

San Diego Astronomy Association

Celebrating Over 50 Years of Astronomical Outreach



October 2021

SDAA Update

<https://www.sdaa.org/>
A Non-Profit Educational Association
P.O. Box 23215, San Diego, CA 92193-3215

Next SDAA Business Meeting

October 12th at 7:00pm
10070 Willow Creek Rd
San Diego, CA 92131
Via Zoom

Next Program Meeting

October 20th at 7:00pm
Live Stream

SDAA is now actively using online facilities like Zoom and YouTube to provide access to club meetings, events, and outreach programs in keeping with state and local mandates regarding physical distancing requirements during the COVID-19 pandemic. In-person events will start again in 2021 as soon as allowed by state and local mandates. Look for updates on the Lipp telescope.

Since TDS is private space there is no reason to lock down the facility but there are actions you can take to help keep the site safe for all of us. If you plan to visit and use the facility, please bring along some disinfectant wipes or disinfectant spray cleaner. When you finish using the restrooms or the warming room, please wipe down the areas that you touched in order to help prevent the spread of any viruses. As much as we love sharing the views of the night sky, try to maintain the recommended 6-foot physical distance guideline.

October 20, 2021 Program Meeting

Caltech graduate student Cecilia Sanders is a Ph.D. candidate in the Division of Geological and Planetary Sciences. She will give a presentation titled “You’ll Know It When You See It: Defining, Describing and Detecting Life in the Universe.” Her descriptions of what evidence could be found on other planets is very relevant to current planetary missions.



Cecilia is studying the origins and evolution of life and writes that she is “interested in how and why evidence of life and its building blocks is preserved — and why it often isn’t.” “I do this by describing and quantifying the sedimentology and stratigraphy of Pre-Cambrian rocks in Central Brazil, Southern Namibia, and the SW United States.” She also produces artwork and graphics for her own research. “I create,” she continues, “graphite-and-ink drawings and digital renderings ... to build a picture of an ancient and faraway world: Precambrian Earth or Mars [with] shallow seas and deep canyons.”

Cecilia Sanders received her undergraduate degree in Earth and planetary science and astrophysics from Harvard University in 2016. In 2018, she earned an MS in planetary science from Caltech. Currently, Cecilia holds a National Science Foundation Graduate Research Fellowship. She is the recipient of a 2020 award from Caltech for her contributions to educational outreach. In addition to her research and coursework, Cecilia designs and teaches the elementary-level science curricula for the Pasadena Unified School District.

You can register in advance for the meeting at the following link. After registering, you will receive a confirmation email containing information about joining the meeting.

<https://us02web.zoom.us/j/89298162225?pwd=TVZsTTg3dzRXcERDY0tXcHErVXArQT09>

CONTENTS

October 2021, Vol LIX, Issue 10
Published Monthly by the
San Diego Astronomy Association
Incorporated in California in 1963

Update.....	1
Program Meeting.....	1
September Minutes.....	2
TDS Star Party Schedule.....	5
Night Sky Charts.....	6
Vintage SDAA, BBQ.....	9
For Sale.....	14
SDAA Contacts.....	17
NASA Night Sky Notes.....	18
Astronomy Cartoon.....	21

Newsletter Deadline

The deadline to submit articles
for publication is the
15th of each month.

Link to SDAA Merchandise Store <https://sdaa28.wildapricot.org/SDAA-Store>

Link to Outreach Calendar https://calendar.google.com/calendar/embed?src=g-calendar@sdaa.org&ctz=America/Los_



San Diego Astronomy Association

San Diego Astronomy Association Board of Directors Meeting *September 14, 2021-* Unapproved and subject to revision

1 Call to Order

The meeting was held via Zoom and was called to order at 7:05pm with the following board members in attendance: Dave Wood, President; Kin Searcy, Vice President, Melany Biendara, Treasurer; Gene Burch, Recording Secretary; Alicia Linder, Corresponding Secretary; Hiro Hakozaki, Director; Dave Decker, Director; Pat Boyce, Director; and member Jerry Hilburn.

2 Priority / Member Business

None

3. Approval of Last Meeting Minutes

The August meeting minutes were approved.

4. Treasurers & Membership Report

The treasurers report was approved. Mel has submitted our tax information to our accountant.

5. Standard Reports

a. Site Maintenance Report:

The road work was completed on time and I think everyone was very happy with the results from it.

The new power line is now fully connected to observatory row and the observatories are no longer connected to the main power at the well.

Steven wired the Cruzen over the weekend so it's now on the same power with the rest of the observatories.

I think we need some new locks as the observatory gate lock broke and would not stay locked. I cleaned it but it's still misbehaving. The board approved purchase of new locks.

My next effort will be to catalog each private pad and clearly indicate electrical issues with the ones that need repair.

Brian is going to come out this weekend and I will help with securing the patio cover which you have noted is in need of repair.

The Lipp chain system has a slippery gear that tends to pop off. I know how to repair this as my observatory uses the exact same setup. I was considering fixing it, but have held off until given permission to do so. I am happy to work on it if needed.

b. Observatory/Loaner Scope Report:

Observatory:

Star parties are in full swing again. Encouraging social distancing (chairs outside) but not requiring masks. Provided training class at BBQ. Observatory has been running well.

Loaner Scopes:

Program continues to run smoothly with a lot of usage.



San Diego Astronomy Association

- c. Private Pad Report:
We currently have 20 people on the waiting list for pads. We have 5 pads that are currently available and another 7 that will definitely be returned to the club at the beginning of October. Two pads are appealing their lease revocations. There are 3 Lessee's we haven't heard from. I expect that we will have at least 15 pads to lease, possibly as many as 17 depending on the BOD action on the appeals. I currently have everybody on the waiting list ranking all 17 pads that may be available and expect to start executing leases at the end of the month.
- d. Program Meetings Report:
Program meeting speakers for September and October are confirmed. November meeting will have elections and either a presentation on astronomy weather (I have asked CSC and Atmospheric so far) or virtual gadget night. I will work on a banquet speaker when date is confirmed. MTRP is still not scheduling evening meetings at the visitor center that is only open Friday - Sunday 11AM - 3pm.
- e. AISIG Report:
At the August AISIG ZOOM meeting imagers showed their pictures of the Eagle Nebula and the nebulosity around Sadr. In September, AISIG will have a live, in person meeting outside Dave Wood's house to practice taking astro images. Because of the ongoing pandemic attendees have been asked to take appropriate precautions including masks and vaccination.
- f. Newsletter Report:
All looks great – congrats to Andrea for her recognition by the Astronomical League!
- g. Website Report:
No issues, except that I would like to get program/speaker info for the website as soon as it is available.
- h. Social Media:
No Report.
- i. Outreach Report:
We continued to support the four monthly events we re-started in July. The highlight of the month was the unusual member attendance at KQ Ranch on August 7. Dennis Ammann reported a total of 17 scopes on the Tennis Court! Several of those members are relatively new to the SDAA and first timers at KQ Ranch. The weather was wonderful, with great seeing, and dark skies.

