



THE LOS ANGELES ASTRONOMICAL SOCIETY

AUGUST, 2019
VOLUME 93, ISSUE 08

THE BULLETIN



Most of the WAA attendees in this picture were LAAS members. Jack Eastman is seated in first row, far right. Picture was taken by Allen Eiserling, member Fred Eiserling's dad.

Image shared by Lew Chillton, LAAS Historian

Interested in joining the Los Angeles Astronomical Society? To find our membership application and further information, please visit our website at LAAS.org.

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Family Night at Lockwood

Grab the family and join us for a night of dark sky observation on Aug. 24, 2019 at our Lockwood facility.

New Contact Info?

If you have recently moved, changed your email address or phone number, please contact our club secretary by sending an email to secretary@laas.org with your new contact information.

The Tulip Nebula

Photo Credit: Brian Paczkowski



The Tulip Nebula (Sh2-101), an emission nebula in the constellation Cygnus. This is my 2nd target from last week's 4 night stay at Lockwood. Here's 2 versions, a narrowband plus RGB version and a Hubble SHO palette version. The narrowband and RGB composite image is made from a combined 33 hours of narrowband data and 8 hours of RGB data. The narrowband data was collected from my light polluted backyard. The Hubble SHO Palette doesn't include any RGB data. Pre-processed in Nebulosity and processed in PixInsight. (AGOptical 10"iDK, 10Micron GM2000 HPS II mount, ZWO ASI 1600mm-cool at -25C)

Family Night At Lockwood

August 24, 2019

Date: Saturday, August 24, 2019

Start Time: 5:00 PM

Location: Lockwood Valley

In 2011, "Family Nights " were scheduled at our Lockwood Dark Sky site best known as the Steve Kufeld Astronomical Site (SKAS).

Here is a link on our website to learn more about this special club facility:

<http://www.laas.org/joomlasite/index.php/dark-sky-observing>.

Family Nights are scheduled for all club members and families to enjoy a night of dark sky observation far from the city lights of Los Angeles. You may bring camping equipment or campers and stay for the entire evening. It's a star party and gives our members an opportunity to view celestial objects normally not visible in the sky over the city.

Due to extreme weather conditions, we only offer these nights to our members during warmer months.

Gates open at 5 PM and the departure times will be discussed with the group. Please arrive early before sunset to become familiar with the grounds and set up equipment. Some of our members enjoy setting up a potluck-style meal to share with all members. Please use the IO group to discuss more about this wonderful weekend of dark skies and club fellowship.



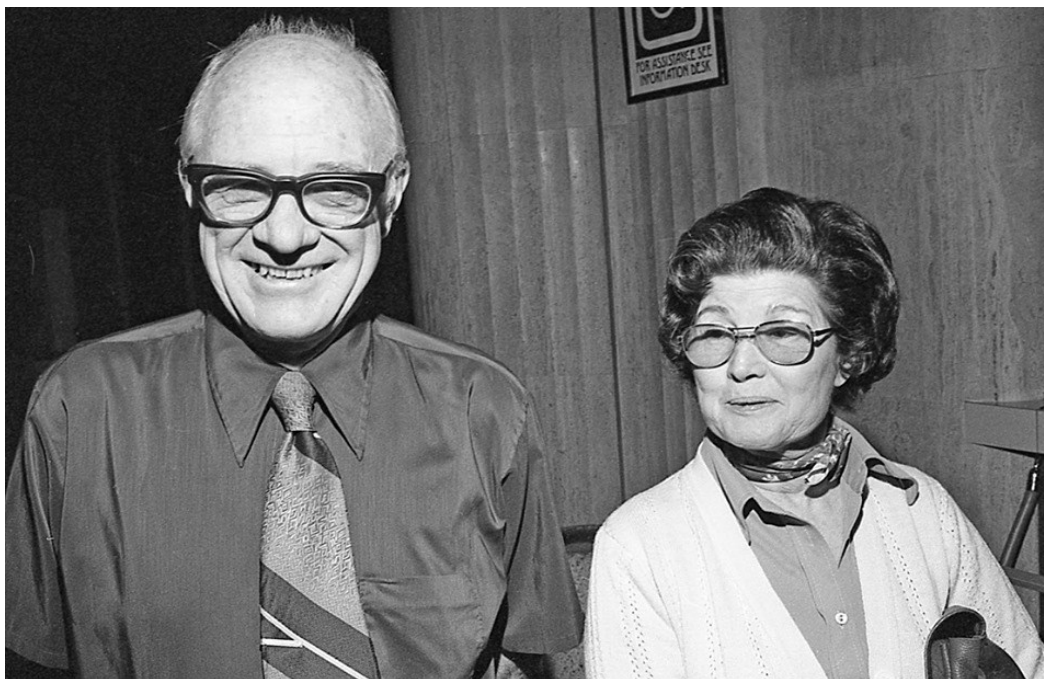
Family Night, 2017

From the LAAS Archive

Lew Chilton, Club Historian

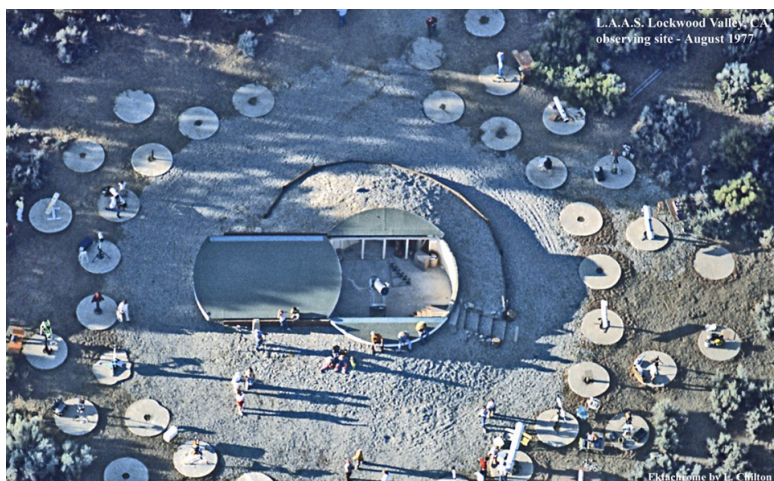
A teaching moment:

Who was Gordon Mitchell, for whom our roll-off roof observatory in Lockwood Valley was named?



Gordon and Dixie Mitchell at the June 14, 1976 LAAS meeting at Griffith Observatory. Gordon was twice LAAS president and established the tradition of the Annual Awards Banquet beginning in 1963. (Image: L. Chilton, LAAS historian)

