



The Sonora Astronomical Society's SONORAN STARRY NIGHTS

OCTOBER 2023

October Meeting Details

DATE: Tuesday, October 10th, 2023
MEETING TIME: 7:00 PM
PLACE: La Posada Rec Center & Zoom
MEETING SCHEDULE:
(6:30 ZOOM Waiting Room Available)
7:00 Meeting Intro and Welcome
7:10 Featured Presentation Followed
by Club Activities/Business

Next Member Star Parties

DATE: Thursday, October 12th, 2023
TIME: 5:30 PM
PLACE: Canoa Preserve Park

**LOOKING AHEAD -
THE FOLLOWING STAR PARTY WILL BE:**

DATE: Thursday, November 9th, 2023
TIME: 5:15 PM
PLACE: Canoa Preserve Park

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 14th, 2023
LOCATION: La Posada Rec. Center
TIME: 7:00 P.M. (in person + Zoom)
Speaker: T B A
Subject : T B A

October Presentation

Speaker: David Carson Fuls,
Catalina Sky Survey

Subject: Civil Planetary Defense: The Catalina Sky Survey Needs Your Help Discovering New Asteroid

Abstract: The Catalina Sky Survey (CSS) has been in operation since the late 90's with the goal of discovering and tracking Near-Earth Asteroids (NEAs). Headquartered in Tucson, with its primary telescopes on Mt. Lemmon, CSS plays a major role in Earth's planetary defense. David Carson Fuls will present CSS's latest project, a new citizen science initiative called "The Daily Minor Planet" which gives volunteers the opportunity to review images taken by CSS survey telescopes to discover new asteroids! This project, much like CSS nighttime operations, focuses on rapid identification of new objects, so images are uploaded the day after they are taken. Carson will cover the project in detail and present its initial discoveries since its official launch in May, 2023. For more info., visit: <https://www.zooniverse.org/projects/fulsdavid/the-daily-minor-planet>

Biography: David Carson Fuls is the Senior Operations Scientist/Engineer for the Catalina Sky Survey. A graduate of Stephen F. Austin State University (MS physics), he has been with CSS since 2015, and has discovered thousands of asteroids and eight comets that bear his name. The asteroid 1999 UN24 was named in his honor. When not searching for space rocks, Carson volunteers with the Southern Arizona Rescue Association, which performs search and rescue missions in the mountains and deserts of southern Arizona.

SONORAN STARRY NIGHTS

PRESIDENTS NOTES

Greetings everyone,

We have resumed our live/ZOOM hybrid meetings. We had a little glitch last month where the presenter's slides were not advancing for those viewing on ZOOM. Hopefully we can get that resolved.

With the monsoon now gone observing can pick up. We had a terrific turnout at our September club star party at Canoa Preserve Park. I was really encouraged to see that. Hopefully we can keep that up. We were treated to a magnificent sight while we were there that evening. A rocket was launched from the Vandenburg Space Port Base facility, and it lit up the western sky. A number of us took photos of it and John McGee got his posted in the Green Valley News. This is the second time we were able to see one of those launches from our club viewing site. Thanks to the low horizons at our site, it makes it easier to see a lot of things you may not be able to see from your home.

The Tucson astronomy club is picking up most of the public star parties we used to do, but they can have difficulty getting people this far south. Canoa Ranch will be holding numerous star parties. I would like to know if anyone would like to volunteer to assist TAAA. Please contact me if you think you could contribute.

Public star parties are now beginning. The first one will be held October 21st at Historic Canoa Ranch. The Moon will be at first quarter so it will be a little bit of a nuisance, but bearable.

We are still looking for someone to step into the president's position. I won't live forever. To keep this club viable, we need people to step up and help out. Otherwise, it will not last.

Finally be sure to check out our website. Joe has done a great job to keep it relevant.

Stay safe,

John Dwyer

President

MEMBER EQUIPMENT FOR SALE

For Sale:

Meade 7" Maksutov telescope f/15 \$700 OBO
This is an OAT with the following accessories included with the telescope:
-- Losmandy mounting adapter
-- Meade electronic focuser
Pick-up in Green Valley, AZ



Contact Steve @ 520-260-1556
Email to: stadthaus2005@gmail.com

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 on the website Home page yellow banner.

