CACHE VALLEY ASTRONOMICAL SOCIETY
cvas-utahskies.org

# CACHE VALLEY CLEAR SKIES

Journal of the Cache Valley Astronomical Society

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## PRESIDENT'S CORNER

**By Dell Vance**

*Ann-Maree Vance*

This is my last President's Corner article. It's been 11 years since Tom Westre, Dale Hooper, Ned Miller, and I worked out the constitution for Cache Valley Astronomical Society. I've had the honor to be president of CVAS for six of those years. I'm certainly in good company with Tom and Bruce, who have also served in this position. As a club we have done some great things: telescopes in all of Cache Valley's libraries, star parties, solar parties, STEM fairs, Utah Public Radio spots, monthly meetings during the winter months, and club parties. This all works because of your support as members of CVAS.

This year has been a good year for CVAS. Our membership continues to grow and we have many opportunities for outreach activities. Last month we had star parties at Bear Lake that Tom coordinated, and another one at Millville City Park that Blaine coordinated. We certainly appreciate all those that help with these events.

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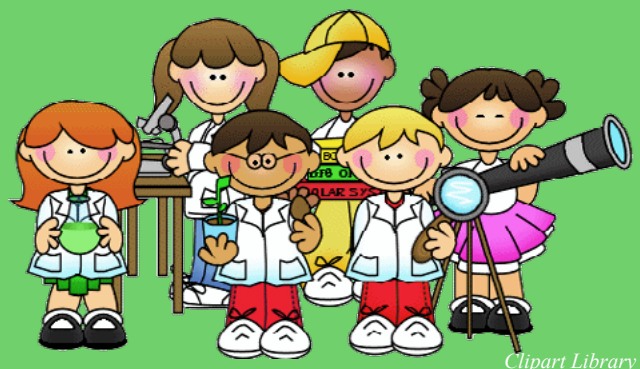


*Clipart Library*

## UPCOMING EVENTS

### Club Meeting & Elections

- September 19 at the Logan Library. We will have club elections. Please consider serving on the Executive Committee.

### Star Parties

- September 14: Observe the Moon Night at Tremonton Library
- September 20: Newton Town Square
- September 26: River Heights Elementary 6th grade
- October 21: Mountainside Elementary 6th Grade

### STEM Nights

- September 18: Summit Elementary
- September 26: Birch Creek Elementary
- September 30: Mountainside Elementary

Keep up to date by visiting our website:

### *President's Corner, cont'd from p. 1*

This month we have a star party for the Newton Library on the town square, where we have had it on previous occasions. The date is September 20, at 8:00 p.m. (sundown is around 7:00 p.m.). I would like to encourage as many to attend as available. We also have another star party for Mountainside Elementary on October 21 at 7:30 to 9:00 p.m.

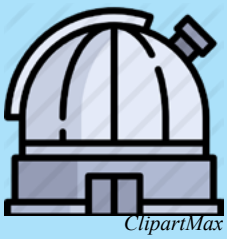
Our STEM Fairs also start up this month. We have Summit Elementary on the 18th, Birch Creek Elementary on the 26th, and Mountainside on the 30th. We signed up for nine elementary schools for this school year, and a third of those are this month.

On a personal note, my observatory is back in business as of August, and it is great to be out under the stars again. I'm testing my new setup and working the bugs out of it. It keeps me young just to have new opportunities. I love this hobby.

Once again, thanks for all your support and have a great month.

Clear Skies!

*Image courtesy of the author.*


## USU Observatory Public Night

The USU Observatory is closed until October due to building renovations. The next public night has not been announced yet. More info available here.

# PLEASE CONSIDER RUNNING FOR A POSITION ON THE CVAS EXECUTIVE COMMITTEE

**by Dell Vance**

It is time to start getting ready for the election of club leaders in September. I have served for two years as president now and will step down in September. Dale Hooper is also stepping down from the Vice President's position, and Bonnie Schenk-Darrington will step down as Secretary-Treasurer. Bruce Horrocks is stepping down as PR Coordinator. In short, we have multiple positions available.

