

Cache Valley Clear Skies

The Journal of the Cache Valley Astronomical Society



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www.cvas-utahskies.org

Meeting Announcement

There is no general meeting this month.

Upcoming Star Parties

August 2 – Beaver Mountain Parking Lot

August 8 – Logan City Library 8 pm

August 30 – Location TBD

The President's Corner By Dell Vance, CVAS President



June has been a very active month for CVAS. Unfortunately, the weather didn't cooperate for the first two star parties planned this month at USU Brigham City and Cache County Library in Providence. The next star party was a public star party at Lee's Market Place in Logan. That star party was also overcast but we were able to see Jupiter and the Moon very clearly most of the night.

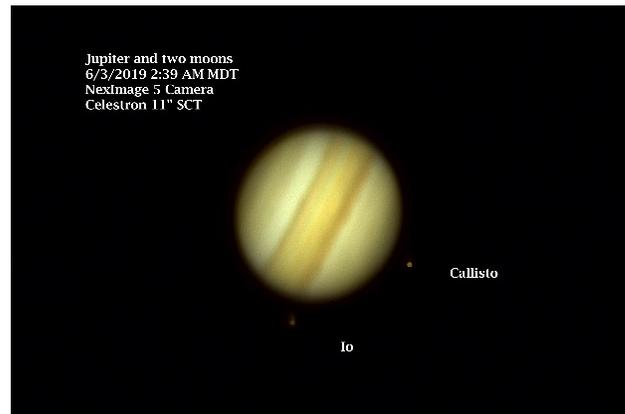
There were several people that stopped by and “took a look”. We had seven telescopes there. About 10:30 PM we were able to finally see a couple of stars and everyone was able get their alignment for the other objects. June 18th was a very busy day. Wendell Waters made a presentation to Summer Science School Students that afternoon. Lyle Johnson made a presentation at the Logan Library that evening. We also presented Logan Library a second telescope that evening. This telescope was donated by ICON Health & Fitness for the Logan Library. We also had another star party that night for the students.

We have also received a donation from Schreiber Foods for another telescope and are in the process of getting it ready for presentation, hopefully the last week in June. June 22nd we sponsored a booth at the Nibley Heritage Day activity. Tom Westre, Brad Kropp, and I had a good day letting the participants see the Sun (no sun spots) through our telescopes with sun filters on them. Brad brought his Solar Scope and we were able to see a flare on the sun all afternoon. It was a good event and we had about 200 people go through.

As of this writing, we have two more events to cover this month. One for the Nibley Stake 11-year old scouts on Friday June 28 and another at Bruce Horrocks place on Saturday June 29.

How much more fun can you have than that?

This month I have been able to at least do some observing in my observatory. I have been trying out my Celestron NexImage 5 with the 11” SCT for imaging planets. It has been fairly successful. I am impressed with the larger images that I am getting versus those from the 6” SCT. The image I took of Jupiter worked out successfully. I was able to capture two moons with the shot. I have been watching Jupiter to see if I can catch the red spot on the image again. I really enjoy being able to just go out for an hour and still have good sights. Observatories are a nice convenience.



On another note, Bridgerland Technical College has changed their meeting room policy. They are now charging \$200 per meeting for meeting rooms. Therefore, we are looking for other options for our meeting locations. I will keep you informed as we work our way through this process. It has been great to hold our meetings at BTC and they have been very good to us. Hopefully, their new policy will help them meet their goals.

Be sure to get out and do some observing. The skies are getting much better and it will start to get dark sooner. Thanks again for your great support.

Clear Skies!