Gary Hawkins and I also hosted a last-minute YouTube live stream on Friday, August 6, titled "The Eastern Skies of Summer". There was a 2-day lead time and essentially no promotional effort made via any of or media options. We generated a total of 10 live view participants for the 2 hour event, from Gary's new home in Blossom Valley. This was meant to be a test of viability for that site. Since August 7, the program has generated 156 views on our YouTube channel. For statistical purposes, we have chosen to use the highest concurrent viewers during the program.



San Diego Astronomy Association

Below is a summary of outreach event participation with numbers for August and for Year to Date.

2021	August	Year to Date
Events Completed	4	9
Events Cancelled	3	41
Total Attendance	184	399

There has not been any significant progress re-starting events in the City of San Diego, including Mission Trails Regional Park, West Sycamore, and Balboa Park. We have additional events already scheduled at Dixon Lake, Camp Mataguay, and Cabrillo National Monument.

j. TARO Report:

TARO is operational and is accepting DSO/EXO target imaging requests, weather permitting. During extended high heat weather periods, TARO has occasionally been shut down to prevent excessive heating on components.

Recent requested projects posted to the TARO image archive include 20 hours of data on for the Fireworks Galaxy and 42 hours of combined WB and NB data for the Pacman Nebula.

Several EXO planet targets have been completed including a target for the NASA TESS program

k. Cruzen Report:

Gene was out of town most of last month and will get started again this month.

l. Merchandise Report:

A few sales.

m. Astronomical League Report:

The Astronomical League Convention, ALCon, held virtually on August 19 – 21, was a tremendous event. Many renown presenters filled the 3-day program, interspersed with presentations of AL awards. Three SDAA members received awards as follows:

Ryan Clairmont: 2021, National Young Astronomers Award, First Place

Vivek Vijayakumar: 2021, National Young Astronomers Award, Third Place

Vivek Vijayakumar: 2021, Horkheimer/Parker Youth Imaging Award, Second Place

Andrea Kuhl: 2021, Mabel Sterns Award, Second Place

A hardy *Congratulations* is order for these members!! Details for these and other awards are published in the September issue of The Reflector Magazine.

Currently, we have 58 members who are also listed as Astronomical League Members affiliated with the SDAA.



San Diego Astronomy Association

n. JSF Report:

There have been no activities for the Julian Starfest, other than initial planning for next year. The dates for JSF 2022 will be August 25 - 28.

6. Old Business:

- a. BBQ/Vintage Scope Night was a huge success and many thanks to all those who worked so hard to make it happen.
- b. Mel is working with Dennis Ritz to find out which buildings at TDS are covered by our insurance.
- c. The annual banquet is tentatively scheduled for February 12, 2022 and we're looking for a venue. Kin has a potential speaker lined up for the event.
- d. Other old business - none

7. New Business:

- a. The patio cover at TDS is in need of shoring up and Brian and Jerry are going to see if it can be fixed or needs to be replaced.
- b. Mel, Dave W and Mark Smith are working to recover some underused pads
- c. The primary electrical grid is old and may need upgrading or replacing. Dave W and Jerry are going to work with Steven Myers to evaluate the site and come up with recommendations.
- d. Other new business - none

8. Adjournment: The meeting was adjourned at 8:05pm.

2021 TDS Star Party Schedule

Date	Type	Sunset	Astro. Twi.	Moonrise(set)	Illumination
Oct-02	Private	6:31 PM	7:53 PM	3:38 AM	17%
Oct-09	Public	6:22 PM	7:44 PM	(8:54 PM)	16%
Nov-06	Private	5:53 PM	7:17 PM	(7:34 PM)	6%
Nov-27	Public	4:42 PM	6:09 PM	12:10 AM	50%
Dec-04	Private	4:42 PM	6:09 PM	(5:12 PM)	0%

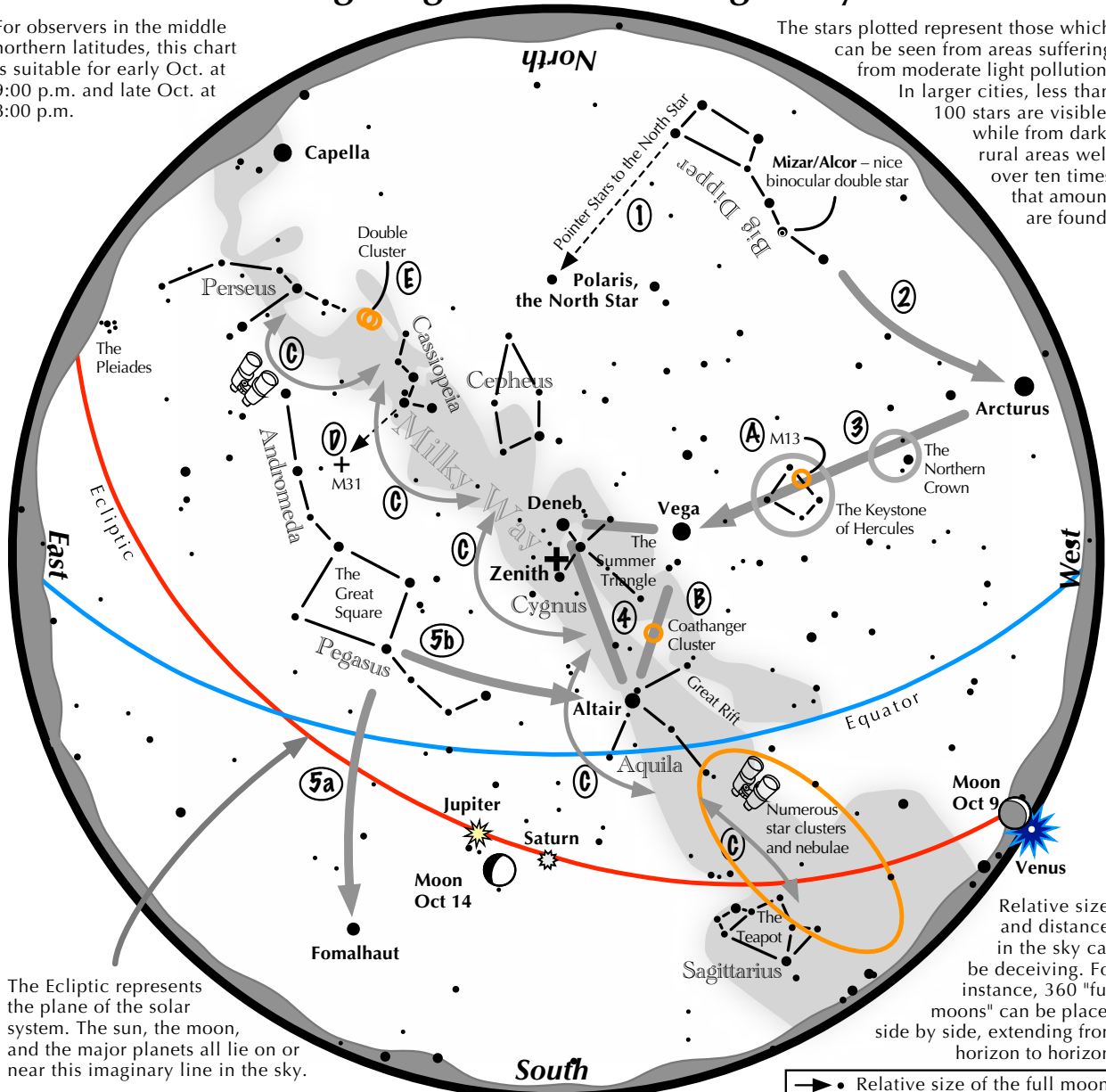


San Diego Astronomy Association

Navigating the October Night Sky

For observers in the middle northern latitudes, this chart is suitable for early Oct. at 9:00 p.m. and late Oct. at 8:00 p.m.

