



The Sonora Astronomical Society's **SONORAN STARRY NIGHTS**

OCTOBER 2026

October Meeting Details

DATE: Saturday, October 17th, 2026
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, October 8th, 2026
TIME: 5:45 PM
PLACE: Madera Canyon Parking Lot
(300 ft past 9 mile marker, Madera Canyon Rd)
See website, directions for details and map.

- LOOKING AHEAD -
THE FOLLOWING STAR PARTY WILL BE:
DATE: Thursday, November 5th, 2026
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: November 21st, 2026
LOCATION: Sahuarita Library & Zoom
TIME: 2:30 PM (in person + Zoom)
Speaker: T B A
Subject: T B A

October Presentation

Speaker: John Dwyer.

Subject: The presentation will be on Astro Imaging tools to improve your final photo.

Abstract: .

Biography:

WHAT'S NEXT?

NASA has several outreach activities. The YouTube channel holds many interesting current and past videos to watch.

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

The **October** presentation is:
Commissioning NASA's Roman Space Telescope, and will air October 22nd at 5:00 PM PDT/MST (AZ).

Viewing of and details on this presentation are on YouTube by clicking:

<https://www.youtube.com/@NASANightSkyNetwork>

Then look for the presentation (should be first shown).

Complete details are also available on the SAS website, News and Letters page and on the Calendar (Events page).

Our Website is:

<https://sonoraastronomicalsociety.org>

SONORAN STARRY NIGHTS

PRESIDENTS NOTES

Greetings everyone,

Our October meeting will take place on October 17th 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 was a spectacular event held October 1st through the 3rd called the Southwest Skies Astronomy Festival. There were lectures held at various locations around Green Valley and Whipple Observatory and VERITAS held open houses and tours. There were also public star parties held at some locations. It was a terrific event and supposedly will be held again next year.

There is one public star party this month down in Tubac. This is a TAAA event.

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 October club star party is scheduled for the 8th. 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.

Member Brian Lane has an EBay Ad he invites you to review:

Celestron C8 Edge HD with CGEM II mount and accessories.

The 'package' is too comprehensive for the newsletter so please look on EBay. I have it on auction so price is flexible, especially if I don't have to ship everything. The package includes a Hyperstar V4 and a lot of goodies that would ordinarily drive the retail price up if purchased individually.

This would be a good opportunity for someone to step up their home observatory.

Telescopes and Accessories for Sale

Gary Carroll 303 581 1041

Orion 80mm Refractor \$75

Orion 127mm Apex Cassegrain Reflector \$75

Heavy duty tripod w/ Alt/Az tracker from Orion \$250

*2 Medium duty tripods @ \$25 each

*Light duty tripod \$10 *23mm eyepiece \$20

*25mm eyepiece \$20 *26mm eyepiece \$20

*6mm eyepiece \$10 *6mm eyepiece \$10

*2x Barlow lens \$20 *Cheap 2x Barlow lens \$10

*90 degree diagonal \$25 *45 degree diagonal \$25

*Misc. 1.25" filters \$10 ea.

SONORAN STARRY NIGHTS

THE SEPTEMBER SKY

SKY HIGHLIGHTS FOR SEPTEMBER

The evening sky is down to five planets this month, but not all have good visibility. Saturn will reach opposition on the 4th and will be visible all night. Neptune will be visible almost all night as it reached late last month.

Uranus will also be visible most of the night as it reaches opposition late next month. Venus will be increasingly difficult to see as it approaches inferior conjunction on the 26th. Mercury will reach Greatest Eastern Elongation of 25° on the 12th but will be very low in the night sky. Both Venus and Mercury will be close to the Moon on the 12th. Everything else is in the morning sky. Jupiter rises after midnight this month. Mars rises about midnight and is about 15° ahead of Jupiter.

