

CACHE VALLEY CLEAR SKIES



Volume 12 No. 6

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<https://cvas-utahskies.org>

PRESIDENT'S CORNER **Dale Hooper**

Well, unfortunately our Total Lunar Eclipse in March turned into a major snowstorm. Such is the life of an amateur astronomer in Cache Valley. It's beautiful here but March is always rather unpredictable. Now we are entering April and it is time for our astro-confidence to rebound. Part of this is because April is part of Galaxy Season!

During April we are looking away from the plane of the Milky Way galaxy, so we are able to see into the depths of intergalactic space and see many more external galaxies. We now get a great view of Leo, Virgo and Canes Venatici which are well placed as the night progresses. I've always found galaxies very fascinating and many of them are amazingly huge! It is mind blowing to me that even though the moon is approximately 250,000 miles away and the Andromeda Galaxy is 2.5 million light-years away, the long dimension of the Andromeda Galaxy subtends an angle in the sky six times greater than the moon (1/2 degree versus 3 degrees)!

I thought it would be a good idea to share some references with you this month that will help you in your exploration of galaxies. The first is from Wido Oerlemans. In Wido's Astroforum (from April 2023) he shares a list and video of 25 great galaxies to observe and image during the month of April. Here is the link:

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<https://astroforumspace.com/25-must-see-deep-sky-objects-in-april-2023-with-a-telescope/#:~:text=April%201%20%E2%80%93%20Coma%20Pinwheel%20Galaxy,of%207.5%20by%206%20arcminutes.>



Executive Committee

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2. Cont'd from pg 1.

I've long been a fan of Alvin Huey and the great references he provides. Many are available for free if you print them yourself. Here are a couple of his atlases related to galaxies. The first is entitled: Observing Selected Small Galaxy Groups. Many of these are observable with moderate sized telescopes (8 inches and up). Here is the link:

<https://www.faintfuzzies.com/Files/GalaxyGroups%20v4.pdf>

This next reference from Alvin Huey provides some greater challenges which require a larger telescope but it includes some very fascinating objects, it is Galaxy Trios and Triple Systems. Here is the link:

<https://www.faintfuzzies.com/Files/GalaxyTrios-v10.pdf>

The last section of the above atlas has some really challenging yet rewarding objects. They are gravitationally lensed quasars and this start on page 265. The final reference is to a book that Blaine Dickey shared with us during Show & Tell. It has images of many different types of galaxies. This one isn't free but it is available for a reasonable price at Amazon. This reference is: Galaxies and Their Amazing Features. Here is the link if you would like to investigate this book some more:

https://www.amazon.com/dp/B0DP31NHRG/?coliid=IXDCC1P5DY OCD&colid=NT6BIXHUDWL5&psc=1&ref_=list_c_wl_lv_ov_lig_dp_it

Here's to hoping that each of you have a great galaxy season!
Clear skies!

Partnership Opportunity with the Utah Office of Outdoor Recreation

By Lisa Stoner, of the [Colorado Plateau & Basin and Range Dark Sky Cooperatives](#) and Bonnie Schenk-Darrington, CVAS PR Coordinator



One of the the cool things about being in CVAS is that we sometimes get approached by people with great outreach opportunities for us.

The Utah Division of Outdoor Recreation (UDOR) has started a new program called Every Kid Outdoors (EKO) Adventure Challenge. In this challenge, kids ages 5 – 18 engage in fun, seasonal activities in the great outdoors. According to the UDOT website, "Each month, participants will be invited to take on "Each month, participants will be invited to take on new challenges that promote outdoor recreation, nature exploration, and skill-building, all while fostering a lifelong love for the outdoors."

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SCIENCE UNWRAPPED

Friday, April 11, 2025 - USU

STEM Nights

Millville Elementary

April 17th

- Bruce Horrocks/Randy Jost/ Blaine Dickey

CCID Charter School

April 10th

- Bruce Horrocks/Randy Jost

In April, in honor of Utah's Dark Sky Month, UDOR will be promoting the Starry Skies Challenge, but they are interested in promoting any star parties that might be planned throughout the year by local astronomy clubs or State Parks. In the Starry Skies Challenge flyer, you'll see on the bottom right, the list of Current Events. Soon to be added to this list will be Utah Valley Astronomy Club's events in June, July, and August. UDOR and Colorado Plateau & Basin and Range Dark Sky Cooperatives have invited us to do the same. They would love to add more events to this list, for starry or solar sky events—anywhere, anytime this year.

