THE LOS ANGELES ASTRONOMICAL SOCIETY

NOVEMBER, 2023
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THE BULLETIN

Looks like some of our members have found new ways to attract the public's attention at our public star parties held at the Griffith Observatory. Check out this cool light display used to promote International Observe the Moon Night. (IOMN)

Photo credit: Scott Basu

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 .

In This Issue

Upcoming Club Events

Board Meeting: Nov. 8

Dark Sky Night: Nov. 11

General Meeting: Nov. 13

Public Star Party: Nov. 18

A Lazy Weekend

By Kevin Gilchrist

I used data from the TelescopeLive service I subscribe to and downloaded a few data sets. Processed by me using StarTools 8 and GIMP are my favorite object types - planetaries and interacting galaxies.

M 57 - the Ring Nebula (HSO color pallet)

M 31 - Andromeda Galaxy (LRGB)

NGC 1097 (LRGB)

NGC 1097 is/has possibly interacted with the small elliptical galaxy at lower left. The larger galaxy is 45-48 million light years away (Mag 9.3) in the constellation of Fornax, The Furnace, an impressive name for a dim and unimpressive constellation near Eridanus and Orion. At the center of this galaxy is a supermassive black hole of 100 million solar masses. Fornax is home to a small number of spiral and elliptical galaxies that taken together, makes for an impressive grouping including the barred spiral NGC 1365.

The Andromeda Galaxy is interacting with its two satellite galaxies - the disc of Andromeda is warped. It was once believed that the Milky Way looked like a smaller version of Andromeda, but it is now known that our galaxy looks more like NGC 1097, a barred spiral, just not as pronounced a central bar as 1097's. Also, the mass of the Milky Way is now estimated (by some) to be similar to Andromeda's.

At about the time that our galaxy and the Andromeda Galaxy are colliding, our Sun will be well into its Red Giant stage and will look similar to the Ring Nebula after the outer layers of the Sun have blown away, leaving it just a White Dwarf star, the naked core of the Sun. This White dwarf will still be hot, though very dim, for another trillion years.

The data sets were from various sizes of scopes in Chile and Spain. M 57 was of lower quality results here - 1hr-55min - and the nebula blown out. Also, I was not pleased with the results when trying to tease out the faint outer shells of nebulous matter, which are there in the data. I will have to try less data and more expensive software someday.
M 31 is 18.5 hours of data, and NGC 1097 is about 12 hours.

Kevin Gilchrist

September, 2023

SMILES FOR/AND MILES!

By Keith Armstrong

Hi Astrofriends! This has been a crazy lead up to the annular eclipse. So much has gone on, it is a blur. Way more to report on than just the past weekend, which was essentially an Astrotrip unto itself. My car has definitely been a worthy sidekick for this round. Let's dive right in!

Garvey hosted two star parties for the city of Monterey Park on consecutive weeks. It was a nice group of locals showing curiosity and excitement for both events. The first one had an additional flair to it in that it wasn't announced to the club beforehand. This fire was elevated from a three-alarm to a four-alarm by the fact that the Board meeting was that night, leaving the Garvey with Joe P, Cassondra, and myself to handle the initial crowd. In my mind it equated to that scene from 300, but I am sure it looked different from the outside. Nevertheless, way to go team! I have loved the generally larger crowds we have gotten at Garvey this year, both from members and the public. I know some of this comes from the outreach we do at Griffith and Mt Wilson, but also I feel that I should also mention that Norm Vargas has likely had a hand in it as well. He has been a one man show in his Alhambra outreach, directing traffic to Garvey. He is such a kind and knowledgeable guy and he is exactly who the average person thinks we all are when we do outreach. There aren't many professional astronomers left in our ranks, but he is the one we have that still takes it to the streets. Thank you Norm for not taking your work home with you, but leaving it outside for us curious raccoons to pick through.

In his spirit (I wish it was more of his mind), I have started my own branch of sidewalk outreach in Silverlake. A little while back, you may have seen that post where two mystery astronomers were photographed on sunset in front of the Silverlake Lounge. That was me and Cassondra going full impromptu after seeing a band play that night. The reception was so great that we decided to go again in a different area of Silverlake. In my last rant you may recall that one got clouded out, but the next two were SO AMAZING. We had multiple people tell us that we made their night, and Pine and Crane sent their staff out to look through our scopes. These were incredibly gratifying and we already have the next one planned for this week. I can easily see this becoming a regular thing. We have even been offered free drinks from Pine and Crane and received ice cream out of grattitude! My favorite story from these has got to be the homeless guy. There was one poor guy out there yelling at the trees and power polls that at one point asked Jamir to look though his scope. Jamir offered, and the dude seemed to go from Hyde to Jekyll in about 3 seconds after viewing Andromeda (I think?). Well, the second night out he was out there doing his Hyde thing until a group of passersby declined to look at Saturn after I asked. Then the guy suddenly became an astro advocate, trying to cajole them into changing their minds and heading our way. I wish I could say it worked, but I appreciated the effort. Thank you to Andy I, Shane W, David Y, Heven, Cassondra, and Jamir for making it out. I have been granted access to the LAAS NSN calendar, and will be including all future trips to this spot on it. To see the NSN calendar look here:
https://nightsky.jpl.nasa.gov/event-list.cfm?Club_ID=1344
To copy it to your ical click here:

https://nightsky.jpl.nasa.gov/club/event-list-ical.cfm?
DistRange=100&EventAfterYear=2023&EventAfterMonth=10&EventAfterDay=16&Sort=EventDate&Club_ID=1344&SortDir=ASC&NonKit_Events=1&Status=Active,Pending,Incomplete,Cancelled&Outreach=0&IncludeRN=1&AllowRSVP=0&OverrideLocation=1

It is the official schedule for LAAS and it has all of our official goings on.

The next thing worth mentioning was definitely the wildest place LAAS has taken me. The Moonrise Campout is an annual music festival in Apple Valley that plays out like a baby Burning Man. The organizer asked our club to bring some scopes to view the Harvest Moon. As a non-science based event I wasn't sure what to expect. But the warmth exuded from these incredibly kind and intoxicated people was amazing. Tears were shed by those that had never seen the rings of Saturn, and I was granted a hug in gratitude by a spider lady. I also watched a dust devil swoop down and explode the info tent while I sipped on a lavender latte made by the festival barista. That was weird. The threat of rain and mud precluded me from joining them on night two, but I will DEFINITELY be joining them next year if given the opportunity. If you like your astronomy mixed with a heavy dollop of subversive art and music culture, I suggest you join me like Jeremiah Pitts did. My poor little car (Gretchen is her name should you ever meet) almost shook to pieces on that 20 mile dirt road to get there, but we made it through unscathed.

Next up was the Fam Nite that wasn't. October is the first month to not have Family Night but some of us did it any It was Brian and I plus about four more and we had a mediocre sky. But the big takeaway from that night came

from the Pifinders. Rich S. builds these things and with software version 1.7 they are SO FLIPPIN GOOD. For the uninitiated, they look like this:

They attach to a telescope like any finder via a standard dovetail, and plate-solve the night sky like astrophotography gear. You align it with your telescope (incredibly easy with the new software) and tell it what you want to see. It then gives you push-to directions to land on your chosen objects. Better still it even sends info to Sky Safari, moving the reticle on your pad or phone along with whatever your scope is seeing. It has been such a pleasure watching this device mature. Brian and I were on them all night hitting object after object. I have a Sky Safari list of subpar DSO's that I have never seen before, and the Pifinder had me checking boxes one after another. I got about 35 done in that night before I diverted my attention to more attractive objects that were more worthy of my brand new ES 17mm/92º eyepiece. That thing is sooooo good, I think I like it better than my 17mm Ethos. Maybe sacrilege to say! Also this was Joe P's first night with the 26 since it moved up to SKAS. I was so happy to hear that ladder clanging around all night in the distance, knowing he was having a good time with the scope he cared for at Griffith for years.

Okay, this takes us up to this last weekend. I can't believe you are still reading this, don't you have something better to do? No? Okay, well now we are in this together. Every now and again I like to challenge myself to test my endurance. The annular eclipse landed on the same day as the Night Sky Festival in Joshua Tree, which was the same day as Dark Sky Night. It was truly impossible to do all three in one day, BUT if I move my SKAS day forward to Friday, I can at least tip my hat to Dark Sky Night and maybe see a friend or two. Then It leaves the eclipse at Griffith on Saturday morning followed by the Night Sky Festival that night. I allllllmost got Cassondra to do the whole thing with me, but she has a few more brain cells than I do and stayed home on Friday. Well let me tell you something about that Friday. It was flippin cold. The week before it was in the low 50's but this time it got into he high 20's. Rich S was at the Dob Pad in his Michelin Man-looking freezer suit, Jamir was in GMO working the 16", and John Park was grabbing data on a western pad while I tested out the Pifinder on the 26. It was funny having the four of us spread out about as far as we could be, but we really got the best out of SKAS. The sky was clear, but not too transparent. Jamir had the find of the night, definitely spotting Uranus. Seeing that there were four of us, and it was cold, and it was late, we succumbed to our basest levels of humor for a solid 15 minutes. Wait, maybe it was only me… I had hoped I would have the decency to leave SKAS at around midnight, but the siren song of the 26 with the Pifinder was too strong and they kept me there until about 1am. Home by 2:30 and UP at 6 to be at G.O. by 7 to set up the Garvey dual solar scope.