CVAS on Utah Public Radio

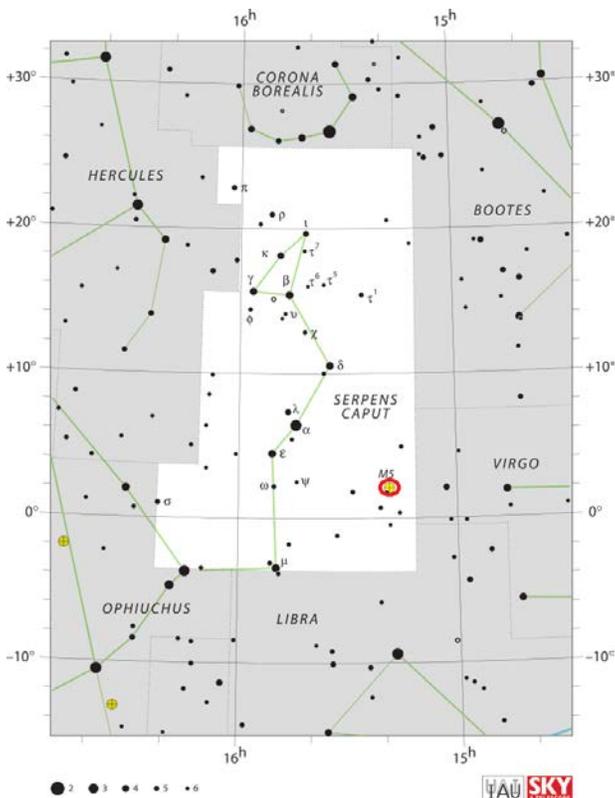
Listen to CVAS on Utah Public Radio each Tuesday at 4:48 pm. Blaine Dickey and Tom Westre are writing weekly astronomy related scripts and recording the program at their station. We are pleased that the folks at UPR have invited us to present a weekly topic on astronomy. You can listen in Logan on 91.5 KUSU-FM, or 89.5 KUSR Logan, with translators 92.1 Brigham City, 89.3 Bear Lake. There are other translators from Soda Springs to St George. You can also listen anywhere on their live stream or download UPR’s free app on your smartphone. Check this out at www.upr.org.

Observing Images and Notes

by Tom Westre

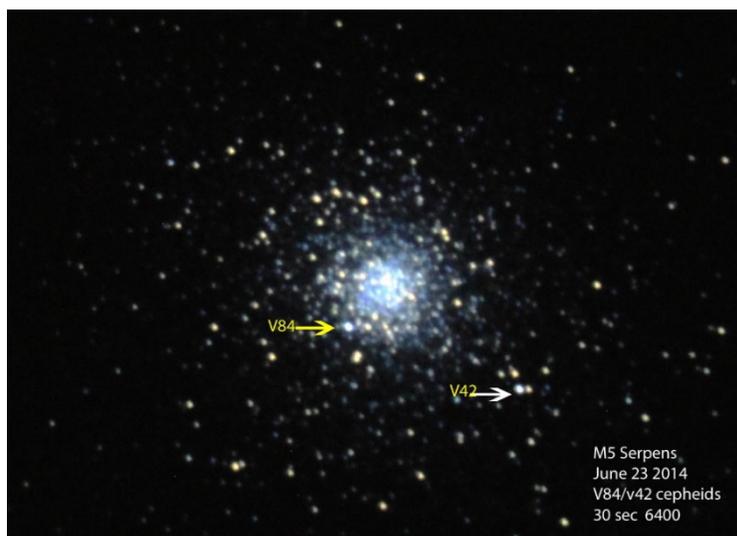
As spring moves into summer (as of June 21) we enter Globular Cluster season. Three of my favorites are Messiers 13, 22 and 5. However one of most overlooked is Messier 5 in Serpens. These densely packed stellar groupings make for an awesome summer evening observing.

Messier 5 is 24,500 light years distant and contains from 100,000 to 500,000 stars. This cluster is one of the largest with a diameter of 165 light years. Most globulars like Messier 5 are ancient; M 5 is 13 billion years old. Its stars have evolved into giants whose outer atmospheres begin to expand and contract or pulsate thus changing in brightness as they expand in and out. If you watch these ancient stars many will change brightness from faint to bright.



Most of the globular variables are faint but Messier 5 has several that can be seen changing their variable brightness even in a six inch telescope. In Messier 5, Variable 42, a Cepheid, and variable 84, an RV Tauri star, stand out.

At maximum v42 is magnitude 10.5 and is the brightest star in the cluster and well outside the clusters core. It fades to magnitude 12 over 25.7 days. V84 is near the clusters center and is a bit more of a challenge to see as it goes from magnitude 10.8 to 12.3 over 64 days.



Messier 5 image by Tom Westre

I imaged Messier 5 with my 6 inch refractor on June 23, 2014. From that image I have labeled Variable 42 and variable 84. Next time you get a clear sky slew over to Messier 5 and see if you can see these variable stars. If you have a camera, try imaging the cluster and locate the variables. It's amazing that we can see these stars in a distant cluster like M 5. It might be interesting to view and or image M5 when the variables, especially V42, are at their brightest and at their dimmest.

If you want to observe V42 the brightest variable in M5 there is an ephemeris at the [American Association of Variable Star Observers](http://www.aavso.org), website. What amateur astronomers are missing is the fact that these can be seen in a 6 to 8 inch scope. So why not give it a try this summer. Let me know the results of your observations.

