

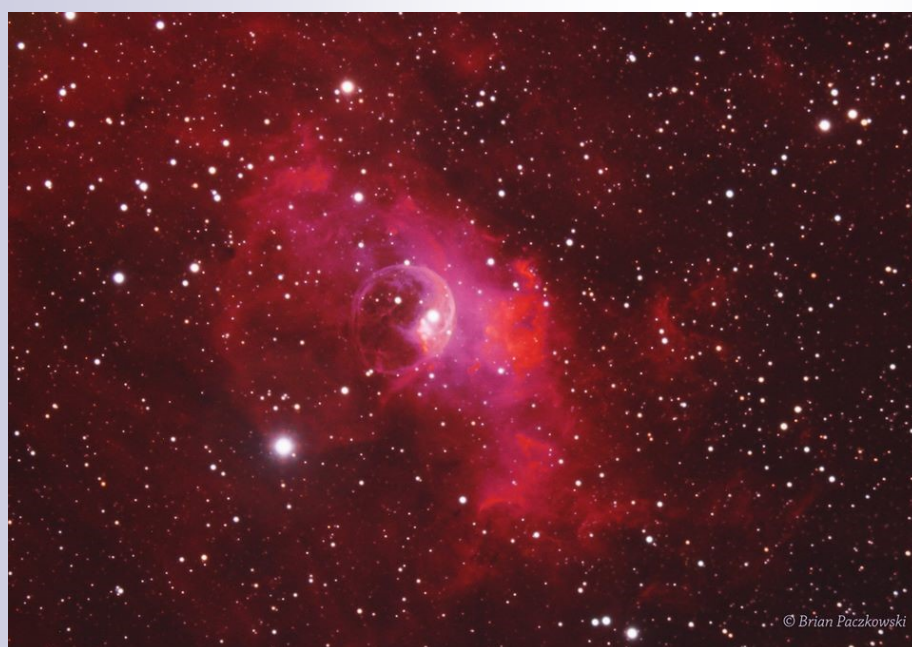


THE LOS ANGELES ASTRONOMICAL SOCIETY

THE BULLETIN

JANUARY, 2018

VOLUME 92, ISSUE 01



© Brian Paczkowski

“The Bubble Nebula (NGC7635) in Cassiopeia. Spent time last month taking some narrowband images of this cool target. This is a composite of H-alpha (2 hours), OIII (2 hours), SII (2 hours) and RGB (2 hours) images. Narrowband data taken from my light polluted backyard in Tujunga, CA; RGB data taken from Lockwood Valley. (Celestron 1100 Edge HD, 0.7x focal reducer, CGEMDX, ZWO ASI 1600mm-cool)”

Photo credit: Brian Paczkowski/LAAS

Club Members, please update your contact info with the club secretary to stay current with the society. Send any new contact info, such as new cell phone numbers and email addresses to Spencer at secretary@laas.org.

HAPPY NEW YEAR!

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LAAS Elections Results-Page 2



LAAS Banquet- Reservations!

Make your banquet reservations soon!
Find all info for our annual gala club event on pages 3-5.

The LAAS Election Results

The New Officers for 2018

Officers

President - Thompson, Tim

Vice President - Gilchrist, Kevin

Treasurer - John O'Bryan

Secretary - Spencer SooHoo

Board of Directors

Byrom, Curtis

Dobrovics, Zoly

Dooley, Darrell

Hurst, Alecia

Jeevanjee, Nasir

Phipps, Joe

Roosman, Richard

Smudde, Mary

Sovereign, Dave (Alternate)





THE LAAS ANNUAL BANQUET
AND AWARDS CEREMONY

COCKTAILS, BUFFET DINNER, GUEST
SPEAKER, AWARDS CEREMONY,
RAFFLE PRIZES AND MORE.




SUNDAY, JANUARY 28, 2018

5:00 PM TO 11:00 PM

THE QUIET CANNON
901 VIA SAN CLEMENTE, MONTEBELLO 90640

RSVP

FURTHER DETAILS FORTHCOMING



The Annual LAAS Banquet and Award Ceremony

Date: Sunday, January 28, 2018

Time: 5 PM to 11 PM

Location: The Quiet Cannon Restaurant - Website: <http://www.quietcannon.com/>

Address: 901 Via San Clemente, Montebello, CA. 90640

Our Annual Banquet and Awards Ceremony is the club's most elegant event of the year. Please join us at the Quiet Cannon Restaurant in Montebello for an incredible buffet dinner, cocktails, an amazing presentation from our guest speaker, Scott Edgington, Deputy Project Scientist for the Cassini project, and more!

Awards will be presented to our outstanding club volunteers and we'll have great raffle prizes to win throughout the night. If you would like to donate a raffle prize, please contact Spencer SooHoo, our club secretary at secretary@laas.org.

Please make your reservations as soon as possible. The prices per person will increase for those who pay at the door. As we need to submit payment in advance and reserve enough tables, chairs, and food, please don't wait until January to reserve your seats. Paying at the door always delays the event as the staff has to set up tables for all additional guests.

The prices are as follows:

Adults: \$50.00 per person - Pay at the door adults: \$55.00 per person.

Children 12 and under: \$25.00 - Pay at the door children: \$30.00 per child.

Friends and family members are always welcome to attend. Please pay for your guests and write their names on your checks or in the "comment" section of the paypal link.

Please also send an email with your full name, email address, and the names of all guests to:

Andee at communications@laas.org

Use this link to submit your reservations now: <https://fs30.formsite.com/LAAS/form12/index.html>

You may also mail a check for you and your guests to:

LAAS
c/o Griffith Observatory
2800 E. Observatory Rd
Los Angeles, CA 90027
Attn: Treasurer/Banquet

What to wear? We want you to be comfortable! The appropriate attire is "business-casual."

Cocktails and wine may be purchased throughout the evening. The dinner is buffet-style and begins at 6 PM.

The menu has been posted on the following page.



Geo Somoza/Club President at last year's buffet table.

