



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

The President's Corner By Bruce Horrocks – CVAS President

I grew up in a small town that years ago only had a couple of full-time doctors. If you got sick or had a health problem, you knew you were going to be treated by one of these two guys. They knew everyone in town probably better than anyone else. They both grew old and retired and thankfully new doctors and medical staff moved into town to fill the void. Last year in a small hometown parade these two doctors were recognized as they sat in the back of a pickup truck that drove down the parade route. On the back of the truck was a big sign that read, "The Great Paradox".

I am sure it was meant to be interpreted as the great pair of docs. I am slow, but even I got it right away.

As we look at space and the images we see, I am always reminded that we are looking back in time. We are seeing things as they were and not as they are. My son and I love to discuss some of the great paradoxes of time and space such as the Fermi paradox, the Grandfather paradox, the Bootstrap paradox, and a few other puzzling phenomena. If



you are not familiar with these let me just briefly explain them to you.

The Fermi Paradox is about aliens and why we don't see them, or maybe we do. With all the stars in the universe it seems reasonable that more life would be abundant on other systems. Some people think that we are from another system or that aliens visited the earth a long time ago and we weren't advanced enough to recognize them. This could be true when you look at the Nazca lines in Peru and wonder why they made shapes only recognizable from a high altitude. Other postulates on this include that maybe we are the most advanced creatures in the universe (I doubt it) and no one is capable of sending or receiving our messages. I tend to agree with the last idea on this and that is that space is just large it takes forever to get from one solar system to another. Our lives, even if we live to be 100 years old are a drop in the bucket of time required to travel across the universe.

The other paradoxes like the Grandfather and Bootstrap are about traveling back in time and either doing something to an ancestor or leaving something in the past. This is what a lot of time travel movies are made of and while I find them entertaining the science behind them is either not practical or just way to out there for me at this time.

When you realize just how much energy is required to move anything to anywhere near the speed of light, you realize that that whole matter / anti-matter engine in the Star Ship Enterprise was way ahead of star date 2020.165.14.

Another so called paradox I see is one based on Moore's Law of computer speed. Moore was a computer scientist back in the 1970's and he proposed that the speed of the next computer would increase at a rate based on the speed of current computers. He was right on for the most part. However, when they use his theory and look at the human brain as a computer, you have to go back to even before the Big Bang to have life become as intelligent as we are today.

I guess what this all comes down to is that I feel very lucky to live on a planet that is just in the right part of space, has just the right conditions for life, and that I am not alone with some slugs or

fungi. In this time of social distancing I hope we still can reach out and say hello to each other and we hope that we can get some star activities going sometime this summer. We hope you are all doing well and doing your part to stay healthy and able to get out and see a few things. We congratulate all of you for your effort on the Messier Challenge and are glad to see Tom back in an observatory and smiling.

Clear Skies and clean hands – Bruce Horrocks



Eagle Nebula photo by Bruce Horrocks



M100 photo by Bruce Horrocks

Imaging with DSLR camera and tripod

By Blaine Dickey

Have you wanted to get into astro-imaging but are reluctant to put down thousands of dollars to get the equipment needed to get started. There is another way to get into imaging that is not nearly as expensive and enables you to image deep sky objects, star clusters, the Milky Way, double stars, emission nebula, comets, planets, conjunctions, etc.

A DSLR camera with a telephoto lens, a tripod, and a shutter control is all that is needed to get started. Here is an image of my set up that has proved to be fun and easy to use and gives some really neat astro-photos. The camera is a NIKON D5100 that my daughter and her husband found on KSL Classifieds and gave it to me as a gift on father's day. The telephoto lens shown was purchased for about \$100. The inexpensive shutter control plugs into one of the ports on the camera and allows me to control the shutter without touching it. The tripod was an inexpensive plastic type that holds the camera steady due to the shutter control cable and allows me to point the camera close to the zenith.



The four images included here have been taken with this set up. They include an image of the Milky Way taken a several days ago, the Moon, a recent conjunction of Venus and the Pleiades and a nice arrangement of the Moon, Mercury and Venus. None of these image exposures were more than 10 seconds.



Double Vision

By Harvey Brown

Social Distancing: A set of measures taken to prevent the spread of a contagious disease by maintaining a physical distance between people and reducing the number of times people come in close contact with each other. A new lexicon in our language of today because of the COVID-19 virus throughout the world has put all of us on edge and keeping our distance to others at all times, so for that reason I thought I would put up a few of our Double stars that are practicing social distancing.

When you look at these stars it will probably come to you as it did me of how these are Doubles and how they can be related when they are so far apart.

With over a thousand Doubles seen with my eyes now I look at these like some of the so-called clusters that have only a couple of stars, I just like the real close ones the best. I hope you enjoy these because of the reason they are listed at this time. Most stand out easily without interference from other stars so it makes them good to see.

