



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

SEPTEMBER 2026

September Meeting Details

DATE: Saturday, September 19th, 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

September 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'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 **September** presentation will be available on the NSN YouTube site when they announced it.

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).

Next Member Star Parties

DATE: Thursday, September 10th, 2026

TIME: 6:25 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, October 8th, 2026

TIME: 5:45 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: October 17, 2026

LOCATION: Sahuarita Library & Zoom

TIME: 2:30 PM (in person + Zoom)

Speaker: T B A

Subject: T B A

SONORAN STARRY NIGHTS

PRESIDENTS NOTES

Greetings everyone,

Our September meeting will take place on September 19th 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 September club star party is scheduled for the 10th. 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 be visible most of the night as it approaches opposition early next month. **Nep-tune** will be visible all night as it reaches op-position on the 26th. **Uranus** will be rising be-fore midnight this month. **Venus** will be at its brightest later in the month, but it will be in-creasingly difficult to see as it becomes lower in the southwestern sky. **Mercury** will be in the evening sky but will be too low for view-ing. Everything else is in the morning sky. **Ju-piter** will be just short of 50° west of the Sun in the morning sky, rising about 4am. **Mars** rises before 2am.

There are a few comets visible this month. Comet 10P/Tempel 2 will be just under 9th magnitude in Piscis Austrinus low in the southern sky below the star Fomalhaut. Com-et 220P/McNaught, now in Taurus, has over-gone several outbursts in the last few months. It is now around 10th magnitude, but barring any further outbursts, it will be fading.

SEPTEMBER MOON/SUN TIMES

DATE	M-Rise	M-Set	M-Phase	Sun-set	Star Party
Tue 09/01	21:16	10:32		18:47	
Wed 09/02	21:58	11:41		18:46	
Thu 09/03	22:48	12:50		18:45	
Fri 09/04	23:48	13:58	3rd Qtr	18:44	
Sat 09/05	-----	15:00		18:42	
Sun 09/06	0:54	15:54		18:41	
Mon 09/07	2:05	16:40		18:40	
Tue 09/08	3:17	17:19		18:39	
Wed 09/09	4:26	17:52		18:37	
Thu 09/10	5:33	18:22		18:36	S.A.S. SP
Fri 09/11	6:37	18:51	New	18:35	
Sat 09/12	7:39	19:19		18:33	
Sun 09/13	8:40	19:49		18:32	
Mon 09/14	9:41	20:21		18:31	
Tue 09/15	10:42	20:57		18:29	
Wed 09/16	11:42	21:38		18:28	
Thu 09/17	12:39	22:24		18:27	
Fri 09/18	13:33	23:15	1st Qtr	18:25	SAS Meet-ing
Sat 09/19	14:21	-----		18:24	
Sun 09/20	15:04	0:11		18:23	
Mon 09/21	15:42	1:09		18:21	
Tue 09/22	16:15	2:09		18:20	
Wed 09/23	16:46	3:09		18:19	
Thu 09/24	17:14	4:09		18:17	
Fri 09/25	17:42	5:09		18:16	
Sat 09/26	18:10	6:11	Full	18:15	
Sun 09/27	18:41	7:15		18:14	
Mon 09/28	19:16	8:21		18:12	
Tue 09/29	19:57	9:30		18:11	
Wed 09/30	20:45	10:41		18:10	
					(S)=Solar

SONORAN STARRY NIGHTS

THE STARGAZER'S CORNER:



This article made available by **NASA Hubble Mission Team** Goddard Space Flight Center

Hubble Solves Merger Mystery From Milky Way's Early Years



Artist's Concept

About 12 billion years ago, a dwarf galaxy known as LKH collided with a young Milky Way and merged with it. This artist's concept portrays that collision. NASA's Hubble Space Telescope uncovered definitive evidence of this collision by studying globular star clusters.

Illustration: NASA, ESA, Joseph Olmsted (STScI)

Our home galaxy, the Milky Way, grew to its current size in part by consuming smaller galaxies. Now, new data from NASA's [Hubble Space Telescope](#) shows definitive evidence of a dwarf galaxy merging with the young Milky Way galaxy in the earliest phases of its evolution. This finding extends our knowledge of our galaxy's history 1.8 billion years farther back in time than before.

The results published Monday in the journal [Nature Astronomy](#).

The Milky Way today is a massive spiral galaxy home to hundreds of billions of stars. However, our galaxy wasn't always so large; it has grown by forming new stars from its gas clouds as well as collecting stars, gas, and [dark matter](#) from other galaxies through mergers.

