

Meeting News (Cont.)

Reminder: Dues are due for 2012. Please submit your membership dues at the club meeting.

VAAS web site that includes a discussion group.

Vince Tobin runs the web site and sends reminders to those that have registered into the discussion group.

<http://tech.groups.yahoo.com/group/vaastronomy/>

Vince mentioned there are some audio books available on the subject of Astronomy; The Modern Scholar: Astronomy 1: Earth, Sky and Planets by James Kaler and Modern Scholar 2: Stars, Galaxies, and the Universe. Additionally, The Modern Scholar: Heavens Above: Stars, Constellations and the Sky.

Up Coming Events

Feb 7th – Full Moon

The moon will be directly opposite the Earth from the Sun and will be fully illuminated as seen from the earth. This phase occurs at 21:54 UTC.

Feb 21st – New Moon.

The Moon will be directly between Earth and the Sun and will not be visible from earth. This phase occurs at 07:39 UTC.

Saturday 14 January 2012

Vince Tobin Dave Covey and Vahan Yeterian met at the observatory to resolve issues discovered during the 13 January viewing session. We looked at the switch, drive motor, inverter and batteries. We were Not able to determine what the inverter's AL 1 code meant until later. We did find that several of the battery cable connections needed to be tightened. This seemed to correct the rotation issue. Many of the cable connectors are badly corroded and need to be cleaned. This effort will be performed before the end of January. The AL 1 code is an indicator of Low Voltage.

Special Topic – Observatory repairs, or the “Tale of Pain and Agony”. Saturday 26 Nov. Vince Tobin and Dave Covey met at the observatory to determine what is going on with the dome rotation system. Might be the Motor. On Fri 9 Dec Dave went to the observatory to remove the dome rotation systems motor with partial success. On Sat 10 Dec, Vahan, Dave and Morrie met at the observatory to remove the drive motor and gearbox assembly. A half hour later the assembly was removed and detached from the gearbox. The gear box lube level was checked along with a visual inspection of the gear assembly. The gear box runs smoothly and no debris were found in the casing. The water levels in the Battery banks were also checked and topped off where necessary. Dave took the motor to Perry's Electric in Santa Maria to have it tested. Perry's tested it (at no charge) and found no defects.

Monday 2 Jan 2012 Vahan and Dave started rework on the dome drive. The rubber weather seal was removed to provide access to the dome track and rollers. Lots of corrosion on the rollers and track and no evidence of lubrication on the track or the rollers. The rollers and track were heavily lubricated with a high temp bearing grease. Manual movement of the dome was now easy with one hand. After reinstalling the drive motor and gear box the dome was rotated using the directional switch and again the dome moved about a foot and then stalled. The switch was removed and disassembled. Contacts were worn and lots of copper filings were found in the switch case. We were about to call it a day when we found the dome shutter would not close electrically. Here now is where the “Pain and Agony” come to play. We ended up manually closing the shutter by rotating the motor coupling to drive gear by hand and relieving the load with block and tackle. Took almost 2 hours to close the shutter.....No Fun!

On 7 Jan Dave received the new switch he ordered a few days earlier. We wired and installed the new switch and tested the dome drive and rotated the dome 360 degrees both directions, all functions were normal no drop outs. Reinstalled the rubber weather seal. We also looked at the dome shutter door electrical wiring and switch. All looked good, then suddenly the little light bulbs in our heads lit up. We had overlooked the lock-out bar on the shutter switch. Sliding it to the close position the shutter function was normal and the shutter closed. “Success”! The dome rotation motor and the shutter motor currently are functional and the observatory is operational. (See photos on page 6,7,& 8 in this document)

Moon Phase:

February Moon

Moon Phases: February 2012						
Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
		1	2	3	4	5
6	7 Full	8	9	10	11	12
13	14	15	16	17	18	19
20	21 New	22	23	24	25	26
27	28	29				

7 Feb - Full Moon:

21 Feb – New Moon:

Moon Folklore

The Egyptians saw the eclipse as the swallowing moon for a short time by a mythical Sow. Other cultures view the eclipse as the moon being swallowed by other animals, like a Jaguar in Mayan tradition. In Chinese mythology a Three Legged Toad swallows the moon. Some tribes thought it was a demon swallowing the moon and they thought they could chase it away by throwing stones and curses at it.

