

Vandenberg Amateur Astronomical Society presents The Sidereal Times



NGC 2237 (see page 5)

Meeting News:

At the February meeting we discussed coming events for March. Dave Covey volunteered to be VAAS Vice president. Our President is down with the Flu so Dave presided over the meeting. Discussed upgrade of observatory computer. Informed the attendees of the alternate route to the observatory through the gate. Watched an excellent video about the Crab Nebula, Messier 1, thanks Dave.

Notice: VAAS meeting March 13th at 7:00 PM
Manzanita school.



Lunar Calendar:

New Moon March 20th

Full Moon March 5th

Observatory at night



Presidents Message

I was sorry I could not attend my first meeting of VAAS last month as I had just gotten the flu from my husband the day before and the both of us were down and out for 2 weeks with influenza type B. If you feel you may be coming down with the flu- symptoms come on suddenly and strong with fever, chills, aches, sinus congestion- then go to your DR. right away and ask for the medicine Tamiflu which can help knock it down if caught with in the first 3 days. I did receive that , and after 4 days the worst was over, but now I just need to recover my energy level.

For those of the club members that have not heard that our illustrious Editor Vahan was in a car accident on Feb 16th when his truck was hit broadside, rolled over twice which resulted in a damaged arm, cuts and bruises for him. The club wishes a complete recovery for him !

I heard the meeting was well attended and was saved by Dave, Vahan , and Vince. Thanks to our officers from me! I have exciting news- that I have been invited by a former student of mine from my first year of teaching in 1969- to join her group of friends to see the 2017 Total Solar Eclipse near Bend , OR. She lives there, and has traveled to other total eclipses before. I never have seen one and always wanted to, and now I have the chance to be in the path of totality !

This month on March 13 at our next VAAS Meeting, I will be **presenting the interesting history of our club** that spans 20 years, showing old photos, and news clippings. Hope all of you can attend!

Wishing You Clear Skies! Jana Hunking

Events

March 5th Full Moon, the Moon will be directly opposite the Earth From the Sun and will be fully illuminated. This phase occurs at 18:05 UTC.

March 6th Dawn at Ceres, NASA's Dawn spacecraft will be encountering the dwarf planet Ceres. Ceres is the largest object in The asteroid belt between Mars and Jupiter. Because of its size and shape it has been officially classified as a dwarf planet, same as Pluto. Ceres is 500 miles in diameter and is large enough to have a round shape. The Dawn spacecraft will spend several months studying Ceres and is expected to send back close up images of the dwarf planet.

March 14th *Star Party at the Observatory see you there.*



March 20th There will be a total solar eclipse this month. The path of totality will begin in the central Atlantic Ocean and move across Greenland and into northern Siberia.

March 20th The March Equinox (Vernal Equinox) and occurs at 22:45 UTC. This is the first day of spring in the northern hemisphere and the first day of Fall (Autumnal equinox) in the Southern hemisphere. The Sun will shine directly the Equator and there will be nearly equal amounts of day and night throughout the world.

March 20th There will be a New Moon. The Moon will be directly between the Earth and Sun and will not be visible. This Phase occurs at 09:36 UTC.

March 21st *Star Party at the Observatory, see you there.*



March 28th *Star Party at the observatory, see you there.*



Star Party and Events

February 14th Star party at the Observatory. Vince Tobin, Dave Covey, Dave McNally, Vahan, Cal Cluff, Craig Fair, Jon Walke, and Jim VanCura on site. Equipment set up and aligned so the observing and photographing began. Earlier there was a fairly heavy overcast but about sunset it cleared. The atmosphere was stable giving us good seeing. We installed a counterweight on Vince's scope and did a touch up alignment on the optics. Craig and Jon were primarily involved with astrophotography the rest of us were visual observing. Some of the objects targeted were M81 and 82, M42, M1, Jupiter, Venus, Comet Lovejoy and the Horse Head nebula to name a few. Craig and Jon captured some super images of comet Lovejoy, M1 and M81 & 82 and the Horse Head nebula. Lots of camaraderie this evening. We had another wonderful night under the stars.



