

Cache Valley Clear Skies

The Journal of the Cache Valley Astronomical Society



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Meeting Announcement

Our monthly meeting will be held on Thursday, October 21, 2015 at 7:30pm at the Physics Conference Room (room 244) in the Science Engineering Research (SER) building directly east of the library (see the map below).

Club member Blaine Dickey will be instructing us first on how to set up a blog. This can be handy for any kind of blog you wish to set up. He will also teach us how to use the free program RTGUI+S to make an observing plan.

The President's Corner By Dell Vance, CVAS President

There are a lot of fascinating things happening in the news about astronomy. We have seen the mountains on Pluto from the recent flyby of the New Horizons spacecraft, flowing water on Mars has been found (potential for life on Mars), and the recent Lunar Eclipse.

The media is working hard to build up interest in space. As CVAS members, we already have a lot of interest in space. We have had some good events as a club as well in September;



- The Boy Scout Camporee at the American Heritage Center where club members volunteered to set up their telescopes to show the boys the wonders of the sky.

- Lunar Eclipse party at the Heritage Park in Nibley near Tom Westre's house, with a very good attendance. A bit cloudy, but a good time for all.
- Club Star Party at Gary Bracken's home in Petersboro.
- Sun Party at the Logan Library.

As you can see the CVAS has been very active last month and is providing good support to the valley. We also had our annual meeting in September with elections for the club officers. Tom Westre stepped down from the President's office after two great years of leadership for CVAS. He has done an outstanding job of championing the vision of the CVAS and will still be on the Executive Committee as the Past President.

Unfortunately, no one was elected as President at the September Meeting. The CVAS By-Laws allow the Executive Committee to appoint officers when an office becomes vacant until the next election. I volunteered to take on the assignment of President until next September's elections and the Committee approved the action. We will be filling the office of Vice-President soon to bring the Executive Committee up to full staffing.

If you have an interest in serving in this capacity or know of someone that would be interested, please let any member on the Executive Committee know of your interest. The positions are not very demanding and provide needed coordination to CVAS. We plan to reach out to more members for support as the opportunities arise.

We are in the planning process for the upcoming meetings and would appreciate feedback as to what you are most interested in for topics. Please let us know what works best for you. We are looking forward to another great year of support to the community. Thanks for all your help.

Where is SER and Where Can I Park

Those that are new to the club may not know where the SER building is on campus. In addition, it is sometimes difficult to find a parking space. The following map shows the location of the SER

building on campus and shows some of the parking lots near the building. The parking lot shown to the southeast of the building is on the other side of the highway. There is a walkway under the road which leads to campus. The entrance to this parking lot is nearly due south of 1200 E.



Observing Ideas for October

By Tom Westre

When it comes to planets for October, the evening sky is has none. But, the morning sky just before sunrise contains three planets, Venus, Mars and Jupiter. As the month progresses, these three planets will do a cool dance as they move through the sky in the constellation Leo.

Here are four dates you don't want to miss. If you have Stellarium set if for an hour before sunrise looking east from October 7 to November 1 and watch how the move in their orbits, it's a fascinating dance. Note the dates below for some interesting alignments.

October 9: The moon forms a triangle with Mars and Jupiter, while Venus and the star Regulus are above

October 18: Mars and Jupiter are very close, less than ½ degree, with Venus a few degree above.

October 22: The three are in a line with Venus higher followed by Jupiter and Mars

October 28: They form a triangle with Jupiter

above, Venus in the middle and Mars below
 November 1: Another triangle with Jupiter above,
 and Mars across from Jupiter.



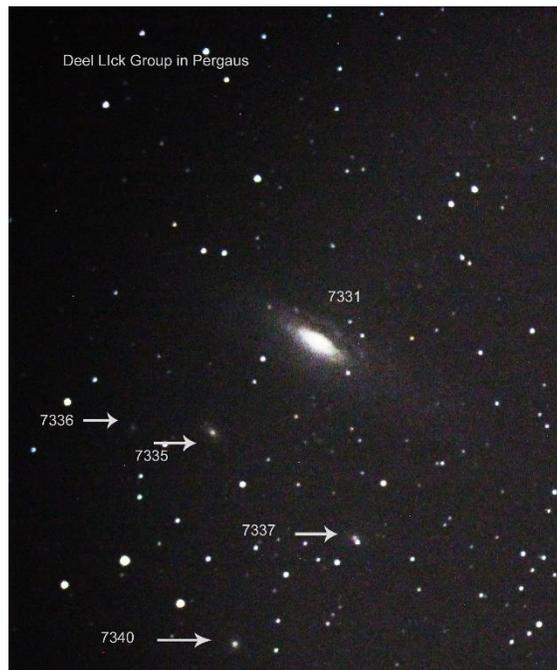
Venus, Mars and Jupiter looking east in Leo before sunrise, Oct 5, 2015 by the author

