

Vandenberg Amateur Astronomical Society
presents
The Sidereal Times



Messier 33 (see page 5)

Meeting News:

At the October meeting we discussed the Oct. 19th picnic. Nomination of VAAS officers, not enough members in attendance for official nominations, only 5 members present. Did not have a video presentation, departed early.

**Reminder: VAAS meeting November 8th
Manzanita school, Hope to see you there.**



Lunar Calendar:

New Moon 3rd
Full Moon 17th

Presidents Message

Two significant VAAS events occurred last month. 1st were the nominations for the various club officers and 2nd was the Fall picnic. Nominations were not really held during the 11 October meeting due to the lack of a quorum. We need at least 2/3 of the active (defined as paid dues) membership for official business. We will try again at the November meeting. The fall picnic was held on 19 October at River Park with 10 members showing up. We had plenty of food and refreshment to go around.

A few astronomical events of note will occur during November. Comet Ison will make its closest approach to the Sun on November 28th if the comet survives its encounter with the sun. Although first indicated to be one of the brightest comets in recent memory, the news is now indicating that it might not live up to the earlier billing. During November Ison can be viewed near the constellations Virgo and Libra in the early morning.

The Taurids meteor shower around November 4-5 is a long running shower with 5 to 10 meteors per hour.

Around November 16-17, the Leonids shower produces an average of 15 meteors per hour. Glare from the full Moon is an issue.

We will be gathering at the observatory on the Saturday closest to new Moon and 3rd quarter Moon through the rest of the year. Please do make an effort to come to the star parties. It is always good to have other members to share their experiences and view through different scopes.

Note: Girl Scout Outreach event 9 November at the Observatory. Bring your scopes. Set up at around 5:00 PM.

As always, have fun and clear skies.

Dave

Nov 2nd or 30th Star party at Observatory.

Nov 3rd The Moon will be directly between Earth and Sun and not be visible, New Moon, this occurs at 12:50 UTC.

Nov 3rd Hybrid Solar Eclipse: This eclipse occurs when the Moon is almost too close to the Earth to completely block the Sun. It will appear as a total eclipse to some parts of the world and will appear annular to others. The path will begin in the Atlantic ocean off the Eastern coast of the USA and move East across the Atlantic and across central Africa.

Nov 4th and 5th Taurids Meteor Shower. The Taurids is a long running shower producing only 5 to 10 meteors per hour. It is unusual in that it is in two separate streams. The first is produced by dust grains from Asteroid 2004 TG10. The second stream is produced by debris left behind by Comet 2P Encke. It peaks on the night of Nov 4th. Meteors Radiate from the constellation of Taurus.

Nov 9th Star Party at the Observatory.

This will also be an Outreach event for the Girl Scouts. Bring your scopes and set up by 5:00 PM. See you there.

Nov 16th and 17th Leonids Meteor Shower. They are an average shower producing an average of 15 meteors per hour at its peak. This shower is unique in that it has a cyclonic peak about every 33 years where hundreds of meteors per hour can be seen. That last occurred in 2001. The peak this year is on the night of the Nov.16th and the morning of the 17th.

Nov 28th Comet Ison closest approach to the Sun. Comet Ison will make its closest approach to the Sun on Nov 28th. If the comet survives its encounter with the Sun it could be one of the brightest comets in recent memory. Some Astronomers estimate that it could be bright enough to be seen during daylight hours. It will be visible in the early evening and morning sky if it survives its encounter with the Sun.

Nov 23rd Star party at the Observatory.

Some star parties were cancelled due to weather.



Star Party

October 5th at the Observatory. This star party location was changed to the observatory due to Figueroa Mtn. Road being closed within the Los Padre National Forest. Louise and Ken Spraker, Vahan Yeterian and Dave Covey gathered before sunset. We were later joined by Vince Tobin and Kris along with two other guests. Vahan set up his 4" refractor to do some photographic work. Louise and Ken set up their 12" Dob and Binocular to visually find deep sky objects. Dave set up his two 8" scopes to spot deep sky objects. The two scopes are both Schmidt-Cassegrain but are about 30 years different in technology. Vince operated the Observatory's 14 inch scope. Kris and the two guests are new to the area and might join us at a later date. Most folks left about 10:30 PM. Vince and Dave called it a night and started packing about 12:00 AM. All-in-all it was a good night under the stars. (see page 6).

