

Vandenberg Amateur Astronomical Society
presents
The Sidereal Times



Messier 8 Lagoon nebula (see page 5)

Meeting News:

At the June meeting we discussed various upcoming events, meteor showers and eliminating rodents in the observatory to name a few.

Watched an original video episode called Cosmos by Carl Sagan courtesy Dave Covey.

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



Lunar Calendar:

New Moon 24th

Full Moon 9th

A Little Humor: Two hydrogen atoms meet one says, "I've lost my electron". The other says, "Are you sure". The first replies, "Yes I'm positive".



Presidents Message

Well the summer break in July and August for the Newsletter and membership meetings has past; along with, hopefully, the nightly marine layer locally known as "the Lompoc Nebula".

The VAAS fall campaign has begun.....we've been getting a few requests from the local teachers for our support.

The 1st event is from the Orcutt Academy K-8 now located in Los Alamos. We haven't firmed up a date for this event, but the current target is **Friday 26 September** setting up the scopes about 7PM.

The 2nd event is from Clarence Ruth school in Lompoc on College Ave. west of V St. The current plan is to support them on **Friday 17 October** starting about 7PM. This event will have a mix of show-n-tells in the classrooms and telescopes outside.

We'll discuss these and other events at the 12 September meeting.

The month of September will bring longer nights and better chances for clear skies. In the evening sky the planets (in order after sunset): Saturn, Mars, Neptune and Uranus are visible. In a dark sky location you should also be able to see the Milky Way nearly straight overhead.

The Great Andromeda Galaxy will be visible about 10PM and for those who can wait until about 2AM the Great Orion Nebula will be visible.

As always, have fun and clear skies!.....Dave

Events

September 9th Full Moon occurs at 01:38 UTC.

Sept 13th *Star Party at observatory.*

September 20th *Star Party at Figueroa Mountain site 1.5*

September 23rd September Equinox. It occurs at 02:29 UTC. The Sun will be directly over the equator and there will be nearly equal Amounts of day and night throughout the world. This is also the 1st day of Fall (Autumnal Equinox) in the Northern Hemisphere and the first day of Spring in the Southern Hemisphere (Vernal Equinox)

September 24th New Moon occurs at 06:14 UTC.

September 27th *Star Party at observatory*



VAAS Observing site 1.5 Figueroa Mountain

Star Party and Events

June 7th & 21st Star party at the observatory cancelled due to weather.



June 28th Star party Figueroa mountain. Dave C. Vince T. and Vahan Y. at Site 1.5. Wind was up this evening. 15 Mph gusting to 25 +. No good for photography images were dancing around even in low power eyepieces. The seeing was good lots of stars and the Milky Way stood out in grand fashion. Did a lot of Messier object viewing. Called it quits at midnight.



Star Party and Events cont.

July 5th Star party at observatory, cancelled due to weather



July 19th Star party at observatory was a combined Hancock's College for kids program and Endeavor center function conducted by Vince Tobin and Edmond Burk with Vahan Yeterian supporting. The sky was overcast with occasional raindrops and some clearing. During clear spots Saturn, Antares, Mars and a few other stars were viewed. About 10 parents and children were in attendance. Lots of Q&A during the event. Secured at 11:00 PM.

July 26th & Aug 2nd Star party Figueroa Site 1.5 and the observatory Cancelled due to weather.