Why should you consider serving on the CVAS Executive Committee? There are multiple reasons, explains Bonnie Schenk-Darrington. "I have a strong belief in community service. How can I expect to live in a better world if I'm not willing to work toward it myself? Our club does such important science outreach to kids and social outreach to adults. Also, the leadership experience I have received as a member of ExecComm has given me courage to speak up more at work. CVAS has improved my skills for my paid employment."

*Clipart Library*

I want to assure anyone that is interested in running for one of the positions that they are not very time-consuming or difficult to serve in. The Executive Committee (ExecComm) meets one night a month for about an hour to plan programs and star parties. With five people on the ExecComm, we usually have a lot of input on the items considered. The elected positions are as follows:

**President:** Chairs the committee and sets up the ExecComm meeting. He/she will also conduct the monthly meeting during the fall and winter months, and writes a monthly column for the newsletter. Time spent each month is about five hours.

**Vice-President:** Conducts meetings when president is not available. (This doesn't happen very often.) He/she may also take assignments when needed by the ExecComm and provides important input at the ExecComm meeting. Works with PR Specialist to advertise club meetings. Time spent each month is about three hours.

**Secretary-Treasurer:** Keeps the minutes of meetings. Edits the newsletter. Collects membership dues, writes checks for expenses, and reports monthly the status of membership and financial activities each month at the ExecComm meeting. Time spent each month is about eight hours.

**Public Relations Specialist:** Posts info about upcoming club meetings on Cache Valley Daily Calendar and UPR Community Calendar. Designs a monthly poster about upcoming club meetings and send them to local public libraries to post. Time spent each month is about three hours.

**Night Sky Network Coordinator:** CVAS is a member society of the NASA Night Sky Network. The NSN Coordinator reports on meetings and activities on the NSN website. They also set up new club members in the roster for NSN.

Time spent on leadership responsibilities may vary depending on how much effort and innovation that you apply to the tasks. As you can see, the time requirements can be minimal. I hope each member will take an active role in the leadership of the club at some time during their membership. The turnover of members for the ExecComm can provide a good mix of ideas and opportunities. In addition, the past president also attends the ExecComm meeting to provide continuity and coaching to the committee.

If you are interested in serving in one of the ExecComm positions, be sure to let one of the current members of the ExecComm know so that we can get you on the ballot.

## Agenda for Club Meeting on September 19

- Elections of Executive Committee members.
- Presentation: "Astrophotography for Beginners," by several club members.

*FreePik*

*PIkPNG*

## Challenge from Our President

Please run for a position on the CVAS Executive Committee. Elections are at our meeting on September 19. No experience is necessary!

Thanks, everyone, for your support of me as the Secretary-Treasurer for the past three years. I've had so much fun and gained so many important friendships and skills.

Sending love and happiness to you all!

~Bonnie

*Vecteezy*

CACHE VALLEY ASTRONOMICAL SOCIETY

Our Website: CVAS-UTAHSKIES.ORG

# EXECUTIVE COMMITTEE

- President: Dell Vance; avteam.dell@gmail.com
- Vice President: Dale Hooper; dchooper5@gmail.com
- Secretary-Treasurer: Bonnie Schenk-
- Darrington; bschenkdarr@gmail.com
- Night Sky Network Coordinator: Dell Vance; avteam.dell@gmail.com
- Public Relations: Bruce Horrocks; bruceh@gembuildings.com
- Webmaster-Librarian: Tom Westre; twestre45@aol.com

