VAAS Website: vaas.universeii.com/ 2, March 2016

Vandenberg Amateur Astronomical Society presents The Sidereal Times

Messier 30 globular cluster (see page 5)

Meeting *News:*

The February meeting we discussed support for a Star party at Los Flores ranch. Talked about various subjects and current events in Astronomy. No videos this meeting.

Reminder: VAAS club meeting March 11th 7:00PM Manzanita School, teachers lounge.

Lunar Calendar:

New Moon 9th
Full Moon 23rd

Dave

Presidents Message

Can you believe our winter weather? We have had wonderful clear nights for viewing the stars, and hot summer like days….but we really need El Nino Rains to come through for us!

VAAS is helping with a large event coming up on March12, the day after our meeting. This is at the Los Flores Park in Santa Maria. They are calling it a Moonlight Night Hike, starting at 7:30pm-9:30pm. There will be perhaps 50-60 people attending. I have been in contact with Rudy Gutierrez who is with the Parks & Rec. Dept setting this up. He has asked us not to drive our vehicles into the area chosen (called Watershed Trail – a good dark site,) as he will provide the transportation for the ¼ mile to the site for you and your scope, and will have electricity available at that site. First arrive at the Visitor's center and someone will direct you form there.

I am plan to meet with him to view the site in the daylight on Friday Feb. 26. And be there for this event. Please feel free to call or email me about any questions. I hope we have at least 3 of our members that could help out with scopes. Let me know if you are interested by our meeting on the 11th. We may get some help from the Central Coast Astronomy Group – led by Steve Williams .

Two weeks ago I had Laryngitis, and could not speak at all for 3 days. (My husband finally got a rest from listening to me!) My voice still is rough, as it was at the last meeting, but I am feeling fine now . During all this time we have had 2 major plumbing problems, that my husband has had to deal with, and one is ongoing as we redo part of our bathroom. I hope things calm down at our house.

Clear Skies for our Star Parties! Jana

Events

March 5th ***Star party at the observatory.***

March 8th Jupiter at opposition, the giant planet will be at its closest approach to Earth and its face will be fully illuminated by the Sun. This is the best time to view and photograph the planet and its moons.

March 9th Total Solar Eclipse. The path of totality will be visible in parts of central Indonesia and the Pacific ocean. A partial eclipse will be visible in parts of Northern Australia and Southeast Asia.

March 12th ***Star party at the Observatory or Figueroa mountain.***

March 20th March equinox occurs at 04:30 UTC. The Sun will shine directly above the equator and there will be almost equal amounts of day and night. It is the first day of Spring in the Northern hemisphere (Vernal equinox) and the first day of Fall (Autumnal equinox) in the Southern hemisphere.

March 23rd Penumbral Lunar eclipse. The eclipse will be visible throughout Eastern Asia, Eastern Australia, the Pacific Ocean and the West coast of North America and Alaska.