The stars plotted represent those which can be seen from areas suffering from moderate light pollution. In larger cities, less than 100 stars are visible, while from dark, rural areas well over ten times that amount are found.



The Ecliptic represents the plane of the solar system. The sun, the moon, and the major planets all lie on or near this imaginary line in the sky.

Relative sizes and distances in the sky can be deceiving. For instance, 360 "full moons" can be placed side by side, extending from horizon to horizon.

→ • Relative size of the full moon.

Navigating the October night sky: Simply start with what you know or with what you can easily find.

- 1 Extend a line north from the two stars at the tip of the Big Dipper's bowl. It passes by Polaris, the North Star.
- 2 Follow the arc of the Dipper's handle. It intersects Arcturus, the brightest star in the early October evening sky.
- 3 To the northeast of Arcturus shines another star of the same brightness, Vega. Draw a line from Arcturus to Vega. It first meets "The Northern Crown," then the "Keystone of Hercules." A dark sky is needed to see these two dim stellar configurations.
- 4 Nearly overhead lie the summer triangle stars of Vega, Altair, and Deneb.
- 5 High in the east are the four moderately bright stars of the Great Square. Its two southern stars point west to Altair. Its two western stars point south to Fomalhaut.

Binocular Highlights

A: On the western side of the Keystone glows the Great Hercules Cluster, a ball of 500,000 stars. **B:** 40% of the way between Altair and Vega, twinkles the "Coathanger," a group of stars outlining a coathanger. **C:** Sweep along the Milky Way for an astounding number of fuzzy star clusters and nebulae amid many faint glows and dark bays, including the Great Rift. **D:** The three westernmost stars of Cassiopeia's "W" point south to M31, the Andromeda Galaxy, a "fuzzy" oval. **E:** Between the "W" of Cassiopeia and Perseus lies the Double Cluster.



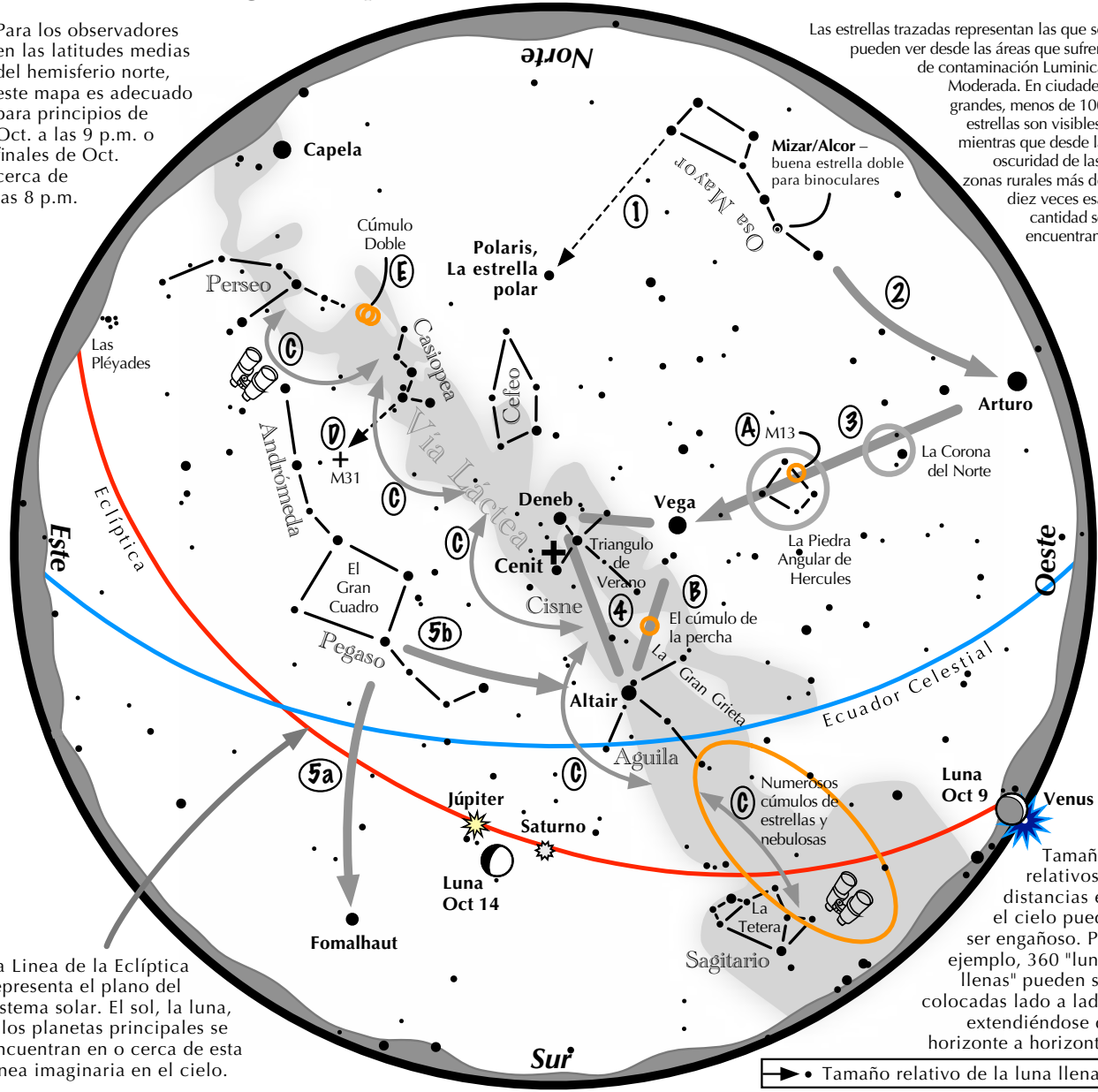


San Diego Astronomy Association

Navegando por el cielo nocturno de Octubre

Para los observadores en las latitudes medias del hemisferio norte, este mapa es adecuado para principios de Oct. a las 9 p.m. o finales de Oct. cerca de las 8 p.m.