# SEESTAR SETUP FOR STAR PARTIES

**By Blaine Dickey**

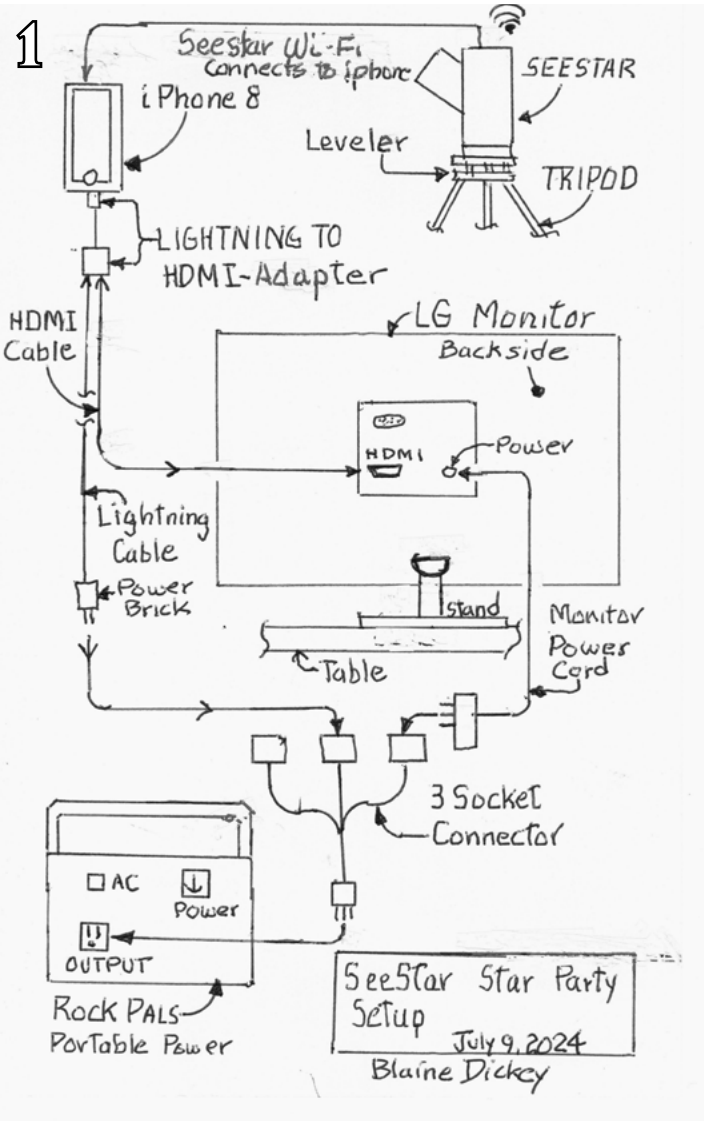
As technology changes it opens up new ways of doing things. The smart scope ZWO Seestar S-50 makes electronics-assisted sharing of the night sky a possibility.

The diagram below (*figure 1*) shows a simple setup of the Seestar S50 that I recently tried out at the Millville Star Party in August. It was easy to set up and was effective for showing a fair size group of people the wonders of the deep sky at one time.

The following list shows the set-up that I used.

## Equipment to Take to Star Party

1. Tripod with leveler
2. SeeStar
3. Small folding table
4. Dew shield
5. Apple lightning charge cable
6. Apple lightning-to-HDMI cable
7. HDMI cable
8. LG monitor with power plug
9. Three-socket connector
10. Portable power supply
11. Chair with cushion to sit on
12. Smart Phone (iPhone 8 in my case) with the SeeStar app installed
13. Desk phone holder
14. Laser pointer
15. Previously taken images on iPhone (in case of clouds)
16. Observing plan loose leaf
17. Pen-size pocket pointer with pocket clip
18. Red desktop lamp for viewing observing plan
19. Head lamp with red bulb




No internet was required with this setup because the SeeStar has its own built-in Wi-Fi that easily connected to my iPhone 8.

Once the sky was dark enough, I was good to go. Next, I choose a deep-sky object in my SeeStar app, and clicked "Goto" to slew to the object. After it finds the object, an image begins to appear on my iPhone and on a large monitor sitting on my small white table. That evening, we observed star cluster M6, globular cluster M13, planetary nebula M27, and the moon.

While the image slowly built up on my large monitor, I took the time to tell a group of onlookers about the objects they were seeing and used my laser to point out some constellations, bright stars, Polaris, and asterisms. Also, I shared with them some other images that I had taken previously. Questions were encouraged, and everyone heard the answers at the same time.

There are no heavy items to set up with this arrangement, and all the equipment easily fits into the trunk of my Toyota.

On p. 5, you will find images of my SeeStar setup for star parties. Front (*figure 2*) and back sides (*figure*

***cont'd on p. 6***

## *SeeStar Setup, cont'd from p. 5*



*Creazilla*

*3*) are shown.

On a side note: if you are using a SeeStar setup at home, you can connect to the Wi-Fi in your home, go back inside, do all your imaging from the comfort of your living room couch, and cast the app images to your smart TV from your smartphone.