March 26th ***Star Party at the Observatory.***

Craig

Dave and Ken

Star party's and Events

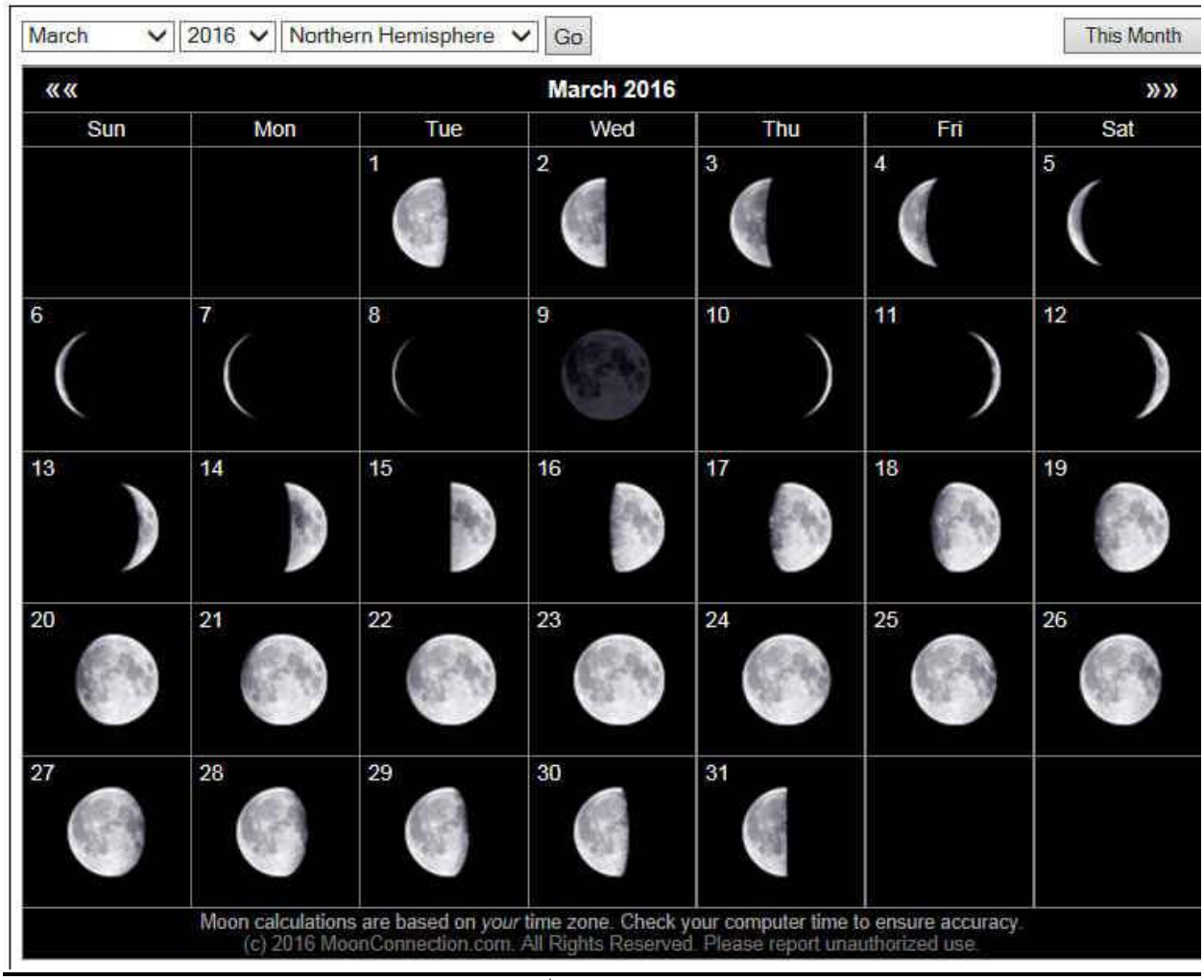
Feb 6th Star party at the observatory. Dave McNally and Vahan only two on site. Opened the observatory but held off opening the shutters. Sky looked fair but had scattered high thin clouds and some Dew. Decided to call it quits, secured and departed about 6:30 pm. Ken and Louise Spraker showed up about 6:45 pm stayed for a while and departed. Vince showed up at 9 pm with his 16 inch Dob and viewed several objects one of which was Caldwell 7 NGC 2403 a galaxy in Camelopardalis. It was large and bright a great object to view. Departed at Midnight. Looks like we all just missed each other for this gathering. A fair night under the stars.

Feb 13th Star party at the observatory. Craig Fair, Dave McNally, Ken and Louise Spraker, Dave Covey and Vahan on site. Ken had his 12 " Dob, Craig his SCT with a 9.25" Celestron and Dave McNally his 4" refractor. It was a clear night with no moisture and the seeing was good. Lots of celestial objects were viewed. The Rosetta nebula, Orion Nebula, Pleiades, Jupiter an open cluster and the Moon to name a few. Vahan and Dave Covey had fun viewing with all the scopes. Closed down and departed at 10pm. Good camaraderie and another good night under the stars.