People once believed the moon was made of silver, so they would ask the moon to help jingle the change in their pockets as they gazed at its glory.

Legend says that to cure warts, catch some moonbeams in a metal basin and wash your hands in it saying “I wash my hands in thy dish O man in the moon, do grant my wish and come take this away”.

Canis Lunus, the full moon during January is the Wolf Moon. Native Americans named it after packs of Wolves they once heard singing in the deep snows of January.

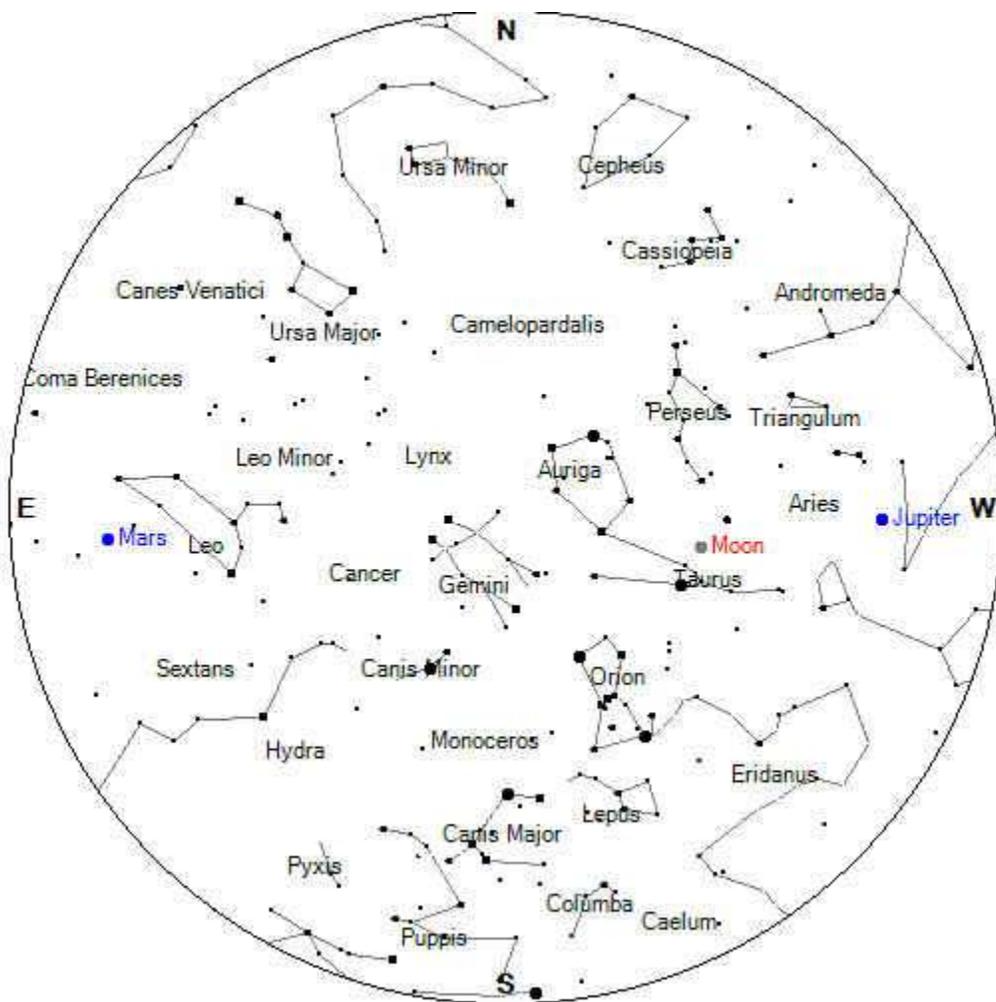
February Sky Chart

Objects of interest

M42 Orion Nebula

M1 Crab nebula

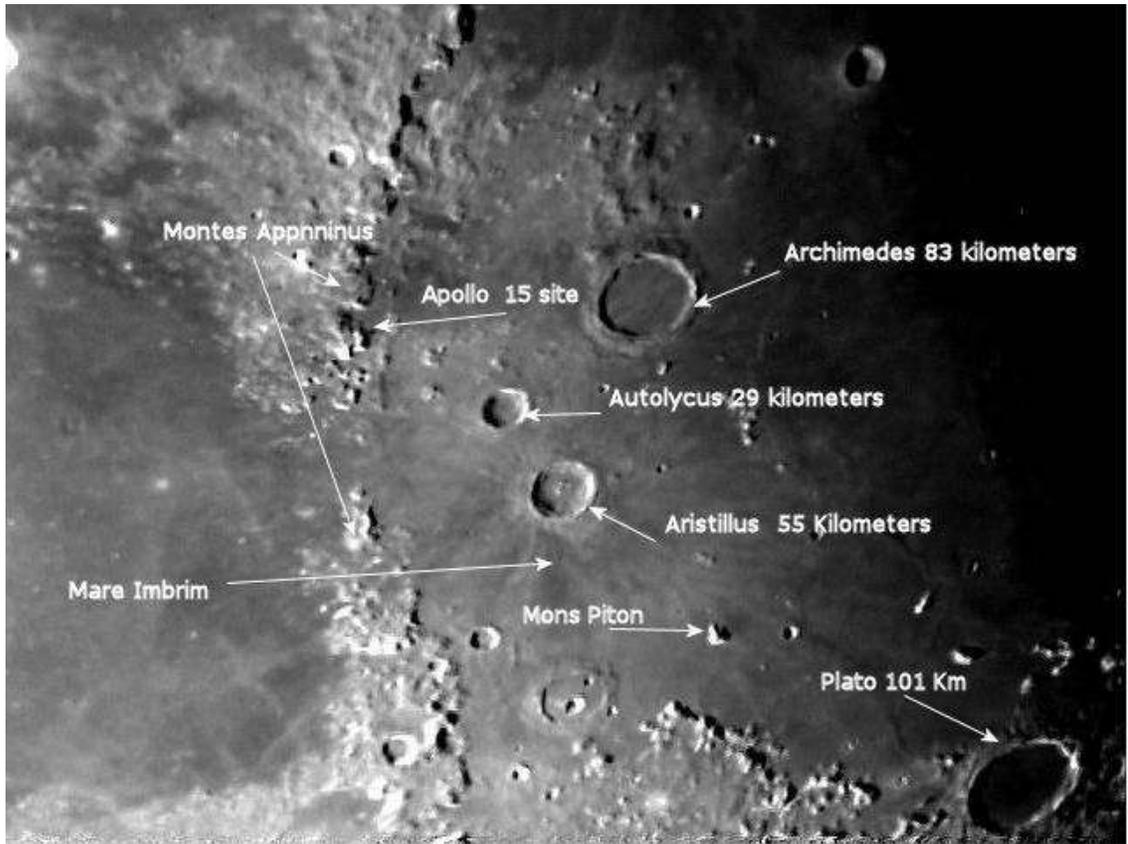
Jupiter, Mars, Venus, Uranus & moon



Date/Time (Local Time)

Year: Month: Day: Hour: Minute:

Picture of the Month Courtesy Vahan Yeterian



Lunar features in the sea of Mare Imbrim.. Latin for “Sea of Showers”, or “Sea of Rains”. It is a vast lunar mare filling a basin on the moon and is one of the larger craters in the solar system. Mare Imbrim was created when lava flooded the great crater that was formed when a very large object hit the moon. With a diameter of 1146 Km it is second only to Oceanus Procellarum among the Maria. It is the largest Maria associated with an impact basin. Apollo 15 landed in the south eastern region of the Mare near the Apennine mountains. The Imbrim basin is surrounded by three concentric rings of mountains. Montes Carpatius in the south, Montes Apennines to the south east and Montes Caucasus to the east. The middle ring of mountains form the Montes Alpes and the regions near craters Archimedes and Plato. The mountain ranges in the area range from 3600 to 5500 meters above the mare basin. Image capture was accomplished using a Meade 12” SCT and DMK31 CCD camera, Exposure time 3 seconds.

