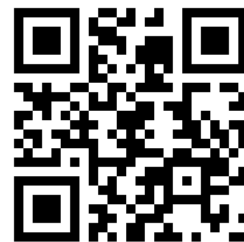




Cache Valley Clear Skies

The Journal of the Cache Valley Astronomical Society



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www.cvas-utahskies.org

Meeting Announcement

Due to the ongoing covid-19 crisis, there will be no meetings or other events until further notice. We will for sure let you know when we are planning to get together again. Until then, please stay safe and stay healthy.

Clear Skies!

The CVAS Executive Committee

Virtual Meeting Announcement

We will be having a “virtual” CVAS meeting on November 18th at 7PM. Further information about joining us will be coming via email so please watch for the invite and join us.

The President’s Corner By Bruce Horrocks – CVAS President

Hello to all of you CVAS Members. We hope you have enjoyed this beautiful fall and with two full moons last month had a nice time looking at the moon or some of the planets that are out there to see. It was also good to see some of you at our Show and Tell night. It was enjoyable to see some of the new fun toys each of you have got and we hope you are able to get out and use them. I would like those of you that will to please write up a small review of what new item you may have and submit it to be included in our monthly newsletter. There are many folks that were not able to be there and I am sure that they would love to see what you have and hear about it as well.

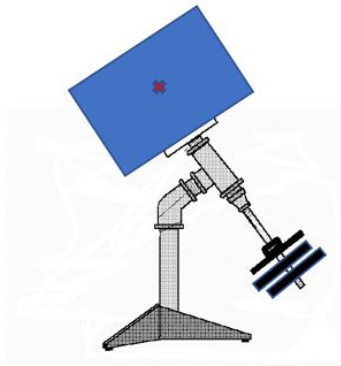
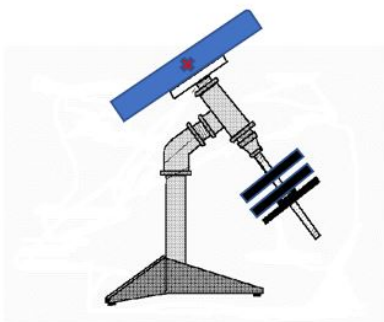
I want to take just a moment to talk about “moments”. There are moments in history, moments in our lives, and some moments we would just as soon see pass like this Covid-19 thing going on right now. But for the moment I walk to talk about moments that engineers like myself are most familiar with, and this kind of moment is what you usually call torque. This is most easily explained as “Force x Distance”.

I recently decided that I needed to get a larger mount as the weight of telescopes, plus cameras and lens starts to add up and I felt it was becoming too much for my equatorial mount to carry. What really caught my attention was when I looked at all those counterweights at the very end of the shaft trying to balance out my telescope load. If you have an equatorial mount, you will know what I mean.

First let me just give you the numbers that the manufactures give to you as the weight a certain mount can carry and I am just going to use Celestron as I am most familiar with them. The AVX mount is rated to carry 30 lbs., the CGEMII can carry 40 lbs., and the CGX mount is rated for 55 lbs. of telescope and equipment.

For now, we will just look at the CGX as that is what I am using. I recently put on my 11" SCT Edge with the Hyperstar, finder scope, and camera and the weight adds up to 38 lbs. I had been using a refractor with a finder scope, filter wheel, and a couple of cameras and that setup came to a total of 45 lbs. Both of these are technically below the capacity of the mount, but with the 11" SCT telescope I had to move my 39 lbs. of counterweight clear to the end of the rod.

The big difference in these two setups is where this mass is all centered. The refractor telescope is small and compact, and the weight is kept close to the mount head. The SCT is large so the center of the mass is much farther away from the mount head. The moment created by the refractors is around $45\text{-lbs} \times 4'' = 180\text{lb-inch}$. The moment created by the 11" SCT is around $38\text{-lbs} \times 9'' = 342\text{ lb-inch}$. So, while the SCT setup is lighter than my refractor, it is putting almost twice the moment or torque on the mount. This is why I had to move the weight clear out to the end of the bar. When I called Celestron they said the mount would support that weight, but I wonder if they ever take this distance into consideration. See my little sketch below to illustrate this idea, where the red dot is center of mass.



I hope this has not been too complicated for you, and if you are one of those not using an equatorial mount than you may not even find this very useful.