February 21st Star party at the Observatory was cancelled due to weather.



Nuts!

February 28th Star party at the Observatory was cancelled due to weather.

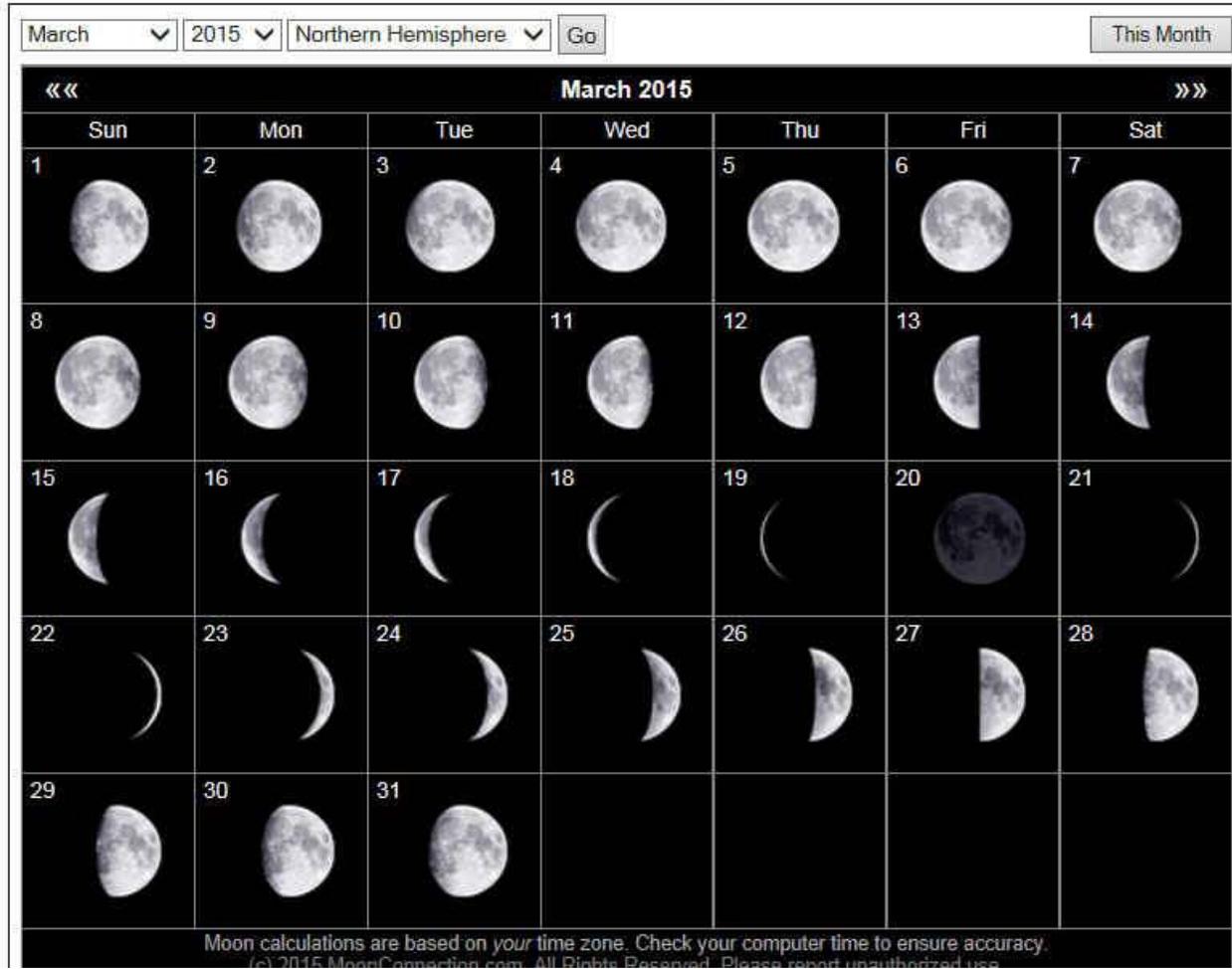


Nutz!

