The Los Angeles Astronomical Society

November, 2020
Volume 94, Issue 11

THE BULLETIN

.This morning (10-15-2020) the waning crescent Moon was 2.3% illuminated in the eastern sky at 6:30 a.m. at an altitude of 11º.Tomorrow (Friday) will be the new Moon (no Moon). The Moon will be between the Earth and the Sun and impossible to see. It's at this time of the lunar phase that we occasionally get solar eclipses, but most often no solar eclipse. On 10-17-2020 (Saturday), the waxing crescent Moon will appear low in the western sky just after sunset. It will be about 2.3% illuminated. I have never been able to photograph the Moon with less than 2% illumination.

Photo credit: Ray Blumhorst

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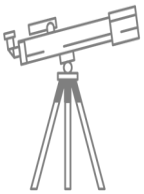


Upcoming Observing Events:

General Meeting—Nov.9th.

Dark Sky Night - Nov14th.

Outreach Event Advisory

Until further notice, all outreach and public event programs are cancelled due to the current pandemic.

The Garvey Ranch Observatory is closed to the Public.

New Contact Info?

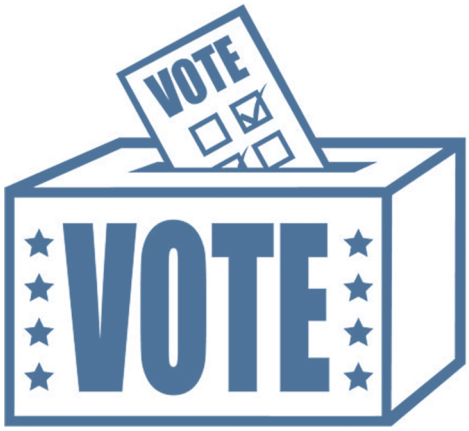
If you have recently moved, changed your email address or phone number, please contact our club secretary at secretary@laas.org.

Secretary's Report

Current Membership Level: 752

33 Members Renewed

Elections for 2021-LAAS Officers and Board of Directors



The nomination period for the LAAS President, Vice-President, Secretary, Treasurer, and 9 Board Members is now open. If you would like to run for any of the above positions or know of anyone you think would be a good fit, please use the link for the nomination form:

https://fs30.formsite.com/LAAS/Nominations/

The only requirements are that the candidate be a "member in good standing" (i.e. current on their due) for at least one year and be willing to participate in LAAS Board meetings and other LAAS Activities.

Nominees must accept the nomination and submit a brief bio (see schedule below) that will be included with the ballots.

The schedule is:

Monday, Nov 9: Last date for nominations. Nominations must be submitted by 11:59PM, Nov 9, 2020.

Monday, Nov 18: Candidates must submit a short bio for inclusion on the ballot.

Monday, Nov 30: Ballots will be sent via email.

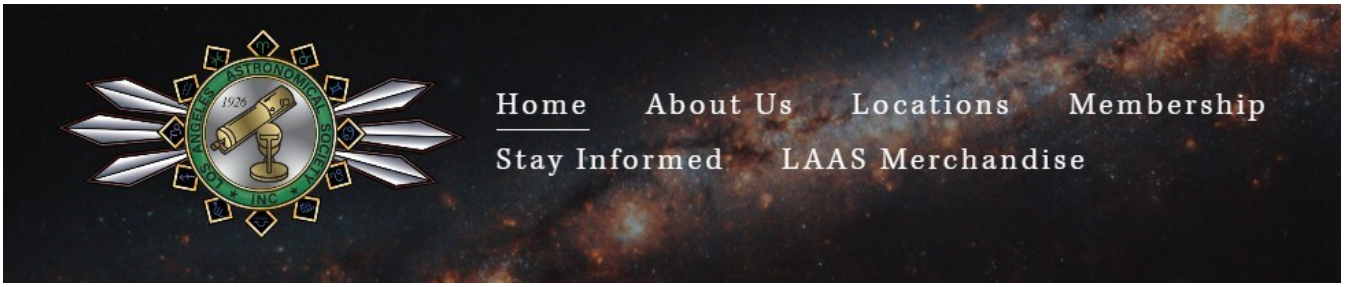
Sunday, Dec 13: Cutoff for voting is 11:59PM, Dec 13, 2020.