October Picnic

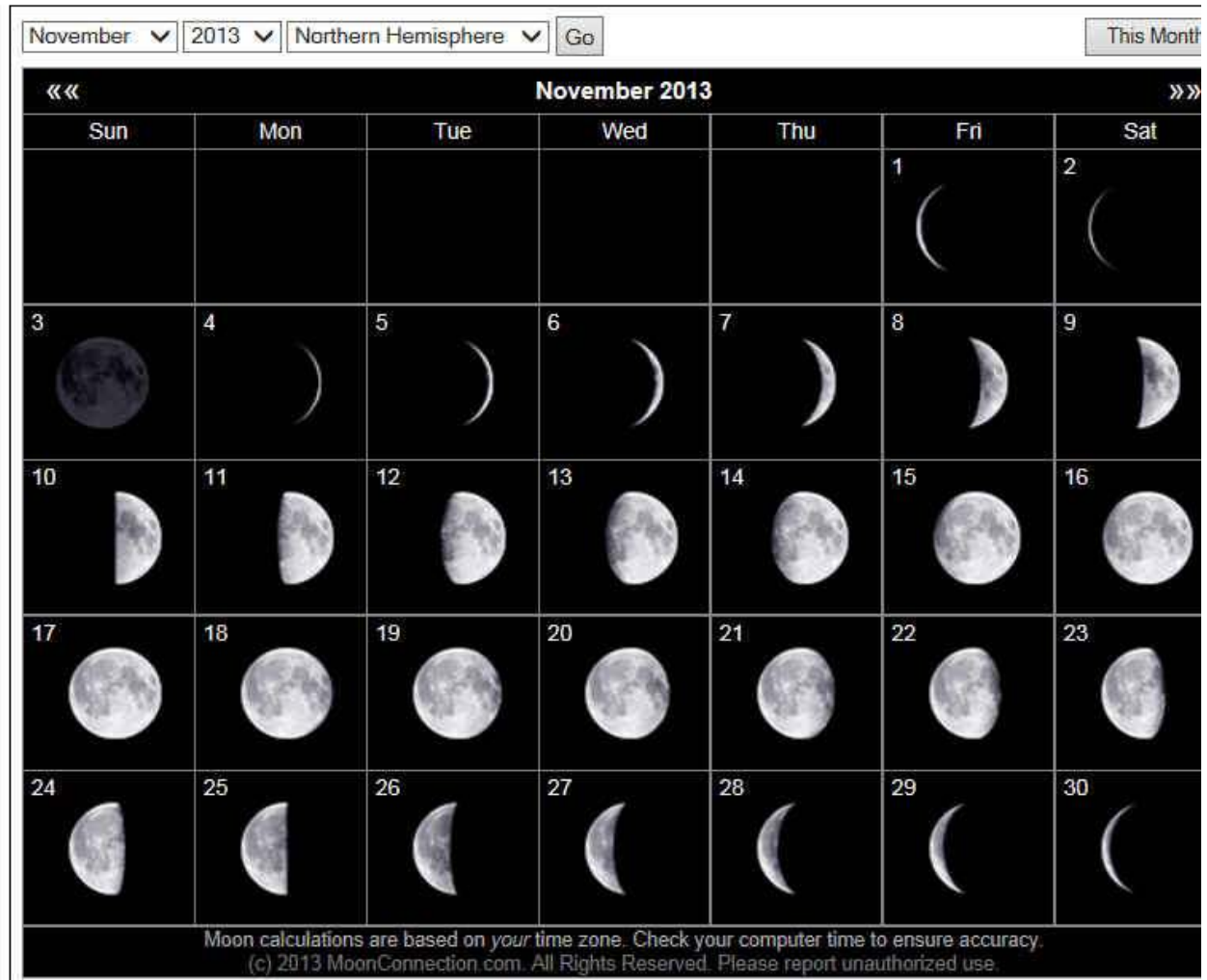
Dave and Vahan set up the tables and BBQ and unpacked the food and drink. About 12:10 PM started BBQ the Tri-Tip. Members started drifting in and by 1:00 PM it was chow time. Most of the attending members brought a side dish like chips, salad, beans deviled egg etc. There was plenty of food to go around. Gary's wife brought some home made cookies and wow were they good. After the group had their fill it was social hour and there was much interaction between the members. All in all it was a very successful event, a good time was had by all. By the way the weather was delightful. (see page 6 & 7).