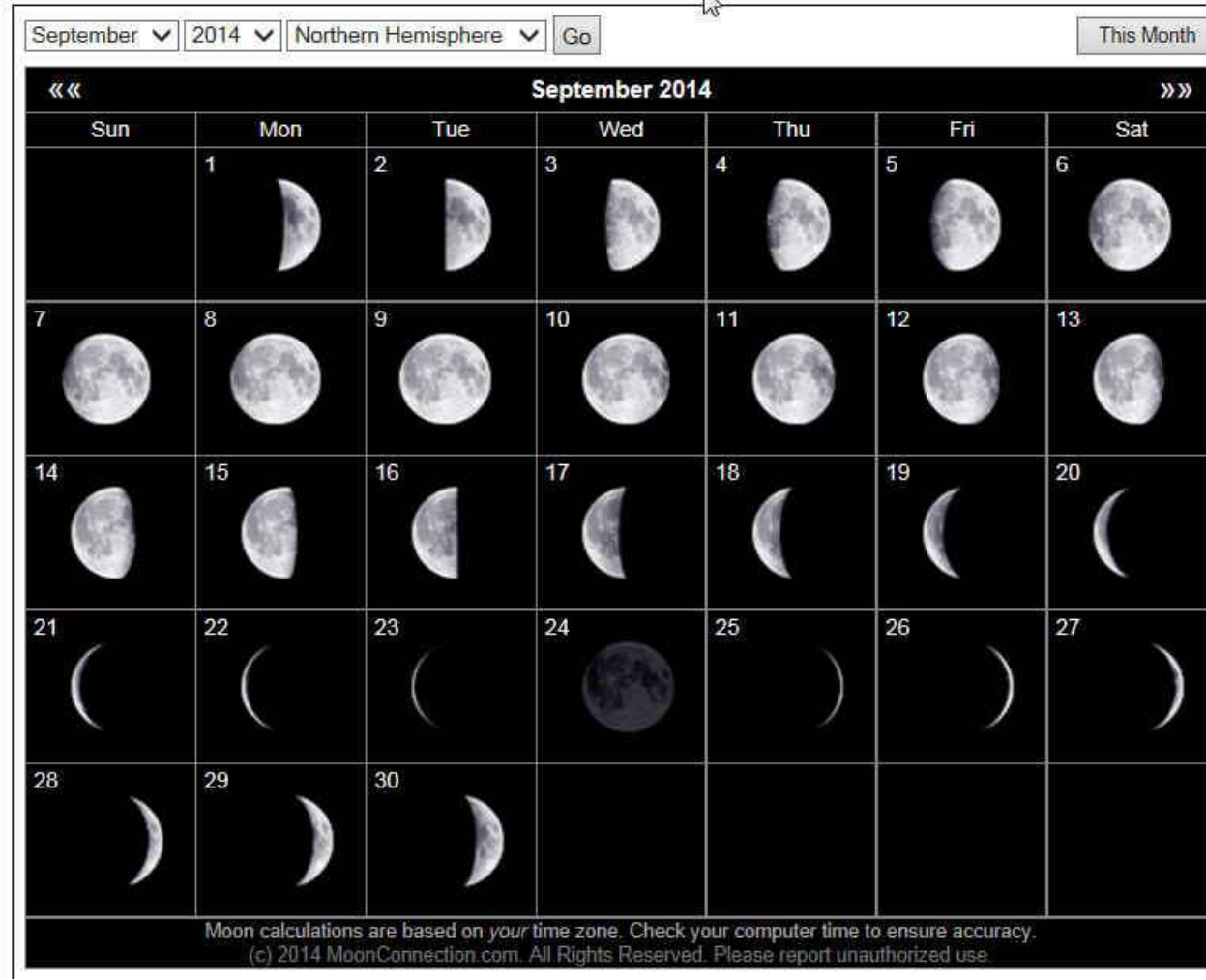


August 16th Star Party at observatory. Vince, Dave, Vahan, Ken & Louise on site. A visitor Jim Vancura also present a potential new member. Sky was clear and stable with the Milky Way dominating the sky. No one brought a scope cause we decided to use the observatory 14" scope. Looked at Saturn, Mars, M4 and 5, M16 and 17 and a bunch of other nebula and clusters. All in all we had a good observing session until about 10:30 when the sky started clouding toward the West and south. Shut down the star Party at about 11:00 PM.

