

Cache Valley Clear Skies

The Journal of the Cache Valley Astronomical Society



CVAS Executive Committee

Pres – Dell Vance - (435) 938-8328
avteam.dell@gmail.com

Vice Pres- Layne Pedersen – (801) 463-1701
laynepedersen@gmail.com

Treasurer- Brad Kropp - (435) 755-0877

Secretary – Dale Hooper - (435) 563-0608
dchooper5@gmail.com

Loaner Scope Coordinator/NSN Coordinator –
Garrett Smith – GarrettGillSmith@gmail.com

Past President, Webmaster, Librarian –
Tom Westre – (435) 787-6380 twestre45@aol.com

Public Relations – Lyle Johnson -
lyledj@aol.com

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www.cvas-utahskies.org

Meeting Announcement

Our May meeting will be held on the **fourth Wednesday, May 23, 2018 at 7pm in room 840 of the main BATC campus.** We have room 840 for the rest of this year. Enter on the east side of the building located at 1301 North 600 West.

Our featured speaker this month is club member Brad Kropp. Brad is a recently retired USU biology faculty member who had a teaching emphasis in microbiology and a research interest in mycology. He will be speaking to us about **Life on other Planets – What are the odds?** This is a very fascinating topic and I'm sure that we will be well rewarded by attending.

Astro-Imaging Special Interest Group

The Astro-Imaging SIG will meet this month at Blaine Dickey's home, 235 E. Center, Millville, UT at 8pm on May 11th. Please contact Tom at 435-787-6380 for more information.

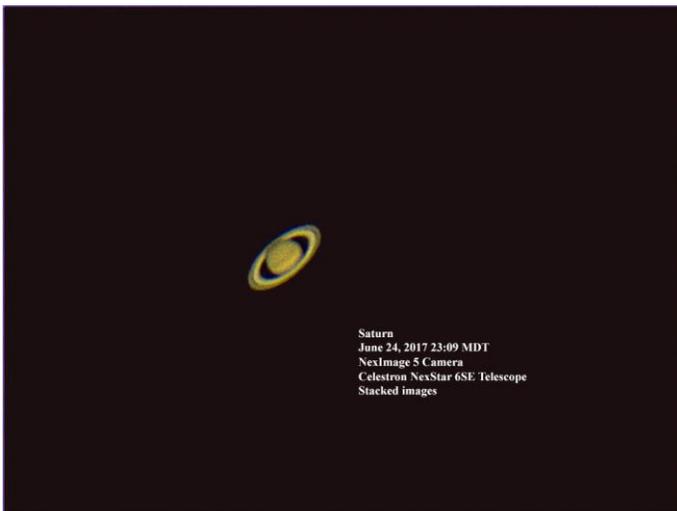
The President's Corner By Dell Vance, CVAS President

It's May! The weather is much warmer, and the skies are often clear.



Be sure to get out and enjoy the skies when you can.

Last month we had some very interesting events. Jeff Clayton invited the Astro Imaging Special Interest Group (SIG) to his home to show how he processes the images he collects through his telescopes. Jeff has put a lot of research into what techniques and equipment to use to get the best results. Any one that has seen Jeff's work knows that he is very skilled at this. I was so impressed with what he showed us that I went home and reprocessed some of my images. The first image is what I had processed last year.



Original Saturn image - courtesy Dell Vance

The next image is from the same video data using some of the tips that Jeff gave us.



Updated Saturn image - courtesy Dell Vance

The image is less grainy and a little clearer than the one from last year. I can see why Jeff says that he can process them over and over to get different final images. It really is an art form and Jeff is an artist.

Our CVAS Monthly meeting for April was presented by our club Secretary, Dale Hooper. He took on the challenging topic of Uranus and Neptune. His presentation was very interesting. I was very interested in the difference between a "Gas Giant" (Jupiter and Saturn) and an "Ice Giant" (Uranus and Neptune). In this case size really does make a difference. The presentation was very well done.

We also had an emergency request for assistance at a Providence School Planet and Constellation Party on Friday Night. Their planned support was not able to help them out at the last minute and they sent me an email on Thursday requesting some assistance. Blaine Dickie and I were able to help them out with our telescopes. The teachers had done a great job of preparing the students for the event and we had a good time showing them the Moon, Venus, Betelgeuse, some double stars, and even a quick glimpse of the Orion Nebula. Of course, the green lasers used to point out the constellations were a big hit. Overall, I think it worked out very well for the students and parents.