I would like to take the time in this moment to thank coffee for all it does for me. The sacrifice of all those beans does not go unrecognized by my metabolism. That is all I have to say about that.

I love how it feels to be under the night sky with friends and a great telescope. Usually in some nature-y location with a fun driving road leading to it. It is peaceful and calming like an ocean breeze or my barely audible, soft-speaking English teacher in high school. Solar astronomy is a foil to this. Waking up early is for eager worm-eaters, not astronomers. The sun was indeed oddly shaped that morning, but any visible sun before 10am is oddly shaped to my nocturnal ass. I was fortunate enough to be set up between Kenji and his family and Soren Fey. The crowd was excited and informed. Most of the G.O. attendees we see are there for date night or tourism, but this time they were a lot of locals looking for something specific. It was surreal to be at a star party with one star but a good time was had and by 11am it was time to head to the next stop.

The Night Sky Festival is put on every year at Sky's the Limit Observatory by the Joshua Tree Park Rangers. I did it last year as support staff, but went this year with my 12" dob. It is essentially a fundraising event that feels like outreach. The 500ish patrons had paid tickets and jumped from scope to scope, with participants from clubs all around SoCal. We had a pretty good presence this year with Oscar M and family, Jeremiah plus his girlfriend, Cassondra, and I. I will mention that the head of the event went out of his way to mention in his opening talk that LAAS had the best hats, and we were all wearing the NASA-like ones! Everyone we came across was incredibly friendly as we jumped around from M22 to M13 to Andromeda/M32/M110 to Dumbell to Ring to Jupiter to M37 and then Capella. That star always looks pretty and Cassondra went to it during her shift on the scope. People loved it! I am so fond of DSO's that "just a star" isn't even on my menu. Truly a diamond in the sky, it captivated those in the eyepiece. At midnight Jeremiah performed an official closing ceremony with his light show and we packed up for the long ride home. It was a long day, but I was truly sad it was over. Thank you to Jamir, John P., Rich S., Al A., Soren, Kenji, Shane, Heven, Victoria, Scott M., Oscar, Jeremiah, Ranger David Larson, Slow Bloom Coffee, Tacos Huicho, and Cassondra for making that blur of activity a fever dream of fun and adventure. Once again you all shined brighter than the stars themselves and made me so happy to be with you in LAAS. See you out there!

-Keith

Eclipse Chasing

By Allan Der

Elizabeth and I arrived days before in Utah for the annular eclipse. Not knowing what it would be like crowd wise, we wanted to sake our ground. Our camp was a location overlooking Cathedral Valley at 9,039 ft. we had a great view of the remote northern part of Capital Reef National Park. We joined my astrophotographer friend already there in his camper. Weather reports across the west were spotty with clouds, being farther from the coast, we hoped it would be clearer.

We had no cell service, but with Jeremy's Starlink satellite internet, we monitored the weather and communicated with eclipse chasing friends from Oregon to Colorado and tracked the weather forecast for most of the west. It all looked very cloudy, the weather was about the same for hundreds of miles around us along the line of totality so there was no point moving.

My photo plan was to work two cameras, one on automatic and one manual. My automatic setup consisted of an ZWO AM3 mount with ASI air plus, a full frame Nikon 750, and a Nikon 70-200mm f:2.8 + 1.7x. I had a few days of practice tracking the sun and doing test shots. My second camera was a APS-C Fujifilm X-T4 with a 100-400mm with 1.2x mounted on a simple gimbal head. All with filters Full Aperture (Solarlite Polymer) from Thousand Oaks Optical. I exposed with bracketing, +2, normal and -2 stops to have the option to create HDR images.

Four days before the eclipse, the weather turned nasty, we had high winds of 40-50 miles per hour. We got hoarfrost, grapple (small hail) and snow. Our water containers all froze and reports from nearby friend via iReach satellite communicators said Cathedral Valley Campground 3000 feet below us was empty. We had a rough two nights in our four season tent. Elizabeth and I packed up and headed for more hospitable conditions. My friend Jeremy roughed it out in his more comfortable camper at the current location. He made a video his stay: https://youtu.be/oyqdaCqQXCg?

Now two days before the annular eclipse we were a lot warmer, less windy and with the amenities of a primitive campground. One more practice, polar aligned our mounts, one more day of test shots we were all set.
Weather showed clearing in the morning with a little high clouds for the eclipse, batteries solar charged, filters on, locked and loaded. Aside from a veil of thing high clouds, everything was set. The morning was promising, mostly clear skies, mild temperatures and no wind. Remembering how cold it can get when the sun was obscured, we kept out coats nearby. Start of partial eclipse to the “Ring of Fire” was wonderful, not nearly as dark as a total eclipse but great.

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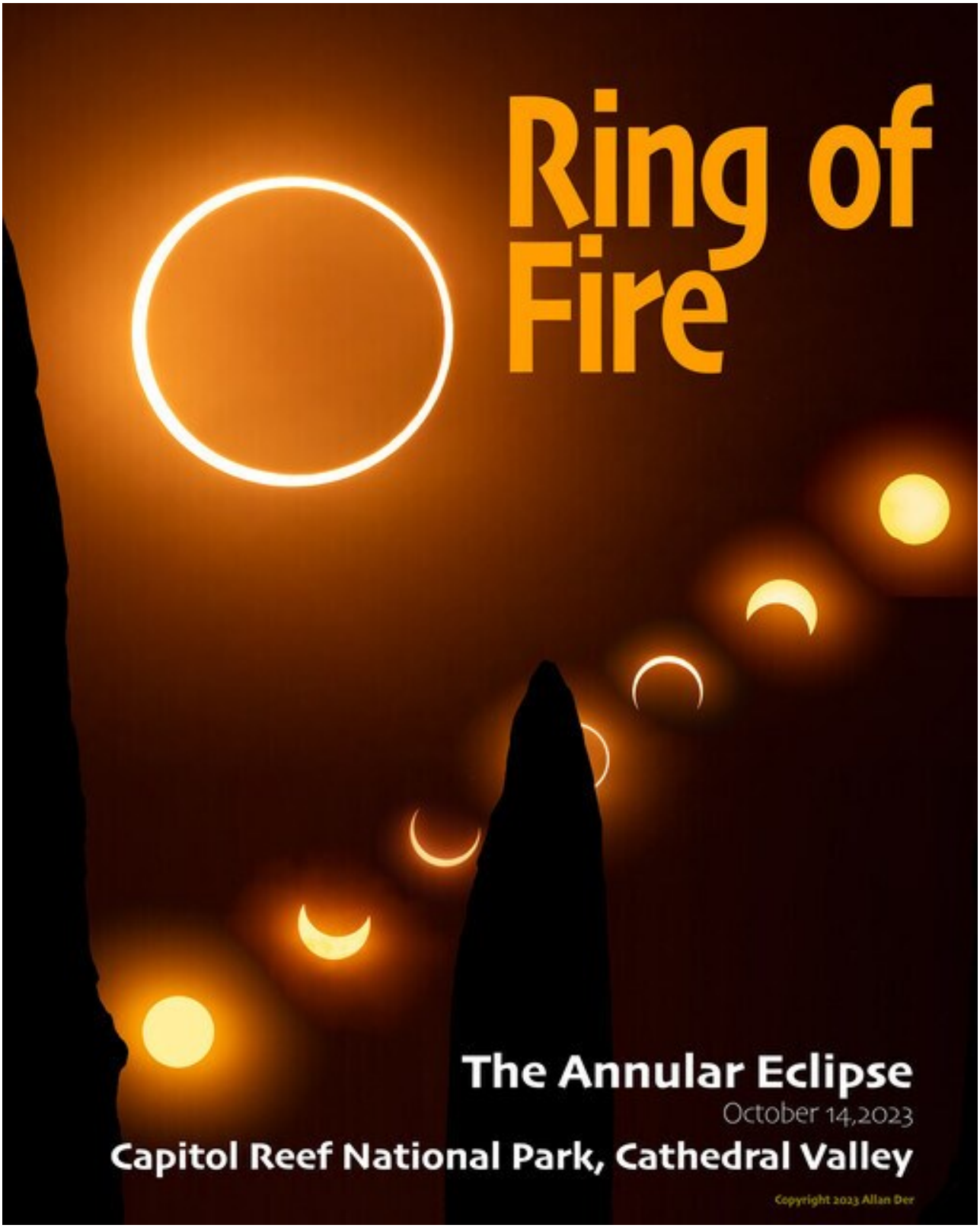


My image is a composite of the photos of the sun from both cameras, moon and the Needle Mountains around us, software was Adobe Lightroom and Photoshop.