There are no comets under 10th magnitude visible this month

SEPTEMBER MOON/SUN TIMES

DATE	M-Rise	M-Set	M-Phase	Sun-set	Star Party
Thu 10/01	21:42	11:50		18:08	
Fri 10/02	22:47	12:55		18:07	
Sat 10/03	23:56	13:51	3rd Qtr	18:05	
Sun 10/04	-----	14:38		18:04	
Mon 10/05	1:06	15:18		18:03	
Tue 10/06	2:14	15:52		18:02	
Wed 10/07	3:20	16:23		18:00	
Thu 10/08	4:23	16:51		17:59	SAS Star Pty
Fri 10/09	5:25	17:19		17:58	
Sat 10/10	6:26	17:48	New	17:57	
Sun 10/11	7:27	18:20		17:55	
Mon 10/12	8:28	18:54		17:54	
Tue 10/13	9:29	19:33		17:53	
Wed 10/14	10:28	20:17		17:52	
Thu 10/15	11:23	21:07		17:51	
Fri 10/16	12:14	22:01		17:49	
Sat 10/17	12:59	22:57		17:48	SAS Meeting
Sun 10/18	13:38	23:56	1st Qtr	17:47	
Mon 10/19	14:13	-----		17:46	
Tue 10/20	14:44	0:55		17:45	
Wed 10/21	15:13	1:54		17:44	
Thu 10/22	15:40	2:53		17:43	
Fri 10/23	16:09	3:54		17:42	
Sat 10/24	16:39	4:57		17:41	
Sun 10/25	17:12	6:03		17:40	
Mon 10/26	17:51	7:12	Full	17:39	
Tue 10/27	18:38	8:24		17:38	
Wed 10/28	19:34	9:37		17:37	
Thu 10/29	20:38	10:45		17:36	
Fri 10/30	21:47	11:46		17:35	
Sat 10/31	22:58	12:36		17:34	

(S)=Solar

SONORAN STARRY NIGHTS

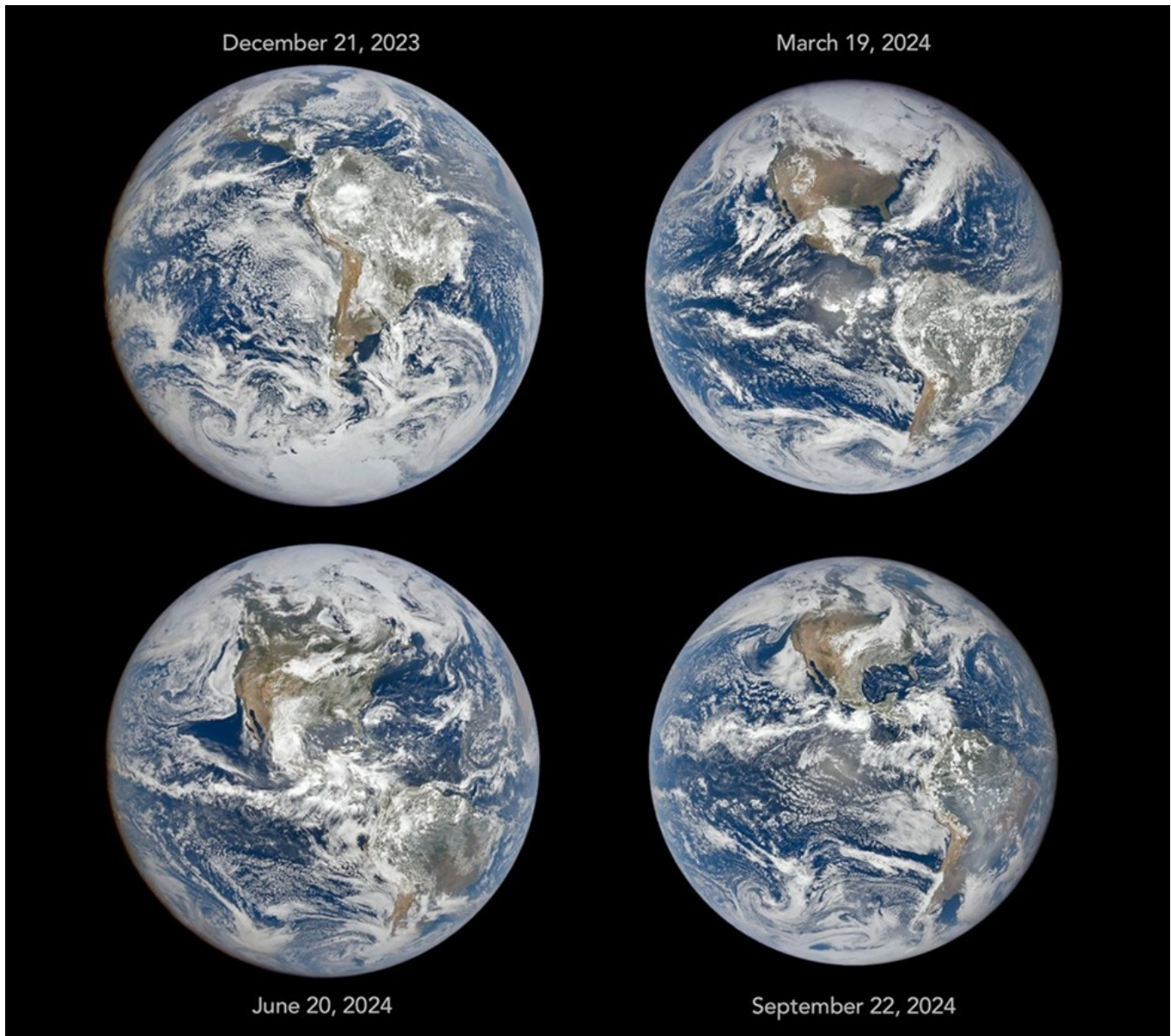
THE STARGAZER'S CORNER:



This article made available by NASA

An Epic View of the Seasons

The tilt in Earth's axis of rotation makes the apparent position of continents shift with the seasons in imagery from a NASA camera in deep space.



Images from NASA's [EPIC](#) (Earth Polychromatic Imaging Camera) aboard the NOAA mission [DSCOVR](#) (Deep Space Climate Observatory) show Earth on the December and June solstices and the March and September equinoxes, illustrating how the tilt of Earth's axis shifts the continent's apparent positions through the year. NASA Earth Observatory/Michala Garrison

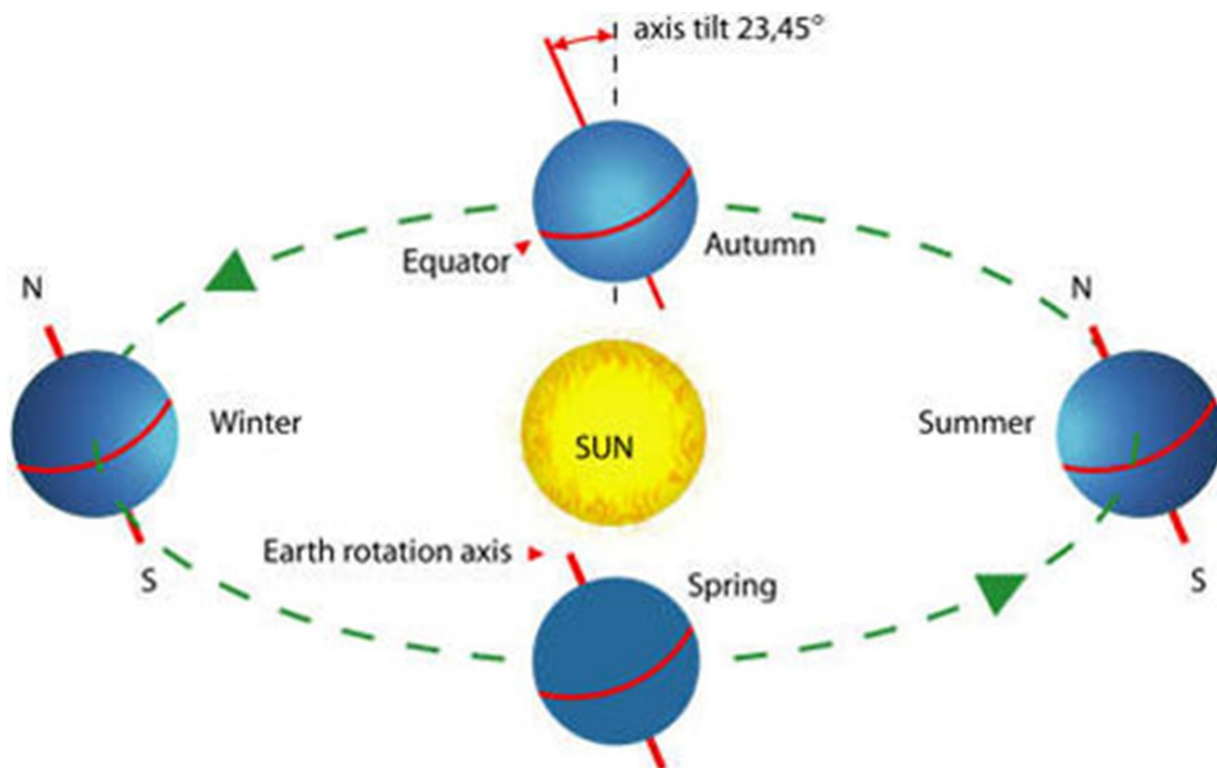
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THE STARGAZER'S CORNER (CONTINUED):