It is possible to use only the SeeStar and a phone or tablet as an alternate setup, but the large monitor makes the extra effort worthwhile. The monitor makes it possible for a good-size crowd to see the deep-sky objects all at once.

On p. 6 are examples of the crowd-pleasing images that can be shown on the monitor during a star party (*figures 4–7*). Some may ask if having electronics-assisted equipment at a star party is a good thing. The planets, moon, double stars, and some star clusters no doubt are best viewed through an eyepiece of a telescope. The constellations, bright stars, and the Milky Way are best seen with the unaided eye. But seeing deep-sky objects, such as galaxies, globular clusters, and colorful nebula, with electronic-assisted gear is a great way to see those objects that often appear only dimly through the eyepiece of a telescope.

So, why not use unaided eye, telescopes, and electronic assisted-scopes together for the ultimate star party experience?

*All images courtesy of the author.*

*Shutterstock*

***cont'd on p. 7***

***SeeStar Setup, cont'd from p. 6***




**Here are some examples of the crowd-pleasing images that can be shown on the monitor during a star party.**

# SEPTEMBER NIGHT SKY NOTES: MARVELOUS MOONS

**by Kat Troche**

September brings the gas giants Jupiter and Saturn back into view, along with their satellites. And while we organize celebrations to observe our own moon this month, be sure to grab a telescope or binoculars to see other moons within our solar system! We recommend observing these moons (and planets!) when they are at their highest in the night sky, to get the best possible unobstructed views.

## The More the Merrier

As of September 2024, the ringed planet Saturn has 146 identified moons in its orbit. These celestial bodies range in size; the smallest being a few hundred feet across, to Titan, the second largest moon in our solar system.

