

Vandenberg Amateur Astronomical Society presents The Sidereal Times



Andromeda Galaxy M31 (see page 5)

Meeting News:

The January meeting was held at Mi Amore Pizza. Photographs of the event are on pages 1,2 and 6. We had a brief recap of past events and reviewed the schedule for star party activity. Jana Hunking was installed as VAAS President.

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



Lunar Calendar:

New Moon 19 February
Full Moon 3 February



Presidents Message

I am proud to accept the position of President of VAAS, and to become the first female to occupy this office. Let me tell you about my background: I was born in Phoenix, AZ. in 1947, then moved to San Antonio, TX at age 3 and spent most of my childhood growing up there. That is where I became aware of the night skies outside my bedroom window, where I would gaze and wonder about the stars I looked upon each night. I moved back to Phoenix in 1962 to finish H.S. there, and then went on to college at NAU in Flagstaff , Az to pursue a degree in Geology. Instead, I became a Science teacher and taught in Lompoc for 32 years, mostly at VMS- 6,7,8th grade, being able to teach about rocks and minerals which I still enjoy, along with Physical Sci. and ,Bio. & Health. If you see my car license plate, it is still true : ILUVSCI .

We had a wonderful time at our Pizza Party at Mi Amore in Jan. A smaller group came, but the pizza and visiting was enjoyable! Thanks to all who showed up!

I hope to see all of you at our Feb 13 Meeting, when I will be discussing the interesting history of our Club, and showing many photos and news clippings from 1985-2015.

Wishing You Clear Skies! Jana Hunking

Events

February 3rd Full Moon. The Moon will be directly opposite Earth from the Sun and be fully illuminated. This occurs at 23:09 UTC.

February 6th Jupiter will be at opposition. The giant planet will be at its closest approach to Earth and will be fully illuminated by the Sun. This is the best time to view and photograph the planet and its moons.

February 14th *Star party at the Observatory see you there.*



February 18th New Moon the Moon will be between Earth and Sun and will not be visible from Earth. This phase occurs at 23:47 UTC.

February 21st *Star party at the observatory see you there.*



February 22nd Conjunction of Venus and Mars. Conjunctions are rare events where 2 or more objects will appear extremely close together. The two planets will appear within a half degree of each other in the evening sky just after sunset.

February 28th *Star Party at the Observatory see you there.*



Some Holiday Party pictures at Mi Amore



Star Party and Events

January 9th Our annual holiday party was held at Mi Amore pizza. The attendance was fair and all had fun munching the goodies and exchanging stories, current events and general camaraderie. Jana set up the holiday party in total from A to Z, lots of pizza like Veggie, Hawaiian and sausage / pepperoni including some extra dishes like BBQ chicken wings and strips. Plenty to eat and savor. She, as usual, brought some deserts from home for everybody to enjoy. A brief meeting was held and Jana is now the President of the VAAS. Dave Covey passed the gavel to her. Now we need to get a Vice President elected cause Jana is basically doing both jobs. Dave has done an absolutely remarkable job as President these past 4 years, thanks for your very dedicated support of VAAS Dave. Now we need to get a VP elected, any one interested in the job?



January 10th Star party at the observatory cancelled due to weather, Rain and Overcast.



Agh!

January 17th Star party at the observatory.