Clear Skies!!!

A few of my favorite things

by Blaine Dickey

About 50 years ago my parents presented me with an Edmund Scientific 3 inch reflector telescope as a Christmas present. Being armed with a Norton's Star Atlas I set outside in our backyard to see what deep sky objects I could see with my new awesome little telescope. Naturally I looked for deep sky objects that were easy to find and luckily I did find several.

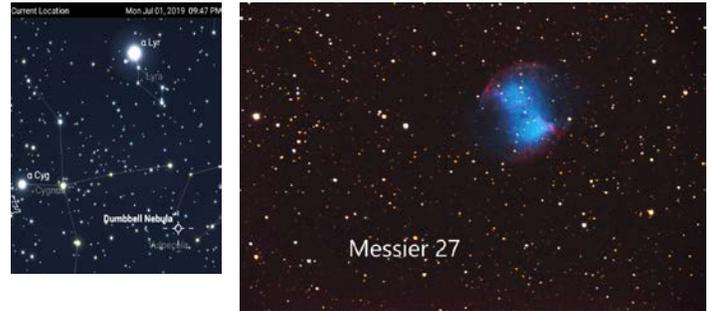
The Ring Nebula M57 was probably the first deep sky object I observed nestled between the two end stars Beta Lyr and Gamma Lyr of the Constellation Lyra. It was dim but distinctly visible as small ring in my 3 inch reflector in those dark skies so long ago.



Another object the Hercules Cluster M13 was easier to find as I could easily see it without optical aid as a fuzzy patch of light in the square of Hercules. Several stars of the globular cluster were resolved embedded in a fuzzy patch of light as seen through my 3 inch reflector. M13 is located about 1/3rd of the distance between Gamma and Pi Hercules.



Finally the Dumbbell nebula M27 in Vulpecula was somewhat harder to find because no bright stars were close to it. When finally discovered it was visible as a faint roundish patch of light.



At that time as a star gazer I had no idea of the extraordinary colors of these objects revealed in modern imagery made possible by the invention of the silicon chip.

The finder charts shown in this article are screenshots from the Celestron Sky Portal App. The deep sky images above were taken on Saturday June 22, 2019 with a Nikon D5100 DSLR through my 12 inch Meade LX200 R mounted in my roll off roof observatory.

Equipment Review

Ultra-wide-angle, Ultra-low-power Binoculars

By Lyle Johnson

For more than 30 years, I have observed the night sky in three different ways: 1) with only my eyes; 2) with binoculars, which provide moderate magnification and reveal some faint objects, but produce small fields of view; and 3) using telescopes, which provide high magnification and reveal many faint objects, but produce very small fields of view.

Is there a fourth way to observe? I recently learned from another club member about ultra-wide-angle, ultra-low-power binoculars. The two most popular models are the Kasai 2.3x40 WideBino28 with a 28-degree field of view (\$170), and the Vixen 2.1x42 Super Wide Angle with a 25-degree field of view (\$299). Do these provide a new and different observing experience?



After reading reviews that I found online, I purchased a Kasai WideBino28. Although it is technically a "binocular," the experience of using it is more like observing with the naked eyes—but with very large eyes.

Imagine looking through binoculars and seeing the entire "teapot" of Sagittarius along with the Lagoon Nebula and the Trifid Nebula in one field of view; or seeing the whole Little Dipper at once. At the same time, imagine seeing many more stars than you can see with only your eyes. For example, from my light-polluted backyard, I can usually see only three to five stars in the Little Dipper, but with the WideBino28 I can see ten to twelve. And at a dark site, the difference is even more dramatic. A few weeks ago, I camped at the Grand Canyon, where the sky was moonless and pitch black at night. I pointed the WideBino28 at Orion and I was awestruck—I could see almost the

whole asterism/constellation at once and it was filled with countless stars—I felt like I was seeing Orion from space. I saw the night sky as I had never seen it before.

So, should you get ultra-wide-angle, ultra-low-power binoculars? That, of course, depends on your interests. For me, it is interesting to scan the sky with them from my light-polluted backyard, and it is exciting to view the sky with them from a dark site. They do provide a new and different way to observe the night sky.

Newsletter Guidelines

It has been suggested by the CVAS Executive Committee that we come up with some guidelines for article submissions for our newsletter.

