



THE LOS ANGELES ASTRONOMICAL SOCIETY

THE BULLETIN

SEPTEMBER, 2022
VOLUME 96, ISSUE 9



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

communications@laas.org

Liftoff of NASA's Space Launch System rocket and integrated Orion spacecraft is targeted for 5:33 PM PDT on Monday, Aug. 29, 2022, from Launch Complex 39B at NASA's Kennedy Space Center in Florida.

Credits: NASA/Ben Smegelsky

Learn more about the Artemis Mission here: [Artemis Mission](#)

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 on every Wednesday night from 7 PM to 10 PM, weather permitting.

Masks are required inside the facilities.



Upcoming Club Events

- Board Meeting: Sept. 7
- General Meeting: Sept. 12
- Family Night: Sept. 17**
- Dark Sky Night: Sept. 24

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:

Aug. 27

Sept. 24 -This is the only 100 Inch session and fully booked!

Oct. 29

Nov. 19

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.

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>

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/>

The Summer Triangle's Hidden Treasures

By David Prosper

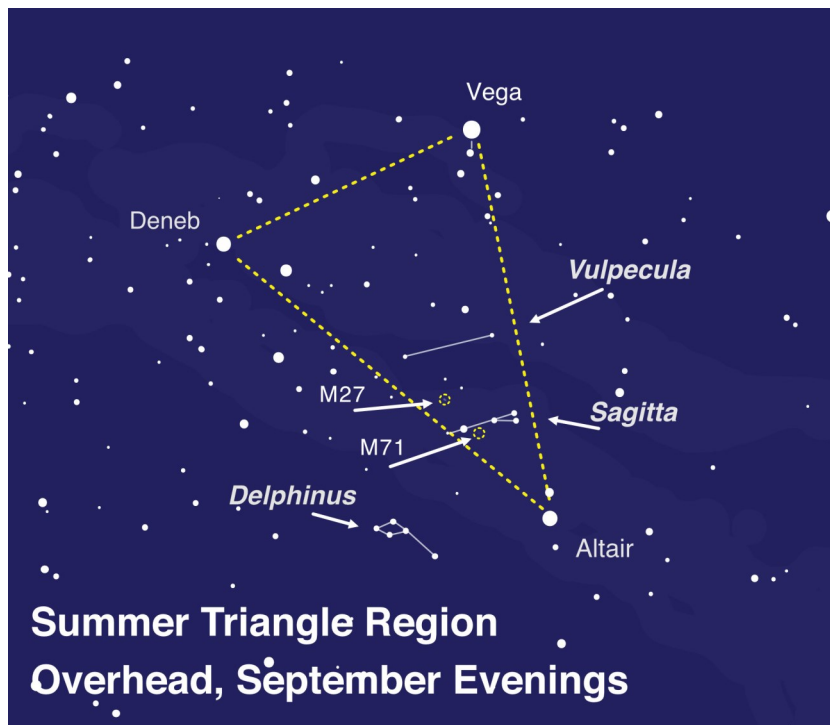
September skies bring the lovely **Summer Triangle** asterism into prime position after nightfall for observers in the Northern Hemisphere. Its position high in the sky may make it difficult for some to observe its member stars comfortably, since looking straight up while standing can be hard on one's neck! While that isn't much of a problem for those that just want to quickly spot its brightest stars and member constellations, this difficulty can prevent folks from seeing some of the lesser known and dimmer star patterns scattered around its informal borders. The solution? Lie down on the ground with a comfortable blanket or mat, or grab a lawn or gravity chair and sit luxuriously while facing up. You'll quickly spot the major constellations about the Summer Triangle's three corner stars: Lyra with bright star Vega, Cygnus with brilliant star Deneb, and Aquila with its blazing star, Altair. As you get comfortable and your eyes adjust, you'll soon find yourself able to spot a few constellations hidden in plain sight in the region around the Summer Triangle: **Vulpecula the Fox**, **Sagitta the Arrow**, and **Delphinus the Dolphin**! You could call these the Summer Triangle's "hidden treasures" – and they are hidden in plain sight for those that know where to look!

