



The Sonora Astronomical Society's SONORAN STARRY NIGHTS

NOVEMBER 2025

November Meeting Details

DATE: November 15th, 2025
MEETING TIME: 2:30 PM (2:00 access)
PLACE: Sahuarita Library & Zoom
MEETING SCHEDULE:
(2:15 PM ZOOM Waiting Room Available)
2:30 Meeting Intro and Welcome
2:40 Featured Presentation Followed
by Club Activities/Business

Next Member Star Parties

DATE: Thursday, November 20th, 2025
TIME: 5:15 PM *NEW LOCATION*
PLACE: Madera Canyon Parking Lot
(300 ft past 9 mile marker, Madera Canyon Rd)

- LOOKING AHEAD -

THE FOLLOWING STAR PARTY WILL BE:
DATE: Thursday, December 18th, 2025
TIME: 5:15 PM
PLACE: Madera Canyon Parking Lot

NOTE: If you have a telescope that you don't know how to use, or are looking to buy a telescope and want to compare different telescopes, join us at a star party and we can give you some help.

UPCOMING EVENTS

NEXT CLUB MEETING

DATE: December 13th, 2025
LOCATION: Sahuarita Library & Zoom
TIME: 2:30 PM (in person + Zoom)
Speaker: T B A
Subject: T B A

November Presentation

Speaker: Speaker and topic will be announced at the meeting.

Subject: The presentation will be an interesting astronomy-based video followed by a round table discussion.

Abstract: .

Biography:

WHAT NEXT?

NASA has suspended all outreach activities due to budget shutdown. The following video has been postponed as well. The YouTube channel still holds many interesting past videos to watch.

NASA's Night Sky Network has a live YouTube Webinar each month—**currently suspended** - (and a video that can be viewed if you missed the live presentation) featuring an interesting array of subjects.

The October 22nd presentation was postponed, and will be made at a later time.

The topic is:

A Storm of Stars with Dr. Shane Larson

Details and the YouTube link can be found on our website, News & Letters page, and on the Events page/Calendar @ <https://sonoraastronomicalsociety.org/>

Or you can search the internet for YouTube, then Night Sky Network, for the videos, or click: <https://www.youtube.com/@NASANightSkyNetwork>

SONORAN STARRY NIGHTS

PRESIDENTS NOTES

Greetings everyone,

Our November meeting will take place on November 15th at the Sahuarita library (670 Sahuarita Rd). There is parking behind the library. The meeting room is just to the left as you enter the front door. The meeting will officially start at 2:30pm this month with ZOOM login available by 2:15pm. If anyone has any suggestions for meeting presentations or knows someone we can bring in for a presentation, please let me know.

There are no public star parties this month.

We no longer have access to Canoa Preserve Park for our club star parties. We are now using our new site which is on the way up to Madera Canyon. There is a map to our new site available on our website. Our November club star party is scheduled for the 22th. Again, check our website for details. If you have any questions about the site, let me know.

Stay safe,

John Dwyer
President

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MEMBER EQUIPMENT FOR SALE

Have a telescope or other astronomy equipment for sale? Contact John Dwyer with your item(s) to get them listed here.

The SAS website has a good one-page article from Sky & Telescope that can help get you started. Copy and paste this link:

<https://sonoraastronomicalsociety.org/newsletters/>

Basic monthly star charts are now available. Look on the website Home page yellow banner.

The website also has a list of suggestions of Planetarium Apps for your phone, several FREE!

SONORAN STARRY NIGHTS

THE NOVEMBER SKY

SKY HIGHLIGHTS FOR NOVEMBER

The evening night sky is gaining more planets this month. **Saturn** is in the southeast sky after sunset. Its ring system is almost edge-on now. **Neptune** is still trailing about 5 degrees behind Saturn. **Mars** is basically too close to the Sun to see now. **Jupiter** is now rising shortly after 10pm and its mag exceeds -2. There will be numerous double shadow events of Jupiter's moons this month. It will reach opposition early next year. **Uranus** will achieve opposition on the 21st. **Venus** is still barely visible in the morning sky but is becoming increasingly close to the Sun. **Mercury** is very low in the evening sky early in the month and will be in conjunction with Mars on the 12th.

