



## Cache Valley Clear Skies

The Journal of the Cache Valley Astronomical Society



### CVAS Executive Committee

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

Vice Pres- James Somers  
[james.m.somers@aggiemail.edu.usu](mailto:james.m.somers@aggiemail.edu.usu)

Treasurer- Janice Bradshaw  
[lojbrads@yahoo.com](mailto:lojbrads@yahoo.com)

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

Night Sky Network Coordinator –  
Garrett Smith – [GarrettGillSmith@gmail.com](mailto:GarrettGillSmith@gmail.com)

Past President – Dell Vance (435) 938-8328  
[avteam.dell@gmail.com](mailto:avteam.dell@gmail.com)

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

Webmaster, Librarian – Tom Westre  
[twestre45@aol.com](mailto:twestre45@aol.com)

---

Vol. 7

Number 7

March 2020

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

---

### Meeting Announcement

Our next meeting will be held on Wednesday, March 25th, at 7 pm in the Lake Bonneville Room of the Logan City Library. Our presenter will be Harvey Brown, and he will be speaking to us about Double Stars.

The meeting is free and open to the public. Light refreshments will be served. COME AND JOIN US!!

### Upcoming Star Parties and CVAS Events

We have two STEM Nights coming up this month. Please contact Bruce Horrocks if you can help out.

1. March 5<sup>th</sup> – Cedar Ridge Elementary
2. March 16<sup>th</sup> – Birch Creek Elementary

### The President's Corner By Bruce Horrocks – CVAS President

It is nice to see the weather finally giving us a few clear skies so we can get out and use those telescopes. Quite often I have people ask me what type of telescope to buy. I always tell them to buy the one they will use, but then I ask them what type of mount you are going to use. Most of the time I then get a funny look like “what are you talking about?”

When I bought my first high quality scope, the dealer tried to talk me into buying an equatorial mount over a fork / altazimuth mount. I had an old telescope with the equatorial mount and found it confusing to use and was intimidated by how to properly set one up for use. Now after many years of using both types, I greatly prefer the equatorial mount and thought I would share a few reasons why.

Altazimuth mounts can come in different styles. They can look like a fork or the common one-sided support on the Celestron Nexstar systems. They are easy to use and have 2 simple rotational movements, horizontal and vertical. They are very easy to use as you just turn and look up. They are a great way to get started in astronomy without adding to much complexity. It is an easy method

for our minds to grasp, much like using X Y coordinates to find a spot on a map.

Equatorial mounts have 4 methods of rotation and maybe this is where it gets complicated. The purpose of these movements is to simulate how your telescope would behave as if you were on the North Pole. Tom Westre gave us a short presentation on how we achieve this polar alignment at a previous club meeting.

Back to the mount, the first 2 methods of rotation are the same 2 that we find on an altazimuth mount. These 2 movements are used for setting up the mount and doing the polar alignment. The other 2 methods, declination (DEC) and right ascension (RA) are for are used for finding and tracking the stars.

The DEC is a measurement similar to latitude that gives us the angle from the celestial equator to the object we want to see. Stars on the equator are at 0 degrees while Polaris is almost 90 degrees. The RA gives us how far we rotate around to find the object. This would be comparable to longitude as we use on earth. While DEC measurements are given in degrees, RA is given in Hours-Minutes-Seconds. While this may seem quite confusing at first, once you learn how to align your scope to the polar axis, you will greatly appreciate the movements of an equatorial mount. If you are thinking of getting a mount, I am sure you can find a club member that would be willing to demonstrate all this to you.

The paradox in all of this is that if you were at the North Pole your altazimuth mount would behave just like an equatorial mount. Straight up above you would be Polaris so your telescope would be polar aligned and all you would have to worry about then is how not to freeze to death. In fact, most commercial equatorial mounts must work in an Earth latitude range between 5 – 65 degrees. I have often wondered if you lived out of this range how to you use a telescope. Is anyone from Quito, Ecuador or Fortaleza, Brazil who has tried to use a telescope?

I hope I haven't confused most of you and remember the best telescope and mount to use is the one that you will use. With our Messier challenge this month we hope that you will all be able to get out and look and some of these fascinating objects in space. Once again, we thank all of you that have helped with the school STEM activities and hope to see you at our meeting next month.

Clear skies and clean lens – Bruce Horrocks

## Recent Astro-Images

By Bruce Horrocks



**Horse Head Nebula**



**Andromeda Galaxy (M31) & Companions (M32, M110)**



**Orion Nebula (M42, M43)**

Taken with an 11" Edge Telescope, the Hyperstar Lens and ZWO 294 color camera.

# The Case of Betelgeuse

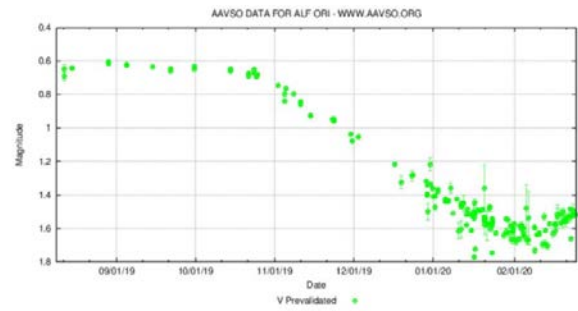
By Blaine Dickey

The star Betelgeuse, otherwise known as Alpha Orionis, has been on an unusual ride since October 2018. You may have read in the news it dimmed to a historic low magnitude of about 1.6. Betelgeuse has been a variable star widely observed over the past century. Betelgeuse had never dimmed this much before. The constellation Orion with a dimmer Betelgeuse hasn't looked the same as before the dimming began. It has lost some of its glory.

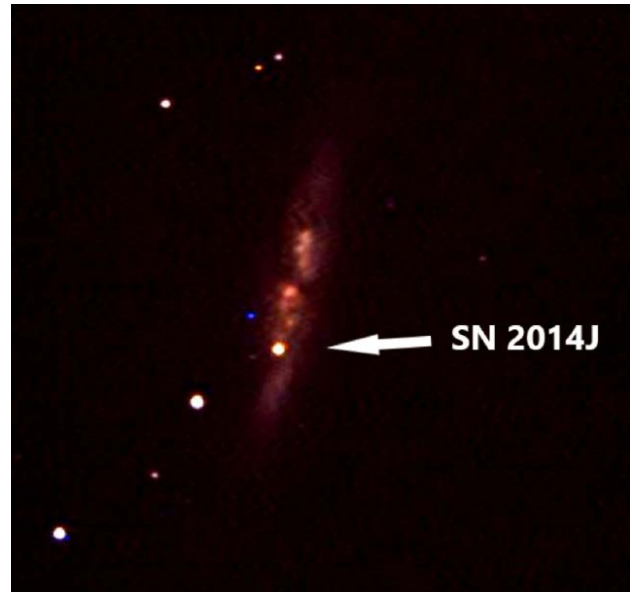
Betelgeuse is a variable star that regularly changes its brightness but it has been a shock to see it dim as much as it has in the past several months. Orion's appearance has changed due to this dimming. I took an out of focus image of Orion at about the time that Betelgeuse was at its lowest magnitude. You can see that Betelgeuse is about the same brightness as Bellatrix but much dimmer than Rigel



All this dimming caused speculation that Betelgeuse was about to become a supernova. In the last few weeks it has become clear that Betelgeuse is now beginning to brighten once again as can be seen in this recent plot from the AAVSO light curve generator.



It is now believed that Betelgeuse will not go supernova any time soon, which is a bit of a disappointment. I've observed supernova before with my naked eye and a camera through a telescope but only in far-away galaxies. Below is an image I took of a supernova in M82 in 2014 on February 10, 2014. All the other stars in the image are in our galaxy. M82 is about 12 million light years distance.



It looks like we will have to wait to see a supernova in our galaxy, even though one is perhaps due by now. There hasn't been a supernova observed in our galaxy since the invention of the telescope in 1604. I'm not quite ready to see the shape of Orion change radically from how we know it now.



## Double Vision

By Harvey Brown

Winter is soon to be gone and warmer nights are ahead, with more clear nights now it's time to get out and see the stars again. This month I have four Doubles two in Ursa Major and two in Canes Venatici, so these will be easy to find and almost always up early too.

We start in the great constellation of Ursa Major:

1193 AB                      Con: Ursa Major  
HIP 40889    SAO 6504    HD 68591  
Mag Pri: 6.1    Sec: 9.6  
Type: Uncertain  
Sep: 40.4"  
RA 8h 20m 40.38s    DEC +72° 24' 25.6"  
Eyepiece: 14mm

*“Nice Gold Primary and very dim Secondary, but splittable. With a full moon takes a lot of the darkness out.”*  
Color: Yellow White

1561 AB                      Con: Ursa Major  
HIP 56809    SAO 43841    HD 101177  
Mag Pri: 6.5    Sec: 8.2    D: 7.5  
Type: Physical  
Sep: 8.84"  
RA 11h 38m 44.91s    DEC +45° 06' 30.3"  
Eyepiece: 14mm

*“Small Double, you can just split the Secondary, D is very dim also. A lot of atmospheric conditions, low in the sky at this time and full moon, so the secondary doesn't stand out as much.”*  
Color: Yellow - White

I had a Full moon out on this night of the Ursa Major Doubles and both were recorded around 12:30-1:00 am.

1692 AB                      Con: Canes Venatici  
HIP 63125    SAO 63257    HD 112413  
Mag Pri: 2.8    Sec: 5.5  
Type: Physical  
Sep: 19.3"  
Star Name: Alpha 2    12 CVn A    COR CAROLI  
(the Heart of Charles II of England)  
RA 12h 56m 01.46s    DEC +38° 19' 07.2"  
Eyepiece: 14mm

*“Beautiful Double, easy split and both very bright. A good SHOW double.”*

Color: White-White

1645                      Con: Canes Venatici  
HIP 60831    SAO 44187    HD 108574  
Mag Pri: 7.4    Sec: 8.0  
Type: Physical  
Sep: 9.8"  
RA 12h 28m 04.12s    DEC +44° 41' 04.7"  
Eyepiece: 14mm

*“Just a good Double. Two Stars about the same mag and close ,but you can split them.”*  
Color: Yellow - White

Keep looking at the stars because they really light up the night.  
Remember that ASTRONOMY IS OVER YOUR HEAD.

Email: [ngc6720@comcast.net](mailto: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

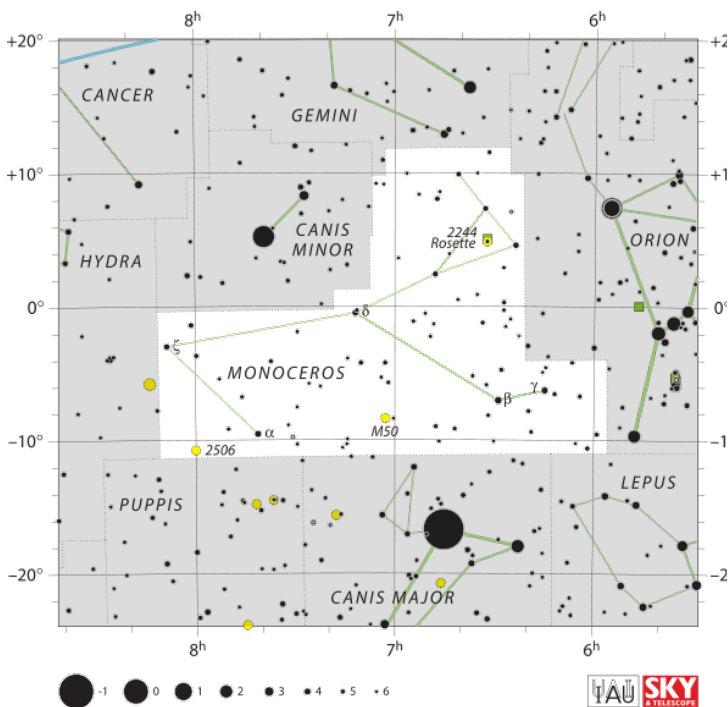
Listen to CVAS on Utah Public Radio each Tuesday at 4:48 pm. Blaine Dickey and Tom Westre are writing weekly astronomy related scripts and recording the program at their station. We are pleased that the folks at UPR have invited us to present a weekly topic on astronomy. You can listen in Logan on 91.5 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](http://www.upr.org).

## Spotlight on Monoceros, the Unicorn

By Dale Hooper

Monoceros was added as a constellation in the seventeenth century. It is a fairly dim constellation but it is located in the plane of the Milky Way between Orion, Canis Major and Canis Minor so it has many open clusters. The open cluster NGC 2244 is embedded in the Rosette Nebula. The nebula is very faint, but is a beautiful object. I am only listing the objects which rate at least four stars in *The Night Sky Observer's Guide* (Monoceros is in Volume 1). However, there are many additional open clusters in this constellation which rate three stars.

As usual, the table is organized according to increasing Right Ascension values.







IAU and Sky & Tel - Roger Sinnott & Rick Fienberg

## Upcoming Events and Anniversaries

- Mar 01 - 40th Anniversary (1980), Pierre Laques & Jean Lechaceux's Discovery of [Saturn Moon Helene](#)
- Mar 06 - [Michelangelo's](#) 545th Birthday (1475)
- Mar 09 - [Venus](#) Passes 2.4 Degrees From [Uranus](#)
- Mar 13 - [Percival Lowell's](#) 165th Birthday (1855)
- Mar 14 - [Pi Day](#)
- Mar 14 - [Giovanni Schiaparelli's](#) 185th Birthday (1835)
- Mar 15 - [Daylight Saving](#) - Set Clock Ahead 1 Hour (United States)
- Mar 16 - [Asteroid 13070 Seanconnery](#) Closest Approach To Earth (2.076 AU)
- Mar 16 - [Caroline Herschel's](#) 270th Birthday (1750)
- Mar 18 - [Moon Occults Mars](#)
- Mar 18 - [Moon Occults Dwarf Planet Pluto](#)
- Mar 20 - [Vernal Equinox, 03:50 UT](#)
- Mar 20 - [Mars](#) Passes 0.7 Degrees From [Jupiter](#)
- Mar 20 - [Asteroid 9620 Ericidle](#) Closest Approach To Earth (1.307 AU)
- Mar 21 - 55th Anniversary (1965), [Ranger 9](#) Launch (Moon Impact Mission)
- Mar 23 - 55th Anniversary (1965), [Gemini 3](#) Launch (Virgil Grissom, John Young)
- Mar 24 - [Mercury](#) At Its Greatest Western [Elongation](#) (28 Degrees)
- Mar 24 - [Venus](#) At Its Greatest Eastern [Elongation](#) (46 Degrees)
- Mar 25 - [Asteroid 25924 Douglasadams](#) Closest Approach To Earth (1.309 AU)
- Mar 25 - [Pierre Weiss'](#) 155th Birthday (1865)
- Mar 25 - 365th Anniversary (1655), [Christiaan Huygens'](#) Discovery of Saturn Moon [Titan](#)
- Mar 26 - [Dwarf Planet 136472 Makemake](#) At [Opposition](#) (51.699 AU)
- Mar 26 - 180th Anniversary (1840), [1st Moon Photo](#) Taken by [John Draper](#)
- Mar 28 - [Earth Hour](#)
- Mar 31 - [Mars](#) Passes 0.9 Degrees From [Saturn](#)
- Mar 31 - 15th Anniversary (2005), [Mike Brown,](#) Discovery of [Dwarf Planet Makemake](#)

Object	R.A.	Dec.
ε Monocerotis (Triple star)	06h23.8m	+04°36'
β Monocerotis (Triple star)	06h28.8m	-07°02'
NGC 2244 (Open cluster)	06h32.4m	+04°52'
NGC 2264 (Open cluster)	06h41.1m	+09°53'
NGC 2301 (Open cluster)	06h51.8m	+00°28'
Messier 50 (Open cluster)	07h03.2m	-08°20'

## 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](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:

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

For any questions contact our Treasurer, Janice Bradshaw at [lojbrads@yahoo.com](mailto:lojbrads@yahoo.com)  
or our Secretary Wendell Waters at [wendellw57@comcast.net](mailto:wendellw57@comcast.net)