LAAS ARCHIVE

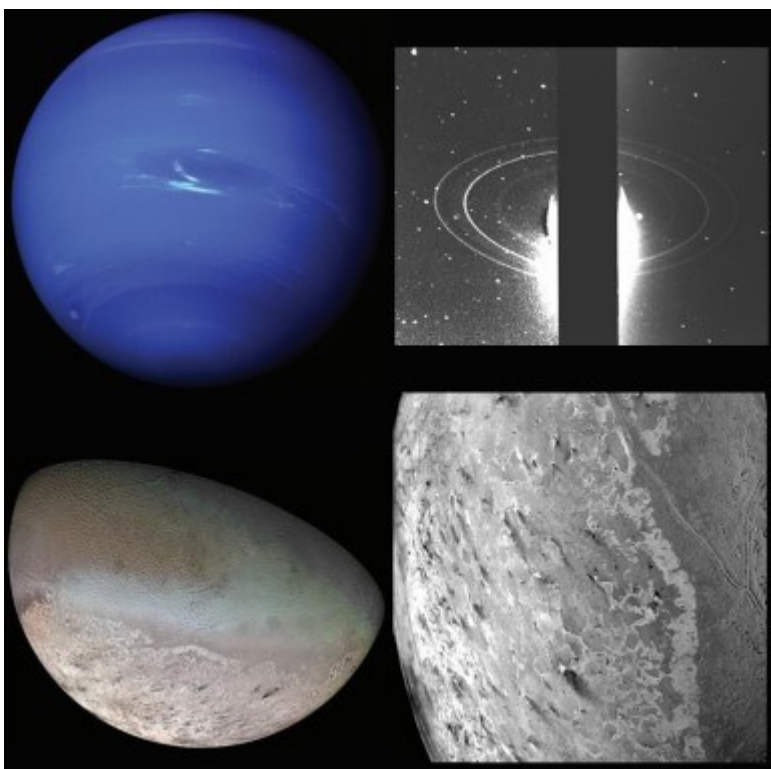


Chill Out: Spot an Ice Giant in August

By David Prosper

Chill Out: Spot an Ice Giant in August By David Prosper Is the summer heat getting to you? Cool off overnight while spotting one of the solar system's ice giants: Neptune! It's the perfect way to commemorate the 30th anniversary of Voyager 2's flyby.

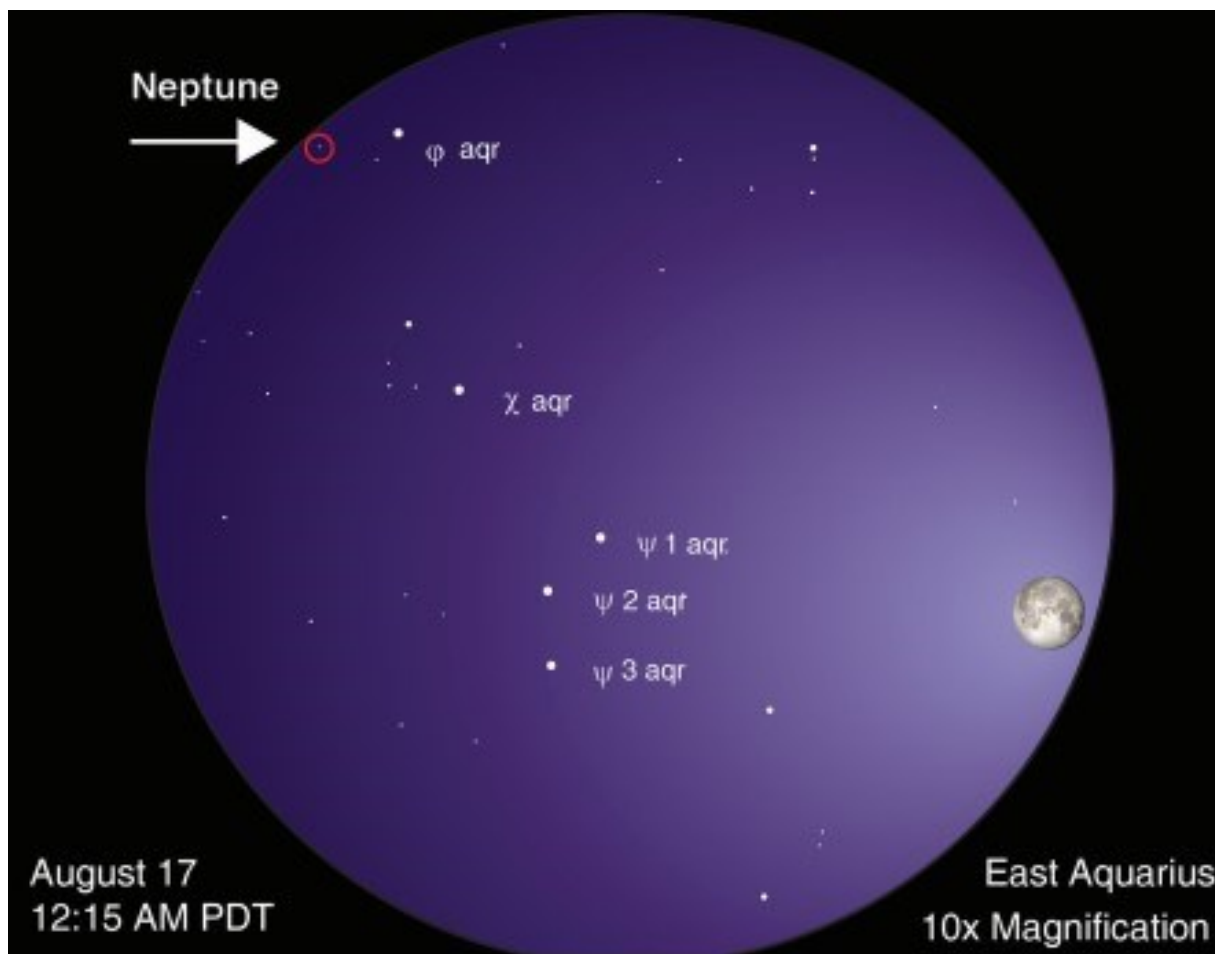
Neptune is too dim to see with your unaided eye so you'll need a telescope to find it. Neptune is at opposition in September, but its brightness and apparent size won't change dramatically as it's so distant; the planet is usually just under 8th magnitude and 4.5 billion kilometers away. You can see Neptune with binoculars but a telescope is recommended if you want to discern its disc; the distant world reveals a very small but discernible disc at high magnification. Neptune currently appears in Aquarius, a constellation lacking in bright stars, which adds difficulty to pinpointing its exact location. Fortunately, the Moon travels past Neptune the night of August 16th, passing less than six degrees apart (or about 12 Moon widths) at their closest. If the Moon's glare overwhelms Neptune's dim light, you can still use the its location that evening to mark the general area to search on a darker night. Another Neptune-spotting tip: Draw an imaginary line from bright southern star Fomalhaut up to the Great Square of Pegasus, then mark a point roughly in the middle and search there, in the eastern edge of Aquarius. If you spot a blue-ish star, swap your telescope's eyepiece to zoom in as much as possible. Is the suspect blue "star" now a tiny disc, while the surrounding stars remain points of white light? You've found Neptune!



Clockwise from top left: Neptune and the Great Dark Spot traced by white clouds; Neptune's rings; Triton and its famed icy cantaloupe surface; close of up Triton's surface, with dark streaks indicating possible cryovolcano activity. Find more images and science from Voyager 2's flyby at bit.ly/NeptuneVoyager2Image Credit: NASA/JPL

Neptune and Uranus are ice giant planets. These worlds are larger than terrestrial worlds like Earth but smaller than gas giants like Jupiter. Neptune's atmosphere contains hydrogen and helium like a gas giant, but also methane, which gives it a striking blue color. The "ice" in "ice giant" refers to the mix of ammonia, methane, and water that makes up most of Neptune's mass, located in the planet's large, dense, hot mantle. This mantle surrounds an Earth-size rocky core. Neptune possesses a faint ring system and 13 confirmed moons. NASA's Voyager 2 mission made a very close flyby on August 25, 1989. It revealed a dynamic, stormy world streaked by the fastest winds in the solar system, their ferocity fueled by the planet's surprisingly strong internal heating. Triton, Neptune's largest moon, was discovered to be geologically active, with cryovolcanoes erupting nitrogen gas and dust dotting its surface, and a mottled "cantaloupe" terrain made up of hard water ice. Triton is similar to Pluto in size and composition, and orbits Neptune in the opposite direction of the planet's rotation, unlike every other large moon in the solar system.

These clues lead scientists to conclude that this unusual moon is likely a captured Kuiper Belt object. Discover more about Voyager 2, along with all of NASA's past, present, and future missions, at nasa.gov



Finder chart for Neptune. This is a simulated view through 10x50 binoculars (10x magnification). Please note that the sizes of stars in this chart indicate their brightness, not their actual size. Moon image courtesy NASA Scientific Visualization Studio; chart created with assistance from Stellarium.



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.org to find local clubs, events, and more!

What is the Night Sky Network? Learn more about it here:

Video: <https://www.youtube.com/watch?v=2f7Az-lt3dY>

Mt. Wilson Nights

2019 Session Schedule

Session Schedule:

60 Inch Nights Only

Friday, August 23

Friday, Sept. 27

Saturday, Oct. 26

Saturday, Nov. 23

The prices for these nights are as follows:

\$50 - 60 Inch Nights

All of the dates above have been posted on the club calendar. These are private events exclusive to current LAAS members, families, and their guests only.

Please click on the following link to contact Darrell Dooley, our Mt. Wilson Coordinator before submitting payment.

mtwilsoncoordinator@laas.org.

To pay using PayPal or by credit card, please use the following link:

<https://fs30.formsite.com/LAAS/MtWilson/index.html>

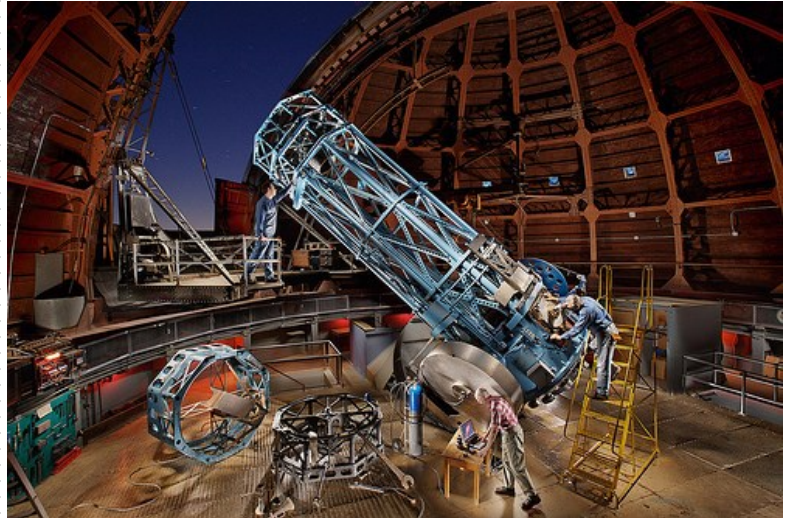
To pay by check, please mail your check to:

LAAS c/o Griffith Observatory

2800 E. Observatory Road

Los Angeles, CA. 90027

ATTN: Treasurer/Mt. Wilson



*Please write "60 Inch" on your check. Make your check payable to: LAAS

Note: If you pay by check, your check may be held by our Treasurer for several weeks, before clearing your bank.

Meet The New Members



Richard Horn

Brandon Hilliard

Kevin Becker

Anish Khare

Francine Ricks

Babak Saberi

LAAS Board Meetings

Our LAAS Board Meetings take place once a month at the Garvey Ranch Park Observatory. You can find the dates for these meetings on our event calendar. All members are welcome to attend all Board meetings. These meetings begin at 8 PM.

All current members may listen to recorded meetings by logging on to our website at LAAS.org and clicking on the "Members Only" tab to find the files. Contact: webmaster@laas.org for your login credentials.

Volunteer Opportunities

Every LAAS member is a volunteer at some point. Some members volunteer to share telescopes with the public, while others tackle administrative duties, help out at our community and public events, or join a club committee. Taking photos at our events and writing articles about events for our club newsletter are great ways to volunteer.

Participating at one of our outreach events is another fine and fulfilling opportunity. This is YOUR club. Don't sit back and let other members do the work and have all the fun! Speak with a club officer and find out how you can volunteer and get more involved in the LAAS as a member.

Time To Renew Your Membership?

Please remember to renew your membership once you receive notice from the Club Secretary in your email inbox. Use this link to learn how to renew your membership:

<https://fs30.formsite.com/LAAS/MemberRenewal/index.html>

Please send any new contact information to the club secretary at secretary@LAAS.org.



August Star Report

By Dave Nakamoto

FINALLY, we get planets in our evening skies !

Of course, Jupiter has been with us since July, but now Saturn joins its Big Brother to put on a show for those with binoculars and especially telescopes.

By the way, the Los Angeles Astronomical Society, which goes by the much shorter name of LAAS, operates the observatory at Garvey Ranch Park in Monterey Park. The observatory is located just off the east parking lot. It is open to the public every Wednesday night from 7:00 PM to 10:00 PM. In August that's the 7th, 14th, 21st, and 28th. An 8-inch 9-foot long refracting telescope is there to look through, weather permitting. People often set up their own telescopes out on the lawn beside the observatory. There is also a telescope making workshop on the ground floor. LAAS members are there to provide advice and knowledge on all things astronomical. Everything is free of charge. If you have any questions on equipment, observing, or just want a peek through the observatory's scopes, drop on by!

The lunar cycle for the month is:

New Moon : 1st

First Quarter : 7th

Full Moon : 15th

Last Quarter : 23rd

New Moon : 30th

The moon shows features even with low power binoculars, but of course you need to take your time and look at it, and more magnification always helps. Features on the Moon change, sometimes in as little a time as a few hours. Especially fascinating are the changes in the shadows along the edge of day and night on the moon, called the Terminator. There are many websites available to help you identify the Moon's features.

Jupiter is the showcase this month, being well placed to the south as August begins. It is the brightest star in that section of the sky, so it's hard to miss. Twin dark bands straddle its equator, and the Red Spot drifts across the disk from time to time, although you'll need a telescope with a magnification of around 120x or more to see these at all.

Here is a simulated 120x view:



During August, the following satellite events are visible when Jupiter is in our skies, although you'll need a telescope to see them clearly. Satellite shadows appear as black disks on Jupiter's disk. For Io, it casts a very small disk, so telescopes capable of magnifications of 150x or more are needed.

3rd : At 9:00pm, Io starts passing across Jupiter's disk, then at 10:00pm, its shadow does the same.

19th : Io is already halfway across Jupiter's disk when it becomes dark enough to see it. At 8:30pm its shadow starts across the disk.

24th : Europa's shadow starts across Jupiter's disk around 8:30pm. Because Europa travels slower in its orbit compared to Io, its shadow doesn't finish across Jupiter's disk until 11:00pm.

26th : At 9:00pm, Io starts passing across Jupiter's disk, then at 10:00pm, its shadow does the same.

From August 25th through the 27th, Jupiter and its satellites will pass in front of the faint globular cluster NGC-6235. NGC stands for New General Catalog, a compilation of visually observed nebulous objects from the 1800s. A globular cluster is a tight grouping of some tens of thousands of stars. However, NGC-6235 is faint, so a large telescope would be needed to see it, and even then it'll look like a faint fuzzy glow. On the 28th, Garvey Ranch observatory will be open, and we will try and see Jupiter and NGC-6235 close together.

Saturn trails Jupiter by two hours, so if Jupiter is directly south at a certain time, Saturn will reach that position two hours later. All but the smallest binoculars will show Saturn's rings, but to see much of anything else requires telescopes with about 100x magnification or more. Saturn's moons don't put on much of a show. Even the brightest, Titan, is very much fainter than even the dimmest of Jupiter's four main moons. But the appearance of the planet and its rings is worth trying to get a look through a large telescope. The rings are still tilted towards us at near their maximum angle, and will do so for another couple of years.

Here's a simulated 180x view of Saturn:



Our first major meteor shower of the year is the Perseids. The peak night, when the most meteors are visible for any given hour of observing, is the 13th. Any meteor shower is best observed under dark skies. Unfortunately, the Moon will be full on the 15th, preventing all but the brightest meteors from being seen. Perhaps 15 per hour is all one can expect under these conditions. Still, if you want to see a meteor shower, going to a site where no town lights are visible is your best bet.

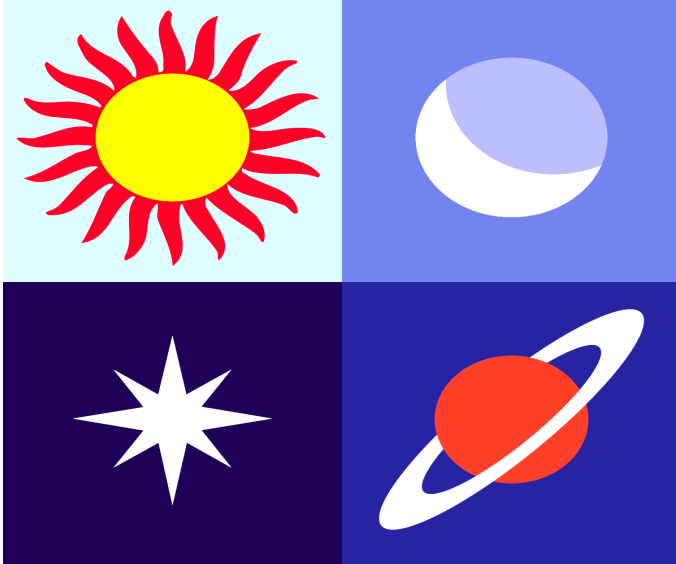
Meteor showers are named from the constellation which they appear to come from. In the case of the Perseids, if you trace the individual meteors back, you'll find they all originate from the constellation of Perseus, the Greek superhero. Well, if he were written today by Marvel or DC comics, he'd be a superhero. He defeated a lady with snakes for hair who could turn you into stone if you looked at her, trashed a sea monster, saved a princess, and saved her kingdom. Just your average day's work for a superhero.



David Nakamoto has been observing the heavens through various scopes since he was in the 5th grade. He can be reached at

dinakamoto@hotmail.com.

Almanac



August 1 - New Moon. The Moon will be located on the same side of the Earth as the Sun and will not be visible in the night sky. This phase occurs at 03:12 UTC. This is the best time of the month to observe faint objects such as galaxies and star clusters because there is no moonlight to interfere.

August 9 - Mercury at Greatest Western Elongation. The planet Mercury reaches greatest western elongation of 19.0 degrees from the Sun. This is the best time to view Mercury since it will be at its highest point above the horizon in the morning sky. Look for the planet low in the eastern sky just before sunrise.

August 12, 13 - Perseids Meteor Shower. The Perseids is one of the best meteor showers to observe, producing up to 60 meteors per hour at its peak. It is produced by comet Swift-Tuttle, which was discovered in 1862. The Perseids are famous for producing a large number of bright meteors. The shower runs annually from July 17 to August 24. It peaks this year on the night of August 12 and the morning of August 13. The nearly full moon will block out most of the fainter meteors this year, but the Perseids are so bright and numerous that it could still be a good show.

Need Help With A New Telescope?

Visit the Garvey Ranch Observatory on any Wednesday night 7 PM to 10 PM for tips and assistance from your fellow LAAS members.

This is a free event for the public.

August 15 - Full Moon. The Moon will be located on the opposite side of the Earth as the Sun and its face will be fully illuminated. This phase occurs at 12:30 UTC. This full moon was known by early Native American tribes as the Full Sturgeon Moon because the large sturgeon fish of the Great Lakes and other major lakes were more easily caught at this time of year. This moon has also been known as the Green Corn Moon and the Grain Moon.

August 30 - New Moon. The Moon will be located on the same side of the Earth as the Sun and will not be visible in the night sky. This phase occurs at 10:37 UTC. This is the best time of the month to observe faint objects such as galaxies and star clusters because there is no moonlight to interfere.

Source: <http://www.seasky.org/astronomy/astronomy-calendar-2019.html>

Mark your calendars for the **Riverside Telescope Makers Conference (RTMC)** coming up in September. The LAAS always has a presence at this event. Let us know if you want to help out at our booth this year.

Date: September 19-22, 2019

Visit the official website to learn more:

<http://rtmcastronomyexpo.org/>



LAAS Outreach Program

The mission of LAAS is to promote interest in and advance the knowledge of astronomy, optics, telescope making and related subjects. In furtherance of its mission, LAAS conducts public star parties and other outreach events that are intended to enhance the public's understanding of astronomy and its enjoyment and appreciation of the beauty and wonders of our universe.



We provide outreach events at local schools, Griffith Observatory, Mt. Wilson Observatory, various state and county parks, and community events.