Vulpecula the Fox is located near the middle of the Summer Triangle, and is relatively small, like its namesake. Despite its size, it features the largest planetary nebula in our skies: M27, aka the Dumbbell Nebula! It's visible in binoculars as a fuzzy "star" and when seen through telescopes, its distinctive shape can be observed more readily - especially with larger telescopes. Planetary nebulae, named such because their round fuzzy appearances were initially thought to resemble the disc of a planet by early telescopic observers, form when stars similar to our Sun begin to die. The star will expand into a massive red giant, and its gasses drift off into space, forming a nebula. Eventually the star collapses into a white dwarf – as seen with M27 - and eventually the colorful shell of gasses will dissipate throughout the galaxy, leaving behind a solitary, tiny, dense, white dwarf star. You are getting a peek into our Sun's far-distant future when you observe this object!

Sagitta the Arrow is even smaller than Vulpecula – it's the third smallest constellation in the sky! Located between the stars of Vulpecula and Aquila the Eagle, Sagitta's stars resemble its namesake arrow. It too contains an interesting deep-sky object: M71, an unusually small and young globular cluster whose lack of a strong central core has long confused and intrigued astronomers. It's visible in binoculars, and a larger telescope will enable you to separate its stars a bit more easily than most globulars; you'll certainly see why it was thought to be an open cluster!

Delicate **Delphinus the Dolphin** appears to dive in and out of the Milky Way near Aquilla and Sagitta! Many stargazers identify Delphinus as a herald of the fainter water constellations, rising in the east after sunset as fall approaches. The starry dolphin appears to leap out of the great celestial ocean, announcing the arrival of more wonderful sights later in the evening.

Want to hunt for more treasures? You'll need a treasure map, and the Night Sky Network's "Trip Around the Triangle" handout is the perfect guide for your quest! Download one before your observing session at bit.ly/TriangleTrip. And of course, while you wait for the Sun to set - or skies to clear - you can always find out more about the objects and science hidden inside these treasures by checking out NASA's latest at nasa.gov.



Search around the Summer Triangle to spot some of its hidden treasures! To improve readability, the lines for the constellations of Aquilla, Lyra, and Cygnus have been removed, but you can find a map which includes them in our previous article, *Spot the Stars of the Summer Triangle*, from August 2019. These aren't the only wonderful celestial sights found around its borders; since the Milky Way passes through this region, it's littered with many incredible deep-sky objects for those using binoculars or a telescope to scan the heavens. Image created with assistance from Stellarium: stellarium.org

M71 as seen by Hubble. Your own views very likely won't be as sharp or close as this. However, this photo does show the cluster's lack of a bright, concentrated core, which led astronomers until fairly recently to classify this unusual cluster as an "open cluster" rather than as a "globular cluster." Studies in the 1970s proved it to be a globular cluster after all – though an unusually young and small one! Credit ESA/Hubble and NASA. Source: [Messier 71](https://www.nasa.gov/feature/messier-71)



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 for September

By Dave Nakamoto

Saturn appeared in the evening sky during the last week of August, having reached Opposition on August the 14th. Now Jupiter joins it, but late in the evening at the end of September, after its Opposition on September 26th. Opposition occurs with any of the outer planets when the planet reaches the point in the sky that is opposite the sun. Both planets are available for viewing all night long. Jupiter and Saturn's moons provide an interesting dance around their respective planets. With Jupiter the four Galilean moons, Io, Europa, Ganymede, and Callisto can be seen even in binoculars with a magnification of 8x or so, but of course even a small telescope while show more. However, with Saturn a larger scope will be needed because, other than Titan its largest moon, the other moons are much fainter and circle close to Saturn.

Neptune has also appeared in the evening sky along with Jupiter, but it is a very small disk even in a large telescope, as is Uranus, and nothing can be made out on their clouds. Like Jupiter and Saturn, Uranus and Neptune are gas giants, so all you can see is the tops of their clouds.

Mars is next, rising in the morning. It slowly headis towards its opposition on December 8th. While there is hardly any difference in the appearance of any of the other outer planets when they are at Opposition, with Mars there is a big difference Mars becomes much larger than at any other time, so this is the time to observe it, although its disk remains small, as large as the disk of Saturn, so a large telescope will be needed to see anything except the polar ice cap and one or two of the largest features on its surface.