If CVAS does submit some events, UDOR can help promote them. If there were a concern over attracting too many attendees, UDOR could help by setting up an Eventbrite page could indicate a limit of attendees, while also providing information about where, when, and how to attend. Kids who sign up for the EKO Adventure Challenge will receive a water bottle and for every challenge, a beautiful sticker to place on the bottle. The bottles and a stack of stickers are already distributed throughout the state at EKO Participating Locations (see map at bottom of this webpage), such as the Newton Library, the Smithfield Library, and the Tremonton Library—all organizations we have worked with in the past.

The CVAS Executive Committee thinks this opportunity is a win-win for both the dark skies/astronomical community and UDOR's EKO mission to get more kids outdoors having positive outdoor experiences at night. Bonnie will be working on this task as part of her job as PR Coordinator. We know that some of our star parties and events are geared to specific communities and others are open to all. Please help Bonnie to recognize which are which as we begin star party season. Also, stay tuned because UDOR is starting a community calendar in which we can post these opportunities.

Club Meetings

-April 18-

Room 107 of the Engineering Lab Building on the USU Campus

- 3rd Friday of the month
- Jeff Clayton will be presenting.

More Winter Deep Sky objects Blaine Dickey

The night sky is a treasure trove of celestial wonders, each with its own unique story. Among these Messier 81 and 82, NGC 6946, and NGC 6939, IC 1396, and NGC 246 were among the deep sky objects I imaged recently in my SeeStar S-50.

Messier 82 (Cigar Galaxy): Just a stone's throw from Messier 81, Messier 82 is an irregular galaxy located in Ursa Major. It is undergoing intense starburst activity, which means it is producing new stars at a rapid rate. This activity is likely triggered by gravitational interactions with its neighbor, Messier 81. The Cigar Galaxy's unique shape and high surface brightness make it a fascinating object for both visual observation and astrophotography.



Messier 81 (Bode's Galaxy): Also located in the constellation Ursa Major, Messier 81 is a grand design spiral galaxy that is one of the brightest galaxies visible from Earth. It lies about 12 million light-years away and is known for its well-defined spiral arms and bright nucleus. Messier 81 is often studied for its similarities to our own Milky Way galaxy, providing insights into galactic formation and evolution. The two objects appearing in this one image is one of my favorite galaxy pairs.



NGC 6946 (Fireworks Galaxy): Situated on the border between the constellations Cepheus and Cygnus, NGC 6946 is a face-on spiral galaxy known for its prolific supernova activity. It has hosted ten supernovae in the past century, earning it the nickname "Fireworks Galaxy." NGC 6946's vibrant star-forming regions and intricate spiral arms make it a spectacular sight through telescopes.

NGC 6939: This open cluster is located in the constellation Cepheus, near NGC 6946. NGC 6939 is a rich cluster of stars that lies about 4,000 light-years

away. It contains several hundred stars, many of which are red giants. The cluster's age is estimated to be around 1.8 billion years, making it an interesting object for studying stellar evolution. The two objects in this one image is a striking example a relatively near object in our Milky Way and another far beyond it.



IC 1396: This is a large, bright emission nebula in the constellation Cepheus. It is home to the famous Elephant's Trunk Nebula, a dense region of gas and dust that is a site of active star formation. IC 1396 spans about 3 degrees of the sky, making it a popular target for wide-field astrophotography. The nebula's intricate structures and vibrant colors is what make it a great object for astrophotography. This image was my first attempt at this celestial wonder.



NGC 246: Also known as the Skull Nebula, NGC 246 is a planetary nebula located in the constellation Cetus. It is approximately 1,600 light-years away from Earth. The nebula's eerie appearance, resembling a skull, is due to the central star illuminating the surrounding gas and dust. NGC 246 offers a fascinating glimpse into the final stages of a star's life cycle.

These deep sky objects offer a glimpse into the vast and varied tapestry of our universe. Exploring these celestial wonders is sure to ignite your sense of wonder and curiosity.



Questions? Email: cvastrosociety@gmail.com

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 contact **Dell Vance, Membership Coordinator** at avteam.dell@gmail.com.