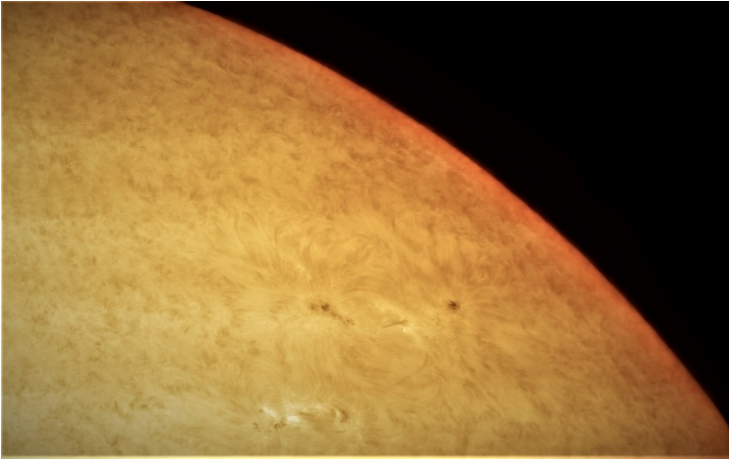
When I had to explain this to my wife, I said it is easy to hold a gallon of milk next to you but if I made you hold it at an arm's length then it becomes a more challenging load. So, if you are one of those using an equatorial mount you might want to not only add up the weight but make sure it is not being put out to far away from the mount head.

I am also very pleased to announce that we are going to attempt a web-based club meeting on November 18th, at 7:00 PM. We will be having a presentation from Blaine Dicky on how to use some great software for planning your nights viewing and other things. Blaine will set this up on Zoom or some other meeting platform and he will be sending you out an invite, so please watch for this in your email. We will have to limit this to 40 minutes so get your favorite snack and please join us for this web meeting. We do hope you are all doing well and look forward to seeing you on the 18th.

I sold my old mount, so I was not able to get any photos. Hopefully, the new mount will come soon.



This was a shot of some solar activity on the surface of the sun the other day 10-26-2020



Remember Clear Skies and Clean Hands,

Bruce Horrocks

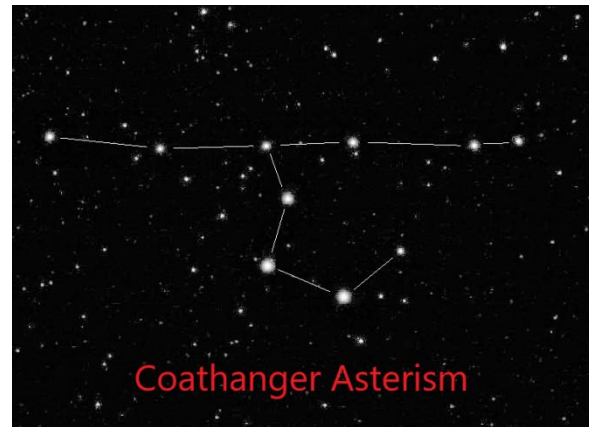
CVAS on Utah Public Radio

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

Vulpecula - The Fox

by Blaine Dickey

Vulpecula, the Fox is a faint constellation often overlooked near the head of Cygnus the Swan. There are some interesting deep sky treasures to be found within the boundaries of this constellation. If you haven't seen it yet a small upside down asterism named the Coathanger is easily viewed with a small pair of binoculars. The image shown below of the asterism was taken with my 60mm guide scope on October 12, 2020.



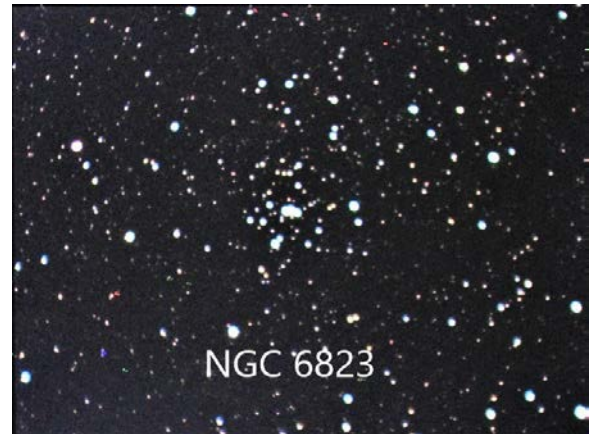
Anser is the brightest star in Vulpecula at a magnitude 4.4. It appears reddish because it is a relatively cool hyper giant star 390 times the Sun's radius at a distance of 294 light years. The companion star 8 Vul is magnitude 5.8 and at a distance of 7 minutes. Both stars can easily be seen in binoculars.



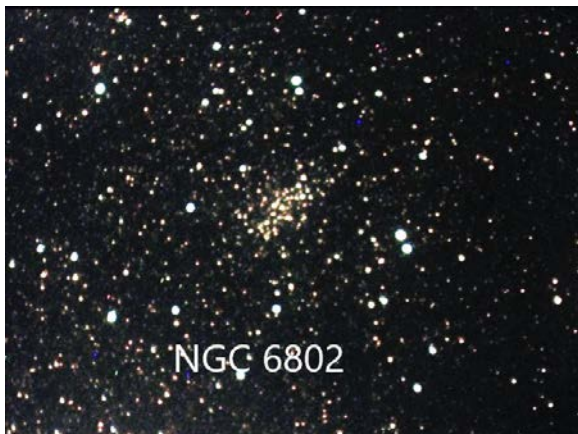
Another very familiar object, Messier 27, is a large planetary nebula visible as a faint cloud in binoculars and telescopes. However its colors are fabulous as seen in the image below. The small white dwarf can be seen at the center of the nebula. This is what is leftover of the star that once was.