Monday, Dec 14: Results will be announced at the General Meeting (8PM-10PM) via Zoom (link for meeting will be sent to members about a week before the meeting)

Questions: Contact Spencer at secretary@laas.org.

The LAAS Website

The LAAS has a new website which a committee has been working on over the last few months. You can visit the site at laas.org.



When you visit the site, please notice the words, “Home, About Us, Locations, Membership, Stay Informed” and “LAAS Membership, “ at the top of the page. Click on any of those words to view a drop-down menu which will offer you links to information available on the new site. To find the club calendar, click on “Stay Informed.”

The club also has a new store, filled with club-branded merchandise, such as T-Shirts in all sizes and colors, mugs, tote bags, and more. All items ordered will be shipped directly to the address you provide on the order form. Prices are subject to change. All prices include shipping and handling.

The website was worked on by the following club members:

Darrell Dooley

Spencer SooHoo

Alicea Hurst

Jason Rogers

Greg Thompson

Mike Hayford

Andee Sherwood

Heven Renteria

Ed Dempsey

Steve Dashiell also provided many files from the old website which are now on the new site. We all need to thank Steve for his many years of volunteer work as our Webmaster and Club Administrator. Thank you, Steve!

If you have any suggestions for the new site or even suggestions for additional items for the store, please contact Darrell Dooley at mtwilsoncoordinator@laas.org.

Escape From L.A., 2020

By Ray Blumhorst

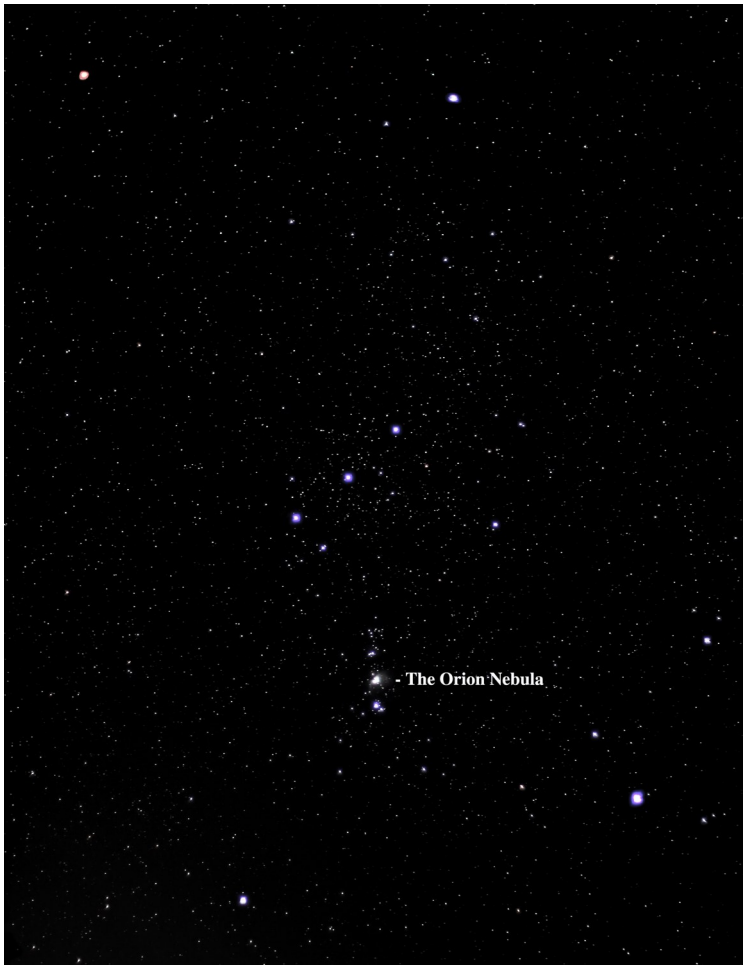
Telescopes were in abundance around sunset and a flurry of activity was evident as twenty-seven people set up observing equipment at SKAS on Saturday. Refractors, Dobsonians, Schmidt Cassegrains, and more exotic designs dotted the arid landscape of SKAS as LAAS members and guests, wore respirators and socially distanced on a cool fall night in the Lockwood Valley. The late night chorus of slewing telescopes and distant coyotes were the most frequent sounds in this otherwise silent world.

