CACHE VALLEY
CLEAR SKIES

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PRESIDENT'S CORNER

Dale Hooper

I hope that each one of you is having a great summer and that you are making some time to get out and observe our amazing universe.

Dale Hooper in his bakyard Observatory

It was unfortunate that we had to cancel our UDOR star party that was scheduled for July 18th. I had really been looking forward to sharing a nice dark sky with the Cache Valley public. I agonized about the decision to cancel and I had been watching the forecast all week. By about 4pm on the 18th most sites were indicating that we shouldn't expect to see much that night. It also turned out that cancelling was the correct decision because the sky certainly did cloud up and was essentially overcast until after midnight. It would really be nice if we could reschedule this event for another time while the weather is still good. But I will have to defer that decision to others since I will be leaving town for a one-year church mission on August 11th.

We are still also hoping to have a club member only (which includes friends and family) star party during August. We created a poll that was sent out on July 9th asking for club member preferences between holding it on Friday, August 15th (around last quarter moon) and Friday, August 22nd (around new moon). To say that the response has been underwhelming is probably being generous. We currently list 71 club members on the groups.io email list and we have heard back from very few members about this star party choice. If you can locate the email from July 9th (with a subject line of: CVAS member only star party) we hope you will take the time to provide your input. It's of course possible that neither of those two dates work for you or you maybe have other input or perhaps you can't find the email mentioned above. In that case, we would really appreciate it if you could send us an email with your comments at: cvastrosociety@gmail.com.

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Executive Committee

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- NASA Night Sky Network Coordinator: Dell Vance avteam.dell@gmail.com

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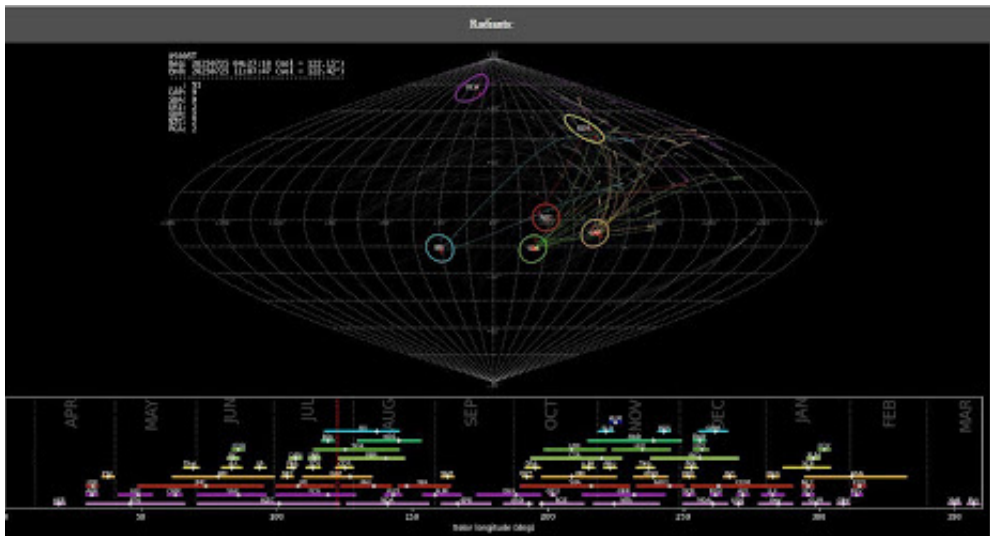
I was fortunate enough to be able to spend a night looking at clear dark skies at Monte Cristo campground this week. The elevation there is around 9000 feet and I had sky quality meter readings around 21.6 (mag/arcsec2). I was able to go there with some old friends from the Ogden Astronomical Society. I don't think there is much that is more enjoyable than getting together at a nice dark sky site, sharing views, helping each other with equipment questions, sharing plans and reminiscing. I hope that we as CVAS club members will have a desire to get together so that we can begin forming these great traditions for our club.

This past month Bruce Horrocks and I (and perhaps some other club members) were able to attend AstroCon 2025 at Bryce Canyon. It was a lot of fun, and we still had some great views in spite of the smoke from the fire. I had a chance to speak with the President of the Salt Lake Astronomical Society, Trevor Hebditch. He is interested in having some collaboration with other Utah astronomy clubs such as sharing speakers or having a swap meet. I was also fortunate to speak with Shane Larson, our club founder. He is willing to speak to our club this next year either via zoom or in-person if possible. Shane is the consummate amateur AND professional astronomer and he is also an amazing speaker. You will be in for a treat when this happens.

I confess that I am not the kind of meteor observer that wraps up in a sleeping bag and sits down in an outdoor recliner to count meteors. If I tried that, I would fall asleep. But you can see from the Meteor Radiants chart below from my global meteor camera, that there are **A LOT** of meteor showers that are currently going on and we haven't even started on the Perseids yet!



Meteor Radiants, 25 July 2025, from GlobalMeteorNetwork-camera US005T

The chart is pretty small in this orientation so you may have to enlarge it on your screen to see it well. Just looking west, it was able to capture meteors from six different meteor showers and 51 sporadic meteors. The meteor showers were the Northern June Aquilids (NZC: 2), psi-Cassiopeiids (PCA: 2) a newly discovered shower, July gamma-Draconids (GDR: 2), eta-Eridanids (ERI: 2), Southern delta-Aquariids (SDA: 9) and alpha-Capricornids (CAP: 9). As I mentioned, this list doesn't include the Perseids meteor shower, which is just about to get started. So, when you are outside this summer observing be sure to look up from your scope every once in a while.

If you are the type of observer that is patient and you don't fall asleep when you lay down all bundled up in a deck chair then you can get some great information about how to observe meteor showers from the International Meteor Organization at https://www.imo.net/observations/methods/visual-observation/major/

Of course, whatever you choose to observe – this is a great time of year to do it. So, step outside and enjoy it.

Clear skies!

Club Meetings

Meetings will resume in September

Star Parties

August 15th - Newton Reservoir 9:00 pm -Club Only

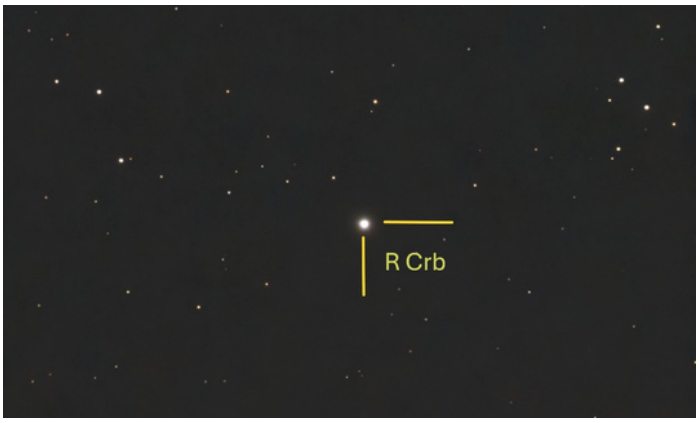
Improvements to my SeeStar S50 and various recent observations by Blaine Dickey

Recently I thought about improving my SeeStar S50 setup by building a stand to mount it onto. The stand is cemented into a 2 foot deep hole and was painted white to protect it from the elements. The mount is very solid and works as I hoped it would.

With the stand in place all I have to do is slide the SeeStar S50 onto its equatorial wedge and then turn it on. Then I can immediately select an object to image without having to do any of the preliminary aligning adjustment of the wedge. Below is picture of what I came up with. You may notice that I also added a platform for a tablet or phone on the side.

The following images are celestial objects that I have visited recently.

T CrB is a recurring Nova in the constellation Corona Borealis, also known as the Blaze Star. About every 80 years it suddenly rises in brightness from around magnitude 10 to magnitude 2 or 3. Most clear evenings I take a pair of binoculars, and point it toward Corona Borealis to see if it has started its predicted rise to glory. No luck so far. ☹️



R CrB also in Corona Borealis is a famous eruptive variable. It normally shines at around 6th magnitude but can dim suddenly in an unpredictable manner to as low as 15th magnitude. At its dimmest you will need a large telescope to see it. The thing that makes this star so interesting is that it dims in no predictable pattern.

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On the early morning of July 20, 2025 I set out my 80 mm refractor attached to my NIKON D5100 DSLR camera and took the following image of the moon just after it had passed in front of the Pleiades. Four stars of the Pleiades are dimly visible just to the left of the overexposed crescent moon.

The summer Milky Way brings many opportunities to image a slew of interesting objects. Following are some objects that I have recently imaged with my SeeStar S50 using an equatorial wedge.

NGC 6819 – A fine cluster in Cygnus

Messier 16 – Eagle Nebula in Serpens Cauda

Messier 27 – The Dumbbell Nebula in Vupecula

Messier 17 – The Swan Nebula in Sagittarius

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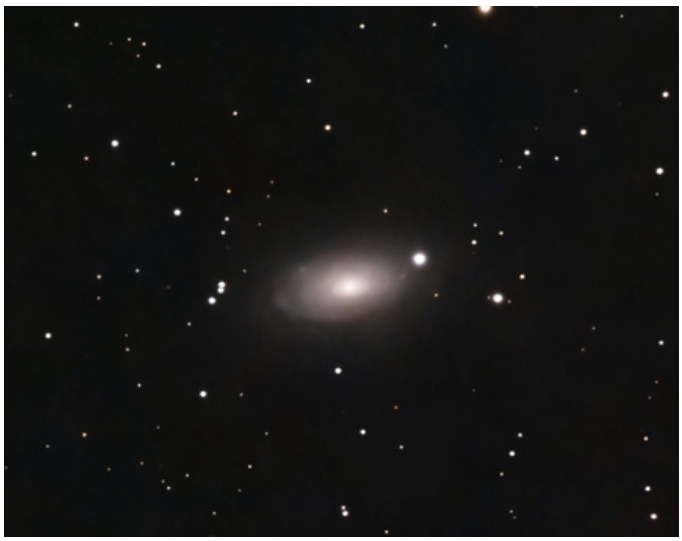
Messier 20 – The Trifid Nebula in Sagittarius



Messier 63 – Galaxy (Sunflower)in Canes Venatici

Messier 4 – Globular Cluster in Scorpius

Messier 22 – Globular cluster in Sagittarius

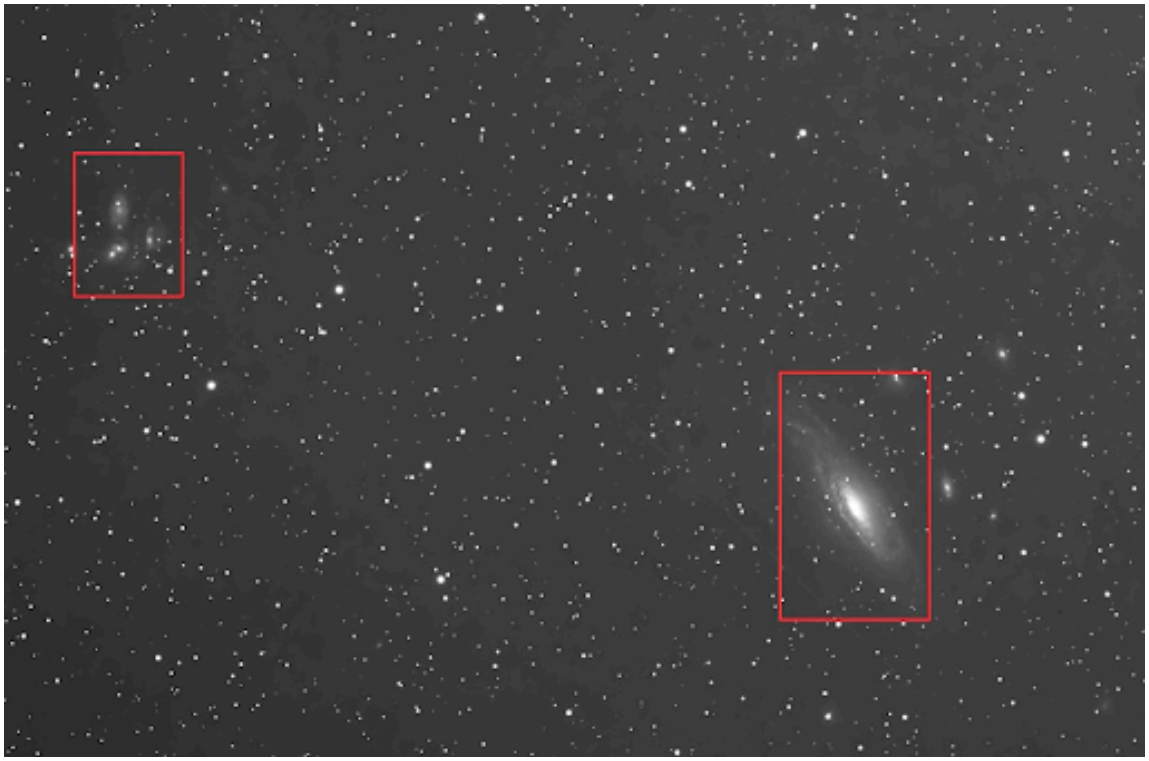
All of these images were taken in Bortle 5 skies from my back or front yard. There are so many more objects yet to image. A lifetime doesn't seem long enough to see them all, but I'm going to have fun trying.

Supernova in NGC7331 By Bruce Horrocks

Recently you may have seen notice of a star in the galaxy NGC7331 that has gone supernova. This galaxy is also known as Caldwell 30 and is part of what is often referred to as the Deer Lick group of galaxies. The galaxy is self is around 40 million light years away, so we are a safe viewing distance to observe this star in its final death days as it goes supernova. It is kind of interesting that something new to us is 40 million years old for people who unfortunately had to live around this star.

Here is a picture of NGC 7331 taken years ago at the Mount Lemon observatory and processed by Adam Block, a well known Pixinsight user and astrophotographer. As you can see it is a beautiful galaxy and has several others around it.

With my work and travel schedule I haven't had much time to get out at night so I did finally get out the other night and while the viewing was not the best due to some thin high clouds that I could see I was able to get a few shots of this with just my monochrome camera and no filters. I was only able to get 10 images before the clouds got worse and I had to call it a night. I was able to get just enough data to recognize the supernova star that is right next to the core of the galaxy.



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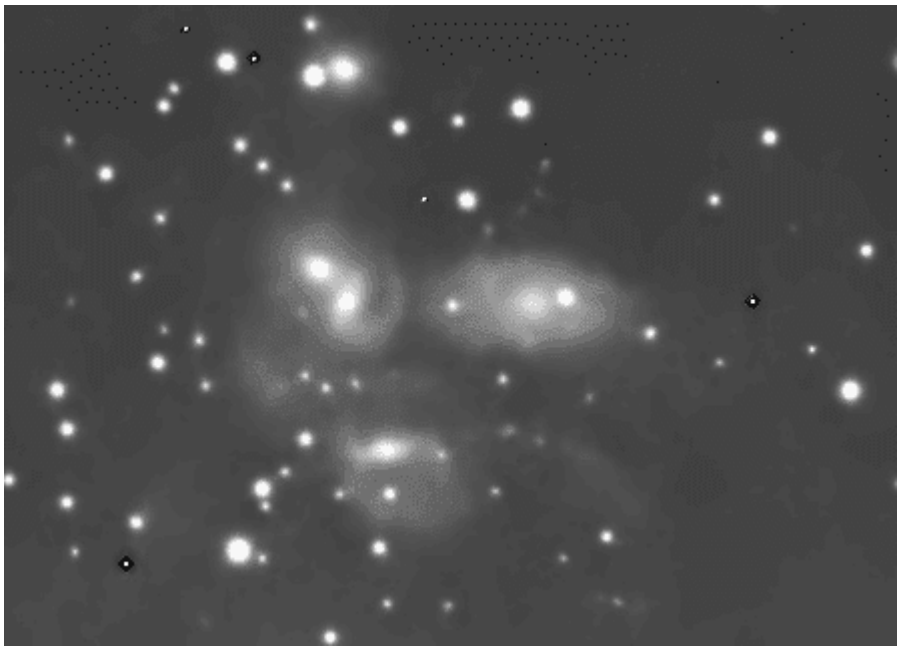
If you look at the picture of just the galaxy below you can see what appears to be like two galaxies cores. Obviously, this was a pretty large supernova to be this noticeable from this distance and resemble the core of this galaxy. I believe the star to the left is the supernova star. It was at magnitude 14 I read on July 14th, and I am not sure what it is now. I did see some SeeStar50 images that can show a little bit of the supernova, I used my Esprit 150mm with a ZWO2600MM camera and a little Pixinsight to pull out that star image a bit. I wish I would have had better seeing and time to get a full color image of this but maybe later this month.

If you are a fan a Stephan's Quintet, you will most likely find it as I have shown in the upper portion of my first images. These are the cute little talking galaxies in the opening scenes of "It's A Wonderful Life" with Jimmy Stewart. These are still quite a distance away, I think in the range of 300 million light years with one of them much closer like 40 million light years away.



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I read an article recently about a star going supernova and what the event is like. The final days of a star must be extremely powerful to watch, and it sounds like you want to be back at a safe viewing distance. It is not uncommon for the luminosity of a supernova star to be comparable to the brightness of the entire galaxy, so it is easy to see why this one is so easy to distinguish between it and core of the galaxy. The recommended safe distance to be from a star that is going supernova is like 160 to 250 million light years. With our earth only a little over 8 minutes light from our closest star we would not have anything left of earth. In fact, there would most likely not be anything left of our entire solar system and them some. There are so many things about the universe that I find just uncompressible and the energy of a star whether under normal conditions or going supernova is one of the. Such an extreme release of energy that come from our sun every second to me is just unfathomable.

When you step out on a hot summer day and feel that energy coming from a star 93,000,000 miles away and realize that, that same amount of energy is going in every direction in space and our earth is only catching a very small percentage of that energy. If I did the math right our Earth is getting hit by on half of 1 billionth of a percent of the sun's energy. My son often talks to me about the theory of Dyson Spheres where more of this energy that escapes out into space could be captured my some method and sent to Earth to solve our energy problems. It is an interesting idea and maybe some day we will figure something out like this.

Regardless of how our sun behaves, the amount of energy released is enormous. Since we have no need to worry about our sun going supernova or any surrounding stars doing the same, I think we can all enjoy the rest of our summer days and find a nice shady spot to relax and enjoy the rest of summer. Enjoy -

Share your photos and stories with us —we'd love to feature them!

Send them to:
deanlouviere@gmail.com
or beccalouviere@yahoo.com

CACHE VALLEY ASTRONOMICAL SOCIETY
MEMBERSHIP APPLICATION FORM

Member # _____

NAME:_____ _____ _____
First Middle Initial Last

Address:_____ _____ _____ _____
Street City State Zip Code

Home Phone: _____ **Cell Phone:**_____

Work Phone : _____ **Occupation** :_____

Email Address: _____

How did you learn about CVAS?

_____Website ____Star Party ____CVAS Member ____Other _____

Membership: $20 lifetime membership

Tell us about yourself: Do you have a special interest in astronomy? Do you have special skills? Are you willing to volunteer on CVAS projects or attend public outreach star parties? Astro equipment owned.

_____

_____

By signing this application, I acknowledge I have access to the CVAS website, cvas-utahskies.org , and the CVAS constitution. I agree to abide by the constitution.

Signature: _____ Date:_____

Bring this form to the meeting or contact **Dell Vance, Membership Coordinator** at avteam.dell@gmail.com.