We still have some comets visible this month. Comet C/2025 A6 (Lemmon) is still low in the western evening sky but will be on a downward path toward the horizon and will be lost below the horizon by the end of the month. Comet C/2025 R2 (Swan) is in the southeastern evening sky. However, it will become fainter as the month goes on. The third comet C/2025 K1 (ATLAS) will rise into the evening sky by the end of the month, but it is fading rapidly.

If you have any solar viewing equipment, the Sun is extremely active now as it has officially reached maximum. As it is getting a little cooler now, break out the solar equipment and take a peek.

NOVEMBER MOON/SUN TIMES

DATE	M-Rise	M-Set	M-Phase	Sun-set	Star Party
Sat 11/01	15:10	17:32		17:33	
Sun 11/02	15:40	18:07		17:32	
Mon 11/03	16:12	18:47		17:31	
Tue 11/04	16:48	19:35		17:31	
Wed 11/05	17:30	20:30		17:30	
Thu 11/06	18:20	21:31		17:29	
Fri 11/07	19:20	22:36		17:28	
Sat 11/08	20:26	23:43	1st Qtr	17:28	
Sun 11/09	21:36	-----		17:27	
Mon 11/10	22:45	0:50		17:26	
Tue 11/11	23:50	1:57		17:26	
Wed 11/12	-----	3:05		17:25	
Thu 11/13	0:52	4:14		17:24	
Fri 11/14	1:50	5:26		17:24	
Sat 11/15	2:46	6:40	Full	17:23	SAS Meeting
Sun 11/16	3:42	7:55		17:23	
Mon 11/17	4:37	9:06		17:22	
Tue 11/18	5:34	10:11		17:22	
Wed 11/19	6:31	11:05		17:21	
Thu 11/20	7:30	11:50		17:21	S.A.S. SP
Fri 11/21	8:27	12:27		17:21	
Sat 11/22	9:21	12:59	3rd Qtr	17:20	
Sun 11/23	10:11	13:26		17:20	
Mon 11/24	10:55	13:51		17:20	
Tue 11/25	11:34	14:15		17:19	
Wed 11/26	12:08	14:39		17:19	
Thu 11/27	12:39	15:05		17:19	
Fri 11/28	13:08	15:33		17:19	
Sat 11/29	13:37	16:06		17:19	
Sun 11/30	14:07	16:45	New	17:19	
					(S)=Solar
					(S)=Solar

SONORAN STARRY NIGHTS

THE STARGAZER'S CORNER:

This article made available by NASA's Webb Telescope Team.

November's Night Sky Notes: Tiny Dust Could Yield Big Answers Under Webb Telescope's Gaze



This image of the Orion nebula, the brightest spot in the sword of the constellation Orion, shows carbon-rich molecules called polycyclic aromatic hydrocarbons (PAHs) as wisps of red and orange. This image was captured through a team-up of the Hubble and Spitzer telescopes, two predecessors of the James Webb Space Telescope. "With Webb we'll be able to see far more detail, including variation in the wisps of PAHs that we currently must paint with a relatively broad brush," said Christiaan Boersma, an astronomer at Ames and joint principal investigator on a project that will use Webb to study PAHs. Boersma is an extended core team member on a Webb Early Release Science project studying this exact region in Orion. **NASA/JPL-Caltech/STScI**

NASA's James Webb Space Telescope is preparing to deliver fantastic new images of faraway worlds and galaxies, but it'll also give us an unprecedented look at a tiny component of our universe: space dust. One category of dust could shed new light on some big processes, like the way stars and galaxies form and evolve.

The tiniest of these dust particles are, technically speaking, polycyclic aromatic hydrocarbons. They go by their initials, PAHs (sounds like "pa's" as in "Grandpa's slippers"), and they're one of the most abundant types of molecules in space. They include a whole family of large molecules with a structure like chicken wire – a latticework of hexagons organized in different patterns. After they were identified in the 1980s, astronomers discovered PAHs just about everywhere they pointed their telescopes: in gas clouds where stars form, in some of the earliest galaxies, and – closer to home – in the atmosphere of Saturn's moon, Titan.

