

Vandenberg Amateur Astronomical Society
presents
The Sidereal Times



Messier 78 (see page 5)

Meeting News:

At the September meeting we discussed Nominations for Club officers, star party attendance, annual picnic, Outreach events and watched a video about the night sky.

Reminder: VAAS meeting October 11th at Manzanita school, Hope to see you there.



Lunar Calendar:

New Moon 5 October
Full Moon 18 October

Presidents Message

Two significant VAAS events occur this month: 1 is nominations for the various officers, President, Vice President, Treasurer and 2nd is the fall picnic. The nominations will be held during the 11 October meeting. Vahan Yeterian has consented to remain the News Letter Editor. Dave Covey and Liberty Partridge have indicated that they would prefer to let others have their turn. The Fall picnic has been set for 19 October at River Park. Details will be discussed at the 11 October meeting. Please mark your calendars and come on down.

Now that the Marine layer, we hope, has loosened its grip on the Central Coast region venturing out into the local night skies can again be fun for us amateur astronomers. We'll still go up to Figueroa Mountain on Saturday closest to the new Moon this month and maybe next month. The Saturday closest to the 3rd quarter Moon we'll continue to gather at the observatory through the rest of the year. Please do make an effort to come to the new Moon or the 3rd quarter Moon star parties. It is always good to have other members share their experiences and view through different scopes. A few of us will also continue to try and get the Mallincam working because it would allow others to see, via a monitor, what is in the scope before they visually look into the eyepiece at the same object.

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

October 5th Star Party Figueroa Mountain.

October 8th Uranus at opposition. The planet will be at its closest approach to Earth and its face will be fully illuminated by the Sun, best time to view.

October 5th New Moon occurs at 00:34 UTC.

October 7&8 Draconids meteor shower. The draconids is a Minor shower producing only about 10 meteors per hour. It is Produced by dust grains left behind by comet Zip Giacobini-Zinger. The shower peaks on the night of the 7th and morning of The 8th. Best viewing will be just after midnight. The meteors radiate from the constellation of Draco but can appear anywhere

October 9th Mercury at greatest Eastern elongation. The planet Will be at its furthest angle from the Sun. It will be at its highest Point in the night sky after Sunset.

October 12th Star party VAAS Observatory.

October 12th This is Astronomy Day part 2. This annual event Is intended to provide a means of interaction between the General public and various astronomy enthusiasts groups and Professionals. The theme is “Bring astronomy to the people” Various clubs and organizations planning special events. October 12th is also the international observe the Moon night.

October 18th The full Moon will be fully illuminated as seen From Earth, this phase occurs at 23:38 UTC.

October 18th Penumbral Lunar eclipse. This occurs when the Moon passes through Earth’s partial shadow (Penumbra). The Eclipse will be visible throughout most of the world except Australia and extreme eastern Sibera.

October 21-22 Orionids meteor shower. Orionids are an average meteor shower producing up to 20 meteor’s per hour a its peak. It is produced by dust grains left behind by comet Halley. The shower runs annually from October 2nd through November 7th. It peaks this year on the night of October 21st and the morning of the 22nd. The meteors radiate from the constellation of Orion but can appear anywhere in the sky.

October 26 Star Party VAAS Observatory

Some Star parties were cancelled due to Local Weather.



Star Party Reports:

7 Sept Figueroa Mtn. Light winds and some low clouds. Vince Tobin and Dave Covey gathered about sunset at Site 1.5. We joined Ge’za Kurczveil from the Santa Barbara area. Vince tried photographing the area near the constellations Delphinus and Sagitta in hopes of spotting a star that recently went Nova. Dave visually star hopped from West to East spotting several clusters nebula and galaxies. We shut down about 1:30 AM the temperature on top was 74deg.F at the bottom it was 59deg F.