Star Party

October 26th Vahan, arrived at the Observatory about 5:00 Pm. Clouds and fog moved in obscuring everything. Loitered for ½ hour weather got worse. Departed. Star Party cancelled.



November Moon



Full 17th, New 3rd, 1st Quarter 10th, Last Quarter 25th

Moon Folklore

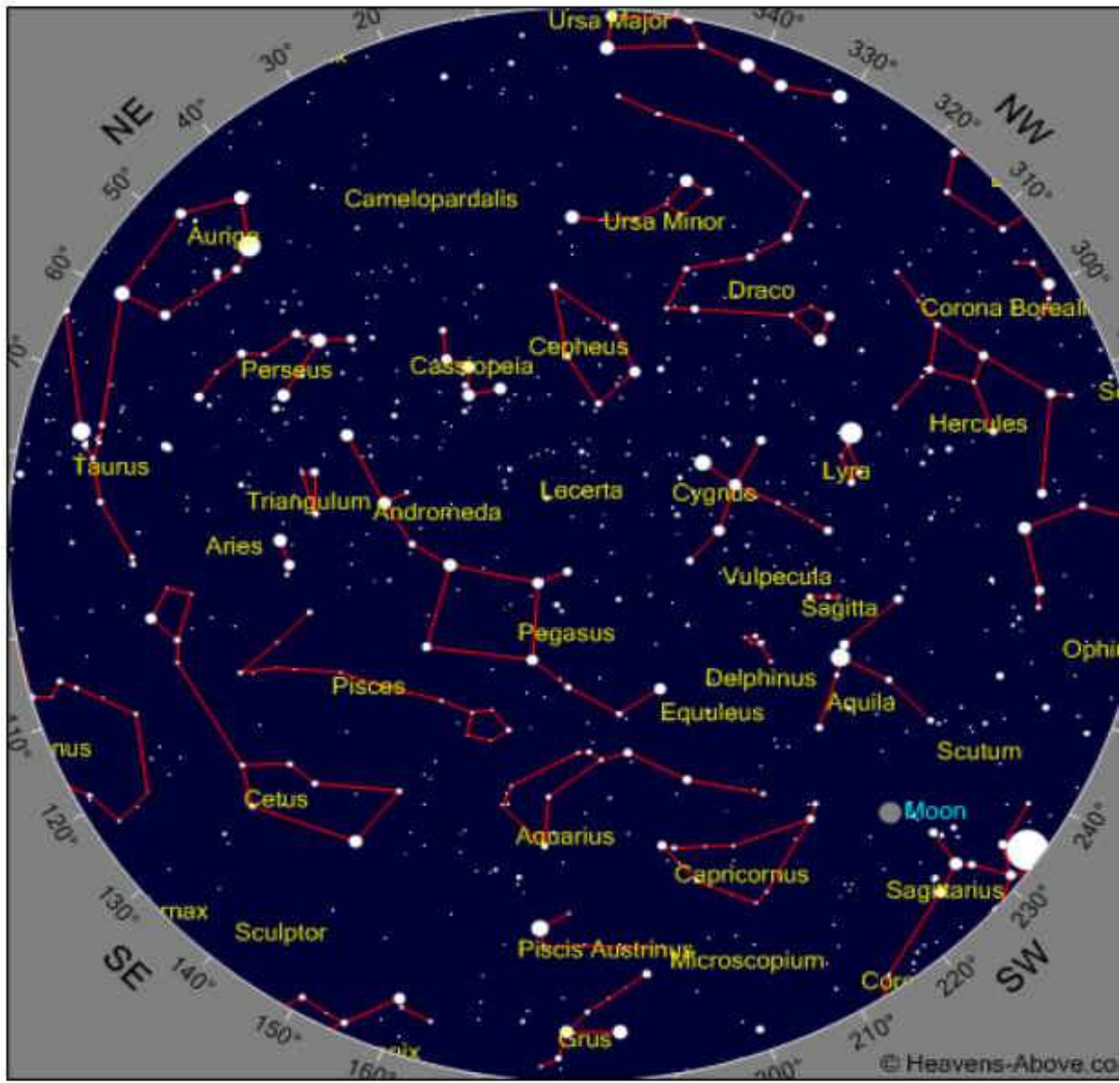
If the New Moon is from the North it will be cold for 2 weeks, but if from the South it will be warm.