(Continued next page)

In the past, space dust was a nuisance for astronomers, because telescopes couldn't see through the dark, massive dust clouds spread across galaxies. With the advent of infrared astronomy, telescopes peered through those obscuring clouds, and we learned that space dust is actually a vital part of star and planet formation. And Webb is poised to be a game-changer for unlocking its secrets.

"Webb has capabilities that dwarf those of previous infrared telescopes and will revolutionize astronomy," said Louis Allamandola, one of the pioneers of the PAH field and a researcher at NASA's Ames Research Center in California's Silicon Valley.

Unprecedented Detail Ahead in Webb's Dust Data

When NASA's Spitzer telescope launched in 2003, with its next-generation infrared technology, PAH research took off.

"Now, Webb will bring superb spatial and spectral resolution," said Christiaan Boersma, an astronomer at Ames and joint principal investigator on a project that will use Webb to study PAHs in space. "We'll be able to see details – better details – on smaller scales than ever before. This will reveal how PAHs form and evolve in very different astronomical environments. And that will allow us to unravel the photophysics and chemistry that drive how star-forming structures arise and explain the remarkable diversity of objects we observe, from exoplanets and stars to galaxies."

Boersma is excited for the detailed spectra Webb will provide. These are like fingerprints for light. When dust molecules are heated by the Sun or another star's rays, they emit infrared light to cool off. The light patterns, or spectra, can help identify the different types of PAH molecules the light came from – if we can capture it well enough.

With lower-resolution infrared telescope technology, astronomers have detected broad PAH populations or families. Deciphering the spectrum of a single type of PAH is possible, but it's painstaking work, requiring the synergy of telescope observations, lab work, and advanced computing that underlies Ames' Laboratory Astrophysics group. The field was brought to maturity at Ames, allowing scientists to recreate in the lab the PAH-forming conditions of interstellar space and measure the spectral fingerprints of the molecules that result.

So far, they've nailed down the "light fingerprint" of around 100 different PAHs by studying molecules in the lab and another 4,000 with the help of computers. Armed with all that data, astronomers match known spectra to PAH populations observed in the sky.

It's a big job, but researchers expect the powerful Webb telescope will bring a whole new approach.

"The holy grail for us is to be able to identify and quantify – directly from the telescope data – the specific PAH types making up the families we see," said Boersma. "We're closer than ever, thanks to the fundamental work that came before."

With Webb's resolution, they'll be able to tease out smaller PAH subsets – defined by characteristics such as size, shape, and electric charge – that contribute to the observed spectra. To analyze and interpret the PAH observations, researchers will turn to a database of research built up by NASA scientists. The NASA Ames PAH IR Spectroscopic Database is freely available to the global scientific community and offers libraries of data and sophisticated tools.

(Continued next page)

THE STARGAZER'S CORNER (CONTINUED):

“We’re entering the era of ‘PAH research 2.0’,” said Allamandola. “Looking at a spectrum is like listening to a symphony. Webb will allow us to hear all the different kinds of PAHs in the orchestra for the very first time. That is a *giant* step forward.”

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The James Webb Space Telescope is the world’s premier space science observatory. Webb will solve mysteries in our solar system, look beyond to distant worlds around other stars, and probe the mysterious structures and origins of our universe and our place in it. Webb is an international program led by NASA with its partners, ESA (European Space Agency) and the Canadian Space Agency.

For more information about Webb, visit www.nasa.gov/webb.