Photo credit: Zoly Dobrovics

Banquet Menu Selections

Salads:

Chinese Ginger Chicken Salad
 Mixed Field Greens
 Waldorf Salad
 Fresh Seasonal Fruit

Entrees:

Roasted Chicken with Garlic, Lemon & Thyme
 Beef Stroganoff
 Salmon Florentine, with Spinach, Tomatoes and Garlic
 Vegetable Lasagna

Vegetables:

Fresh Seasonal Vegetables

Accompaniments:

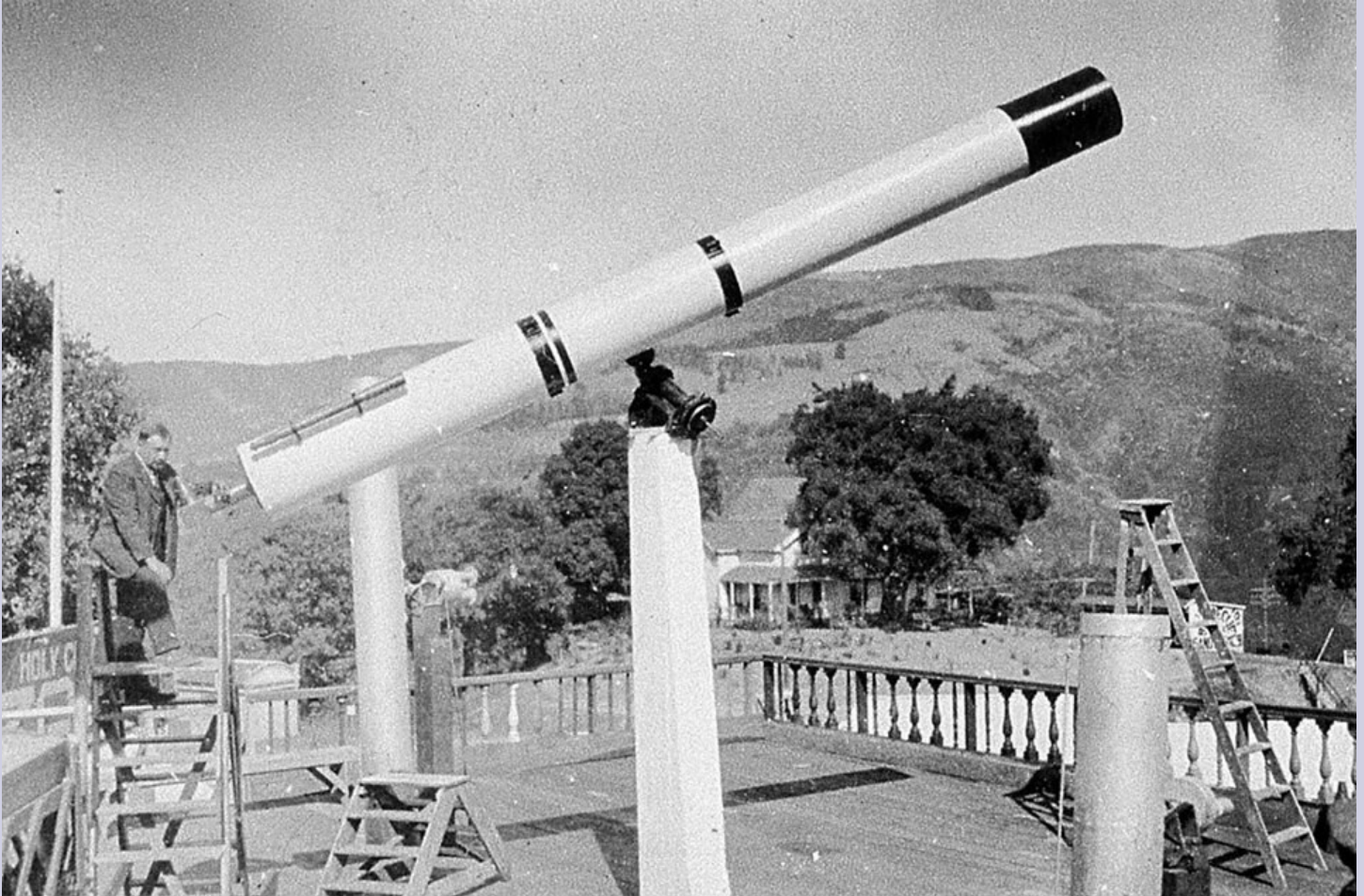
Rice Pilaf
 Roasted New Potatoes

Desserts:

A Variety of Cakes
 Rolls, Bread, Coffee and Tea

LAAS History - A Mystery!

Lew Chilton, Club Historian



This image (see attached) is from the LAAS Digital Archive. It appeared in a March 1928 Scientific American magazine article, pp. 244-245. (The article is also in the LAAS Digital Archive.)

The big reflector (yes, reflector) in the foreground was made by LAAS members Jimmy Herron (optics) and Dr. George Ferguson (mechanicals). I can't identify the person in the picture, but he was probably also an LAAS member.

There are a number of telescope piers and step ladders on the foreground observing platform . Beyond is a ranch house with rolling hills in the distance.

Can anyone identify the locale? I have a hunch, but I won't reveal it just now. ideally, I'd like to find the approximate spot where this picture was taken.

Lew Chilton
LAAS History D

Is LAAS History a Dead Subject?

Lew Chilton

"History is a subject as dead as it can be, once it killed the Romans and now it's killing me." I was recently reminded of this little ditty after being met with polite yawns while sharing some recently discovered facts about our club's history. While certainly not as sexy as, say, astro-imaging or discussions about gravity waves or dark energy, it does have a place in our Society. So, here for your perusal are two items from the LAAS Archive...and quit yawning! – Lew Chilton, LAAS Historian

The following article appeared in the December 1926 issue of Scientific American magazine.

A New Telescope Society

The interest in amateur telescope making is mounting by leaps and bounds. So far, we have traced more than 1500 who have taken up this engrossing work. The cooler weather of fall and winter, driving people indoors where they can work on their telescopes, is now giving this nation-wide – and in fact, world-wide – movement a stronger impetus than before. Recently an amateur in Los Angeles requested the names and addresses of those in his community who had purchased "Amateur Telescope Making." We supplied them, and a club has been projected. In several cases we have received requests from isolated amateurs in other communities, for the addresses of neighboring enthusiasts. At the risk of causing occasional annoyance we have given these names to bona fide "T.N.'s." Here is a letter from Los Angeles:

Editor, Scientific American:

For some time a number of amateur telescope makers have been planning to organize a society here in Los Angeles. Your "challenge" expedited matters somewhat, and the preliminary arrangements having been made, we are requesting you to do your "bit."

It would help us a great deal, since you are the only periodical common to all the 50 amateurs in Los Angeles, if you would give a little space in the Scientific American, telling of our meeting place and time.

Here is the data:

Meeting place: Study room above Science room in New Public Library.

Time: First Thursday in every month, at 8 P.M., starting November 4, 1926.

Everyone is welcome, although we are making a special appeal to those interested in building their own telescopes.

After the telescopes still in the process of being built are finished, the society will doubtless promote useful work in astronomy.

If you will give this to the public through your columns, you will be doing a great favor to the amateur astronomers in Los Angeles.

Very sincerely yours,

Charlton F. Chute

Los Angeles, California

Article continued on next page.

The following letter appeared in the March 1927 issue of Popular Astronomy.