Looking in my finder scope while wearing a respirator was an added dimension of awkwardness, as it seemed to touch the scope even before my eye was over the eyepiece, but astronomers are adaptable. Regardless of all challenges, it was a memorable night under the heavens with clear and steady skies and fall night sky sites in abundance. Orion, the Pleiades, Andromeda, Mars, Jupiter, Saturn and more all graced the heavens, and just before dawn bright Venus rose in the eastern sky as bright Mars set in the western sky. Of all the sites to behold the Orion nebula is still my favorite.

The evening was cool, but not cold, at least not as cold as winter temperatures will soon be.
Jupiter's moons seemed to capture the mood of the evening best - friends old and new, close together, but not to close. Left to right: Ganymede, Io, Callisto, and Europa.

For many if not all the astronomers at SKAS, a night under the heavens was a welcome and refreshing reprieve from all the cares of present day life. At least it certainly was for me.

Photo credit: Ray Blumhorst



Above, is the Andromeda galaxy (M31) with companion galaxy (M32).

Left: The Orion constellation with the Orion nebula location identified and taken with just a 50mm lens.

A Night At Lockwood

By Lew Chilton

I was up at our SKAS on Friday nite, October 16th, to observe Mars. I wasn't disappointed.

After ending my observing session of Mars, I attempted to try a little deep sky astro-imaging with my 120mm refractor and a Canon EOS DSLR.
I hadn't attempted this in the past because I never previously owned a mount with a clock drive, let along an accurate clock drive.

My Losmandy GM-8 uses a digital drive, which is not go-to. I had accurately polar aligned it earlier in the evening using the built in polar scope and was able to track Mars at 300X for a 1/2 hour or longer without any discernible drifting.
So just before calling it a night and breaking down my equipment, I thought I'd try hooking my Canon DSLR to the drawtube and take a few quick images of the Double Cluster in Perseus and the Pleiades because that's the general direction that my telescope happened to be pointed. As pleased as I was with the results after I got home and downloaded them, I have no intention of becoming an astro-imager. If I want to see really great images, all I have to do is look at what so many of our LAAS astro-imagers have accomplished. I'll stick to being a visual observer.

Photo credit: Lew Chilton

Diamonds In the Sky

By Spencer SooHoo

At 4:30 AM, I groggily cancelled the alarm on my phone, crawled out of my tent and looked up. There, in the cool darkness were Sirius and the bright stars of the constellation Orion. The Beatle's song "Lucy in the Sky with Diamonds" immediately popped into my head and I was so captivated that I continued to stare at the sky, picking out other Winter constellations and almost forgot to start taking dark frames to cap off a satisfying night of astrophotography. The view of "diamonds in the sky" is etched in my mind and will always remind me of that early morning.

This Dark Sky Night was well attended with over 30 attendees and included some first-timers. I don't know about everyone else there, but my feeling was that it was great to be out on a night where smoke wasn't going to be an issue and a sense of relief to be able to get out under some dark skies. I got there early to install a 2nd Wi-Fi access point to provide better coverage on the South side of the Gordon Mitchell Observatory, and was grateful for the help Al Alecia provided. That let me get the job done so I could start setting up early - my targets for the night were the Bubble Nebula (NGC 7635) and the Crab Nebula (M1).