SHY 204 Omi 1 62 Con: Cancer
HIP 43970 SAO 98447 HD 76543
Mag: Pri: 5.2 Sec: 5.7
Sep: 975.7"

Type: Physical
RA: 08h 57m 14.95s DEC: +15° 19' 21.9"
Eyepiece: 6.5

"Two good bright stars but way way far away yet PHYSICAL. I actually looked at this one through my finderscope because of the separation distance. (A first for me)"

Color: White-White

O 562 6 Con: Lynx
HIP 31039 SAO 25771 HD 45410
Mag: Pri: 5.9 Sec: 9.5
Sep: 169.2"

Type: Visual
RA: 06h 30m 47.11s DEC: +58° 09' 45.5"
Eyepiece: 6.5

"Very wide separation. Not much of a Double. You see the major Magnitude difference on this one too."

Color: Yellow - White

TOK 259 Con: Lynx
HIP 29873 SAO 25647 HD 42994
Mag: Pri: 7.2 Sec: 9.2
Sep: 486.1"
Type: Physical
RA: 06h 17m 23.34s DEC: +57° 24' 52.8"
Eyepiece: 6.5

"OK, not much to see here even though this is a PHYSICAL Double. So wide of a split you would never know this is a Double star. You do see the magnitude difference."

Color: Yellow -White

TOK 272 Con: Leo
HIP 48642 SAO 81082 HD 85843
Mag: Pri: 7.1 Sec: 10.3
Sep: 461.9"
Type: Physical
RA: 09h 55m 05.94s DEC: +24° 38' 13.9"
Eyepiece: 6.5

"It's Physical but miles apart. Don't even look like a Double. Very wide separation. You see the magnitude difference easy too."

Color: White - White

TOK 530 13 Con: Leo Minor
HIP 47631 SAO 61648 HD 83951
Mag: Pri: 6.1 Sec: 8.3
Sep: 336.7"
Type: Uncertain
RA: 09h 42m 42.74s DEC: +35° 05' 36.2"
Eyepiece: 6.5

"Another double that don't look it because the separation is so far out! You see the magnitude difference."

Color: White - White

O 104 UU Con: Leo Minor
HIP 50951 SAO 62021 HD 90068
Mag: Pri: 7.2 Sec: 7.2
Sep: 209"
Type: Uncertain
RA: 10h 24m 22.19s DEC: +34° 10' 35.0"
Eyepiece: 6.5

*“Another wide separation. Both same magnitude.
Easy to see, out in the open.”*

Color: White -White

You may notice that I am using a different eyepiece. I bought an Explore Scientific 6.5mm 52° Waterproof eyepiece and I love it for the Doubles. No more using a Barlow and cutting out more light. I hope everybody is doing well while we are “Shut-in”. Enjoy the wonders of the heavens and someday we’ll be able to get back together to talk about our shut-in time.
Keep looking up and stay safe.

Email: ngc6720@comcast.net

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





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.

Upcoming Events and Anniversaries

- Jun 03 - 55th Anniversary (1965), [Gemini 4](#) Launch, USA's First Spacewalk (Ed White)
- Jun 04 - [Mercury](#) At Its Greatest Eastern [Elongation](#) (24 Degrees)
- Jun 05 - [Penumbral Lunar Eclipse](#)
- Jun 06 - [Godefroy Wendelin's](#) 440th Birthday (1580)
- Jun 08 - [World Oceans Day](#)
- Jun 08 - [Giovanni Cassini's](#) 395th Birthday (1625)
- Jun 12 - [Mars](#) Passes 1.7 Degrees From [Neptune](#)
- Jun 14 - 250th Anniversary (1770), [Charles Messier's](#) Discovery of [Lexell's Comet \(D/1770 L1\)](#)
- Jun 17 - 35th Anniversary (1985), [STS-51-G](#) Launch (Space Shuttle Discovery)
- Jun 19 - [Moon Occults Venus](#)
- Jun 20 - [Summer Solstice, 21:44 UT](#)
- Jun 20 - 350th Anniversary (1670), Discovery Of [Nova 1670 Vulpecula](#)
- Jun 21 - [Annular Solar Eclipse](#)
- Jun 22 - [Royal Greenwich Observatory's](#) 345th Birthday (1675)
- Jun 23 - 115th Anniversary (1905), 1st Flight of [Wright Brother's 3rd Plane \(Flyer III\)](#)
- Jun 24 - [Fred Hoyle's](#) 105th Birthday (1915)
- Jun 26 - [Charles Messier's](#) 290th Birthday (1730)
- Jun 30 - [Asteroid Day](#)

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. They plan to start loan out with Preston Jr. High Star Party
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