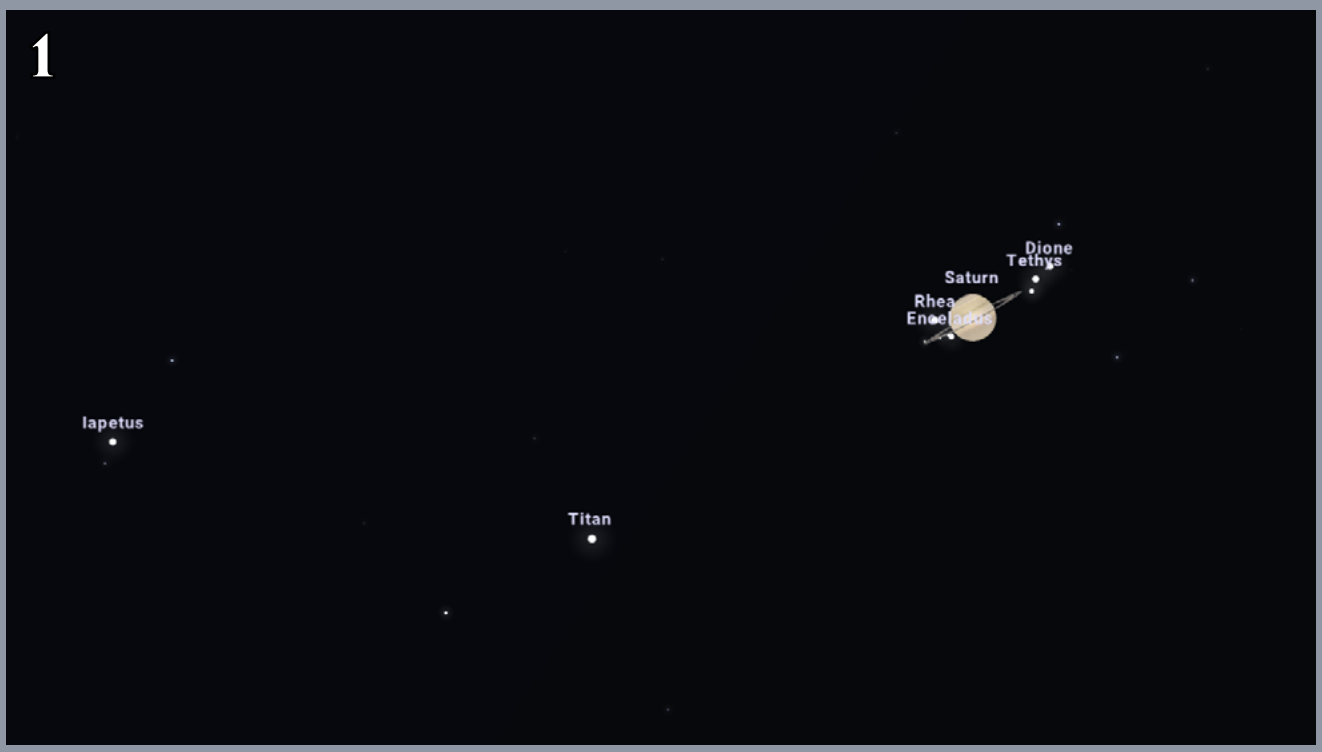



*Figure 1: The Saturnian system along with various moons around the planet Saturn: Iapetus, Titan, Enceladus, Rhea, Tethys, and Dione. Credit: Stellarium Web.*

Even at nearly 900 million miles away, Titan can be easily spotted next to Saturn with a four-inch telescope, under urban and suburban skies, due to its sheer size. With an atmosphere of mostly nitrogen with traces of hydrogen and methane, Titan was briefly explored in 2005 with the Huygens probe as part of the Cassini-Huygens mission, providing more information about the surface of Titan. NASA's mission Dragonfly is set to explore the surface of Titan in the 2030s.

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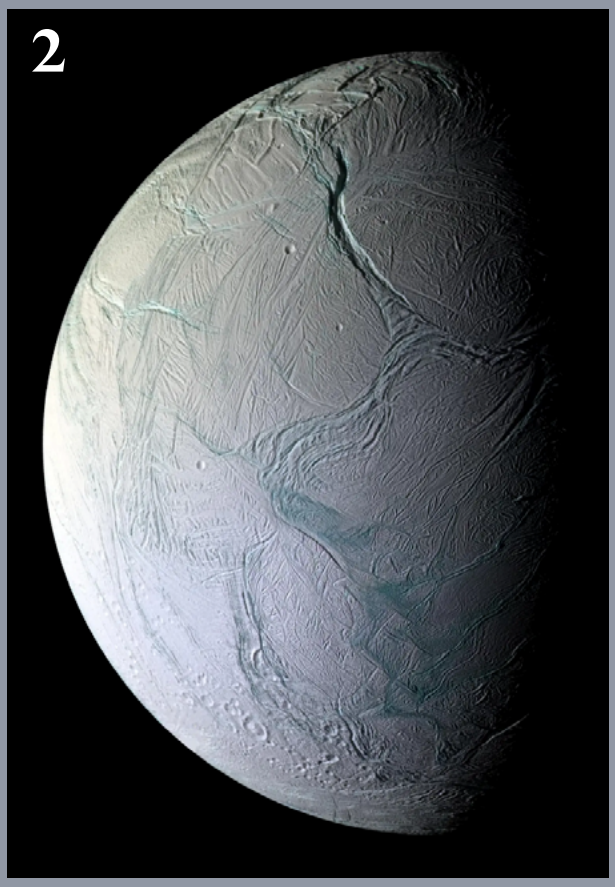
*Marvelous Moons, cont'd from p. 8*




Saturn's moon Enceladus was also explored by the Cassini mission, revealing plumes of ice that erupt from below the surface, adding to the brilliance of Saturn's rings. Much like our own moon, Enceladus remains tidally locked with Saturn, presenting the same side toward its host planet at all times.

*Figure 2: This mosaic of Saturn's moon Enceladus was created with images captured by NASA's Cassini spacecraft on Oct. 9, 2008, after the spacecraft came within about 16 miles (25 kilometers) of the surface of Enceladus. Credit: NASA/JPL/Space Science Institute.*

## The Galilean Gang

The King of the Planets might not have the most moons, but four of Jupiter's 95 moons are definitely the easiest to see with a small pair of binoculars or a small telescope because they form a clear line. The Galilean Moons—Ganymede, Callisto, Io, and Europa—were first discovered in 1610, and they continue to amaze stargazers across the globe.