- We would like all submissions to be sent to Wendell by the 27th of each month. Just send him an email with the article as an attachment (wendellw57@comcast.net).
- Please submit your articles as a "Word" document.
- If you have pictures or sky maps that go with your article, please place them in the text where you would like them to be, but also send them as separate attachments in the email.
- Please try to keep them at a reasonable length (500 to 800 words or so).
- Preferred font is Times New Roman
- Perfect spelling and grammar are optional.

Your thoughts and suggestions are always appreciated. After all, this newsletter is for you. Thanks for all of your help in making our newsletter GREAT!! (The editor)

Kidstronomy Corner

By Bonnie Schenk-Darrington

Hello, all! I apologize for falling off the face of the earth for the past 4 months. I had a lot of crazy stuff going on, and then ended up getting very ill in May. I'm back in action now!

This month, I'm reviewing another middle-grade astronomy novel.



(4 out of 5 planets)

Gibbs, Stuart. 2014. *Space Case*. New York: Simon and Schuster.

Ages 8 – 12 (Grade levels 3 – 7) 352 pages

\$10.43 on [Amazon.com](https://www.amazon.com)

When I'm not reading science fiction novels, I'm obsessed with murder mysteries. This book scratches both itches in a very satisfying way. Gibbs is a children's author of books and TV shows and has a firm handle on his audience. *Space Case* is the first book in the Moon Base Alpha series, and while I haven't read the sequels yet, I can't wait to do so!

It would be amazing to be one of the first people to live on the moon, right? Dash Gibson must be the luckiest 12-year-old alive, right?

Actually, not so much. It's year 2041, and Dash lives on Moon Base Alpha with his little sister and his parents, who are both NASA scientists. As Dash complains, "It's as comfortable as an oil refinery. You can't go outside, the food is horrible, it's always cold—and the toilets might as well be medieval torture devices" (p. 6). There are no sports or surfing, and Dash misses his old school and friends. There *are* some other kids up there, but not very many, and no one that Dash has anything in common with. And worst of all, a new scientist arrives on a rocket with his daughter, Kira—and Base Commander Nina Stack orders Dash to befriend her and show her around.

Oh, man! How much lamer can things get? Pretty lame, it turns out. A certain Dr. Holtz turns up dead on the lunar surface after Dash overhears him having a mysterious phone conversation. Dash is convinced he's been murdered, but none of the adults believe him—Commander Stack even orders him to stop spreading malicious rumors. But Dash is creeped out by the thought that he's sharing the tiny moon

base with a killer. He and Kira set out to discover the truth . . . and almost get killed themselves!

This is a fun book, and Gibbs works a lot of sound space science into it. The chapters are interspersed with pages from *The Official Residents' Guide to Moon Base Alpha*, whose golden descriptions of life in space Dash debunks with caustic commentary. He also gripes about science fiction shows featuring warp-speed travel and terraforming, and in one memorable scene, gives Kira tips for coping with the moon's reduced gravity (if you try to run, you'll soar right up and splat into a wall). Gibbs has just about perfected pre-teen attitude and sarcasm, and Dash's narration is believable even when he's using vocabulary that sounds too sophisticated for most middle-graders. And in spite of Dash's ennui, it still sounds pretty awesome to live on the moon!

I found the ending a bit unbelievable, but not so much that it ruined the book for me. I don't want to give away any spoilers, but I will say that it surprised me and set up a scenario I'm very curious to see played out in the sequels.

Some of the behavior of the kids did upset me. On the one hand, I don't worry much about my kids ever taking an unauthorized moon walk. On the other hand, the 16-year-old Sjoberg kids are terrible bullies to the middle-grade kids, and one of the middle-graders retaliates by filming Lily Sjoberg changing her clothes. All *very* not OK! So, as you read this book with your kids or grandkids, that might be a conversation for you to keep in mind. And, of course, if you do not want to know the gory details of going to the bathroom or vomiting in reduced gravity, this book is not for you.

Overall, I felt that the recommended age level for this book was a little too low. Words that younger kids might not know include, e.g., *communal*, *hermetically*, and *clinical*. Some of the names (e.g., the Brahmaputra-Marquez family) are going to give younger kids trouble, too. I think 12-year-olds (like Dash) will be able to cope, for the most part. But I know my 9-year-old would have trouble both reading and understanding the vocabulary. Finally, I also want to note that this book passed the "swipe" test. Usually it's my 9-year-old who swipes my books; this time, it was my 15-year-old who stole the book off my desk and read it. She loved it, even though the protagonist was 3 years her junior. We will likely read the sequels together, as soon as we make it back to the library to check them out!

Upcoming Events and Anniversaries

Jul ?? - 755th Anniversary (1264), 1st Observation of the Great Comet of 1264

Jul 04 - Earth At Aphelion (1.017 AU From Sun)

Jul 04 - Moon Occults Mars

Jul 04 - 965th Anniversary (1054), The Crab Nebula Supernova

Jul 07 - Mercury Passes 3.8 Degrees from Mars

Jul 09 - Saturn At Opposition

Jul 11 - 40th Anniversary (1979), Skylab Re-Enters Into Earth's Atmosphere

Jul 15 - Dwarf Planet Pluto At Opposition

Jul 16 - 50th Anniversary (1969), Apollo 11 Launch (1st Manned Moon Landing)

Jul 16 - Partial Lunar Eclipse

Jul 16 - Moon Occults Saturn

Jul 16 - Moon Occults Dwarf Planet Pluto

Jul 16-22 - 25th Anniversary (1994), Comet Shoemaker-Levy 9 Impacts on Jupiter

Jul 17 - Asteroid Ledzepplin Closest Approach To Earth

Jul 17 - Asteroid TARDIS Closest Approach To Earth

Jul 17 - Georges Lemaitre's 125th Birthday (1894)

Jul 18 - Asteroid Kubrick Closest Approach To Earth

Jul 20 - 50th Anniversary (1969), 1st Man On The Moon (Apollo 11)

Jul 21 - 105th Anniversary (1914), Seth Nicholson's Discovery of Jupiter Moon Sinope

Jul 22 - Friedrich Bessel's 235th Birthday (1784)

Jul 23 - 20th Anniversary (1999), Chandra X-Ray Observatory Launch (STS-93, Space Shuttle Columbia)

Jul 23 - 35th Anniversary (1984), Discovery of Neptune's Rings

Jul 24 - Mercury Passes 5.7 Degrees From Venus

Jul 25 - 35th Anniversary (1984), 1st Woman Spacewalk (Svetlana Savitskaya)

Jul 27 - Asteroid Tolkien Closest Approach To Earth

Jul 28 - 30th Anniversary (1989), Stephen Synnott's Discovery of Neptune Moons Despina & Galatea

Jul 29 - South Delta-Aquarids Meteor Shower Peak

Jul 30 - Asteroid Sauron Closest Approach To Earth

Jul 31 - Asteroid Saruman Closest Approach To Earth

CVAS Loaner Telescope

CVAS provides a 10 inch Dobsonian telescope to club members. Contact Garrett Smith to make arrangements to use this telescope. Garrett can be contacted by email at GarrettGillSmith@gmail.com.



Binocular Supports

The club still has available a number of mostly completed binocular supports. These supports are being sold to club members at cost. These supports just need the binocular attachment – which is tailored to the type of binocular being mounted.

Please contact Ned Miller or Dell Vance if you are interested in purchasing a binocular support. The images below show what they look like with binoculars attached as well as an image showing them folded for storage.



**Completed Binocular Support (with binos attached) -
Courtesy Ned Miller**

Library Loaner Telescope Program Status

Library	Telescope Donated By	Telescope Placed	Available for Checkout	Library Status
Logan Library	CVAS	6/10/2018	10/15/2018	Loaning out with Holds pending
Logan Library #2	ICON Health & Fitness 	6/18/2019	Pending	
Hyrum Library	CVAS	12/11/2018	2/1/2019	Loaning out
Smithfield Library	Occipital, Inc	12/14/2018	4/10/2019	Loaning out
North Logan Library	Utah NASA Space Grant Consortium 	3/4/2019	4/5/2019	Loaning out
Cache County Library (Providence)	INOVAR & CVAS Members	3/1/2019	5/22/2019	Holds on telescope – waiting for clear skies
Lewiston Library	Schreiber Food's 	Last Week of June (Tentative)		Telescope being Prepared for presentation Last Week of June
Richmond Library				
Preston Library	Idaho NASA Space Grant Consortium			The library has submitted the request to the donor
Mendon Library	Campbell Scientific 	4/8/2019	5/30/2019	Loaning out
Newton Library				

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 a year

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 Mail Application to:

Brad Kropp, CVAS Treasurer
1573 E 1425 N
Logan, UT 84341

For any questions contact our Treasurer at brad.kropp@usu.edu or our Secretary Wendell Waters at wendellw57@comcast.net