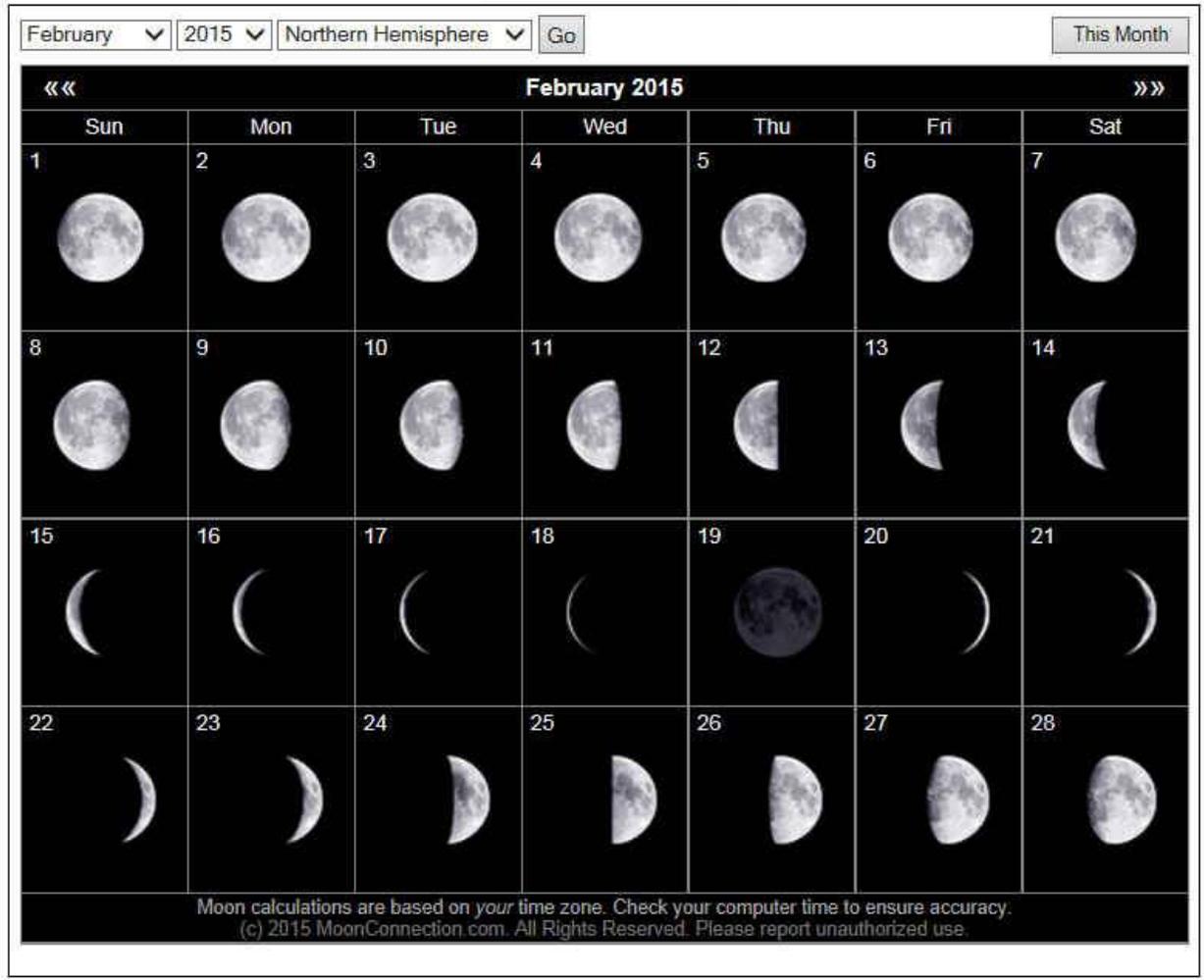
Dave, Vince, Craig, Jon and Vahan on site. Vince, Jon and Craig set up their scopes. Dave and Vahan opened the observatory. The sky was seeded with scattered clouds, no seeing to the West and North. East and South were fairly clear of clouds. Three visitors showed up one of which was Vince's old student. We looked at comet Lovejoy, M42 nebula and several other objects. Craig photographed the comet and Orion nebula M42. The weather started closing in to the East and some to the South. Considering the seeing conditions all had a good time viewing and discussing some of the technical aspects of astronomy.



January 24th Star party at the Observatory. Craig Fair, Jon Walke, Dave McNally, Dave Covey, Jana Hunking, Ken & Louise Spraker and Vahan Yeterian on site, also 6 guests showed up. Jon and Craig had their 8" SCT's and Vahan had his 4" refractor and a telephoto lens. Ken had scope and camera. The seeing was good the weather comfortable (no wind) but a bit cool. Craig, Jon and Vahan were doing astrophotography and just having a lot of fun gazing at the stars, Orion, M31, M45 and comet Lovejoy etc. The guests had lots of questions which we answered. A good night under the stars.