Tom Westre and I also met with the Logan Library Director, Karen Clark, and the Assistant Director, Joseph Anderson. We presented our plan to provide a Library Loaner Telescope to the Logan Library. They were very receptive and gave us the go ahead. We have since received the telescopes and zoom eyepieces. We are making the recommended modifications to them and hope to have them ready for the Library this month. We plan to work with the Library to make a formal presentation and get local media involved in the event. We will keep you posted so that you can attend or at least tell your friends. This has a big potential to spike the community's interest in astronomy.

This month the CVAS Monthly meeting will cover the topic of "Life on other planets - what are the odds?" Brad Kropp, CVAS Treasurer, will make the presentation. Brad is recently retired from teaching Biology at USU and is a great resource on this topic. Brad says, "The presentation will cover the various factors required to support life on earth and the odds of finding the right mix of those factors elsewhere in the universe." It should be a good topic for everyone. Be sure to invite your friends.

I am always very amazed at the depth of the abilities demonstrated by members of CVAS. You really are a great group to work with. Be sure to share those talents with your friends and family.

This is going to be a great month. So be sure to get out there and enjoy one of the best seasons of the year to watch the stars.

Thanks again for your support.

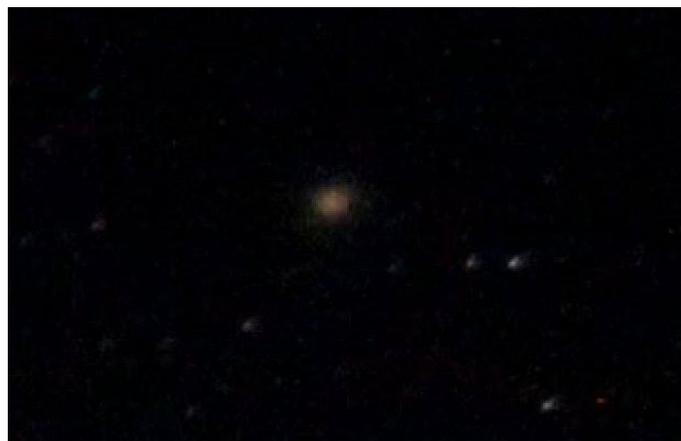
Clear skies!

Southern Skies

By Dale Nartker

While staying on the big island this month (April), I was able to catch some southern delights. First shot is obvious, the second is Centaurus with Omega Centauri to the middle right, the third shot is Omega by itself, lastly the Southern Cross by itself.

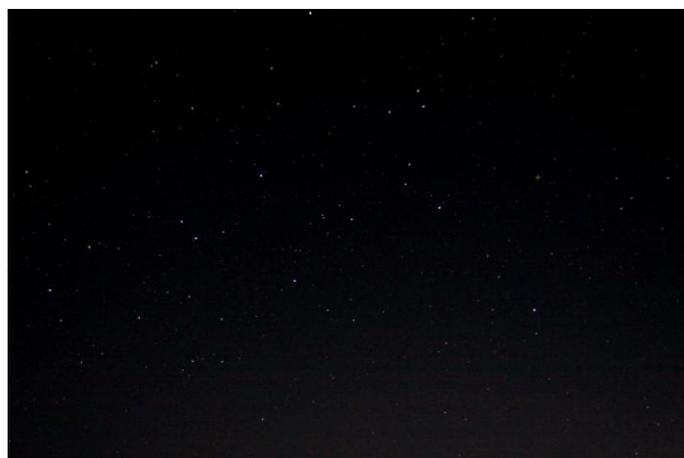
Enjoy, Aloha.