The Partial Solar Eclipse of October 14, 2023

By: Ray Blumhorst

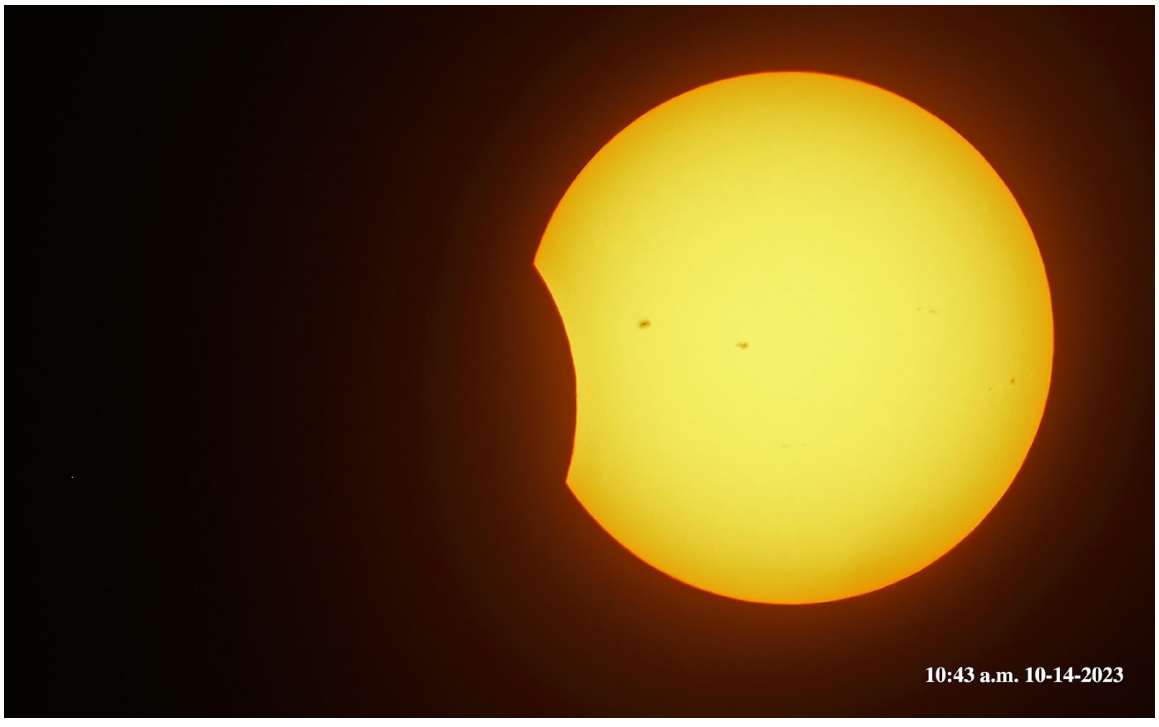
The morning sky was clear and the sun shown brightly in the San Fernando Valley when the moon began to block sunlight streaming to earth.

The sun rose at 5:41 a.m., and as viewed from earth, was already in close proximity to the moon. At a little before 8:29 a.m. the pair began to clear the trees and buildings in my neighborhood, but the eclipse had officially begun at 8:07 a.m. It just wasn't visible were I was until 22 minutes later.

The equipment I used to capture the event was a Canon T6i camera and a Canon 400mm telephoto lens. Both have now been discontinued by Canon, but are still effective tools for an Astro-imager. Of course, safe solar observing dictated I use a white light (Mylar) solar filter on the front end of the telephoto lens. The filter was tinted to give the sun a yellow appearance.

At 8:29 a.m., I began snapping images at approximately three-minute intervals to show the progression of the eclipse.

The midpoint of the eclipse and maximum covering of the sun (70.83%) occurred at 09:28 a.m. At that time, the sun's two most prominent sunspots were also covered by the moon.



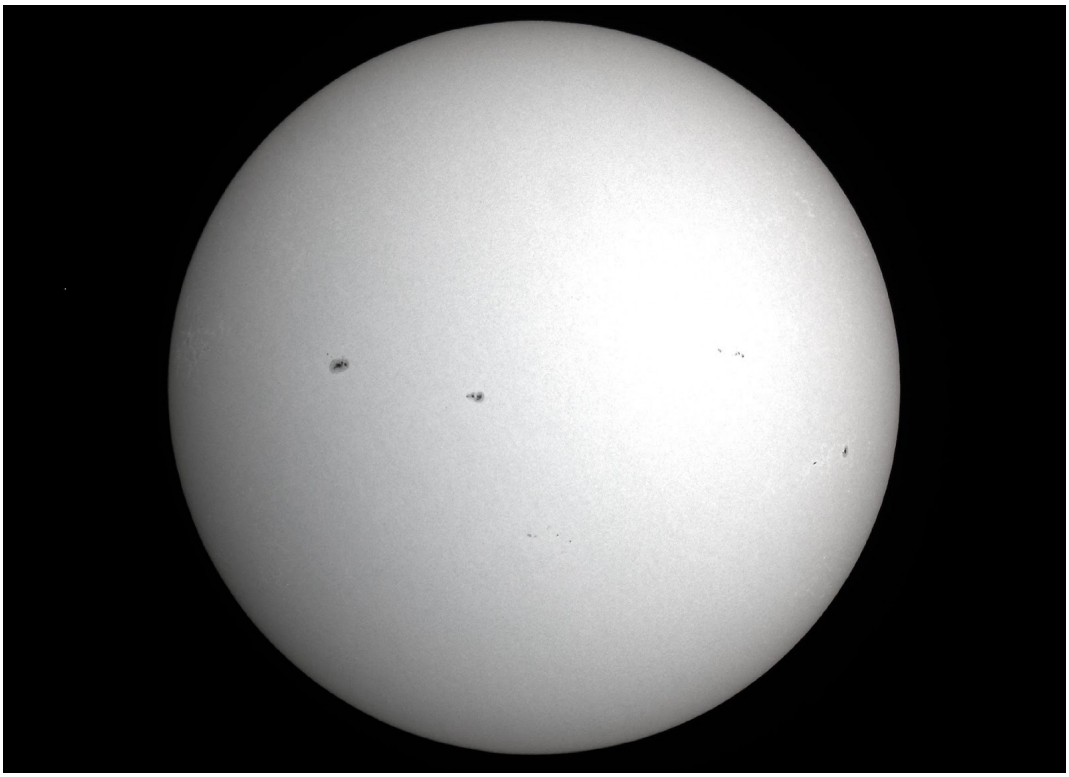
At 10:43 a.m. I took my last image as the moon receded from the left limb of the sun. The moon was totally gone at 10:50 a.m. The eclipse was over.

An interesting peculiarity occurred during the eclipse when shadows cast through the leaves of trees landed on various surfaces. During the eclipse, crescent shadows appeared all over the back wall of the house as well as on pavements at various locations in the yard where shade from trees fell. The crescent shadow images were most notable around 9:30 a.m. This peculiarity was called the pinhole camera effect.

"The tiny gaps between leaves act as pinhole lenses, projecting crescent shaped images of the eclipsed sun onto the world below," said an online article at PetaPixel. https://

"A pinhole camera is a simple camera without a lens but with a tiny aperture (the so-called pinhole)—effectively a light-proof box with a small hole in one side. Light from a scene passes through the aperture and projects an inverted image on the opposite side of the box, which is known as the camera obscura effect. The size of the images depends on the distance between the object and the pinhole," said an article at Wikipedia. https://en.wikipedia.org/wiki/Pinhole_camera