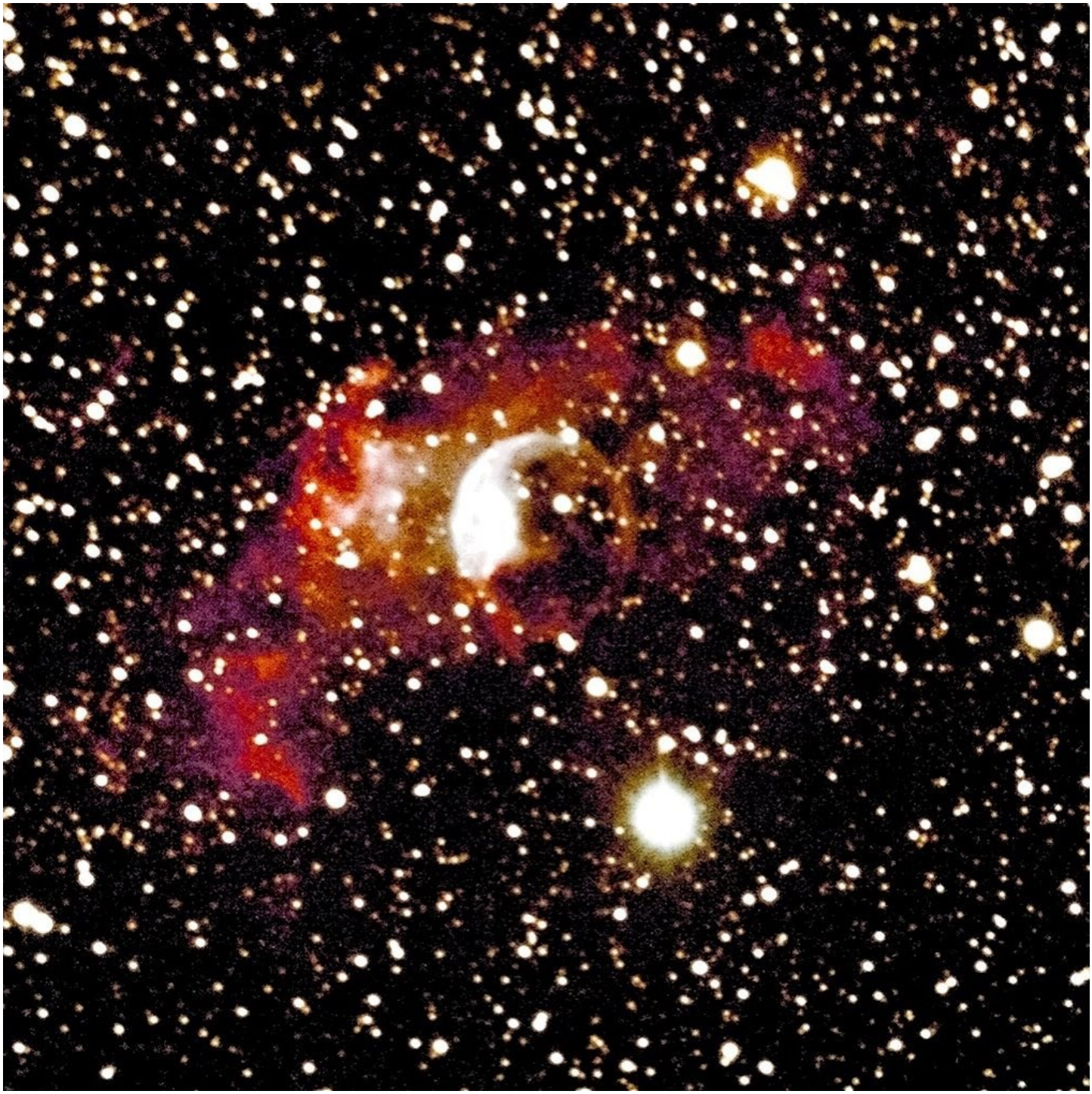
As I was going through my setup, I realized I had left both DSLR cameras at home. After going through the mental exercise of calculating what time I would be back if I left to get the camera, I concluded "Ok..we'll go visual tonight and go home around midnight - at least I'll have a nice warm soft bed to sleep on" since the temperature was expected to drop down to the low 40's. During the Sunset Talk, as we were discussing departure times, I mentioned that I wouldn't be spending the night there since I had forgotten my cameras. Nasir Jeevanjee and Al Alicea both generously offered to loan me cameras; Al's was the best fit for my equipment, so I gratefully accepted his offer.