The October 2015 Sky and Telescope has a great article by Ted Forte, called “A few of my favorite things”. Ted describes some of the best galaxy groups for amateur astronomers. He concentrates on five found in Pegasus that can be seen with a 6 to 10 inch telescope. IF you are tired of the usual Messier targets try these. I refer you to his article for maps of the regions and a list of 34 galaxies in these groups. For several years I have been interested in these galaxy groups especially Stephen’s Quintet and the nearby Deer Lick Group. These two galaxy groupings are very close together.

I would start by locating NGC 7331 in the Deer Lick group. 7331 is the brightest member at mag 9.5 galaxy at a distance of 40 million light years. It was discovered by Sir William Herschel, in 1784. One curious feature of the galaxy is its central core or bulge, which rotates in the opposite direction than its disk! The name "Deer Lick" is thought to be attributed to an amateur astronomer, naming it after a mountain site where he first observed it. There are four satellite galaxies nearby that can be seen in a dark sky (7335, 7336, 7340, 7337). The smaller galaxies are often referred to as the “fleas”.

If you move your telescope about 5 degrees southwest from NGC 7331 you will find Stephens Quintet. This group consists of NGC 7320 (largest), NGC 7317, NGC 7318 A/B (these two are the most

difficult to see), and 7319. NGC 7320 is not a member of the group only 35 million light years away, the others are 300 million light years distant.



Deer Lick Group in Pegasus taken by the author

Open clusters are not the most popular targets, but you might want to add NGC 457 to your list especially if you have friends or family, this will give them a chuckle. NGC 457 is an open cluster in Cassiopeia. Usually called the Owl Cluster made by two of its brightest stars and the overall shape.

Since the famous 1982 movie ET:THE EXTRATERRESTRIAL, it is also easy to see a likeness to a space creature from the film, some call it the ET Cluster. A 6-8 inch telescope will see from 75-100 stars. This cluster is 30 light years in diameter and about 8,000 light years distant and lies in the Perseus Arm of the Milky Way Galaxy.



NGC 457 the Owl or ET cluster in Cassiopeia by the author

The Bubble Nebula, NGC 7635, a diffuse Nebula in Cassiopeia. This object is a challenge. You will need to use averted vision. A magnitude 8 star in the nebula, and a magnitude 7 star to the west makes it hard to see. It is caused by a fast stellar wind from a hot, young central star near the center that is clearing a roughly arc shaped opening around the star. It lies about 10,000 light years distant.



NGC 7635 the Bubble Nebula in Cassiopeia by the author

My final target is NGC 404 a distant galaxy in Andromeda. 404 lies very close to Beta Andromedae, known as Mirach. If you look closely you will see Mirach's Ghost, NGC 404 a round fuzzy galaxy above Mirach in the center of the

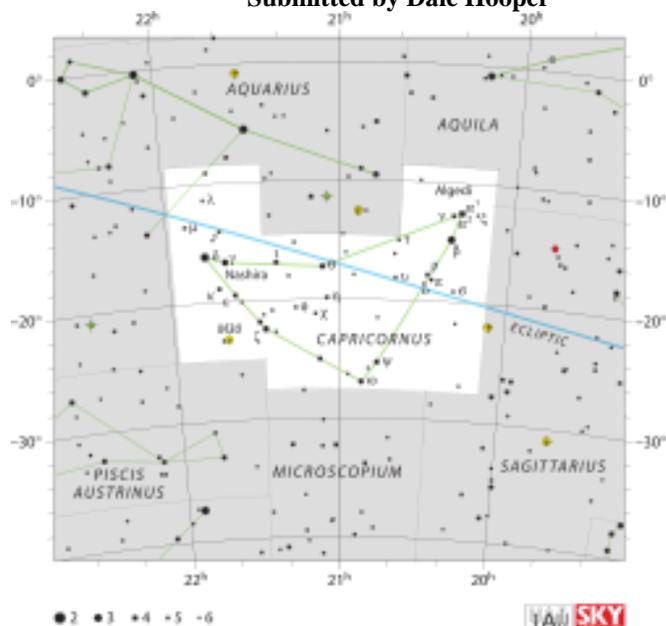
photo. Mirach is about 200 light years distant, and is a red giant, cooler than our sun, but larger. The glare from this bright star makes the faint galaxy look ghostly. NGC 404 is 10 million light years distant and is a magnitude 10.4. Mirach shines at magnitude 2.4.