In some Chinese religions offerings are made to the ancestors on the night of the full Moon.

A ring around the Moon means rain or snow. Two new Moons in one month were said to predict bad weather.

November Sky

Objects of interest: M13, M15, M92, M27, M57, M31



Time

Year	2013	Month	11	Day	8	Hour	3	Minute	23
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Photo Courtesy Gary Satterfield



Messier 33, NGC 598 lies at a distance of 3 million light years in the constellation of Triangulum. M33 is informally referred to as the "Pinwheel" Galaxy. It is the third Largest member of the local group of galaxies which includes the Milky Way and Andromeda and about 30 other smaller galaxies. At a diameter of 50,000 light years it may be a gravitationally bound companion of the Andromeda galaxy. It may be home for some 40 billion stars compared to the 400 billion for the Milky Way and 1 trillion for Andromeda. Star formation is taking place at a rate that is strongly correlated with the gas density. The total integrated rate of star formation is about 0.45 solar masses per year. M33 is a type SC. The pronounced arms exhibit numerous reddish HII regions as well as bluish clouds of young stars. Baade discovered population II stars and globular clusters. At least 112 variable stars have been discovered including 4 Novae and about 25 Cepheids. A young Xray source is also situated in this Galaxy.

Image capture was performed using an Astro Tech AT8RC @F#8 guided with a miniBorg 50mm guide scope and an SBIG ST-I mono guide camera using PHD guide software. Capture over 4 nights using a Canon T1i @ISO 1600, then hand picking the best frames from the bunch resulting in a final stack of 64 7 minute frames(7.46 hrs total integration). All stacking, calibration and post processing was done using PixInsight 1.8 RC7.

Star Parties and October Picnic





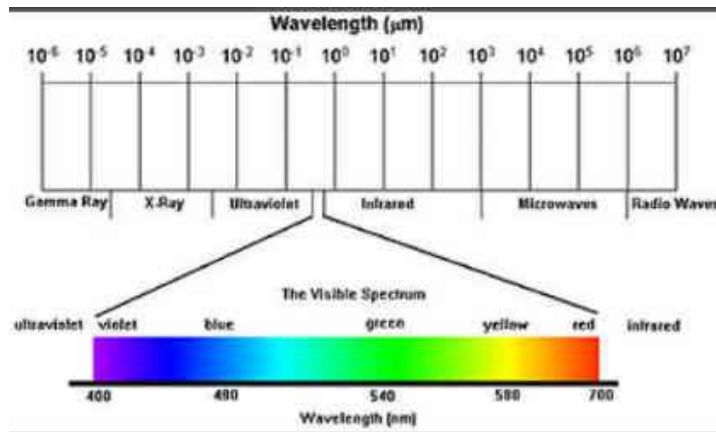
For What its Worth

Interference Fringes: Alternating light and dark bands are known as fringes and are produced by interference of peaks and troughs that result when two or more waves that travel slightly different paths from the same source are brought together. The term is also used in radio astronomy to describe the pattern that results when the signals picked up by two or more elements of an interferometer are combined; interference is the basic principle used in interferometry to increase resolving power.

Purkinje effect: The tendency of the peak sensitivity of the human eye to shift toward the blue end of the spectrum at low illumination levels. It can affect visual estimates of variable stars when using comparison stars of different colors, especially if one of the stars is red.

Refractive index: The ratio of the speed of light in a vacuum versus the speed of light through another medium. It is always greater than one, unless in a perfect vacuum, as the presence of matter retards the speed of light. When passing through a medium, long wavelengths refract less than short wavelengths so the refractive index of a medium depends on the wavelength of light passed through it.

Visible light: Electromagnetic radiation that can be detected by the human eye. It extends from a wavelength of about 780 nanometers (780×10^{-9} m) at the red end of the spectrum to one of 380 nm (violet light). Visible light spans the divide between infrared and ultraviolet radiation. See chart.



Segmented Mirror: A large mirror construction technique in which many smaller elements are built and then actively controlled to conform to the shape of the required large mirror. Presently there are several large telescopes constructed in this manner. The same technique will be used in the construction of the Giant Magellan telescope.

Note: No trees were killed to generate this newsletter, but a large number of Electrons were terribly inconvenienced.

Club Officers



President
Dave Covey



Treasurer
Liberty Partridge



Vice President
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 8 November 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.