

Vandenberg Amateur Astronomical Society
presents
The Sidereal Times



Sculptor galaxy (see page 5)

Meeting News:

At the January meeting and New Years party we held a brief club Meeting, discussed some future events and enjoyed the Pizza and all the trimmings and good camaraderie among the attendees. Also confirmed club officers for 2016 operating year.

**Reminder: VAAS meeting February 12th at 7:00 PM
Manzanita school, Hope to see you there.**



Lunar Calendar:

New Moon 8th
Full Moon 22nd

Site 1.5 Figueroa Mt.



Presidents Message

For the January meeting, we had a great New Year's party at Mi Amore Pizza, with many members attending. It was a good time to visit and I think everyone seemed to enjoy the evening spent there.

Our next meeting for Friday February 12-(Lincoln's Birthday), will be back at Manzanita Charter School starting at 7pm. Recent space items in the news may be discussed and an Astronomy video will be shown. Members are always encouraged to bring articles or information on Astronomy to share.

Most of you probably heard the Space -X Rocket as it took off last January 17 from SLC 4 on south VAFB in the morning, but it was sad we could not see it for the heavy fog that day. The satellite Jason -3 was delivered correctly to the proper orbit and will be helping map our oceans and presenting more information on climate and weather patterns of our Earth.

We hope our members and their families enjoy Valentine's Day on Sunday the 14th of February.

Hopefully we will have clear night skies before the rains come back.

Jana

Events

Feb 6th *Star party at the observatory.*



Feb 7th Mercury will be at its greatest Western elongation of 25.6 degrees from the Sun. This is the best time to view Mercury since it will be at its highest point above the horizon just before sunrise in the Eastern sky.

Feb 13th *Star party at the observatory.*



Feb 27th *Star party at the Observatory*



VAAS Club Officers for 2016



Outreach event at Winery 2015



Star Party and Events

Jan 2nd Star party at the observatory cancelled due to weather.



Jan 8th Meeting and New Years party at Mi Amore Pizza. We had a good turn out of members and family for this event 16 in all. We did collect 2016 membership dues from some of the members. Lots of Pizza, chicken wings, salad, drinks, meat balls in sauce, desert and lots of goodies for all to enjoy. As usual Jana brought some tasty treats from home. We all had a good time and shared stories and adventures with each other and look forward to more events of this kind in the future. We confirmed club officers for 2016 operating year meaning the 2015 officers were railroaded into another term. Many thanks go to Jana our President for setting up this event for all to enjoy. (See page 6 photos).



Jan 9th Star party at the observatory. Cancelled due to weather.



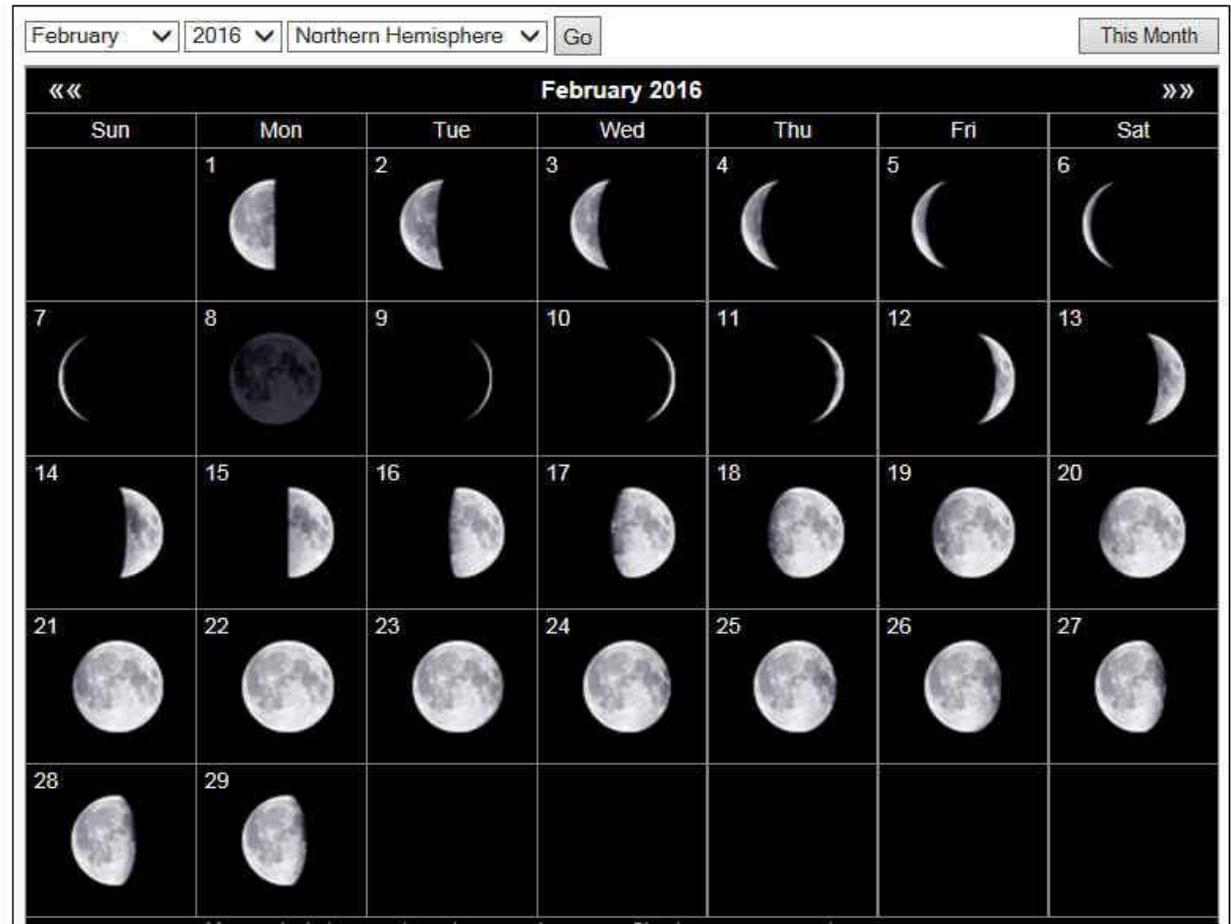
Jan 16th Star party at the observatory. Cancelled due to weather.