Most kids learn in elementary school that the seasons are caused by Earth rotating on a tilted axis during its yearly orbit around the Sun. The substantial tilt, about 23.5 degrees, is thought to be the result of an ancient planetary body, Theia, smashing into Earth about 4.5 billion years ago, in the same cataclysmic collision that formed the Moon.

To visualize why Earth has seasons, imagine the planet as a spinning top tilted to one side. Around the June solstice, the Northern Hemisphere leans toward the Sun, bringing more direct sunlight and longer days. Around the December solstice, the Southern Hemisphere does the same. That's why June ushers in summer and warm weather in the Northern Hemisphere, while December does so in the Southern Hemisphere.

The March and September equinoxes serve as the midpoints between these two seasonal extremes. On those days, the terminator—the boundary between the sunlit and dark sides of Earth—runs directly through both poles. As a result, the Northern and Southern Hemispheres receive almost the same amount of sunlight, and day and night are nearly equal in length.



What do the seasons look like from about one million miles away? That's the view provided by NASA's EPIC (Earth Polychromatic Imaging Camera) aboard the NOAA mission DSCOVR (Deep Space Climate Observatory). By maintaining an orbit that puts the spacecraft between the Sun and Earth roughly 1.6 million kilometers (1 million miles) from Earth, the camera has a nearly continuous view of the sunlit hemisphere. As Earth spins during the course of a day, EPIC captures a full-disk image of the planet's sunlit face every few hours.

(Continued next page)

THE STARGAZER'S CORNER (CONTINUED):

Continued....

The four images above at the top, taken at roughly the same time of day, show how EPIC's view of the Western Hemisphere changes over the year, from the December solstice (upper left) to the March equinox (upper right), June solstice (lower left), and September equinox (lower right). The most striking difference is between the two solstices. In December, South America lies near the center of the disk and much of Antarctica is visible, while North America is partially out of view. In June, Earth's tilt means the situation is reversed: the Northern Hemisphere and North America are more centered, Arctic sea ice comes into view, South America is offset, and Antarctica is completely out of view.

There are other notable differences among the four images. Earth looks slightly smaller during the March and September equinoxes, for instance. That's because DSCOVR was tens of thousands of miles farther away from Earth on those dates than on the solstices. On December 21, 2023, DSCOVR was 1,447,327 kilometers (899,327 miles) from Earth compared with 1,561,901 kilometers (970,520 miles) on September 22, 2024.

The slight difference in Earth's apparent size has nothing to do with Earth's tilt. Instead, it occurs because DSCOVR follows a looping, three-dimensional path called a Lissajous orbit to keep the spacecraft near Lagrange point 1, where the combined gravitational pull of the Sun and Earth and the centrifugal pull of the satellite balance out, making it easier for engineers to maintain the spacecraft's position without using much fuel. DSCOVR's distance from Earth swings between its maximum and minimum roughly every three months, and the timing drifts throughout the year because of lunar influences and orbital maneuvers. In 2024, the orbit happened to put the spacecraft slightly farther from Earth at both equinoxes, but that is not always the case.

There's one other notable way the images differ. Because of DSCOVR's Lissajous orbit, the angle between the Sun, Earth, and satellite varies between 2 and 12 degrees, explained Alexander Marshak, the deputy project scientist for the DSCOVR mission. Earth appears as a fully illuminated disk at smaller angles and less rounded at larger angles, like a "bite" has been taken out, similar to a gibbous phase of the Moon. For this set of images, the September 22 image has a slightly lower angle (8.1°) than the December 21 image (10.3°), making it appear slightly rounder and fuller. The angle between the Sun, Earth, and satellite in the other two images is between 9° and 10°.