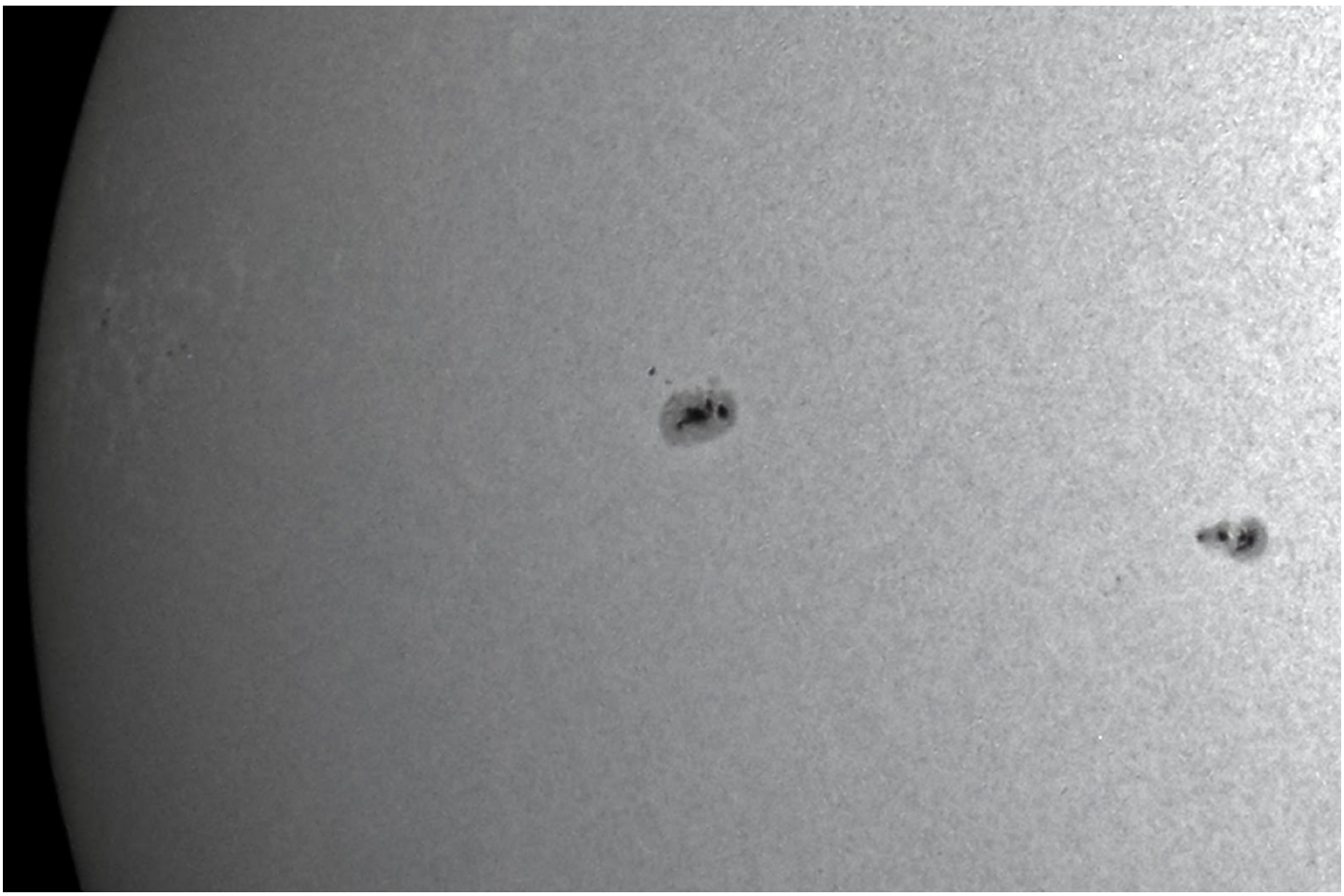
Over the three-hour time of the eclipse, the temperature rose steadily in the San Fernando Valley. The cool, brisk morning air progressed into the familiar "hot and getting hotter" mode of summer weather. But sunspots beckoned so I uncovered a 6-inch refractor, installed another white light solar filter (Mylar/no tint), and got a closer look.



The two most prominent sunspot groups on the sun's photosphere were present near the equator and on the left side of the Sun. A couple of much smaller sunspot groups were present near the equator and on the right side of the sun, making for four total sunspot groups on 10-14-2023 by my count.

It appears the Sun has passed its maximum activity for this solar cycle and is moving on toward solar minimum in the progression of the eleven-year sunspot cycle – twenty-two year cycle if you count the switching of polarity in the solar hemispheres at the end of each eleven-year cycle.

Earlier in the present sunspot cycle, sunspots were mostly appearing at higher latitudes, closer to the sun's poles.



The black center of sunspots are cooler and called the sunspot's umbra. The grayish area surrounding the umbra is known as the penumbra and is hotter.

April of 2024 will be the next solar eclipse to cross the U.S., but anyone wanting to see totality will once again have to travel eastward.

Photo Credit: Ray Blumhorst

A view of the Annular Eclipse from the Four Corners Region

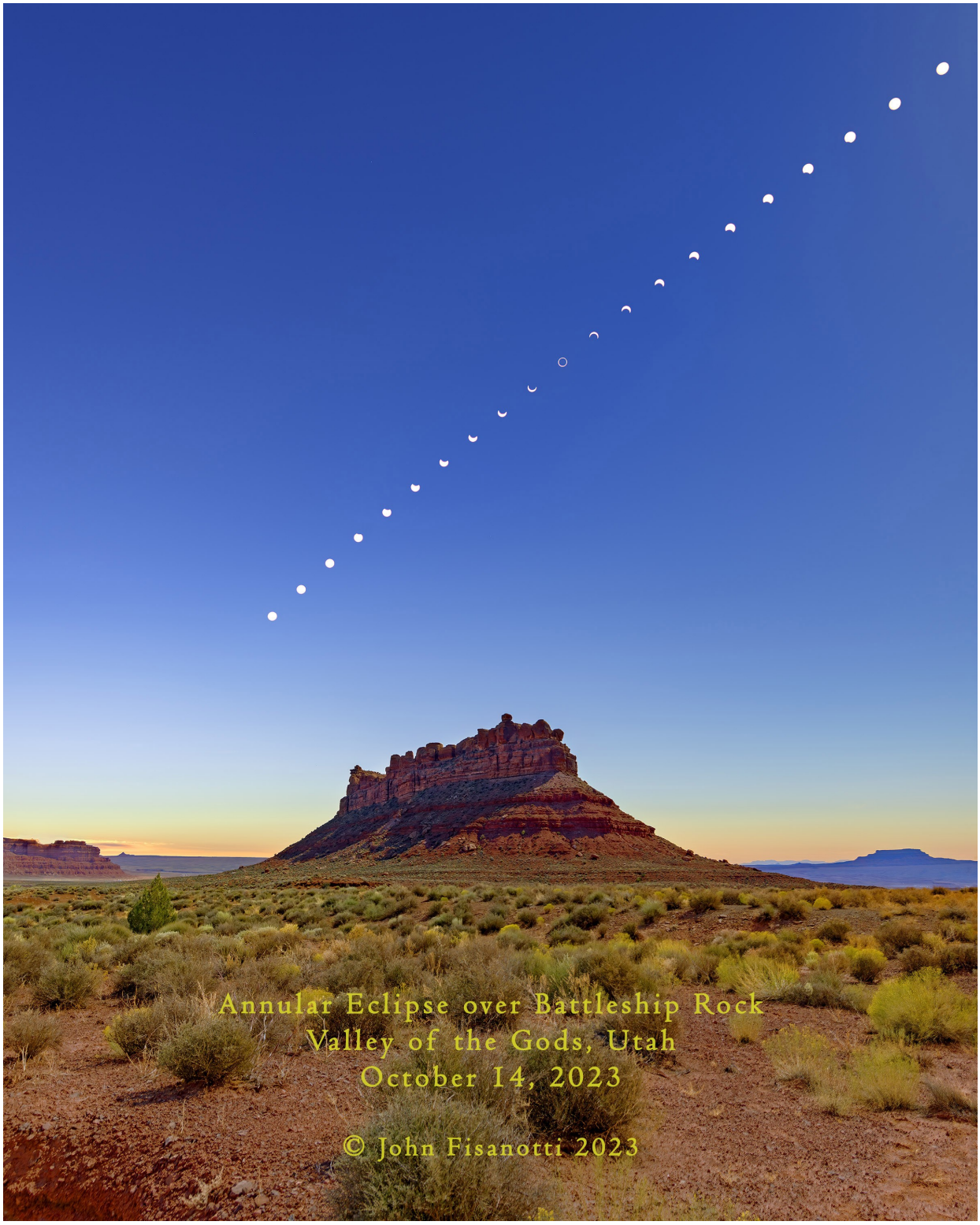
By John Fisanotti

This year's annular eclipse on October 14, passed over some very scenic and dark locations. I went to see and photograph the eclipse, and while there, I took advantage of the location to do some nightscape photography. Here is a description of my eclipse photo and the three nightscape photos, which accompany this write up.

For the annular eclipse in October, I went to Kayenta, Arizona to be close to the centerline of the eclipse. I planned to find a location in the Monument Valley/Four Corners area to shoot a landscape image with a sequence of the eclipsed sun overhead. I did a reconnaissance the day before the eclipse in the Valley of the Gods, a little north of Mexican Hat, Utah. What I found is people were already camped out in most of the available turnouts along the road within the Valley. When I found a suitable spot, I made friends with the people already there. Fortunately, they were all very friendly and welcoming to have me join them. Worried about traffic and possible road closures the next morning, I elected to forgo my hotel room and spend the night before the eclipse sleeping in my car in all my clothes to stay warm at this location. It afforded me the opportunity to do some nightscape photography as well.

From this location, I shot the Big Dipper at twilight. The camera used was a Nikon D810A and the lens was a Sigma 28mm f/1.4 Art lens. The twilight shot is a two-image composite: one image exposed for the stars and the other for the landscape.