The most recent massive merger in our galaxy's history took place with the Sagittarius dwarf galaxy, beginning over 6 billion years ago and still ongoing today. Looking back into the even more distant past, researchers learned that the Milky Way galaxy consumed another dwarf galaxy called [Gaia-Sausage-Enceladus](#) 10 billion years ago. This ancient merger greatly affected the structure of our galaxy's disk of stars. Other, smaller mergers occurred between these two.

But our galaxy's history doesn't stop there. Both observations and simulations have suggested that another large merger preceded these two, though the specifics of the event have been heavily debated. Now, Hubble has uncovered definitive evidence of an earlier merger that occurred about 11.8 billion years ago, or just 2 billion years after the big bang.

"Our home is the Milky Way galaxy, but we do not know how our house was built," said Davide Massari, lead author, Astrophysics and Space Science Observatory of Bologna in Italy. "In this paper we discover where the first significant batch of bricks came from: a dwarf galaxy that we call LKH."

(Continued next page)

Cosmic archaeological sites

Immense astronomical surveys and precision data from spacecraft like ESA's (European Space Agency's) [Gaia mission](#) have been instrumental in piecing together the history of our galaxy. The farther back into our galaxy's history that scientists attempt to look, the more difficult it becomes to tell what happened. When our galaxy was young, it was smaller and much closer in size to the galaxies it clashed with. It was also more chaotic, and it's possible that the signs of mergers have been erased over billions of years.

It's into this murky past that Hubble peered. Researchers used Hubble to study some of the Milky Way galaxy's [globular clusters](#): immense, roughly spherical collections of tens of thousands to a few million stars. Globular clusters contain some of the oldest stars in our galaxy, and they can act as cosmic archaeological sites that preserve stars from other galaxies the Milky Way galaxy has collected.

"Thanks to the high resolution and depth of Hubble imaging, we could measure the age and the metal content of these clusters with unprecedented precision," said Chiara Zerbini, study co-author, University of Bologna in Italy. "Coupled with measurements from Gaia, this made it possible to distinguish a population of globular clusters that are different from the others. These are the clusters that were born in LKH, and they tell us when that galaxy was devoured by ours, and how massive it was."

The team analyzed Hubble observations of 39 globular clusters in the inner 20,000 light-years of our galaxy, where evidence of the most ancient mergers should be preserved. They expected this sample to contain globular clusters that formed within the young Milky Way galaxy as well as those collected from the Gaia-Sausage-Enceladus dwarf galaxy about 10 billion years ago.

Using Hubble's sensitive observations to determine each cluster's precise age and associated metallicity — the abundance of elements heavier than helium — they determined there was a third population of globular clusters in the inner regions of our galaxy. The team found that these clusters are older than the group collected in the Gaia-Sausage-Enceladus merger, but younger than those born in the Milky Way, regardless of their metal content. These clusters, therefore, came from a separate and even earlier merger — in which the Milky Way galaxy absorbed a dwarf galaxy containing roughly 500 million times the mass of the Sun in stars, a significant fraction of our galaxy's mass at the time. They named this dwarf galaxy Low-energy-Kraken-Heracles, or LKH, in honor of three earlier research papers that championed the idea of a merger early in our galaxy's history.

Such a large merger so early in the Milky Way galaxy's formation has profound implications for the evolution of our galaxy.

"Some past studies have argued that the earliest phases of our galaxy's evolution were defined by stars born only in our galaxy," says Massari. "Here, we have shown that stars born in external galaxies also need to be considered."

The team plans to continue their work to unravel the history of the Milky Way galaxy by studying its globular clusters, aiming to characterize all the massive mergers that our galaxy has experienced across cosmic history. "Hubble is observing globular clusters that have never been studied before, and this will help us characterize the merger events that are far back in time in the Milky Way galaxy's history," said Fernando Aguado-Agelet, co-author, University of Vigo and the University of La Laguna in Spain.

The Hubble Space Telescope has been operating for more than three decades and continues to make ground-breaking discoveries that shape our fundamental understanding of the universe. Hubble is a project of international cooperation between NASA and ESA (European Space Agency). NASA's Goddard Space Flight Center in Greenbelt, Maryland, manages the telescope and mission operations. Lockheed Martin Space also supports mission operations at Goddard. The Space Telescope Science Institute in Baltimore, which is operated by the Association of Universities for Research in Astronomy, conducts Hubble science operations for NASA.

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: 100
Total Membership: 101

Bank Balance as of May 31: \$ 1,823.09
 Deposits / (D/Ws): \$ 50.00 / (\$169.90)
Bank Balance as of Aug 31: \$1,703.19

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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