SONORAN STARRY NIGHTS

THE OCTOBER SKY

SKY HIGHLIGHTS FOR OCTOBER

The big planets are returning to the evening sky. **Saturn** is the primary early evening planet sitting in the southeast sky at sunset at a magnitude of about 0.6. **Jupiter** starts rising about an hour after sunset as it approaches opposition in early November. It glows brilliantly at a magnitude of just under -3. **Mars** will be lost in the glare of the Sun this month as it transitions to the morning sky. **Uranus**, still trailing behind Jupiter, will reach opposition in the middle of November. **Neptune**, which reached opposition last month, is still trailing behind Saturn and will be visible most of the evening. **Venus**, now in the morning sky, will reach its greatest western elongation from the Sun of 46° on the 23rd exhibiting a magnitude of -4.5 at that point. Its diameter continues to shrink (at about 25") as it moves away from us while its percentage of illumination is about 50%. **Mercury** will be difficult to see this month.

The big event this month will be the annular solar eclipse scheduled for Saturday October 14th. If you live in some areas of Texas, New Mexico, Utah, or Nevada, you will be able to see the annularity. If you are looking to get into the path of annularity and don't have hotel reservations, you are probably out of luck. Everything is booked up by now. Here in the Tucson area will we see a partial eclipse with the Moon covering about 84% of the Sun. Eclipse starts at 8:12am, reaches maximum at 9:33am, and ends at 11:05am.

The new comet (**C/2023 P1 (Nishimura)**), discovered by a Japanese astronomer, is fading rapidly and is now unobservable. Two periodic comets are now viewable. Comet **103P/Hartley 2**, located between Gemini and Cancer, is at about 8th magnitude, but will be fading. Comet **2P/Encke** will be up to mag 7.5 this month but will begin fading thereafter and will be unobservable soon. It is moving from Leo into Virgo.

OCTOBER MOON/SUN TIMES

DATE	M-Rise	M-Set	M-Phase	Sun-set	Star
Sun 10/01	19:43	8:45		18:09	
Mon 10/02	20:22	9:54		18:07	
Tue 10/03	21:06	11:01		18:06	
Wed 10/04	21:55	12:04		18:05	
Thu 10/05	22:48	13:02		18:04	
Fri 10/06	23:46	13:53	3rd Qtr	18:02	
Sat 10/07	-----	14:36		18:01	
Sun 10/08	0:44	15:14		18:00	
Mon 10/09	1:42	15:47		17:59	
Tue 10/10	2:38	16:15		17:58	SAS Meeting
Wed 10/11	3:35	16:41		17:56	
Thu 10/12	4:29	17:06		17:55	SAS Star
Fri 10/13	5:25	17:32		17:54	
Sat 10/14	6:20	17:58	New	17:53	
Sun 10/15	7:18	18:26		17:52	
Mon 10/16	8:19	18:59		17:51	
Tue 10/17	9:22	19:38		17:49	
Wed 10/18	10:27	20:23		17:48	
Thu 10/19	11:31	21:18		17:47	
Fri 10/20	12:31	22:19		17:46	
Sat 10/21	13:26	23:28	1st Qtr	17:45	Canoa Ranch
Sun 10/22	14:12	-----		17:44	
Mon 10/23	14:53	0:38		17:43	
Tue 10/24	15:29	1:49		17:42	
Wed 10/25	16:01	2:58		17:41	
Thu 10/26	16:32	4:06		17:40	
Fri 10/27	17:03	5:14		17:39	
Sat 10/28	17:37	6:22	Full	17:38	
Sun 10/29	18:14	7:31		17:37	
Mon 10/30	18:56	8:40		17:36	
Tue 10/31	19:43	9:47		17:35	

(S)=Solar

SONORAN STARRY NIGHTS

THE STARGAZER'S CORNER:

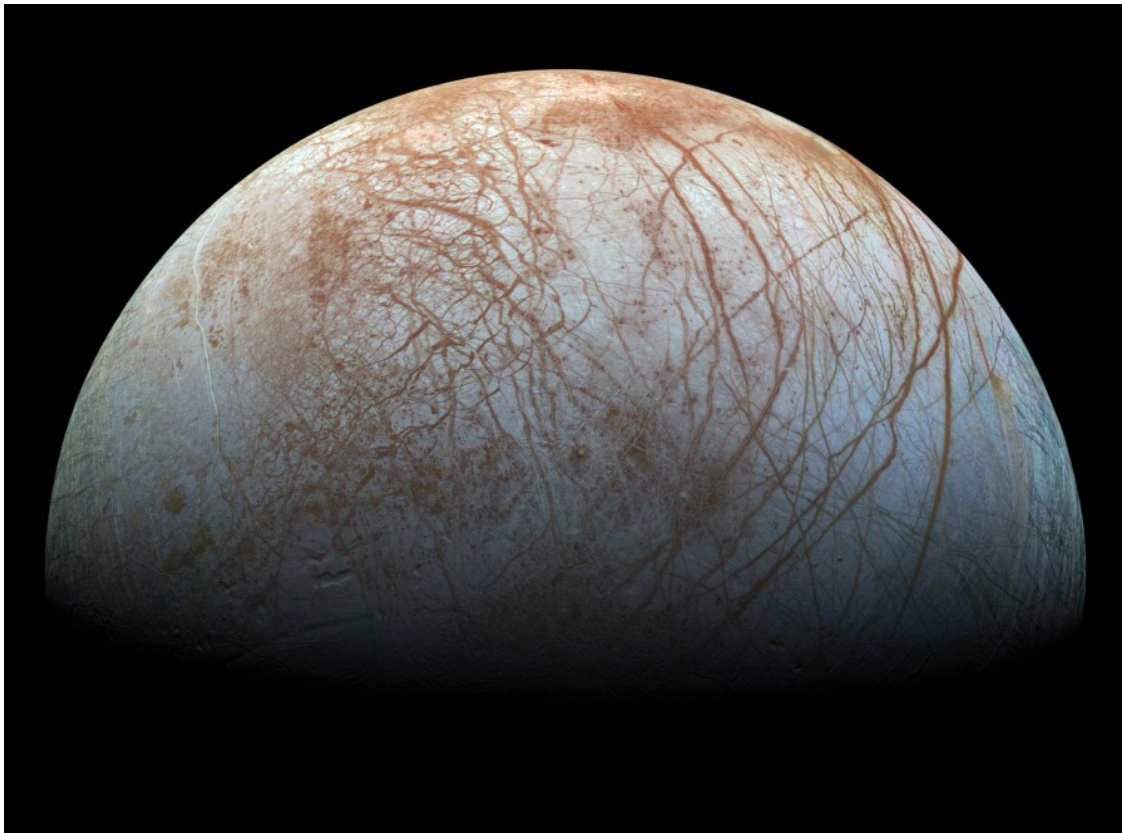
This article is distributed by NASA's Night Sky Network (NSN).

From Galileo to Clipper, Exploring Jupiter's Moons

By Vivian White

*"...We, too, are made of wonders, of great
and ordinary loves, of small invisible worlds,
of a need to call out through the dark."*

From *In Praise of Mystery: A Poem for Europa* by Ada Limon



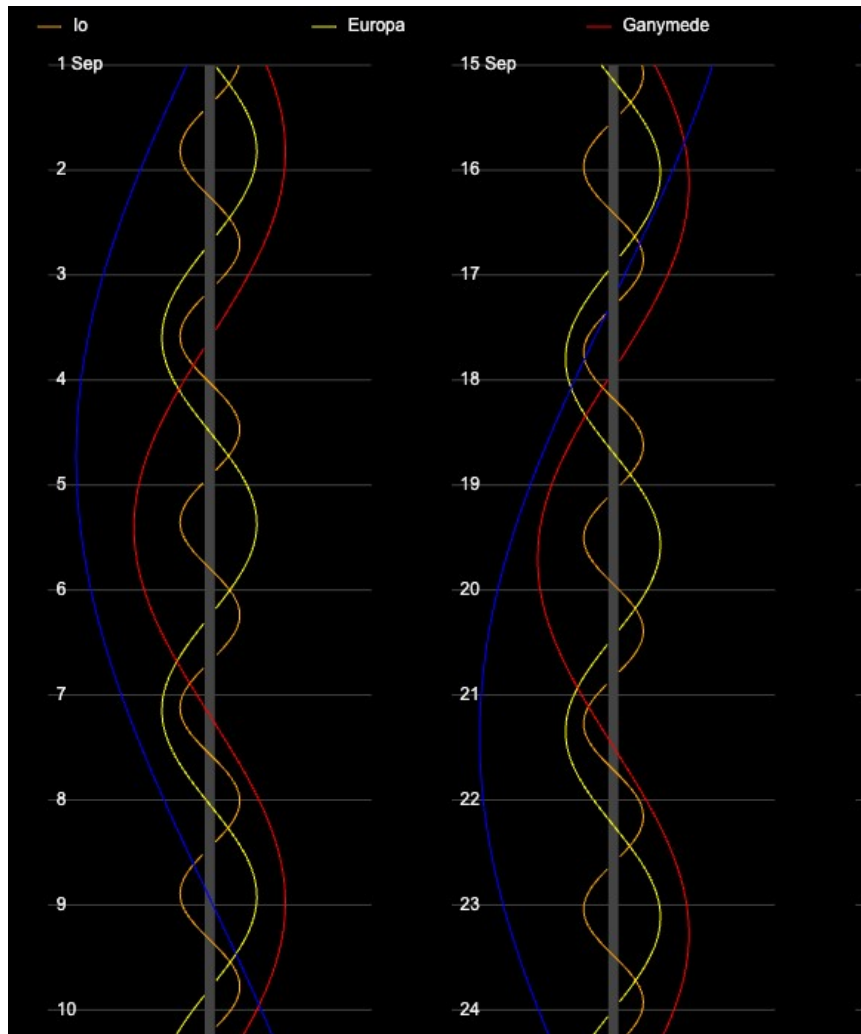
As autumn begins, if you're up late, you may notice a bright point of light rising in the east. Look a bit closer, with a pair of binoculars, and you'll notice it's not a star at all. While stars look point-like no matter how big your backyard telescope, this light appears as a circle under closer examination. Even more curious, you will likely see a line of smaller dots on one or both sides. Congratulations! You've rediscovered the king of the planets - majestic Jupiter - and its four largest moons.