Amateur Astronomers in Los Angeles

Last summer the idea arose simultaneously in the minds of three amateur telescope makers that it would be desirable to form a society of men interested in this work in this city. The *Scientific American's* nation-wide poll of those interested in building a telescope had revealed a large number in Los Angeles.

I was appointed to carry out the arrangements, so I wrote for and received from the *Scientific American* that part of their mailing list concerned with Los Angeles and its environs. It comprised some sixty names. We can hardly thank that magazine, and particularly Mr. Ingalls, enough for their kind interest and assistance in making our proposed society a fact. A card was mailed to everyone whose name was on the list telling of the time and place of meeting. In addition, Dr. Mars Baumgardt, to whom we also owe a debt of thanks, announced the information regarding our meeting over the radio during his Wednesday night lectures on astronomy.

It was very gratifying to have at our first meeting thirty-two men. A committee was appointed to draw up a constitution. We were fortunate in having an attorney on our committee and under his guidance an excellent constitution was written. This constitution was adopted at the next meeting which occurred in December when thirty-eight men put in an appearance despite the fact that we had experienced a heavy rain all day. After the adoption of the constitution the officers were elected and then the meeting was adjourned to be followed by discussion among the members who find thus a method of airing their troubles and getting advice from someone who has experienced the same troubles and overcome them.

At our third (January, 1927) meeting we had no less than forty-eight in attendance. This meeting was so full of business that a detailed account would almost fill this magazine. A hasty survey shows plans for trips to Mt. Wilson, to Mt. Lowe with its sixteen-inch Clark refractor, the Clark Observatory in Los Angeles, plans for publicity, and many others; but most important of all, the appointment of a committee to select and rent a building to be used as a shop and meeting place for all the members. Here we can be as dirty as we please and work as late or as early as we wish.

Our mailing list now numbers over one hundred names and we have had sixty-seven different men at our three meetings.

The name of this organization is the "Amateur Telescope Makers' Society," and its meetings are held the second Wednesday of every month in the Science Seminar Room of the Los Angeles Public Library.

We would be glad to answer any inquiries regarding its organization or its activities. Such letters should be addressed to Mr. Charlton F. Chute, 3401 South Flower St., Los Angeles, Calif.



Charlton F. Chute

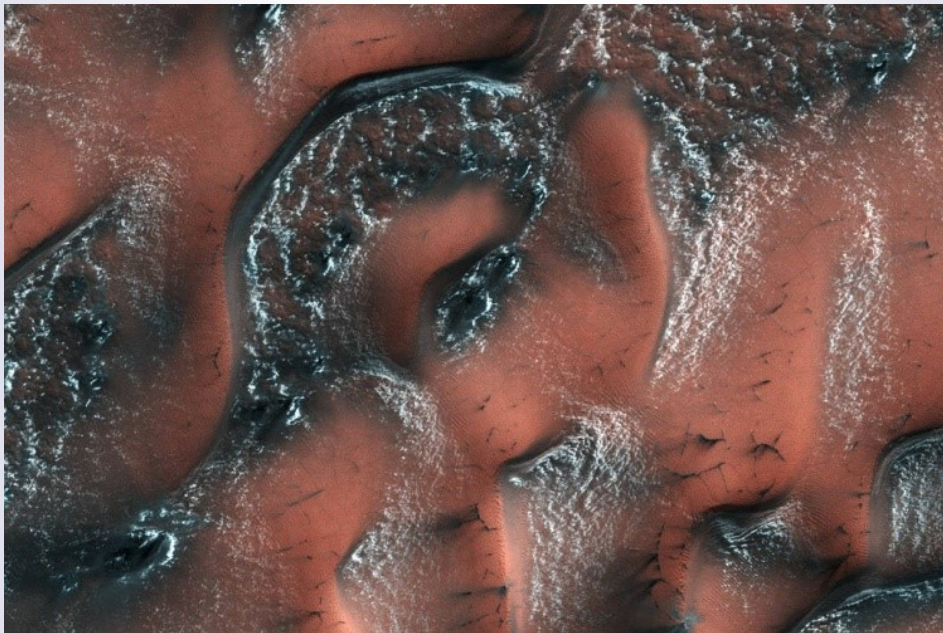
Snowy Worlds Beyond Earth

Linda Hermans-Killiam

There are many places on Earth where it snows, but did you know it snows on other worlds, too? Here are just a few of the places where you might find snow beyond Earth:

Mars

The north pole and south pole of Mars have ice caps that grow and shrink with the seasons. These ice caps are made mainly of water ice—the same kind of ice you'd find on Earth. However, the snow that falls there is made of carbon dioxide—the same ingredient used to make dry ice here on Earth. Carbon dioxide is in the Martian atmosphere and it freezes and falls to the surface of the planet as snow. In 2017, NASA's Mars Reconnaissance Orbiter took photos of the sand dunes around Mars' north pole. The slopes of these dunes were covered with carbon dioxide snow and ice.



NASA's Mars Reconnaissance Orbiter captured this image of carbon dioxide snow covering dunes on Mars. Credit: NASA/JPL/University of Arizona

A Moon of Jupiter: Io

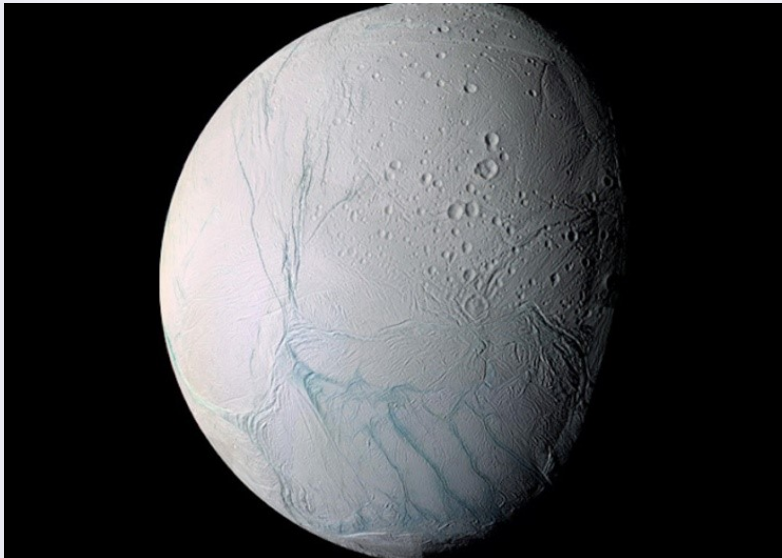
There are dozens of moons that orbit Jupiter and one of them, called Io, has snowflakes made out of sulfur. In 2001, NASA's Galileo spacecraft detected these sulfur snowflakes just above Io's south pole. The sulfur shoots into space from a volcano on Io's surface. In space, the sulfur quickly freezes to form snowflakes that fall back down to the surface.