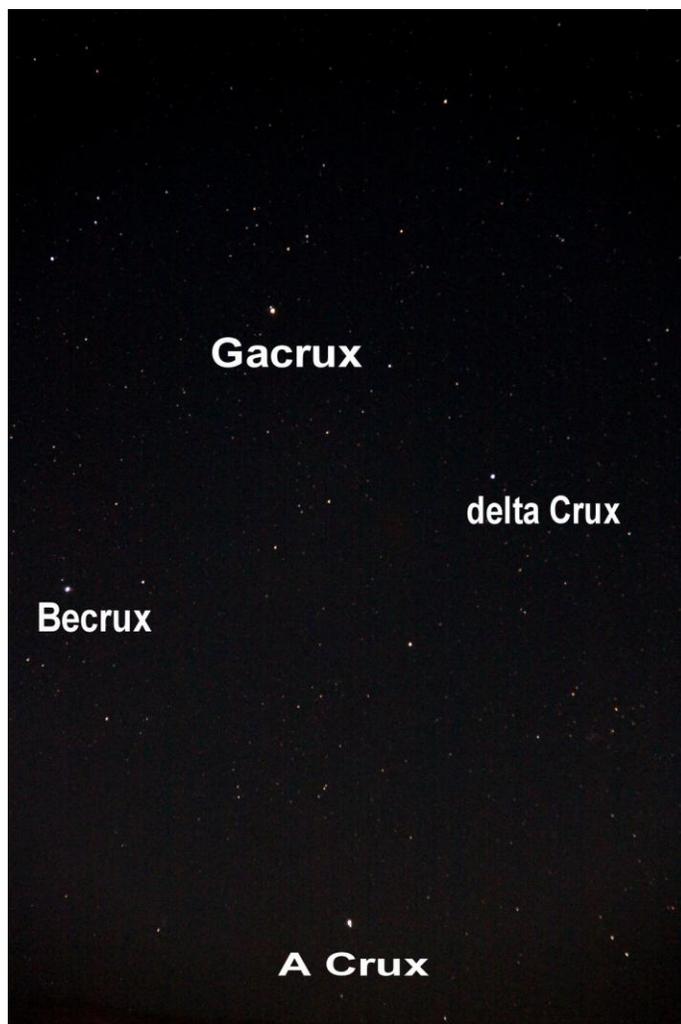
Globular Cluster Omega Centauri - courtesy Dale Nartker



Alpha Centauri & Southern Cross - courtesy Dale Nartker



Centaurus - courtesy Dale Nartker



The Southern Cross - courtesy Dale Nartker

Robigalia and the Setting of Sirius

By Brad Kropp

Spring is the time of year when the star Sirius gradually disappears into the sunset. By the time this newsletter comes out, Sirius will be safely tucked away behind the horizon again until winter.



The Setting of Sirius – courtesy Brad Kropp

Sirius is the brightest and one of the most recognizable stars in the night sky. Probably because of that so many cultures around the world from the ancient Egyptians to the Chinese have legends or religious traditions based on it. These traditions are all interesting and a few of them are downright odd.

One little-known tradition involving Sirius comes from ancient Rome. This is a good time of year to write about it since it was tied to the springtime disappearance of Sirius. The Romans celebrated a festival called Robigalia in late April that corresponded to the heliacal setting of Sirius. During this season, their fields were susceptible to disease and a wheat disease called Stem Rust was especially important to them. Before the advent of modern agriculture, this disease had the potential to lay waste to entire crops of grain and it periodically caused famines when it broke out.

The Romans believed that one of their gods called Robigus had power over Stem Rust.



Stem rust - image courtesy Brad Kropp

To protect their grain, the Romans carried out rituals to appease Robigus during Robigalia. Priests and followers dressed in white robes made their way to a sacred grove outside the city where a sacrifice was made to Robigus. Wine, incense, a sheep, and a red dog were often sacrificed. The sacrifice of a red-colored dog is very unusual but it was probably required because the fungus that causes Stem Rust is reddish in color.

Of course, the early Christians didn't think much of these happenings. So, as Christianity spread through the Roman world, Robigalia was eventually replaced by a more acceptable substitute called Rogation Days. This celebration is rarely practiced nowadays. However, it was patterned after Robigalia in that the fields within a given area were blessed by a priest so that a good harvest would be had. It was done at the same time of year as Robigalia even though it doesn't seem to have remained linked directly to the setting of Sirius.

Interestingly, the old English tradition of "beating the bounds" is something that was done in spring as a part of Rogation Days. Thus, it is also related to the disappearance of Sirius in an indirect way. Beating the bounds, like Rogation Days, is now an almost extinct practice. When it was done, villagers walked around the perimeter of their parish with the local pastor to pray for blessings on the land and to mark parish boundaries. Weirdly enough, beating the bounds sometimes even included "bouncing" boys on the markers (usually stones) along the path.



Bouncing a boy on a stone – courtesy Brad Kropp (but it wasn't him doing it)

In the old days, this was apparently a rather painful process for the boys since it was intended to make them remember the markers! (...do we really need to travel further than England to find alien life?) Beating the bounds is still practiced occasionally but mostly as a reenactment and, nowadays, it seems to be done with a good deal of humor.