14 Sept. at the observatory, light winds and the Marine layer moved in fast before sunset. Vince T, Dave C, and Vahan Y

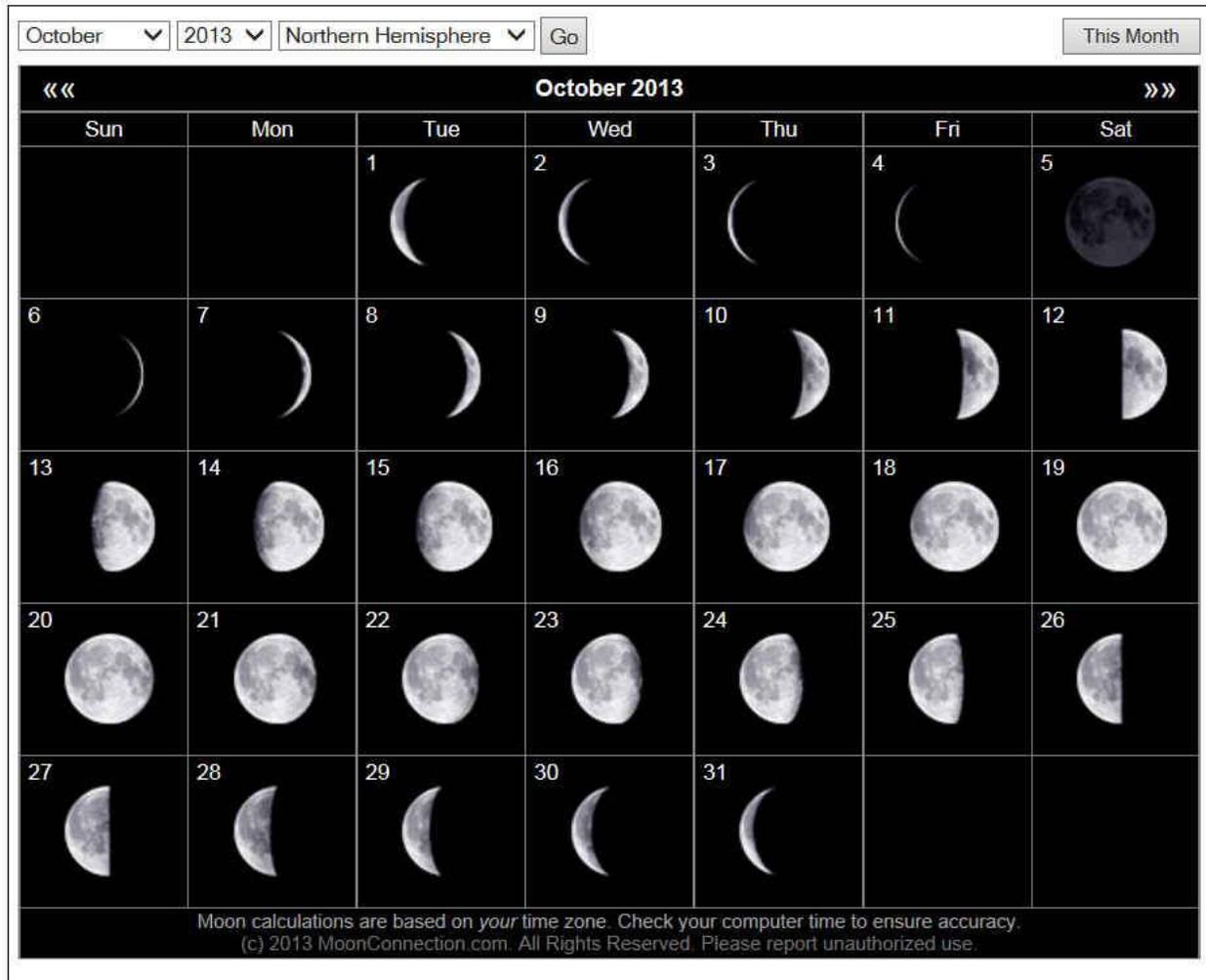
gathered at the observatory with the primary goal of getting the Mallincam functioning with the 14 inch scope and displaying on the observatory monitor. We discovered the monitor has a standard VGA connector, Strike one! The Mallincam has an RCA type connector. Strike Two! We did manage to interface the camera to the 14 inch scope using a Micro focuser and a flip mirror. Vince brought a portable TV which has a RCA video connector. Yea a Hit! After some fiddling around we got the Malincam connected to the TV and verified the Camera does function. Later we will try imaging when we have clear sky and try and fine tune the setup. Called it quits at about 8:30 PM.