August 23rd Star Party at Figueroa Mtn. Vince only one there from VAAS. J. Pritchard and several visitors on site. Geza was also there photographing, he excels imaging deep space dark nebula. Vince had a special treat viewing Comet Jacques. Weather was good but sky was not as dark a usual. Was a good clear night enjoyable under the stars. Vince departed 0250 hrs.

August 30 Star Party at observatory. Dave Covey and Vahan were on site 7:40 Pm. Sky was overcast with high clouds and a light haze. Did not set any instruments up. They did change the battery in the telescope hand controller but did not do a calibration because of the overcast. Departed the site at 8:40 Pm.

September Moon



Full 9th, New 24th, 1st Quarter 2nd, Last Quarter 16th

Moon Folklore

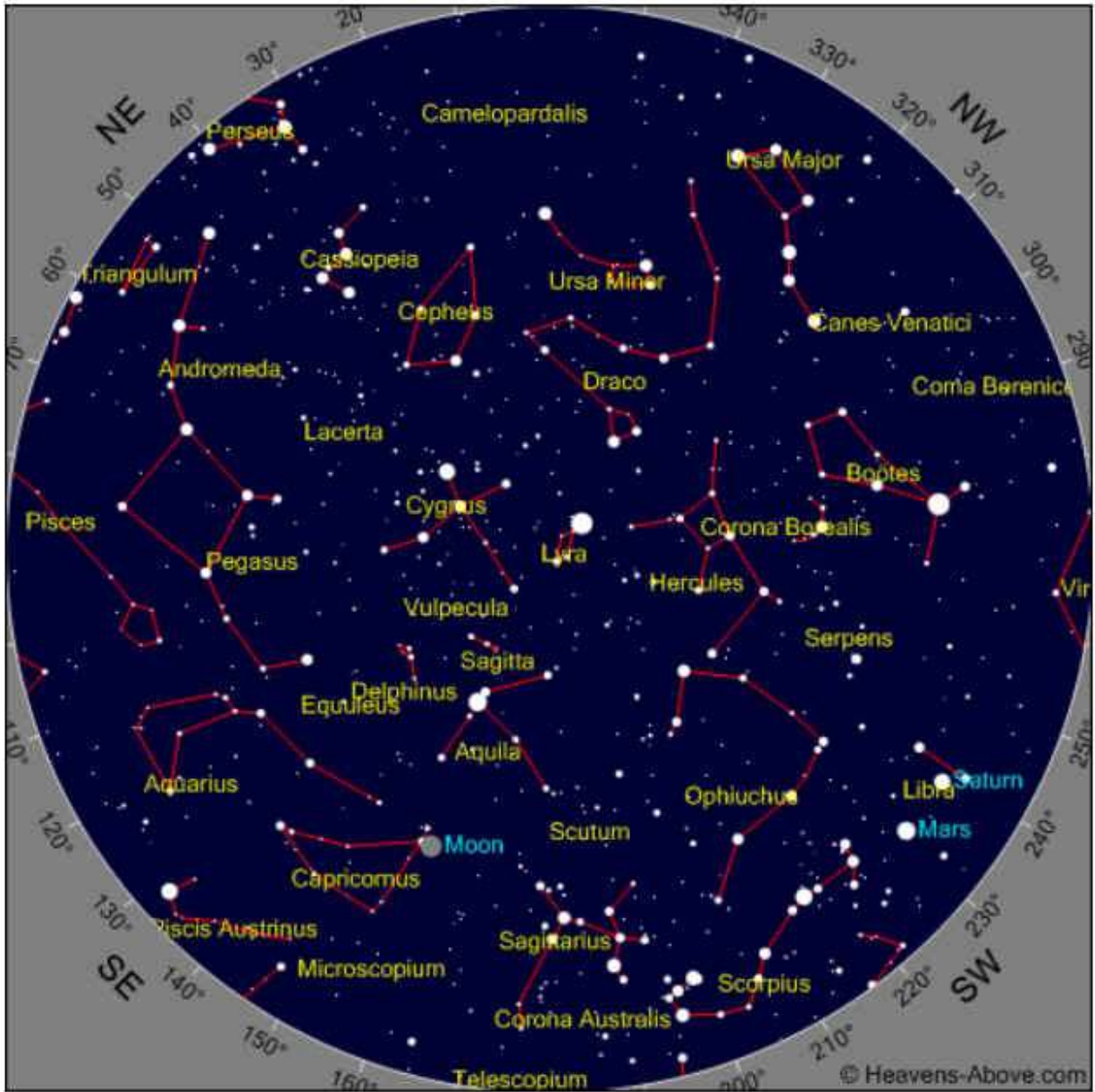
Chinese legend speaks of the man in the moon who secures the destiny of lovers by uniting them with an invisible silken cord that he ties around their waist.