Mauna Kea Hawaii



March Moon



Full 5 March, New 20th, First Quarter 13 March, Last Quarter 27 March

Moon Folklore

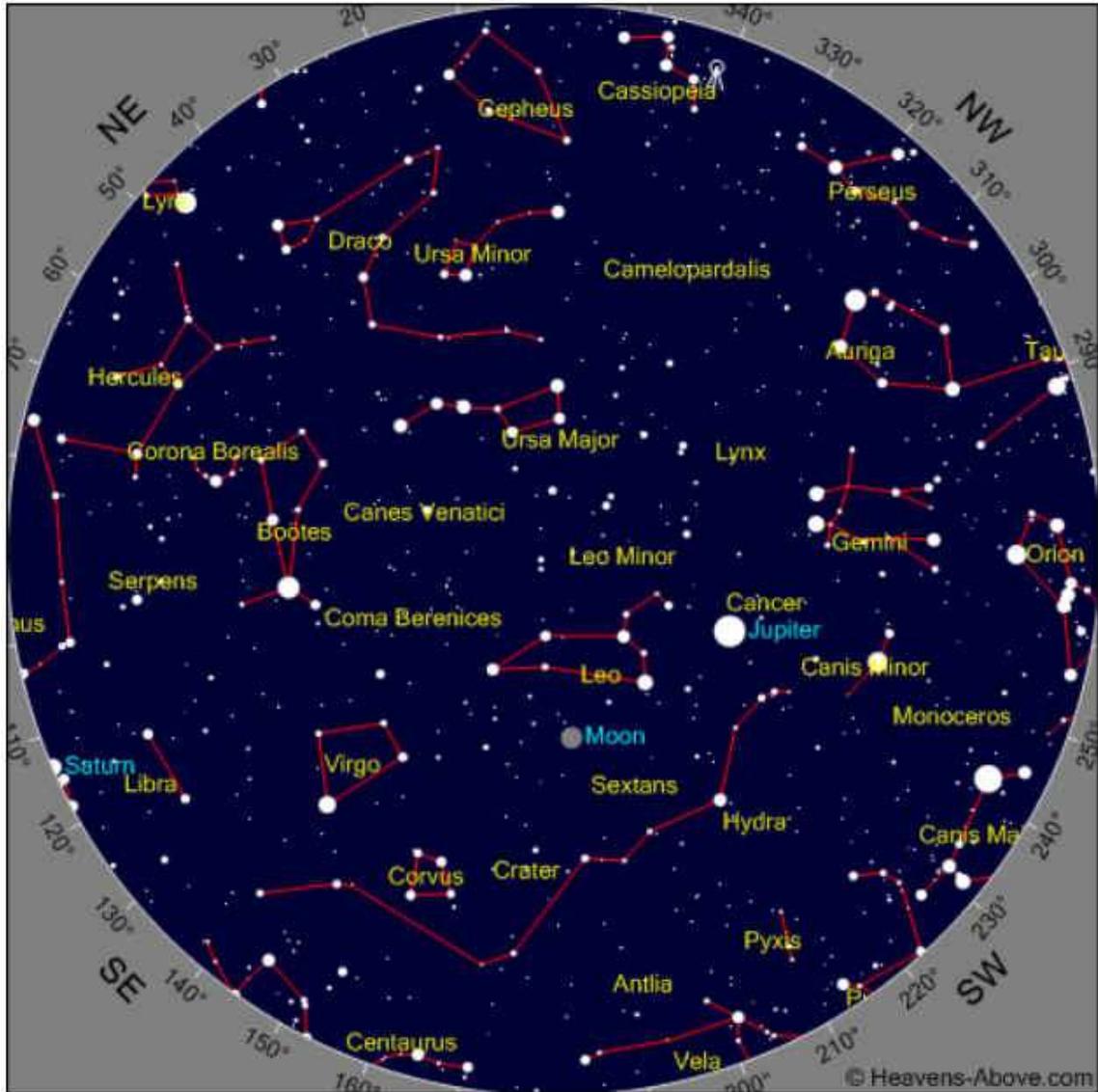
Some believe that the 5th day after a full Moon is the perfect time to try and conceive a child.

