

Cache Valley Clear Skies

The Journal of the Cache Valley Astronomical Society



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Vol. 2 Number 5 January 2015

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Meeting Announcement

Our monthly meeting will be held on Wednesday, January 21, 2014 at 7:30pm at the Physics Conference Room (room 244) in the Science Engineering Research (SER) building directly east of the library. This month will be a “Show and Tell”. So, if Santa brought you some new astronomy gear or you found a cool article that you would like to discuss for a few minutes – bring it to the meeting and share it with us. This kind of meeting really helps us to learn from each other’s experiences.

President’s Corner

By Tom Westre, CVAS President
January 2015



Well, another year has come to a close. It's been somewhat eventful, in some instances not the way I would have planned but glad to be here in any case. It has given me a chance to pause and reflect over

the past 69 years. Yes, 69 years. During this time much has changed in amateur astronomy. Which makes the era we live in one of the most exciting of any era, with high quality telescopes, computerized mounts, CCD cameras, solar telescopes...just about anything an amateur astronomer could hope for to make the hobby one of the most enjoyable of any hobby.

Since I was 10 I have had an interest in the night sky. When I was 11 my parents bought me a Spitz Moonscope. It was a 3 inch reflector on a plastic Dob type mount with three short legs and a whopping 32 power. I took it out Christmas night of 1955 and aimed it at the moon. The skies back in South Dakota were and still are dark and filled with bright stars.

I am not sure what happened to that little telescope but a few years later as a cub scout our group visited the observatory on the campus of the University of South Dakota. It was that experience that rekindled my interest in astronomy.

A few years later, as a high school Freshman, my parents got me a 60 mm Tasco refractor on an equatorial mount with slow motion cables, it came with two eyepieces, a 2x Barlow, erecting prism, 6x30 finder scope, diagonal prism and sun filter, sun projection screen from which I viewed several solar eclipses, an accessory tray and hardwood storage

case. These days Tasco doesn't have a great reputation for quality, but back in the 1960's they made a decent telescope. It gave clear sharp views of the moon and planets. Collectors are realizing this and they have a great value today. Back then they cost about \$149 but adjusted for inflation the scope today would sell for \$800 to a \$1000. It's sad to think a family in the 1960's would have to spend that kind of money on a 60mm refractor but at the same time it's kinda cool and I will be forever grateful that my parents did. During high school other interests entered my life but I recall having my friends stop at the book store in Sioux City on the way to the local drag strip, so I could buy the recent issue of Sky and Telescope.

Since then I have owned a Cave 10 inch Schmidt Cassegrain purchased back in 1973, a Meade 10 Inch computerized SC purchased in 1995 and more recently a Meade 8 inch GPS, an Explore Scientific 6 inch refractor and a Celestron 11.

All of these telescopes have given me hours and hours of wonderful views of the night sky. Our hobby just keeps getting better and better. The future only holds more hours of great viewing of the wonders of the sky.

So as 2014 draws to a close, take a well-deserved break and share some good times with your close friends and family members. Reflect on this year's accomplishments, make those New Year's resolutions (and try to stick to those 'get healthier' resolutions next year!), and we'll see you at our January meeting. To our officers, and especially our membership at large, some of whom we seldom see at regular events, I extend a heartfelt 'Thank You!' all for the wonderful year of giving and support of CVAS' mission through our club activities. I look forward to sharing the stewardship with you again in 2015.

January Skies

- By Dale Hooper

Yes, it is very cold outside right now. But, if the sky is clear there are at least three things that will be well worth your observing time in January. The first is

Comet Lovejoy (C/2014 Q2). Unlike several recent high profile comets – this one is outperforming expectations by about two magnitudes. It is now expected to reach about magnitude 4.1 during the second and third weeks of January. Tom has already started to image it as you can see below. In addition, we've also included a January finder chart for Comet Lovejoy (courtesy Sky and Telescope magazine).



