



# THE LOS ANGELES ASTRONOMICAL SOCIETY

DECEMBER, 2023  
VOLUME 97, ISSUE 12

## THE BULLETIN



Have you accepted your invitation to the annual LAAS Banquet and Award Ceremony yet? It is time to reserve your seat at our finest gala affair of the year. A great buffet dinner, cocktails, a guest speaker presentation, raffle prizes and more! Please go to page 2 to learn more about it and make your reservations.

### In This Issue

- Annual Banquet Invitation..... Page 2
- Mt. Wilson 60 and 100 Inch Nights 2024... Page 3
- Brief Notes From The 2023 Nightfall.....Pages 4-7
- Outreach: Thursday Nights in Silverlake....Page 8
- A Flame In the Sky - The Orion Nebula...Pages 9-10
- Have Scope, Will Travel.....Pages 11-12
- Star Hopping From Caph.....Pages 13-15
- Monthly Star Report ..... Page 16
- Almanac ..... Page 17
- Calendar of Events ..... Page 18
- Meet the New Members .... Page 19
- Outreach Volunteers..... Page 20
- The LAAS Outreach & Club Swag ..... Page 21
- Astronomy Magazines ..... Page 22
- Club Contacts & Social Media Links ..... Page 23

**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 .



### Upcoming Club Events

- Board Meeting: Dec. 6
- Dark Sky Night: Dec. 10
- General Meeting: Dec. 11
- Public Star Party: Dec. 16

You Are Invited To

# The LAAS Annual Banquet and Award Ceremony

Buffet Dinner, Cocktails, Guest Speaker, Awards,  
and Raffle Prizes

**Sunday, January 28, 2024  
6:00 PM - 11:00 PM**

Location:  
The Quiet Cannon  
901 Via San Clemente, Montebello, CA. 90640  
Contribution Reserve by

**Adults: \$75.00 per person  
Children 12 and under: \$35.00  
Friends and family members are always welcome to attend.**

Made with PosterMyWall.com

Please use the following link to make your reservations for the banquet.

<https://fs30.formsite.com/LAAS/banquet/index>

# Mt. Wilson 60 and 100 Inch Nights

## Schedule for 2024

### 60 Inch Dates:

Friday Apr. 5

Friday May 3

Friday June 7

Friday July 5

Friday Aug. 2

Saturday Sept. 7

### 100 Inch Nights:

Saturday April 13th.

Friday Oct. 4th.



### 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 **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.

# Brief Notes From The 2023 Nightfall

By Dave Nakamoto

Hi everyone !

Not much to show from the first night, the 9<sup>th</sup>. Clouds moved in during the afternoon, but the Seeing (turbulence) was some of the worst I've experienced at this event. I was hoping to use my 7-inch f/15 Mak and G-10 Orion camera, FOV = 26 arcminutes, to get closeup views of deep sky objects, but the Seeing blurred out enough stars that Livestack couldn't find enough to do the stack.

So I switched to the 6-inch f/4 Newt with the same camera for Fri and Sat night.

NGC 253 and 288 are favorites of mine from the first Nightfall in 1992 or 1993. And these are my clearest, best images of both.

NGC 253, the great tilted spiral galaxy in Sculptor.





NGC 288, a globular cluster, and closest NGC/IC object to the South Galactic Pole.

The Flame and Horsehead nebulas.



The 11<sup>th</sup> followed the same pattern as the previous two nights; afternoon clouds but it cleared after sunset. Seeing was not as bad as Thurs but not as good as Fri's. But haze moved over the site; the Milky Way was fainter and blurrier than yesterday.

A few of the choice objects.



M52, and open cluster, and NGC 7635



IC-405, the Flaming Star nebula. Another first time.



Then M78. This is a hard object to capture under less than dark skies, because it is a reflection nebula, and generally, they're faint. A wonderful play of an emission nebula (the red glow covering all the right side), the reflection nebulae (the blue stuff), and dark nebulae seen against these glows. There's quite a bit of detail faintly visible in the reddish portions.



Clear and steady nights !  
--- Dave

# Outreach Report: Thursday Nights In Silverlake

## By Keith Armstrong

More Thursday memories! Thanks to Justin H for making it out there with us. What a great addition to the group! We got to show Saturn to a musician about to release a song by the same name, and another person who just got a Saturn tattoo! Also we got the Orion Nebula for the first time out there. I can't wait to have Saturn, Jupiter, Orion, and the Moon at the same time...

-Keith



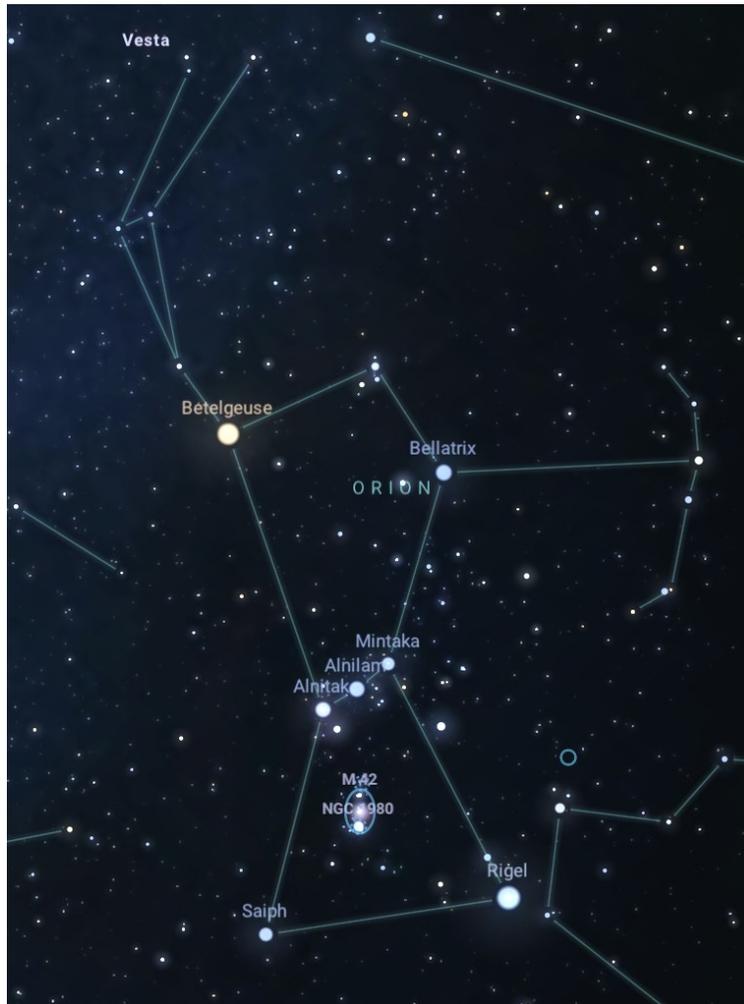
### Editor's Note:

To learn more about the "Silverlake Nights," please check the email you receive from the club's discussion group. All members can post messages to other members informing them of local astronomy events. Please contact Heven Renteria, our outreach coordinator, if you would like to set up an outreach event in your area. You can email Heven at [outreach@laas.org](mailto:outreach@laas.org).

# A Flame in the Sky – the Orion Nebula

## By Kat Troche

It's that time of year again: winter! Here in the Northern Hemisphere, the cold, crisp sky offers spectacular views of various objects, the most famous of all being Orion the Hunter.



Credit: Stellarium Web

As we've previously mentioned, Orion is a great way to [test your sky darkness](#). With your naked eye, you can easily spot this hourglass-shaped constellation. Known as an epic hunter in Greco-Roman, Orion and all its parts have had many names and meanings across many cultures. In Egyptian mythology, this constellation represented the god *Sah*. *The Babylonians referred to it as The Heavenly Shepard. In most cultures, it is Orion's Belt that has many stories: Shen in Chinese folklore, or Tayamnicankhu in Lakota storytelling. But the Maya of Mesoamerica believed that part of Orion contained The Cosmic Hearth – the fire of creation.*

1,500 light years away from Earth sits the star-forming region and crown jewel of Orion – Messier 42 (M42), the Orion Nebula. Part of the “sword” of Orion, this cloud of dust and gas sits below the first star in Orion’s Belt, Alnitak, and can easily be spotted with the naked eye under moderate dark skies. You may also use binoculars or a telescope to resolve even more details, like the Trapezium: four stars in the shape of a baseball diamond. These young stars make up the core of this magnificent object.

Of course, it’s not just for looking at! M42 is easily one of the most photographed nebulae around, by astrophotographers here on the ground, large ground-based observatories, and space telescopes alike. It has long been a place of interest for the Hubble, Spitzer, and Chandra X-ray Space Telescopes, with James Webb Space Telescope joining the list in February 2023. Earlier this year, NASA and the European Space Agency released [a new photo](#) of the Orion Nebula taken from JWST’s NIRCам (Near-Infrared Camera), allowing scientists to image this early star forming region in both short and long wavelengths.



ESA/Webb, NASA,  
CSA, M. Zamani (ESA/  
Webb), PDRs4ALL  
ERS Team

But stars aren’t the only items photographed here. In June 2023, JWST’s NIRCам and MIRI (mid-infrared instrument) imaged a developing star system with a planetary disk forming around it. That’s right – a solar system happening in real time – located within the edges of a section called the [Orion Bar](#). Scientists have named this planet-forming disk **d203-506**, and you can learn more about the chemistry found [here](#). By capturing these objects in multiple wavelengths of light, we now have even greater insight into what other objects may be hiding within these hazy hydrogen regions of our night sky.

In addition to our Dark Sky Wheel, a fun presentation you can share with your astronomy club would be our [Universe Discovery Guide: Orion Nebula, Nursery of Newborn Stars](#) activity. This will allow you to explain to audiences how infrared astronomy, like JWST, helps to reveal the secrets of nebulae. Or, you can use public projects like the NASA-funded [MicroObservatory](#) to capture M42 and other objects.

Learn more about what to spy in the winter sky with our upcoming mid-month article on the [Night Sky Network page](#) through NASA's website!



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

# Have Scope, Will Travel...

## By Keith Armstrong

Hi LAAS friends!

It's that time of the month when the moon is a bit more private, and unlike the werewolf community, us astronomers emerge to live our best lives. As per usual, there was too much good stuff going on to pass up, so I girded my loins and made a tour of it.

Lets begin on Thursday! I have grown more and more fond of Thursday night outreach in Silverlake. I can't imagine keeping this up every single week like we have been doing, but also I feel like I will miss it dearly if we don't. We are getting more repeat visitors, often bringing friends along to show them what we have been doing. The crowd is always

I have taken to calling these nights out to Astronomers Without Borders and Planetary Society in order to encourage others to do this in their neighborhoods as well. I am getting replies from Sweden, UK, and Germany so far but I haven't seen any pics of any outreach efforts yet. This is so fun to do, I hope that others will jump on the bus and have as much of a good time as we do!

On Friday, after getting done with work, I grabbed my dob and headed out to Borrego Springs. This was my first time at the Nightfall event, and I was encouraged by Joe Phipps to join his group out there. Traffic was as traffic does, and made my 2pm departure a 6:30pm arrival. I let Joe know I was going to get there after sunset and he met me in the front parking lot. He then went into Rudolph the Red Nosed Reindeer mode, and guided me and my car to the campsite with his red flashlight.

I was delighted to be met by Penny, Neide, Curtis, Tommy D, Randy C, Andy S and David N, and Rich S. It was so cool to have so many friends out there and I particularly enjoyed spending some time with Dave N outside of Garvey. He usually spends so much of his night in the observatory while I tend to be either in the shop or on the lawn.

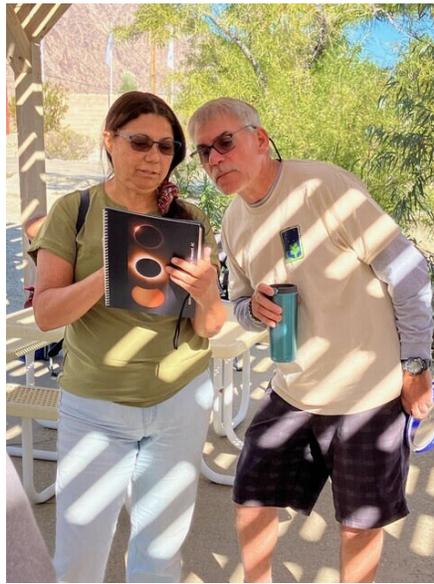
After showing off the modern day marvel that is the PiFinder to a few people, I put it away to do some proper star hopping. For much of this year I have been spending much of my time under the night sky sharing the really cool stuff with those around me. Because of this I haven't challenged myself in awhile. The PiFinder made breezing through my "To Do" list of largely unimpressive DSO's a breeze indeed.

In order to stay sharp, I am doing a slow tour of the Messier catalog, sans any assist other than Sky Safari, a telrad, and a finder scope. It was really gratifying to hunker down on some of those objects and build strategies for finding them. I had done something similar last spring for the proper marathon, but it was a far more intense effort. Also much of the very deliberate plans I made using Sky Safari ended up not being helpful under the real sky. Since I am not in any hurry this time I am happy to fail, and definitely did just that a few times. I have learned to adore the sharing culture of astronomy, but this night had a good bit of singular focus and that was a nice change of pace. Around 12am, the LAAS crew I was with was mostly cached out and heading to bed, so I did the same. Joe was so kind to save me a bed in his trailer and I passed out right away.

The following morning I was greeted by Neide with a bag of Cafe De Olla beans and her trademark smile. She has got to be one of the warmest and kindest members of the club and when she speaks, her words are like little hugs



to your ears. She is a mainstay at both Garvey and Griffith, and is part of the west valley crew with Phil T and Dave Y. She also gets lovely views with her C8 and is an early adopter of the ZWO Seestar. Once I got a cup of coffee in me, I headed over to the Nightfall Swap Meet. I was hoping to find a second panoptic 24 to use with my beloved binoscope or maybe a paracorr 2, but neither materialized. I did come across these goons though:...



After some chit chat it was time to head out, as I had something really exciting on the schedule. After a most excellent ride from Borrego Springs to Palm Springs, I stopped at Cartel Coffee to take in a pour over and their wifi. That afternoon I had a Zoom meeting with SAMAZ, the astro club from Mazatlán Mexico. At the end of the Astrotrip, Andi P suggested that we do the next one in Mexico. As incredible as that sounds, I don't want to trust just anyone to taking me and my friends into the Mexican countryside for astronomy. So I got to thinking about making an exchange program. We take members of a Mexican club to Griffith/Mt Wilson/SKAS etc, first and forge the relationship. Then they take us south to their spots. I made inquiries to Mexican members of Astronomers Without Borders and heard from SAMAZ. During our meeting, David (the SAMAZ president) and Pollo Sato (I know, right?) were inquisitive, knowledgeable, and enthusiastic. The club has only been around since 2016, but they get a lot of press due to the upcoming eclipse. They have some okay gear, but listed a bunch of cool places we could go down there, including the observatory at the University of Sinaloa. They also suggested including other local Mexican clubs, which I thought would be a fantastic idea. If you want to be a part of this adventure, please let me know. I'm thinking it will happen after the eclipse when things settle down for them.

After leaving the desert I stopped at home to say hi to the fam, shower, and change clothes. I unloaded my scope gear from my car and waited for Brian to swing by and carpool to SKAS for Dark Sky Night. Borrego was in the upper 40's at its coldest, but I knew that SKAS would be way more sinister. This is the first night since the late spring that I had to enlist the thermals and snow boots but I am so glad that I did. We definitely dipped into the high 20's and were grateful for the heaters running in GMO and the building FKA as the "new bathroom". There were about 20 of us out there and spirits were high despite Bill McD, Spencer, and I all having critical gear and packing failures. SKAS provided Bill and I with scopes to use for the night, and Spencer was lent a mount by Al. I had a great time hanging out with Esther and David, showing them the binoscope and the 26". Brian got great views of Stephan's Quintet and an Io transit. Patrick was on his first trip up there and he was a great hang seeming to make the most of it. It was also great to see Ted M, Al A, Aleks, and Alan D.

It is such a blessing that with all of this travel to see the night sky in different environments, you guys made me feel at home in every single place. Because of this, I STILL have FOMO for not making it to Panamint this weekend...

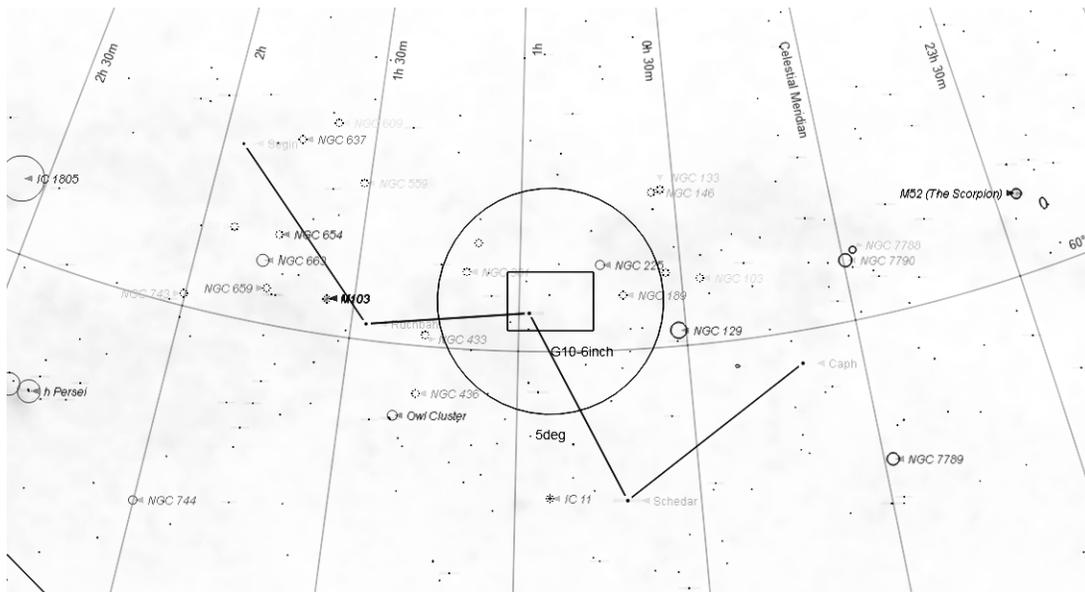
-Keith

# Star Hopping from Caph

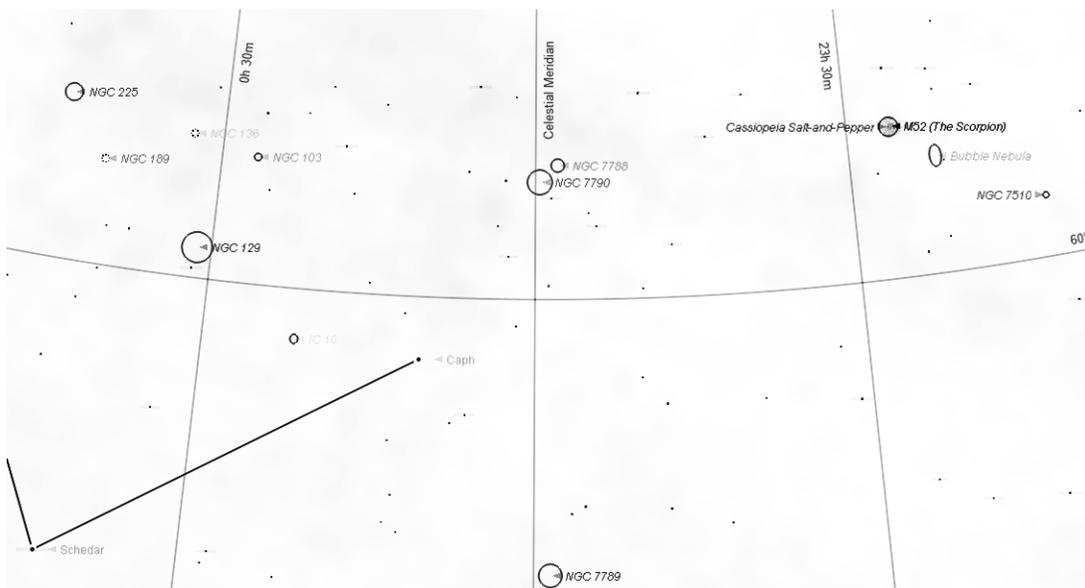
## By David Nakamoto

During this year's Nightfall star party at Palm Canyon resort at Borrego Springs, I decided to go for several open clusters that use the westernmost star in the W of Cassiopeia as a star hop starting point. That star is named Caph by ancient astronomers.

As you can see from the general chart below, there are many cluster in this region. That's because it is within the Milky Way, where practically every known open star cluster, planetary nebulas, and emission nebula resides, at least visually.



This next chart centers on the area around Caph.

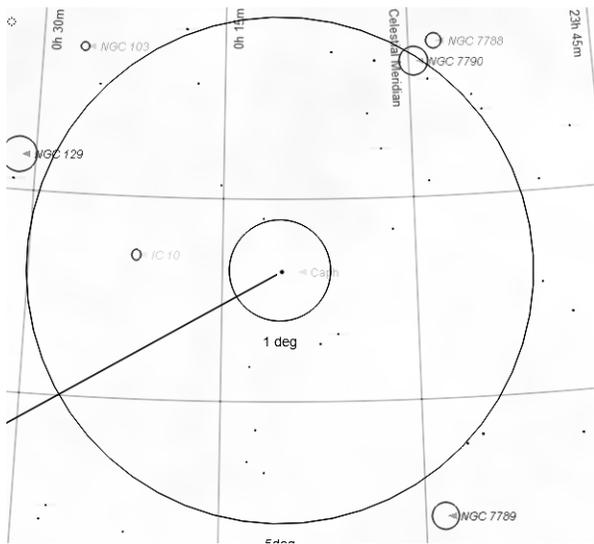


As Cassiopeia passes almost directly overhead during some time of the night, both Dobsonians and equatorial mounts will have some trouble, so plan your observing session to avoid this . . . unless you like bending over at awkward positions to peer through Telrads or finders.

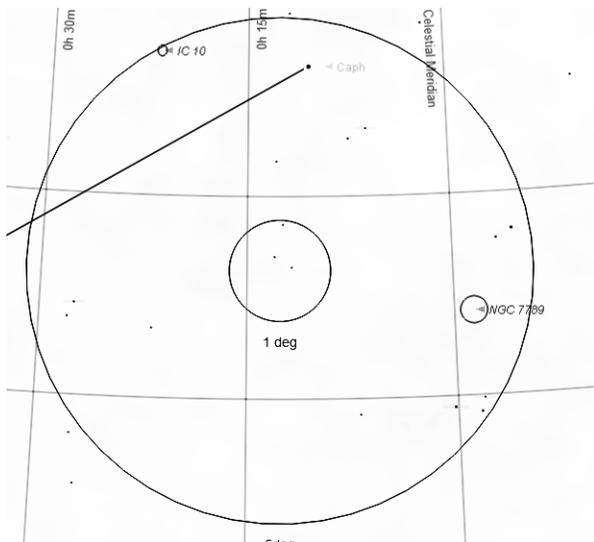
There are a couple of tricks to star hopping. One is to recognize star patterns. For this, you have to know which direction north, south, east, and west are, especially in a finder. I use equatorial mounts, so moving the scope only in one of those four directions is easy. For alt-azimuth mounts like Dobs, it's probably easier to move in elevation or azimuth, and with apps this is possible. However, in the past, I've owned two 10-inch Dobs with 8x50 right angle finders and went north-south, east-west anyways.

I always have used a finder, usually an 8x50, to see faint stars, necessary from the urban sky. To successfully star hop, I consider a large finder essential.

Another trick is to know how large your field of view is. Most 8x50mm finders have a five degree FOV. Most scopes with a low power eyepiece like a 24mm will have a one degree FOV. These are needed to help recognize star patterns even though they are rotated in relation to your star charts. In the chart below for our first target NGC-7789, a five and one degree FOV are shown by the circles.



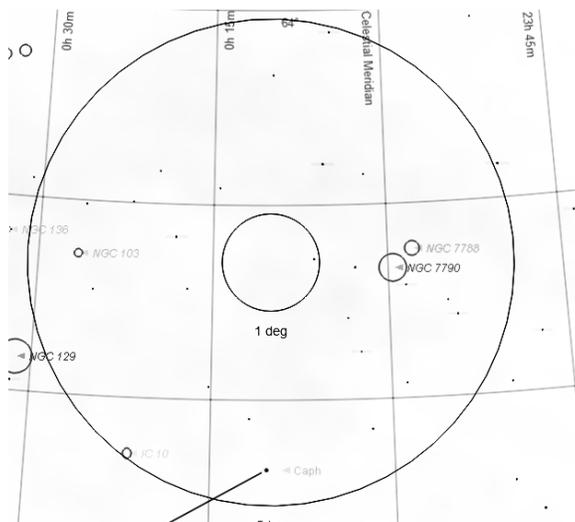
Centered on Caph, notice the grouping of three 5<sup>th</sup> mag stars south of Caph, and the triangle of 5<sup>th</sup> mag stars below that. I lock down the RA axis and release the Dec. Make sure your mount is balanced ! More convenient is the hand paddle or other electronic slew controls. Move south until you center on the triangle. Caph will be near the top of the FOV.



Now, notice the pair of faint stars with a small triangle south of it. I lock down the dec, and release the RA. Move west and center right between these two patterns, and you'll have NGC-7789 !

The image I took of 7789 shows it to be in a star rich field, but you should easily pull it out, as it is a densely populated and packed open, probably a fine

Back to Caph, my next two targets were one after the other. NGC-7790 and 7788 are two opens close to one another, a smaller version of the famous Double Cluster off the other, eastern, end of Cassiopeia. Move north until Caph is very near the southern edge of the FOV.

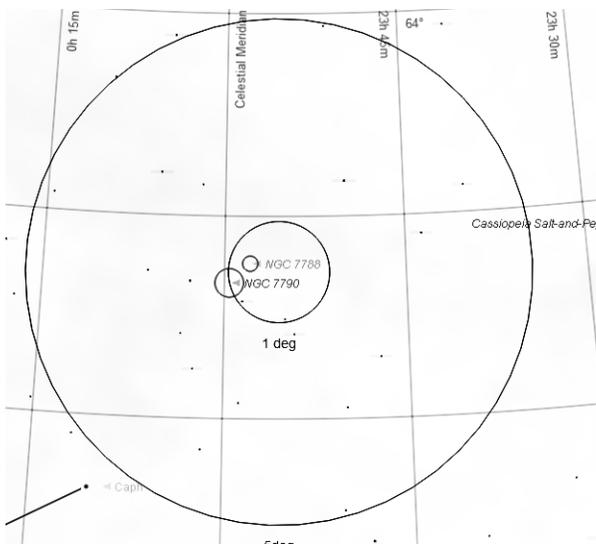


As you can see, the declination is right for 7790 and 7788. Notice also two things. NGC-7790 is halfway to the western edge of the FOV. To help reference this, notice the gentle curve of faint stars that 7790 is partially embedded in. Use both these facts to move the scope to point to that region, and 7790 and 7788 should be in the FOV.

Both of these are small but reasonably condensed and populated opens.

Now for the last one, M52, and possibly the Bubble nebula.

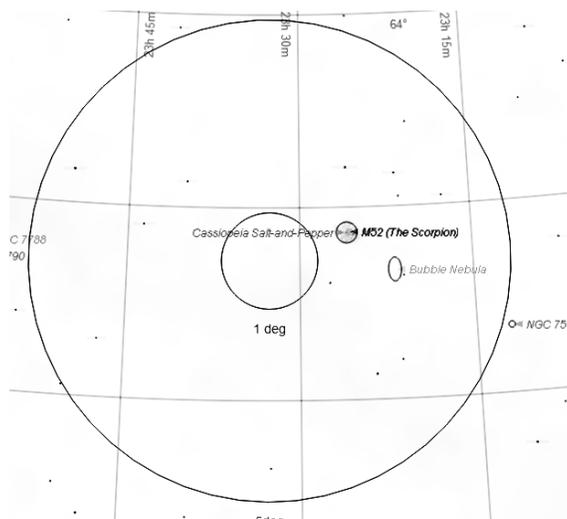
Nudge the scope a little to the west and notice that triangle of stars to the northwest.



Now, move west past the triangle until it is on the east portion of the FOV. Notice the pattern of five stars in the northwest looking like a miniature Cygnus, and the trapezoid to the southwest.

I aligned the center of the FOV with the east star in that pseudo-Cygnus. Both M52, a dense open, and the Bubble nebula, very faint, should be in the FOV.

Again, know your FOV, use finders especially from an urban location, move only in RA or Dec where possible, recognize the four cardinal directions in your finder, and patience, patience, patience.



# Monthly Sky Report

## By Dave Nakamoto

The daylight hours continue to decrease, and the night hours increase, through the month, until we reach the winter solstice on Dec 21. After the 21<sup>st</sup>, the days will slowly get longer.

The moon is at last quarter on the 4<sup>th</sup>. On the 12<sup>th</sup> it'll be new moon, first quarter is on the 19<sup>th</sup>, and full moon on the 26<sup>th</sup>.

From evening to morning, the planets appear thusly.

**Mars** is too close to the sun for observation. Mars will appear in the morning sky in January but will remain very small and unobservable until the planet is close to opposition beginning in December 2024.

On the 1<sup>st</sup>,

**Mercury** sets in the southwest at 6:00 p.m. PST, with the sun setting at 4:44 p.m., PST, one hour and 16 minutes before Mercury. By the 22<sup>nd</sup>, Mercury is too close to the sun for observation. Do not observe any planet when it comes close to the sun, for the danger to the eyes is great.

**Saturn** sets in the west-southwest, at 10:53 p.m., PST, on the 1<sup>st</sup>. At the end of the month, Saturn sets at 9:05 p.m., PST, so for the entire month Saturn is well placed for evening viewing. A telescope with a magnification of 50x or more is needed to see the planet's rings and its large moon Titan.

**Neptune** begins the month setting in the west-southwest at 12:51 a.m., PST. By the end of the month, Neptune sets at 10:50 p.m., PST. On the 15<sup>th</sup>, Neptune is at Right Ascension 23<sup>h</sup> 43<sup>m</sup> 17<sup>s</sup> and declination -3° 10' 3". Neptune ends its retrograde motion on the 6<sup>th</sup>, and then travels very slowly west to east among the stars. A telescope with a magnification of 150x or more is needed to see the planet's small disk. Jupiter at the beginning of the month sets in the west at 4:11 a.m., PST. At the end of the month the planet sets at 2:07 a.m., PST, so it is well placed for observations all month long. Jupiter ends its retrograde motion and starts to move west to east among the stars. A telescope with a magnification of 50x will show the Red Spot and the four bright Galilean moons.

**Uranus** sets in the west-northwest at 5:17 a.m., PST, at the beginning of the month. By the end of the month, Uranus set at 3:15 a.m., PST. On the 15<sup>th</sup>, Uranus is at Right Ascension 3<sup>h</sup> 9<sup>m</sup> 59<sup>s</sup> and declination +17° 24' 3". The planet continues its slow retrograde motion, moving east to west among the stars. A magnification of 150x or more is needed to see the planet's small disk.

On the 1<sup>st</sup>, **Venus** appears in the east around 3:13 a.m., PST, with the sun rising at 6:41 a.m., PST. The planet is a gibbous phase and 17 arcseconds wide. On the 31<sup>st</sup>, Venus rises at 4:06 a.m., PST, with the sun rising at 6:59 a.m., PST. A telescope with a magnification of 50x is needed to see its shrinking disk.

Also on the 31<sup>st</sup>, **Mercury** rises in the southeast at 5:37 a.m., PST, with the sun rising one hour and 22 minutes later.

### SPECIAL EVENTS this month include:

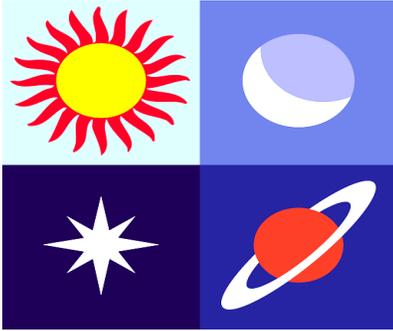
The winter solstice occurs on December 21 at 7:27 p.m., PST. The sun reaches its southernmost point on the ecliptic, reverses its movement south, and heads north. This marks the longest night and the shortest day of the year. The sun rises at 6:55 a.m., PST, and sets at 4:48 p.m., PST. The day is 9 hours 53 minutes long.

The Geminid meteor shower is usually the strongest meteor shower of the year. The shower is active from November 19 through December 24, and peaks from the evening of the 13<sup>th</sup> through the morning of the 14<sup>th</sup>. This is the one major shower that provides good activity prior to midnight as the constellation of Gemini is well placed from 10:00 p.m., PST, onward. The Geminids are often bright and intensely colored. Due to their medium-slow velocity, persistent trains are not usually seen. The parent object is the asteroid 3200 Phaethon and not a comet, as is usual for meteor showers. On the night of the 13<sup>th</sup>, the moon will be a one-percent waxing crescent.

The Ursid meteor shower is often neglected, as it peaks just before Christmas with a rate much lower than the Geminids, which peak a week before the Ursids. This year the Ursids appear from the 13<sup>th</sup> through the 24<sup>th</sup>, with the peak occurring from the night of the 21<sup>st</sup> to the morning of the 22<sup>nd</sup>. Observers will normally see 5 to 10 Ursids per hour during the late morning hours on the date of maximum activity. There have been occasional outbursts when rates have exceeded 25 per hour. The parent object is the comet 8P/Tuttle. The moon will be a 74-percent waxing gibbous.

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](mailto:dinakamoto@hotmail.com).





# Almanac

Source:  
[Seasky.org](http://Seasky.org)

**December 4 - Mercury at Greatest Eastern Elongation.** The planet Mercury reaches greatest eastern elongation of 21.3 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.

**December 12 - 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 23:33 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.

**December 13, 14 - Geminids Meteor Shower.** The Geminids is the king of the meteor showers. It is considered by many to be the best shower in the heavens, producing up to 120 multicolored meteors per hour at its peak. It is produced by debris left behind by an asteroid known as 3200 Phaethon, which was discovered in 1982. The shower runs annually from December 7-17. It peaks this year on the night of the 13th and morning of the 14th. This should be an excellent year for the Geminids. The nearly new moon means 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 Gemini, but can appear anywhere in the sky.

**December 21, 22 - Ursids Meteor Shower.** The Ursids is a minor meteor shower producing about 5-10 meteors per hour. It is produced by dust grains left behind by comet Tuttle, which was first discovered in 1790. The shower runs annually from December 17-25. It peaks this year on the night of the 21st and morning of the 22nd. The waxing gibbous moon will block out most of the faintest meteors this year. But if you are patient, you should still be able to catch a few good ones. Best viewing will be just after midnight from a dark location far away from city lights. Meteors will radiate from the constellation Ursa Minor, but can appear anywhere in the sky.

**December 22 - December Solstice.** The December solstice occurs at 03:21 UTC. The South Pole of the earth will be tilted toward the Sun, which will have reached its southernmost position in the sky and will be directly over the Tropic of Capricorn at 23.44 degrees south latitude. This is the first day of winter (winter solstice) in the Northern Hemisphere and the first day of summer (summer solstice) in the Southern Hemisphere.

**December 27 - 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 00:34 UTC. This full moon was known by early Native American tribes as the Cold Moon because this is the time of year when the cold winter air settles in and the nights become long and dark. This moon has also been known as the Long Nights Moon and the Moon Before Yule.

# December 2023

Sun	Mon	Tue	Wed	Thu	Fri	Sat
Happy Holidays!					1 Outreach Pasadena	2
3	4	5	6 Garvey Night Board Mtg	7 Happy Hanukah 	8 Outreach Echo Park	9 Dark Sky Night
10	11 General Mtng	12	13 Garvey Night	14	15	16 Public Star Party Outreach Santa Monica
17	18	19	20 Garvey Night	21	22	23
24	25 Christmas Day Ho! Ho! Ho!	26	27 Garvey Night	28	29	30
31 New Year's Eve						

# Meet The New Members

## Welcome to the LAAS!



Allan Abrams	Richard Eisenberg	Sophia Lee and family
Joaquin Alcantara and family	Marlyn Garcia	Charlie Pokaski
Denise Barnes and family	Patrick Gardner and family	James Rochford
Mariah Birchard and family	John Harb	Lea May Sarte and family
Allison Dial	Liangming Huang	Jason Strong
Tyson Diaz-Lapham	Anna Josenhans and family	Shirah Vollmer

## LAAS Board Meetings

All Board Meetings are 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.

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.

Please send any articles, images, or artwork to the newsletter editor here: [communications@laas.org](mailto:communications@laas.org)

## Time To Renew Your Membership?

Please remember to renew your membership after you receive a notice from the Club Secretary.

Please send any new contact information to the club secretary at [secretary@LAAS.org](mailto:secretary@LAAS.org) OR login to your account here: <https://common.wildapricot.com/login>



# 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](mailto: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](mailto: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.

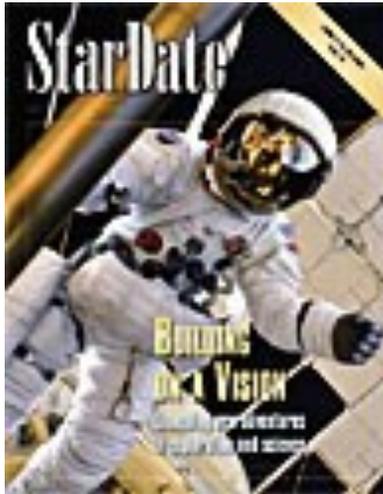
Treasurer

# 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](mailto:President@laas.org)

Vice President: Alecia Hurst

[hurst.alecia@gmail.com](mailto:hurst.alecia@gmail.com)

Treasurer: John O'Bryan, Jr.

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

Secretary: Spencer Soohoo

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

Outreach Coordinator: Heven Renteria

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

Club Communications: Andee Sherwood

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

Mt. Wilson Coordinator: Darrell Dooley

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

Bulletin Editor: Andee Sherwood

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

Club Historian—Lew Chilton

[trainfans2@sbcglobal.net](mailto:trainfans2@sbcglobal.net)



Find astronomy outreach activities by visiting NASA's [Night Sky Network](#)

## 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:



Instagram



YouTube

twitter

Donate