For the eclipse, I set up a Nikon D810 with a Nikkor 20mm f/1.8 lens and a white light solar filter. Using the in-camera intervalometer, I programmed the camera to take a photo every 10 minutes starting 1 hour 40 minutes before mid-eclipse. After fourth contact, I removed the filter and waited for the sun to drift out of the field of view, and took a final series of bracketed exposures to record the landscape. In the final processed image, all 25 frames used to create the final were in registration when stacked since the camera was locked down on the tripod. After making my processing adjustments, I cropped the image to increase the apparent scale.



During my stay in the area, I also photographed a duo of photos, illustrating the same Monument Valley buttes in morning and evening. From a location along US Highway 163, these buttes appear towards the southwest. After dinner on Thursday night, I drove out there because I knew the Milky Way in Sagittarius would be well placed over the buttes. The light in the foreground came from a passing car. Camera was Nikon D810A, Lens was Sigma 28mm f/1.4 Art and the exposure was 10 seconds, f/1.8 and ISO 2000. By morning, from the same location Orion and Canis Major are positioned above the buttes. The morning shot was taken as dawn was brightening the sky to the east on Sunday morning. For this I had my iOptron tracking mount set up to allow for a two-minute exposure for the stars, at f/4 and ISO 3200. Then I turned off the tracking and as the dawn light got brighter, took a second image 60 seconds at f/4 and ISO 3200. The landscape and the sky from each were then composited in Photoshop.

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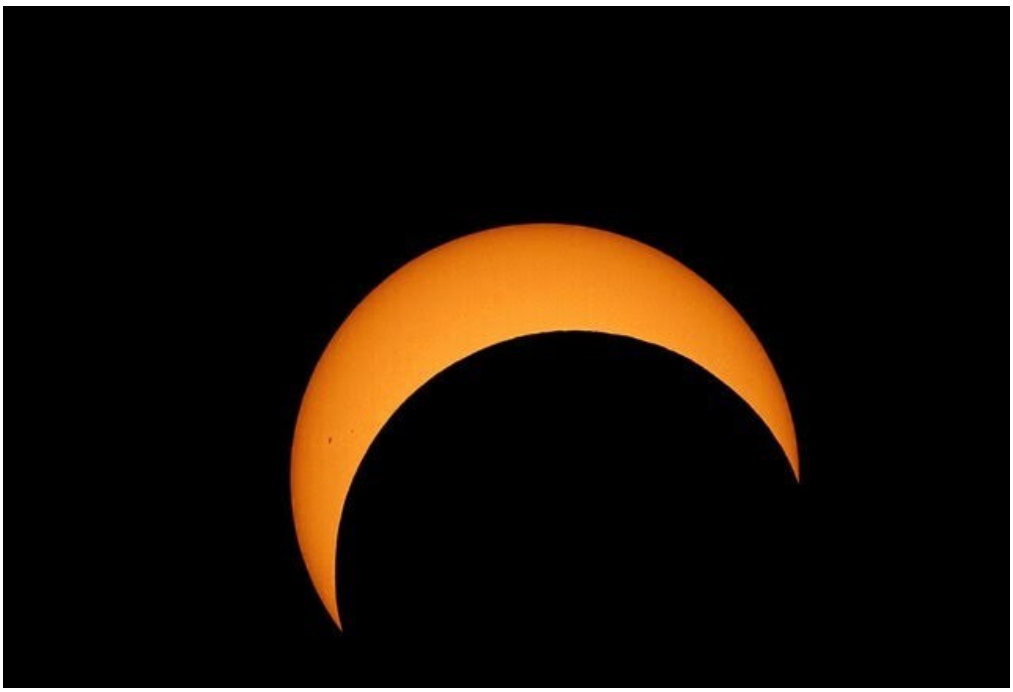
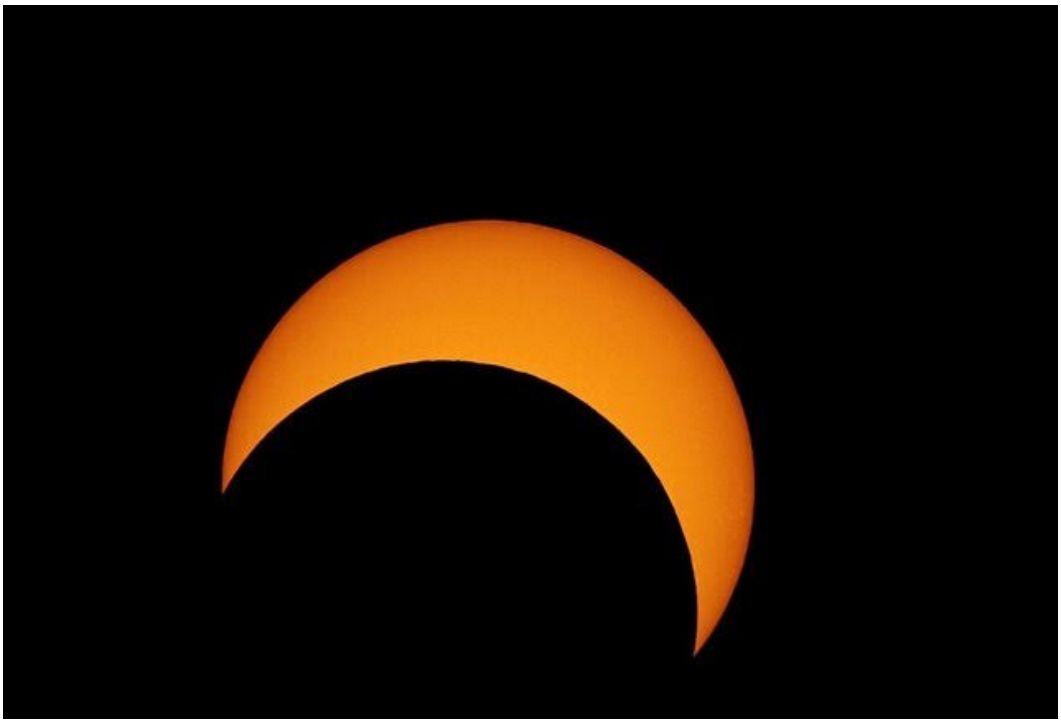
Photos of the Annular Eclipse

By Karim Elmahmoudi

So glad the weather was great! Here are my pics.

Taken from the roof of my apartment in Miracle Mile/La Brea with a Stellina telescope and solar filter.