"You can see the subtle influence of the changing orbital geometry in these images," Marshak said. "But the most obvious changes—the apparent location of the continents—are due to Earth's tilt." EPIC's vantage point offers a perspective that makes it easier to understand and visualize why Earth has seasons, but after more than a decade in space, the mission has also opened up new approaches to understanding and observing how daily and seasonal cycles play out on a planetary scale. It has collected more than a decade of diurnal and seasonal data on many key features on Earth, including vegetation, clouds, ice, snow, UV radiation, ocean color, and aerosols.

NASA Earth Observatory image by Michala Garrison, using data from DSCOVR EPIC. Story by Adam Voiland.

BONUS SECTION — SEE NEXT PAGE



NASA's Night Sky Network (NSN) distributes this article.

October's Night Sky Notes: Spooky Stargazing

By Kat Troche

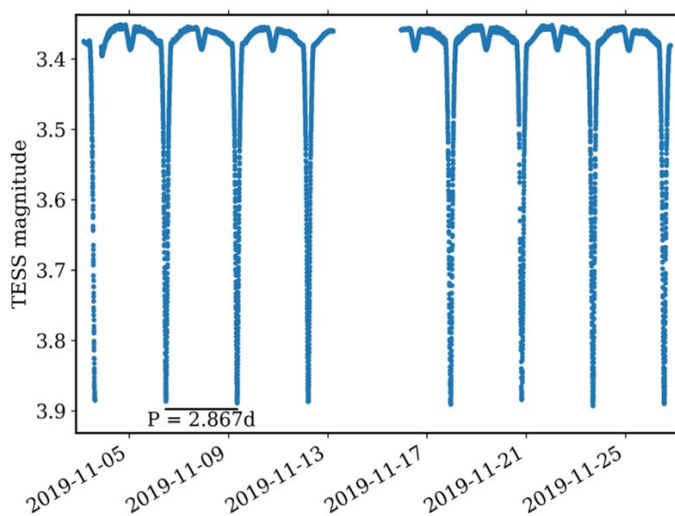


Perseus holding the head of Medusa. Credit: Stellarium

The Ghoul

Located within the constellation Perseus lies a star called Algol, also known as 'Demon Star' or 'The Ghoul'. You can spot this star during the autumn months, along with Cassiopeia and Andromeda in the northeastern sky, beginning after 9 PM. In Greek mythology, this star represents the 'blinking eye' of the gorgon Medusa. But how can a star blink?

Algol (β Persei)



Light curve of the eclipsing binary star Algol recorded by NASA's Transiting Exoplanet Survey Satellite (TESS), stored on NASA's [Mikulski Archive for Space Telescopes](#) (MAST). Credit: NASA/Wikipedia Commons

Algol is a triple-star system, with two of the three stars orbiting one another. This [eclipsing binary](#) causes the system to go from a bright +2.1 magnitude to a slightly dimmer +3.4 magnitude about every three days. Using data from NASA's [Transiting Exoplanet Survey Satellite](#) (TESS) mission, this light curve shows the regular dimming, or Medusa's 'blinking eye'! (continued next page)

THE STARGAZER'S CORNER (CONTINUED):

NASA's Night Sky Network (NSN) distributes this article.



Using the constellations Cassiopeia and Andromeda, locate Perseus. You can find Algol by using the star Almach as a guide.

Credit: Stellarium

There is no shortage of resources on how to calculate the dimming – or minima – of Algol, from interactive charts to data plots. Find the one that works best for you. Because it has a similar magnitude of brightness, you can compare Algol's brightness to the nearby star Almach (Gamma Andromedae) in Andromeda using a small telescope or binoculars.