Star Party



March Sky

Objects of interest M81, M82, M1, M13, M51, M92, Jupiter & Moon



Time

Year	2015	Month	3	Day	5	Hour	8	Minute	14
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Photo Courtesy Dave McNally



The Rosette Nebula NGC 2237, also known as Caldwell 49, is located in the H II region of the giant molecular cloud in the constellation of Monoceros (the Unicorn) and lies at a distance of approximately 5200 light years but some researchers have reduced that to 4900 light years. The diameter of the Rosette is 130 light years. Radiation from young hot stars in the nebula excites the atoms in the nebula to emit radiation themselves producing the emission nebula we see. The Chandra observatory has revealed the hot young stars in the nebula core have heated the surrounding gas to a temperature of about one million degrees Kelvin causing the gas to emit large amounts of X-rays. The mass of the nebula is estimated to be around 10,000 solar masses. The stellar winds from a group of O and B stars are exerting pressure on the interstellar clouds to cause compression and star formation in the nebula.

Image was capture using a Sigma 170 - 500 F5.6 telephoto lens mounted on a Celestron CGEM hypertuned mount and a Canon T3i modified DSLR camera. Frames were 20 x 120" integration time 0.7 hours. Image processed using DSS software.

For What it's Worth

Angle of Reflection The angle at which a ray of light leaves a reflecting surface. The angle is measured between the reflected ray and the normal, the line at right angles to the surface where the ray leaves it. For a plane mirror the angle of reflection is equal to the angle of incidence.

Angle of Incidence The angle that a line, such as a ray of light, falling on a surface or interface makes with the normal drawn at the point of incidence. For a plane mirror the angle of incidence equals the angle of reflection.

Complementary Colors Any two colors that combine to make white light. Any color can be described in terms of the combination of Red, green, or blue, (the "additive" primary colors) that has the same effect on the eye's. Since red, Green and blue in the right proportions add to make white, it follows that the complementary color of Red is blue-green (Cyan), of blue is yellow (which is produced by red and green combined), of green is Magenta (red-blue). In painting combinations of colors get darker not lighter. It remains true that complementary colors tend to neutralize each other.

Aberration of Starlight The difference between the observed position of a star and its true direction. This is a combined result of the observer's motion across the path of the incoming light and the finite speed of light. The effect is similar to that observed by someone walking in the rain. Though the rain is falling vertically, because of the person's motion it appears to be falling at an angle. There are three components of the aberration of starlight (up to 20.47"), first is annual aberration caused by the Earth's revolution around the Sun, second is Diurnal aberration caused by Earth's axial rotation, and third the very small Secular aberration caused by the motion of the Solar system through space. Stars on the ecliptic appear to move fro along the line of 41", stars 90 degrees from the ecliptic appear to trace out a circle of radius 20.5", and stars in intermediate positions ellipses of major axis 41".

Handy Temperature conversion chart

Celsius to Fahrenheit	$^{\circ}\text{F} = 9/5 \times (^{\circ}\text{C}) + 32$
Kelvin to Fahrenheit	$^{\circ}\text{F} = 9/5(^{\circ}\text{K} - 273) + 32$
Fahrenheit to Celsius	$^{\circ}\text{C} = 5/9(^{\circ}\text{F} - 32)$
Celsius to Kelvin	$\text{K} = ^{\circ}\text{C} + 273$
Fahrenheit to Kelvin	$\text{K} = 5/9 (^{\circ}\text{F} - 32) + 273$

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

Club meeting March 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/Minion.

Comet Lovejoy