Las estrellas trazadas representan las que se pueden ver desde las áreas que sufren de contaminación Luminica Moderada. En ciudades grandes, menos de 100 estrellas son visibles, mientras que desde la oscuridad de las zonas rurales más de diez veces esa cantidad se encuentran.



La Línea de la Eclíptica representa el plano del sistema solar. El sol, la luna, y los planetas principales se encuentran en o cerca de esta línea imaginaria en el cielo.

Tamaños relativos y distancias en el cielo puede ser engañoso. Por ejemplo, 360 "lunas llenas" pueden ser colocadas lado a lado, extendiéndose de horizonte a horizonte.

→ • Tamaño relativo de la luna llena.

Navegando por el cielo nocturno: simplemente comience con lo que sabe o con lo que puede encontrar fácilmente.

- 1 Haz una línea hacia el norte desde las dos estrellas en la punta de la Osa Mayor. Pasa por Polaris, la estrella polar.
- 2 Siga el arco del mango de la Osa Mayor. Se cruza con Arturo, la estrella más brillante en el cielo de la noche de octubre.
- 3 Dibuja una línea desde Arturo a Vega. Un tercio del camino se encuentra "La Corona del Norte". Dos tercios de esa distancia llevan a la "piedra angular de Hércules." Se necesita un cielo oscuro para ver estas dos configuraciones estelares tenues.
- 4 Las estrellas del Triángulo de verano, Vega, Altair y Deneb, brillan en el Cenit.
- 5 En lo alto del Este se encuentran las cuatro estrellas brillantes de la Gran Cuadro de Pegaso. (5a) Sus dos estrellas occidentales apuntan al Sur hacia Fomalhaut. (5b) Sus dos estrellas meridionales apuntan al Oeste hacia Altair.

Puntos destacados con binoculares

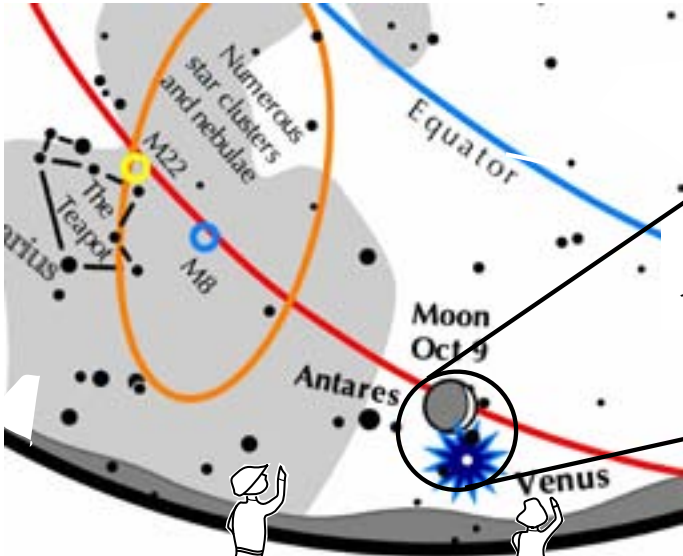
A: En el lado occidental de la Piedra Angular brilla el Gran Cúmulo de Hércules, un círculo borroso de 500,000 estrellas. **B:** Casi a la mitad de la distancia entre Altair y Vega, Brilla la "Percha," un grupo de estrellas que describe un perchero. **C:** Recorre la Vía Láctea en busca de un número asombroso de destellos tenues y bahías oscuras, incluido La Gran Grieta. **D:** Las tres estrellas más occidentales de las "W" de Casiopea apuntan hacia el sur hasta M31, la Galaxia de Andrómeda, un óvalo "borroso." **E:** Entre la "W" de Casiopea y Perseo se encuentra el Doble Cúmulo.



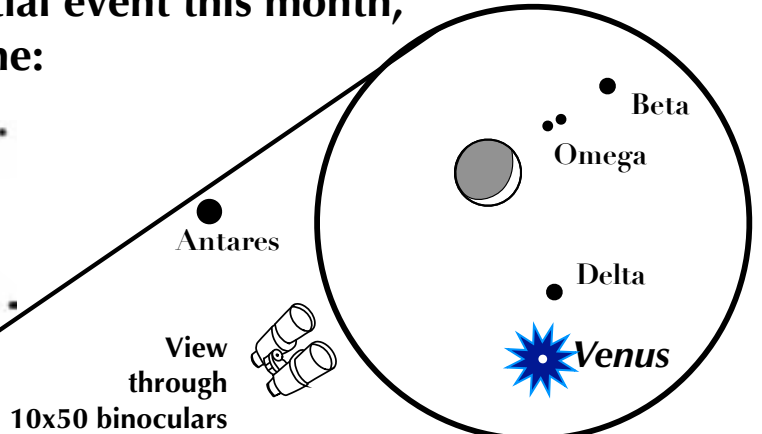


San Diego Astronomy Association

If you can observe only one celestial event this month, consider this one:



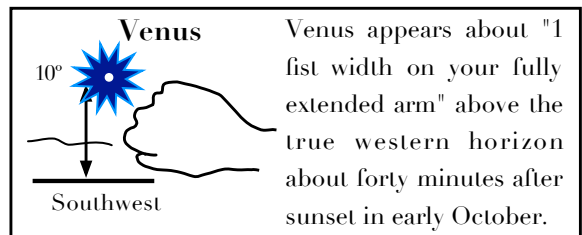
Southwest
40 minutes
after sunset
Oct. 9



Venus hangs with the Crescent Moon

Look to the southwest 40 minutes after sunset October 9.

- The brilliant star-like object low above the horizon is Venus.
- The thin crescent Moon visits Venus on Oct. 9.
- Aim binoculars at Venus & the Moon to spot the double star Omega Scorpii.
- The night side of the Moon glows in Earthshine, giving a magical scene.





San Diego Astronomy Association

Vintage SDAA; Foundation for Growth

There have been many significant San Diego Astronomy Association events at Tierra Del Sol. Some of them include constructing observatories, first light of the Lipp Observatory, constructing the Wilbur Will Warming Room, and building the Cruzen Observatory. Another such event that might be considered significant was first light of "The Topham 24" telescope during the Fall BBQ at TDS. Within this article, we will elaborate about this wonderful new club asset.

First, you may have noticed that the SDAA is growing ... rapidly! Since March of 2020, our membership has increased from approximately 740 to 850 members, and there has been a big increase in usage of the public pads at TDS during this same period.

How many of you newer members know about the Lipp, the D&G Refractor, the TARO, or the Cruzen observatories? And how many members know about the Topham 24? It is in fact our 24" Dobsonian built by *Lorey Topham* and *John Dobson* in the late 1980's.

This stuff is what we have missed since October of 2017, our last club BBQ event at our dark sky site. Recovery from those two years of weather issues followed by a year of pandemic caution compelled us to resurrect the 2021, SDAA Fall BBQ, with style.