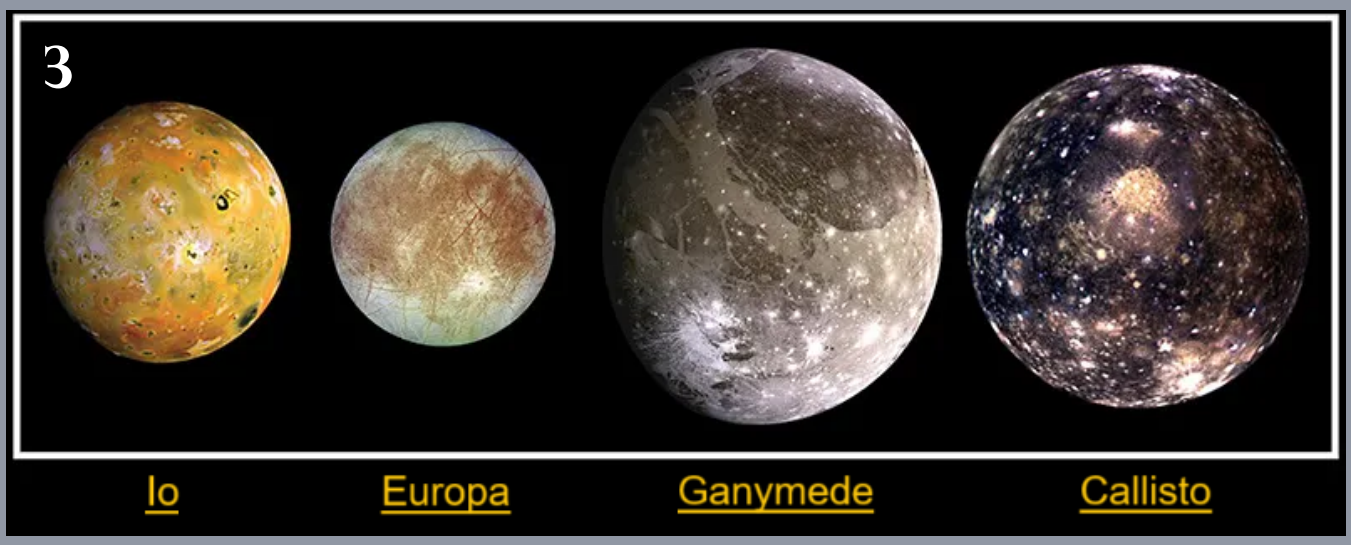



*Figure 3: Jupiter's largest moons, from left to right: Io, Europa, Ganymede, Callisto. Credit: NASA.*

*cont'd on p. 10*

***Marvelous Moons, cont'd from p. 9***


*Figure 4: The Jovian system: Europa, Io, Ganymede, and Callisto. Credit: Stellarium Web.*

- Ganymede: largest moon in our solar system, and larger than the planet Mercury, Ganymede has its own magnetic field and a possible saltwater ocean beneath the surface.
- Callisto: this heavily cratered moon is the third largest in our solar system. Although Callisto is the furthest away of the Galilean moons, it only takes 17 days to complete an orbit around Jupiter.
- Io: the closest moon and third largest in this system, Io is an extremely active world, due to the push and pull of Jupiter's gravity. The volcanic activity of this rocky world is so intense that it can be seen from some of the largest telescopes here on Earth.
- Europa: Jupiter's smallest moon also happens to be the strongest candidate for a liquid ocean beneath the surface. NASA's Europa Clipper is set to launch October 2024 and will determine if this moon has conditions suitable to support life. Want to learn more? Rewatch the July 2023 Night Sky Network webinar about Europa Clipper here.

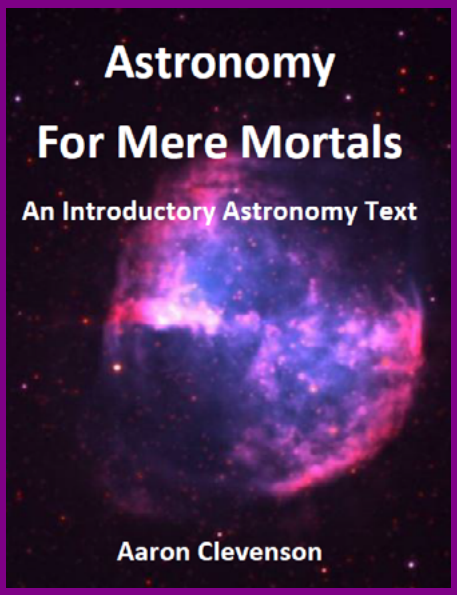
Be sure to celebrate International Observe the Moon Night here on Earth September 14, 2024, leading up to the super full moon on September 17! You can learn more about supermoons in our mid-month article on the Night Sky Network page!

*All images courtesy of NSN.*

This article is distributed by NASA's Night Sky Network (NSN).
The NSN program supports astronomy clubs across the USA dedicated to astronomy outreach.
Visit https://nightsky.jpl.nasa.gov/ to find local clubs, events, and more!


Mark your calendars for Saturday, September 14, 2024, the next International Observe the Moon Night. Join hundreds of thousands of people from all over the world in learning about lunar science and exploration, taking part in celestial observations, and honoring cultural and personal connections to the moon.

Explore the NASA website to learn more about the program and find helpful event hosting tips and resources.




*Astronomical League*

## *Astronomy for Mere Mortals*

You can download the e-book, *Astronomy for Mere Mortals* by Aaron Clevenson, a complete introductory textbook, available free, updated annually.

You can download a free PDF here. You may print it, or if you would like a printed copy, please contact the author, Aaron Clevenson, at aaron@clevenson.org.

*Clipart Library*

## NSN News:
## Night Sky Network Website Updates

*The Graphics Fairy*

The new Night Sky Network website will officially launch on September 10, 2024! This updated platform will have all of the same great features you are used to, with a fresh new look, in line with the new Night Sky Network public-facing page on NASA's website! With this refresh, Nationwide Clubs and Nationwide Events will all have an official home on the NASA page, which means that all of your public-facing events will be visible to potentially thousands of folks a month! View a sneak peak here.

**What does this mean for you?**

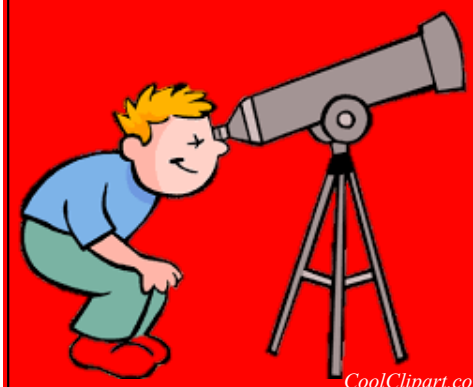
Mostly, this will be seamless, however, once the new website is launched, every user—be they Coordinator or Member—will need to update their password. The system will prompt you to do so on your first attempt.

**When should you expect to see the update?**

A read-only version of the website will start on Monday, September 9, which means you will not be able to log in or update your club's page. But don't panic; this should last less than a day and the site will be live on September 10, 2024. Once the site is live, NSN users will be able to access the site as before.

**NOTE:** if you encounter any issues on the new site, please contact us at nightskyinfo@astrosociety.org so that we may investigate.

**Additionally we have created a September NSN Social Hour: Website Overview & Discussion!** Join us on September 19, 2024, at 4:00 p.m. MDT to discuss the new features of the website, and ask any questions you may have about it. Click here to join the discussion.


*CoolClipart.com*

## Stumped? Befuddled?? Bamboozled???
## Telescope Help Is Available!

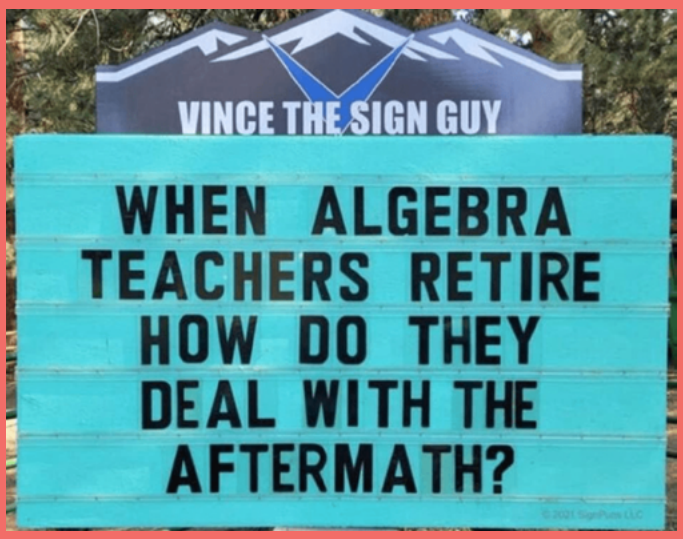
When even your CVAS friends can't answer your obscure telescope questions, you might find it helpful to call Tom Sevcik
at the Clark Planetarium in Salt Lake City!
His number is (385) 468-1264. You can read his bio on the Clark Planetarium website.

