Lompoc at the corner of H St and Central Ave. As before this is for members and family. VAAS will supply the Pizza and some salads. All liquid refreshment to be supplied by the individual. Try and attend. Additionally this is the time to renew membership for the 2015 operating year.



January 10th: Star Party at the Observatory try to attend.

January 17th: Star Party at the Observatory try to attend.

January 20th: New Moon, the Moon will be directly between Earth and the Sun and will not be visible from Earth. This phase occurs at 13:14 UTC. This is the best time of the month to observe faint objects such as galaxies, nebula and star clusters

January 24th: Star Party at the Observatory try to attend.



Star Party and Events

December 13 Star Party at the observatory. Cancelled due to weather.



December 20th Star Party at the observatory. Cancelled due to weather.



December 27th Star Party at the observatory. Considering the holiday season and family and the weather in general the star party was cancelled.

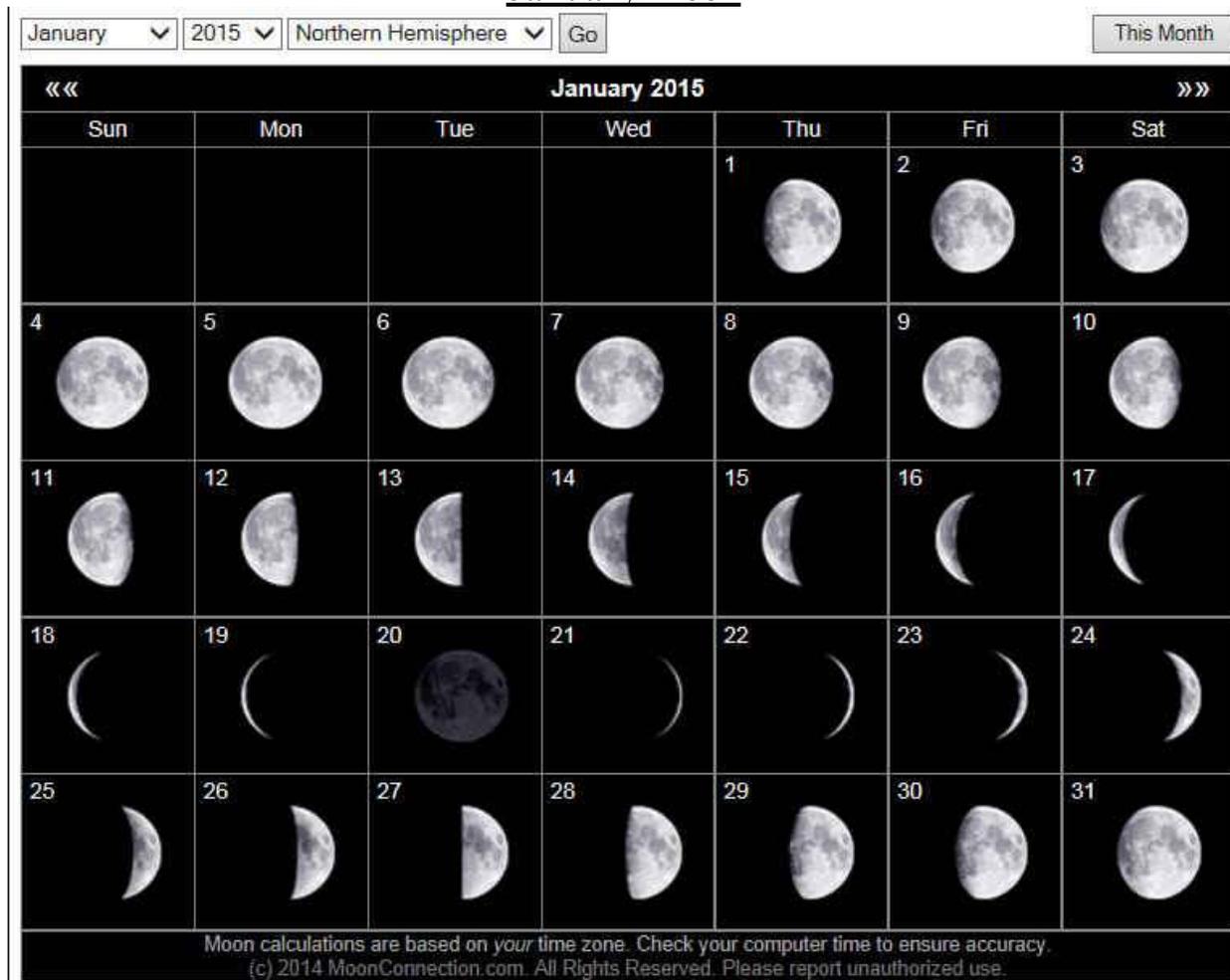
Mauna Kea



Figueria Mountain



January Moon



Full 5th, New 20th, 1st Quarter 26th, Last Quarter 13th

Moon Folklore

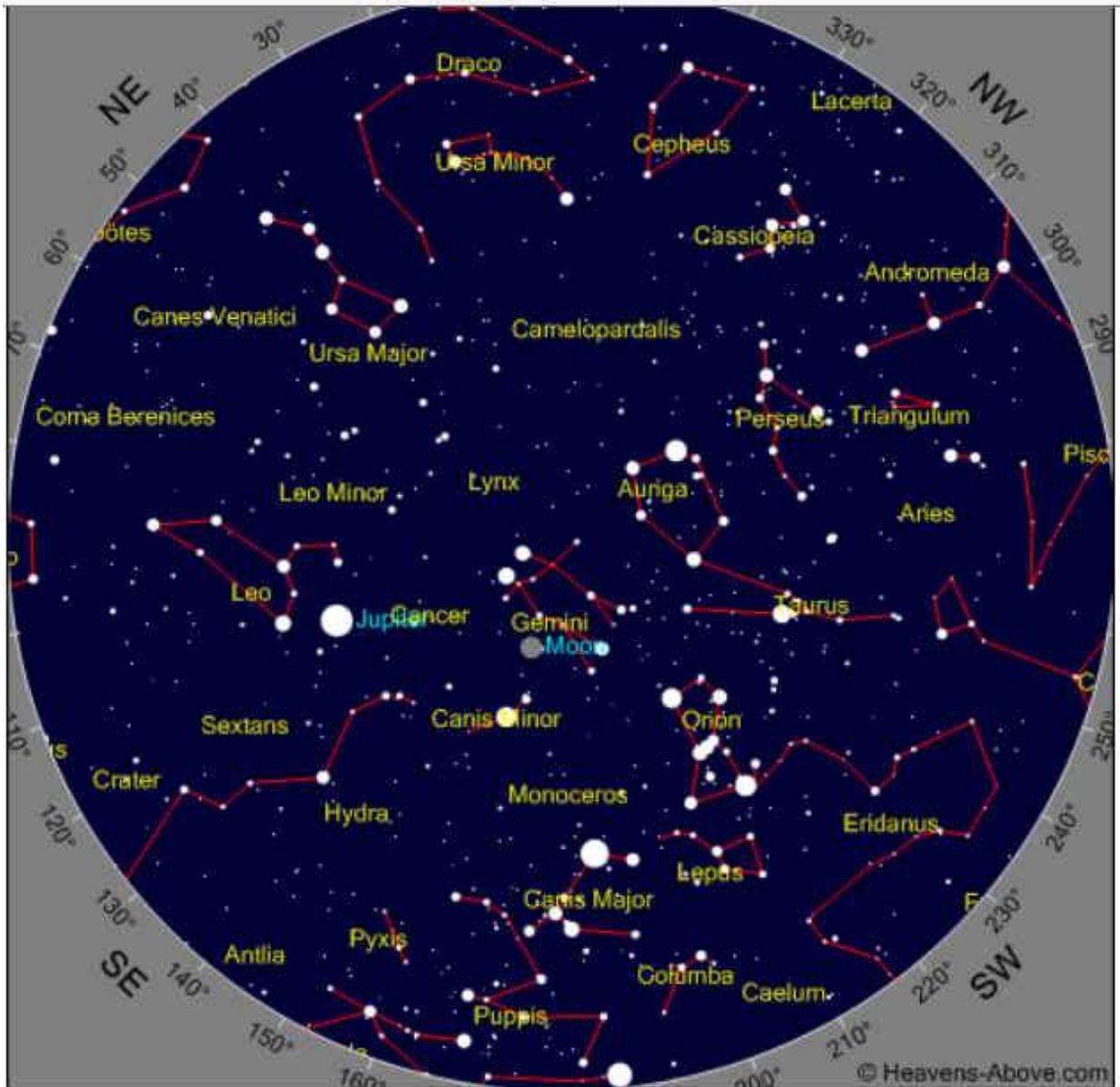
People once believed the Moon was made of silver, so they would ask the Moon to help jingle the change in their pockets as they gazed at its glory.