Feb 27th Star party at the observatory. Dave Covey Dave McNally, Vince Tobin and Vahan on site. Opened the observatory and energized system. The sky was reasonably clear with lots of stars visible however the seeing was not too good when looking at Jupiter. Had some dew forming. We noticed the 14" was not tracking properly, tried a few times to check tracking but no joy. Possible battery problem in the controller, it has been a year since the last battery change. Had a spare battery but did not want to take the controller apart in the dark to change battery. Departed site about 10:30Pm.

Jana

March Moon



Full 23rd, New 9th, 1st Quarter 16th, Last Quarter 1st

Moon Facts

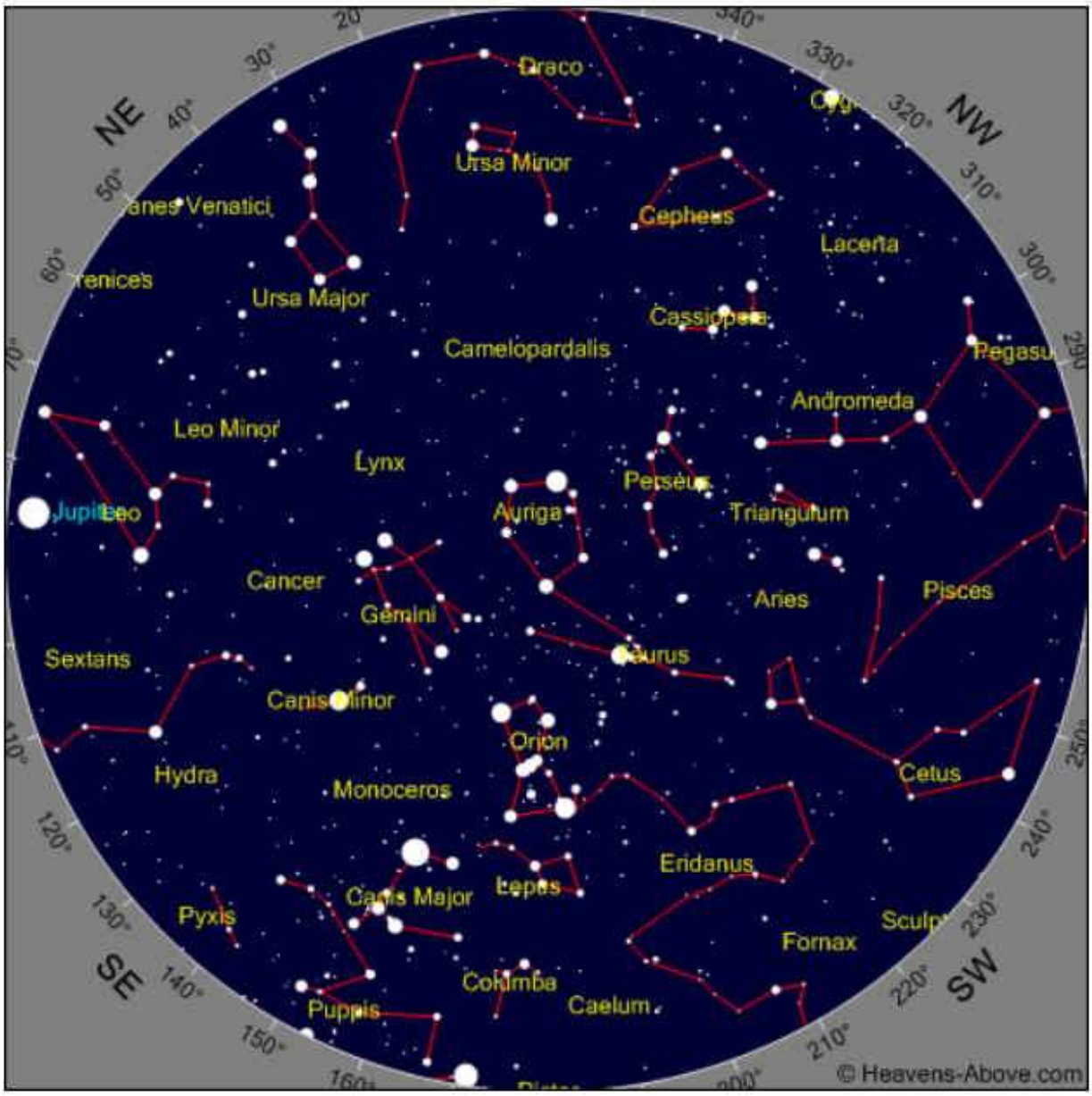
More than 400 trees on Earth came from the Moon. In 1971 Apollo astronaut Stuart Roosa took a bunch of seeds with him and while Alan Shepard and Edgar Mitchell were sauntering around on the Moon's surface, Roosa guarded his seeds. Later the seeds were germinated on Earth and planted at various locations around the country. These trees came to be known as the Moon trees. Most of them are doing fine.