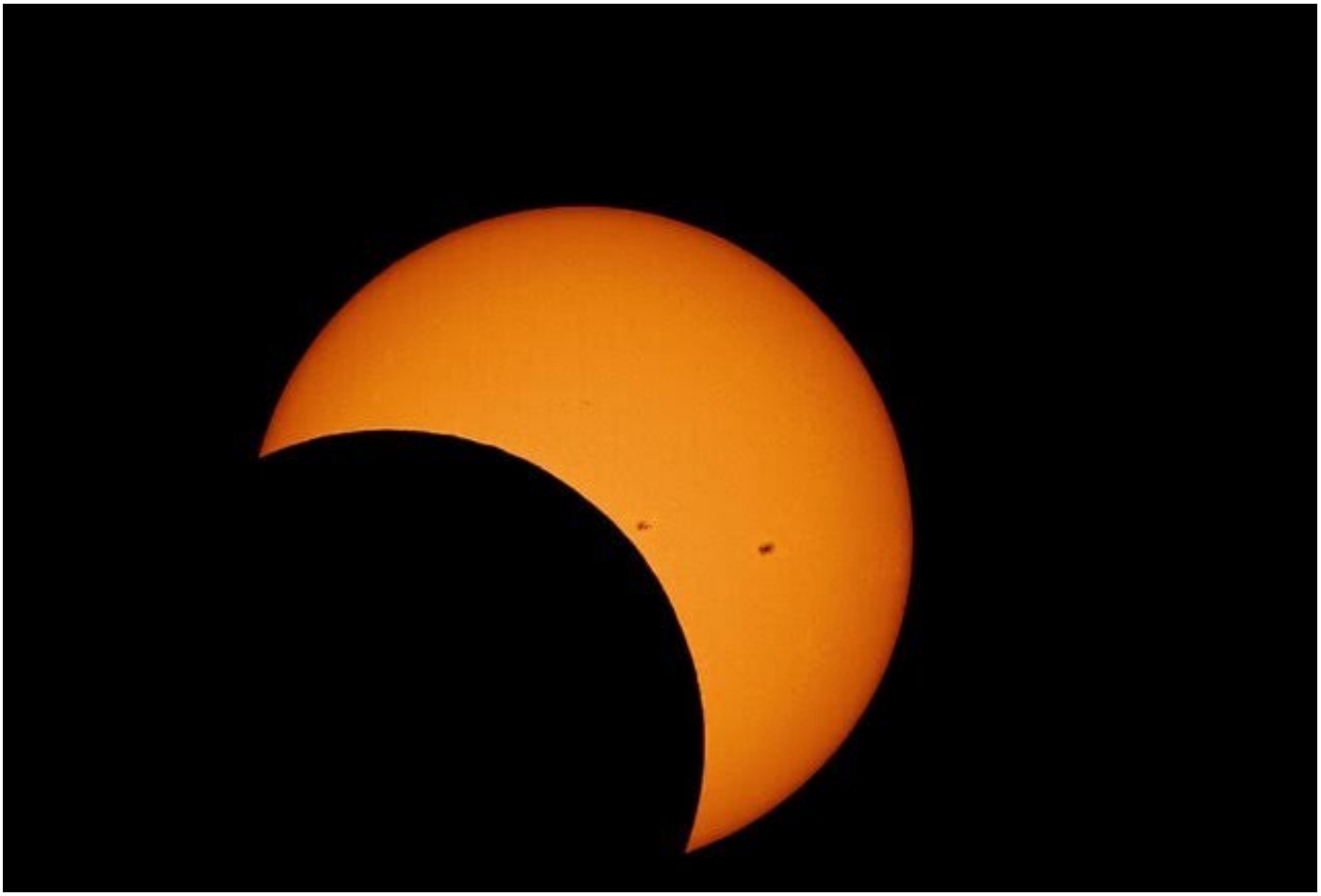


Photo credit: Karim Elmahoudi

Photos of the LAAS at Griffith Observatory During the Annual Eclipse

By Heven Renteria

Fortunately, the weather forecasters over at NOAA got the fog prediction completely wrong in our favor! A huge thank you to all of you who made it to Griffith Observatory today. Mark Pine, deputy director of Griffith Observatory was very impressed with the turnout we had. The event would not have succeeded without you all!


GRIFFITH OBSERVATORY
Signs of Life
NOW PLAYING

THANK YOU VOLUNTEERS

Oct 21/22 at Lockwood!

By Ben Guthrie

Andy, John, Belenie and I braved the cold *(Al checked in to make sure we were ok a couple times)*, it dipped to -2c last night and the seeing/guiding was... odd, but through it all I got a pretty good haul. I am still having a blast with the Hyperstar on my 9.25". Its too easy to be successful with an unfiltered F2 scope, with a decent OSC camera.

I setup a Canon 7D2 and grabbed some star trails over our sign. This ran for most of the night, but I just took a select bit to make these 'comet' style trails.

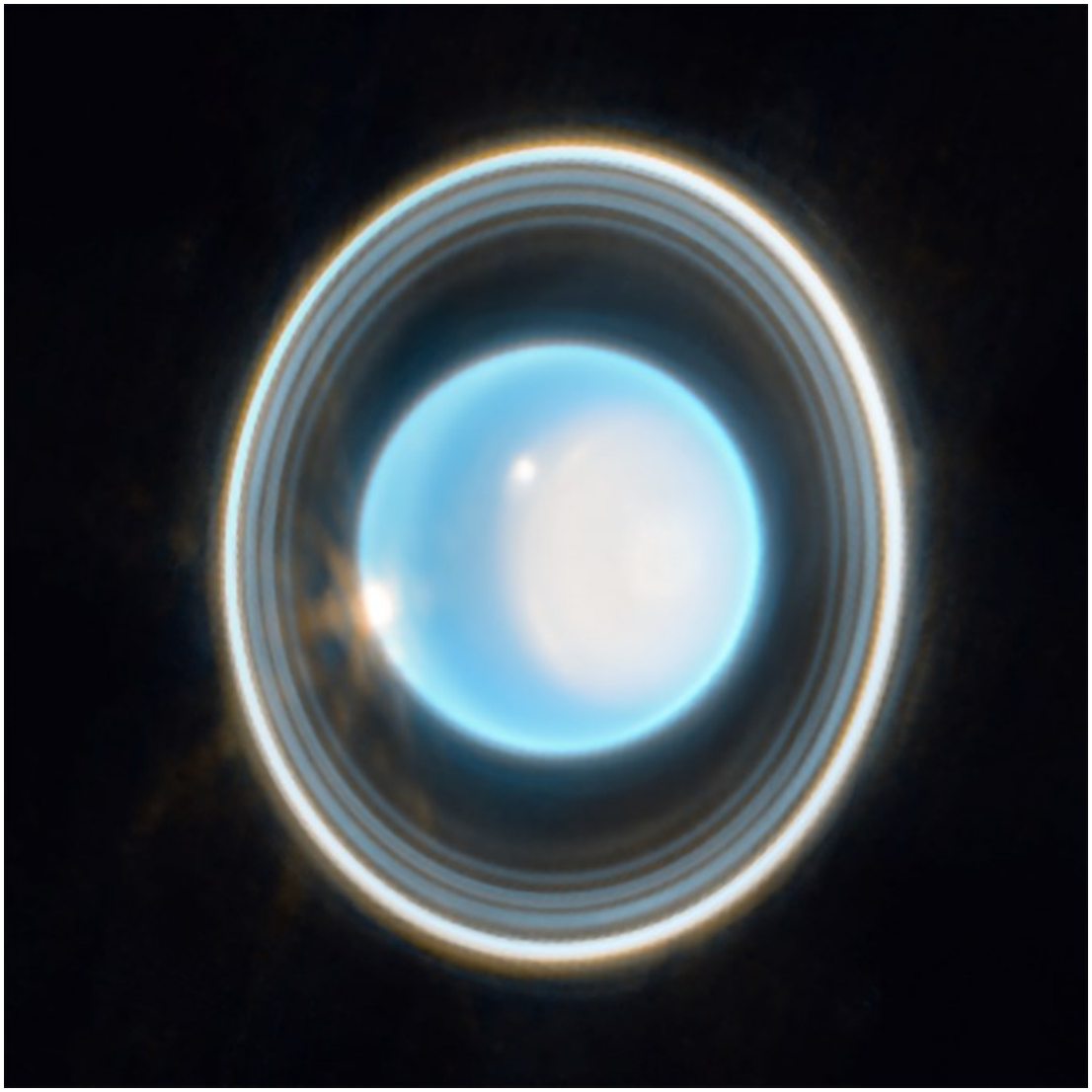
While waiting for the moon to clear I spent 90 minutes on the Heart Nebula

I figured this was the right time of the year for the Christmas Tree Cluster so I spent 47 minutes here... I think I need to swap.

John Park encouraged me to take a stab at NGC 1333, so I dumped 2.5 hours on this.

Spy the Seventh Planet, Uranus

By Liz Kruesi



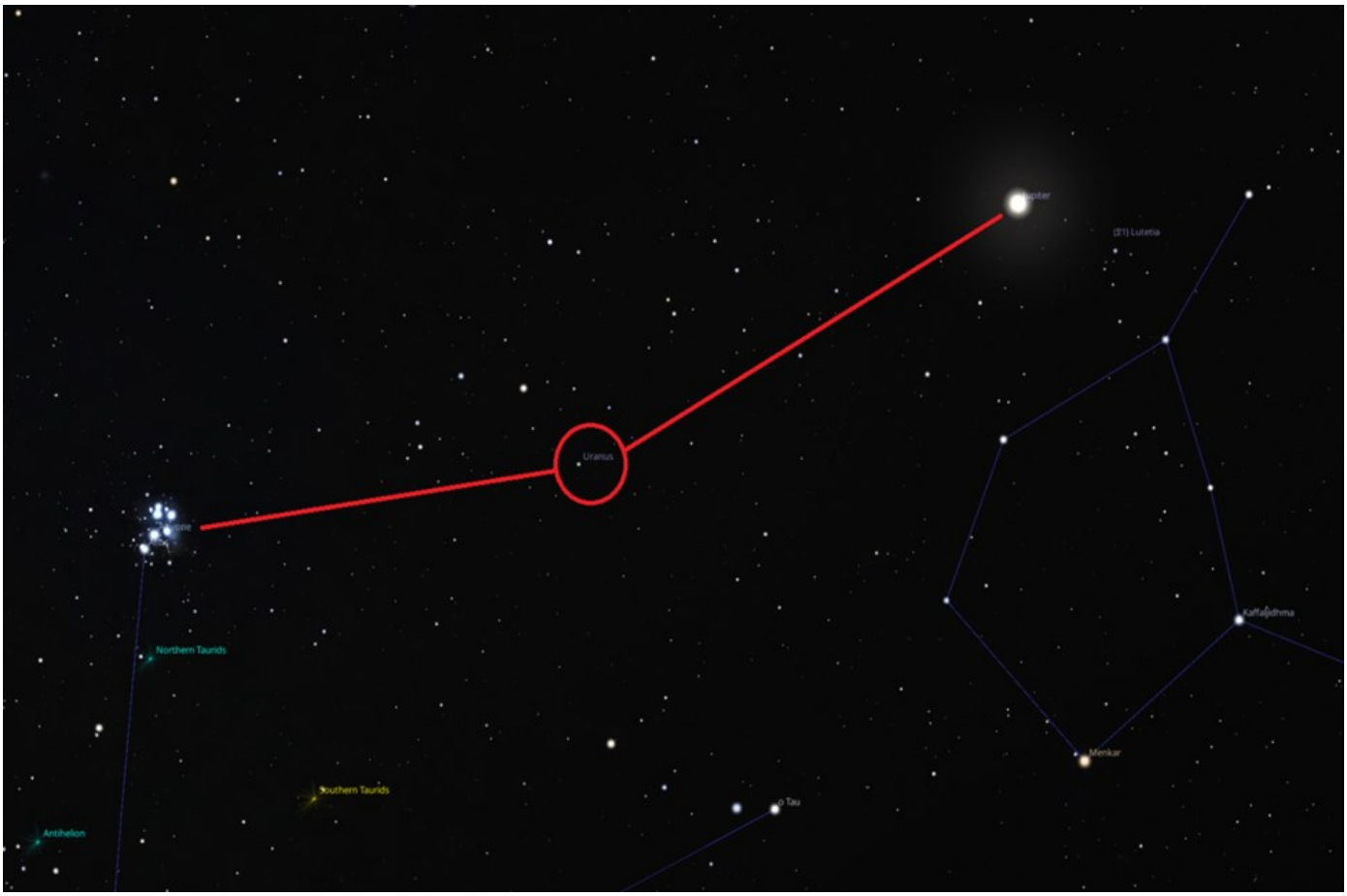
This zoomed-in image of Uranus, captured by Webb's Near-Infrared Camera (NIRCam) Feb. 6, 2023, reveals stunning views of the planet's rings. The planet displays a blue hue in this representative-color image, made by combining data from two filters (F140M, F300M) at 1.4 and 3.0 microns, which are shown here as blue and orange, respectively