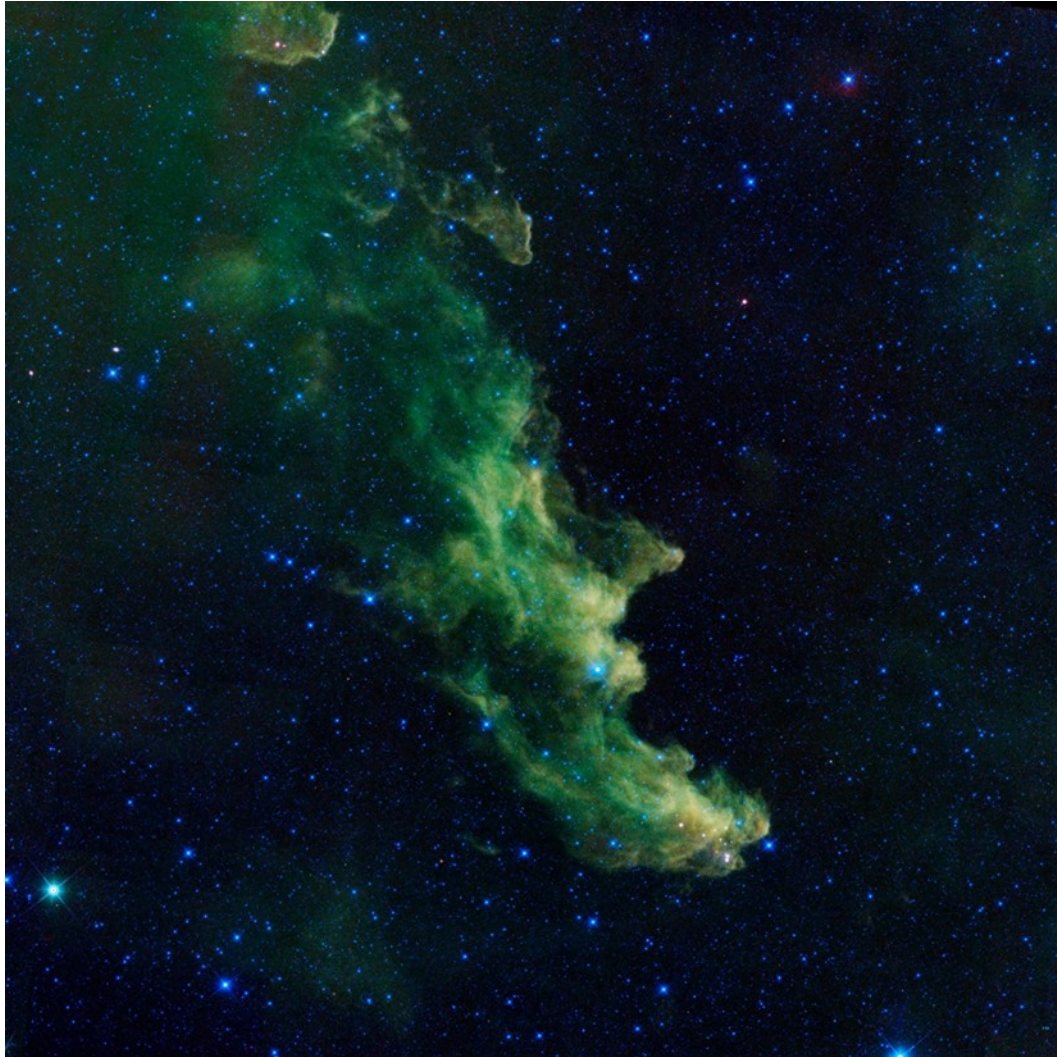
Witch Head Nebula

Between the Eridanus and Orion constellations lies a spooky silhouette, illuminated by the star Rigel. IC 2118, or the [Witch Head Nebula](#), is a reflection nebula about 900 light-years away from Earth. Because reflection nebulae rely on nearby starlight to appear visible, they can be difficult to see with the naked eye, especially if they are as far away as this one. While the Witch Head Nebula can't be seen with the naked eye, telescopes with very large apertures and low magnification make it easier to catch under dark skies. Astrophotographers, with or without smart telescopes, can image this haunting outline within a few hours, depending on equipment and sky quality. And what is a witch without [their broom](#)! You can find the Witch's Broom in the Western Veil Nebula, located in the constellation Cygnus.

(continued)

THE STARGAZER'S CORNER (CONTINUED):

NASA's Night Sky Network (NSN) distributes this article.



An infrared portrait of the Witch Head nebula from NASA's Wide-field Infrared Survey Explorer, or WISE, shows billowy clouds where new stars are brewing. Credit: NASA/JPL-Caltech

Want more tips for getting into the season? Read our article on how you can make some spooky sidewalk astronomy fun for your community with [Trick or Treat: Sidewalk Astronomy!](#)

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>

SAS STATISTICS & FINANCES

Lifetime Members: 1
 Individual & Family Members: 86
Total Membership: 87

Bank Balance as of Aug 31: \$ 1,703.19
 Deposits / (D/Ws): 0.00 / (\$143.88)
Bank Balance as of Sept 30: \$1,559.51

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 llp41astro@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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