The surface of the Moon has about the same area as the continent of Africa.

The exact time of moonrise is affected by the observer's latitude and longitude.

March Sky

Some Objects of interest, M42, M1, Jupiter



Time

Year	2016	Month	3	Day	5	Hour	18	Minute	30

Photo Courtesy Jon Walke

Messier 30 NGC 7099 Globular Cluster is about 26,000 light years distant and is located in the constellation of Capricornus. It follows a retrograde orbit through the galactic halo that suggests that M30 was acquired from a satellite galaxy rather than forming in the Milky Way galaxy. It is 180,000 times the mass of the Sun. It has an angular diameter of 12 arc minutes corresponding to 90 light years. It is a fairly dense cluster and contains a bright red giant star about 12.1v magnitude. The cluster is approaching at approximately 181.9 km/sec. The core of the cluster exhibits an extremely dense population and has undergone core collapse similar to at least 21 other of the 157 globular clusters in the Milky Way galaxy also including M15, M70, M62 and M79. Consequently M30 core is very small in extension about 12 arc minutes. Despite its compressed core, close encounters of the member stars of M30 have rarely occurred. Image capture was with a C8, 1280mm @f/6.3 600mm w/PHD2 guide. T3 (mod) ISO 1600,12 x 300s lights, 20 darks, 40 bias / 60 flats.

For What its Worth

Open cluster, Messier 18, NGC 6613 in the constellation of Sagittarius was discovered by Charles Messier in 1764. It exhibits at least a dozen bright stars (sky catalog 2000 lists it with 20 members). It is about 0.2 degrees in diameter thus appearing as a loose and poor cluster. Its Trumpler type is given as II,3,p,n (see below instruction) by all sources (where n assigns to it some nebulosity). Its distance is about 4900 light years according to Kenneth Glyn Jones and Burnham, but sources disagree: Mallas gives 6,000 light years, the Sky Catalog has 3900 light years. Adopting our value of 4900 light years its linear diameter should be about 17 light years. The hottest stars in M18 are of spectral class B3. This cluster is quite young with an estimated age of 32 million years. This cluster contains a collection of bright blue as well as bright yellow or orange stars.

The open clusters are classified according to a scheme developed by of *R.J. Trumpler*. There are 3 indicators depending on the concentration and detachment from the stellar background, range in brightness and number of stars:

Concentration and detachment from the surrounding star field

- Class I: The cluster is strongly detached from the stellar background with a strong core stellar density.
- Class II: The cluster is detached from the stellar background with a light core stellar density.
- Class III: The cluster is detached from the stellar background without a denser core.
- Class IV: The cluster is weakly detached from the stellar background, the area having a higher stellar density but no visible core.

Range in brightness

- Class 1: All the stars present about the same brightness.
- Class 2: The stars present a regular range of brightness.
- Class 3: Beside some very bright stars, many weaker stars with a wide magnitude range.

Number of stars

- p: The cluster is poor in stars (less than 50 stars)
- m: The cluster has a medium number of stars (from 50 to 100 stars)

- r: The cluster is rich in stars (more than 100) The letter 'n' at the end of the classification indicates a nebula linked to the cluster.

"Astronomy compels the soul to look upward, and leads us from this world to another". (Plato)

Club Meeting

Reminder Club meeting March 11th at Manzanita charter School.

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

Night Time Bright Objects (no scope required)

Link to "Heavens Above" web site
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

Louise