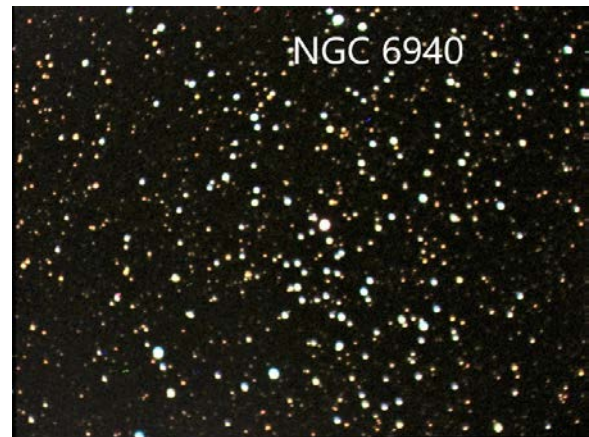
Another open star cluster in Vulpecula is NGC6823. Most of the stars are around magnitude 13 but there are six 9th and 10th magnitude stars near the center.



NGC 6802 is a faint small condensed open star cluster of about 50 stars between magnitude 9 and 11. It is located east of the Coathanger.



Vulpecula is located in a star rich area of the Milky Way. NGC 6940 is somewhat hard to distinguish from the other stars in the Milky Way as seen below.



Unless otherwise noted the images in this article were taken with my Celestron 8 inch Evolution through a Mallincam DS237/c camera. This is a fair sampling of a double star and some deep sky objects that can be observed in the constellation Vulpecula.

Special Announcement

The CVAS website is up and operating. I would appreciate any feedback from club members. The website has a Gallery page and club members are invited to email me any images they take with their telescopes. If they include their name, type of telescope and camera that would also be informative. I also have a page for club members to send a picture of their telescopes and/or observatories. I also encourage taking pictures of our meetings, STEM events or star parties for the image gallery. – Tom Westre; Webmaster

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 edito





Upcoming Events and Anniversaries

- Nov 02 - [Harlow Shapley's](#) 135th Birthday (1885)
- Nov 02 - [George Boole's](#) 205th Birthday (1815)
- Nov 03 - [Taurids Meteor Shower](#) Peak
- Nov 08 - 125th Anniversary (1895), [Wilhelm Rontgen's](#) Discovery of X-Rays
- Nov 09 - [Carl Sagan Day](#)
- Nov 09 - 95th Anniversary (1925), [Robert Millikan](#) Confirms Cosmic Rays From Outer Space
- Nov 10 - [Mercury](#) At Its Greatest Western [Elongation](#) (19 Degrees)
- Nov 12 - 40th Anniversary (1980), [Voyager 1](#), Saturn Flyby
- Nov 17 - [Leonids Meteor Shower](#) Peak
- Nov 25 - 105th Anniversary (1915), [Albert Einstein](#) Publishes [General Theory of Relativity](#)
- Nov 25 - 170th Anniversary (1850), [William Dawes'](#) Discovery of [Saturn's C Ring](#)
- Nov 26 - 410th Anniversary (1610), [Nicolas-Claude Fabri de Peiresc's](#) Discovery of the [Orion Nebula](#)
- Nov 27 - [Bill Nye's](#) 65th Birthday
- Nov 30 - [Penumbral Lunar Eclipse](#)

A Last Little Note

This issue of our Clear Skies newsletter (Volume 8, No. 3) represents my 25th as the editor. I want to thank everyone who has contributed and helped with this in any way. Without your great articles and suggestions, it would not have been anywhere near as good. Thanks again – the editor

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	7/15/2019	Loaning out
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
Lewiston Library	Schreiber Food's 	Last Week of June (Tentative)		Telescope was placed and they are in the process of setting it up.
Richmond Library				Received Telescope
Preston Library	Idaho NASA Space Grant Consortium			Telescope placed.
Mendon Library	Campbell Scientific 	4/8/2019	5/30/2019	Loaning out
Newton Library				Ready for check out

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 Mail Application to:

Janice Bradshaw, Treasurer
175 W 700 S
Wellsville, UT 84339

For any questions contact our Treasurer, Janice Bradshaw at lojbrads@yahoo.com
or our Secretary Wendell Waters at wendellw57@comcast.net