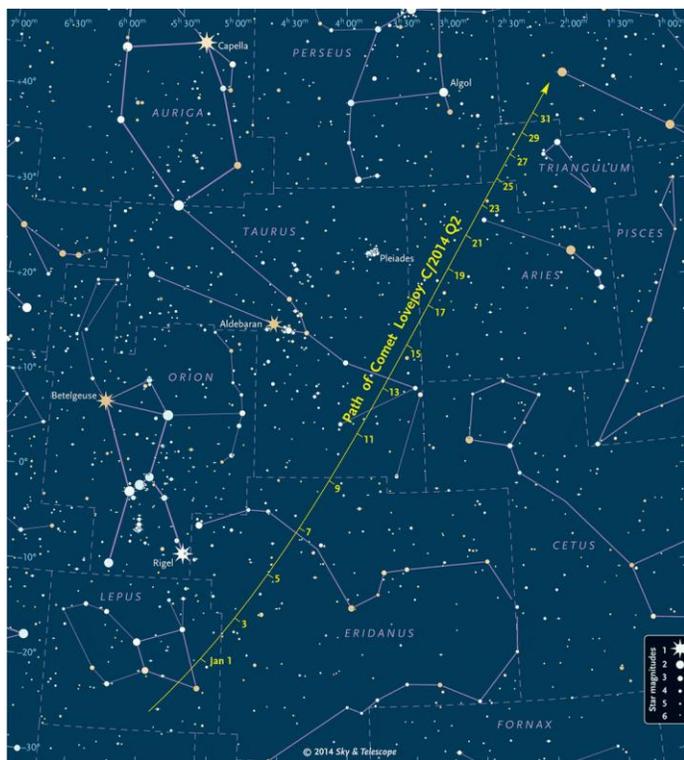
Comet Lovejoy taken 1 Jan 2015 about 10:30pm with a 300mm telephoto lens and Canon T3i by Tom Westre

The second January event to watch for is a close conjunction of the planets Mercury and Venus. They will be low in the west, but for the first three weeks of January they will be within the same field of view of a pair of 7x50 binoculars. Venus will be very bright at magnitude -3.9 and this should help guide you to Mercury.

The third event is actually a series of events that begin in January and will extend until around August. As described in the January issues of Sky and Telescope and Astronomy magazines, every six years the planet Jupiter goes through equinox. When this occurs the orbital planes of Jupiter's Galilean moons are tilted nearly edge on to earth.

This results in a number of satellite eclipses and occultations by other moons. The Institut de Mecanique Celeste et de Calcul des Ephemerides has several lists that you can use to find the dates and

times and types of events. Their website is located at: <http://tinyurl.com/pn49lnh>



Comet Lovejoy finder chart (Copyright Sky and Telescope)

One major set of events occurs this month. Over the night of January 23rd and 24th there will be a triple moon shadow transit. In other words, for a short time there will be shadows of three Galilean moons crossing Jupiter. In addition, Callisto will eclipse Io.

Here are some of the details:

Jan 23

8:11pm Callisto's shadow first touches Jupiter

9:35pm Io's shadow touches Jupiter

10:41 Io passes into Callisto's shadow

10:59 Io's shadow leaves Callisto's shadow

11:27pm Europa's shadow begins crossing Jupiter

All three shadows appear on Jupiter for the next 25 minutes. The next time this will happen is the year 2032.

11:52pm Io's shadow leaves Jupiter

Jan 24

01:00am Callisto's shadow leaves Jupiter

2:22am Europa's shadow leaves Jupiter

CVAS Minutes – Dec 2015

Tom discussed a large sunspot group and lots of sunspots that are currently observable. There was an M9 class solar flare on December 16th. There was also a Coronal Mass Ejection (CME) which caused some blackouts in Australia.

Tom also discussed Comet Lovejoy (C/2014 Q2) which is currently around magnitude 6.1 and close to naked eye visibility. We also discussed several other things that can currently be observed.

We then watched the video "The Star of Bethlehem" by Rick Larson. The video makes the case for several astronomical events related to the birth and death of Jesus. Following the video there was a short question and answer session.

Upcoming Star Parties

Currently there are no organized club star parties planned for January.

Upcoming Events

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|-----------|---|
| 1 Jan | Anniversary of the discovery of dwarf planet 1 Ceres by Giuseppe Piazzi (1801). |
| 8-12 Jan | Mercury and Venus will be within one degree of each other (look low in the southwest) |
| 15 Jan | Comet Lovejoy (C/2014 Q2) should reach around magnitude 4.1 as it travels through Taurus and Aries |
| 23-24 Jan | A rare triple shadow transit of Callisto, Io and Europa occurs including an eclipse of Io by Callisto |
| 27 Jan | Anniversary of Apollo 1 fire on the launch pad which killed all three crew members (1967) |

- 28 Jan Anniversary of space shuttle
Challenger launch disaster. All seven
crew members are killed (1986).
- 31 Jan Anniversary of Explorer 1 launch.
First orbiting American spacecraft
(1958).