Some food for thought

Antoniadi Scale

A five-point scale, devised by Eugene Antoniadi and used by amateur astronomers to indicate the quality of seeing. 1- perfect seeing without a quiver, 1I – slight undulations with moments of calm lasting several seconds, 1II – Moderate seeing with larger tremors, 1V- poor seeing with constant troublesome undulations, V – very bad seeing, scarcely allowing the making of a rough sketch.

Rayleigh Scattering

The scattering of light by particles that are 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. The phenomenon is named after the English physicist Lord Rayleigh (1842 – 1919).

Focal Reducer

An auxiliary lens, used mainly for photographic or CCD – imaging purposes. It reduces the telescope’s effective focal length, allowing images to be taken much faster, and also gives a wider Field of View (FOV). Some focal reducers may be used visually to obtain a wider FOV, but others are intended for photographic/CCD use only.

Depth of Field

In an imaging system, the distance in object space over which the system delivers an acceptably sharp image. In an instrument such as a camera the available depth of field depths depend on the quality of the lens employed and on the aperture stop. The greater the aperture (the lower the F number), the shorter the Depth of Field and visa versa.

Observatory Dome Drive(a Brief Account)

2 Jan 2012

The Target



Well here we are



Scope Secured



Dave stripping the rubber seal



Corrosion & No Lube



Drive motor, gearbox and switch installed



Lubing the bearings and track



Dave manually lowering the Shutter



Vahan relieving the Shutter loads



From this point Dave and I figured it was time to call it a day cause we have been at it since 0930 hrs. It was now 1500 hrs. Time to clean up and head for home. Well, it was not to be that easy cause Murphy's Law went into effect. The Dome shutter would not close, only one direction worked and that was OPEN! The shutter switch would not work in close direction. We ended up getting an 8-foot ladder and manually closed the dome by hand rotating the motor to gearbox coupling and relieving the load by pulling on the shutter with block and tackle.

4 Jan 2012

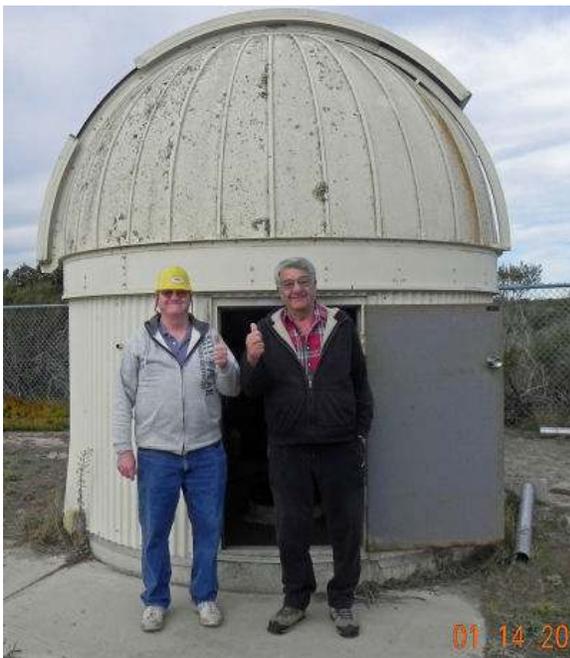
Looking into the Dome shutter problem...buzzed out some wires, found nothing a-miss. After a bit of trouble shooting the problem turned out to be the shutter lockout bar on the raise lower switch was in the wrong position...Dave and I were "*Beside Ourselves*" for overlooking the lockout bar. "*Beside Ourselves*" is a mild way of expressing it !



7 Jan 2012

Made some modifications to the switch installation. Wired the switch and ran a test on dome rotation. Dome rotation both directions is smooth and positive, no drop-outs. Observatory is fully operational. Cleaned up and departed 1230 hrs.

It's Fixed!



Club Officers



President
Dave Covey



Treasurer
Liberty Partridge



Vice President
Vince Tobin



Newsletter Editor
Vahan Yeterian

Vince the consultant and the work crew



Club Meeting

Club meeting 10 February 2012 7:00 PM

Star Parties (as always weather permitting)

11 February (Observatory around 5:PM)
18 February (Observatory around 5:00PM)
25 February (Observatory around 5:30 PM)

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.