A volcano shooting molten sulfur out from the surface of Io. Credit: NASA/JPL-Caltech

A Moon of Saturn: Enceladus

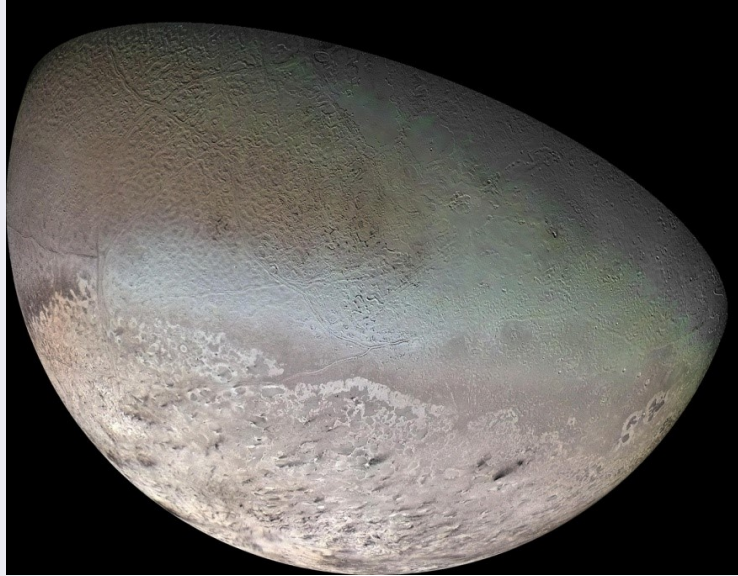
Saturn's moon, Enceladus, has geysers that shoot water vapor out into space. There it freezes and falls back to the surface as snow. Some of the ice also escapes Enceladus to become part of Saturn's rings. The water vapor comes from a heated ocean which lies beneath the moon's icy surface. (Jupiter's moon Europa is also an icy world with a liquid ocean below the frozen surface.) All of this ice and snow make Enceladus one of the brightest objects in our solar system.



Enceladus as viewed from NASA's Cassini spacecraft. Credit: NASA

A Moon of Neptune: Triton

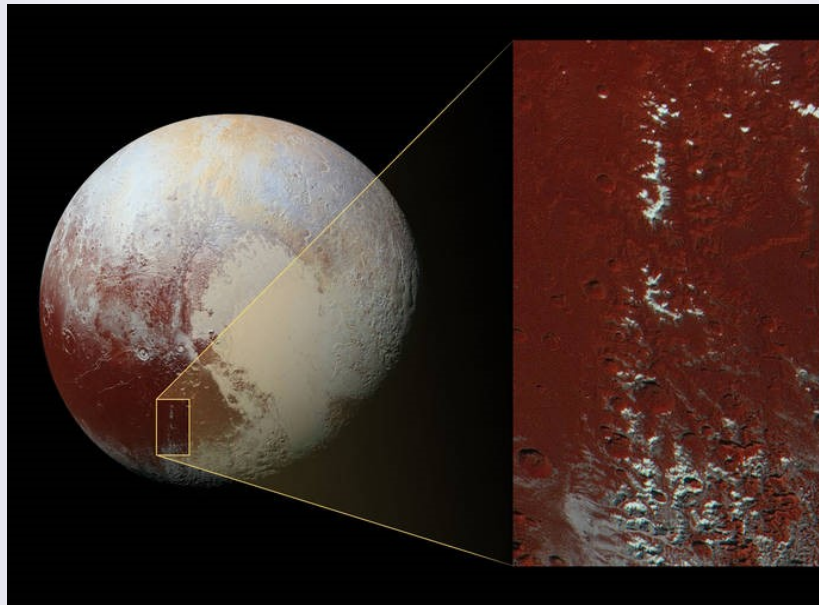
Neptune's largest moon is Triton. It has the coldest surface known in our solar system. Triton's atmosphere is made up mainly of nitrogen. This nitrogen freezes onto its surface covering Triton with ice made of frozen nitrogen. Triton also has geysers like Enceladus, though they are smaller and made of nitrogen rather than water.



The Voyager 2 mission captured this image of Triton. The black streaks are created by nitrogen geysers. Credit: NASA/JPL/USGS

Pluto

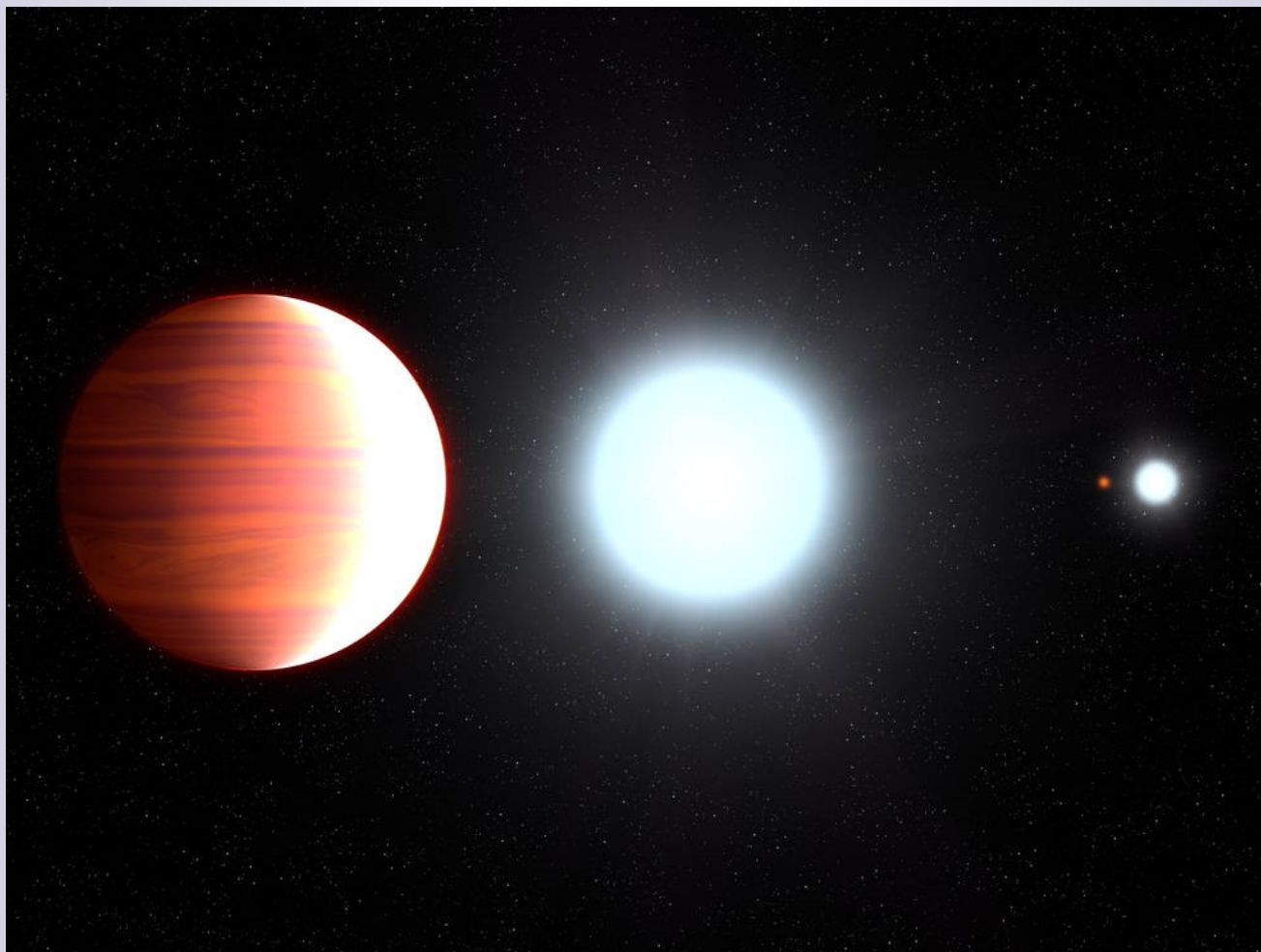
Farther out in our solar system lies the dwarf planet Pluto. In 2016, scientists on the New Horizons mission discovered a mountain chain on Pluto where the mountains were capped with methane snow and ice.



The snowy Cthulhu (pronounced kuh-THU-lu) mountain range on Pluto.

Credits: NASA/JHUAPL/SwRI **Beyond Our Solar System**

There might even be snow far outside our solar system! Kepler-13Ab is a hot, giant planet 1,730 light years from Earth. It's nine times more massive than Jupiter and it orbits very close to its star. The Hubble Space Telescope detected evidence of titanium oxide—the mineral used in sunscreen—in this planet's upper atmosphere. On the cooler side of Kepler-13Ab that faces away from its host star, the planet's strong gravity might cause the titanium oxide to fall down as "snow."



This is an artist's illustration of what Kepler-13Ab might look like. Credit: NASA/ESA/G. Bacon (STScI)

Want to learn more about weather on other planets? Check out NASA Space Place: <https://spaceplace.nasa.gov/planet-weather>

This article is provided by NASA Space Place.

With articles, activities, crafts, games, and lesson plans, NASA Space Place encourages everyone to get excited about science and technology.

Visit spaceplace.nasa.gov to explore space and Earth science!



Click on the icon above to view in English. You can also view the site in Spanish here: <https://spaceplace.nasa.gov/sp/>

Outreach Reports

Van Webster

Kester Elementary School

Date: Friday, December 01, 2017

Time: 5:30 pm – 8:00 pm

Report submitted by Van Webster/LAAS

A strong contingent of Los Angeles Astronomical Society members brought their telescopes and expertise to Kester Elementary School in the San Fernando Valley for an evening of Moon and star gazing. The school campus has a large playground area and school staff had done a good job of turning off the playground lights that can otherwise be distracting to the observers.

John, Heven and I were the first to arrive and begin to set up our equipment. Over the next hour and a half, more club members arrived until a picket line of 8-10 optical instruments were deployed along an east-west axis. Setting up computerized scopes is facilitated by the north-south orientation of the school campuses. Pick any painted line on the playground any you'll have true north.

After a warm day, the air cooled quickly as the sun dropped behind the visible horizon. The sky was pretty clear for an urban setting and there was little wind, making for still air and good seeing (in the lighted city).

The Moon was the first and most obvious target. Nearly full, the Moon was so bright that I needed a 0.9 neutral density filter to make the image of the Moon comfortable for viewing. John had interpretive materials on display and gave lessons in lunography to the visiting students. Heven had his astro-binoculars trained on M45 for most of the evening. Those with computerized scopes were able to capture fainter deep sky objects and the planet Neptune.

The crowds were substantial and continuous. Long lines formed at the telescopes while the students and parents got what was often their first look ever through a telescope. The observing traffic never let up and I was still offering views even as I packed up.

The school staff provided the astronomers with a pizza and drinks to fortify us as we worked the crowd.

At 8:00 PM we began packing up our gear amid conversations about the success of the night and the range of objects that had been on view. Then off into the blaze of lights of Friday night traffic.

Photo credit: Van Webster/LAAS



Soto Street Elementary Date: Thursday, December 07, 2017 Time: 5:00 pm - 8:00pm

Lorena Elementary School Date: Friday, December 08, 2017 Time: 5:00 pm - 8:00pm

Members of the Los Angeles Astronomical Society's outreach team ventured to East Los Angeles on December 7/8 for back to back events at two LAUSD elementary school campuses. These older schools, wrapped in a linguini of narrow streets, clusters of older houses and a nest of freeway overpasses were the site of two science night events for students and their families.

Thursday was warm and clear as 8 LAAS members set up their telescopes for public viewing at Soto Street Elementary School. The school had managed to turn off the playground lights and the staff made an effort at crowd control with street closure barriers.

The skies were clear if light polluted. There was no moon or major planets to be seen so the targets for the evening were stars and star groups. Objects included Vega, Capella, Albireo, M45, and the Owl Cluster. About 125 students and families took their times at the eyepieces.

The air was fragrant with the smell of fried onions from one of the hot trucks parked in the neighborhood but no food was offered to the astronomers.

Lorena Elementary School, just a mile away from Soto Street School, held their science night event on Friday. As we drove to the campus, dark smoke could be seen in the sky from a small brush fire that had burned at the intersection of Mission Street and Soto Street. Heavy commercial trucks lumbered all night down Lorena street in a continuous caravan of general merchandise.

Set up was on the playground. The school staff was friendly and helpful in arranging the telescopes and providing traffic cones for crowd control. Again, the playground lights were turned off for better viewing.

Freshly grilled burgers and fries were offered to the 5 LAAS members present as the sun went down and observations began.

Conditions were nearly identical to the night before with similar targets for the students to view.

Although scheduled to end by 8:00 PM, the crowds had pretty well dissipated by 7:30 so we packed up and headed off into the night traffic.



Okie-Tex Star Party Report

Jack Eastman

As Fall begins to fall, it's time for another trek to the wilds of the Oklahoma Panhandle, Camp Billy Joe, next to Kenton OK, for another Okie-Tex Starparty, sponsored by the Oklahoma City Astronomy Club.

Departure was Thursday, Sept. 14 with a view to spending the night in Boise City then on to the camp to help with setup. the trip started on a seriously sour note when the side door on my van slid open and a bunch of stuff slid out and hit the road. Fortunately the police were right there and helped get stuff back on board. The bright side is except for the loss of a number of music CDs all the 'scope equipment was uninjured!

Got to Boise City, thought I'd cancel my room and go on to the camp, but I sure didn't like the looks of rather nasty looking T-storm in the direction of Kenton. The storm brushed by Boise with all the warnings and red flags but nothing untoward came of it. So, next morning, Friday, off to the camp and help with setup, striping "roads" laying out power lines and such stuff. This year the East Field was extended some hundred and fifty more feet, adding about 2.24 acres, making for even more need for additional power lines and all. That night was a good one, I had the 6-inch Mak-Newt set up, also the Clark tripod, and was able to boresight the polar axis for what should be better polar alignment. Also got the 25X100 binoculars set up. Saturday was a very nice day, and a better evening for observing, but Sunday evening we were treated to a wild and woolly bit of weather... Started out cloudy and by dark it was continuous lighting. John Anderson walked over and showed us the current radar--- huge red swath looking like it was about to swallow Camp Billy Joe! This with severe weather warnings and everything that went with them! There was a bit of a tail surrounding the camp. Sho-'nuff it started to rain like no tomorrow! Fortunately I had pretty much water proofed the equipment, sat inside and watched the show. John came by and noted the severe storm warnings had all been cancelled, but there was another smaller one on its way. Round two brought several minutes of hail and much more rain, possibly even a nearby tornado! There were rather ominous thumb-shaped "stalactites" hanging down from the foreground clouds, nicely silhouetted by the continuous lightning. This went on for most of the night. Squishing up to the food line the next morning, someone mentioned, "Look at the bright side, the fire danger is really low!" We discovered breakfast was somewhat delayed, as the camp had lost power overnight, thanx to the storm. Although that slowed Jody's preparations somewhat we were, as usual, well fed. It seems the weather gods got all this out of their system, and we had essentially perfect conditions, with one cloudy night (Aah! guilt free sack time) until the end.

Except for the aforementioned "interesting" weather, the nights were rather good, Sky Quality readings around 21.6--21.75, and seeing reasonably good. My program was nothing in particular, everything in general, scanning the Milky Way with the Mak-Newt (36X with a field of 2.7 degrees, 4.1-mm exit pupil) and with the 25X100 binoculars. (field- 3-deg, 4-mm exit pupil) Lots and lots of stars, numerous faint and not so faint fuzzies. M-31, Andromeda was spectacular covering the entire field and then some in the Mak-Newt. Also the rather faint and somewhat difficult objects, M-33, Triangulum and the Helix Nebula, Aquarius. Both of these with all three 'scopes.

Saturday evening was set aside as an open house for folks from the local area to come out and see what we were all about, see the equipment and get a look at what is in the sky. A large number of kids, presumably from one of the nearby schools (nearest town of any consequence is Boise City, 35-miles to the East) were there, and it was more than gratifying hearing all the "oohs" and "aahs" as they looked at Saturn through the 6-inch refractor, then M-31, the Double Cluster, Perseus, M-22 in Sagittarius and M-13 in Hercules. Later in the week a number of older kids from Norman North arrived, and, again, some good observing for them as well.

In past star parties I was rather perplexed at the Milky Way in Scorpio/Sagittarius looking rather washed out, some sort of light pollution to the Southwest, but what? Clayton NM, pop. <3000, 33.5 miles (as the crow flies) to the South-south west? Turns out it was natural! Zodiacal Light! Last year the ZL was particularly bright in the morning sky and it dawned on me (pun intended!) that the ZL would, of course follow through Scorpio/Sagittarius! This year, it didn't appear to be all that bright, perhaps some loss of transparency thanks to all the smoke from the Northwest. Most nights low temperatures were in the low 50s coldest two were 42. Very comfortable, indeed.

As in the past, it was a very laid back affair, lots of time to commiserate with old acquaintances and meet many new folks. The formal talks began Wednesday afternoon with Mike Lockwood, of Lockwood Precision optics with a couple of talks revolving around his large mirror facility. This was followed by Terry Tree with an introduction to Radio Astronomy. That evening Scott Monahan aired his documentary "Sacred Equinox" delving into new archaeological findings regarding early human occupation of North America. Even featured Yours Truly and my old Clark telescope from Okie a couple of years earlier. The following afternoon was devoted to the care and feeding of astronomical imaging then a talk on public outreach and popularization of science in Brazil, by Marcelo Souza, thought of as the "Carl Sagan of Brazil". Great work! Friday brought David Prosper talking about the Night Sky Network (NSN), a coalition of amateur astronomy clubs that bring the inspiration of NASA missions to the general public. This was followed by W. Alan Scott describing a truly compact/portable "12-inch Travel Scope" followed in turn by Ed Wiley describing the Strasbourg Astronomical data center (CDS) which is a data center dedicated to the collection and worldwide distribution of astronomical data and related information. It is located at the Strasbourg Astronomical Observatory, France.. That afternoon/evening brought a trip out to nearby Anubis Caves to witness the pattern of sunlight on the carvings at the equinox. For those who stayed behind Dr. Guy Consolmagno (Brother Guy) gave an impromptu description on how he got hooked on astronomy, while, for a short time, studying for the priesthood, and how all this led to his Ph.D. and ultimate appointment as Director of the Vatican Observatory. He's out of Tucson, where the Vatican Observatory has a presence on Mt. Graham. The telescope there boasts a 72-inch F/1 primary mirror, the first experimental spin cast mirror from the Steward Observatory's Mirror Lab. Saturday brought a discussion of open Star Clusters by Phil Fleming followed by a great discussion of how our views of our universe changed over time from dumping the Geocentric system, dumping the Sun being the center of everything, out with being at the center of the Milky Way--- and so on., Dee Friesen "Cosmology" That evening, it was Brother Guy's turn again "Discarded Worlds" astronomical ideas that were almost correct, e.g. rotation period of Mercury and Venus, conditions on Venus, from a humid dinosaur infested jungle to a burning desert that'd melt lead and similiar notions that have changed over time as new information becomes known.

Tuesday and Saturday, after lunch, brought the swap meets... Lots of interesting stuff, one fellow had a Celestron 4-or so-inch Newtonian on a very nice equatorial complete with eyepieces and all. Price was right---Free! Hoping it would be picked up by a kid, it was taken by a fellow that was going to present it to his grandkids O.K., I'll admit it, I caved in and grabbed a couple of ancient GPS units and a 50-mm eyepiece.

On the gastronomical side of things, Jody Risley and her crew again outdid themselves keeping us all well fed and well grunted. One of her crew, Susan, produced a 3-inch (76.2-mm) equatorial refractor. It was a Tasco, back when that name was still a fairly good instrument. We got it set up, checked out and sent Susan off with a really nice telescope.

Thursday and Saturday evenings brought the wild and woolly door prize drawings. Seems us Coloradans got a few but didn't get almost all of 'em like a few years ago. The odds of winning were pretty good as many shipped out earlier with the threat of more wet and cold weather. Those that bailed out missed the drawing and the scrumptious final BBQ which is always a crowd/tummy pleaser. Sure enough, Sunday dawned cloudy, rainy and cold. Got the remaining stuff loaded and set out for a cold, foggy and soggy trip back. All in all it was a great time, as usual, and, yes, I'm hooked, big time, and will be there October 2018.

This year 499 folks were registered, with about 433 on site at any one time. Mike says quite a few from Texas and Florida cancelled due to the hurricanes. This party has, indeed, become rather popular in recent years.



Photo from Okie-Tex, 2016 -Me, 6-Inch Clark with notation from Artists in Optics From OkieTex 2016 - Photo Credit: Mark Levinson

I thought I'd add the vitals for the telescope in that shot... From Alvan Clark and Sons, Artists in Optics by Ariail and Warner, P-74

"Central University in Richmond Kentucky had a 6-inch Clark equatorial refractor dated 1877. This was provided with tripod slow-motion control and accessories, and an unusual giant 4-inch focusing sector that accommodated an equally unusual giant comet eyepiece also supplied by the Clarks. In 1901 when Central university consolidated with Centre College, the Clark telescope moved to Danville Kentucky. The tube assembly is now owned by Jack Eastman and the mount by Robert B. Ariail."

I thought that was interesting, is Bob coming up to RTMC to reclaim the mount and make me hand-hold the 'scope? Turns out the original tripod for this was much taller, 79-inches as opposed to the "normal" 66-inch tripod. These are shown (with the Central University's original) on P-225 of Ariail & Warner. Not sure when Bob acquired this thing, I got it in (I think-?) 1986. It was interesting in this book Comet eyepieces were described and it was noted that mine came with such an eyepiece, but in talking with Bob, he said it came with "some sort of unusual lens that screwed into the focuser and took the regular eyepieces" After some experimenting, and removing a lens from an eyepiece that was "out of place", (gunked in with some sort of black sticky stuff rather than burnished in like all the rest), I deduced that "eyepiece" was the eyelens for the Huygens 75-mm Comet eyepiece

Jack Eastman/LAAS and Denver Astronomical Society

Meet The New Members

Welcome to the LAAS!



Jay Siri

Brian Woods

Mike Tyszka

The Brandon Family

Michael Gat

The Pizzo Family

Ashley Smith and Family

LAAS Board Meetings

Our LAAS Board Meetings take place once a month at the Garvey Ranch Park Observatory. You can find the dates for these meetings on our event calendar. All members are welcome to attend all Board meetings. These meetings begin at 8 PM.

NEW: You may listen to recorded meetings by logging in to our website at LAAS.org and clicking on the "Members Only" tab.

Before you try to access the "Members Only" information, you need to request login credentials from our Webmaster. On the left hand side of the page, scroll down and find "Login." Click "Login" for further information.

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. Participating at one of our outreach events is another fine and fulfilling opportunity. This is YOUR club. Don't sit back and let other members do the work and have all the fun! Speak with a club officer and find out how you can volunteer and get more involved in the LAAS as a member.

Time To Renew Your Membership?

Please remember to renew your membership once you receive notice from the Club Secretary in your email inbox. Use this link to learn how to renew your membership: <https://fs30.formsite.com/LAAS/MemberRenewal/index.html>

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



A Guide To The Night Sky

Tre Gibbs



Happy New Year!

January always seems to be an interesting time, psychologically speaking. The holidays are behind us and we are in the early throws of winter, which always has me feeling slightly melancholy - to put it mildly. However, I keep reminding myself that as of December 21st, the days have been ever-so-slowly getting longer. This becomes more noticeable towards the end of January and early February, Trying to focus on the positive, this extended darkness allows us to observe the night sky, although most of the action happens in the early, pre dawn skies.

On New Year's Day, around 4:00 am, planets Jupiter and Mars rise as a pair in the southeast before the rising sun's glare renders them both invisible. Jupiter is very bright, while Mars in comparison is much dimmer. What's more interesting is that over the next week, Mars will appear to slip across Jupiter, essentially switching places. By the early morning of the 5th, Mars is closing in on Jupiter, appearing at Jupiter's one o'clock position. The very next morning, January 6th, Mars appears to be in contact with Jupiter, the two almost appearing as one bright object. And on the morning of the 7th, Mars appears to breakaway from Jupiter, roughly at Jupiter's seven o'clock position. Remember, these events are happening right before the

dawn's first light so you'll have to be observing the southeast while it's still dark outside, ideally between 5:30 am and 6:00 am. By the early morning of the 11th, the waning crescent moon will have slipped closer to the pair, thereby creating a triple conjunction of the Moon, Jupiter and Mars. A beautiful, astronomical treat for early risers.

One of the easiest constellations to spot this month is Orion, The Hunter. Orion, a winter constellation, stands out not only due to his unique and large shape, but is also easily identified by the three stars in a row that make up his belt. By now, Orion rises around sunset, is high in the south at midnight and sets in the west near sunrise. Orion will appear closer and closer to the western horizon each week, until mid March when Spring in the Northern Hemisphere is just around the corner.

The "Full Wolf Moon" is January's full moon and rises in the east around sunset on the last day of the month, January 31st. The name comes from the time when during this particular full moon, hungry wolves would gather outside Native American villages and howl, which must have been a rather frightening circumstance.

So until next month, have a great, productive and safe start to 2018, and as always, KEEP LOOKING UP !

ALMANAC



- January 1 - Mercury at Greatest Western Elongation.** The planet Mercury reaches greatest western elongation of 22.7 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.
- January 2 - Full Moon, Supermoon.** 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 02:24 UTC. This full moon was known by early Native American tribes as the Full Wolf Moon because this was the time of year when hungry wolf packs howled outside their camps. This moon has also been known as the Old Moon and the Moon After Yule. This is also the first of two supermoons for 2018. The Moon will be at its closest approach to the Earth and may look slightly larger and brighter than usual.
- January 3, 4 - Quadrantids Meteor Shower.** The Quadrantids is an above average shower, with up to 40 meteors per hour at its peak. It is thought to be produced by dust grains left behind by an extinct comet known as 2003 EH1, which was discovered in 2003. The shower runs annually from January 1-5. It peaks this year on the night of the 3rd and morning of the 4th. Unfortunately the nearly full moon will block out all but the brightest meteors this year. If you are patient, you should still be able to catch some of the brightest ones. Best viewing will be from a dark location after midnight. Meteors will radiate from the constellation Bootes, but can appear anywhere in the sky.

Need Help With A New Telescope?

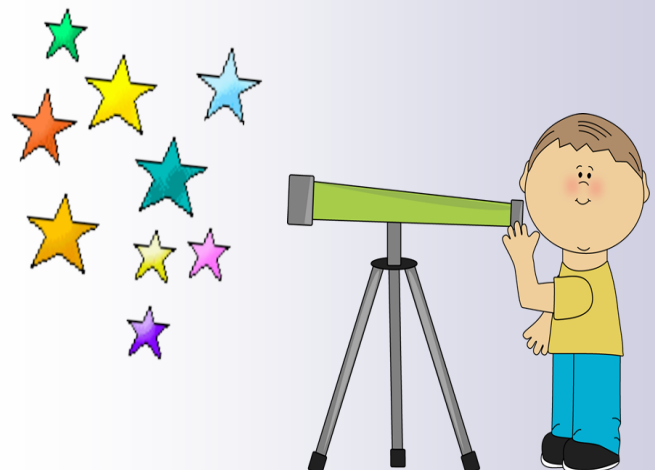
Visit the Garvey Ranch Observatory on any Wednesday night 7 PM to 10 PM for tips and assistance by your fellow LAAS members. **Learn more:** [The Garvey Ranch Park Observatory](#)

- January 17 - New Moon.** The Moon will be located on the same side of the Earth as the Sun and will not be visible in the night sky. This phase occurs at 02:17 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.
- January 31 - Full Moon, Supermoon, Blue 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 13:27 UTC. Since this is the second full moon in the same month, it is sometimes referred to as a blue moon. This is also the last of two supermoons for 2018. The Moon will be at its closest approach to the Earth and may look slightly larger and brighter than usual.
- January 31 - Total Lunar Eclipse.** A total lunar eclipse occurs when the Moon passes completely through the Earth's dark shadow, or umbra. During this type of eclipse, the Moon will gradually get darker and then take on a rusty or blood red color. The eclipse will be visible throughout most of western North America, eastern Asia, Australia, and the Pacific Ocean.

Source: <http://www.seasky.org/astronomy/astronomy-calendar-2018.html>

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Fulfilling!
Fun!**

**Be a part of something great!
Join our Outreach team of volunteers today.
Contact Heven Renteria, our Outreach
Coordinator at Outreach@LAAS.org**





Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
31 4:55 PM Sunset	01	02	03 7:00 PM Garvey	04	05	06
07 5:01 PM Sunset	08	09	10 7:00 PM Garvey	11	12	13
14 5:07 PM Sunset	15	16	17 7:00 PM Garvey	18 5:00 PM Outreach - Highland Park	19 5:00 PM Outreach - Los Angeles	20 5:00 PM Dark Sky Night
21 5:14 PM Sunset	22	23	24 7:00 PM Garvey	25 5:15 PM Outreach - North Hills	26 6:00 PM Outreach - Highland Park	27 2:00 PM Public Star Party
28 5:20 PM Sunset 6:00 PM Banquet	29	30 5:30 PM Outreach - Inglewood	31 7:00 PM Garvey	01	02	03



LAAS Members: Please log on to the Night Sky Network (NSN) to view all private events on the calendar.

Be advised all scheduled events may not be visible on the calendar above, due to last minute changes.

If you have not registered on the network, please follow this link and register today:

https://nightsky.jpl.nasa.gov/club-apply.cfm?Club_ID=1344&ApplicantType=Member

BETELGEUSE

Universe
Discovery Guide
For January



Orion Constellation. Credit: P. Sanz

**Discover the universe with
your family and friends!**

Download the guide by following this link:

<https://nightsky.jpl.nasa.gov/docs/01UDGBetelgeuse.pdf>

IN THIS GUIDE:

BETELGEUSE, RED SUPERGIANT WORKAHOLIC » SKY FEATURE: BETELGEUSE » TRY THIS! » ACTIVITY: NUCLEAR FUSION ... WITH MARSHMALLOWS » CONNECT TO NASA SCIENCE

Always use [Adobe Acrobat Reader](#) to view the Guides on a computer.

NASA'S NIGHT SKY NETWORK - FREE WEBINARS

Each month, the NSN hosts a free online webinar for all registered members of the Night Sky Network.

Log on to your NSN account to learn more.

9:00 PM Eastern/ 6:00 PM Pacific

Topic and Speaker TBD

Check the NSN newsletter for further information.

[YouTube Playlist : All NSN Astronomy Webinars](#)

[All Past Webinars and Resources on NSN](#)



LAAS JACKETS, T-SHIRTS, AND CAPS



Share your club spirit with the public and wear your club colors to help identify you as a member of the LAAS today by ordering a new jacket, t-shirt or cap.

If you would like to purchase club jackets, T-shirts, or caps featuring our club logo, please look for Richard Roosman at the public star party and at our general meeting. Richard will have the club merchandise on sale from 2 PM to 6 PM at the star party.

For further information, feel free to contact Richard at Richardinwalnutpark@msn.com.

You can also use the link on Paypal, if you would like to place an order for club merchandise by using the following link:

<http://laas.org/joomlasite/index.php/laas-merchandise>



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

What is AmazonSmile?

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

Learn more by following this link: <http://smile.amazon.com/>

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John O'Bryan, Jr./Treasurer



Thank you for your donation!

Astronomy Magazine

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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.

Below, are some subscription links and suggestions for your convenience, from our friends at NASA's Night Sky Network:



[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.

Sky & Telescope Magazine



If your current subscription was obtained through your club, [click here for online renewal of your Sky & Telescope magazine subscription](#) at the club discount rate. You will be asked to enter your mailing label information. This information allows S&T to know that you originally subscribed through your club and can continue your subscription at the club discount rate.

If this is a new subscription or if you did not previously subscribe through your club or through the Night Sky Network, [click here for a NEW Sky & Telescope subscription at the club discount rate](#).



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StarDate Magazine

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Go to this page and press "Add to Cart" under the kind of subscription you want: <http://stardate.org/store/subscribe>
Then, on the Checkout form, enter "network" in the Coupon Code box.

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213-473-0800

Sky Report:

213-473-0880

Lockwood Site:

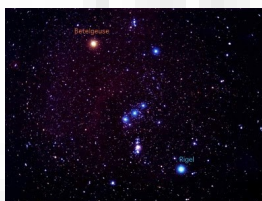
661-245-2106

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