Observatory



February Moon



Full 22nd, New 8th, 1st Quarter 15th, Last Quarter 1st

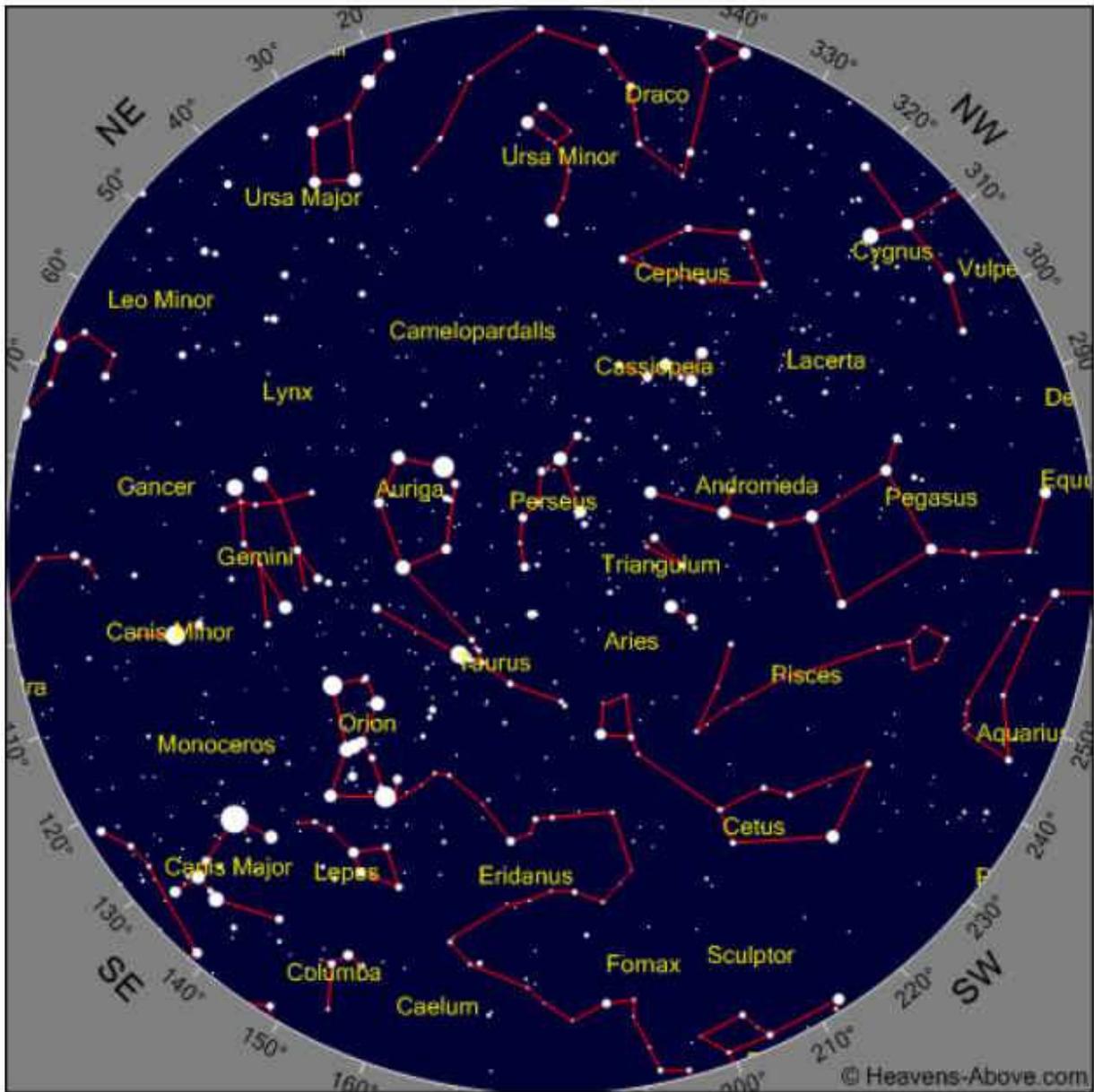
Moon Facts

As you read this, the Moon is moving away from us. Each year the Moon steals some of Earth's rotational energy and uses it to propel itself about 3.8 centimeters higher in its orbit. Researchers say that when it formed the Moon was about 14,000 miles from Earth. It is now more than 240,000 miles away.

The Moon is Earth's only natural satellite, Right? Maybe not. In 1999 scientists found that a 3 mile wide asteroid may be caught in Earth's gravitational grip thereby becoming a satellite of our planet.

February Sky

Some Objects of interest,
M42 M1, Moon & Double Cluster



Time

Year	2016	Month	2	Day	5	Hour	2	Minute	32
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Photo Courtesy of Jon Walke



The Sculptor Galaxy NGC 253, also known as the silver Coin or Silver Dollar galaxy is an intermediate spiral galaxy in the constellation of Sculptor. NGC 253 is approximately 11,420,000 light years distant. The Sculptor galaxy is a starburst galaxy that is currently undergoing a period of intense star formation. NGC's most notable feature of star formation has created several super star clusters on NGC 253's center, one with a mass of 1.5×10^6 solar masses and an absolute magnitude of at least -15 and two others with 5×10^4 solar masses and an absolute magnitude around -11 . A later study discovered an even more massive cluster obscured by NGC 253's interstellar dust with a mass of 1.4×10^7 solar masses and is also rich in Wolf Rayet stars. Star formation is also high in the northeast of the galaxy where a number of red super giants can be found. This along with other peculiarities found suggest that a gas rich dwarf galaxy collided with it some 200 million years ago disturbing its disk and starting the present starburst. As happens in other galaxies suffering strong star formation the stellar winds of the massive stars produced