28 September at the observatory. Clear night with some light haze down low. We had a good showing, The Sprakers Ken and Louise, Vahan Yeterian, Dave Covey, Vince Tobin, Jana Hunking and Tom Gerald and two guests. Vahan and Vince struggled most of the evening with getting the Mallincam functioning. They were mostly successful but it took awhile. Ken Spraker and wife Louise visually observed several objects with their 12 inch Dobsonian scope. Tom did the same with his 3 inch refractor. Dave had 2 8 inch scopes going. The manual 8 inch Celestron was used from time to time as was his 8 inch Meade go-to system. The go-to capability was used more frequently since it could auto follow objects of interest. A few individuals used Binoculars. A good time was had by all. At 11:00 PM we called it a night.

(See page 6 star party photos)

Editors Note: Gramatical errors and misspelled words are strictly for the amusement of the reader.

October Moon



New Moon Oct 5th Full Moon Oct 18th

Moon Folklore

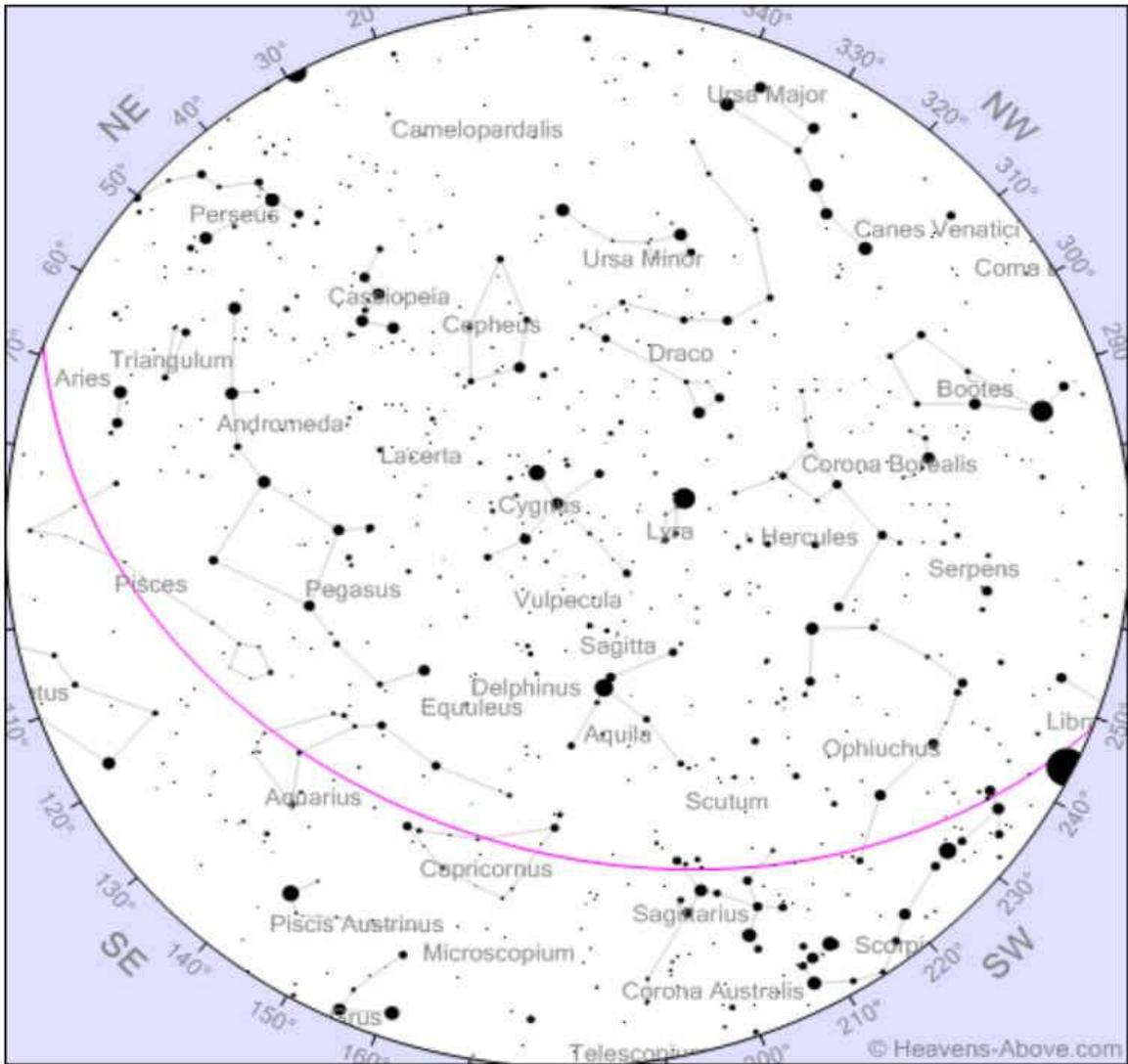
Some believe that the 5th day after a full moon is the perfect time to try and conceive a child.