Ergo, "The Vintage Scope Event" was staged to accomplish 3 things:

- * Reestablish the tradition of the Fall BBQ meet;
- * Set the occasion for assembling and learning how to use the Topham 24 scope, first light at TDS;
- * Introduce the membership to this new club asset, now a part of our TDS resources.

Consensus is that we have been successful in this regard. The Fall BBQ / picnic was a breath of fresh air. It was a joy to see the synergy developing between the old school, long-time members and the new guard, all chatting about experiences, and scopes, imaging and science. About 130 participated in the BBQ, based upon how much food was consumed -- 110 hamburgers, 80 hot dogs, 40 bratwursts, and a lot of potluck dishes contributed by members.

President Dave Wood did the cooking honors, supported by a few diligent sous chefs. Jerry Hilburn made the grocery run and managed the site preparation and the contract to improve Tierra De Luna Road with drainage and grading. Ed Rumsey and Jim Traweek hosted observing sessions at the Lipp 22 Observatory and on the public pad with the D&G Refractor. We all took part in learning how to use our new toy, the Topham 24.

Our Tierra Del Sol facility is a great asset, a wonderful place to practice our craft, and to share with others under a decent sky. But, as with all benefits, there are responsibilities. At TDS we do not have "maintenance" personnel, trash collection, gardeners, repair facilities, etc. What we have are "members". SDAA members do everything at Tierra Del Sol. Members make it all happen so that the membership may enjoy the benefits. And "enjoy" is what we did with a hardy "Thank You" for those who cleaned, organized, setup, and hauled trash in support of the Vintage Scope event.

It came together on Saturday, September 4, when members set up a variety of vintage and modern, visual and imaging rigs on the TDS public pads. A bunch of RVs lined the north brush line, and many of the private pads were occupied for several days. As mentioned above, at least 130 attendees enjoyed the BBQ and facilities, including a large cadre from the CAL Fire San Diego Unit – White Star, located nearby on Tierra Del Sol Road. A few of our close neighbors also attended, with great curiosity about SDAA activity.

And then there was the Topham 24, as we now call it, an old telescope but a new asset for the SDAA. If you did not visit the site on Saturday, September 4, then you may not know about the scope and its history which was documented in a scrap book format displayed nearby it. Here is the story ...



San Diego Astronomy Association

In 2017, not long after our last BBQ, Lorey Topham contacted the SDAA with an offer to donate his Dobsonian telescope. Little did we know that the scope was a 24" f/6, built with the help of John Dobson himself. Further discussions and a visit to Mr. Topham's home by "The Committee" revealed the remarkable story of his association with John Dobson and the building of both the scope and figuring of the 24" mirrors.

Mr. Topham and his business partner dreamed of building a large telescope, but, alas, had no experience with such an instrument. Pursuing this passion, they were able to contact John Dobson in 1988, and "generated a firm plan [to] go forward with the project with John's expert guidance and direction." Those of you who know about John Dobson's telescopes will understand the materials and structural design used for the Topham 24.

In general, he used a sonotube for the optical tube assembly. They are strong, reasonably light weight, resist moisture damage, and are cheap. Dobson built a rocker box azimuth swivel out of common plywood with plastic or Teflon bearing material on top of the plywood ground board. Multiple layers of plywood allowed for support beneath the altitude bearing assembly where a simple half circle cutout and small Teflon pads support the mirror box. The mirror box was also common plywood with a round disk of aluminum plate for the pivot surface of the altitude bearings. The 24" parabolic mirror is mounted on another piece of plywood attached to the bottom of the mirror box, with a piano hinge and simple gate hook. The mirror cell consists of three triangular pieces of plywood, each with three small blocks of nylon, each sitting on top of a large bolt threaded through the thick plywood trapdoor. The mirror sits on the nylon blocks and is adjusted with the three bolts for collimation. For lateral support the mirror sits in a cloth sling extending more than half the circumference of the mirror and is not adjustable.

Because John Dobson intended to build telescopes that were simple and not expensive, he often used whatever glass was available for mirror grinding. Plate glass and ship's portals were in common use. The secondary mirror was firmly attached to a strut arrangement with pads at the ends of the struts, wedged into the top of the sonotube and held in by friction. Adjustment of the secondary mirror is with a hammer! Just tap the struts until it all lines up...

John Dobson built several large scopes, but one is of particular interest. The 24" scope he used extensively while touring the National Parks was painted a light blue and was given the name "Delphinium", after a common blue flower that John appreciated on his favorite mountain hiking trails. Our scope is essentially an exact copy of Delphinium. Pictures of Dobson's scope and our Topham 24 show no difference in structure or dimension, only in color of the final finish.

This basic design is very familiar to those with classic Dobsonian scopes. It was further developed and popularized by David Kriege and then marketed under the trade name of Obsession Telescopes. In the book documenting their work, David Kriege and Richard Berry state in the forward "... Dobson's original design is fundamentally excellent." Our scope is mostly classic Dobson, yet it does sport high-quality, Pyrex optical glass mirrors. Yes, mirrors, we have one and a spare ...

In true John Dobson style, Lorey Topham used the scope for many years at desert camp outs, Scouting events, and school star parties. As happens to us all, with advancing age the scope was difficult for him to handle. So, his donation of the scope to the SDAA has allowed us, the SDAA, to carry forward the tradition set by John Dobson and further advanced by Lorey Topham; using it at our TDS site for members and visitors exploring the night sky.

And, hopefully, you were one of many people who climbed the 12-foot ladder on Saturday night to look at views of Jupiter, the Io transit, Saturn, M22, M33, M17, NGC 253, and other objects. After spending three nights with the Topham 24, I would describe the optics as spectacular! So there you have a good portion of the story of the Topham 24 and its debut at the SDAA, 2021, Fall BBQ.