Galileo famously chronicled the four moving dots near Jupiter and surmised that they were orbiting the distant world. While Jupiter has well over 80 discovered moons as of September 2023, these brightest four are called the "Galilean Moons" - Io, Europa, Ganymede, and Callisto. (Great mnemonics exist to remember these in order of distance from Jupiter, such as "I Eat Green Caterpillars") You can follow these like Galileo did, using stargazing apps or the handy image below. A favorite beginning observing challenge is to [track the movement of the Galilean Moons](#) over the course of many nights. Even within a few hours, you will notice them moving in relation to Jupiter, just as Galileo did.

(Continued Next Page)

THE STARGAZER'S CORNER (CONTINUED):

Fast forward 414 years, and NASA will be sending a robotic mission to investigate the surface of one of these distant worlds. The [Europa Clipper Mission](#) is launching to the cold, icy moon in 2024, to begin orbiting in 2030. With its salty oceans covered by ice, Europa was chosen as an excellent location to continue the search for life outside of Earth. Clipper will be the largest spacecraft ever sent to another planet, designed to withstand Jupiter's punishing radiation. Once it arrives at Jupiter in 2030, NASA plans to do about 50 flybys of Europa, mapping almost the entire surface of this watery world.



The position of the Galilean Moons of Jupiter in October 2023: <https://in-the-sky.org/jupiter.php>

What was once only dreamed of in the small telescope of Galileo, or in great works of fiction, NASA is turning our wildest imagination into reality. One of the celebrated quotes from the classic 2010: *Odyssey Two* warns, “All these worlds are yours, except Europa. Attempt no landing there.” Science fiction fans can feel relieved knowing that writer Arthur C. Clarke gave his blessing for the Europa Clipper mission.

Join the Europa Message in a Bottle Campaign to send your name with the spacecraft, hear the rest of the poem by the US Poet Laureate, and learn more about the wonders of space travel with the Clipper Mission: <https://europa.nasa.gov/participate>

Watch a wonderful Clipper webinar with Dr. Cynthia Phillips, planetary geologist with the mission: <https://www.youtube.com/live/RnnLJBLRBCA?feature=shared&t=269>

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	Duane Johnson	(520) 303-6920
Newsletter Editor	Joe Castor	(620) 584-4454
Webmaster	Joe Castor	(620) 584-4454
ALCOR* (Currently Inactive)	Burley Packwood	(520) 396-3576
NSN** Representative	Duane Johnson	(520) 303-6920
Past President Emeritus	Open	
*Astronomical League		
**Night Sky Network		

WHY JOIN SAS

1. SAS Family Membership Fee is only \$15.00 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 \$15 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: 109
Total Membership: 110

Bank Balance as of August 31: \$1,937.99
 Deposits / (D/Ws): \$90.00 / (\$143.88)
Bank Balance as of September 30: 1,883.21

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? Please plan to join our monthly meeting of the Sonoran Desert Astro Imagers group. Our meetings focus on improving our skills, helping each other, workshops, and field trips. 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.

OUR SPONSORS

STARIZONA

ADVENTURES IN ASTRONOMY AND NATURE

5757 N. Oracle Rd

Tucson, AZ 85704

(520) 292-5010

www.starizona.com

Stellar-Vision Astronomy & Science



Since 1986
New Address:
3721 E 37TH ST
TUCSON AZ
85713
(520) 571-0877

