



## 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](mailto:avteam.dell@gmail.com)

Vice Pres- Bruce Horrocks  
[bruceh@gembuildings.com](mailto:bruceh@gembuildings.com)

Treasurer- Brad Kropp - (435) 755-0877  
[brad.kropp@usu.edu](mailto:brad.kropp@usu.edu)

Secretary – Wendell Waters (435) 213-9230  
[wendellw57@comcast.net](mailto:wendellw57@comcast.net)

Loaner Scope Coordinator/NSN Coordinator –  
Garrett Smith – [GarrettGillSmith@gmail.com](mailto:GarrettGillSmith@gmail.com)

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

Public Relations – Lyle Johnson -  
[lyledj@aol.com](mailto:lyledj@aol.com)

Vol. 6 Number 9

May 2019

[www.cvas-utahskies.org](http://www.cvas-utahskies.org)

### Meeting Announcement

Our May meeting will be held Wednesday, May 22nd at 7 pm in **Room 840** of the main BTC Campus. Enter on the east side of the building located at 1301 North 600 West. Our speaker will be Emma Smith, science teacher at Ridgeline High. Her topic will be “Galaxies”.

### Upcoming Star Parties

We have been invited to help with a STAR PARTY at the Smithfield Library on Friday, May 3rd starting about 8:00 pm. It is our first star party of the year. We are also having a solar party on May 11th at the Logan Library, followed by a public outreach star party at the Providence Maceys that same night! Hope to see you there!!

### Special Announcement

We are having our yearly CVAS dinner/star party on Friday, May 31<sup>st</sup> at the Heritage Park in Nibley.

### The President's Corner By Dell Vance, CVAS President



April Showers! That pretty well sums it up. The Newton Reservoir is full of water and it should be a great year for our crops and gardens. However, the number of “really good” nights to watch stars was somewhat limited for me. Of course, I was out of state the week you had the good weather. But other than that, it has been another great month for CVAS. We were able to place another telescope in

Mendon Library. Bruce Horrocks has agreed to be the liaison for that library. We have two other telescopes in the process of being donated to libraries. Assuming those donations work out that will bring us up to 8 telescopes in Cache Valley libraries. That is 80% of all the libraries in the valley.

In addition to that we have been supportive of STEM Fairs in the Elementary School in the Cache County School District. Bruce Horrocks has also been working with the School District. I have found it very satisfying to see a young student look through a telescope and get all excited about seeing the clock on the wall. I know the excitement of looking through a telescope. I still get that feeling of awe with what I can see.

I did get a chance to get out to my telescope and test out some of my equipment, particularly, the auto guiding process. I'm not perfect yet and probably won't be anytime soon, but I am enjoying the process. I was able to get this shot of M66 – Spiral Galaxy (part of the Leo's Triplet) with a 3-minute exposure. Auto guiding provides some great opportunities for astrophotography. I included a picture last month without autoguiding and a higher ISO value. The auto guiding allows you to decrease the ISO value and increase the exposure time. I ended up with much more detail. I hope all of you are trying new things with your observing. It makes the experience much more fun.

Our monthly meeting for April took some unexpected turns. Dr. Palen was not able to come, due to illness. We were able to get together some interesting photos of nebulas and a video on planetary nebulas. It was pretty much last minute, but it worked out well and we had good participation from all in attendance. We hope to get Dr. Palen to give us a presentation when we start up the lectures again next fall.

In May, we have another guest speaker coming. Ms. Emma Smith, Ridgeline High School Science Teacher, will be with us to give information

about Galaxies. Ms. Smith made a presentation last fall and did a great job. We look forward to having her again. Be sure to bring a friend with you when you come.

Be sure to take advantage of the warmer weather and get out and do some observing. May 31<sup>st</sup> we will have our Annual Pot Luck Party/CVAS Star Party. Be sure to watch the website for more information. This is a great opportunity for our families to get to know each other. We will also use the Group.io email system to poll you about what you want to have at the party.

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](http://www.upr.org).

## Best CVAS Images and Notes

### Hi CVAS imagers and observers

This newsletter article highlights what you are observing and or imaging. We encourage you to send in images and visual reports of what you have found and share it with the rest of us. We received reports last month from several imagers.

May is a great month to hunt down galaxies for both visual and astrophotography. Because there are so many galaxies to observe here is short list of some of my favorites:

The Leo Triplet (M 65, M66, and 3638)  
Bodes Galaxy (M81 and M82) in Ursa Major  
The Pinwheel Galaxy (M101) in Ursa Major  
The Whale Galaxy (NGC 4631) and the Hockey Stick Galaxy (NGC 4656/NGC 4657) in Canes Venatici  
The Whirlpool Galaxy (M51) in Canes Venatici  
The Cocoon Galaxy (NGC 4490) in Canes Venatici  
The Sunflower Galaxy (M63) in Canes Venatici  
The Needle Galaxy (NGC 4565) in Coma Berenices  
The Blackeye Galaxy (M64) in Coma Berenices  
The Sombrero Galaxy (M104) in Virgo  
The Eyes (NGC 3538 and NGC 4535) interacting galaxies in Virgo  
The Siamese Twins (NGC 4567 and 4568) interacting galaxies in Virgo  
The Antenna Galaxies or Ringtail Galaxy (NGC 4038/4039) interacting galaxies in Corvus

The Messier list of galaxies contains two, **M84 and M86** that are part of a string of galaxies called the Markarian Chain, a string of galaxies near the center of the great Virgo Cluster. Other galaxies that are a part of this chain are NGC 4477, NGC 4473, NGC 4461, NGC 4458, NGC 4438, and NGC 4435. You should be able to see these galaxies on a dark night with at least an 8 inch telescope. An Armenian Astronomer, Benjamin Markarian, was the first to discover that all galaxies share a common motion in space.