NGC 404 Mirach's Ghost in Andromeda taken by the author

Spotlight on Capricornus, the Horned Sea Goat

Submitted by Dale Hooper



IAU and Sky & Tel - Roger Sinnott & Rick Fienberg

Capricornus is a mythical creature which is half goat and half fish. It is not a particularly bright constellation but the “V” shape of Capricornus is easily spotted to the east of Sagittarius. Now is a good time to observe this constellation before the temperature gets much colder.

Capricornus has several fine double or multiple stars, a couple decent galaxies and a really nice globular cluster (Messier 30).

The double and multiple stars and M30 rate four stars in *The Night Sky Observer’s Guide* (Capricornus is in Volume 2), however the two galaxies rate three stars. As usual, the table is organized according to increasing Right Ascension values

Object	R.A.	Dec.
α Capricorni (Double star)	20h18.1m	-12°33’
7 Capricorni (Double star)	20h19.4m	-19°07’
β Capricorni (Triple star)	20h21.0m	-14°47’
NGC 6903 (Galaxy mag 11.9)	20h23.6m	-19°19’
NGC 6907 (Galaxy mag 11.1)	20h25.1m	-24°49’
10 Capricorni (Triple star)	20h27.3m	-18°13’
11 Capricorni (Quad star)	20h28.9m	-17°49’
12 Capricorni (Double star)	20h29.9m	-18°35’
β 271 (Double star)	21h19.8m	-26°21’
Messier 30 (Globular Cluster)	21h40.4m	-23°11’

CVAS Minutes – September 2015

The annual general meeting of the Cache Valley Astronomical Society was held September 17, 2015. Tom discussed some of the club’s history. He mentioned that the club was originally formed as the Cache Valley Stargazers by Dr. Shane Larson. When Shane left for Chicago we pretty much had to begin again from scratch. We have been formally organized for two years.

Tom discussed dues and voting and he explained the opportunities club members have to serve. If we don’t have a full slate of candidates we will have to consider additional options.

Lyle then discussed the upcoming star party for the scouts at the American West Heritage Center on Sep

18th. The star party will begin at 9:15pm but we can begin setting up around 8pm. Between 150 and 400 scouts were expected.

Dale then discussed the upcoming September 27th total lunar eclipse.

The conversation then turned to nominations and the election. There were no additional nominations from the floor. By acclamation Dell Vance was re-elected as Vice President, Ned Miller was re-elected as Treasurer and Dale Hooper was re-elected as Secretary. Since Tom declined to seek a third term and there were no additional nominations there is currently a vacancy in the position of club President.

The conversation then turned again to how best to keep the club functioning. Turnout has been low for many club events. Lyle mentioned that it would be good to partner up with some group such as the American West Heritage Center. It was mentioned that perhaps several members could give shorter (i.e. five to fifteen minute) talks on subjects of their choice. Ideas such as small hands-on projects like the Galileo telescope, ion thrusters and other hands-on ideas were offered.

Dave Hansen offered to make a presentation at an upcoming meeting on the topic of the Basics of Telescope Optics.

The current plan is to hold future meetings on the third Thursday of the month at 7:30pm in the SER Physics Conference Room (room 244).

Upcoming Star Parties

10 Oct Solar Party, Logan Library (11am to 1pm)

Upcoming Events

4 Oct Last Quarter Moon
5 Oct Edwin Hubble identifies Cepheid variables in M31 (1923)

7 Oct Luna 3 photographs the far side of the moon (1959)

8 Oct	Venus 0.7° north of the Moon Draconid meteor shower
9 Oct	Mars 3° north of the Moon Venus 3° south of Regulus Jupiter 3° north of the Moon Draconid meteor shower
10 Oct	William Lassell discovers Triton, moon of Neptune (1846)
11 Oct	Mercury 0.9° north of Moon Uranus at opposition
12 Oct	Columbus Day New moon
15 Oct	Mercury at greatest western elongation (18°)
16 Oct	Saturn 3° south of Moon
17 Oct	Mars 0.4° north of Jupiter
20 Oct	First Quarter Moon Orionid meteor shower
21 Oct	Orionid meteor shower
22 Oct	First recorded solar eclipse (China, 2136 BC) Orionid meteor shower
23 Oct	Neptune 3° south of Moon
24 Oct	William Lassell discovers Ariel and Umbriel, moons of Uranus (1851)
25 Oct	Giovanni Cassini discovers Iapetus, moon of Saturn (1671)
26 Oct	Venus at greatest western elongation (46°) Venus 1.1° south of Jupiter Uranus 0.9° north of Moon
27 Oct	Full Moon
29 Oct	Aldebaran 0.6° south of Moon
31 Oct	Halloween