in the starburst as well as their deaths as supernovae have blown out material to the galaxy's halo in the form of a super wind that seems to be inhibiting some star formation in the galaxy. Scientists have seen hints of a much denser, hydrogen rich molecular gas in the galaxy. This is the type of gas that makes up a large part of the parent clouds that gave birth to stars in the galaxy's central region as the stars form their radiation pushes against the surrounding parent cloud.

Image capture, NGC 253 Sculptor galaxy, C8, 1280mm at f/6.3, 600mm w/PHD2 guide, T3 mod ISO 1600, 9x300s lights, 20 darks and 40 flats, 40 bias.

For What its Worth

The Ring Nebula Messier 57, NGC 6720 is a planetary nebula in the Northern constellation of Lyra. It lies at a distance of 2,283 light years from Earth and is 1.2 arc minutes in angular size. Such objects are formed when a shell of ionized gas is expelled into the surrounding interstellar medium by a red giant star that was passing through the last stage in its evolution before becoming a white dwarf. It has a visual magnitude of 8.8v and a photographic magnitude of 9.7p. Photographs taken over a period of 50 years show the rate of nebula expansion is roughly 1 arcsecond per century that corresponds to a spectroscopic observation as 20-30 km/sec. M57 is illuminated by a central white dwarf of magnitude 15.75v. All interior parts of the nebula have a blue green tinge that is caused by doubly ionized oxygen emission lines at 495.7 and 500.7 nanometers (nm). These observed lines occur only in conditions of very low density containing only a few atoms per cubic centimeter. In the region of the ring part of the reddish hue is caused by hydrogen emission at 656.3 nm. Ionized nitrogen contributes to the reddishness at 654.8 and 658.3 nm.

2016 New Years Party and Meeting Mi Amore Pizza



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

Reminder Club meeting February 12th 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

