

THE LOS ANGELES ASTRONOMICAL SOCIETY

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THE BULLETIN



Here's looking at you, Kid! There's something new at SKAS, Stop by a Family Night or a Dark Sky Night in Lockwood to check out our newest addition to the club.. This is a JMI 14.5" scope, generously donated by Mrs. Claude Marquis and family.

Learn more about it on Page 8.

Garvey Nights -The Garvey Ranch Park Observatory is open to the public every Wednesday night from 7:30 PM to 10 PM, weather permitting. Bring your telescopes or stop by to learn more about the LAAS .



In This Issue

| 60 and 100 Inch Nights 2023 Schedule Page 2 |
|--|
| May 2023 Family Night Report Pages 3-7 |
| LAASt WeekPages 8-10 |
| Look Up In The Sky - It's A Bird Pages 11-12 |
| Monthly Star Report Page 13 |
| Almanac Page 14 |
| Calendar of Events Page 15 |
| Meet the New Members Page 16 |
| Outreach Volunteers Page 17 |
| The LAAS Outreach & Club Swag Page 18 |
| Astronomy Magazines Page 19 |
| Club Contacts & Social Media Link Page 20 |

Update Your Contact Information

Please send any contact info changes to the club secretary at

secretary@laas.org.



Mt. Wilson Nights - Schedule For 2023 60 Inch and 100 Inch Nights

60 Inch Dates:

(All on Saturday and all HALF-nights only.)

June 17

July 15

August 12

September 16

October 14

100 Inch Nights:

September 9 - This is the final 100 Inch Night of the season. Please make your reservations soon.

The Cost per person, per session:

60 Inch Night - \$65.00 100 Inch Night - \$145.00 (Booked/Waiting List only) There will be 20 people, per session.

Learn more about these incredible events by visiting Mt. Wilson Observatory's website:

https://www.mtwilson.edu/60-telescope/

https://www.mtwilson.edu/100-telescopeobserving/

How to Make a Reservation?

Please contact Darrell Dooley <u>BEFORE</u> you pay for your reservation.

Darrell is our Mt. Wilson Coordinator and the **ONLY** contact available.

Darrell's Email Address:

Mtwilsoncoordinator@laas.org

Darrell will answer all of your questions and concerns.



May 2023 Family Night Report By Spencer L SooHoo LAAS Secretary and Lockwood Committee Co-Chair

The Lockwood Committee scheduled a workday for early Saturday, and I needed to work on the Wi-Fi network, so I decided to drive up Friday evening have the network ready for Family Night. The traffic going up I-5 on a Friday afternoon/early evening wasn't nearly as bad as I feared it would be. Just as I was starting to pat myself on the back for making good time, the driver in the car to my right made a lane change without looking. I leaned on my horn and braked, expecting to hear the grinding sound of metal on metal that never came. Whew!

Once I got to SKAS, I was treated to the sight of a beautiful sundog.



Saturday morning, John O'bryan and Keith Armstrong worked on the Carson roll off roof observatory, Al Alecia and I sealed some of the observing pads, Ray Blumhorst trimmed weeds, and Tommy Dowling (licensed electrical contractor), worked on getting heaters up and running in the trailer.

Other members started arriving as we finished up for the day, so by sunset, there were about 12 members setting up for a night of viewing. The low turnout was likely due to Mother's Day weekend.



Getting setup for a clear night of viewing and imaging

Keith and Al got the Gordon Mitchell Observatory (GMO) open for "first light" for the 16- inch Orien Earnst Newtonian after a nearly 3-year hiatus. Judging from the time and orientation of the scope, it was probably pointed at Venus.



Keith makes the final adjustments on the Orien Earnt Newtonian and Victoria Fegen takes a first look through it.

The night was clear, and although the temperature dropped down to about 40 degrees, I could still hear a lot of activity ---Keith was conducting his star hopping class, I overheard someone demonstrating how to use an iPhone to capture the Milky Way, while others were on the hunt for star clusters. Since Spring is Galaxy Season, my targets for the night were Whale and Hockey Stick Galaxies and M101.



Victoria Fegen's first image of the Milky Way with her smartphone (the red on the lower left is from the red light on a table in the GMO)



M101 (Pinwheel galaxy) is a spiral galaxy nearly twice the diameter of our Milky Way. It is estimated to contain over 1 trillion stars and is located about 25M light years away.



This image shows the Whale galaxy (NGC4631) on the lower right corner and the Hockey Stick Galaxy (NGC4627) in the upper left. The Whale is about 25M light years away, and the Hockey Stick is about 30 M light years away.

The M101 image is a stack of 20x180 second exposures, and the Whale and Hockey Stick image is a stack of 40x180 second exposures. Both were taken through a Celeron 9.25 inch SCT with a f 6.3 focal reducer and an ASI 2600MC Pro camera. The mount is an AM5 with a 400mm guide scope and ASI120mm guide camera controlled by an ASIAIR Pro.

LAASt Week By Keith Armstrong

Happy Sunday, Y'all!

What a week it was, three trips to SKAS and one to Mt Wilson. I met a bunch of cool people and helped to get a Super Big Gulp's worth of work done. Perhaps one for the books!

It started last Sunday when I broke away from Mother's Day plans to go pick up a newly donated 10.5" LX200 from Harvey Freed. He was an active LAAS member for a long time and I believe he said he was president at one point. It was great listening as he told me stories of trying to cut out early from his dentist practice to get to SKAS and set up for a night of hand guided analog AP. The patience it took and not knowing how the images came out until after developing is crazy. Some of his images were featured on Sky and Telescope. He seemed to glow when talking about those days. In that moment it occurred to me that we are living them right now in our own lives, and it really put another scoop of coal in the motivational boiler. His telescope will be included into the loaner program as of Wednesday, if you want to see what he saw.

The following Tuesday had me out in the deep Valley to pick up another donor scope. It is a humble 6" Criterion newt, but it has a tracking motor and what appears to be actually useable setting circles. If you are curious to learn the way that the cool kids at Griffith park and Mt Wilson operate those big telescopes, this might be a bite-sized way to learn it. My 6" Orion has setting circles, but they are too small to make any accurate setting and it put me off of learning how to locate objects this way. This Criterion was probably a serious piece of kit for it's time and will also track your target once you spot it via an RA motor (if it works, we will see at Garvey). This will also be available as a loaner on Wednesday.

Later that Tuesday night, Chriss B and I made a trip to SKAS with a trailer-full of this:



A JMI 14.5" Binocular telescope! One entire Dob/eye. It is an absolute unit of an instrument and we are incredibly fortunate to have it in our stable at SKAS. Chriss and I picked it up at around 9pm and went straight up the mountain to it's new home. Getting the two sides to display the same image was too difficult to do at night, so the realistic goal of the evening was to make sure that all of the controls worked properly (they do) and make sure it passes light on both sides (it did). All that monkeying around got us to 3am and we crashed out in the newly heated bunk room. The following morning we returned the trailer to the donor and then went to work a bit on the tired side. Thank you Chriss for being an amazing partner in this operation, I will always think of you when using this beast.

The following Thursday was something I had been looking forward to for about a year. The main reason I joined this group was because I was tired of being lonely while stargazing. I certainly had a need for learning how to use my telescope, but going out by myself all the time was really getting the best of me. The first LAAS event I did was a 60" night and some dude named Brian Elerding happened to be there too. We had a few small interactions that night, but the enthusiastic and inviting way he presented his knowledge stood out to me. Also he was saying that he was going out all the time by himself at someplace called "Chuchupate Ranger Station". We didn't exchange contact info that night, but I couldn't shake the feeling that he might be someone to stay in touch with. I hunted his ass down systematically, by google-ing the names of everyone on the email that Darrell sent pictures to from that night and reached out. We then worked out a trip to his astro spot. That would be the first trip of many to The Chooch which was a steady combination of camaraderie, knowledge sharing , and reciprocal enthusiasm. We would get others to join us from time to time creating our band of oft-frozen, sucker hole loving fools called the Lockwood Celestial Bodies. But a good amount of the time it was just him and I. I grew a crazy amount in this one year, and I am so grateful to have Brian as a mentor and friend. We often talked about becoming Star members so we could go to SKAS whenever we wanted to as an option, and on Thursday it finally did.

I didn't bring a scope for this trip as I wanted to be sure that the Bino was working for Dark Sky Night. I got there early enough to have plenty of daylight to work out alignment of the two barrels. The moment that the I got a little yucca tree to jump to the center of both eyepieces was amazing. This scope adjusts with handlebars like a motorcycle, and all of the tweaks are made with electric motors via a control panel placed above the aforementioned handlebars. She is finicky to be sure, but some of the views seen through it are pretty special, particularly M11 and the larger globs. I am sad that I missed the window to see Pleides, M35 and M37 with it. Brian taught me how to use the DSC system, as it is the same one he has on his Dob. If you have the patience, it is definitely worth your time to learn to use this scope. Let me show you how the next time you are at SKAS! We had a good night, as the marine layer in the city caught some light pollution from reaching us, and seeing cleaned up after midnight. We stayed out about an hour and a half later than we planned and also got caught up in the 5 South closure. Home at 5am... not good.

This takes us to Friday at Mt Wilson. Talks and Telescopes is the most unique outreach we do. As opposed to schools and Griffith, these are paid events for people that want to sit in on a specific lecture or art exhibit. The crowd is a bit more mature but enthusiastic enough to make the trip to Mt Wilson. Friday was a great example of what makes these events special. It was a wine and charcuterie affair, with the dapper crowd taking the time to look through our scopes and ask insightful questions. I believe we may have made a couple of recruits that evening, we will see... As per usual, Zoly got the first sighting by spotting Venus before it became naked eye visible in broad daylight. It was a fun and warm night (60°!) and we saw a number of globs and galaxies from our little nest alongside the big 100". In a way, I felt like our small scopes were like baby ducks next to the big momma duck in the dome.

FINALLY, Dark Sky Night! Last night was sort of a payoff for me for the other trips leading up to this week. The thing is, my big takeaway from yesterday wasn't astronomy based. Yes, I am excited that we had a pretty good turnout with some new members and they were all great company. Yes, I am thrilled to operate the GMO 16" reflector again. Yes, I am happy that the bino operated well in its first full outing, pics below:

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But the wow factor I felt from yesterday came well before the sun went down.

We had a FANTASTIC work day at SKAS yesterday. I thought last week was phenomenal (and it was), but this week we were rolling about 12 people deep and everyone was in full focus. This was awesome. About half were there just for working and didn't stay for viewing that night. We are sooooooo close to finishing the Carson shed now. I think most, if not all of the pads are freshly weatherproofed. The weed whacking crew was large in number and effective, knocking down the early growth and setting us up for a round of herbicide. I believe we are inspections compliant in the weed department now. The trailer got a bit of cleaning (more to come), and GMO got fully cleaned up and is ready for regular use (especially since the roof is now relatively easy to open and close. I did it myself a couple of times yesterday).



Between last week and this week, I suspect we will have checked the boxes of A LOT of our to-do list. I look forward to the next Lockwood meeting to measure how far we have come in such a short amount of time. To all of you who have put the time and sweat equity into SKAS, I thank you. But it is your SKAS too, and I hope you are proud in the way the place looks and feels now, specifically because of your effort. Each time we go out there, the place gets better and better, and as custodians of the property you are the ones making it so. I hope you are feeling the reward for this, I know I do.

Join us and see what I mean...

-Keith

Look Up in the Sky - It's a Bird By Theresa Summer

Bird constellations abound in the night sky, including **Cygnus**, the majestic swan. Easy to find with its dazzling stars, it is one of the few constellations that look like its namesake and it is full of treasures. Visible in the Northern Hemisphere all summer long, there's so much to see and even some things that can't be seen. To locate Cygnus, start with the brightest star, **Deneb**, also the northeastern most and dimmest star of the Summer Triangle. The Summer Triangle is made up of three bright stars from three different constellations – read more about it in the September 2022 issue of Night Sky Notes. "Deneb" is an Arabic word meaning the tail. Then travel into the triangle until you see the star **Albireo**, sometimes called the "beak star" in the center of the summer triangle. Stretching out perpendicular from this line are two stars that mark the crossbar, or the wings, and there are also faint stars that extend the swan's wings.

From light-polluted skies, you may only see the brightest stars, sometimes called the Northern Cross. In a darker sky, the line of stars marking the neck of the swan travels along the band of the **Milky Way**. A pair of binoculars will resolve many stars along that path, including a sparkling open cluster of stars designated **Messier 29**, found just south of the swan's torso star. This grouping of young stars may appear to have a reddish hue due to nearby excited gas.

Let's go deeper. While the bright beak star Albireo is easy to pick out, a telescope will let its true beauty shine! Like a jewel box in the sky, magnification shows a beautiful visual double star, with a vivid gold star and a brilliant blue star in the same field of view. There's another marvel to be seen with a telescope or strong binoculars – the Cygnus Loop. Sometimes known as the **Veil Nebula**, you can find this supernova remnant (the gassy leftovers blown off of a large dying star) directly above the final two stars of the swan's eastern wing. It will look like a faint ring of illuminated gas about three degrees across (six times the diameter of the Moon).

Speaking of long-dead stars, astronomers have detected a high-energy X-ray source in Cygnus that we can't see with our eyes or backyard telescopes, but that is detectable by NASA's Chandra X-ray Observatory. Discovered in 1971 during a rocket flight, Cygnus x-1 is the first X-ray source to be widely accepted as a black hole. This black hole is the final stage of a giant star's life, with a mass of about 20 Suns. Cygnus x-1 is spinning at a phenomenal rate – more than 800 times a second – while devouring a nearby star. Astronomically speaking, this black hole is in our neighborhood, 6,070 light years away. But it poses no threat to us, just offers a new way to study the universe.

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This article is distributed by NASA's Night Sky Network (NSN). The NSN program supports astronomy clubs across the USA dedicated to astronomy outreach.

Visit nightsky.jpl.nasa.gov to find local

Cygnus the Swan Deneb Deneb Cygnus x-1 black hole Albireo Cygnus Loop/ Veil Nebula

Look up after sunset during summer months to find Cygnus! Along the swan's neck find the band of our Milky Way Galaxy. Use a telescope to resolve the colorful stars of Albireo or search out the open cluster of stars in Messier 29. Image created with assistance from Stellarium: stellarium.org



While the black hole Cygnus x-1 is invisible with even the most powerful Optical telescope, in X-ray, it shines brightly. On the left is the optical view of that region with the location of Cygnus x-1 shown in the red box as taken by the Digitized Sky Survey. On the right is an artist's conception of the black hole pulling material from its massive blue companion star.

Check out the beautiful bird in your sky this evening, and you will be delighted to add Cygnus to your go-to summer viewing list. Find out NASA's latest methods for studying black holes at <u>www.nasa.gov/black-holes</u>.

Full moon is on the 3^{ed}, last quarter is on the 10^{eb}, new moon is on the 17^{eb}, and first quarter is on the 26^{eb}. Summer begins when the sun passes through the summer solstice on June 21. It then reaches its highest point along the ecliptic. This is the longest day of the year, and hence also the shortest night. The sun rises at its earliest time in the morning and sets at its latest time in the evening. After this, the days will get shorter and nights longer.

On the 1st, **Mercury** rises at 4:34 a.m., PDT, just a little north of east and about 70 minutes ahead of the sun. Mercury rises later each night. By the 30st, Mercury rises only six minutes ahead of the sun, and so will be unobservable. You'll need a telescope with a magnification of 150x to see the planet's diminutive disk, which is only eight arcseconds wide. **DO NOT** observe any planet when it comes close to the sun, for the danger to the eyes is great.

Venus is due west and three quarters of the way up from the horizon after sunset. The planet sets at 11:20 p.m., PDT, on the 1st, and at 10:36 p.m., PDT, on the 30th, so it'll be visible in the evening hours this entire month. You'll need a magnification of 100x or more to see its disk, which changes from a half phase to a medium wide crescent.

Mars crosses from Cancer the Crab to Leo the Lion this month. Mars is due west, halfway above the horizon after sunset, and sets at 11:51 p.m., PDT, on the 1st, and at 10:49 p.m., PDT on the 30th. Mars is a very small disk which will require a magnification of 500x or more to see any-thing on its disk, and so it is essentially unobservable until the last few months of 2024.

Jupiter is in Aries the Ram, and rises due east at 3:46 a.m., PDT, on the 1st, and rises at 2:09 a.m., PDT, on the 30st. A small telescope with a magnification of 50x or more will show the four Galilean moons and the Red Spot.

Saturn is in Aquarius the Water Bearer and rises before Jupiter at 1:18 a.m., PDT, on the 1st in the east-southeast, and at 11:21 p.m., PDT, on the 30st. The rings and Saturn's largest moon Titan can be seen with a magnification of 50x or more.

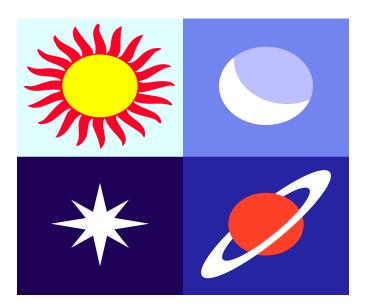
Uranus is in Aries the Ram. Uranus rises at 4:34 a.m., PDT, an hour before the sun does, making it difficult to observe due to its faintness. On the 30th, Uranus rises in the morning sky at 2:45 a.m., PDT, making it easier to observe. However, its small disk requires magnifications of 200x or more to see its diminutive disk.

Neptune is in Pisces the Fishes. Neptune rises due east at 2:11 a.m., PDT, on the 1st, and at 12:17 a.m., PDT, on the 30th. A magnification of over 150x is needed to see its diminutive disk.

David Nakamoto has been observing the heavens through various scopes since he was in the 5th grade. You can contact Dave by email at:

<u>dinakamoto@hotmail.com</u>.





Almanac

June 1, 2 - **Mars in the Beehive.** The planet Mars will pass through the beehive cluster, an open cluster of stars located in the constellation Cancer. Mars can be seen in or very near the cluster on the nights of June 1st and 2nd. A good pair of binoculars should be enough to see this rare event all though a telescope will provide a much better view.

June 4 - Full Moon. The Moon will be located on the opposite side of the Earth as the Sun and its face will be will be fully illuminated. This phase occurs at 03:43 UTC. This full moon was known by early Native American tribes as the Strawberry Moon because it signaled the time of year to gather ripening fruit. It also coincides with the peak of the strawberry harvesting season. This moon has also been known as the Rose Moon and the Honey Moon.

June 4 - Venus at Greatest Eastern Elongation. The planet Venus reaches greatest eastern elongation of 45.4 degrees from the Sun. This is the best time to view Venus since it will be at its highest point above the horizon in the evening sky. Look for the bright planet in the western sky after sunset.

June 12, 13 - Venus in the Beehive. The planet Venus will pass through the beehive cluster, an open cluster of stars located in the constellation Cancer. Venus can be seen in or very near the cluster on the nights of June 12 and 13. A good pair of binoculars should be enough to see this rare event all though a telescope will provide a much better view.

June 18 - New Moon. The Moon will located on the same side of the Earth as the Sun and will not be visible in the night sky. This phase occurs at 04:39 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.

June 21 - **June Solstice**. The June solstice occurs at 14:51 UTC. The North Pole of the earth will be tilted toward the Sun, which will have reached its northernmost position in the sky and will be directly over the Tropic of Cancer at 23.44 degrees north latitude. This is the first day of summer (summer solstice) in the Northern Hemisphere and the first day of winter (winter solstice) in the Southern Hemisphere.

Source:

http://www.seasky.org/astronomy/astronomy-calendar-2023.html

June 2023

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|-----|--------------------------|-----|---------------------------------|-----|-----|----------------------------|
| | | | Garvey Night | 1 | 2 | 3 |
| 4 | 5 | 6 | 7 Garvey Night Board Mtng | 8 | 9 | 10 Family Night |
| 11 | 12 General Meeting | 13 | 14 Garvey Night | 15 | 16 | 17 Dark Sky Night |
| 18 | 19 | 20 | 21 Garvey Night | 22 | 23 | 24 Public Star Party |
| 25 | 26 | 27 | 28 Garvey Night | 29 | 30 | |



Raphael Lieberman Nick Nordoff

Sehoon Park

LAAS Board Meetings

.Due to the pandemic, all Board Meetings are now held online, live on Zoom. Please check the information posted in the IO Group Forum for any current news related to these meetings. If you wish to attend a board meeting, please send a request to <u>secretary@laas.org</u> for a link to Zoom.

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 and become more involved in the LAAS as a member.

Volunteers are always welcome to write articles for our monthly newsletter or share images captured of the night sky. Members are also welcome to come up with new ideas and future activities for the membership which can be shared in Board meetings. If you are artistic and enjoy creating posters or flyers, or printable astro-educational handouts for further star parties, please let us know.

Time To Renew Your Membership?

Please remember to renew your membership once you receive notice from the Club Secretary in your email inbox. The secretary will send you a link to a form created just for you for your renewal.

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



Outreach Team Volunteers

"We are dedicated to advancing the knowledge of astronomy, optics, telescope making, and the wonders of our universe."



One of the ways the LAAS advances the knowledge of astronomy and the wonders of our universe is to visit local schools in our area with telescopes. The telescope operators are current members of the club. Many schools invite us to their campus to provide views of the objects in the night sky for not only the children but for the staff and parents, too. Some schools invite us on scheduled "Science Nights" while other schools plan a special evening of astronomy education on their campus. Other activities may be planned by the school during the event while our members are stationed in one specific location with telescopes to share with students and other school guests. These special members are part of our Outreach Team.

Our Outreach Coordinator is Heven Renteria. He and the others on his team have been attending outreach events on campuses throughout Los Angeles county and beyond. Many of them travel great distances (and after a full day of work) to share astronomy with children and the public. The LAAS is also invited to attend special community events or events at state or city parks, libraries, and other venues. Re-

cently, the club could not accept additional requests for outreach events because the team's schedule was full.

The LAAS needs more members to join the outreach team. Some of these events may be local to you. Outreach members are greatly appreciated by the school administrators and students at every event.

You don't need to be an expert using a telescope as the members of the team will help you set up and find objects in the sky to share with the students. You can attend an outreach event without a telescope and help the team with their telescopes or help with the long lines of children who are excited to look through a telescope for the first time.

These events are fun and rewarding in many ways. The enthusiasm shared by the children is infectious, in the best way possible. If you enjoy attending Public Star parties at the Griffith Observatory, you will enjoy a school outreach event.

The Outreach Team really needs your support and participation.

Please contact Heven at outreach@laas.org to learn more.

Thank you for volunteering!

Andee Sherwood Communications



John O'Bryan shows a student the Sun at Overland Elementary, 2021. Photo credit: Van Webster

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 for more information.



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

Outreach Request Form

LAAS Club Merchandise

LAAS T-SHIRTS, HOODIES, MUGS, AND MORE!

To find new merchandise from our store, please use the following link: **Shop Here**

Please note all prices listed are subject to change and include all shipping and handling costs. All items will be shipped directly to the address you provide on your order form.





LAAS Hoodie







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John O'Bryan, Jr.

Treasurer

Astronomy Magazines

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.



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On the Checkout form, enter "network" in the Coupon Code box.



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Use this link to begin the subscription process.



Join the Astronomical Society of the Pacif-

ic and help support the cause of advancing science literacy through engagement in astronomy. Member benefits include a subscription to <u>Mercury Magazine</u>, published quarterly.

Club Contact Information

President: Darrell Dooley

President@laas.org

Vice President: Alecia Hurst

hurst.alecia@gmail.com

Treasurer: John O'Bryan, Jr.

treasurer@laas.org

Secretary: Spencer Soohoo

secretary@laas.org

Outreach Coordinator: Heven Renteria

outreach@laas.org

Club Communications: Andee Sherwood

communications@laas.org

Mt. Wilson Coordinator: Darrell Dooley

mtwilsoncoordinator@laas.org

Bulletin Editor: Andee Sherwood

communications@laas.org



Club Phone Numbers

LAAS Message Phone: 213- 673-7355 (Checked daily) Griffith Observatory: 213-473-0800

Sky Report:

213-473-0880



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

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