Craig Ewing & Dave Decker



San Diego Astronomy Association





San Diego Astronomy Association





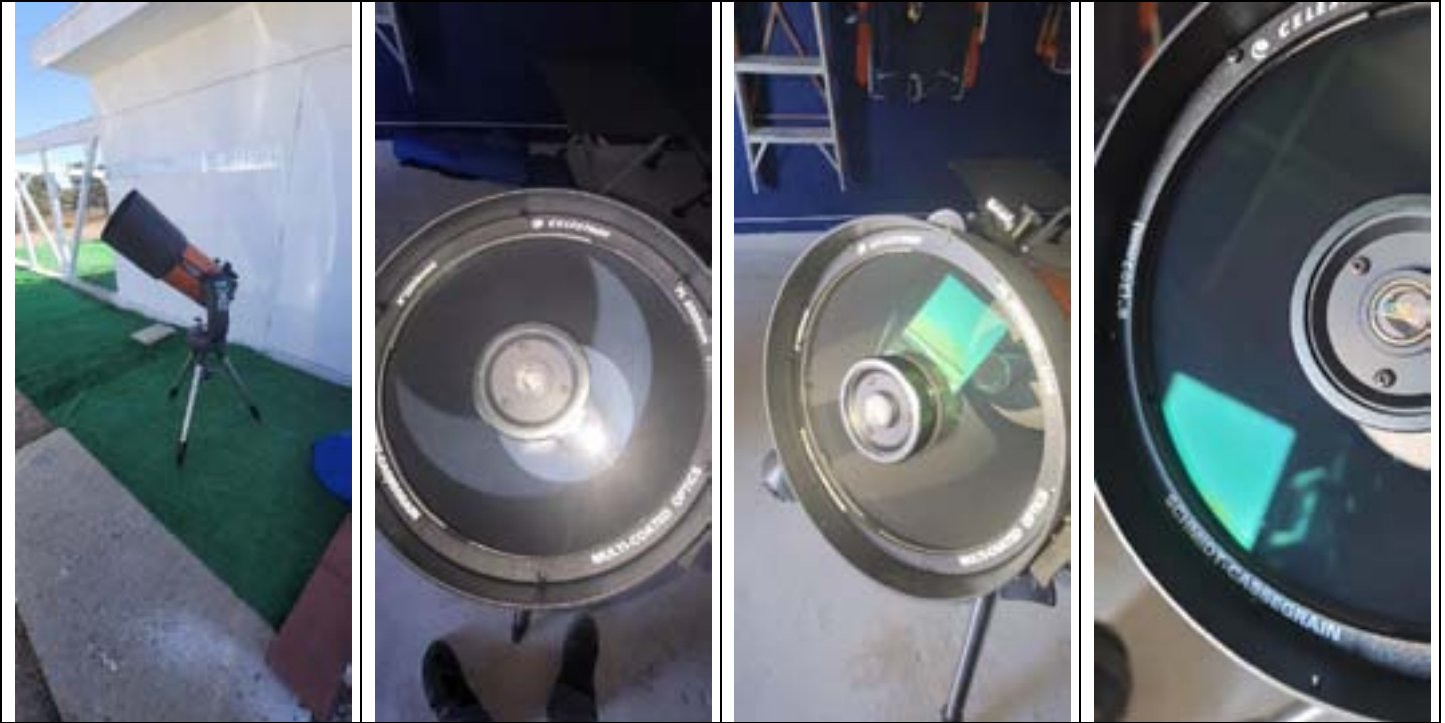
San Diego Astronomy Association





San Diego Astronomy Association

NexStar 8SE (with Goodies)



Presale price of **\$1,000** plus fees for Contributing Members only.

Cloudy Nights & Astromart pricing will be **\$1,200** plus fees and shipping.

This is an older version of the NexStar 8SE. Fastar compatible. The telescope comes with most of the original components, manuals, disks, and a whole lot of goodies. Firmware has been updated, and the telescope ran through its paces.

First the bad news: The azimuth has some minor backlash which is normal for these scopes. The corrector coatings have some minor damage and there is a little bit of dirt inside the scope. The illuminator for the non-stock RACI finder no longer works – stock red dot finder is fine. One of the tripod rubber feet is missing and the other two are loose.

On to the good news: Non-stock goodies include; Celestron Wi-Fi adapter, right angle illuminated finder (illumination not op), TPO 2" SCT thread star diagonal, Telegismo 8SE 365 cover, Celestron 1.25" color filters set, Orion polarizing 1.25" filter, Celestron X-Cel LX 2x Barlow, 2 Celestron X-Cel LX 9mm and X-Cel LX 18mm, Celestron Ultima Duo 5mm, Orion StarShoot 1.25" Solar System camera, and Meade tripod bag.

We are selling "as-is." Bottom line, you can have this complete package at a very reasonable price.

for SDAA, Ed Rumsey, observatory@sdaa.org, 858.722.3846



San Diego Astronomy Association



Orion EQ-3M Single Axis Drive (#07829)

These Right Ascension motors retail for \$109.99 plus tax and shipping. They include a separate hand controller with 2x and 8x sidereal rates. Perfect for centering objects! While designed for the Orion mount, they should be adaptable to other brand's older GEM mounts. I have even heard of other utilizing the motor on a focuser. Requires four D-cell batteries. \$109.99 plus tax & shipping on-line. The first \$35 takes it. Otherwise "or best offer" will be accepted at the end of the month.

6" Orion Safety Film Solar Filter for Reflectors (#07770)

Solar filter with an inside diameter of 7.5 inches to the bare metal retaining ring. Stock felt lining will reduce the allowable exterior telescope diameter a bit. Cork spacers could further reduce the outer radius. The inside diameter of the ring (light transmitting area) is six inches. The filter material is mylar. This filter retails for \$109.99 plus tax and shipping.

The first \$40 takes it. Otherwise "or best offer" will be accepted at the end of the month.



1.25" Orion UltraBlock Narrowband Filter (#05654)

This very popular light pollution filter has a very narrow band pass. It is likely very similar to a traditional UHC filter but pass band information is not available. Orion does recommend for planetary nebulae. Looks to be in great shape with no visible markings. This filter retails for \$79.99 plus tax and shipping. We are offering it at a considerable discount from prior Astromart pricing. The first \$45 takes it. Otherwise "or best offer" will be accepted at the end of the month.

for SDAA, Ed Rumsey, 858.722.3846, observatory@sdaa.org



San Diego Astronomy Association

STI Knife Edge Focuser - Free



Produced by Stellar Technologies International. These focusers were state of the art for working with film. This version is for Canon EOS cameras, or any with that form factor and back focus. The kit includes a Ronchi grating if you prefer an interference pattern to blinking a star. Instructions, 22mm Plössel, and case, are included.

The kit looks to be in exceptional condition. We are passing as-is.

Price is free to Contributing Members only.

Ed Rumsey, observatory@sdaa.org, 858.722.3846



San Diego Astronomy Association

SDAA Contacts

Club Officers and Directors

President	Dave Wood	President@sdaa.org	(858) 735-8808
Vice President	Kin Searcy	VicePresident@sdaa.org	
Recording Secretary	Gene Burch	Recording@sdaa.org	(858) 926-9610
Treasurer	Melany Biendara	Treasurer@sdaa.org	(619) 213-9887
Corresponding Secretary	Alicia Linder	Corresponding@sdaa.org	
Director Alpha	Pat Boyce	DirectorAlpha@sdaa.org	(619) 227-9614
Director Beta	Mike Chasin	DirectorBeta@sdaa.org	(858) 210-1454
Director Gamma	Dave Decker	DirectorGamma@sdaa.org	(619) 972-1003
Director Delta	Hiro Hakozaiki	DirectorDelta@sdaa.org	(858) 869-9507