In some countries, a Halo around a full Moon means bad weather is coming.

A pale full Moon indicates rain, while a red one brings wind.

October Sky

Objects of interest: M31, M57, M27



Time

Year	2013	Month	10	Day	1	Hour	4	Minute	30
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Photo Courtesy Gary Satterfield



Messier 78, NGC 2068 is a reflection nebula in the constellation of Orion. M78 is the brightest diffuse reflection nebula that includes NGC2064, NGC2067 and NGC 2071. This group belongs to the Orion molecular cloud complex and is about 1600 light years distant. Two stars HD38563A and HD38563B are responsible for making the cloud of dust in M78 visible by reflecting their light. About 45 variable stars of the T Tauri type young stars are still in the process of formation as well as some 17 Herbig-Haro objects are known in M78. The heat glow of interstellar dust grains show astronomers where new stars are being formed. Image capture was performed using an AT8RC telescope and a Hypercams modified canon DSLR 500D riding on an auto guided Hyper tuned Celestron CGEM mount.

Star Party Figueroa Mtn and VAAS Observatory



For What It's Worth

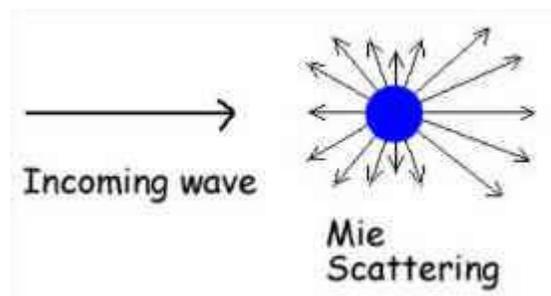
Entrance Pupil The optical aperture of a telescope, binoculars, eyepiece or other optical system through which light enters.

Exit Pupil The minimum diameter of the light beam leaving an eyepiece through which all of the light from the eyepiece passes. It can be calculated in either of two ways by dividing the diameter of the telescope's primary objective by the magnification, or by dividing the focal length of the eyepiece by the focal ratio (F# number of the telescope). For example a telescope with a 20 centimeter (8inch) primary mirror using a magnification of 38 times results in an exit pupil of 5.3 mm. The observers eye should be located at the exit pupil to see the full and brightest field of view.

Seeing Conditions A five point scale devised by Eugene Antoniadi to indicate the quality of seeing.

- 1-perfect seeing without a quiver.
- 2-slight undulations with moments of calm lasting several seconds.
- 3-moderate seeing with larger tremors.
- 4-poor seeing with constant troublesome undulations.
- 5-very bad seeing, scarcely allowing the making of a rough sketch.

MIE Scattering Scattering of light by larger particles such of those of dust or fog in Earth's atmosphere in which the amount of scattering depends very little on wavelength. Mie scattering named after the German physicist Gustav Mie, results in a pattern like an antenna lobe with a sharper and more intense forward lobe for larger particles. Compare with Rayleigh Scattering.



Rayleigh Scattering The scattering of light by particles that are relatively small in relation to the wavelength of light. Rayleigh scattering of short wavelengths in sunlight by gas molecules in the atmosphere is the reason the sky appears blue. (English physicist Lord Rayleigh 1842-1919). In Rayleigh scattering the amount of scattering is inversely proportional to the 4th power of the wavelength. Thus blue light is scattered by small particles ten times as much as red light.



Club Officers



President
Dave Covey



Treasurer
Liberty Partridge



Vice President
Vinca 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 11 October 2013 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.