February Moon



Full 3rd, New 19th, 1st Quarter 12th, Last Quarter 25th

Moon Folklore

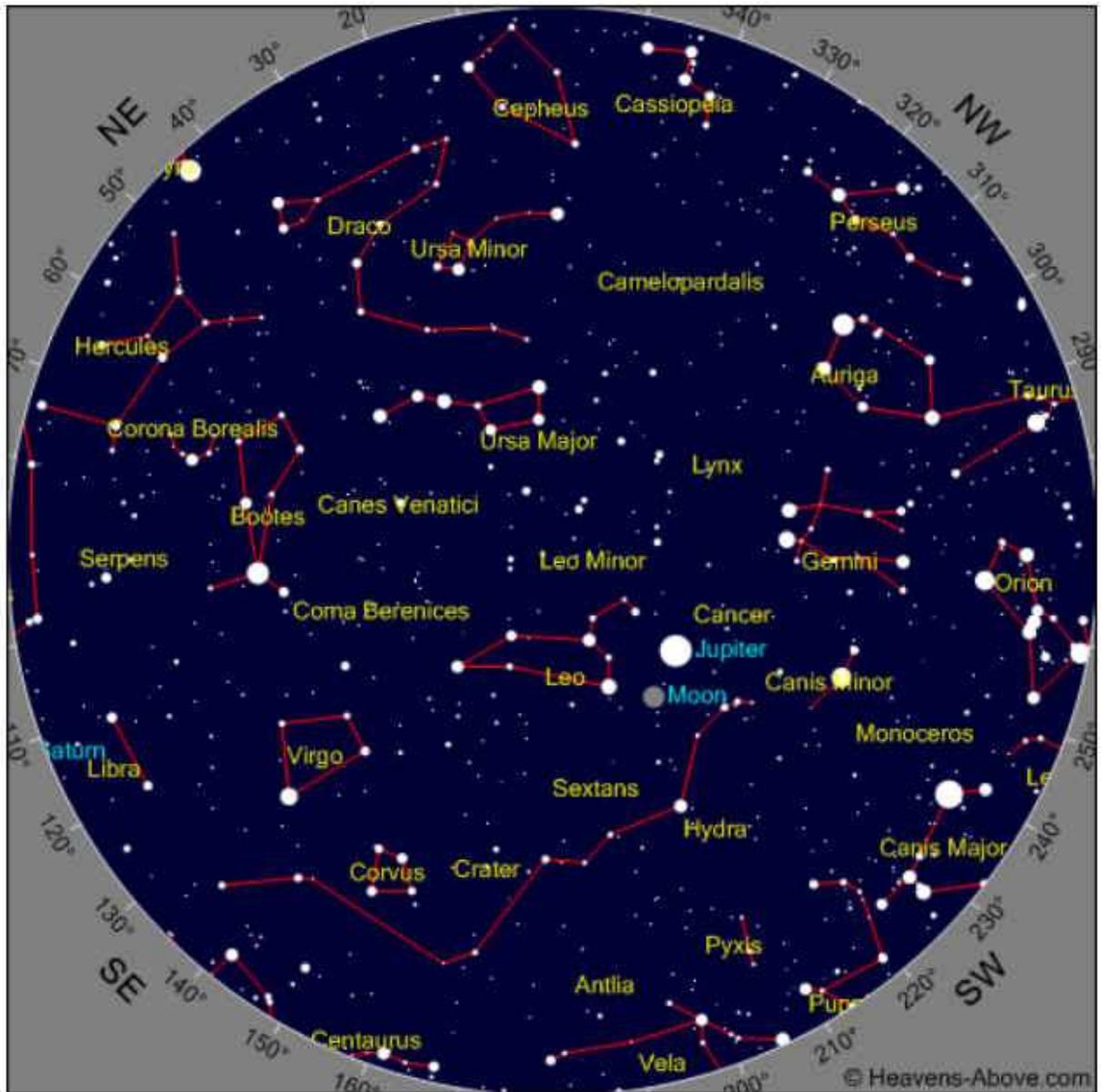
In Italy they say that if the Moon changes on Sunday, there will be a flood before the month is out. But if the Moon falls on a Saturday it is said that there will be 20 days of wind and rain.

If a full Moon fell on a Friday and it was also the 13th, it is considered to be the unluckiest day there could be.

A ring around the Moon means rain or snow.

February Sky

Some Objects of interest, Jupiter, Moon



Time

Year	2015	Month	2	Day	4	Hour	9	Minute	45
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Photo Courtesy Dave McNally



Messier 31, NGC 224, is a galaxy in the constellation of Andromeda. It is a close neighbor at 2,538,000 light years. It is estimated that it contains 1 trillion stars and its age is 9 billion years. It is a spiral galaxy like the Milky Way and contains a concentrated bulge of matter in the middle surrounded by a disk of gas, dust and stars. It is more than 260,000 light years long, more than 2.5 times as long as the Milky Way. Though Andromeda galaxy contains more than a trillion stars, our galaxy is actually more massive because it contains more dark matter. M31 is one of more than 20 galaxies comprising the Local Group of galaxies. There are 2 other Messier objects both smaller dwarf elliptical galaxies seen in the photo, M32 and M110. These are small satellite galaxies and are gravitationally bound to the much larger M31 galaxy. They contain from 1-10 percent of the mass of M31 and are a factor of 10 smaller in spatial extent. Studies have indicated that there is an eclipsing Binary star system in M31. Measurements indicate that M31 is approaching the Milky Way galaxy at about 300 kilometers a second and in about 5 billion years M31 and the Milky Way will collide. (Talk about a big bang, yikes!). Image capture was 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 its worth

Diffraction Pattern In general the interference pattern that results when diffraction waves are superimposed. In astronomy the image of a star formed by an optically perfect telescope. In a refractor this consists of a small bright disk surrounded by concentric rings of light. In a reflector the disk will have (typically) four spikes caused by diffraction from the secondary mirror support.

Resolving Power The ability of a telescope to distinguish between two closely separated objects. It is ultimately limited by diffraction but in the case of ground based instruments it is also composed by the smearing effect of Earth's atmosphere. The use of interferometers and new techniques such as adaptive optics allows dramatic improvements in resolving power.

Coude' Focus A telescope focus used primarily for spectroscopy. In this arrangement light from the primary mirror is reflected along the polar axis to a focus at a fixed place separate from the moving parts of the telescope or in an entirely separate room of the observatory (the Coude' room) where large pieces of equipment can be fitted without interfering with the telescope balance. The word Coude' comes from the French word meaning "Bent like an elbow".

More Pictures Holiday Party at Mi Amore



Club Officers



President
Jana Hunking

Vice President
?????



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 February 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.