After spending about an hour fiddling with the new configuration, I settled in to image the Bubble Nebula with a sequence of forty 4-minute exposures. I couldn't believe how well everything was working, so I grabbed my sandwich and hot tea, sat back in my chair, and enjoyed picking out constellations. It was fun listening to snatches of disembodied conversations. Al Germaine was talking to someone about Mars being too bright in his 16 inch Dob and needing something to reduce the brightness, another person was commenting on how the transition to LED for outdoor lighting has reduced the effectiveness of light pollution filters, Nassir was engaged in a conversation about narrow band imaging and cooled cameras, and I could overhear someone pointing out how to star hop to find the Andromeda Galaxy.

After a quick nap, M1 was high enough to start imaging, so I started an imaging sequence and spent some time looking at the Andromeda Galaxy through my binoculars before setting my alarm for 4:30 and retiring to my tent.

Taken at the LAAS Lockwood Valley site on Oct 18,2020 . M1 or the Crab Nebula is the remnant of a supernova that was observed by Chinese, Japanese, Korean, and Arab astronomers in 1054 AD who reported seeing a bright new star in Taurus that was visible during the day for about 3 weeks and faded from view over the course of 2 years. It lies about 6300 LY from earth and is barely visibile with the naked eye under very dark skies. This is a stack of 22x240 sec exposures @ ISO 3200

Photo credit: Spencer SooHoo



Taken at the LAAS Lockwood Valley dark sky site on Oct 17, 2020. The Bubble Nebula (NGC 7635) is 7 LY across and 7100 LY from earth in Cassiopea. This an emisson nebula (hydrogen is ionized and has the characteristic pink/red glow) in a star-forming region. The bubble shape is formed by the interaction of glowing gas expelled by the central star interacting with a nearby molecular cloud to form the bubble shape. The central star is 15x the radius of our sun and about 400,000 times brigher. This is a stack of 26x240 sec exposure at ISO 3200.

Photo credit: Spencer SooHoo

The Pleiades (M45)

By Brian Paczkowski

The Pleiades (M45). Also known as the Seven Sisters, this open star cluster in the constellation Taurus is made up of hot B-type stars, brightening nearby interstellar dust surrounding those stars resulting in a reflection nebulae. This image was taken over the past couple of weeks at my telescope's new remote location in New Mexico. This composite image made from a total of 21 hours of data.

Photo credit: Brian Paczkowski

Mars Opposition 2020

By Brian Paczkowski

Mars Opposition 2020. Here's the best image I was able to capture during this year's closest approach to Mars. Sadly, the seeing conditions over the last several nights were marginal. Despite that, this is a decent image. Planetary imaging poses much different challenges (acquisition and processing) than deep sky objects. This image is created by stacking of the best 10% frames from three 2-minute videos.

Photo credit: Brian Paczkowski

November Star Report

By Dave Nakamoto

The three bright outer planets, Jupiter, Saturn, and Mars, continue to dominate the evening skies, but this month also includes the annual Leonid meteor shower.

The Leonids are so named because they stream out of the constellation of Leo the Lion. They do so because they travel in nearly identical orbits around the Sun, and those orbits intersect with Leo as viewed from the earth. This is because they all originated from the same object, comet Tempel-Tuttle, which ejected them when the comet approaches the Sun every 33 years. This means that, about every 33 years, we'll be treated to a particularly spectacular display of Leonid meteors. The shower peaks this year from the evening of November 16th to the morning of November 17th. Thankfully, the moon was New on the 15th, so it sets early on 16th, making the entire night dark for the shower. Unfortunately, the next time their parent comet Tempel-Tuttle makes a pass by the earth is 2031, so although the Leonids will be worth watching, it'll be a gentle shower rather than a storm. The time to see them is after midnight on the evening of the 16th, but you'll need to get to a dark site, away from all lights and the glows from them, in order to see the shower at its best. The constellation of Leo rises just after midnight in the east, and as the earth rotates, Leo journeys westward until by dawn it's towards the south. Please consult Internet sources for sky maps and such to help you pinpoint where in the sky it is.

Mars is still around 20 arc-seconds wide, shining brightly towards the south. It continues moving slowly against the background stars east to west, what astronomers all retrograde motion, meaning a planet moves opposite what its orbital motion would make it move. It doesn't reverse and go into prograde motion, west to east against the stars, until the 14th.

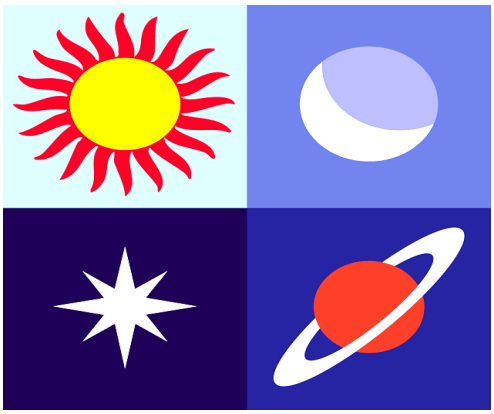
During November, Mars slowly shrinks in size as the earth pulls away from the Red Planet, from 20 arc-seconds to 14. The sky is 180 degrees across the sky. One degree is 60 arc-minutes. One arc-minute is 60 arc-seconds. The moon is approximately 30 arc-minutes across or half a degree, so Mars is less than 1/90th of the visible disk of the moon. You'll need a good telescope to see any features on it, perhaps 100x magnification or more.

Jupiter and Saturn are around 40 arc-seconds wide, twice as large as Mars is. These two are located towards the south-southwest. Jupiter is west of much dimmer Saturn.

The Moon's phases in November are:

Full Moon – 1st
Last Quarter – 8th
New Moon – 15th
First Quarter – 22nd
Full Moon – 30th

David Nakamoto has been observing the heavens through various scopes since he was in the 5th grade. You can contact Dave by email at: dinakamoto@hotmail.com.



Almanac

November 10 - Mercury at Greatest Western Elongation. The planet Mercury reaches greatest western elongation of 19.1 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 morning sky. Look for the planet low in the eastern sky just before sunrise.

November 11, 12 - Northern Taurids Meteor Shower. The Northern Taurids is a long-running minor meteor shower producing only about 5-10 meteors per hour. This shower is, however, famous for producing a higher than normal percentage of bright fireballs. The Northern Taurids is produced by dust grains left behind by Asteroid 2004 TG10. The shower runs annually from October 20 to December 10. It peaks this year on the the night of the 11th and morning of the 12th. The thin crescent moon will not be much of a problem this year leaving dark skies for what could be a really good show. 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 15 - 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 05:08 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 16, 17 - 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 16th and morning of the 17th. The crescent moon will set early in the evening leaving 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 Leo, but can appear anywhere in the sky.

November 30 - 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 09:32 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 30 - Penumbral Lunar Eclipse. A penumbral lunar eclipse occurs when the Moon passes through the Earth's partial shadow, or penumbra. During this type of eclipse the Moon will darken slightly but not completely. The eclipse will be visible throughout most of North America, the Pacific Ocean, and northeastern Asia including Japan. .

Source: http://www.seasky.org/astronomy/astronomy-calendar-2020.html

November 2020

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

Meet The New Members

Mike Aguirre and Family .Elsa and John Finn .

Franco Vairani

Tom and Ashana Thorman

Hao Lui and Jia Min Li

LAAS Board Meetings

.Due to the pandemic, all Board Meetings are now held online, live on Zoom. Please check the information posted in the IO Group Forum for any current news related to these meetings. If you wish to attend a board meeting, please send a request to secretary@laas.org for a link to Zoom.

Volunteer Opportunities

Every LAAS member is a volunteer at some point. Some members volunteer to share telescopes with the public, while others tackle administrative duties, help out at our community and public events, or join a club committee. Taking photos at our events and writing articles about events for our club newsletter are great ways to volunteer and become more involved in the LAAS as a member.

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

Volunteers are still needed to write articles for our monthly newsletter or share images captured of the night sky. Members are also welcome to come up with new ideas and future activities for the membership which can be shared in Board meetings. If you are artistic and enjoy creating posters or flyers, or printable astro-educational handouts for further star parties, please let us know.

Time To Renew Your Membership?

Please remember to renew your membership once you receive notice from the Club Secretary in your email inbox.

Please send any new contact information to the club secretary at secretary@LAAS.org.

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

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

https://nightsky.jpl.nasa.gov/club-eventrequest.cfm?Club_ID=1344

LAAS Club Swag

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

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

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

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

Amazon Smiles

The LAAS is now listed on Amazon Smiles. When you purchase any goods on Amazon.com, Amazon will donate a small percentage of the funds they receive from you, back to the LAAS. Here's some information to help bring in funds for our club projects:

What is AmazonSmile?

AmazonSmile is a simple and automatic way for you to support your favorite charitable organization every time you shop, at no cost to you, with the added bonus that Amazon will donate a portion of the purchase price to your favorite charitable organization., such as the LAAS!

Learn more by following this link:

http://smile.amazon.com/

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. **The Society does not endorse Amazon.com or any of its business practices**, but we are registered with Amazon Smile and will accept contributions from that program. If you are an Amazon customer and would like to have part of the proceeds from your purchase retuned to the Society as a contribution, please go to https://smile.amazon.com/ when you are shopping on Amazon and select Los Angeles Astronomical Society under the caption: "Or pick your own charitable organization." A percentage of you purchases will be donated to the Society to fund its educational and outreach programs.

John O'Bryan, Jr.

Treasurer

Astronomy Magazine Discounts

Discounts for astronomy magazines can be found on the internet. Look for the best deals possible. Send a copy of your LAAS membership card with your check or payment to receive a club member discount.

Astronomy magazine

As a member of the Night Sky Network, you may use the above link to renew your Astronomy Magazine subscription (or enter a new subscription) at the club discount rate. If this is a renewal, Astronomy Magazine will match your entered name and address and extend your subscription. For inquiries, please contact Astronomy Magazine customer service & sales at 1-800-533-6644.

Click here to subscribe to Sky and Telescope Magazine.

Join the Astronomical Society of the Pacific and help support the cause of advancing science literacy through engagement in astronomy. Member benefits include a **subscription to the online *Mercury* Magazine**, published quarterly, and **Astronomy Beat**, a monthly on-line column written by "insiders" from the worlds of astronomy research and outreach.

Subscribe or renew to the McDonald Observatory's StarDate Magazine and receive a special discount. Go to this page and press "Add to Cart" under the kind of subscription you want:
http://stardate.org/store/subscribe
Then, on the Checkout form, enter "network" in the Coupon Code box.

Club Contact Information

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Outreach Coordinator: Heven Renteria

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Club Communications: Andee Sherwood

communications@laas.org

Mt. Wilson Coordinator: Darrell Dooley

mtwilsoncoordinator@laas.org

Bulletin Editor: Andee Sherwood

communications@laas.org

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

https://nightsky.jpl.nasa.gov/about.cfm

Club Contacts

Club Phone Numbers

LAAS Message Phone:

213- 673-7355 (Checked daily)

Griffith Observatory:

213-473-0800

Sky Report:

213-473-0880

Lockwood Site:

661-245-2106

Not answered, arrange time with caller.

Outgoing calls – Collect or calling card only.

Follow us on social media by clicking on one of the images below

Instagram

YouTube

twitter

The Los Angeles Astronomical Society
2800 E. Observatory Road
Los Angeles, CA 90027

Call us for more information about our organization and outreach program.
213-673-7355

Visit our web site at
www.LAAS.org

From:
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c/o Griffith Observatory
2800 E. Observatory Road
Los Angeles, CA. 90027

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To: