



# THE LOS ANGELES ASTRONOMICAL SOCIETY

## THE BULLETIN

APRIL 2022  
VOLUME 96, ISSUE 4



A couple of pretty planetary nebulae in the constellation Cassiopeia. The smaller Abell 6 and the larger Heckathorn-Fesen-Gull 1 (HFG1) nebula. These nebula are made from ejected material of dying stars - our Sun's fate in the distant future. A color composite made from 34 hours of data.

Photo Credit: Brian Paczkowski

### Upcoming Club Events

Dark Sky Night: Apr. 2

Board Meeting: Apr. 6

General Meeting: Apr. 11

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All members are encouraged to contribute articles of interest for publication in The Bulletin. Please send your articles and images to:

[communications@laas.org](mailto:communications@laas.org)

### Update Your Contact Information

Please send any contact info changes to the club secretary at

[secretary@laas.org](mailto:secretary@laas.org).

### Garvey Nights Are Back!!!

The Garvey Ranch Observatory is open to the public on **Wednesday nights only** from 7 PM to 10 PM, weather permitting.

Masks are required inside the facilities.

# 60 and 100 Nights Schedule for 2022

## Mt. Wilson Observatory



### Session Schedule - 2022

The dates above are **all** scheduled on Saturday nights and are **all** half-night events.

April 2

April 30

May 28

June 18

July 23

Aug. 27

**Sept. 24 -This is the only 100 Inch session.**

Oct. 22

Nov. 19

### The Cost per person, per session:

60 Inch Night - \$65.00

100 Inch Night - \$145.00

There will be 20 people, per session.

### 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](mailto: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>

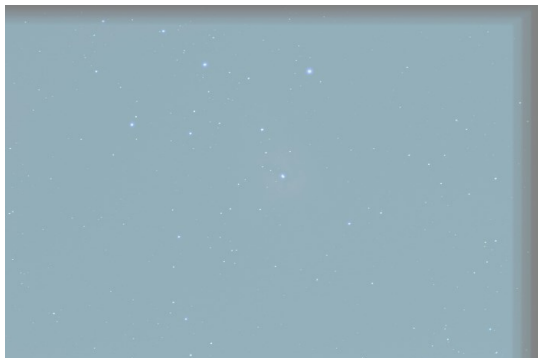
Learn more about these incredible events by visiting Mt. Wilson Observatory's website:

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

<https://www.mtwilson.edu/100-telescope-observing/>

# Astrophotography Class: SharpCap Demo and Light Pollution Removal By Spencer SooHoo

In early February, Two LAAS Members, David Nakamoto and Vance Tyree joined forces to show how they use SharpCap for data capture and some open-source software tools (SiriL and GIMP) for processing images captured under urban, light polluted skies (Bortle 8) at Garvey Ranch Observatory (GRO). The photo below shows the difference processing makes in bringing out detail in the image of M20 (Trifid Nebula) shot through the 8-inch refractor at GRO.



Before and after photos of the Trifid Nebula taken under Bortle 8 skies at GRO.

The sessions were conducted via Zoom video conferences with about a dozen LAAS members in attendance. Dave's session was the first, but unfortunately, the weather didn't cooperate for his demo and he wasn't able to show how to control the mount with the software. Instead, he concentrated on how SharpCap manages the camera, image capture and storage parameters, and went over strategies for adjusting the gain and exposure time. Vance followed up two days later with a demo on how to use SiriL for color correction and removal of background light pollution.

I think I can speak for most of the attendees when I say I found the session quite informative. Thanks to Vance, I'm probably going to spend many late nights re-processing quite a few of my astrophotographs!

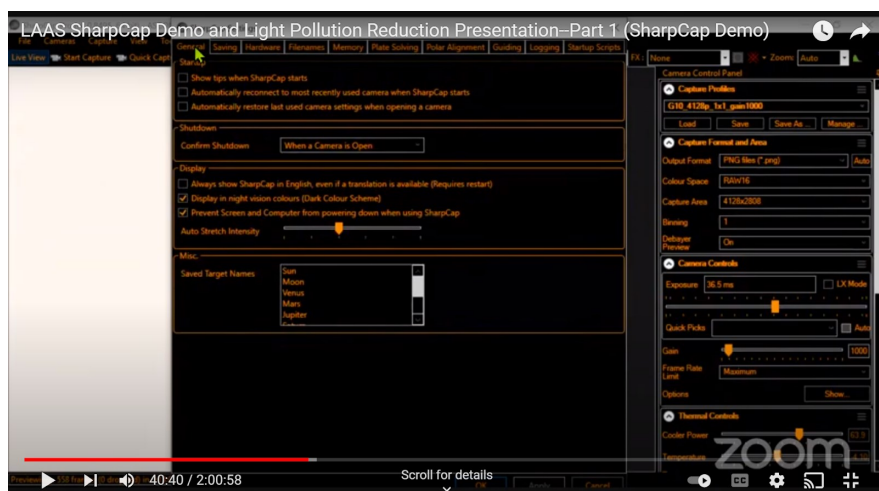
The links for the YouTube recordings are at:

<https://www.youtube.com/user/LosAngelesAstronomy>

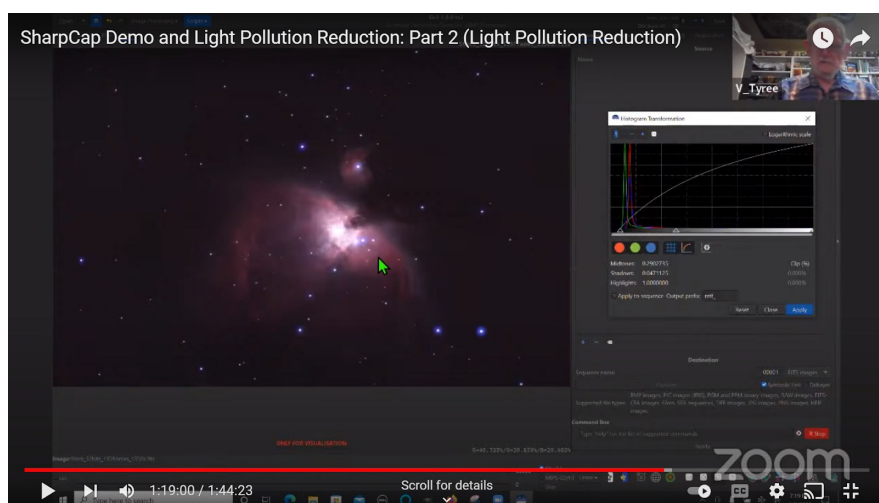
and Vance's writeup on the workflow he uses is on the LAAS Website ([www.laas.org/laas-member-articles](http://www.laas.org/laas-member-articles)). The direct link is: [SiriL-GIMP Light Pollution Removal Workflow](#)

LAAS members attending Dave's  
SharpCap Demo session





Screen shot of SharpCap demo



Screenshot from Vance's talk on using Siril and GIMP for light pollution reduction on an image of the Orion Nebula

Software download links:

SharpCap: Image capture tool that can be used with dedicated astrophotography cameras, webcams, and DSLR cameras <https://www.sharpcap.co.uk/sharpcap/downloads>

Siril: Free software for image capture and pre-processing, including stacking and noise reduction. <https://siril.org/download/>

GIMP: Free alternative to Adobe Photoshop for final processing of astronomy images. <https://www.gimp.org/downloads/>

# Springtime Catspotting: Lynx and Leo Minor

By David Prosper

Many constellations are bright, big, and fairly easy to spot. Others can be surprisingly small and faint, but with practice even these challenging star patterns become easier to discern. A couple of fun fainter constellations can be found in between the brighter stars of Ursa Major, Leo, and Gemini: **Lynx** and **Leo Minor**, two wild cats hunting among the menagerie of animal-themed northern star patterns!

**Lynx**, named for the species of wild cat, is seen as a faint zigzag pattern found between Ursa Major, Gemini, and Auriga. Grab a telescope and try to spot the remote starry orb of globular cluster NGC 2419. As it is so distant compared to other globular clusters - 300,000 light years from both our solar system and the center of the Milky Way - it was thought that this cluster may be the remnants of a dwarf galaxy consumed by our own. Additional studies have muddied the waters concerning its possible origins, revealing two distinct populations of stars residing in NGC 2419, which is unusual for normally-homogenous globular clusters and marks it as a fascinating object for further research.

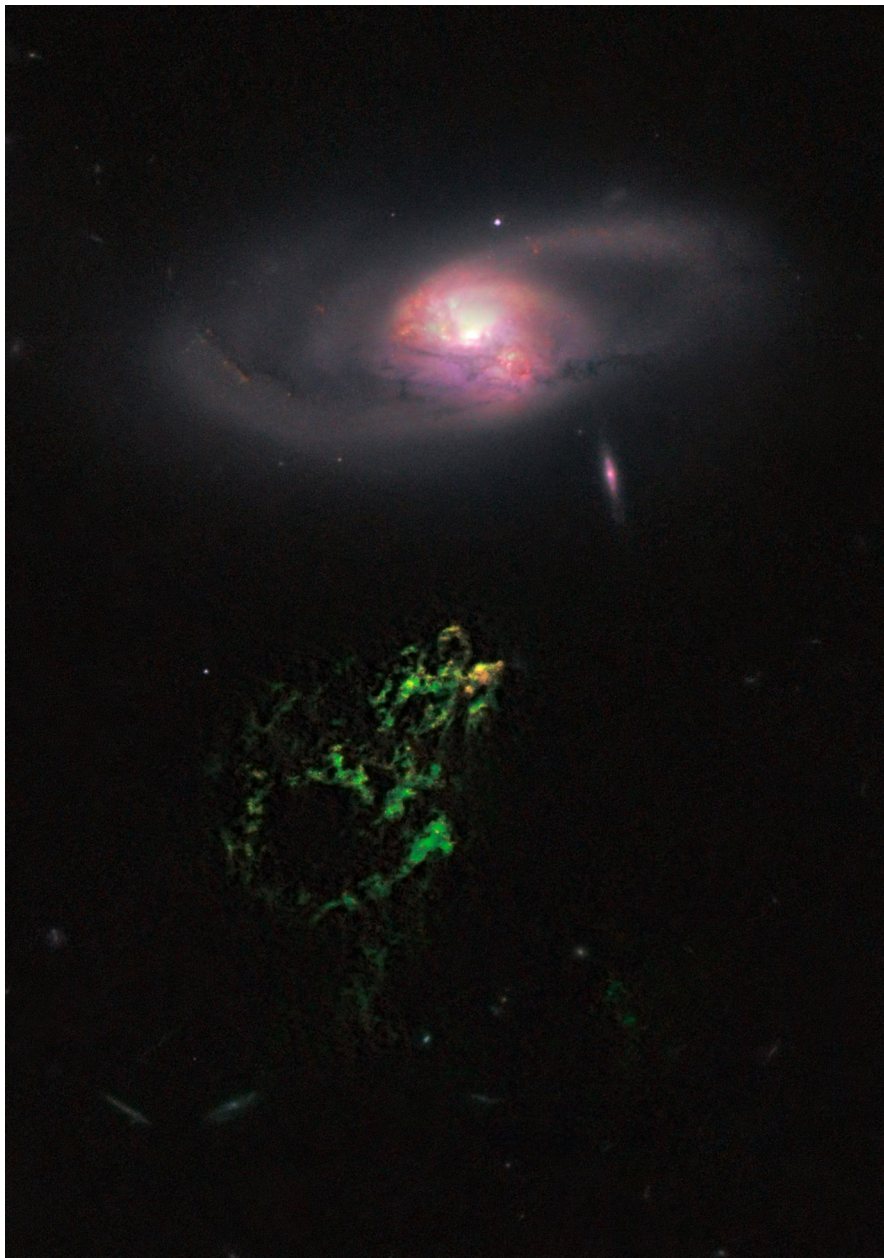
**Leo Minor** is a faint and diminutive set of stars. Its “triangle” is most noticeable, tucked in between Leo and Ursa Major. Leo Minor is the cub of Leo the Lion, similar to Ursa Minor being the cub to the Great Bear of Ursa Major. While home to some interesting galaxies that can be observed from large amateur scopes under dark skies, perhaps the most intriguing object found within Leo Minor’s borders is Hanny’s Voorwerp. This unusual deep-space object is thought to be a possible “light echo” of a quasar in neighboring galaxy IC 2497 that has recently “switched off.” It was found by Hanny van Arkel, a Dutch schoolteacher, via her participation in the Galaxy Zoo citizen science project. Since then a few more intriguing objects similar to Hanny’s discovery have been found, called “Voorwerpjes.”

Lynx and Leo Minor are relatively “new” constellations, as they were both created by the legendarily sharp-eyed European astronomer Johannes Hevelius in the late 1600s. A few other constellations originated by Hevelius are still in official use: Canes Venatici, Lacerta, Scutum, Sextans, and Vulpecula. What if your eyes aren’t quite as sharp as Johannes Hevelius – or if your weather and light pollution make searching for fainter stars more difficult than enjoyable? See if you can spot the next Voorwerp by participating in one of the many citizen science programs offered by NASA at [science.nasa.gov/citizenscience](http://science.nasa.gov/citizenscience)! And of course, you can find the latest updates and observations of even more dim and distant objects at [nasa.gov](http://nasa.gov).

*Map of the sky around Lynx and Leo Minor. Notice the prevalence of animal-themed constellations in this area, making it a sort of celestial menagerie. If you are having difficulty locating the fainter stars of Leo Minor and Lynx, don’t fret; they are indeed a challenge. Hevelius even named the constellation as reference to the quality of eyesight one needs in order to discern these faint stars, since supposedly one would need eyes as sharp as a Lynx to see it! Darker skies will indeed make your search easier; light pollution, even a relatively bright Moon, will overwhelm the faint stars for both of these celestial wildcats. While you will be able to see NGC 2419 with a backyard telescope, Hanny’s Voorwerp is far too faint, but its location is still marked. A few fainter constellation labels and diagrams in this region have been omitted for clarity.*

*Image created with assistance from Stellarium*





*Hanny's Voorwerp and the neighboring galaxy IC 2497, as imaged by Hubble. Credits: NASA, ESA, W. Keel (University of Alabama), and the Galaxy Zoo Team Source: [hubblesite.org/contents/news-releases/2011/news-2011-01.html](http://hubblesite.org/contents/news-releases/2011/news-2011-01.html)*



**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](http://nightsky.jpl.nasa.gov) to find local clubs, events, and more!

# Monthly Sky Report

## By Dave Nakamoto

On the 1<sup>st</sup>, the sun sets at 7:14 p.m., PDT, and rises at 6:39 a.m., PDT. The night is 11 hours 25 minutes long. On the 30<sup>th</sup> the sun sets at 7:37 p.m., PDT, and rises at 6:04 a.m., PDT. The night is 10 hours one minute long. As we approach the summer equinox on June 21 the nights continue to decrease in duration.

The moon is at first quarter on the 8<sup>th</sup>, full on the 16<sup>th</sup>, last quarter on the 23<sup>rd</sup>, and new on the 30<sup>th</sup>.

Mercury starts April too close to the sun to be observed. The planet appears in the evening sky at the middle of the month, and on the 30<sup>th</sup> Mercury sets at 9:19 p.m., PDT, and the sun sets at 7:37 p.m., PDT, so Mercury sets just one hour and 42 minutes after sunset.

Venus is in the morning sky. On the 1<sup>st</sup> Venus rises at 4:32 a.m., PDT, and the sun rises at 6:40 a.m., PDT, two hours and eight minutes later. On that date, Venus is slightly more than a half phase, 56% of its disk illuminated, and 22 arcseconds wide. On the 30<sup>th</sup>, Venus rises slightly later at 4:14 a.m., PDT and the sun rises at 6:05 a.m., PDT, one hour and 51 minutes later. On that 30<sup>th</sup>, Venus' disk is 68% illuminated and 17 arcseconds wide, shrinking as the distance between and earth increases. The disk can be seen in binoculars or a small telescope. On the 27<sup>th</sup>, Venus is 18 arcminutes east of Neptune. On the 30<sup>th</sup>, Venus is 23 arcminutes south of Jupiter.

Mars rises at 4:25 a.m., PDT, on the 1<sup>st</sup>, and the sun rises at 6:40 a.m., PDT, two hours and 15 minutes later. On the 30<sup>th</sup>, Mars rises at 3:33 a.m. PDT, and the sun rises at 6:05 a.m., PDT, two hours and 32 minutes later. Mars' disk is only 5.7 arcsecond wide and very small, so nothing will be seen in binoculars or a small telescope.

Jupiter rises in the morning sky at 5:51 a.m., PDT, and the sun rises at 6:40 a.m., PDT, on the 1<sup>st</sup>, 49 minutes later. On the 30<sup>th</sup>, Jupiter rises at 4:14 a.m., PDT, and the sun rises at 6:05 a.m., PDT, one hour and nine minutes later. Features on the disk, as well as the four Galilean moons are visible in binoculars or a small telescope.

Saturn starts off on the 1<sup>st</sup> rising in the morning sky at 4:31 a.m., PDT. On the 30<sup>th</sup> it rises at 2:43 a.m., PDT. Features on the disk, the rings, and the large moon Titan are visible on binoculars or a small telescope.

Uranus is at Right Ascension 2<sup>h</sup>, 44<sup>m</sup>, 11<sup>s</sup> and Declination +15° 30' 28" on the 15<sup>th</sup>. Uranus is only 3.4 arcseconds wide, so a large telescope and medium magnifications are needed to see its disk.

Neptune is at Right Ascension 23<sup>h</sup> 38<sup>m</sup> 58<sup>s</sup> and Declination -3° 30' 15" on the 15<sup>th</sup>. It is both faint, magnitude +8, and small at 3.2 arcseconds wide, so a large telescope and medium magnifications are needed to see its disk.

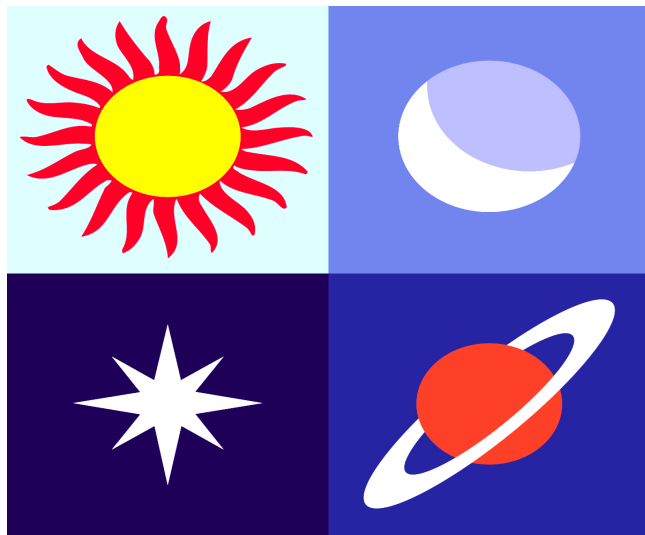
The Lyrid meteor shower peaks from the evening of April 21 to the morning of April 22.

The meteors come from the comet C/1861 G1 (Thatcher). The Lyrids are a medium-strength shower, averaging about 18 meteors per hour at the peak with occasional fireballs. The moon will be a 61% waning gibbous on that date and will interfere with observations.

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

[dinakamoto@hotmail.com](mailto:dinakamoto@hotmail.com).





## Almanac

**April 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 06:27 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 16 - 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 18:57 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.



Want to know what objects will be in tonight's sky in Los Angeles?

<https://www.timeanddate.com/astronomy/night/usa/los-angeles>

**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 waning gibbous moon may block some of the fainter meteors this year, but there is still potential for a good 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.

**April 29 - Mercury at Greatest Eastern Elongation.** The planet Mercury reaches greatest eastern elongation of 20.6 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 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 20:30 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 30 - Partial Solar Eclipse.** A partial solar eclipse occurs when the Moon covers only a part of the Sun, sometimes resembling a bite taken out of a cookie. A partial solar eclipse can only be safely observed with a special solar filter or by looking at the Sun's reflection. This partial eclipse will be visible throughout most of the southeast Pacific Ocean and southern South America. It will be best seen from Argentina with 53% coverage. ([NASA Map and Eclipse Information](#))

Source:

<http://www.seasky.org/astronomy/astronomy-calendar-2021.html>



# April 2022

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2 DARK SKY NIGHT And 60 Inch Night
3	4	5	6 Board Meeting	7	8	9
10	11 General Meeting	12	13	14	15	16 Outreach: Culver City
17	18	19	20	21	22	23
24	25	26	27	28	29	30

# Meet The New Members

## Welcome to the LAAS!



Courtney and Barbara Cooke

Robert and Evan Chiler

Samantha Newman

Kalina Bitter

Maia Anderson

Louis Rios

Kevin Page

## 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](mailto: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.

HOWEVER, due to Covid-19 restrictions in our area, all outreach events have been cancelled until further notice.

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.

Please send any new contact information to the club secretary at [secretary@LAAS.org](mailto:secretary@LAAS.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](mailto: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](https://nightsky.jpl.nasa.gov/club-eventrequest.cfm?Club_ID=1344)

## LAAS Club Swag

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

To find new merchandise from our store, please use the following link: <https://www.laas.org/store>

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.



Please remember all LAAS Outreach activities are postponed due to the Covid-19 pandemic.

## 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.

## 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 to subscribe to Sky and Telescope Magazine.](#)



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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.



## Club Contact Information

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secretary@laas.org

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outreach@laas.org

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communications@laas.org

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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



Follow us on social media by clicking on one of the icons below:

