



# THE LOS ANGELES ASTRONOMICAL SOCIETY

OCTOBER, 2023  
VOLUME 97, ISSUE 10

# THE BULLETIN



“Science Night” is baaack!!!! This is a LAAS hosted event held at the Garvey Observatory for the public and all LAAS members and friends, It is a Halloween-themed evening of fun and science. Come in costume and bring the kids and grandkids.

To learn more, view the complete event flyer on page 2.

**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 .



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## Upcoming Club Events

- Board Meeting: Oct. 4
- Dark Sky Night: Oct. 14
- General Meeting: Oct. 16
- Public Star Party: Oct. 21
- Science Night: Oct. 28**

# You're Invited To **SCIENCE NIGHT**

**A Safe Place for Space**

- KIDS' COSTUME PARADE -
- HEALTHY TREATS - NASA - ISS-ABOVE -
- TESLA COIL - ROCKET LAUNCHING -
- SPOOKY MUSIC - TELESCOPES
- THE PLANETARY SOCIETY
- COLUMBIA MEMORIAL SPACE CENTER
- ASTRONOMY AND SCIENCE.

*A special needs friendly event!*

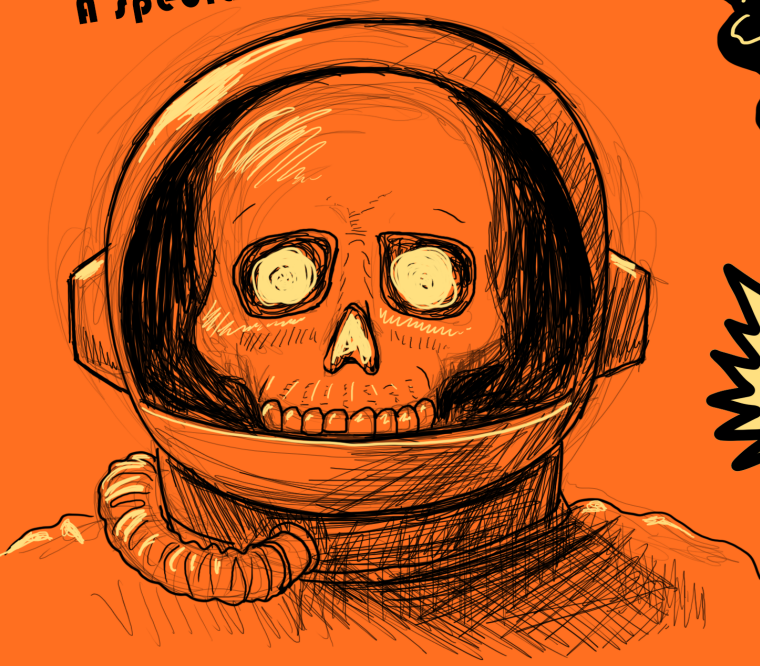
**Saturday**  
October 28th  
3PM - 9PM

**GARVEY RANCH  
OBSERVATORY**

781 S. ORANGE AVE  
MONTEREY PARK, 91755

**FREE EVENT!!!**

For More Info Call  
(213) 673 7355



**Hosted by The Los Angeles Astronomical Society**

[www.LAAS.org](http://www.LAAS.org)    [www.safeplaceforspace.org](http://www.safeplaceforspace.org)

# Mt. Wilson Nights - Schedule For 2023

## 60 Inch and 100 Inch Nights

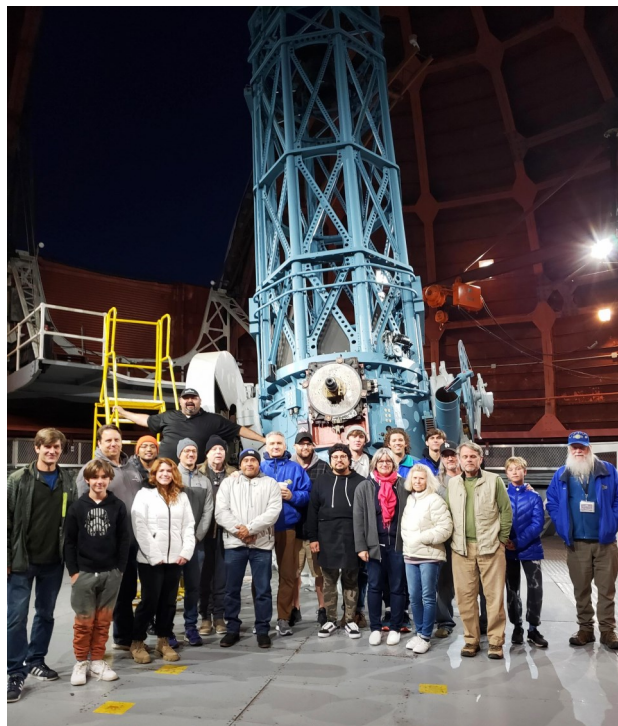
### 60 Inch Dates:

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

October 14

### 100 Inch Night:

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



### The Cost per person, per session:

60 Inch Night - \$65.00

100 Inch Night - \$145.00 (Booked/Waiting List only)

There will be 20 people, per session.

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

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

<https://www.mtwilson.edu/100-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](mailto:Mtwilsoncoordinator@laas.org)

*Darrell will answer all of your questions and concerns.*

# The Bob Deubler, NASA/CalTech 26 Inch Telescope Moved To Its New Home

## By Joe Phipps



Photo by Dave Pinsky

The LAAS 26 inch telescope that has been a huge attraction for many years at our club's monthly Star Parties at Griffith Observatory has been moved to its new home at SKAS in Lockwood Valley. The move was up for vote by the club recently and the result was to move the scope to our dark sky site where we could take advantage of the scope's aperture and members would have access to the views it provides.

Originally funded by NASA, ordered by Caltech, and built by the Ball Brothers Research Corporation in the 1970's. The mission was to send this telescope to space aboard Skylab B which was eventually canceled. Acquired and used by the Big Bear Solar Observatory for solar research until 2007. Donated to the LAAS in 2007 and mounted on its current custom built Dobsonian mount.

After we received the mirror, deceased club member Bob Deubler built the base and made the scope portable. I started helping with its operation in 2014 shortly after joining the club. Daniel Belmour (deceased) Heven Renteria and Jim Tanimoto were the main operators at that time. There were several other club members that would help occasionally.

I've asked the Lockwood committee to decide the use rules. Heven Renteria, Keith Armstrong, Penny Kunitani and Myself all have experience with setting up and using the scope which will take a little training for new people to be ok'd to use. Because of its size and a few particulars that need to be known this scope could be dangerous for an untrained person.

The best way to get to know this scope is to be involved with the setup and operation several times.

We always had a line of people waiting for us to start the viewing.



Photo by Todd Kunioka

Penny Kunitani operating the scope at its last



Photo by Scott Basu

## The Move

5 club volunteers showed up early before the observatory opened on Saturday morning September 9<sup>th</sup>. We brought the telescope up from the third level of the building on the elevator for its last time and rolled it down to the sidewalk by the horseshoe turn on the road.

Deciding the safest way to transport the telescope was to remove both mirrors and using a hydraulic lift table on wheels which I had borrowed from my company made removing the heavy primary an easy task. After loading the mirror into the back of my carpeted truck bed and supporting it with furniture pads since the back of the mirror cell is slightly cone shaped, it was ready for travel.

The telescope, ladder and toolbox were loaded into a U-Haul trailer that was picked up earlier that morning. After securing everything with ratcheting tie down straps we were ready to hit the road.

Rafael Gonzales followed me in his truck to keep an eye on everything until we arrived safely in Lockwood where reassembling the telescope was just as easy as disassembly was.

A Big Thanks to the volunteers involved with making the move.



Left to right. Joe Phipps, Jamir Soberanis, Keith Armstrong, Zoltan Dobrovics (Zoly) and Rafael Gonzalez



Securing the load.



Ready for travel

Arrived at SKAS safely





Zoly pulling the mirror out of the truck.



Keith and Joe rolling it into its new home .



Fits in nicely with room left for the other items that will be stored in the shed.



# From Galileo to Clipper, Exploring Jupiter's Moons

By Vivian White

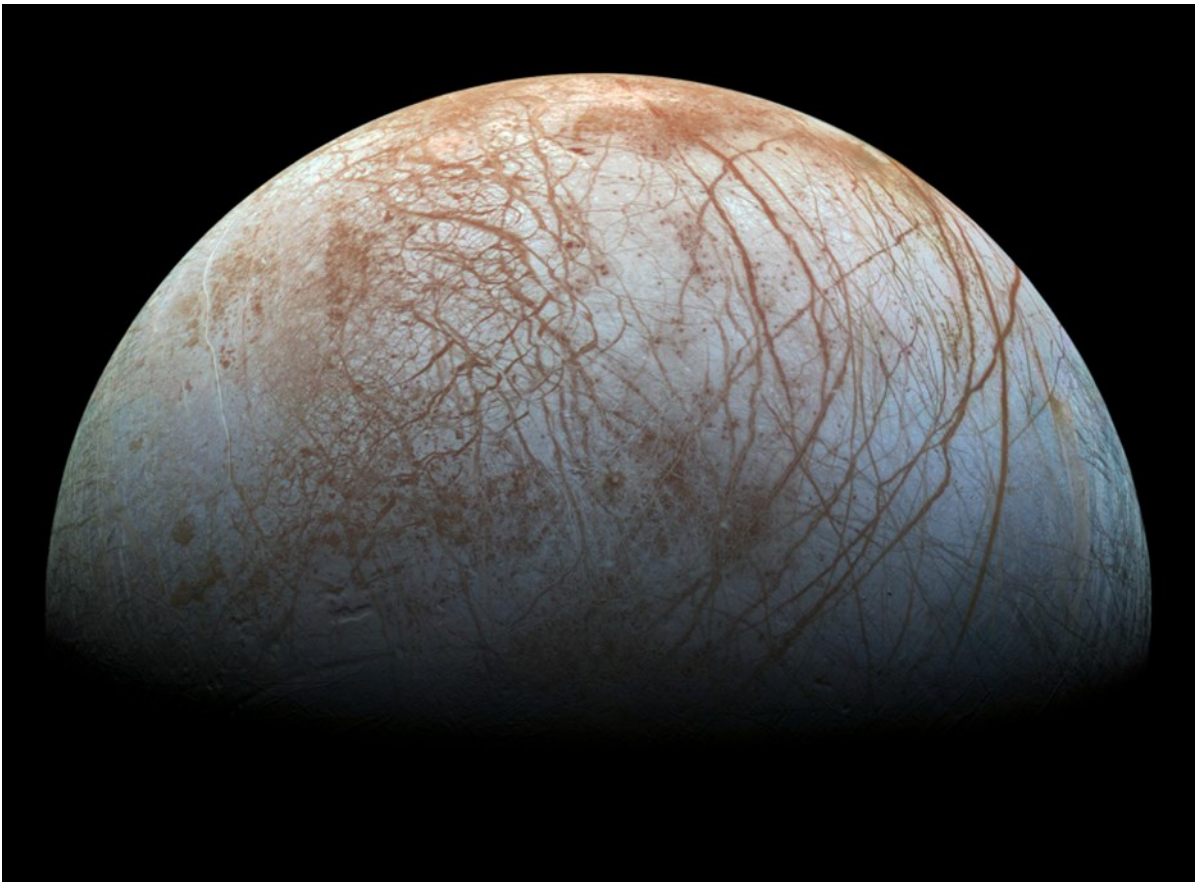


**This article is distributed by NASA's Night Sky Network (NSN).** The NSN program supports astronomy clubs across the USA dedicated to astronomy outreach.

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

*"...We, too, are made of wonders, of great  
and ordinary loves, of small invisible worlds,  
of a need to call out through the dark."*

From *In Praise of Mystery: A Poem for Europa* by Ada Limon



As autumn begins, if you're up late, you may notice a bright point of light rising in the east. Look a bit closer, with a pair of binoculars, and you'll notice it's not a star at all. While stars look point-like no matter how big your backyard telescope, this light appears as a circle under closer examination. Even more curious, you will likely see a line of smaller dots on one or both sides. Congratulations! You've rediscovered the king of the planets - majestic Jupiter - and its four largest moons.

RECENS HABITAE. 23

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Ori. \* ○ \*

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Ori. \* \* ○ \*

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occidentali min. 4. hæc ab occidentaliori min. 6. ma-  
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paulo minor apparebat. Hora autem septima orien-  
tales Stellæ distabant tantum min. 0. sec. 30. Iuppiter

Ori. \*\* ○ \*

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rò sequente min. 4. hæc verò ab occidentaliori dista-  
bat min. 3. erantque æquales omnes, & in eadem recta  
secundum Eclipticam extensa.

Die quinta Cælum fuit nubilosum.

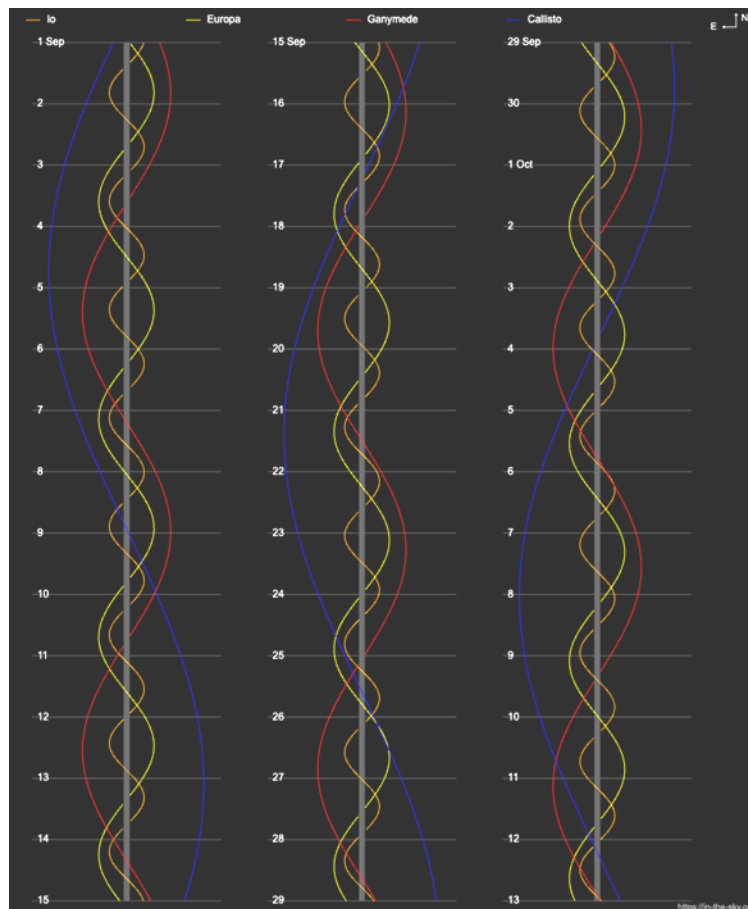
Die sexta duæ solummodo apparuerunt Stellæ me-

Ori. \* ○ \*

Occ.  
dium

Galileo famously chronicled the four moving dots near Jupiter and surmised that they were orbiting the distant world. While Jupiter has well over 80 discovered moons as of September 2023, these brightest four are called the “Galilean Moons” - Io, Europa, Ganymede, and Callisto. (Great mnemonics exist to remember these in order of distance from Jupiter, such as “I Eat Green Caterpillars”) You can follow these like Galileo did, using stargazing apps or the handy image below. A favorite beginning observing challenge is to [track the movement of the Galilean Moons](#) over the course of many nights. Even within a few hours, you will notice them moving in relation to Jupiter, just as Galileo did.

Fast forward 414 years, and NASA will be sending a robotic mission to investigate the surface of one of these distant worlds. The [Europa Clipper Mission](#) is launching to the cold, icy moon in 2024, to begin orbiting in 2030. With its salty oceans covered by ice, Europa was chosen as an excellent location to continue the search for life outside of Earth. Clipper will be the largest spacecraft ever sent to another planet, designed to withstand Jupiter’s punishing radiation. Once it arrives at Jupiter in 2030, NASA plans to do about 50 flybys of Europa, mapping almost the entire surface of this watery world.



The position of the Galilean Moons of Jupiter in October 2023: <https://in-the-sky.org/jupiter.php>

What was once only dreamed of in the small telescope of Galileo, or in great works of fiction, NASA is turning our wildest imagination into reality. One of the celebrated quotes from the classic 2010: Odyssey Two warns, “All these worlds are yours, except Europa. Attempt no landing there.” Science fiction fans can feel relieved knowing that writer Arthur C. Clarke gave his blessing for the Europa Clipper mission.

Join the Europa Message in a Bottle Campaign to send your name with the spacecraft, hear the rest of the poem by the US Poet Laureate, and learn more about the wonders of space travel with the Clipper Mission: <https://europa.nasa.gov/participate>

Watch a wonderful Clipper webinar with Dr. Cynthia Phillips, planetary geologist with the mission: <https://www.youtube.com/>

# ¡DAARK Sky Nite y Mas!

By Keith Armstrong

Hi All,

What a night it was, the perfect antidote to cloudy Fam Nite the week before. This was more of a veteran's group with great views to be seen all over the field from Brian E., Kamyar, Richard S., and Jonathon. Imagers like Ben G., Al A., Krystal, and Scott Mc G were smoothly grabbing data and trying out new configurations. But I will say that despite being the end of the summer season, it felt more like a new beginning. SKAS has been slowly evolving over the course of the year, but Saturday really felt like the beginning of a new era. In order to participate in the cool, self-serious storytelling arc of the modern era, let me flash you back in time to provide some theme development and perspective...

## **Saturday, September 9, 2023**

As you may have heard, the morning of this ill-fated Family night was incredibly productive. A small group of members (Joe P., Jamir, Zoly, Rafa, and me) went to Griffith to fulfill the wishes of the club vote and bring the Deubler 26" scope to SKAS. It involved a flatbed trailer, a hydraulic table, and many a furrowed brow. I believe Joe is going to have a detailed write up of the whole endeavor in the upcoming monthly bulletin, so I won't scoop him here. I will make a single observation of this experience though. If any of you spent time with this telescope at G.O. you have seen the awe and wonder that it provoked from the casual passerby. No matter how much benefit is gained by having it at SKAS, I will always carry a little sorrow that the 26" won't again stir that same reaction en masse, as it so easily did in those large crowds. Know this about the Deubler 26. Even after it had been stripped of it's mirrors for travel and was just sitting out on the lawn in broad daylight like a riding lawnmower, it still brought hikers, tourists, bicyclists, and even Griffith Staff over to take pictures and ask questions. In its very last moments at one of the most picturesque sites in one of the most picturesque cities, it STILL drew attention to the club and to astronomy at large. This telescope may have a greater impact on those looking at it than those looking through it. (and believe me I love looking through it, read on)

Once the scope was secured and settled in its happy new home alongside the Binoscope (the Bino hospitably donated one of it's blankets to cover the front of the 26"- how ADORABLE, right?), Chriss B and I got to work on the SKAS toolshed. This was probably the most intensive portion of the SKAS cleanup initiative. Chriss and I mowed through that sombitch, removing years of old scrap wood and metal, "compromised" machinery, several generations of rat paraphernalia, and even found some tools! It was a really dirty job, and we got though the bulk of it on this day. Thank you Chriss, that was far more pleasant with a partner. The sweetest surprise of the day was that Zoly completed the bino repair! I am so glad that this scope is back in working order and I want to thank Zoly for putting the time in to make it happen. It is so crazy to use, and I am so glad you now get to experience it

## **Sunday, September 10, 2023**

The following Sunday I returned. Like a great white coming back to finish off the prey it had immobilized, I wanted to close the deal on the tool shed. With some help from Al we did get it wrapped up and functional. But when the sun set, the party started. The sky was clear this night and out came the Deubler 26" to catch first light at SKAS. I had only briefly got to see the ring nebula as the only DSO targeted from Griffith and it looked pretty flippin good, so I was more than eager to set it loose on a relatively dark sky. Setup is a breeze compared to bringing it up the G.O. elevator, and we viewed m13, m22, ring, whirlpool, dumbbell, E/W veils, swan, lagoon, and trifold. The views were fantastic, and it was a delight having all that light to play with in regards to magnification and filtering. I went home feeling like a million bucks from both the night AND the workday. .

### **Wednesday, September 13, 2023**

Over the following days I couldn't get those views out of my mind, and I brought my friend Lindy up to SKAS again on Wednesday night to give it another go. Larry S and his son were up there and it was fun sharing the scope with them, but I was really happy to find that Penny was up there too! She was one of the regular operators of the 26 at Griffith, and it was great watching her have some fun with it on her own for once. But my single favorite experience with this instrument is sharing it with Lindy. Whatever growth I have had within this club started with her. She got me interested in stargazing, which was absolutely critical in flattening the star hopping learning curve. The basis of learning constellations before getting into equipment makes for such a solid foundation to build from. Her level of excitement in seeing satellites, meteors, and recalling newly learned constellations reverberates within me every time I find a new object, or teach others what she showed me. If you wonder why I am the way I am, this is it. Seeing her peer into the 26 was very "circle of life", as she planted the seed in me that then allowed her to go to SKAS on an off night and view the sky through the Deubler. She lives in Idaho now and is a member of the Boise Astronomical Society, so I relish the opportunities I have to show her what LAAS has to offer (both with generosity and a little bit of a "flex").

### **Friday September 15, 2023**

This was to be the first time a new group of members went to do outreach in the eastside bar and restaurant scene. I was emboldened by the responses I saw while joining Norm Vargas at Fosselman's Ice Cream in Alhambra, and the spontaneous outreach Cassandra and I did in Silverlake. For this date, I had a few commits to join me in the heart of Silverlake in a popular pedestrian area. The forecast looked good and I was excited (and a bit nervous) to boldly go out in public to share what we love to do. Things looked even more fortuitous as I got a one in a million parking spot super close to the setup area, but that is where my luck ran out. It was all clouds, all night, like one star for about 2 minutes cloudy. But here is the thing about LAAS that I would like to again mention. It is the people that make it great. We had no sky at all, but the time I spent with Andy I and Shang L flew by. I regret absolutely nothing for having gone out there, because I had a great night with two friends I hadn't spent a lot of time with in awhile. Andy is one of the first people I met in the club, and he is so kind and smart. He has helped out countless people at Garvey with loaner scopes and their own equipment. We are so lucky to have that dude in our ranks, and I was super lucky to have that night with his company. I had only met with Shang once before when he joined Brian and I at the Chooch. He is an excellent star hopper and gets really great views with his dob. I love talking to him about eyepieces, filters and the like, and has a great sense of humor. He also introduced me to the concept of wearing an eyepatch on your observing eye when not using it. This is a wild way to preserve night vision! That would be some crazy LAAS merch, right? An eyepatch with the OG club crest on it! We would look like One Eyed Willie from The Goonies, but sitting on a fortune of astronomy gear instead of dubloons. Our good time was bolstered in that we were also regularly questioned by the public to ask about the telescope and what we were hoping to see. It killed me that there was nothing to show them, but the response we got for simply being there was heartwarming. We will definitely be back there, watch this space for announcements on time and date.

### **Saturday September 16, 2023**

Okay, back to the present tense of this tale. Or at least only looking back as far as we started when you made the terrible mistake to start reading this post. This day was the final workday of SKAS cleanup. All the hard stuff had been done, now just getting rid of the large pieces of lumber somewhat randomly placed a few spots around the field. We always mention "trip hazards" in the sunset talks, but I always wondered why we didn't just get rid of them. THIS WAS THAT DAY! You can still trip and fall at SKAS, but now it is your fault since we don't have "trip hazards" anymore. Al and I reaped the benefits of a functioning tool shed by using a chainsaw we found in there to cut the big pieces into smaller ones and put them into the trash pile of mirth that has been steadily growing throughout the summer. I do regret not using gloves while doing this because I loaded up my hands with about a golf tee's worth of splinters, about half of which were easily removed. The rest are going to be part of my anatomy until I absorb them osmosis-style. After the wannabe-lumberjack session was complete, we wrapped up waterproofing the remaining watervulnerable pads and then started greeting the early Dark Sky attendees. Brian and Rich S were among them and we took the time to survey the property north of SKAS that we are to be soon acquiring. It was easy to let our imaginations race with what a 3x larger SKAS could be. The property is mostly forested, but with some clearings and a functioning non-potable well. No decisions have been made as with what to do with it, but it was pretty surreal to walk the property knowing that it will soon belong to LAAS. We got back to chat with others that arrived, and also for me walk face first

into the cross bar of the door for the cinder block shed. A kind Richard S made me a vegan meat-smelling icepack, and a new member provided a band aid and disinfectant for my aerated face. We may not have trip hazards, but between this bar and the low door threshold in the Carson Observatory, the remaining SKAS threats to your anatomy are focused on your head.

Regardless, the show must go on and as the sun went down, I was so pleased that the club now had three large format scopes available to its members operated by three different members that didn't need to bring equipment. This is something that I love about going to SKAS. I can choose to spend the night in GMO with the 16", or with the Bino, or now with the 26", or bring my 12". It's a different astro experience each time because I have options, and so do you. I would love to make sure that all our big scopes come out every Fam and Dark Sky Night. They aren't hard to use (maybe the Bino at first), and look great.

If you are interested in learning to operate these club instruments, please reach out to me and I will show you how. That said, I believe it the best interest of safety to let Joe Phipps have the final say on Deubler 26" operators. He is a good teacher and wants to see that thing getting tons of use, but there should be proper training from Joe with this scope to make sure nobody gets hurt.

A big surprise for the night came from the kindness of a member I had not previously met (and tragically I forgot his name, please ID yourself for an earned ocean of adoration). I have been on the hunt to find a Glatter collimation kit for the 26" and 16" SKAS scopes. This collimator will work despite the primary mirrors of both of these scopes featuring a hole in the middle. I don't believe that these collimators are made anymore and are costly to purchase even if their increasing rarity is overcome. At one point in the evening, a generous member offered to loan the club his glatter kit to get our scopes tuned up. In accepting his offer, he mentioned he doesn't really use it, and I said that the club may offer to buy it from him. Before I could walk that back because it had never been discussed, he then offered it as a donation! I cannot wait to put this to use on our big scopes. I reckon it will be of use to any reflecting scope with a 2" focuser.

This wasn't the only surprise of the night, either. Another one came from the Carson Brucker Observatory. About half-way through the night, Brian told me that Roman had taken the first image with the Takahashi rig! This is a huge step forward in the club's upcoming remote access AP observatory. He posted this image on groups, and it is pretty stunning in the detail captured. I believe he said it was a portion of the Milky Way, and the image resolves it into stars. He said that tracking seems stable, especially for the first time out and he is pleased with the first effort. To me, that whole rig was a mere figment of meetings and discussion threads. To see it working was really cool and nearly got me excited about astrophotography. Between this, the 26", the new property, and an engaged membership willing to care for SKAS and utilize its assets it really feels like the dawn of a new LAAS. There is more change on the horizon, but I couldn't be more happy to participate in shaping the future of the club with you.

Thanks for reading, now it's time to change my face bandages.

-Keith

# Astrophotography Images

## By Ginger Rose Brucker



“Star trails around beloved Polaris”

1) Today marks the 1 year anniversary of this image I took of the star trails around our beloved north star: Polaris. This was taken with my Canon 5D mark ii and Rokinon 14mm lens in Sonoma last summer. One of my favorites! It is special to me because it was my very first attempt at astrophotography and I have fallen in love with it since then!

Star Tracker: Sky-Watcher, Star Adventurer 2i Pro

Cameras used: Canon 5D mark ii, Canon Rebel T3 (modified)

Lens used: Rokinon 14mm, Rokinon 135mm

Computer stacking/processing softwares: Deep Sky Stacker, Sequator, SiriL, Gimp, PixInsight.





“California Nebula at Lockwood”

2) The picture above is another very special image to me. When I moved to Los Angeles in September of 2022, I immediately joined the LAAS as a member so that I could learn more about astrophotography. The image is the California Nebula located in Perseus taken at the LAAS Lockwood Valley site in Frazier park on January 21, 2023. This was a VERY cold night with temps getting down to the mid 20s but I was determined and spent the night in my car because I had one goal in mind.

The California Nebula was actually quite a challenging target because it was my first time using a modded camera with my star tracker and I had trouble focusing the stars, not to mention I was freezing!!! Once I saw the red strip of hydrogen on my camera I knew I had the right target and I had faith in my star tracker and camera to track the nebula over the course of the night. In the meantime, I tried to get some rest under my warm sleeping bag.



The comet!!!!

This same night I also tried to capture the comet 2022 E3 ZTF and was somewhat successful, however at that point I was cold and tired and the image did not appear the way I was hoping. Regardless, astrophotography is quite a learning curve and out of everything I continue to learn from it, it most certainly has taught me how to be more patient.



“Rho Ophiuchi”

3) My favorite summer target: Rho Ophiuchi just next to star Antares.

This was taken with my Canon 5d mark ii and Rokinon 135mm lens in my hometown of Carpinteria overlooking the ocean.

I am most proud of this image as this was only about 2 hours of data with quite a bit of light pollution from the town. The colors are just beautiful from this stellar cloud complex and I highly recommend this as a great summer target for beginner Astrophotographers!

# Monthly Sky Report

## By Dave Nakamoto

**The sun** moves from Virgo the Maiden to Libra the Scales on October 31. The days will continue to grow shorter, and the nights get longer, until the sun reaches the winter solstice on December 21.

**The moon** is at last quarter on the sixth, new on the 14<sup>th</sup>, first quarter on the 21<sup>st</sup>, and full on the 28<sup>th</sup>.

On the 1<sup>st</sup>, **Mercury** rises in the morning at 5:41 a.m., PDT, and the sun rises at 6:48 a.m., PDT, 67 minutes later. A telescope with a magnification of 200x or more is needed to see its small disk, which is only six arcseconds wide. Mercury approaches the sun and is too close to observe next week. On the 31<sup>st</sup>, Mercury is in the evening sky. The sun sets at 6:01 p.m., PDT, and Mercury sets at 6:21 p.m., PDT, so the planet is too close to the sun for observations. Do not observe any planet when it comes close to the sun, for the danger to the eyes is great.

On the 1<sup>st</sup>, **Venus** rises in the morning just north of east at 3:22 a.m., PDT, and is 36-percent illuminated and 32 arcseconds wide, a wide crescent phase. On the 31<sup>st</sup>, Venus rises at 3:32 a.m., PDT, and the sun rises at 7:12 a.m., PDT, and is 54-percent illuminated and 22 arcseconds wide, and is more than a half phase. Venus will continue to increase the portion of its disk that is illuminated, and decrease in size, until May of next year. The planet will remain in the morning sky until May.

**Mars** crosses from Virgo the Maiden to Libra the Scales on the 23<sup>rd</sup>. The planet is too small to see anything, since its disk is only four arcseconds wide, and will remain so until a few months prior to its next closest approach to earth in January 2025. On the 1<sup>st</sup>, the sun sets at 6:38 p.m., PDT, and Mars is due west and sets at 7:17 p.m., PDT, 39 minutes later. On the 31<sup>st</sup>, Mars sets at 6:16 p.m., PDT, 15 minutes after sunset, and so is unobservable. Do not observe any planet when it comes close to the sun, for the danger to the eyes is great. Mars will appear in the morning sky in a few months.

**Jupiter** is in Aries the Ram. On the 1<sup>st</sup>, the planet rises in the evening north of east at 8:16 p.m., PDT. On the 31<sup>st</sup>, the planet rises at 6:08 p.m., PDT. A telescope capable of magnification 50x will show the Red Spot, and the four bright Galilean moons can be seen moving back and forth, across and behind Jupiter.

**Saturn** is in Aquarius the Water Bearer. On the 1<sup>st</sup>, Saturn rises in the evening in the east-southeast at 5:00 p.m., PDT. On the 31<sup>st</sup>, Saturn rises at 2:59 p.m., PDT. The rings and Saturn's largest moon, Titan, can be seen with a telescope capable of magnification 50x.

**Uranus** is in Aries the Ram. On the 1<sup>st</sup>, the planet rises in the evening in the east-northeast at 8:38 p.m., PDT. On the 31<sup>st</sup>, Uranus rises at 6:37 p.m., PDT. On the 15<sup>th</sup>, Uranus is at Right Ascension 3<sup>h</sup> 19<sup>m</sup> 35<sup>s</sup> and declination +18° 0' 47". A magnification of 200x or more is needed to see its small disk, only 3.5 arcseconds wide.

**Neptune** is in Pisces the Fishes. On the 1<sup>st</sup>, Neptune rises in the evening just south of east at 6:03 p.m., PDT. On the 31<sup>st</sup>, Neptune rises at 4:04 p.m., PDT. On the 15<sup>th</sup>, Neptune is at Right Ascension 23<sup>h</sup> 44<sup>m</sup> 51<sup>s</sup> and declination -2° 55' 16". A magnification of 200x or more is needed to see its small disk, only 2.5 arcseconds wide.

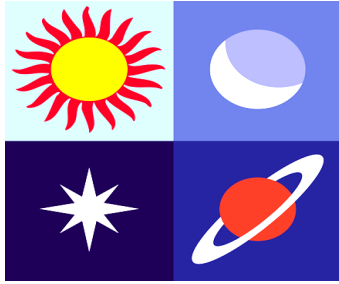
### SPECIAL EVENTS

**An annular solar eclipse** will occur over southern Oregon, northeastern Nevada, Utah, New Mexico, and western Texas on Saturday October 14<sup>th</sup>. The annular phase will last over five minutes at the greatest eclipse point, located in Central America. **The eclipse is partial as viewed from Los Angeles**, with approximately 70-percent of the sun's disk covered by the moon. The moon will contact the edge of the sun's disk at 8:08 a.m., PDT. Mid eclipse happens at 9:24 a.m., PDT. The moon leaves the sun's disk at 10:50 a.m., PDT. NEVER look at the sun without proper solar filters at any time.

**The Orionid meteor shower** is active from September 26 to November 22. The shower produces between 10 to 20 meteors per hour at its peak. The radiant, the point at which the meteors seem to come from, is in the constellation of Orion the Hunter. The parent object is the famous comet 1P/Halley. The peak is on the night of October 20 to the 21<sup>st</sup>. The moon will set at 10:43 p.m., PDT, that night.

*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

Source:

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

**October 8, 9 - Draconids Meteor Shower.** The Draconids is a minor meteor shower producing only about 10 meteors per hour. It is produced by dust grains left behind by comet 21P Giacobini-Zinner, which was first discovered in 1900. The Draconids is an unusual shower in that the best viewing is in the early evening instead of early morning like most other showers. The shower runs annually from October 6-10 and peaks this year on the the night of the the 8th and morning of the 9th. The second quarter moon will be visible in the early morning but shouldn't interfere too much. Best viewing will be in the early evening from a dark location far away from city lights. Meteors will radiate from the constellation Draco, but can appear anywhere in the sky.

**October 14 - New Moon.** The Moon will located on the same side of the Earth as the Sun and will not be visible in the night sky. This phase occurs at 17:56 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.

**October 14 - Annular Solar Eclipse.** An annular solar eclipse occurs when the Moon is too far away from the Earth to completely cover the Sun. This results in a ring of light around the darkened Moon. The Sun's corona is not visible during an annular eclipse. The eclipse path will begin in the Pacific Ocean off the coast of southern Canada and move across the southwestern United States and Central America, Columbia, and Brazil. A partial eclipse will be visible throughout much of North and South America. ([NASA Map and Eclipse Information](#)) ([NASA Interactive Google Map](#))

**October 20, 21 - Orionids Meteor Shower.** The Orionids is an average shower producing up to 20 meteors per hour at its peak. It is produced by dust grains left behind by comet Halley, which has been known and observed since ancient times. The shower runs annually from October 2 to November 7. It peaks this year on the night of October 20 and the morning of October 21. The first quarter moon may block some of the dim meteors in the evening, but it will set shortly after midnight. This will leave dark skies for what could be a good morning show. Best viewing will be from a dark location after midnight. Meteors will radiate from the constellation Orion, but can appear anywhere in the sky.

**October 23 - Venus at Greatest Western Elongation.** The planet Venus reaches greatest eastern elongation of 46.4 degrees from the Sun. This is the best time to view Venus since it will be at its highest point above the horizon in the morning sky. Look for the bright planet in the eastern sky before sunrise.

**October 28 - 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 20:25 UTC. This full moon was known by early Native American tribes as the Hunters Moon because at this time of year the leaves are falling and the game is fat and ready to hunt. This moon has also been known as the Travel Moon and the Blood Moon.

**October 28 - Partial Lunar Eclipse.** A partial lunar eclipse occurs when the Moon passes through the Earth's partial shadow, or penumbra, and only a portion of it passes through the darkest shadow, or umbra. During this type of eclipse a part of the Moon will darken as it moves through the Earth's shadow. The eclipse will be visible throughout all of Europe, Asia, and Africa, and western Australia. ([NASA Map and Eclipse Information](#))

# October 2023

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4 Garvey Night Board Mtng	5	6	7
8	9	10	11 Garvey Night	12	13	14 Dark Sky Night 60 Inch Night
15	16 General Mtng	17	18 Garvey Night	19	20 Outreach- Arcadia Outreach- Granada Hills	21 Public Star Party
22	23	24	25 Garvey Night	26	27 Outreach- Silverlake	28 Science Night
29	30	31 Happy Halloween!				

# Meet The New Members

# Welcome to the LAAS!



Kasey Cooley	Peter Hata	Uver Santa Cruz
Natasha D.	Morgan Kadoya	
Dominique Frank	David Martinez	
Martin Glazer	Greg Mathis	
Laura Harp	Sarah Mazuca	
W.Andrew Harrell	Nancy Meza	

## LAAS Board Meetings

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.

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

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Secretary: Spencer Soohoo

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Club Communications: Andee Sherwood

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Mt. Wilson Coordinator: Darrell Dooley

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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



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