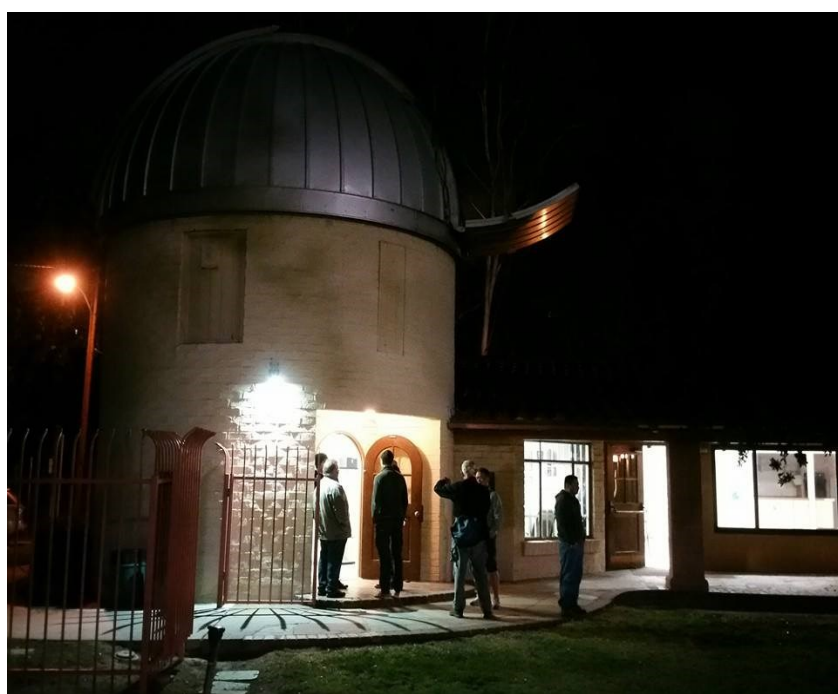




THE LOS ANGELES ASTRONOMICAL SOCIETY

APRIL 2023
VOLUME 97, ISSUE 4

THE BULLETIN



All club members and the public are welcome to visit the Garvey Ranch Park Observatory on Wednesday nights from 7PM to 10 PM. The LAAS members will open the dome on clear nights to share objects in the night sky. To learn more about our "Garvey Nights," please follow this link:

<https://www.laas.org/garvey>

Upcoming Club Events

- Board Meeting, Apr. 5**
- General Meeting, Apr. 17**
- Dark Sky Night: Apr.15**
- Public Star Party: Apr. 29**

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Update Your Contact Information

Please send any contact info changes to the club secretary at

secretary@laas.org.

Garvey Nights -The Garvey Ranch Observatory is open to the public every Wednesday night from 7 PM to 10 PM, weather permitting. Masks are required inside the facilities.

Mt. Wilson Nights - Schedule For 2023

60 Inch and 100 Inch Nights

60 Inch Dates:

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

April 22

May 20

June 17

July 15

August 12

September 16

October 14

100 Inch Nights:

April 15

September 9



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-telescope-observing/>

How to Make a Reservation?

Please contact Darrell Dooley **BEFORE** 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.

Reserve your spot by paying by credit cards or PayPal using the following link:

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

Outreach Report—March 23, 2023

By Van Webster

Outreach Report

Don Benito Fundamental School

Pasadena, Ca.

March 23, 2023

A small cadre of Los Angeles Astronomical Society members ventured up the foothills of the San Gabriel Mountains to provide an astronomy outreach activity for the students, parents and faculty of Don Benito Fundamental School in Pasadena. After some small confusion about where the set up area was to be located, the group set up three telescopes under cloudy skies.

Our leader had assured us that the sky would clear after 4:00 PM. At 6:00 PM the clouds were still thick above us with a thin sliver of clarity over downtown Los Angeles, miles away. A light mist coated the instruments as we waited for improved conditions.

There were a few students about the playground kicking balls and waving light sabers. The astronomers had some time to catch up with each other on the activities of the day.

At 7:00 PM the skies opened up with substantial rain, leaving astronomers to quickly gather up their gear and pack it out of the rain. So not much happened astro-wisely at this event. Looking for better conditions next time.



Outreach Report - March 2, 2023

By Van Webster

Outreach Report
St. James Church
South Pasadena, Ca
3/2/2023

After a week of rains and wild weather it was nice to get out and do some public astronomy on Thursday night March 2nd at St. James Church in South Pasadena. A strong showing of LAAS members set up their telescopes in the church parking lot. Telescope observing was only one of a number of science based activities for the church members.

The night was cold and crisp but not too windy. The Moon was the first target with the Venus-Jupiter near conjunction following on quickly. Some extra effort by the event organizers got a strong flood light turned off brought cheers of the astronomers. As the night sky darkened more targets came into view including M42 and M45, the Pleiades. A spirit of friendly competition brought on some more challenging targets including M81-M82 and the planet Uranus.

The crowd skewed to the young side with lots of pre-kindergarten kids taking their turns at the eyepieces including some still in diapers. A few teens also came by. About 50 folks, mostly families, participated in the event.

On the LAAS side it was good to see a number of younger club members participating as well as the regulars. On a personal note, this event was my 300th outreach session.

Things wound down at about 7:30 PM and the astronomers packed up their gear and were able to head homeward in good order.



Van Webster



Rob Komoto



Mars and Jupiter for 2023

By David Nakamoto

Well, this year and the last, for some reason I haven't had any clear steady views of any planets, but then, at the beginning of 2023, Saturn disappeared, Jupiter was getting low in the southwest, and Mars was a month or more away from the relatively distant opposition where it was only 17 arcseconds wide at its best.

My best shots of Jupiter and Mars came, not from Garvey Ranch or a Griffith public star party, but during a public outreach event at Sierra Madre Middle School on January 27.

As it happened, Ganymede's shadow was transiting Jupiter's disk. This made it great for my Orion 7-inch f/15 Maksutov and Celestron NexImage-10 camera, because Ganymede's shadow is large. This is a stack of a couple of hundred frames from a video. While not sharp, it does show what the other scopes saw visually. Jupiter was setting in the west and storms and the asphalt didn't help with the air currents. I displayed my images onto a 32 inch LED TV for Wow factor.



And below is the best image of Mars I got this opposition season. Thank Goodness for the clarity and magnification of the Mak and NexImage camera. Again, a stack of hundreds of frames from a video.



I can be reached at dinakamoto@hotmail.com

Clear and steady nights everyone !

Solar Eclipses Are Coming!

David Prosper

Have you ever witnessed a total solar eclipse? What about an annular solar eclipse? If not, then you are in luck if you live in North America: the next twelve months will see two solar eclipses darken the skies for observers in the continental United States, Mexico, and Canada!

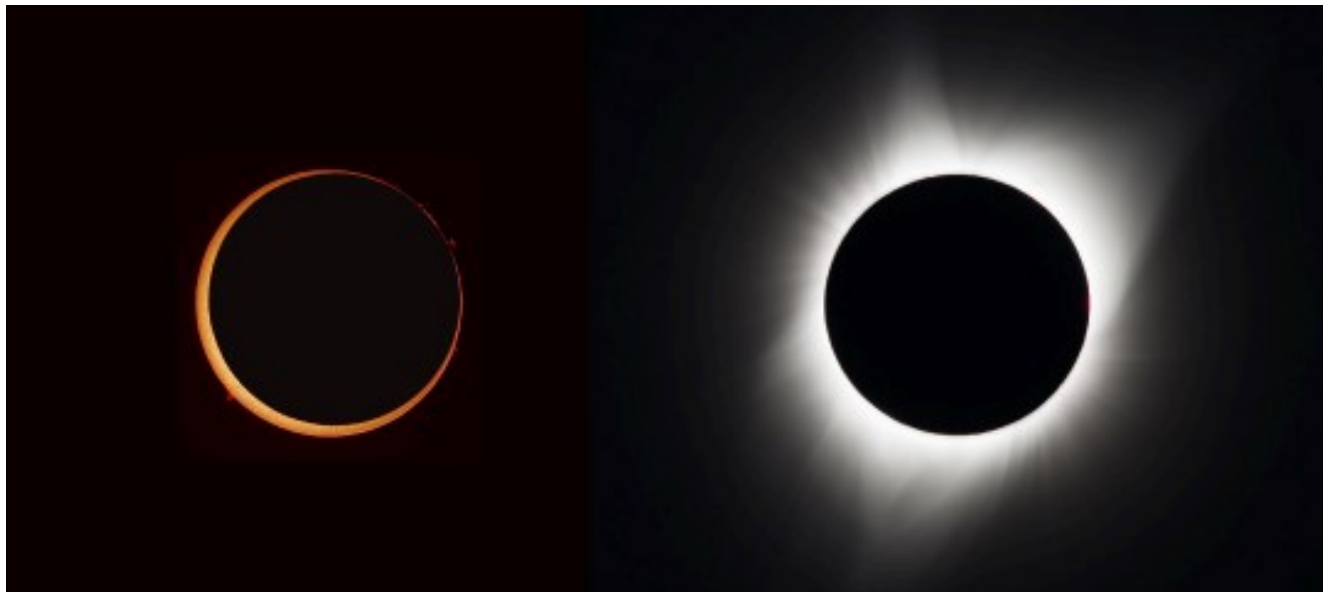
Solar eclipse fans get a chance to witness an annular eclipse this fall. On Saturday, October 14, 2023, the Moon will move exactly in front of the Sun from the point of view of observers along a narrow strip of land stretching across the United States from Oregon to Texas and continuing on to Central and South America. Since the Moon will be at its furthest point in its orbit from Earth at that time (known as apogee), it won't completely block the Sun; instead, a dramatic "ring" effect will be seen as the bright edge of the Sun will be visible around the black silhouette of the Moon. The distinct appearance of this style of eclipse is why it's called an annular eclipse, as annular means ring-like. If you are standing under a tree or behind a screen you will see thousands of ring-like shadows projected everywhere during maximum eclipse, and the light may take on a wan note, but it won't actually get dark outside; it will be similar to the brightness of a cloudy day. This eclipse must only be observed with properly certified eclipse glasses, or other safe observation methods like pinhole projection or shielded solar telescopes. Even during the peak of the eclipse, the tiny bit of the Sun seen via the "ring" can damage your retinas and even blind you.

Just six months later, a dramatic total solar eclipse will darken the skies from Mexico to northeast Canada, casting its shadow across the USA in a strip approximately 124 miles (200 km) wide, on Monday, April 8, 2024. While protection must be worn to safely observe most of this eclipse, it's not needed to witness totality itself, the brief amount of time when the Moon blocks the entire surface of the Sun from view. And if you try to view totality through your eclipse viewer, you won't actually be able to see anything! The Moon's shadow will dramatically darken the skies into something resembling early evening, confusing animals and delighting human observers. You will even be able to see bright stars and planets - provided you are able to take your eyes off the majesty of the total eclipse! While the darkness and accompanying chilly breeze will be a thrill, the most spectacular observation of all will be the Sun's magnificent corona! Totality is the only time you can observe the corona, which is actually the beautiful outer fringes of the Sun's atmosphere. For observers in the middle of the path, they will get to experience the deepest portion of the eclipse, which will last over four minutes - twice as long as 2017's total solar eclipse over North America.

While some folks may be lucky enough to witness both eclipses in full – especially the residents of San Antonio, Texas, whose city lies at the crossroads of both paths – everyone off the paths of maximum eclipse can still catch sight of beautiful partial eclipses if the skies are clear. The Eclipse Ambassadors program is recruiting volunteers across the USA to prepare communities off the central paths in advance of this amazing cosmic ballet. Find more information and apply to share the excitement at eclipseambassadors.org. NASA has published a fantastic Solar Eclipse Safety Guide which can help you plan your viewing at bit.ly/nasaclipsesafety. And you can find a large collection of solar eclipse resources, activities, visualizations, photos, and more from NASA at solarsystem.nasa.gov/eclipses



This detailed solar eclipse map shows the paths of where and when the Moon's shadow will cross the USA for the upcoming 2023 annular solar eclipse and 2024 total solar eclipse, made using data compiled from multiple NASA missions. Where will you be? This map is very detailed, so if you would like to download a larger copy of the image, you can do so and find out more about its features at: <https://svs.gsfc.nasa.gov/5073>. Credits: NASA/Scientific Visualization Studio/Michala Garrison; eclipse calculations by Ernie Wright, NASA Goddard Space Flight Center.



Photos of an annular total solar eclipse (left) and a total solar eclipse (right). Note that the annular eclipse is shown with a dark background, as it is only safe to view with protection – you can see how a small portion of the Sun is still visible as the ring around the Moon. On the right, you can see the Sun's wispy corona, visible only during totality itself, when the Moon completely – or totally - hides the Sun from view. A total solar eclipse is only safe to view without protection during totality itself; it is absolutely necessary to protect your eyes throughout the rest of the eclipse! Credits: Left, Annular Eclipse: Stefan Seip (Oct 3, 2005). Right, Total Eclipse, NASA/Aubrey Gemignani (August 21, 2017)



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 clubs, events, and more!

Monthly Sky Report

By Dave Nakamoto

Full moon is on the 5th, last quarter is on the 13th, new moon is on the 19th, and first quarter is on the 27th. The Lyrid meteor shower is active from the 15th through the 29th, with the peak being on the night/morning of the 22nd/23rd. At the peak about 20 meteors an hour may be visible, with occasional bright fireballs. The nine-percent evening crescent moon will not interfere with seeing these meteors, but a dark sky away from all lights is recommended.

On the 1st the sun sets at 7:14 p.m., PDT, and **Mercury** sets at 8:27 p.m., PDT, one hour and 13 minutes later. On the 11th, Mercury is at greatest eastern elongation, 20 degrees away from the sun. It slowly approaches the sun for the rest of April. You'll need a telescope with a magnification of 150x to see the planet's diminutive disk. Mercury is about seven degrees north of west and about one-third of the way up from the horizon. On the 25th, Mercury is within ten degrees away from the sun and is not observable. **DO NOT** observe any planet when it comes close to the sun, for the danger to the eyes is great.

Venus sets at 10:15 p.m., PDT, on the 1st, three hours after sunset. On the 10th, Venus is less than three degrees south of the bright open star cluster the Pleiades. On the 30th, the sun sets at 7:36 p.m., PDT, and Venus sets even later at 11:06 p.m., PDT, three and a half hours later. Venus is seven degrees north of west, and about one-third of the way up from the horizon. You'll need a small telescope to see its disk, which is a wide gibbous phase. Again, **DO NOT** observe any planet when it comes close to the sun, for the danger to the eyes is great.

Mars is in Gemini the Twins. On the 1st, the planet sets at 1:49 a.m., PDT. On the 30th, Mars sets at 12:56 a.m., PDT. Mars continues to diminish in size and decrease in brightness for the rest of 2023. This month it reduces from six arcseconds to five arcseconds in width and has faded to a magnitude of +1.1.

On the 1st, **Jupiter** sets at 7:47 p.m., PDT, only 30 minutes after sunset. This makes it practically impossible to observe the planet. For the rest of April, Jupiter slowly approaches the sun and hence is unobservable.

On the 1st, **Saturn** rises at 5:05 a.m., PDT, and the sun rises at 6:41 a.m., PDT, so Saturn rises an hour and a half before sunrise. On the 30th the planet rises at 3:19 a.m., PDT. Saturn is 30 degrees south of east and about one-fifth the distance from the horizon to the zenith, the highest point in the sky. The rings and Saturn's largest moon Titan may be seen with a small telescope with a magnification of 50x.

Uranus is in Aries the Ram. On the 1st the planet sets at 10:00 p.m., PDT. On the 30th, the sun sets at 7:36 p.m., PDT, and Uranus sets at 8:13 p.m., PDT, 37 minutes later, and hence it is unobservable. On the 15th, Uranus is located at Right Ascension 2^h 59^m 21^s and a declination of +16° 39' 55". Uranus' disk is only 3.4 arcseconds wide, so a magnification of 150x is needed to even see it as a disk.

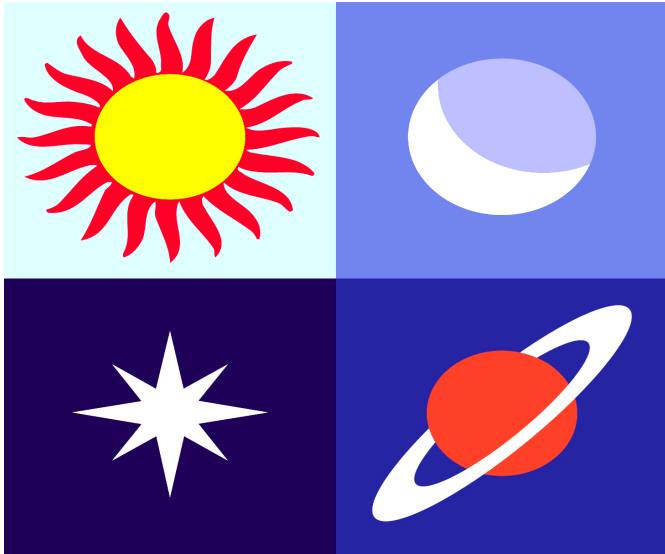
Neptune is in Pisces the Fishes. The planet rises at 6:06 a.m., PDT, half an hour before sunrise, and hence cannot be observed. On the 30th, Neptune rises at 4:14 a.m., PDT, almost two hours before sunrise. The planet is just south of east. On the 15th, Neptune is located at Right Ascension 23^h 46^m 49^s and a declination of -2° 42' 36". Neptune's disk is only 2.2 arcseconds wide, so a magnification of 150x is needed to even see it as a disk.

Garvey Ranch park observatory is open every Wednesday night from 7:30 p.m. to 10:00 p.m. The telescope is open for public viewing if the sky is clear. It is manned by volunteers from the Los Angeles Astronomical Society. Admission and viewing through the telescope are free.



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

dinakamoto@hotmail.com.



Almanac

April 6 - 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 04:37 UTC. This full moon was known by early Native American tribes as the Pink Moon because it marked the appearance of the moss pink, or wild ground phlox, which is one of the first spring flowers. This moon has also been known as the Sprouting Grass Moon, the Growing Moon, and the Egg Moon. Many coastal tribes called it the Fish Moon because this was the time that the shad swam upstream to spawn.

April 11 - Mercury at Greatest Eastern Elongation. The planet Mercury reaches greatest eastern elongation of 19.5 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 evening sky. Look for the planet low in the western sky just after sunset.

April 20 - 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 04:15 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.

April 20 - Hybrid Solar Eclipse. A hybrid solar eclipse occurs when the Moon is almost too close to the Earth to completely block the Sun. This type of eclipse will appear as a total eclipse to some parts of the world and will appear annular to others. The eclipse path will begin in the southern Indian Ocean and move across parts of western Australia and southern Indonesia. A partial eclipse will be visible throughout most of Indonesia and Australia. ([NASA Map and Eclipse Information](#)) ([NASA Interactive Google Map](#))

April 22, 23 - Lyrids Meteor Shower. The Lyrids is an average shower, usually producing about 20 meteors per hour at its peak. It is produced by dust particles left behind by comet C/1861 G1 Thatcher, which was discovered in 1861. The shower runs annually from April 16-25. It peaks this year on the night of the 22nd and morning of the 23rd. These meteors can sometimes produce bright dust trails that last for several seconds. The thin crescent moon will set early in the evening leaving dark skies for what should be an excellent show. Best viewing will be from a dark location after midnight. Meteors will radiate from the constellation Lyra, but can appear anywhere in the sky

Source:

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

April 2023

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5 Garvey Night Board Mtng	6	7	8
9	10	11	12 Garvey	13	14 Outreach- Culver City Outreach- Temple City	15 Dark Sky Night 100 Inch Nite
16	17 General Mtng	18	19 Garvey	20	21	22 60 Inch Nite
23	24	25	26 Garvey	27	28	29 Public Star Party
30						

Meet The New Members

Welcome to the LAAS!



Esther Ancrum	Christian Hurley	Bruce Peters	Quvnh Vu
Cole Black	Siddhant Jaiswal	Brooke Ramel	Tina Yang
Luis Castañón	Tommy Lavin	Rena Shahandeh	
Robert, Douglas	Luella Macvie	Jacob Sinclair	
Chris Drachkovitch	Robert Olmeda-Barrientos	Eric Staudenmaier	
Seewai Hui	Koran Pearsall	Tina Varghese	

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 secretary@laas.org 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. Recently, 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



Donate



Disclaimer: The Los Angeles Astronomical Society, Inc. is a public charity, as defined by Internal Revenue Code Section 501(c)(3) and all contributions to the Society are deductible for Federal and State Income tax purposes.

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.



[Click here to subscribe to Sky and Telescope Magazine.](#)



Subscribe or renew to the McDonald Observatory's StarDate Magazine and receive a special discount. Follow this link to subscribe and press "Add to Cart" under the type of subscription option: <http://stardate.org/store/subscribe>

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



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.

Use [this link](#) to begin the subscription process.



[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 [Mercury Magazine](#), published quarterly.

Club Contact Information

President: Darrell Dooley

President@laas.org

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hurst.alecia@gmail.com

Treasurer: John O'Bryan, Jr.

treasurer@laas.org

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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



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



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