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.

January Sky

Some Objects of interest, M1, M42, M44, Jupiter, double cluster, Moon



Time

Year	2015	Month	1	Day	5	Hour	8	Minute	3
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Photo Courtesy Dave McNally



The Dumbbell Nebula or M27 NGC 6853 is in the constellation of Vulpecula. It is a showpiece object lying at a distance of approximately 1250 light years. It is the second brightest planetary nebula in the night sky. The angular diameter of the luminous body is 6 arc minutes with a halo extending to over 15 arc minutes. M27's age is estimated to be 3000 to 4000 years. The central star is quite bright at 13.5 magnitude and is an extremely hot blueish sub dwarf at about 85,000 degrees Kelvin (152,540.6 degrees F). Spectral class is O7. The central star emits highly energetic radiation in a non-visible part of the spectrum and is absorbed by exciting the nebula's gas and then re-emitted by the nebula. Most of the visible light is emitted in one spectral line, in the green light at 5007 Angstrom. The nebula appears to be shaped like a prolate spheroid and is viewed from our perspective along the plane of its equator. Prolate spheroid is where the polar axis is greater than the equatorial diameter. Adopting the value of 1250 light years the intrinsic luminosity of the gaseous nebula is about 100 times that of the Sun. The nebula also contains knots. Its central region is marked by a pattern of dark and light knots and their associated trails. The knots vary in appearance from symmetric objects with tails to rather irregular tail-less objects. Image capture was with a 10 inch SCT and Canon T3/1100D DSLR 15 30 second images at ISO 6400 were processed with DSS.

For what its worth

Albedo: A measure of the reflecting power of a non-luminous object, such as a planet, moon or asteroid. Albedo (from the Latin word albus for "white") is expressed as the fraction of light and/or other radiation falling on an object that is reflected or scattered back into space; its value ranges from 0, for a perfectly black surface, to 1, for a totally reflective surface.

Coma: 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 the star images toward the edge of the field of view appear to have comet-like trails spreading radially out from the optical axis (negative coma) or in toward the axis (positive coma).

Seeing: The blurring of a stellar (point-like) image due to turbulence in Earth's atmosphere. Seeing estimates are often given in terms of the full width in arcseconds of the image at the points where the intensity has fallen to half its peak value. A typical value at a good site is a little better than 1 arcsecond. Amateur astronomers often use the 5 point Anontyadi Scale which rates Seeing as 1(perfect) 2 (Good), 3 (moderate), 4 (poor), and 5 (very bad).

Depth Perception: The ability of the eyes to locate the position of objects in three-dimensional objects. The retina is two dimensional so information about depth is created in the brain. The brain uses "depth clues" which include such factors as linear perspective, parallax, relative size and the slightly different view each eye has of the object.

Past events photos



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

NOTE:

Club meeting January 9th 6 PM at the Mi-Amore Pizza restaurant H St and Central. 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.