Some ancient civilizations considered the moon a masculine deity whose role was to structure society as a measure and recorder of time.

When a large star or planet is near the Moon the weather will be violent. Fog and a small Moon bring easterly winds.

September Sky

Some Objects of interest, Saturn, Mars, M31, M13, M57, M27, Moon



Time

Year	2014	Month	9	Day	5	Hour	21	Minute	5
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Photo Courtesy David McNally



Messier 8 NGC 6523 the Lagoon nebula is a giant interstellar cloud some 5200 light years distant in Sagittarius. It is one of only two star forming nebulae faintly visible to the naked eye from the mid Northern latitudes. It is currently undergoing vivid star formation and has already formed a considerable cluster of young stars. It is an emission nebula in the H-II region. It spans 110 by 50 light years. M8 contains a number of remarkable features, known as Bok globules (Dark collapsing clouds of protostellar clouds with diameters of 10,000 AU). It also includes a funnel like or tornado like structure caused by a hot O-type star that emanates ultraviolet light heating and ionizing gases on the surface of the nebula. Image capture was using a Meade 10 inch wide field SCT F#6.3 and Canon DSLR CCD camera, modified. 7x3 minute exposure stacked and adjusted in Deep Sky Stacker (DSS), 21 minute total integration time.



For what its worth

Accommodation The ability of the eye or other optical instrument, to change focus depending on the distance to the object. In humans and some mammals accommodation occurs by changing the shape of the lens. At rest the lens is thin and focused for distant objects. To bring nearby objects into focus the Ciliary muscles contract causing the lens to become rounder (more convex). At about age 40 the lens becomes less flexible and accommodation is gradually lost. This condition is known as Presbyopia.

Crystal Optics The transmission of light by crystals differs from that by glass since the refractive index may depend on the direction of incidence of the light. (Crystals are not in general isotropic). Uniaxial crystals (belong to the tetragonal, hexagonal and trigonal systems) have two principal refractive indices and display double refraction. Biaxial crystals (orthorhombic, monoclinic and triclinic) have three principal refractive indices.

Nicol Prism An optical device for producing a beam of plane Polarized Light. Two pieces of calcite crystal are cemented together with Canada Balsam. Incident light is split into ordinary and extraordinary linearly polarized rays in the prism. The ordinary ray hit the balsam layer obliquely, and is totally internally reflected; the other ray emerges plane polarized for a certain range of incident angles. The Nicol prism is used in the polarizing microscope and also in Geology to examine thin sections of rock microscopically.

Maximum Magnification An easy way to determine the maximum useable magnification your scope can use is rather simple. The eyepiece focal length for maximum useable magnification can be found by just looking at the F-ratio for the scope. For example look at the front of an 8 inch scope where it says "f-10", you now know the smallest focal length eyepiece is 10 mm. Some scopes do not have this information on the front of the instrument but it is easily found in its documentation or can be calculated by Focal length divided by aperture size (in inches or in millimeters).



Observatory (VAAS)



14 inch SCT inside

Club Officers



President
Dave Covey



Vice President
Monica LeClair



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 September 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.