Join our Outreach team of volunteers today.

Contact Heven Renteria, our Outreach Coordinator at Outreach@LAAS.org



Want to include astronomy outreach at your school's science night or open house? Follow the link below to access the request form:

https://nightsky.jpl.nasa.gov/club-eventrequest.cfm?Club_ID=1344

LAAS Club Swag

LAAS JACKETS, T-SHIRTS, AND CAPS

Share your club spirit with the public and wear your club colors to help identify you as a member of the LAAS today by ordering a new jacket, t-shirt or cap.

If you would like to purchase club jackets, T-shirts, or caps featuring our club logo, please look for Richard Roosman at the public star party and at our general meeting. Richard will have the club merchandise on sale from 2 PM to 6 PM at the star party.

For further information, feel free to contact Richard at Richardinwalnutpark@msn.com.

You can also use the link on Paypal, if you would like to place an order for club merchandise by using the following link:

<http://laas.org/joomlasite/index.php/laas-merchandise>



August 2019

Sun	Mon	Tue	Wed	Thu	Fri	Sat
4	5	6	7	8	9	10
			Garvey Night Board Meeting			Dark Sky Night
11	12	13	14	15	16	17
	General Meeting		Garvey Night Lockwood Committee Meeting			Outreach Chilao
18	19	20	21	22	23	24
			Garvey Night		60 Inch Night	Family Night
25	26	27	28	29	30	31
			Garvey Night			Dark Sky Night

Amazon Smiles

The LAAS is now listed on Amazon Smiles. When you purchase any goods on Amazon.com, Amazon will donate a small percentage of the funds they receive from you, back to the LAAS. Here's some information to help bring in funds for our club projects:

What is AmazonSmile?

AmazonSmile is a simple and automatic way for you to support your favorite charitable organization every time you shop, at no cost to you, with the added bonus that Amazon will donate a portion of the purchase price to your favorite charitable organization., such as the LAAS!

Learn more by following this link: <http://smile.amazon.com/>



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John O'Bryan, Jr.

Treasurer

Astronomy Magazine Discounts

Discounts for astronomy magazines can be found on the internet. Look for the best deals possible. Send a copy of your LAAS membership card with your check or payment to receive a club member discount.

Astronomy
magazine

As a member of the Night Sky Network, you may use the above link to renew your Astronomy Magazine subscription (or enter a new subscription) at the club discount rate. If this is a renewal, Astronomy Magazine will match your entered name and address and extend your subscription. For inquiries, please contact Astronomy Magazine customer service & sales at 1-800-533-6644.

[Click here for a NEW Sky & Telescope subscription at the club discount rate.](#)

[Click here for online renewal of your Sky & Telescope magazine subscription](#)



[Join the Astronomical Society of the Pacific](#) and help support the cause of advancing science literacy through engagement in astronomy. Member benefits include a **subscription to the online Mercury Magazine**, published quarterly, and **Astronomy Beat**, a monthly on-line column written by "insiders" from the worlds of astronomy research and outreach.

Subscribe or renew to the McDonald Observatory's StarDate Magazine and receive a special discount. Go to this page and press "Add to Cart" under the kind of subscription you want:

<http://stardate.org/store/subscribe>
Then, on the Checkout form, enter "network" in the Coupon Code box.



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Bulletin Editor: Andee Sherwood

communications@laas.org



Find astronomy outreach activities by visiting NASA's Night Sky Network:

<https://nightsky.jpl.nasa.gov/about.cfm>

Club Contacts

Club Phone Numbers

LAAS Message Phone:

213- 673-7355 (Checked daily)

Griffith Observatory:

213-473-0800

Sky Report:

213-473-0880

Lockwood Site:

661-245-2106

Not answered, arrange time with caller.

Outgoing calls – Collect or calling card only.



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**The Los Angeles
Astronomical Society**
2800 E. Observatory Road
Los Angeles, CA 90027

Call us for more information and
about our organization and
outreach program.
213-673-7355

Visit our web site at
www.LAAS.org

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