SONORAN STARRY NIGHTS

S.A.S. CLUB OFFICERS

OFFICE/POSITION	NAME	PHONE NO.
Chairman of the Board	Open	
President	John Dwyer	(520) 393-3680
Secretary	Michael Moraghan	(520) 399-3352
Treasurer	John McGee	(520) 207-6188
Star party Coordinator	Open	(520) 303-6920
Newsletter Editor	Joe Castor	(620) 584-4454
Webmaster	Joe Castor	(620) 584-4454
ALCOR* (Currently Inactive)	Inactive	(520) 396-3576
NSN** Representative	Open	(520) 303-6920
Past President Emeritus	Open	
*Astronomical League		
**Night Sky Network		

WHY JOIN SAS

1. SAS Family Membership Fee is only \$25.00 per year.
2. SAS monthly newsletter "The Sonoran Starry Nights."
3. Top-quality astronomy lectures by local astronomers!
4. SAS Discount for Astronomy Magazine \$34.00 for 1yr or \$60.00 for 2 yr renewed through our treasurer.
5. SAS Discount subscription rate for Sky & Telescope Magazine — self-renewed.
6. RASC Observer's Handbook at a discount, \$30.00.
7. SAS T-Shirts for sale for \$10.00—M, L, XL.
8. Member of International Dark-sky Association (IDA).
9. SAS Discount for Astronomy 2020 Calendar \$10.00
10. SAS monthly Member Star Parties.
11. SAS Telescope and astronomy book loan programs.
12. SAS outreach to astronomy education in schools.
13. SAS fellowship with other amateur astronomers!

CLUB DUES

Dues (family or individual) are \$25 annually, payable each year in the month you initially joined the club. You will receive a reminder in the monthly newsletter e-mail of your due date. You can either pay at the club meeting or mail it to the club's address (S.A.S., P.O. Box 1081, Green Valley, AZ, 85622).

SAS WEBSITE

If you want to keep up-to-date with club activities, such as star parties, etc., check out our website (and Calendar) at:

[HTTPS://sonoraastronomicalsociety.org](https://sonoraastronomicalsociety.org)

SAS STATISTICS & FINANCES

Lifetime Members: 1
 Individual & Family Members: 101
Total Membership: 102

Bank Balance as of Sep. 30 \$ 1,310.96
 Deposits / (D/Ws): \$ 100.00 / (\$10.00)
Bank Balance as of Oct 30: \$1,400.96

SONORAN STARRY NIGHTS

LOCAL ASTRO-IMAGING GROUP: Sonoran Desert Astro Imagers (SDAI), Larry Phillips, Coordinator

Are you interested in Astrophotography or are you currently involved in imaging the skies? If so, you are invited to join the Sonoran Desert Astro Imagers group. Our meetings focus on improving our skills, helping each other, workshops, and field trips. We meet on Thursdays at 9 AM. The meetings are on Zoom, except once-a-month we get together in-person at the Quail Creek Conference Center. Email notifications are sent to members before each meeting.

Please send your Name and E-mail address to my address below and we'll include you in the emailing notices of monthly meetings; "the when and where meeting notice." Do you have any questions? If so, call me (Larry Phillips) at (520) 777-8027 or email to lp41astro@cox.net. Clear Skies! Larry Phillips

ABOUT THE ASTRONOMICAL LEAGUE



While SAS is no longer an active member of the Astronomical League, a SAS member may join the Astronomical League as an at-large member. What are the advantages to joining the AL?

1. You can receive various observing awards by joining an "observing club" and observing the required number of objects. There are all levels of clubs from beginner to advanced, viewing constellations to deep-sky objects and using either your naked eyes, binoculars, or a telescope. Contact our ALCOR rep Burley Packwood for details.
2. You can get a 10% discount on books purchased through the AL Book Service.
3. You will receive the AL's quarterly "Reflector" magazine which keeps you up to date on all the AL activities.

More info at www.astroleague.org

SAS IS A MEMBER OF IDA



SAS is proud to be a member of the International Dark-Sky Association, supporting the reduction in light pollution around the U.S. and the world.

More info at www.darksky.org

SAS NON-PROFIT STATUS

The Sonora Astronomical Society is a 501 (c) (3) nonprofit charitable organization! SAS has a CERTIFICATE OF GOOD STANDING from the State of Arizona Corporation Commission!

MAGAZINE SUBSCRIPTIONS

To renew your Sky and Telescope Magazine at the Club Rate, you can go directly to their website, or to order it new, or to order or renew Astronomy Magazine, contact the Club Treasurer.

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