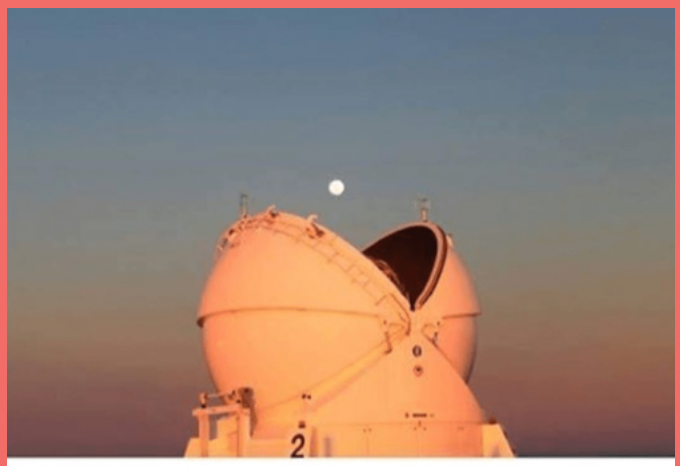
# A LITTLE ASTRONOMY HUMOR

**NASA Solar System** Follow
@NASASolarSystem

nobody will remember:
- your salary
- how "busy you were"
- how many hours you worked

people will remember:
- your favorite planet
- whether you call Pluto a planet
- how you pronounce the name of the seventh planet
- how you made them feel when watching the planets



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> bewbin:
>
> > nasa trying to eat the moon
>
> WAKKA WAKKA WAKKA WAKKA

r/astrophysics Join
u/ExoGeniVI · 1d

Can you blow my mind with a space fact?

276 476 Share

INSERT_NFT_NAME · 1d

Space is the longest key on a typical keyboard.

··· Reply 98

**jamie**
@glitterburrito

I'm a woman in STEM (shenanigans, tomfoolery, enjoyment, and mischief)

## UFO caught on tape

*Memebase and Geek Universe*

# Cache Valley Astronomical Society

**Free Public Meeting**

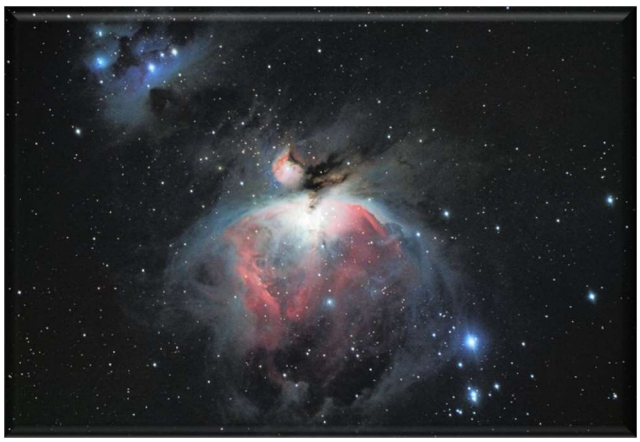
**September 19th, 7:00 PM**

**Logan City Library, Community Room 1**

**285 North Main Street, Logan Utah**

# Astrophotography for Beginners

Come join with the Cache Valley Astronomy group as we learn new and affordable ways to take beautiful picture of deep sky objects. New telescope-camera products are making it easier to enjoy ways of capturing nebulae, galaxies, and even solar system objects in greater detail than you ever thought possible. We will have various club members sharing their knowledge on how to use new products such as the ZWO SeeStar and more. This will be a great start to your new hobby!  We look forward to seeing you!



# 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.

_____

_____

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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:_____

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Bring this form to the meeting or contact **Bonnie Schenk-Darrington, Secretary/Treasurer** at bschenkdarr@gmail.com.