Credits: NASA, ESA, CSA, STScI. Image processing: J. DePasquale (STScI)

You might be familiar with Saturn as the solar system's ringed planet, with its enormous amount of dust and ice bits circling the giant planet. But Uranus, the next planet out from the Sun, hosts an impressive ring system as well. The seventh planet was the first discovered telescopically instead of with unaided eyes, and it was astronomer extraordinaire William Herschel who discovered Uranus March 13, 1781. Nearly two centuries passed before an infrared telescope aboard a military cargo aircraft revealed the planet had rings in 1977.

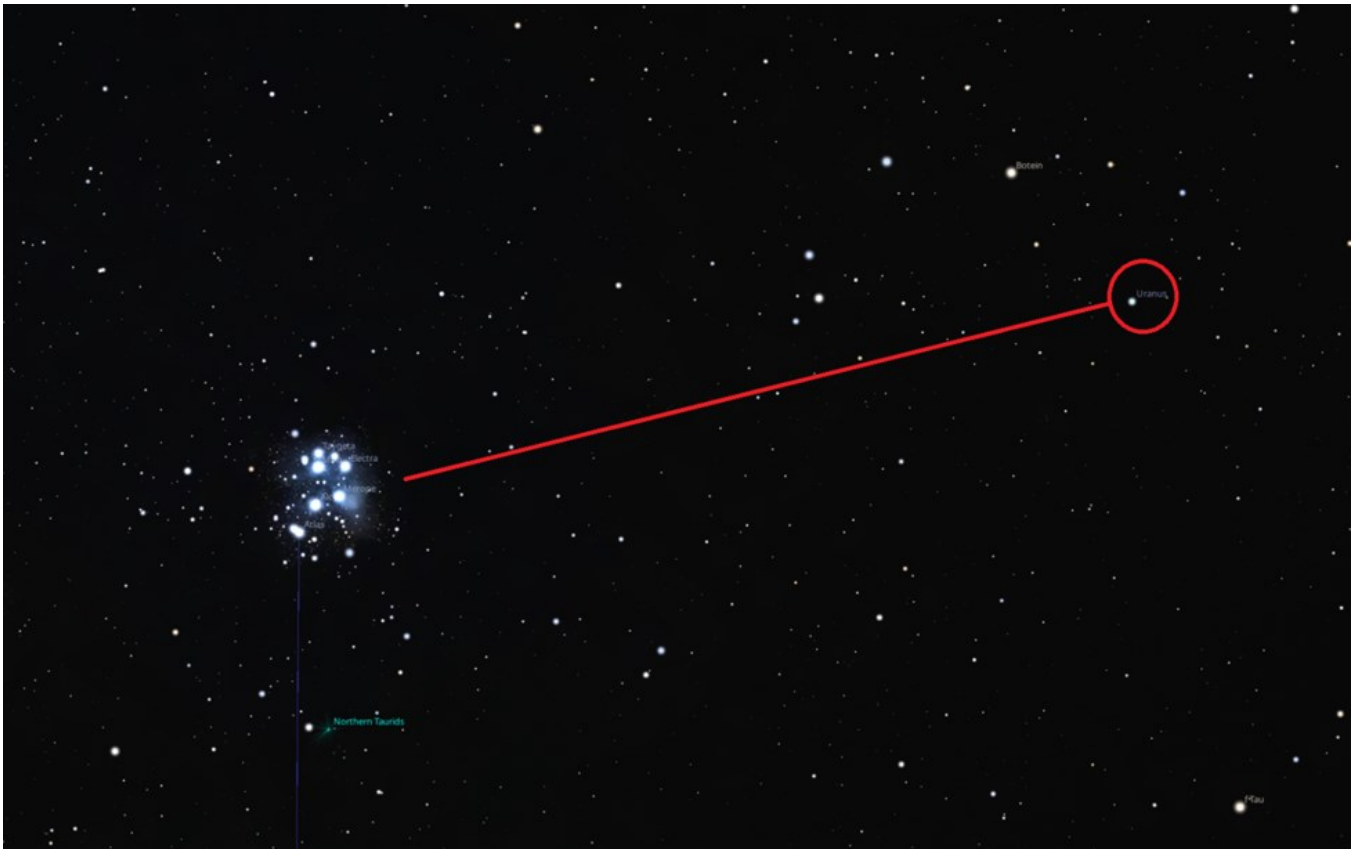
Since that discovery, multiple observatories have revealed more details of Uranus and its ring system. Most recently, the NASA-led JWST space observatory captured the planet and its rings in detail. This recent image combines just 12 minutes of exposure in two filters to reveal 11 of the planet's 13 rings. Even some of the planet's atmospheric features are visible in this image. Even with advanced imaging like that from JWST, much of Uranus remains a mystery, including why it orbits the Sun on its side. This is because only one spacecraft has ever visited this planet: NASA's Voyager 2, which flew by the distant planet in the mid-1980s.

Planetary scientists are hoping to change that soon, though. Scientists recommended in a report released last year from the National Academies of Sciences, Engineering, and Medicine that Uranus be the focus on the next big planetary science spacecraft mission. Such a large-scale mission would gain insight into this icy giant planet and the similar solar system planet, Neptune.



Sky map picturing M45, Uranus and Jupiter, Stellarium

If you want to catch a view of Uranus with your own eyes, now is prime time to view it. This ice giant planet lies perfectly positioned in mid-November, at so-called “opposition,” when its position in its orbit places it on the other side of the Sun from Earth. That location means our star’s light reflects off Uranus’ icy atmosphere, and the planet appears as its brightest.



Sky map picturing M45 and Uranus, Stellarium

To find it, look overhead just after midnight on November 13. Uranus will lie about halfway between the brilliant planet Jupiter and the diffuse glow of the Pleiades star cluster (M45). While Uranus may look like a bright blinking star in the night sky, its blue-green hue gives aways its identity. Binoculars or a telescope will improve the view.

For more about this oddball planet, visit NASA’s Uranus page.

Image 1:

Uranus hosts 13 faint rings, 11 of which are visible in this JWST image. The planet was 19.67 times the Earth-Sun distance from our planet (1.83 billion miles) when JWST captured exposures through two near-Infrared filters on February 6, 2023. The white region in the right side of Uranus is one of the planet’s polar caps. This icy world orbits the Sun differently from the rest of the solar system’s planets – Uranus rolls along on its side.

[NASA, ESA, CSA, STScI; Image Processing: Joseph DePasquale (STScI)]

For more about this oddball planet, visit NASA’s Uranus page: https://science.nasa.gov/uranus/facts/

More Skywatching Resources

Plan your skywatching with help from our planner page, featuring daily stargazing tips courtesy EarthSky monthly sky maps, and videos from NASA/JPL. You can even find out how to spot the International Space Station!

Pleiades Star Cluster (M45)

By John Park

Pleiades star cluster (M45) shot from SKAS Sep 23 with an F/5.5 refractor. Total of around 6 hours of data processed. Interesting to see the details of the blue and reddish dust of this reflection nebula.

Photo Credit: John Park

Monthly Sky Report

By Dave Nakamoto

The daylight hours continue to decrease, and the night time hours increase, through the month, until the winter solstice on Dec 21. Daylight Saving Time ends on Sunday, Nov 5, at 2:00 a.m., when clocks need to be set back one hour.

On that same day, the moon is at last quarter. It is a new moon phase on the 13th, first quarter on the 20th, and full moon on the 27th.

From evening to morning, the planets appear thusly:
Mercury and **Mars** are both very close to the sun and hence unobservable.

Saturn begins the month rising 15 degrees south of east at 2:55 p.m., PDT. At the end of the month, Saturn rises at 12:03 p.m., PST, so for the entire month Saturn is well placed for evening viewing. On the 4th, Saturn reverses its slow retrograde motion and starts its prograde motion as it changes direction and moves west to east among the stars. A telescope with a magnification of 50x is the minimal size needed to see the planet's rings and its large moon Titan.

Neptune begins the month rising in the east at 4:00 p.m., PDT. By the end of the month, Neptune rises at 1:05 p.m., PST. On the 15th, Neptune is at Right Ascension $23^h\ 43^m\ 43^s$ and declination -3° 8' 24". Neptune continues its retrograde motion. A telescope with a magnification of 150x or more is needed to see the planet's small disk.

Jupiter rises 17 degrees north of east at 6:03 p.m., PDT, at the beginning of the month. At the end of the month the planet rises at the same position at 2:58 p.m., PST. The planet continues its slow retrograde motion as it moves east to west among the stars. A telescope with a magnification of 50x will show the Red Spot and the four bright Galilean moons.

At the beginning of the month, **Uranus** rises in the east-northeast at 6:33 p.m., PDT. By the end of the month, Uranus rises at 3:35 p.m., PST. On the 15th, Uranus is at Right Ascension $3^h\ 14^m\ 40^s$ and declination +17° 42' 4". The planet continues its slow retrograde motion. A magnification of 150x or more is needed to see the planet's small disk.

Venus is the last planet to rise this month, appearing in the east around 3:30 a.m., PDT, at the beginning of the month, and rises later each morning for the rest of the month. It will leave the morning sky in February. A telescope with a magnification of 50x is needed to see its shrinking disk.

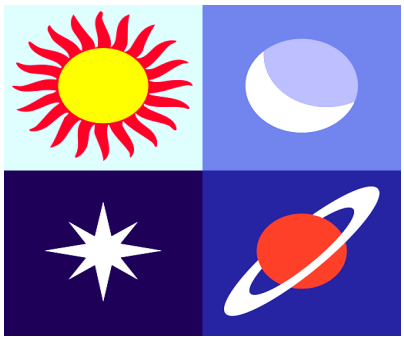
SPECIAL EVENTS this month include:
Daylight Saving Time ends on Sunday, November 5, at 2:00 a.m. All clocks must be set back one hour, according to the saying, "Spring forward, fall back."

Lunar-X will be visible on the 19th starting at 4:23 p.m., PST. Lunar-X is the raised rim of a few craters that are illuminated by the sun. It appears as a white X-shaped feature on the dark half of the first quarter moon, just west of the terminator, the line between the illuminated and the dark portions of the moon. Lunar-X is visible for only a few hours. Binoculars or a small telescope will be needed to see it.

The Leonid meteor shower peaks from the evening of the 17th through to the morning of 18th. The shower is named after the constellation of Leo the Lion, where the meteors appear to originate. The Leonids usually produce ten to 20 meteors per hour with many bright meteors. The moon will be in the evening sky, 23-percent illuminated, and will not interfere with observation this year. The parent object is the comet 55P/Tempel-Tuttle.

The Northern Taurid meteor shower peaks from the evening of the 11th through to the morning of the 12th. The shower is named after the constellation of Taurus the Bull, where the meteors appear to originate. The new moon will not interfere with observation. The parent object is the comet 2P/Encke. The Northern Taurids might produce ten to 20 meteors per hour, with occasional fireballs.

The Southern Taurid meteor shower peaks from the evening of the 4th through to the morning of the 5th. The shower is named after the constellation of Taurus the Bull, where the meteors appear to originate. The last quarter moon will rise after midnight. The parent object is the comet 2P/Encke. The Southern Taurids rarely produce more than five meteors per hour, but many are bright fireballs.



Almanac

Source:
Seasky.org

November 3 - 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.

November 4, 5 - Taurids Meteor Shower. The Taurids is a long-running minor meteor shower producing only about 5-10 meteors per hour. It is unusual in that it consists of two separate streams. The first is produced by dust grains left behind by Asteroid 2004 TG10. The second stream is produced by debris left behind by Comet 2P Encke. The shower runs annually from September 7 to December 10. It peaks this year on the the night of November 4 and the morning of the 5th. The second quarter moon may block most of the dim meteors this year. But if you are patient, you may 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 Taurus, but can appear anywhere in the sky.

November 13 - 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 09:28 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.

November 13 - Uranus at Opposition. The blue-green 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 Uranus. Due to its distance, it will only appear as a tiny blue-green dot in all but the most powerful telescopes.

November 17, 18 - Leonids Meteor Shower. The Leonids is an average shower, producing up to 15 meteors per hour at its peak. This shower is unique in that it has a cyclonic peak about every 33 years where hundreds of meteors per hour can be seen. That last of these occurred in 2001. The Leonids is produced by dust grains left behind by comet Tempel-Tuttle, which was discovered in 1865. The shower runs annually from November 6-30. It peaks this year on the night of the 17th and morning of the 18th. The crescent moon will set before midnight leaving dark skies for what should be a great early morning show. Best viewing will be from a dark location after midnight. Meteors will radiate from the constellation Leo, but can appear anywhere in the sky.

November 27 - Full Moon. The Moon will be located on the opposite side of the Earth as the Sun and its face will be will be fully illuminated. This phase occurs at 09:17 UTC. This full moon was known by early Native American tribes as the Beaver Moon because this was the time of year to set the beaver traps before the swamps and rivers froze. It has also been known as the Frosty Moon and the Dark Moon.

November 2023

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1 Garvey Night	2	3	4
5 Outreach UCLA	6	7	8 Garvey Night Board Mtng	9	10	11 Dark Sky Night
12	13 General Mtng	14	15 Garvey Night	16 Outreach Pasadena	17 Outreach S. LA	18 Public Star Party
19	20	21	22 Garvey Night	23 Thanksgiving	24	25
26	27	28	29 Garvey Night	30		

Meet The New Members

Eric Bey
Brian Dibarnaba
Melissa Dougherty
Christopher Grewal
Sean Kenney
Audris Kins
David Klandrud
Raymond Luna
Victor Marana
Daniel Mounsey
Alex Ramos
Paul Rudholm
Jeremy Varghese
Grace Yoshimoto

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 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

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 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 to learn more.

Thank you for volunteering!

Andee Sherwood
Communications

John O'Bryan shows a student the Sun at Overland Elementary, 2021.

Photo credit: Van Webster

LAAS Outreach Program

The mission of LAAS is to promote interest in and advance the knowledge of astronomy, optics, telescope making and related subjects. In furtherance of its mission, LAAS conducts public star parties and other outreach events that are intended to enhance the public's understanding of astronomy and its enjoyment and appreciation of the beauty and wonders of our universe.

We provide outreach events at local schools, Griffith Observatory, Mt. Wilson Observatory, various state and county parks, and community events.
Join our Outreach team of volunteers today.
Contact Heven Renteria, our Outreach Coordinator at Outreach@LAAS.org for more information.

Want to include astronomy outreach at your school's science night or open house? Follow the link below to access the request form:

Outreach Request Form

LAAS Club Merchandise

LAAS T-Shirts, Hoodies, mugs, and more!

To find new merchandise from our store, please use the following link: **Shop Here**

Please note all prices listed are subject to change and include all shipping and handling costs. All items will be shipped directly to the address you provide on your order form.

LAAS Hoodie

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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.

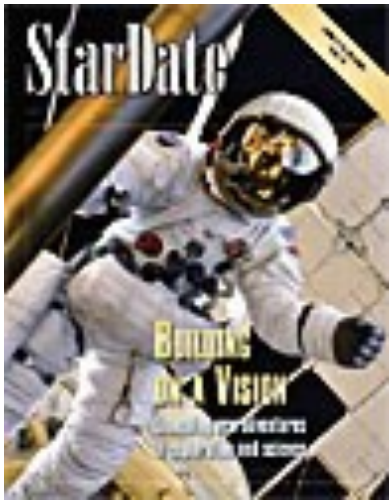
John O'Bryan, Jr.

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 subsribe and press "Add to Cart" under the type of subscription option: http://stardate.org/store/subscribe

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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.

Use **this link** to begin the subscription process.

ASTRONOMICAL SOCIETY OF THE PACIFIC

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.

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Mt. Wilson Coordinator: Darrell Dooley

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Bulletin Editor: Andee Sherwood

communications@laas.org

Club Historian—Lew Chilton

trainfans2@sbcglobal.net

Find astronomy outreach activities by visiting NASA's Night Sky Network

Club Contacts

Club Phone Numbers

LAAS Message Phone:

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Griffith Observatory:

213-473-0800

Sky Report:

213-473-0880

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