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 now 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



Binocular support (folded for storage) - Courtesy Ned Miller

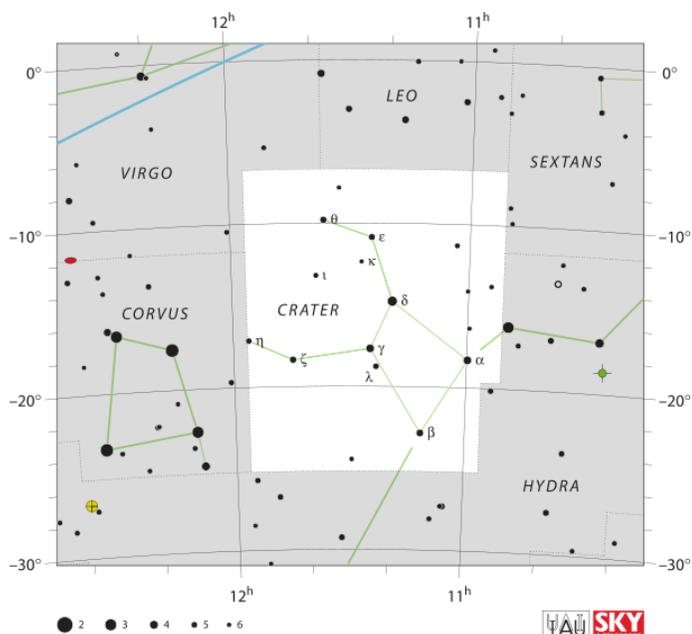
Spotlight on Crater, the Cup

By Dale Hooper

Crater is another constellation which is fairly far south for us and doesn't contain any really bright stars. Crater was one of the original 48 constellations included in the second century AD by Ptolemy. It represents a gold cup that is placed on the back of Hydra the water snake.

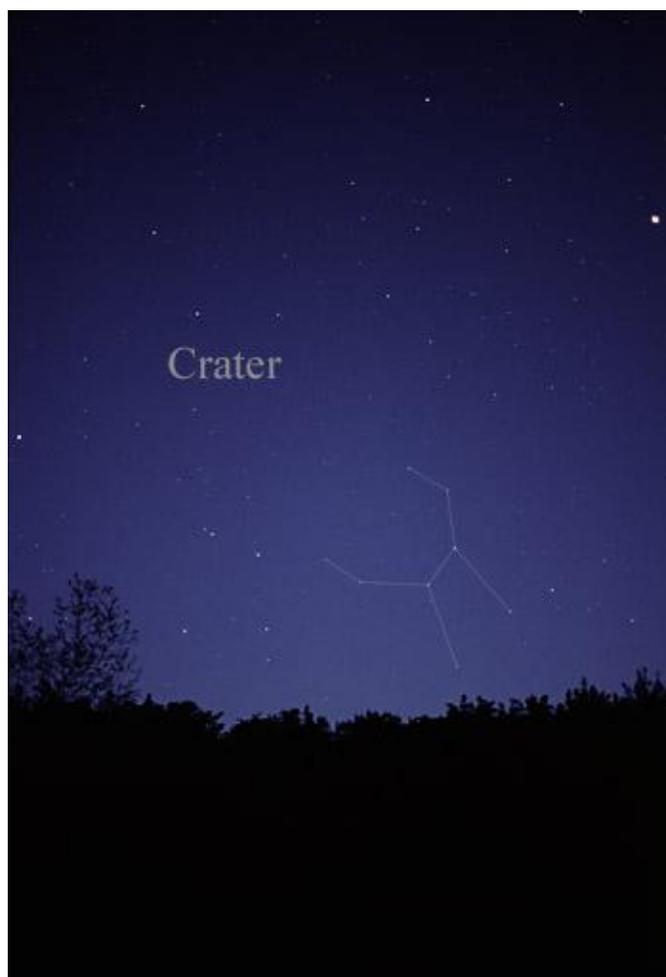
Admittedly, it doesn't contain any double stars which meet our criteria of at least three stars in *The Night Sky Observer's Guide*. But, like Corvus which we discussed last month, it does have a fair number of decent galaxies which are worth checking out. .

Objects which rank at least three stars in *The Night Sky Observer's Guide* (Corvus is in Volume 2) have been included. As usual, the table is organized according to increasing Right Ascension values.



IAU and Sky & Tel - Roger Sinnott & Rick Fienberg

Object	R.A.	Dec.
NGC 3511 (Galaxy mag 11.0)	11h03.4m	-23°05'
NGC 3513 (Galaxy mag 11.5)	11h03.8m	-23°15'
NGC 3672 (Galaxy mag 11.4)	11h25.0m	-09°48'
NGC 3887 (Galaxy mag 10.6)	11h47.1m	-16°51'
NGC 3892 (Galaxy mag 11.5)	11h48.0m	-10°58'
NGC 3955 (Galaxy mag 11.3)	11h54.0m	-23°10'
NGC 3962 (Galaxy mag 10.7)	11h54.7m	-13°58'
NGC 3981 (Galaxy mag 11.0)	11h56.1m	-19°54'



The constellation Crater as it can be seen with the unaided eye. © T. Credner & S. Kohle, AlltheSky.com - used with permission

CVAS Minutes – April 2018

The April CVAS meeting was held on April 25th at BATC. There were approximately twenty-five people in attendance. It was announced that the AstroImaging – SIG will meet at Blaine Dickey's house on Friday, May 11th.

A star party on June 22nd for the Nibley Stake cub scouts will replace the star party originally planned for Macey's on that same night.

The remainder of the time was turned over to Dale Hooper for our featured presentation on Uranus & Neptune – The Ice Giants.

Like Garrett last month, Dale began his presentation with a scale model of the solar system. The scale used was one foot for one astronomical unit (AU).

Dale then explained why Uranus and Neptune are referred to as the “Ice Giants”. He explained that because of their smaller mass they lack the deep metallic hydrogen mantles found on Jupiter and Saturn. This distinguishes them from the Gas Giants.

He then discussed Uranus’ discovery by then amateur astronomer William Herschel with his 6.2 inch reflector. Dale also discussed how Herschel originally named the planet Georgium Sidus (The Star/Planet of George) after King George III. But the name was subsequently changed to Uranus in 1850.

He then discussed some of the physical properties of Uranus. He then covered where and when to observe Uranus and talked about a Java applet for determining the location of Uranus’ five brightest moons. He then shared with us a YouTube video about Uranus from the Astrum series: ***Our Solar System’s Planets: Uranus.***

Following the video Dale discussed discrepancies in Uranus’ orbit which led to the calculation of Neptune’s location by Urbain Le Verrier and its observation one degree from the calculated position by Johann Galle and Heinrich d’Arrest. The first observation was made September 23, 1846 and credit for the discovery was given to Le Verrier.

He then explained then even though other names were offered for the new planet’s name, Le Verrier felt that he had the right to name the planet, so he named it Neptune after the Roman god of the sea.

Some of the physical properties of Neptune were then covered, followed by where and when it could be observed. He then talked about a Java applet which could be used for determining the location of Neptune’s brightest moon, Triton. Lastly, he shared with us a YouTube video about Neptune from the Astrum series: ***Our Solar System’s Planets: Neptune.***

Upcoming Star Parties

15 Jun Annual Pot Luck Dinner / Star Party

Nibley Park, 6:30pm (850 W. Nibley Park Ave, Nibley). Enter Nibley on 800 W and drive south until you reach Nibley Park Ave. and turn west one block before the pavilion.

- 16 Jun Solar Party, 10:30am – Noon
Logan Library
- 22 Jun Nibley Stake Cub Scout Star Party
- 13 Jul CVAS Star Party – (possibly Monte Cristo)
- 14 Jul Solar Party, 10:30am – Noon
Logan Library
- 20 Jul Public Star Party – Heritage Park
2456 S. 800 W., Nibley

Upcoming Events

- 02 May Gerard Kuiper discovers Neptune’s moon Nereid (1949)
- 04 May Saturn 1.7° south of Moon
- 05 May Alan Shepard, first American in space (1961)
Eta Aquarid meteors
- 06 May Mars 3° south of Moon
Eta Aquarid meteors
- 07 May Last Quarter Moon
Eta Aquarid meteors
- 08 May Jupiter at opposition
- 10 May Neptune 2° north of Moon
- 12 May Mercury 2° south of Uranus
- 13 May Mother’s Day
- 14 May Skylab launched (1973)
- 15 May New Moon
Nicolas Lacaille born (1713)
- 16 May Aldebaran 1. 2° south of Moon
- 21 May First quarter Moon
- 23 May **CVAS Monthly Meeting, 7pm**
BATC room 840
- 28 May Memorial Day
- 29 May Full Moon
- 31 May Saturn 1.6° south of Moon

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 Dale Hooper at dchooper5@gmail.com