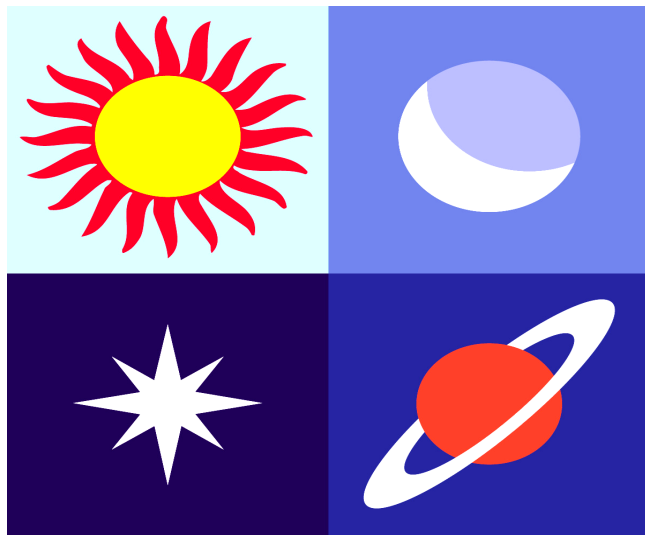
Venus is next, but it rises just ahead of the sun in the morning sky and is therefore not situated favorably for observations. NEVER try and observe a planet when it is close to the sun, as permanent eye damage will result.

Mercury is in the evening sky, the only planet that is visible this month. Unfortunately, it appears only in the first two weeks of September. After that, it too will be too close to the sun and unavailable for observations until October when it will appear in the morning sky. Again, do NOT observe a planet when it is close to the sun.

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

September 10 - 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 09:58 UTC. This full moon was known by early Native American tribes as the Corn Moon because the corn is harvested around this time of year. This moon is also known as the Harvest Moon. The Harvest Moon is the full moon that occurs closest to the September equinox each year.

September 16 - Neptune at Opposition. The blue giant planet will be at its closest approach to Earth and its face will be fully illuminated by the Sun. It will be brighter than any other time of the year and will be visible all night long. This is the best time to view and photograph Neptune. Due to its extreme distance from Earth, it will only appear as a tiny blue dot in all but the most powerful telescopes.



Curious about the objects in tonight's sky? Click on the link below to learn more.

[Time & Date - Los Angeles, CA.](#)

September 23 - September Equinox. The September equinox occurs at 00:55 UTC. The Sun will shine directly on the equator and there will be nearly equal amounts of day and night throughout the world. This is also the first day of fall (autumnal equinox) in the Northern Hemisphere and the first day of spring (vernal equinox) in the Southern Hemisphere.

September 25 - 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 21:55 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.

September 26 - Jupiter at Opposition. The giant planet will be at its closest approach to Earth and its face will be fully illuminated by the Sun. It will be brighter than any other time of the year and will be visible all night long. This is the best time to view and photograph Jupiter and its moons. A medium-sized telescope should be able to show you some of the details in Jupiter's cloud bands. A good pair of binoculars should allow you to see Jupiter's four largest moons, appearing as bright dots on either side of the planet.

Source: [Sea And Sky Reference Guide 2022](#)

Webcasts, broadcasts and podcasts

[STScI webcasts](#) – Webcasts from Space Telescope Science Institute. (scroll down to the bottom of the page to choose category- outreach public lectures, Science training, Engineering workshops etc)

[Astronomy Live](#) and [Slooh](#) – Watch major Astronomical events live

[Astronomy Cast](#), [Cosmoquest](#)– weekly discussions on astronomical topics ranging from planets to cosmology

[Observing podcasts](#) – Weekly podcasts on observing the sky

[StarTalk radio](#) – A commercial radio program devoted to all things space, hosted by renowned astrophysicist Neil deGrasse Tyson

September 2022

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

Meet The New Members

Welcome to the LAAS!



Alexander Boiko

Laura Stribling

Lawrence Held

Justin Lawrence

Ivan Orozco and Family

Kimmie Reyes and Family

Nick & Ksenia Sitchon

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.

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. 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.



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



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.](#)



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



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



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