**NGC 4538 and NGC 4535 in Virgo (Fig 3)** are two interacting galaxies known as The Eyes Galaxies because they look like a pair of eyes in small telescopes. Their mutual gravity has brought them within only 16,000 light years of each other and the gravitational forces is pulling material and dust from both galaxies apart.

My final recommendation

**Hickson 61**, commonly known as **The Box (Fig 1)** in Coma Berenices. This compact group of galaxies consists of 4 galaxies in a 6' area of sky and form an almost perfect rectangle. The brightest is NGC 4169 a

lenticular galaxy at magnitude 13.3 and should be visible in an 8 inch scope. The next is NGC 4174, nearly edge on at magnitude 14.5. NGC 4175 is magnitude 14.3 also edge on. The last is NGC 4173, the largest of the four but is a challenge to see. The Box would be a great grouping to photograph.



Figure 1 The Box, or Hickson 61 Galaxy group by Tom Westre



Figure 2 The Siamese Twins interacting galaxies in Virgo by Tom Westre



Figure 3 The Eyes NGC 4435 and NGC 4438 in Virgo by Tom Westre

## Review of Meade UWA 20mm

### 82° field of view eyepiece

By Blaine Dickey

Recently I purchased the Meade UWA 20mm 82° eyepiece for my Celestron Evolution 6 inch telescope. This telescope is almost exclusively used for star parties. Up until recently the eyepieces I used most often for this scope were a Celestron Zoom 8-24mm eyepiece and a 25mm Meade eyepiece.

The Celestron zoom eyepiece has the advantage going from a low power of 84X to high power of 254 X by just twisting the barrel of the eyepiece. At the lowest power 84X, the apparent field of view is quite small but the apparent field of view expands when the power increases 254X. This eyepiece is best suited for viewing the planets where high power and a wide field of view are desirable.

The Meade 25mm eyepiece has a nice apparent field of view of 65 degrees, which gives decent wide field views of deep sky objects, but does not do justice to the planets because of the low magnification.

While doing some calculations I found out that an eyepiece with a focal length of 18 to 20 mm with an apparent field of view of 82 would give me the same actual field of view as my 25mm Meade but it would increase the magnification to about 100 X. That would allow me have great views of deep sky objects, see the entire moon in the field of view, and still have enough magnification to see good detail on the planets.

My research led me to the 20mm Ultra-Wide Meade eyepiece with an apparent field of view of 82 degrees. This has turned out to be great choice. Through this eyepiece the moon looks large with very sharp detail. The stars appear well focused even to edge of the field of view. With this eyepiece I can see the double cluster NGC 884 and

NGC 869 in the same field of view. The weight of the eyepiece is somewhat heavy coming in at 2.25 lbs. with a 2 inch barrel. There is a twist eye cap that allows you to place your eye at the best location to get your preferred eye relief. Using this eyepiece on my Celestron Evolution and my LX200 R 12 inch has been a breathtaking experience because of the wide clear apparent field of view. This is quickly becoming my favorite eyepiece.



## 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 27<sup>th</sup> 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)

## Spotlight on Scutum, the Shield

By Dale Hooper

This small constellation doesn't appear on our current skymap because it doesn't rise until about 11:30pm in early May. We are getting close to having highlighted all of the constellations that are completely visible from Cache Valley.



Messier 11, the Wild Duck Cluster,  
Public domain NASA image

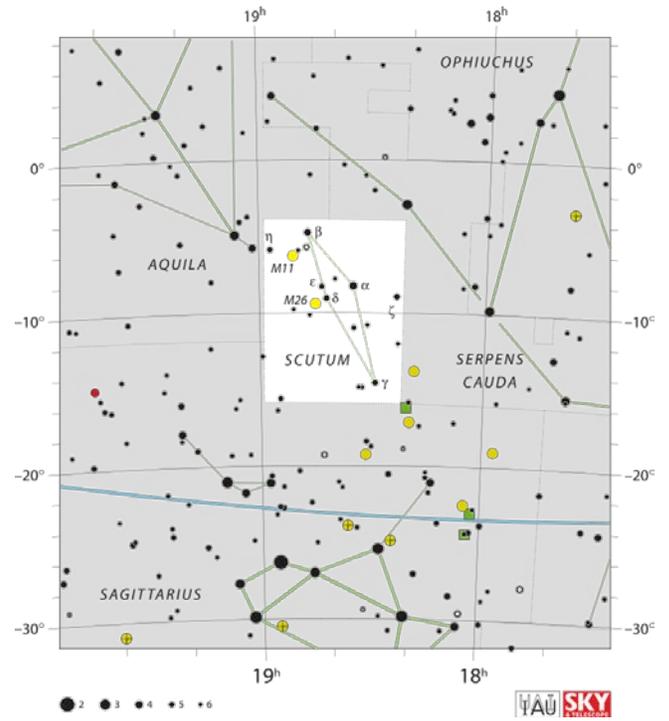
Scutum is nestled between Aquila, Serpens Cauda and Sagittarius. Even though it is small and has rather dim stars, it is found in a region where there is a good variety of deep sky objects and double stars.



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

It is the home of open cluster Messier 26 and one of my all-time favorite objects Messier 11, the Wild Duck Cluster(!) as well as a number of other nice open clusters.

Scutum also contains a substantial number of dark nebulae. However, if you are going to look for dark nebulae you really do need to head to a dark sky location.



IAU and Sky & Tel - Roger Sinnott & Rick Fienberg

Scutum was another constellation named by Polish astronomer Johannes Hevelius. It was initially named Scutum Sobiescianum (Shield of Sobiesky) to commemorate the victory of the military forces led by Polish King John III Sobieski. The name was later shortened to Scutum.

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

Object	R.A.	Dec.
Σ2306 (Triple star)	18h22.2m	-15°05'
Barnard 312 (Dark nebula)	18h32.2m	-15°35'
Barnard 101 (Dark nebula)	18h32.6m	-08°57'
Barnard 100 (Dark nebula)	18h32.6m	-09°12'
NGC 6649 (Open cluster)	18h33.5m	-10°24'
NGC 6664 (Open cluster)	18h36.7m	-08°13'
Barnard 103 (Dark nebula)	18h39.4m	-06°41'
NGC 6683 (Open cluster)	18h42.2m	-06°17'
Δ Scuti (Double star)	18h42.3m	-09°03'
Trumpler 35 (Open cluster)	18h42.9m	-04°08'
Messier 26 (Open cluster)	18h45.2m	-09°24'
Σ2373 (Double star)	18h45.9m	-10°30'
Barnard 104 (Dark nebula)	18h47.3m	-04°32'
R Scuti (Variable star mag 4.9 to 8.2)	18h47.5m	-05°42'
Basel 1 (Open cluster)	18h48.2m	-05°51'
Barnard 110 (Dark nebula)	18h50.0m	-04°48'
Barnard 111 (Dark nebula)	18h50.1m	-04°48'
Messier 11 (Open cluster)	18h51.1m	-06°16'
Barnard 113 (Dark nebula)	18h51.4m	-04°19'

## Upcoming Events and Anniversaries

May 04 - Star Wars Day  
 May 05 - Eta Aquarids Meteor Shower Peak  
 May 06 - Asteroid 18610 Arthudent Closest Approach To Earth (1.823 AU)  
 May 08 - Mercury Passes 1.4 Degrees from Uranus  
 May 08 - Asteroid 6128 Lasorda Closest Approach to Earth (1.292 AU)  
 May 14 - Peder Horrebow's 340th Birthday (1679)  
 May 17 - Asteroid 250840 Motorhead Closest Approach to Earth (2.481 AU)  
 May 18 - Blue Moon  
 May 18 - Venus Passes 1.1 Degrees from Uranus  
 May 18 - 50th Anniversary (1969), Apollo 10 Launch  
 May 19 - Moon Occults Dwarf Planet Ceres  
 May 19 - Asteroid 9951 Tyrannosaurus Closest Approach to Earth (1.232 AU)  
 May 21 - Asteroid 9618 Johncleese Closest Approach to Earth (1.451 AU)  
 May 22 - Moon Occults Saturn  
 May 23 - Moon Occults Dwarf Planet Pluto  
 May 23 - 115th Anniversary (1904), 1st Flight of Wright Brother's 2nd Plane (Flyer II)  
 May 24 - William Gilbert's 475th Birthday (1544)  
 May 25 - Towel Day - Annual Tribute to Douglas Adams  
 May 25 - Igor Sikorsky's 130th Birthday (1889)  
 May 29 - 100th Anniversary (1919), Solar Eclipse Confirms Einstein's General Theory of Relativity  
 May 29 - Peter Higgs' 90th Birthday (1929)  
 May 30 - Moon Occults Asteroid 4 Vesta  
 May 30 - Alexey Leonov's 85th Birthday (1934)



Photo by Blaine Dickey

## 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
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		Pending Board approval
Lewiston Library	Schrieber Foods			Funds Pending
Richmond Library				
Preston Library	Idaho NASA Space Grant Consortium			Working out details for Library to receive funding for the telescope
Mendon Library	Campbell Scientific 	4/8/2109		Pending Board approval
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](http://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](mailto:brad.kropp@usu.edu) or our Secretary Wendell Waters at [wendellw57@comcast.net](mailto:wendellw57@comcast.net)