Committees

Site Maintenance	Bill Quackenbush	TDS@sdaa.org	(858) 395-1007
Observatory Director	Ed Rumsey	Observatory@sdaa.org	(858) 722-3846
Private Pads	Mark Smith	Pads@sdaa.org	(858) 484-0540
Outreach	Dave Decker	Outreach@sdaa.org	(619) 972-1003
N. County Star Parties	-Vacant-	NorthStarParty@sdaa.org	
S. County Star Parties	-Vacant-	SouthStarParty@sdaa.org	
E. County Star Parties	Dave Decker	EastStarParty@sdaa.org	(619) 972-1003
Central County Star Parties	Dennis Ammann	CentralStarParty@sdaa.org	(619) 247-2457
Camp with the Stars	-Vacant-	CampWiththeStars@sdaa.org	
K.Q. Ranch Coordinator	Dennis Ammann	KQ@sdaa.org	(619) 247-2457
Newsletter	Andrea Kuhl	Newsletter@sdaa.org	(858) 547-9887
New Member Mentor	Dan Kiser	Mentor@sdaa.org	(858) 922-0592
Webmaster	Jeff Stevens	Webmaster@sdaa.org	(858) 566-2261
AISIG	Scott Dixon	AISIG@sdaa.org	(858) 673-9588
Site Acquisition	-Vacant-	SecondSite@sdaa.org	
Field Trips	-Vacant-	FieldTrips@sdaa.org	
Grants/Fund Raising	-Vacant-	Grants@sdaa.org	
Julian StarFest	-Vacant-	info@julianstarfest.com	
Merchandising	Gene Burch	Merchandising@sdaa.org	(858) 926-9610
Publicity	Jeff Flynn	Publicity@sdaa.org	(619) 806-6505
Loaner Scopes	Ed Rumsey	loanerscopes@sdaa.org	(858) 722-3846
Governing Documents	TBD		
TDS Network	Dave Wood	TDSNet@sdaa.org	(858) 735-8808
Amateur Telescope Making	-Vacant-		
ALCOR (Astronomical League Correspondent)	Dave Decker	ALCOR@sdaa.org	(619) 972-1003

SDAA Editorial Staff

Editor - Andrea Kuhl

newsletter@sdaa.org

Assistant Editor: Craig Ewing

Have a great new piece of gear? Read an astronomy-related book that you think others should know about? How about a photograph of an SDAA Member in action? Or are you simply tired of seeing these Boxes in the Newsletter rather than something, well, interesting?

Join the campaign to rid the Newsletter of little boxes by sharing them with the membership. In return for your efforts, you will get your very own byline or photograph credit in addition to the undying gratitude of the Newsletter Editor. Just send your article or picture to Newsletter@SDAA.Org.



San Diego Astronomy Association

NASA Night Sky Notes

October 2021



This article is distributed by NASA Night Sky Network

The Night Sky Network program supports astronomy clubs across the USA dedicated to astronomy outreach.

Visit nightsky.jpl.nasa.gov to find local clubs, events, and more!

Weird Ways to Observe the Moon

David Prosper

International Observe the Moon Night is on October 16 this year– but you can observe the Moon whenever it's up, day or night! While binoculars and telescopes certainly reveal incredible details of our neighbor's surface, bringing out dark seas, bright craters, and numerous odd fissures and cracks, these tools are not the only way to observe details about our Moon. There are more ways to observe the Moon than you might expect, just using common household materials.

Put on a pair of sunglasses, especially **polarized sunglasses!** You may think this is a joke, but the point of polarized sunglasses is to dramatically reduce glare, and so they allow your eyes to pick out some lunar details! Surprisingly, wearing sunglasses even helps during daytime observations of the Moon.

One unlikely tool is the humble **plastic bottle cap!** John Goss from the Roanoke Valley Astronomical Society shared these directions on how to make your own bottle cap lunar viewer, which was also suggested to him by Fred Schaaf many years ago as a way to also view the thin crescent of Venus when close to the Sun:

“The full Moon is very bright, so much that details are overwhelmed by the glare. Here is an easy way to see more! Start by drilling a 1/16-inch (1.5 mm) diameter hole in a plastic soft drink bottle cap. Make sure it is an unobstructed, round hole. Now look through the hole at the bright Moon. The image brightness will be much dimmer than normal – over 90% dimmer – reducing or eliminating any lunar glare. The image should also be much sharper because the bottle cap blocks light from entering the outer portion of your pupil, where imperfections of the eye's curving optical path likely lie.” Many report seeing a startling amount of lunar detail!

You can **project the Moon!** Have you heard of a “Sun Funnel”? It's a way to safely view the Sun by projecting the image from an eyepiece to fabric stretched across a funnel mounted on top. It's easy to make at home, too – directions are here: bit.ly/sunfunnel. Depending on your equipment, a Sun Funnel can view the Moon as well as the Sun– a full Moon gives off more than enough light to project from even relatively small telescopes. Large telescopes will project the full Moon and its phases, with varying levels of detail; while not as crisp as direct eyepiece viewing, it's still an impressive sight! You can also mount your smartphone or tablet to your eyepiece for a similar Moon-viewing experience, but the funnel doesn't need batteries.

Of course, you can join folks in person or online for a celebration of our Moon on October 16, with International Observe the Moon Night – find details at moon.nasa.gov/observe. NASA has big plans for a return to the Moon with the Artemis program, and you can find the latest news on their upcoming lunar explorations at nasa.gov.



San Diego Astronomy Association

NASA Night Sky Notes

October 2021



Sun Funnels in action! Starting clockwise from the bottom left, a standalone Sun Funnel; attached to a small refractor to observe the transit of Mercury in 2019; attached to a large telescope in preparation for evening lunar observing; projection of the Moon onto a funnel from a medium-size scope (5 inches).

Safety tip: NEVER use a large telescope with a Sun Funnel to observe the Sun, as they are designed to project the Sun using small telescopes only. Some eager astronomers have melted their Sun Funnels, and parts of their own telescopes, by pointing them at the Sun - large telescopes create far too much heat, sometimes within seconds! However, large instruments are safe and ideal for projecting the much dimmer Moon. Small telescopes can't gather enough light to decently project the Moon, but larger scopes will work.



San Diego Astronomy Association

NASA Night Sky Notes

October 2021



International OBSERVE THE MOON NIGHT 2021 SATURDAY OCTOBER 16TH



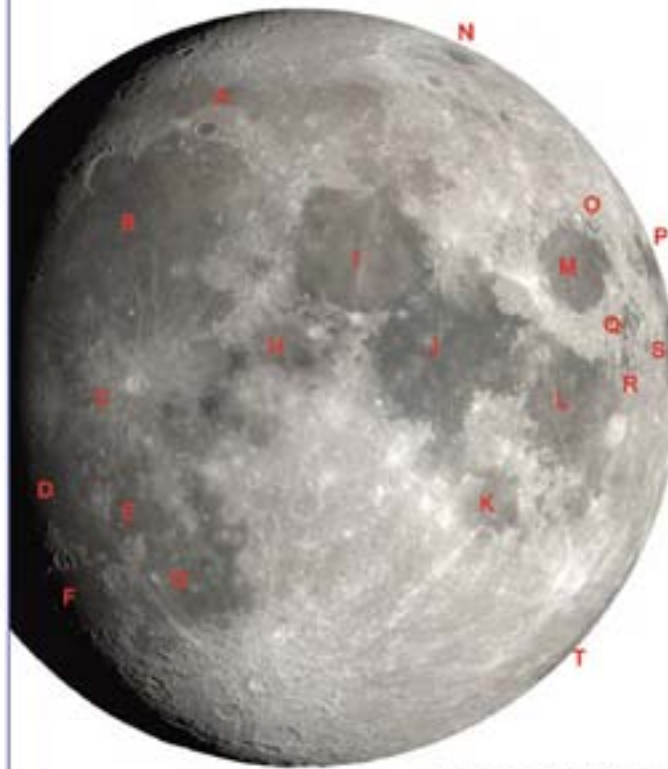
NORTHERN HEMISPHERE MOON MAP WITH LUNAR MARIA (SEAS OF BASALT)

Moon Map

This map was created for International Observe the Moon Night 2021. It depicts the Moon as it will appear from the northern hemisphere at approximately 11:00 PM EDT on October 16, 2021 (3:00 AM UTC on October 17).

Lunar Maria (Seas of Basalt)

You can see a number of maria tonight. Once thought to be seas of water, these are actually large, flat plains of solidified basaltic lava. They can be viewed in binoculars or even with the unaided eye. Tonight, you may be able to identify 18 maria on the Moon. This includes four seas along the eastern edge that are often hard to see. Because of libration, a slight apparent wobble by the Moon in its orbit around Earth, tonight we get to peek slightly around the northeast edge of the Moon, glimpsing a sliver of terrain normally on the Moon's far side.



Map generated with NASA's Dial-A-Moon (https://svs.gsfc.nasa.gov/49743)

- A. Mare Frigoris (Sea of Cold)
- B. Mare Indiarum (Sea of India)
- C. Mare Insularum (Sea of Islands)
- D. Oceanus Procellarum (Ocean of Storms)
- E. Mare Cognitum (Known Sea)
- F. Mare Humorum (Sea of Moisture)
- G. Mare Nubium (Sea of Clouds)
- H. Mare Vaporum (Sea of Vapor)
- I. Mare Serenitatis (Sea of Serenity)
- J. Mare Tranquillitatis (Sea of Tranquility)
- K. Mare Nectaris (Sea of Nectar)
- L. Mare Fecunditatis (Sea of Fertility)
- M. Mare Crisium (Sea of Crises)
- N. Mare Humboldtianum (Humboldt's Sea)
- O. Mare Anguis (Serpent Sea)
- P. Mare Marginis (Border Sea)
- Q. Mare Undarum (Sea of Waves)
- R. Mare Spalarum (Sea of Fauna)
- S. Mare Serenitatis (Serenity's Sea)
- T. Mare Australe (Southern Sea)



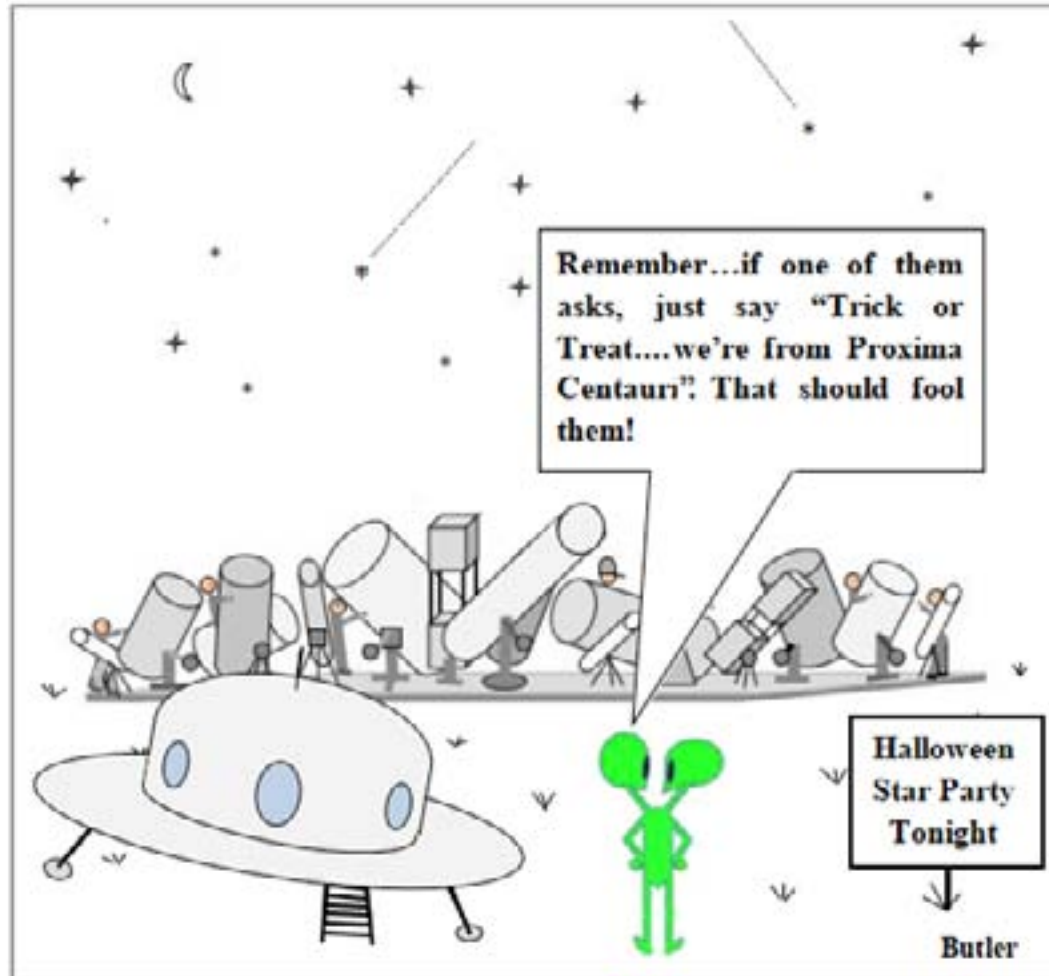
MOON.NASA.GOV/OBSERVE

#ObserveTheMoon

You can download and print NASA's observer's map of the Moon for International Observe the Moon Night! This map shows the view from the Northern Hemisphere on October 16 with the seas labeled, but you can download both this map and one of for Southern Hemisphere observers, at: bit.ly/moonmap2021 The maps contain multiple pages of observing tips, not just this one.



San Diego Astronomy Association



AmazonSmile Donations

The SDAA board wants to thank members for using the AmazonSmile donation link as you've helped us raise over \$300 in 2020 at no cost to you. This is three times the amount we received in 2019. Our URL is smile.amazon.com/ch/51-0183640 and, if you are an Amazon user, we hope you will encourage your family to use this option.

MEMBERSHIP INFORMATION

Send dues and renewals to P.O. Box 23215, San Diego, CA 92193-3215 or renew on-line. The notice that your membership in SDAA will expire is sent by email. Dues are \$60 for Contributing Memberships; \$35 for Basic Membership; \$60.00 for Private Pads; \$5 for each Family membership.