



THE OFFICIAL PUBLICATION OF THE SALT LAKE ASTRONOMICAL SOCIETY

HOME OF SALT LAKE CITY, UTAH'S OBSERVATIONAL ASTRONOMERS AND ASTROPHOTOGRAPHERS



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SLASBROCHURE.pdf



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<https://www.facebook.com/UtahSPOC>



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SLAS.US



MOON PHASES

SOURCE: [MOONPHASES.ORG](https://moonphases.org)

Utah

MARCH 2025

| | | | |
|---|---|---|---|
|  |  |  |  |
| First Quarter March 6th 9:33 AM MST | Full Moon March 14th 12:55 AM MDT | Last Quarter March 22nd 5:32 AM MDT | New Moon March 29th 5:00 AM MDT |

APRIL 2025

| | | | |
|---|---|---|---|
|  |  |  |  |
| First Quarter April 4th 8:16 PM MDT | Full Moon April 12th 6:23 PM MDT | Last Quarter April 20th 7:37 PM MDT | New Moon April 27th 1:33 PM MDT |

SLAS President Message



Trevor Hebditch

Since my last message, I have been incredibly proud of the club—especially the board and appointed members—for their dedication in laying a strong foundation for the year ahead and prioritizing outreach.

We have already hosted two excellent speakers who delivered engaging talks. Starting with February's meeting, we resumed using Zoom to broadcast our talks live and record them for later viewing.

Additionally, we have established a YouTube channel to make these recordings and other educational content available on demand.

Looking ahead, we will expand Zoom broadcasts to more general meetings, ensuring greater accessibility for those unable to attend in person. The benefits of this were clear during our last talk, which had over 65 attendees in person and 20 more joining via Zoom. I'm also pleased to share that we have an outstanding lineup of speakers for the year, covering a range of topics from beginner to intermediate levels, as well as more technical subjects.

Please keep an eye out for SLAS Blast announcements, and be sure to check the website calendar and newsletters for updates.

I look forward to an exciting year ahead with enthusiasm and anticipation.

Trevor Hebditch, President

SLAS OFFICERS

SLAS Board of Directors

President: Trevor Hebditch

Vice President: Jenette Scott

Secretary/Treasurer: Rachel Henderson

Board Members at Large: Hayden Wilde and Max Byerly



Appointed Positions

Astronomical League Contact: Aleta Cox

Equipment Manager: Trevor Hebditch and Aleta Cox

Library Loaner Telescope Coordinator: Joan Carman

Historian: Patrick Wiggins

NASA Night Sky Ambassador: Krista Lemoine

NASA Night Sky Co-Ambassador: Jenette Scott

Nova Newsletter Editor: Jenette Scott

Observatory Director: Jim Keane

Private Star Party Coordinator: Don Colton

Solar Party Coordinator: Don Abernathy

Webmaster: Ken Warner

ZAP Grant Writer: Jim Keane

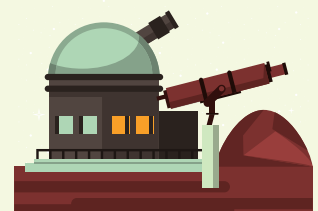


SPOC Advisory Committee

Chair: Jim Keane

Members: Trevor Hebditch, Bob Moore, Patrick Wiggins, Jim Keane,
John Drabik, Leslie Fowler, Bill Kennedy.

Members As Obser. Dir. Emeritus: Rodger Fry.



SPOC Telescope Instruction Coordinators

Bogdan Refractor: Marlene Egger

Ealing: Jim Keane

Grim: Rodger Fry

Clements: Leslie Fowler

[Click Here To Contact Us](#)

Celebrating

**20
YEARS**

of the Harmon Building at SPOC

April 16, 2025, marks the 20th anniversary of the Harmon Building at the Stansbury Park Observatory Complex (SPOC). For two decades, this remarkable facility has provided countless visitors with an opportunity to explore the wonders of the night sky, fostering curiosity, education, and a deep appreciation for astronomy.

A Legacy of Dedication and Community Support

The grand opening of the Harmon Building in 2005 was a milestone moment, made possible by the dedication of volunteers, generous donations, and the support of the Salt Lake Astronomical Society (SLAS). The facility, featuring a retractable roof and a state-of-the-art 32-inch Grim Reflector telescope, remains one of the largest telescopes routinely available to the public.

On that special day, Utah Governor Jon Huntsman Jr. declared April 16 as Utah Astronomy Day and the week of April 11-17 as Utah Astronomy Week. The event was celebrated with a ribbon-cutting ceremony attended by honored guests, including astronauts Don Lind and former Senator Jake Garn, who recognized the significance of SPOC's mission.

“For us, it’s been a labor of love, but we couldn’t have done it without the help of many of you here today,” said SLAS President Siegfried Jachmann during the opening ceremony.



Jake Garn, a former Utah senator and astronaut, gives Bob Harmon an autograph during the official opening ceremonies of the Harmon's observatory at the Stansbury Park Observatory Complex Saturday. photography/Mitch Richardson

Honoring Those Who Made It Possible

Several individuals and organizations were instrumental in bringing the new observatory to life. Notably, the late Bill Richardson's early contribution helped spark the vision for a new facility. "Without him, we probably would have just dragged the old observatory to a different place," Jachmann reflected.

Mark Meadows, the store director for the Midvale Harmons, was also recognized as a key supporter. "He was more than just an associate on the project—he became a personal friend," Jachmann said.

Both Richardson and Meadows were honored with awards, and their contributions are memorialized with plaques inside the observatory.

Longtime SLAS member Bruce Grim received special recognition for his dedication to the project. The facility's impressive 32-inch telescope, the "Grim Reflector," is named in his honor.

Inspiring the Next Generation

The Harmon Building has remained true to its mission: making astronomy accessible to the public. Thousands of families, students, and amateur astronomers have looked through its telescopes, gaining a deeper understanding of the universe.

Astronaut Don Lind praised the value of such facilities, calling telescopes "some of the most delightful and marvelous toys we have to play with." Former Senator Jake Garn encouraged young visitors to seize the opportunity to learn, reminding them, "The things you'll be able to discover right here—right here in this building—will be amazing."

As we celebrate 20 years of the Harmon Building at SPOC, we look forward to many more decades of exploration, discovery, and community engagement. Here's to continuing the tradition of inspiring future astronomers under the vast, starry skies.

For information on upcoming star parties and observatory events, visit slas.us.



Left: Bob and Randy Harmon
Right: Utah Astronaut Don Lind
Photo Credit: Carla Burningham





Utah Senator and Astronaut Jake Garn
Photo Credit: Carla Burningham



Bruce Grim: The telescope's namesake.
Photo Credit: Carla Burningham



Linda Steiner and Ann House pictured with Governor Huntsman's Utah Astronomy Day Proclamation
Photo Credit: Carla Burningham



Patrick Wiggins with the Grim Scope
Photo Credit: Carla Burningham



SLAS President Siegfried Jachmann
Photo Credit: Carla Burningham

Sources:

- 1.) <https://www.tooeleonline.com/articles/news/new-observatory-opens-window-to-universe/>
- 2.) <http://www.slas.us/patrick2/slas/SPOC2BUILD09.HTML>

SLAS EVENTS PAGE

star party and sun party



Come to a
Star Party!!

www.slas.us



The Salt Lake Astronomical Society invites you to join us at a FREE public Star Party or Sun Party! Enjoy views of the Sun, Moon, Planets, Stars, Nebulae, and Galaxies through some of Utah's largest telescopes.

2025 Star & Sun Party Schedule & Locations

| | | |
|-----|-------|--|
| APR | 4 | SL Co. Library Branch Sandy Library 10100 S. Petunia Way (1405 East) Sandy, UT |
| APR | 5 | SPOC* |
| APR | 12 | Sun Party- Winchester Park (6400 S. 1100 West) |
| APR | 19 | SPOC* |
| MAY | 2 | SL Co. Library Branch Taylorsville Library 4870 S. 2700 West, Taylorsville, UT |
| MAY | 3 | SPOC* |
| MAY | 10 | Sun Party- Winchester Park (6400 S. 1100 West) |
| MAY | 17 | SPOC* |
| MAY | 30 | SL Co. Library Branch Magna Library 2675 S. 8950 West, Magna, UT |
| MAY | 31 | SPOC* |
| JUN | 14 | Sun Party- Winchester Park (6400 S. 1100 West) |
| JUN | 21 | SPOC* |
| JUN | 25-28 | Bryce Canyon Astronomy Festival, also Astron. League ASTROCON 2025 @ Bryce Canyon N. P. |
| JUL | 12 | Sun Party- Winchester Park (6400 S. 1100 West) |
| JUL | 19 | SPOC* |
| AUG | 1 | SL Co. Library Branch Herriman Library 5380 W. Main Street, Herriman, UT |
| AUG | 2 | SPOC* |
| AUG | 9 | Sun Party- Winchester Park (6400 S. 1100 West) |
| AUG | 16 | SPOC* Stansbury Days |
| AUG | 29 | SL Co. Library Branch Holladay Library 2150 E. Murray-Holladay Blvd., Holladay, UT |
| AUG | 30 | SPOC* |
| SEP | 6 | Sun Party- Winchester Park (6400 S. 1100 West) |
| SEP | 13 | SPOC* |
| SEP | 18-20 | Great Basin Astronomy Fest, and Heritage Star Festival @ Capitol Reef N.P. |
| SEP | 26 | SL Co. Library Branch Granite Library 3331 S. 500 East, South Salt Lake City, UT |
| SEP | 27 | SPOC* |
| OCT | 4 | Sun Party- Winchester Park (6400 S. 1100 West) |
| OCT | 11 | SPOC* |
| OCT | 25 | SPOC* (final star party of the year) |

*Stansbury Park Observatory Complex



Star Parties run from Dusk until:
10 PM in Apr, May, Sept, Oct
11 PM in Jun, Jul, Aug,
Sun Parties are from 9AM – Noon.

All Sun & Star Parties are Weather Permitting.
See you under a clear Sky



General Meeting Information

Board Meetings are for SLAS Board members and are open to any member of SLAS to attend. Please note that only board members may vote at board meetings. Board meetings take place on the 2nd Wednesday of each month at 7:00 pm located at the Denny's Restaurant on 1701 West North Temple Street Salt Lake City, Utah 84116 (We meet in the back meeting room)

General Meetings for SLAS members take place on the 3rd Wednesday of each month (Except for December when the solstice party at the beginning of December takes the place of the General Meeting) at 7:30 pm located at Room TB104, Rampton Technology Building, Salt Lake Community College Redwood Road Campus Parking is across the street to the north of the building in parking lot 'R'. General Meetings are open to the public.

- Mar 12 -Board Meeting
- Mar 19 -General Meeting
- Apr 09 -Board Meeting
- Apr 16 -General Meeting

Please read the information above for the place and time of meetings and the webpage slas.us.



ASTROCON 2025

BRYCE CANYON
NATIONAL PARK

June 25 - June 28, 2025, Ruby's Inn, Bryce Canyon City, Utah
26 South Main Street • www.rubysinn.com

Sponsored by the MARS Region of the Astronomical League

This year, we will be under the stars for our conference!

- The Astronomical League is pleased to announce that **ASTROCON 2025** will be held during the new moon June 25-28 2025, at **Ruby's Inn**, near the entrance to **Bryce Canyon National Park**. Along with talks and workshops given during the day, nightly dark-sky observing will be offered at **Rainbow Point**.
- Bryce Canyon National Park features some of the darkest skies in the United States. Naturally, the National Park Service will hold a nightly public star gaze across the street from the **Bryce Canyon Visitor's Center** for both park visitors and ASTROCON attendees. **Ruby's Inn** is family-oriented with many options for fun and adventures. The area is full of possibilities.
- **Ebenezer's Barn and Grill** will host the **Star-B-Que** Friday at Noon to 2:00 PM and the **Gala Banquet** Saturday night from 5:00 PM to 8:00 PM. A room and/or RV Park/ tent camping site reservation link will be provided via email after registration to the conference has been confirmed. Lodging is available at a reduced rate, and will fill up fast.
- **Speakers and Workshops** will utilize the lecture hall at **Ruby's Inn** and **Ebenezer's Barn and Grill**.
- Reserved rooms with the ASTROCON rates are available the nights of June 24th through the 28th. This also includes the RV Park and Campground. If you want to come earlier or stay later, you will be charged the normal rate for those extra nights.
- Enjoy a **vacation extravaganza** to other National Parks and National Monuments within a days drive.
- Many activities available: hiking, mountain biking, horseback riding, guided ATV tours, and scenic flights.

• Featured Workshops:

Astrophotography / Digital Imaging - Novice
Astrophotography / Digital Imaging - Advanced
Observing: Personal Program / Journal
Observing: Tips & Ideas / Eyepieces / Filters
Observing: Charts / Books / Observing Lists
Sketching



Scan to register!

www.astrocon2025.org



2025 Celestial Calendar

January

| SUN | MON | TUES | WED | THUR | FRI | SAT |
|-----|-----|------|-----|------|-----|-----|
| | | | 01 | 02 | | |
| 05 | 06 | 07 | 08 | 09 | | 11 |
| 12 | | | | 16 | 17 | |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | | | | |

April

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| 20 | | | 23 | | | 26 |
| | | 29 | | | | |

July

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|----|----|----|----|----|----|----|
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| | 21 | 22 | 23 | | 25 | 26 |
| 27 | | | 29 | 30 | 31 | |

October

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| 19 | 20 | | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 | 31 | |

February

| SUN | MON | TUES | WED | THUR | FRI | SAT |
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| | 10 | 11 | | 13 | 14 | 15 |
| | 17 | 18 | 19 | 20 | 21 | 22 |
| 23 | 24 | 25 | 26 | 27 | | |

May

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|----|----|----|----|----|----|----|
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| 11 | | 13 | 14 | 15 | 16 | 17 |
| 18 | 19 | 20 | 21 | | | 24 |
| 25 | 26 | | 28 | 29 | 30 | |

August

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| 17 | 18 | | 20 | 21 | 22 | |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |

November

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| 16 | | 18 | 19 | | | 22 |
| 23 | 24 | 25 | 26 | 27 | 28 | |
| 30 | | | | | | |

March

| SUN | MON | TUES | WED | THUR | FRI | SAT |
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| 09 | 10 | 11 | 12 | 13 | | 15 |
| 16 | 17 | 18 | 19 | | 21 | 22 |
| | 24 | 25 | 26 | 27 | 28 | |
| 30 | 31 | | | | | |

June

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|----|----|----|----|----|----|----|
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| 08 | 09 | 10 | | 12 | 13 | 14 |
| 15 | 16 | 17 | | 19 | 20 | |
| | 23 | 24 | | 26 | 27 | 28 |
| | 30 | | | | | |

September

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December

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| 14 | 15 | 16 | 17 | 18 | | 20 |
| | | 23 | 24 | 25 | | 27 |
| 28 | 29 | 30 | | | | |

Icon Key

- New Moon
- Full Moon
- Supermoon
- Mercury Greatest Elongation
- Venus Greatest Elongation
- Mars
- Saturn Opposition
- Jupiter Opposition
- Neptune Opposition
- Uranus Opposition
- Pleiades Cluster
- Solar Maximum

Lunar Eclipses

Mar 13 Total Lunar Eclipse
(visible from Americas, Antarctica, Alaska, Russia and Africa)

Sep 07 Total Lunar Eclipse
(visible from Americas, Antarctica, Alaska, Russia and Africa)

Partial Solar Eclipses

Mar 29 Partial Solar Eclipse
(visible from the Americas, western Russia, Europe and Africa)

Sep 21 Partial Solar Eclipse
(visible from Antarctica and Oceania)

Saturn's Plane Crossing

Mar 23 - April 11
Saturn's rings cross plane on March 23, but the planet becomes visible in the morning sky by April 11.

Lunar Occultation

Jan 13 Mars
Jun 29 Mars

Meteor Showers

Jan 03-04 Quadrantids
Apr 22-23 Lyrids
May 06-07 Eta Aquarids
Jul 28-29 Delta Aquarids
Aug 12-13 Perseids
Oct 08-09 Draconids
Oct 21-22 Orionids
Nov 12-13 Taurids
Nov 17-18 Leonids
Dec 13-14 Geminids
Dec 21-22 Ursids

Equinoxes & Solstices

Mar 20 March Equinox
Jun 21 June Solstice
Sep 22 September Equinox
Dec 21 December Solstice

Conjunctions

Jan 03 Venus and Moon
Jan 04 Saturn and Moon
Jan 10 M45 and Moon
Jan 13 Mars and Moon
Jan 14 M44 and Moon
Jan 18 Venus and Saturn
Jan 31 Saturn and Moon
Feb 01 Venus and Moon
Feb 06 M45 and Moon
Feb 06 Jupiter and Moon
Feb 09 Mars and Moon
Mar 01 Venus and Moon
Mar 05 M45 and Moon
Mar 08 Mars and Moon
Apr 01 M45 and Moon
Apr 02 Jupiter and Moon
Apr 05 Mars and Moon

Apr 24 Venus, Saturn and Moon
Apr 28 Venus and Saturn
Apr 30 Jupiter and Moon
May 03 Mars and Moon
May 05 M44 and Mars
May 22 Saturn and Moon
May 23 Venus and Moon
Jun 01 Mars and Moon
Jun 18 Saturn and Moon
Jun 22 Venus and Moon
Jun 29 Mars and Moon
Jul 16 Saturn, Pluto and Moon
Jul 20 M45 and Moon
Jul 28 Mars and Moon
Aug 11 Venus and Jupiter
Aug 12 Saturn and Moon

Aug 16 M45 and Moon
Aug 31 M44 and Venus
Sep 08 Saturn, Neptune and Moon
Sep 12 M45 and Moon
Sep 16 Jupiter and Moon
Oct 05 Saturn and Moon
Oct 09 M45 and Moon
Oct 13 Jupiter and Moon
Nov 02 Saturn and Moon
Nov 06 M45 and Moon
Nov 09 Jupiter and Moon
Nov 29 Saturn and Moon
Dec 03 M45 and Moon
Dec 07 Jupiter and Moon
Dec 26 Saturn and Moon
Dec 31 M45 and Moon

SAY HELLO TO OUR NEW MEMBERS!

Samantha Bettride
Sam Braganza
Rose Difley
Charles Fritz
Justing Isabell
Larry Marvin
Dorothy Maryon
Jonah Pielow
Doug Shaffer
Layne Turner
Ryan Wagstaff

WELCOME
ABOARD!

At SLAS, we are observational astronomers who:

Promote astronomy

Encourage public education and interest

Coordinate activities with professional research



SLAS General Meeting Guest Speakers

March 19, 2025



Photo Credit: Ray Villard

Ray Villard has specialized in communicating astronomy to the general public for his entire career. As the Hubble News Chief for the Space Telescope Science Institute at the Johns Hopkins University in Baltimore, he is responsible for disseminating the discoveries made with NASA's Hubble Space Telescope. Since Hubble's launch in 1990, Villard has reported on all newsworthy space telescope findings in over 1,400 press releases and exciting Hubble photographs. Villard has done numerous popular lectures, TV appearances, and articles related to space astronomy. He has earned several NASA service award for popularizing the Hubble space shuttle servicing missions. In 2003, Villard published "Infinite Worlds" an illustrated guide to the discovery of exoplanets. He was nominated for the 2010 Primetime Emmy Awards as a co-writer for the National Geographic program, "Alien Earths," which is based on his book. In 2025 Villard was advisor and co-author on the sixth edition of the popular astronomy guide "The Universe and Beyond."

April 16, 2025



Photo Credit: University of Utah

Dr. Ben Bromley is a Professor of Physics and Astronomy at the University of Utah, specializing in theoretical and computational astrophysics. His recent research explores a range of fascinating topics, including the influence of quantum mechanical dark matter on the formation of supermassive black holes, the long-term stability of Pluto's small moons—an extraordinary dynamical system—and the potential of dust as a solar shield, the focus of his upcoming talk.

It is Messier Marathon Season!

The Periodic Table of Messier Objects

Messier Marathon 2025!

(Note: This is NOT an SLAS Sponsored Event. Nor is it a public star party. This is two best friends who belong to SLAS who do the marathon every year and invite others to join)*

Date/Time
 Primary Weekend: Dusk March 21 to Dawn March 22
 Secondary Weekend: Dusk March 28 to Dawn March 29
 (If the weather is poor on the Primary weekend, we'll try again on the Secondary weekend)

Place
 Pit 'N Pole
 BRING YOUR OWN TELESCOPE

***We are not liable for any loss, damages, or injuries. NO DRUGS, ALCOHOL OR SMOKING ALLOWED AT THIS EVENT!**

Bring Snacks and Water

Dress Very Warm

No Facilities Prepare Accordingly

Astronomical League Messier Observation Challenge

Friends

Zodiacal Lights

No Fire Building

No Guns or Weapons

No Fireworks

Fun

SCAN ME!

Pit 'N Pole Map

How to Prepare

SCAN

Messier Marathon Code of Understanding

- 1.) This is **not** a SLAS-sponsored event. This is **2** friends who get together (weather permitting) every year and decided to invite others to come along.
- 2.) This is **not** a public star party. You will need to bring your own telescope and equipment. This event has the word "marathon" in it for a reason. It is a well-planned fast-paced sky hopping event. We don't have time to sit on one object long enough for a line of people to get a look at what is in the eyepiece. This is a sundown to sunup marathon and our goal is to get all 110 objects before they are washed out by the sun.
- 3.) Good astronomers and astrophotographers respect the area they are observing in. They do not trash the area. If you bring it in with you, you need to take it out with you. We behave like good citizens and respect nature and property.
- 4.) We **are not** liable for damages. If you break something of someone else's, or if you break your equipment, you are responsible for paying for those damages. So, please don't touch it if it isn't yours unless you have permission, and please be mindful and careful of the space others are occupying. If you aren't planning to stay all night, it would be appreciated if you park your car in such a way that the light will not disturb other's night vision when you leave.
- 5.) This **will not** take place at SPOC. SPOC **never** was a consideration. The observatory sits too much in a bowl and has light pollution.
- 6.) If you hate the idea of a Messier Marathon, that is fine. You **do not** need to come. But please **do not** spoil the fun for others with negative comments. Sometimes it is better to leave opinions to ourselves.
- 7.) This is an **all-night event** in the early spring. It still gets very cold. Please make sure you dress appropriately. No one can tell you what that looks like for your body. We all metabolize differently. So if you know you run on the cold side and need to pile on the blankets in the winter, you better bring lots of layers to keep yourself warm. We **aren't** responsible for bodily harm or medical bills.
- 8.) **Bring water.** This cannot be emphasized enough. There is no potable water where we are going and dehydration is a real thing even in winter weather. Bring any food, snacks, or other things you may need as well. We won't have extra supplies.
- 9.) Please **don't** plan on building any campfires. The smoke hinders visibility, and the light from the fire ruins night vision and is a problem when trying to view fainter objects. It can also be damaging to observing equipment.
- 10.) **NO ALCOHOL CONSUMPTION, SMOKING, OR ILLEGAL DRUG USE IS ALLOWED AT THIS EVENT! THERE IS A ZERO TOLERANCE RULE FOR THIS ACTIVITY.**
- 11.) Lastly, this is supposed to be an enjoyable event. So please enjoy yourselves, make new friends, and share in the wonder of our beautiful universe!

From Shadows to Science: Using the Danjon Scale to Observe the March Lunar Eclipse



Observing and Rating the March 14/15 Lunar Eclipse with the Danjon Scale

On the night of March 14 into the early morning of March 15, 2025, a total lunar eclipse will grace the skies, offering a spectacular celestial display for observers across North and South America. During this event, the Earth will cast its shadow across the Moon, filtering sunlight through the Earth's atmosphere and bathing the Moon in hues of red, orange, or brown—an effect often referred to as a "Blood Moon."

Unlike solar eclipses, which are visible only from narrow paths, lunar eclipses are visible to anyone on the night side of Earth. This makes them more accessible to amateur astronomers and skywatchers. The total phase of the eclipse will last just over an hour, providing plenty of time to observe the changing colors and brightness of the Moon as it moves through Earth's shadow.

How to Observe the Lunar Eclipse

For the best experience, plan to monitor the entire eclipse from start to finish. The eclipse will unfold gradually, with subtle changes in color and brightness. Observing the event with the naked eye is sufficient, but binoculars or a small telescope can enhance the view, especially for detecting variations in color and detail across the lunar surface. During the eclipse, the Moon will appear dimmer, allowing more stars and constellations to become visible. The Moon will be located in the constellation Leo, with Mars shining nearby—another treat for skywatchers.

Using the Danjon Scale to Rate the Eclipse

One of the most fascinating aspects of a total lunar eclipse is its unpredictable color and brightness. The appearance of the Moon during totality can vary significantly due to atmospheric conditions such as dust, volcanic ash, or cloud cover. To quantify the brightness and color of the Moon during an eclipse, astronomers use the Danjon Scale, a five-point system developed by French astronomer André Danjon:

- **L = 0:** Very dark eclipse, Moon almost invisible, especially at mid-totality.
- **L = 1:** Dark eclipse, gray or brownish coloration, with surface details difficult to discern.
- **L = 2:** Deep red or rust-colored eclipse, with a dark central shadow and a brighter outer edge.
- **L = 3:** Brick-red eclipse, often with a bright or yellow rim around the umbra.
- **L = 4:** Very bright copper-red or orange eclipse, with a bluish or bright yellow rim at the shadow's edge.



Photo Credit: UC Riversite

The best time to assign a Danjon rating is during mid-totality, but it's helpful to observe and note changes in brightness and color throughout the entire eclipse. Observers should record their observations using the naked eye, binoculars, or small telescopes, and make note of the time, weather conditions, and any variations in color across different regions of the Moon.

Recording Observations

When making Danjon scale ratings, include as much detail as possible:

- Time of observation (using an accurate clock or time app)
- Instrumentation used (naked eye, binoculars, telescope)
- Weather conditions
- Variations in color across the lunar surface
- Any sketches or photographs

By participating in this simple yet scientifically valuable activity, amateur astronomers can contribute to the study of how Earth's atmosphere affects the appearance of lunar eclipses.

If you carry out any of these simple projects during the eclipse, consider sharing your results with Sky & Telescope's Roger W. Sinnott, who collects observations for later analysis. Detailed instructions on how to participate can be found by clicking here: [Sky & Telescope](#).

Whether you're making scientific observations or simply enjoying the view, the March 14/15 lunar eclipse promises to be a memorable event. Set aside time to marvel at this celestial wonder and happy skywatching!





Saturn's Rings to Temporarily Disappear in 2025 – A Cosmic Illusion

In 2025, Saturn's iconic rings will seemingly vanish from view – but only for a short time. This celestial event happens approximately every 15 years as Saturn's tilt and Earth's orbit align in just the right way to obscure the rings from our perspective.

Though Saturn's rings stretch over 280,000 kilometers, they are remarkably thin – only a few meters thick in some areas. As Saturn completes its 29.4-year journey around the Sun, its tilted axis causes the planet to “nod” back and forth. Twice during each orbit, the rings align edge-on with Earth, making them nearly invisible without a powerful telescope.

In March and November 2025, the rings will reach this edge-on position, appearing as a thin line or disappearing entirely. The last time this occurred was in 2009, and it will happen again in 2038. While the rings will be difficult to spot in 2025, they will gradually tilt back into view over the following years. By 2032, they will once again present a spectacular sight for stargazers.

Although this vanishing act is temporary, Saturn's rings are not permanent. Scientists believe the icy particles that form the rings are slowly falling into the planet, with the entire system potentially disappearing in 100 million years.

For now, Saturn remains one of the most breathtaking sights in the night sky – and there's no better time to catch a glimpse before its rings briefly slip from view.



Sweeping Our Skies

IMAGINE > WINTER 2025

Tractor beams, the stuff of sci-fi lore, are getting a real-world makeover at the U. But these aren't for pulling the Millennium Falcon into the Death Star. Instead, U professor of mechanical engineering [Jake Abbott](#) MS'01 and his team are aiming their futuristic technology at a more pressing problem: the growing cloud of space junk orbiting our planet.

This isn't just about tidying up, says Abbott. Scientists worry about a scenario called the Kessler Syndrome, where colliding debris in low-Earth orbit creates a cascading effect, potentially rendering entire orbits unusable and jeopardizing satellite communications, weather forecasting, and space exploration for generations.

At the heart of Abbott's innovation is the Omnimagnet—a cube-shaped device housing three nested electromagnetic coils. By controlling the electric current through each coil independently, Abbott's team can create a magnetic field pointing in any direction. When rapidly changed, this field induces electric currents in nearby non-magnetic but conductive materials, like aluminum. These induced currents, called eddy currents, then interact with the magnetic field, allowing manipulation of the object without physical contact.

"We showed we can reach out and pull an object in," Abbott notes with a grin. "But don't expect to capture a spaceship that's trying to get away. We're talking about gently manipulating tumbling space debris."

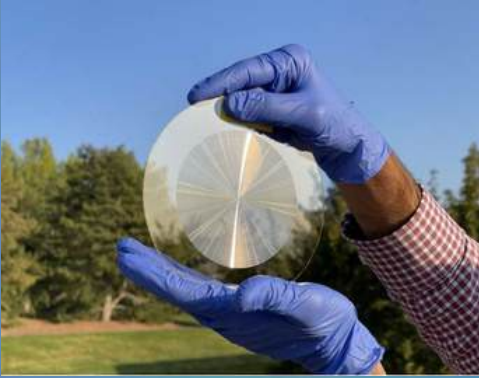
Backed by U.S. Space Force funding and partnering with Rogue Space Systems, Abbott's team is aiming to launch a prototype in the coming years. And they are already pushing the boundaries of the technology, brewing up algorithms to synchronize multiple magnets for more powerful manipulations. They're also joining forces with U heat transfer experts to overcome the challenge of keeping those hard-working Omnimagnets cool in the unforgiving environment of space.

As satellites continue to crowd our skies, Abbott's down-to-earth solution might just be the ticket to keeping the final frontier from turning into an impenetrable barrier of debris.

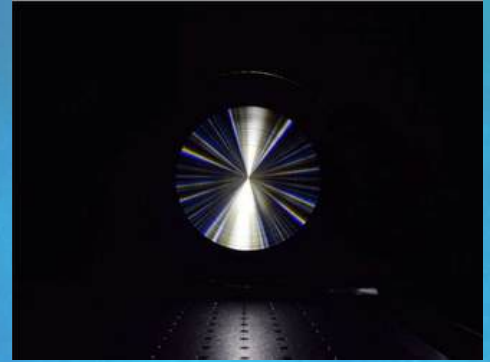
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IMAGE COURTESY OF EUROPEAN SPACE AGENCY

Right in OUR Backyard!



Utah researchers demonstrated the capabilities of their flat lens with test images of the sun and moon. Credit: Menon Lab, University of Utah



The concentric rings of microscopic indentations on the researchers' flat lens are optimized to bring all wavelengths of light into focus at the same time. Credit: Menon Lab, University of Utah

Scientists from the University of Utah have developed a groundbreaking flat lens capable of capturing color images while detecting light from distant stars. Traditional lenses rely on curved glass or plastic to bend light, but they become bulky and heavy as magnification power increases. Existing lightweight alternatives like Fresnel zone plates (FZPs) often sacrifice image quality, producing color distortions due to their inability to focus all wavelengths of visible light at the same angle.

The new flat lens, designed by Rajesh Menon and his team, overcomes these limitations by using precisely patterned microscale concentric rings on a flat surface. These microstructures diffract light in a way that preserves color accuracy while maintaining the light-bending strength of traditional lenses. Advanced computational techniques helped optimize the lens design, while the Utah Nanofab facility enabled the precise manufacturing required to create the lens.

This innovation holds significant potential for astrophotography and space-based telescopes, where minimizing weight and size is critical. The team demonstrated the lens' capabilities with test images of the sun and moon, paving the way for future applications in astronomy, satellite imaging, and other industries where lightweight, high-quality optics are essential.

More information: Apratim Majumder et al, Color astrophotography with a 100 mm-diameter f/2 polymer flat lens, *Applied Physics Letters* (2025). DOI: [10.1063/5.0242208](https://doi.org/10.1063/5.0242208)

Journal information: [Applied Physics Letters](https://doi.org/10.1063/5.0242208)

Provided by [University of Utah](https://www.unh.edu/)

<https://techxplora.com/news/2019-10-thin-lightweight-lens-slimmer-camera.html>

Also published by [phys.org](https://www.phys.org/). Original article written by Lexi Hall, University of Utah

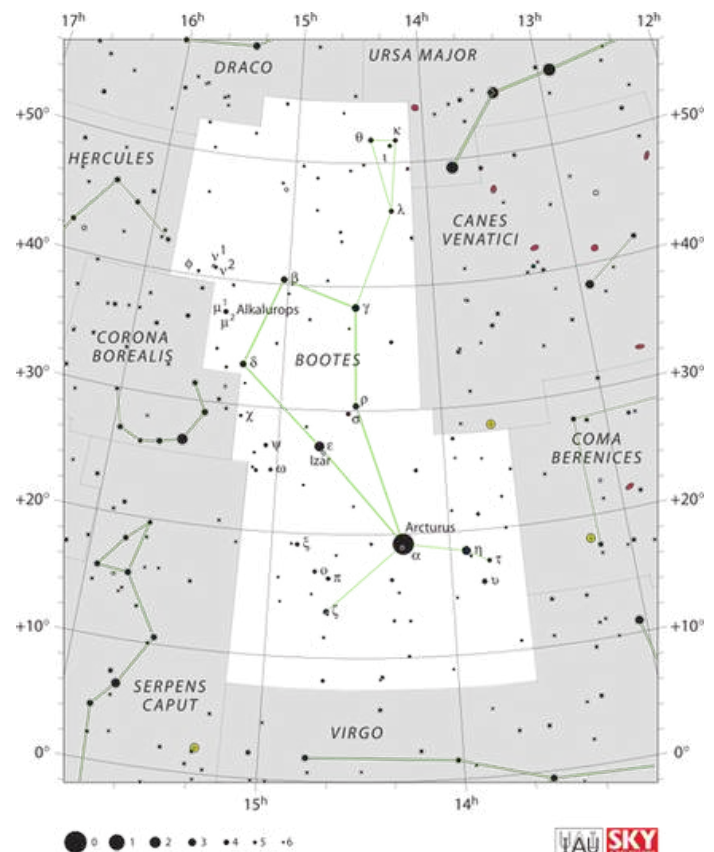
Constellation CORNER

BY: KRISTA LEMOINE

Boötes

THE HERDSMAN
MARCH 2025

Boötes is often depicted as a herdsman with a club, leading two hunting dogs. In the night sky, he appears to follow Ursa Major around the North Pole. One legend suggests he symbolizes a ploughman guiding oxen with his dogs, Asterion and Chara, represented by the constellation Canes Venatici. More commonly, Boötes is linked to Arcas, the son of Zeus and Callisto, daughter of the Arcadian king Lycaon. Hera, discovering Zeus' betrayal, turned Callisto into a bear. Years later, when Arcas encountered her, not recognizing her, he began to chase her. To protect Callisto from harm, Zeus placed both in the sky: Callisto became Ursa Major, and Arcas was immortalized as Boötes.



ASTRONOMICAL LEAGUE OBSERVING TARGETS

Messier
None

Herschel 400
NGC 5248
NGC 5466
NGC 5557
NGC 5676
NGC 5689

Double Star
Kappa Bootis
Iota Bootis
Pi Bootis
Epsilon Bootis
Xi Bootis
Delta Bootis
Mu Bootis

Urban
None

[Click here](#) for the list of
Astronomical League Observing Programs.

NGC 5466 GLOBULAR CLUSTER

Magnitude: 9.7

Approximate distance from

Earth: 52,800 light-years

Location: 14h 05m 27.29s(right
ascension), +28° 32' 04.0"
(declination)



NGC 5466
PHOTO: RON BRECHER



NGC 5248
PHOTO: NASA/ESA HUBBLE

NGC 5248 SPIRAL GALAXY

Magnitude: 10.97

Approximate distance from
Earth: 69.1 million light-years

Location: 13h 37m 32.02s
(right ascension), +08° 53'
06.907" (declination)

WHERE IS THE BOÖTES CONSTELLATION?

Boötes is best seen in the springtime, rising in the northeast after sunset, but remains visible through the summer. A simple way of finding the constellation is to look along the handle of the Big Dipper away from its spout, arcing to the bright orange star Arcturus, forming the base of the constellation Boötes, which may look like a kite to some.

NEXT MONTH:

Leo

THE LION
APRIL 2025

10 BRIGHTEST STARS IN BOÖTES

- α Boötis - Arcturus - -.04
- η Boötis - Muphrid - 2.68
- ϵ Boötis - Izar - 2.7
- γ Boötis - Seginus- 3.03
- δ Boötis - 3.47
- β Boötis - Nekkar- 3.5
- ρ Boötis - 3.58
- θ Boötis - 4.05
- υ Boötis - 4.07
- λ Boötis - Xuange - 4.18

OTHER DEEP SKY OBJECTS IN BOÖTES

- IC 4502 - Galaxy
- NGC 5600 - Galaxy
- NGC 5656 - Galaxy
- NGC 5859 - Galaxy
- NGC 5623 - Galaxy

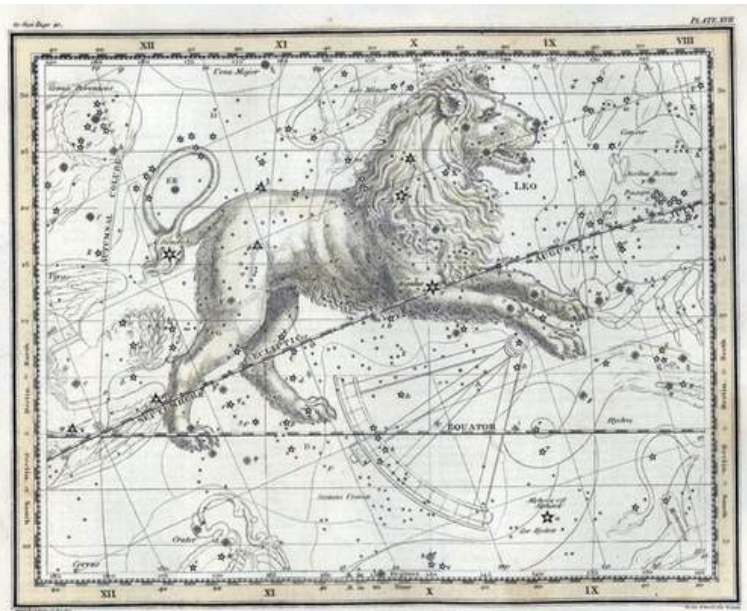
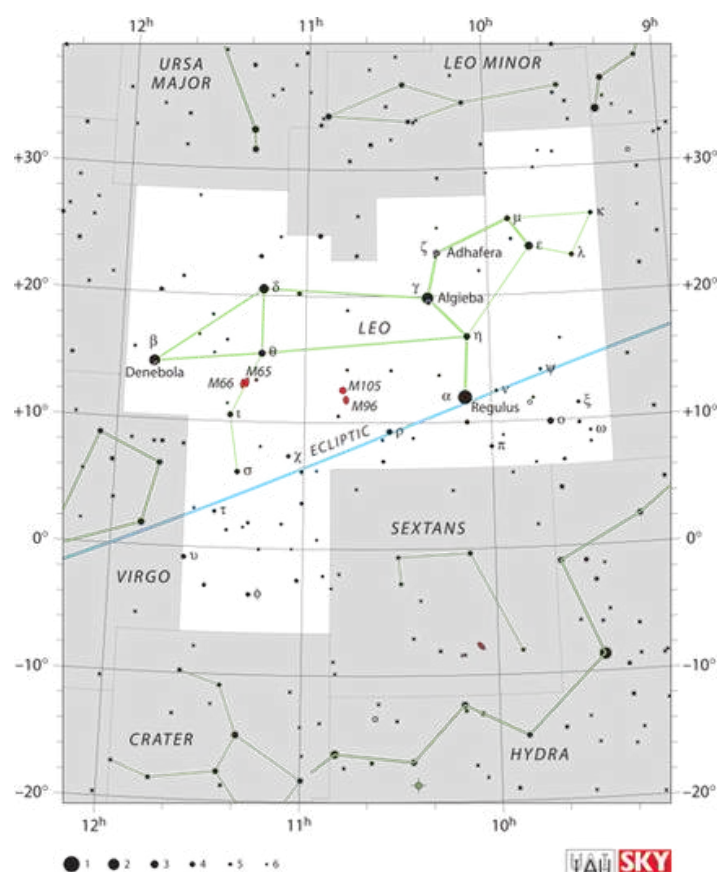
Constellation CORNER

BY: KRISTA LEMOINE

Leo

THE LION
APRIL 2025

The Babylonians called the star Regulus "the star that stands at the Lion's breast," highlighting its significance. In ancient cultures, Leo and its brightest star were widely recognized. The Greeks associated Leo with the Nemean lion, which Heracles defeated during his first labor. Eratosthenes and Hyginus noted that this lion was honored among the constellations for being the king of beasts. The lion lived in a cave in Nemea, terrorizing the locals with its invulnerable skin. Unable to defeat it with arrows, Heracles trapped it in its cave, grappled with it, and emerged victorious. He then used the lion's claws to create a cloak, enhancing his fearsome appearance.



ASTRONOMICAL LEAGUE OBSERVING TARGETS

| Messier | Herschel 400 | Double Star | Urban |
|---------|--------------|-------------|-----------|
| M65 | NGC 2903 | NGC 3593 | Alpha Leo |
| M66 | NGC 2964 | NGC 3607 | Gamma Leo |
| M95 | NGC 3190 | NGC 3608 | 54 Leo |
| M96 | NGC 3193 | NGC 3626 | |
| M105 | NGC 3226 | NGC 3628 | |
| | NGC 3227 | NGC 3640 | |
| | NGC 3377 | NGC 3655 | |
| | NGC 3379 | NGC 3686 | |
| | NGC 3384 | NGC 3810 | |
| | NGC 3412 | NGC 3900 | |
| | NGC 3489 | NGC 3912 | |
| | NGC 3521 | | |

Click [here](#) for the list of Astronomical League Observing Programs.

MESSIER 65/66 & NGC 3628 LEO TRIPLET

Magnitude: 8.9-9.5

Approximate distance from

Earth: 35 million light-years

Location: 11h 17m(right
ascension), +13° 25' (declination)



LEO TRIPLET
PHOTO: MAX BYERLY



NGC 2903
PHOTO: MARK HANSON

NGC 2903 SPIRAL GALAXY

Magnitude: 9.0

Approximate distance from

Earth: 30.4 million light-years

Location: 09h 32m 10.111s
(right ascension), +21° 30' 02.99"
(declination)

WHERE IS THE LEO CONSTELLATION?

The constellation can be found by looking for the head of the lion, or the "sickle," starting at the Regulus (Alpha Leonis) star. Regulus, Al Jabbah, and Algieba, together with the fainter stars ζ Leo (Adhafera), μ Leo (Ras Elased Borealis), and ε Leo (Ras Elased Australis), constitute the sickle.

NEXT MONTH:

Virgo

THE MAIDEN
MAY 2025

10 BRIGHTEST STARS IN LEO

- α Leonis - Regulus - 1.35
- β Leonis - Denebola - 2.14
- δ Leonis - Zosma - 2.56
- γ1 Leonis - Algieba - 2.61
- ε Leonis - Ras Elased Australis - 2.98
- θ Leonis - Chertan - 3.34
- ζ Leonis - Adhafera - 3.44
- η Leonis - Al Jabbah - 3.51
- ο Leonis - Subra - 3.52
- γ2 Leonis - 3.8

OTHER DEEP SKY OBJECTS IN LEO

- IC 651 - Galaxy
- NGC 3185 - Galaxy
- NGC 3389 - Galaxy
- NGC 3495 - Galaxy
- NGC 3507 - Galaxy

A Message From the Night Sky Network



Celebrate our Marvelous Moon

02/13/2025

The Moon, Earth's constant companion, has been a source of wonder and awe throughout our shared history. It inspires celebrations around the world, including those highlighted here.

In 2025, a total lunar eclipse graces the night sky on March 13th across the US. It's a perfect opportunity to notice these cycles and connect to the sky all the way to International Observe the Moon Night and beyond. Keep looking up!

Print this calendar of celebrations on 11"x17" paper to share widely.

Many sizes available below

Updated February 13, 2025

[Download Celebrate Our Marvelous Moon Poster - to print 11" x 17"](#) (PDF, 610 KB)

[Download Image file of 2025 Moon Celebrations](#) (jpg). (JPG, 943 KB)

[Download Image file of 2025 Moon Celebrations](#) (jpg). (JPG, 943 KB)

[Exploring Moon Phases - cards for viewing the Moon](#)

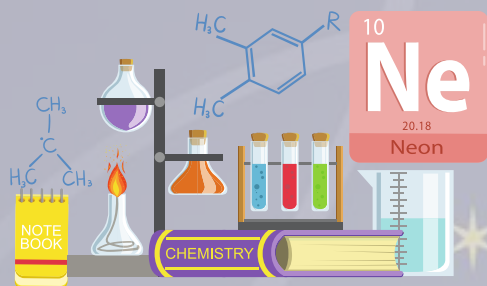
[Ways of Knowing: Eclipses Around the World](#)

[Moon Myths from Around the World](#)

[Previous years version so the Moon Celebrations calendar](#)

The Astronomer's Periodic Table of Elements

Neon



When we look up at the stars, we're really seeing cosmic chemistry in action! One of the lesser-known but super important elements in stars is neon – yes, the same element that lights up cool signs here on Earth!

Neon is a noble gas with the symbol Ne. It's colorless, odorless, and doesn't usually react with other elements. But don't let that fool you – in stars, neon plays a powerful role!

Stars spend most of their lives fusing hydrogen into helium through a process called nuclear fusion – the same process that powers the sun. As stars age and their core gets hotter, they start fusing heavier elements like helium into carbon and oxygen. But only the biggest stars – at least 8 times bigger than our sun – get hot enough to start burning neon!

Neon burning happens near the end of a massive star's life – and it's lightning-fast by space standards! While some fusion stages take millions of years, neon burning only lasts a few years – just a blink in the lifetime of a star.

Neon burning starts when the star's core gets super hot – about 1.2 billion degrees Kelvin (that's more than 2 billion degrees Fahrenheit!). At this temperature, something wild happens: high-energy gamma rays blast neon atoms apart in a process called photodisintegration. This breaks neon into smaller pieces like helium (alpha particles) and oxygen.

Here's what happens next:

- Neon breaks apart into oxygen and helium.
- The free helium nuclei smash into more neon, creating magnesium.
- The star keeps making more and more oxygen and magnesium until all the neon is gone.

Neon Burning Assembly Line 🔥 ➡️ 🌊 ➡️ ➡️ 🧑🏽💡

| Element | What It Becomes |
|--------------------|-----------------|
| Neon | Oxygen + Helium |
| Neon + Helium | Magnesium |
| Magnesium + Helium | Silicon |

Even though neon burning happens quickly, it helps build the oxygen and magnesium we find all around us – including inside our bodies! Without neon burning, the universe wouldn't have many of these life-building elements.

Neon is also key to understanding how stars work. Scientists have found that stars (including our sun!) might have three times more neon than we thought. This could solve a big mystery about how stars move energy from their cores to their surfaces.

Once all the neon is gone, the star's core collapses again, and oxygen burning begins. The star keeps burning heavier and heavier elements until it reaches iron – the heaviest element a star can make through fusion. After that, the star explodes in a supernova, scattering all those elements into space to help create new stars, planets, and even life!

Fun Fact 💡

The same neon that makes bright signs on Earth once helped build entire galaxies!

Neon might not shine on its own, but in the heart of a star, it's one of the universe's greatest builders – helping create the elements that make you and everything around you!





HELP!



Telescope Repairs and Maintenance

Need help with your telescope? Whether it's alignment, collimation, cleaning, or repairs — I'm here to help!

I'm Max, and I'm experienced with Meade, Celestron, iOptron, and Orion/Skywatcher equipment, but I'm happy to work on any telescope. I've cleaned optics, tuned GoTo systems, repaired mounts, and handled a wide range of issues.

If you're having trouble or just need advice, reach out — let's get your telescope back under the stars!

Contact: maxbyerly@icloud.com



Pssst! Need a Telescope?



Do you want to use a telescope, but don't have the space for one, or the money for one? There are a couple of options for borrowing a telescope. One is from our Salt Lake County Libraries and the other is if you join SLAS, you can borrow a telescope as part of membership benefits.



To reserve Telescopes, please call Customer Service 801.943.4636 or stop by your local branch and talk with a librarian.



Telescopes THE SALT LAKE COUNTY LIBRARY SYSTEM

The County Library is lending a limited number of Orion StarBlast Telescopes at each branch. The County Library's telescope lending program is made possible through a partnership with the Salt Lake Astronomical Society. Follow the safety rules and don't look at the sun! Enjoy this STEM experience.

- Telescopes are located at all libraries for check out, subject to availability
- Only 1 telescope per library card
- The Telescope and all peripheral materials (fanny pack, eyepiece, rubber eye guard, lens covers, view finder, books, head gear, brush pen, instructions, batteries, and base) must be returned together in the condition in which they were checked out and on the same day in which the Telescope is returned

To see all participating libraries in the telescope loaner program in Utah, click on this link: Utah (librarytelescope.org)

These are the telescopes available to borrow through SLAS.
This program is for members only and can be obtained through slasloanequipment@gmail.com

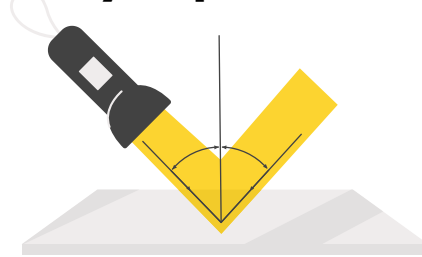
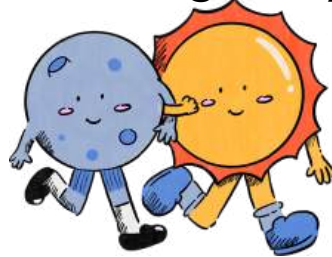


- (4) 8" Dobsonian telescopes
- (2) 6" Dobsonian telescopes
- (4) C-8 telescopes
- (1) 4" Criterion SCT
- H-Alpha Solar Telescope, tripod, mount and misc. accessories.



K-12 Astronomy Lab

Moonlight Mystery Experiment



Mission: Let's discover how the moon gives us light at night!

Your Big Question:

If you shine a flashlight on a piece of white paper in a dark room, what happens? Does the room get brighter, darker, or stay the same? Where does the light go? Does it just shine on the paper, or does it bounce off in a cool way? Take a guess!

What You'll Need:

- A flashlight
- A white paper plate (or cut a piece of white paper into a moon shape!)
- A room that can get nice and dark
- A closet door or couch to hide behind
-

Let's Get Experimenting!

1. Go to a dark room with your flashlight and paper.
2. Turn on your flashlight and shine it onto the paper. What happens to the room? Does the light stay on the paper, or does it spread around? Does the room look brighter or darker?

Time for Some Moon Magic!

Now let's pretend the sun is hiding, just like it does at night.

1. Hide the flashlight behind a door or couch, and place your paper a little away from the door or couch.
2. Turn on the flashlight behind the door, and see how the paper reacts! Have someone stand on the other side of the door or couch, so they can only see the paper and not the flashlight. What do they see? How does the paper light up the room?

What Did You Learn?

Just like the moon reflects sunlight to light up the night sky, your paper is reflecting the flashlight's light to brighten the room. Even though we can't see the flashlight directly, its light bounces off the paper, just like how the moon reflects the sun's light!



SLAS Board Meeting Notes

January 8th, 2025

Board Members in Attendance: Trevor Hebditch, Jenette Scott, Rachel Henderson, Hayden Wilde, Max Byerly

Other Members in Attendance: Alpine Stringham, Tony Sarra, Jim Keane, Ken Warner, Don Abernathy, Patrick Wiggins, Joan Carman, Krista Lemoine, Aleta Cox, and Bradley DeDea

President Trevor Hebditch called the meeting to order at 7 pm. He thanked the outgoing 2024 Board and welcomed the new board members.

OFFICE REPORTS

Astronomical League Contact – Aleta Cox- ASTROCON 2025: Aleta reported that there is a planning meeting next Tuesday the 14th from 6-8 pm at the Whitmore Library (2197 Fort Union Blvd, Cottonwood Heights, UT 84121). They still need more help/volunteers for the event. They are also looking to sell the rest of their exhibit spaces- if anyone has an in with an exhibitor, please have them contact Lowell Lyon or come to the meeting on the 14th. The Astrocon organizers want to reach out to clubs in surrounding states- Aleta sent them a list of some clubs she's found.

Library Loaner Scope Coordinator – Joan Carman: Joan emailed the dates for the 2025 SLAS star parties last month but didn't hear back. She followed up today. She will have the locations for library star parties by next week.

Historian – Patrick Wiggins: Everyone in attendance was very sorry to hear of the passing earlier in the day of Patrick's cat, Pumpkin. Patrick reported that he found lots of paper/old docs for scanning. Otherwise, he's just getting ready for the new website.

SPOC Director – Jim Keane: Jim reported that SPOC maintenance is almost done. The big building is nice and clean inside, and he even organized the inside of the cabinets.

ZAP Grant Writer - Jim Keane: Jim reported that there is no ZAP Grant this year because SLAS doesn't have a requirement for one.

Equipment Manager – Trevor Hebditch / Aleta Cox: Jim suggested changing the title of Equipment Manager to Loaner Scope Manager. Hayden made a motion, Max seconded- the motion passed unanimously. Aleta reported that the 10" Meade is showing as available but is not in the equipment garage. Jenette said that it is at member Luke Moses' house although it's not

checked out to him. Aleta and Trevor will speak to Luke, as well as go through the loaner scope list to check what scopes are actually available.

NASA Night Sky Ambassador - Krista Lemoine: Krista said that once the 2025 star party schedule is finalized, she'll put the dates on the Night Sky calendar.

Newsletter Editor - Jenette Scott: Jenette reminded the group that she is adding a message from the President to the NOVA. She will also continue with Krista's constellation corner. She stressed that her goal is outreach and to help educate people on astronomy.

Private Star Party Coordinator - Don Colton: Not in attendance.

Sun Party Coordinator - Louis Maez: Not in attendance.

Library Star Party Coordinator – Open: Trevor asked for suggestions for a new appointee. None were made. He will put out an email blast and ask for a volunteer.

BOARD MEMBER REPORTS

Vice President – Jenette Scott

Approval of SLAS 2025 Calendar: Jenette made a motion to approve, and Hayden seconded- the motion passed unanimously. The calendar will go in the next NOVA- March/April edition.

Jim said that per the SLAS constitution, the VP oversees advertising. He suggested that in the next board meeting, we talk about sending the calendar out, advertising, etc. Jenette agreed and suggested sending the calendar to the Clark Planetarium, libraries, etc.

Uncompleted Goals / New Goals: Jenette asked if SLAS has ever had a main vision. It was brought up that there is a mission statement on the website, and Joan said the first sentence of the Constitution spells out why we're here. Jenette wants to focus on outreach and making SLAS more prominent in the community. Trevor agreed that he wants to focus on outreach this year, especially to new and younger astronomers.

Secretary / Treasurer – Rachel Henderson

Budget for 2025: Rachel passed out the final proposed budget and indicated that the Board added a line item for a PO Box, which would cost \$182/year. This was done since current SLAS snail mail goes to Patrick's house. The Board proposed that they rent a PO Box at a location convenient to Rachel for 12 months, at which point, the location could be changed to accommodate next year's secretary/treasurer. Rachel also said she will try and switch over as many pieces of mail as she can to electronic delivery, instead of snail mail. Patrick said the club used to have a PO Box, but people got tired of going in once or twice a month just to get junk mail. He said he does not mind receiving the mail for SLAS and would prefer the club not spend the money on a PO Box. Aleta raised the point- what happens if Patrick gets sick and can't bring

in the mail he receives? There was some discussion and Trevor said the Board will take the issue to the membership to approve at the January general meeting.

Bank Signatures for All New Board Members: The Board will communicate and set a date. Outgoing board members don't need to be there. Don said to make sure the Board has documentation stating who the new board members are- bring minutes from the meeting where they were announced or a copy of NOVA.

Refund For Deceased Members Discussion/Decision: Recently, someone asked whether we should refund the membership dues of a deceased member who passed shortly after paying the dues. After some discussion, Rachel suggested that in the future, **if** a family member requests a refund after a member dies, SLAS will give the refund in full. Rachel made the motion, Hayden seconded- the motion passed unanimously.

Managing SLAS Cash Reserves: Rachel reviewed the SLAS 2024 financials and the proposed 2025 budget and suggested we put \$20k of the fund balance into the best-rate CD, which will leave more than enough money in the fund to cover all expenses in 2025. Jim suggested the CD not exceed 12 months, so that the 2026 Board is not burdened by it, and all agreed. Jenette made the motion, Hayden seconded- the motion passed unanimously.

Star Parties TIP “Jar” Concept: Rachel suggested we reinstate cash tip jars at SPOC star parties, as well as a Venmo QR code for folks to scan. She will create a charity Venmo account for SLAS to use. Jim and Patrick said the old tip jars were at the Ealing, Grim, and Refractor scopes. Jenette made the motion, Hayden seconded- the motion passed unanimously.

Zoom License: Trevor spoke about this. He wants one general member meeting every quarter to be more basic, for new members. To allow those members greater access to the meeting, he wants to broadcast it by Zoom. The first of these meetings will be in February (basic astrophotography by Martin Ratcliffe) and there will be a basic solo observing presentation in the summer by John Smith from the UK. There will still be two meetings per quarter for more “normal” types of presentations. Trevor proposed having the Zoom license paid for by the club, but the expense needs to be approved by the general membership at January's meeting.

Nominations for Education Fund Committee: Trevor proposed that the committee be made up of the Board President, SPOC Director, and Secretary/Treasurer (himself, Jim, and Rachel this year). Rachel made the motion, and Jenette seconded- the motion passed unanimously.

Board Member – Hayden Wilde

Hayden has been in contact with Jia Wei at Westvale Elementary about his request for a school star party on Tuesday, February 4th. She is working out a few more details and will send out a blast to get volunteers. She is going through the rest of the requests that were left by Marlene, and one sent by Jenette, and reaching out to the contacts, planning, etc.

Board Member – Max Byerly

Seestars for Star Parties: Trevor and Max spoke last month about the idea of potentially getting Seestar Smart Telescopes for SPOC star parties. Max proposed getting 2 telescopes at around \$500 each for a cost of ~\$1,000 total. Don said that Seestar recently released their S30 models, which are cheaper than the current model at about \$350 each. He thinks the S30 would be appropriate for our needs, and pointed out that we would also need to get monitors/screens, too. Trevor said he wanted to delay the discussion until the next board meeting.

SPOC: Max also proposed getting graphics/printouts to put on the back of the doors at SPOC, i.e. how a star forms or dies, the Milky Way, etc., to engage people while they're waiting in line at star parties. He and Jim will talk about the idea, and we will discuss it at the next board meeting.

President – Trevor Hebditch

Approval of President and Board Message: Trevor asked if anyone had objections to his January message- nobody did. Jenette will post it and put out a SLAS blast and Patrick will include a link in the SLAS weekly news.

New Board Members/Appointed Positions Hand-Overs Progress: All new board members said they have a good understanding of their positions going forward and do not have questions.

Discussion On Creating Bylaws: Trevor wants to create bylaws and get away from using collective tribal knowledge, i.e. "I remember back in the day this is how it was done". Jim said he would caution against doing this because every year the board is different, and any bylaws the 2025 board creates can't be emotional bylaws, they have to be well thought-out and make sense for the club, or the next board will just get rid of them, and it'll be a never-ending process. Don pointed out that the constitution says bylaws must be proposed/approved by the board and then approved by the general membership, and it will take the same effort to remove a bylaw- so be careful. Trevor said he agreed with both Jim and Don. He asked if anybody else had objections to the bylaws concept. Don said there were no objections, just thoughts and discussion and cautions. Trevor said the board will start to move forward with the discussion.

Mabel Sterns Award Nomination in Astronomical League (Jenette Scott as Editor Of SLAS's NOVA): Trevor will initiate the process of nominating Jenette for the award. Jenette said they will present the award at Astrocon if we win. She pointed out that SLAS has never received the award, so it would be fun if we did at our own Astrocon.

SLAS Website Progress: Ken said the website is coming along nicely. He is meeting with the dev team almost daily. Jim and Tony are helping with a few content pages. Trevor asked if there is a completion date they are aiming for. Ken said originally, the goal was by the end of 2024, but the interactive pages aren't completed yet (calendars, site admin, SLAS blasts). Don asked if there's a Beta version. Ken provided a website URL but asked those in attendance not to publish or share it. Trevor asked if there was a deadline for the completion of the contract. Ken said SLAS paid the team ½ and the rest is contingent upon getting the website operational. Trevor wants to push to get it completed. Ken said one of the major time sucks is site administration- having permissions on every single page, having to assign individual roles to each page and what

they can do with it- every page has its own set., i.e. people who can add a SPOC event (board members, webmaster, SPOC trainers). They also have to implement a set of rules for members that are completely separate, and there's public vs. member security to consider (pages that are accessible by the public vs. only by members). Trevor asked Ken to provide a projected finish date by the next board meeting.

Patrick asked about the existing website member gallery that hasn't been used for years, and specifically, what will happen to a deceased member's pictures. Ken said he's not going to throw them away. Trevor said all photographs will be kept until the team doing the website can come up with a strategy on what to do and propose it to the board. Patrick verified that nothing is being thrown away, and Trevor confirmed.

Standardized Email Addresses: Trevor proposed a set of standardized emails that the club can use. Asked Ken to review the provided list to see if it makes sense from his side. Jim said he doesn't want the SPOC committee to have separate contacts. Ken said he has set up a new mail server and can set up mailboxes and give people web access to them. That way, copies of emails can be kept on the server for future reference. Ken asked if the board wanted the emails forwarded to their personal emails. Trevor said he'd prefer iMap capabilities. He asked Ken to come back next month and talk about how it'll be done, as well as to contact the people involved.

Social Media Accounts and Moderator Role: Will discuss this at the next board meeting.

Cache Valley Astronomical Society - Researching Mental Health and Dark Skies: CVAS is asking for volunteers to attend meetings and be part of that program. Trevor asked Jenette to put their request in the NOVA and send out an email blast. Don suggested we mention it in next week's general meeting, too.

Google Accounts and SLAS Inventory 2023: Trevor created a Google Drive and shared it with everyone. He said he wants a common repository for all documents and stressed the importance of transparency. SLAS inventory docs are in that drive as well. Jim said that in the future, he would like to talk about how to manage the inventory list i.e. when he brings new things into SPOC.

Request Each Board Member to Prepare Improvement Ideas Doc for Their Role: Trevor requested this, and all board members acknowledged the request.

Other/Missed Items

Patrick: Will set up a reservation at Golden Corral for the December 2025 party.

Motions Passed at Meeting

- The title of Equipment Manager will now be Loaner Scope Manager
- The SLAS 2025 calendar was approved

- If the family of a deceased club member requests a refund of that member's membership dues, it will be given in full.
- \$20k of the SLAS fund balance will be invested in a CD not to exceed 12 months.
- Tip jars (cash and Venmo) will be reinstated at SPOC star parties
- The Education Fund Committee will consist of the current Board President, SPOC Director, and Secretary/Treasurer.

Action Items

- **Joan:** Provide locations for library star parties
- **Trevor/Aleta:** Compare the loaner scope list with the actual inventory, speak to Luke about 10" Meade telescope
- **Krista:** Put star party schedule dates on the calendar
- **Trevor:** Put out a blast and ask for a new library star party coordinator volunteer. Nominate Jenette for the Mabel Sterns Award.
- **Max:** Continue developing Seestar and SPOC graphics ideas for the next meeting.
- **Jenette:** Put the CVAS request in the next NOVA and send out an SLAS blast.
- **Rachel:** Create a SLAS Venmo account. Invest \$20k in CD.
- **Hayden:** Send out email blast for Feb 4th star party volunteers
- **Ken:** Bring the projected website finish date to the next board meeting. Figure out standardized email addresses.
- **Patrick:** Include a link to the January President's message in the next SLAS weekly news. Make the Golden Corral reservation.
- **All Board Members:** Go to the bank to get signature authority on the SLAS account



SLAS General Meeting Minutes
January 15th, 2025- 7:30 pm
Salt Lake Community College- Redwood Road Campus

Roughly 35-40 people in attendance

Introduction

President Trevor Hebditch called the meeting to order at 7:30. He thanked the outgoing 2024 Board and introduced the 2025 Board. He asked all first-timers to introduce themselves.

Trevor then introduced the amazing Dr. Jumana Alshaikh, MD, with a brief history of her background and expertise, before passing the meeting off to her.

Lecture

Jumana gave a fascinating lecture titled “The Neurology of Space Travel”. The slides can be found here: <https://shorturl.at/kkoEX>

Meeting End

After Jumana finished, Trevor concluded the main meeting and reviewed some SLAS business. He spoke about his desire for transparency in financials and all big decisions made by the Board. He reviewed the January 2025 board meeting and asked the membership to vote on various items.

- The membership voted to approve the 2025 budget, invest a portion of the SLAS fund balance into a CD, purchase an SLAS P.O. Box, the 2025 meeting, and start the party schedule.
- After some discussion, the membership did not approve the motion to give deceased club members’ families a refund of the deceased person’s membership dues, saying that since a family has never requested a refund in the history of the club, it probably wasn’t necessary to pass the motion and that the Board could handle any refund requests on a case-by-case basis.
- Trevor requested that all loaned telescopes/equipment be returned so that he and Aleta Cox can perform an audit
- Trevor requested a volunteer for the SLAS Library Star Party Coordinator position
- Trevor requested any comments or feedback from members on anything discussed during the evening

Trevor then concluded the meeting and invited all to attend “Advanced Training” at Denny’s.

Minutes submitted by: Rachel Henderson, Secretary/Treasurer



SLAS Board Meeting Notes

February 12th, 2025

Board Members in Attendance: Trevor Hebditch, Jenette Scott, Hayden Wilde, Rachel Henderson

Other Members in Attendance: Alpine Stringham, Aleta Cox, Ken Warner, Patrick Wiggins, Tony Sarra, Don Abernathy, Bradley DeDea, and Joan Carman

President Trevor Hebditch called the meeting to order at 7 pm.

OFFICER REPORTS

Astronomical League Contact – Aleta Cox- ASTROCON 2025: Aleta reported that there have been no big changes since last month, but next Tuesday, February 18th, there's another coordination meeting at the Murray Library at 6 pm. They are still looking for volunteers to help at the event.

Library Loaner Scope Coordinator – Joan Carman: Joan reported that she will have 200 flyers from the county library next month, to be distributed to members only. The county will also have the flyers in all their libraries.

Joan also reported making contact with the Cache Valley Astronomy Club, who told her they already have telescopes in their libraries. Due to some changes with the library loaner scope program, the future of SLAS in the program will likely be a lot less intensive than right now.

Historian – Patrick Wiggins: Patrick reminded all in attendance to send him updates for the SLAS Past document and indicated that the updates don't need to be astronomy-related. Anything noteworthy is welcome. <http://slas.us/slasbooks/SLASPAST.PDF>

SPOC Director – Jim Keane: Not in attendance. Will discuss insurance renewal next month.

ZAP Grant Writer - Jim Keane: Not in attendance.

Equipment Manager – Trevor Hebditch / Aleta Cox: Trevor and Aleta reported that all equipment has been returned – they will work together to get it inventoried and cleaned up. They also recently received an additional piece of equipment.

NASA Night Sky Ambassador - Krista Lemoine: Not in attendance, but Trevor reported that thanks to Krista, SLAS now has a NASA Engages account. This will allow us to connect with NASA experts for future speaking engagements member meetings, etc.

Newsletter Editor - Jenette Scott: Jenette reported that Krista is almost done with her constellation corner and that she's on schedule to have the March/April newsletter published on Feb 28th.

Private Star Party Coordinator - Don Colton: Not in attendance.

Sun Party Coordinator - Louis Maez: Not in attendance. Trevor talked to him last night, and there is nothing new to bring up at this time.

Library Star Party Coordinator – Open: Trevor will ask for volunteers again at the next general meeting.

BOARD MEMBER REPORTS

Vice President – Jenette Scott

Night Sky Network: Jenette is the Night Sky Network co-coordinator with Krista Lemoine. Krista has outreach kits from the Network and she and Jenette would like to have an outreach table at the star parties at SPOC to engage the kids that attend the parties.

Astronomical League Offerings: Jenette and Krista also spoke recently about wanting to make members more aware of Astronomical League offerings. They discussed perhaps doing mini-competitions for SLAS members and letting people earn badges through SLAS.

Secretary / Treasurer – Rachel Henderson

Financial Report and January To-Do List: January's financial report is completed and available on Google Drive. The 2025 board has all been added to the Bank of Utah account, the P.O. Box and Zoom license is set up, and \$20k from the bank should be invested in a CD in the next few days.

Tax Exemption Rules: Rachel reminded all in attendance of the sales tax exemption rules for nonprofits in Utah. Any purchase over \$1k should be tax-exempt at the time of purchase. Rachel has exemption certificates that can be provided to vendors if needed. For purchases under \$1k, we should pay sales tax and then Rachel will request a

reimbursement from the state. She sent in a tax reimbursement request for 2024 in January. She and Trevor also reminded all in attendance that reimbursements will not be given in 2025 without proper documentation (an itemized receipt/invoice).

Membership Renewals: Rachel brought up some concerns and ideas about the membership renewal process. She noticed that there were a lot of members who did not renew their memberships in January. We discussed the possibility of setting up an auto-renewal for memberships, or a monthly, subscription-based membership. Will discuss more at next month's meeting.

New Member Outreach: Rachel wanted to find a way to reach out to new members and make them feel more engaged with the club when they first join. She created little "thank you" cards to send to new members and would like to order fridge magnets with the SLAS logo and website to send them. She will present again on that (with pricing for the magnets) at the next board meeting.

Board Member – Hayden Wilde

Hayden reported that she's finished going through Marlene's files and all her information is available on Google Drive under "2025 Requests Communication Log". She will update it frequently to provide all board members with information on School and Specialty Star Parties.

The Westvale Star Party from February was canceled due to weather- tentatively rescheduled for the evening of March 4th.

The U.S. Air Force Auxiliary (like the Boy Scouts, but the Air Force version) is also having an event that day at SLCC, from 2:00-4:30 pm. Hayden will ask for volunteers for both events. Jenette volunteered to teach a class about basic astronomy and bring a solar telescope.

Board Member – Max Byerly

Max was not in attendance due to a death in his family. We are all so very sorry and express our love and support to Max at this time.

President – Trevor Hebditch

General Meeting Speakers: Trevor reported that it's difficult to find speakers for the SLAS general meetings, but a lot of people in the club have good contacts, so he wants to set up a committee of people who can help the President work out a schedule of speakers each year. Don pointed out that since we now have the NASA Engages account, that's a huge plus. There was some discussion on upcoming speakers (Dr.

Claire Higgs) and some other ideas for ways to find speakers (The American Astronomical Society (AAS)).

Mabel Sterns Award: Trevor will be nominating Jenette Scott as Editor of SLAS's NOVA for the Mabel Sterns Award nomination in the Astronomical League this month, using the January 2025 NOVA for the nomination.

SLAS Website: Ken gave a progress update/demo of the new website and it looks great. He also indicated that the new website will have a certificate that will fix the MacOS/Safari issue some members are having lately.

Tony requested that those in attendance at the meeting access the dev website with their phones/tablets to check how the mobile version is working.

Trevor asked Ken to give a little preview of the website at next week's general member meeting and requested that the website be finished by March/April, if possible.

Standardized Email Addresses: Ken set them up and has the passwords, etc. He will send to the board members.

Other/Missed Items

- General Meeting Speakers:
 - Feb – Martin Ratcliff – “Basic AstroPhotography”
 - March – Ray Villard – Overview of how Hubble and Webb are working together with new discoveries about our universe. Trevor will get Ray's bio to Jenette ASAP for the NOVA.
- Jenette suggested that we ask for donations to support the Utah Food Bank at the October 25th Star Party at SPOC.
- Each board member will prepare an improvement ideas doc for their role
- Social media accounts and moderator roles, as well as discussions on the strategy/goals of the society, will be pushed to the next board meeting.



SLAS General Meeting Minutes
February 19, 2025- 7:30 pm
Salt Lake Community College- Redwood Road Campus

66 people in attendance + 21 on Zoom

Introduction

Jenette and Hayden handed out fliers for ASTROCON 2025

President Trevor Hebditch called the meeting to order at 7:30. He asked all first-timers to introduce themselves. There were a lot of new people and a lot of young people. Many of the newcomers were students who attended in order to receive extra credit.

Trevor then introduced the fantastic Martin Ratcliffe, with a brief history of his background and expertise, before passing the meeting off to him.

Lecture

Martin gave a wonderful presentation on the basics of Astrophotography. The slides can be found here: <https://shorturl.at/3iH2P>

The link to the Zoom recording can be found here: <https://shorturl.at/Us83P>

Meeting End

After Martin finished, Trevor concluded the main meeting and reviewed some SLAS business.

- Gave a quick January financial report
- Ken Warner gave a demo of the new website.
 - Trevor indicated we would have a short update from Ken at every general meeting going forward.
- Talked about ASTROCON 2025 again
 - Lowell Lyon gave an overview. He also added that he wants to re-institute making it to dark sky sites
 - Jenette Scott talked about an upcoming, unofficial messier marathon that she is planning
 - Don Colton added that there is a public star party happening across from the visitors center at ASTROCON

Trevor concluded the meeting at 8:52 pm and invited all to attend “Advanced Training” at Denny’s.

Minutes submitted by: Hayden Wilde, Board Member at Large, and Rachel Henderson, Secretary/Treasurer