



THE LOS ANGELES ASTRONOMICAL SOCIETY

THE BULLETIN

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Messier 20, NGC 6514 - Trifid Nebula
Messier 20 (NGC 6514) is also known as the Trifid Nebula. Named for its three-lobed appearance, it is one of the most famous objects in the sky. This object is an unusual combination of an open cluster of stars, an emission nebula, a reflection nebula, and a dark nebula that divides the emission nebula into three parts.

Photo Credit: Nasir Jeevanjee/LAAS

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**Have a happy and safe
4th of July!**



The Garvey Ranch Park Observatory will be closed to members and the public on July 4th due to the holiday.

RTMC 50th Expo

F. Jack Eastman

As many of you might have guessed, it's that time of year when this one heads West to the annual Riverside Telescope Maker's Conference (RTMC). As, for many years, this was again held at Camp Oakes near Big Bear in the San Bernardino Mountains, California. This one was special, this is the 50th Riverside Telescope Maker's Conference, the first one having been held at Riverside City College in Riverside CA in 1969. The trip was thoroughly routine and uneventful, car ran fine, I survived the burning deserts and dodged all the dreaded Giant Mojave Sandworms and arrived at Big Bear Thursday, May 23. After a great Mexican dinner and a night at Motel-6 it was off to the camp. No problem getting situated, set up and ready for the party. Weather was great, mid/high 60s during the day, coldest night was 21. Probably not below freezing by the time we gave up at the telescopes. One complication for observation, especially of faint fuzzies was a very nearly Full Moon! It was decided many years ago to hold this event on Memorial Day weekend, Moon or no Moon!

Friday things were slow, giving lots of time to look up old friends and set up 'scopes. Dan Schechter arrived and set up his AP-900 mount. This time we had the proper mounting rings and associated hardware for my 6-inch Clark. This made for very nice stable observing. Dan also brought up a 1924-ish vintage 80-mm F/15 Zeiss with a type-B triplet objective.

He was disappointed that he had forgotten the counterweight shaft for his Losmandy mount. The morning after he said he was rather uncomfortable during the night, something had been jabbing him in the back. Upon rooting around in his bedroll the next morning, the offending lump turned out to be the "forgotten" shaft! The Zeiss was a very nice instrument, indeed!

There were quite a few interesting, and large, telescopes. Gerry Logan had another of his finely made mounts carrying his 12-inch coma-free SCT Bob



F. Jack Eastman, Tim Thompson and Dan Schechter. Jak's 6-inch Clark on Dan's AP-900 equatorial.



David Radosevich 22-inch F/5 Equatorial Newtonian

Pfaff again brought his nicely done replica of a 19th century

brass refractor. There were a couple of 36-inch 'scopes, one, an unusual folded design which eliminated the need for a huge ladder. Near my camp I could see the end of a large reflector, naturally assumed a big Dob, but it was no Dob! This finely fashioned 22-inch F/5, made by David Radosevichsat on a very finely made equatorial fashioned from large gears and circles made by Ed Byers! It was fully computerized and even though we had a big, fat moon, the Ring Nebula looked pretty good. Another interesting instrument made by Howard Royster of Eye to the Sky. This is a large reflector on an unusual Alt-Alt mount. This can move in altitude in two directions in such a way it eliminates the "blind spot" at zenith that plagues ordinary Alt-Az mounts.

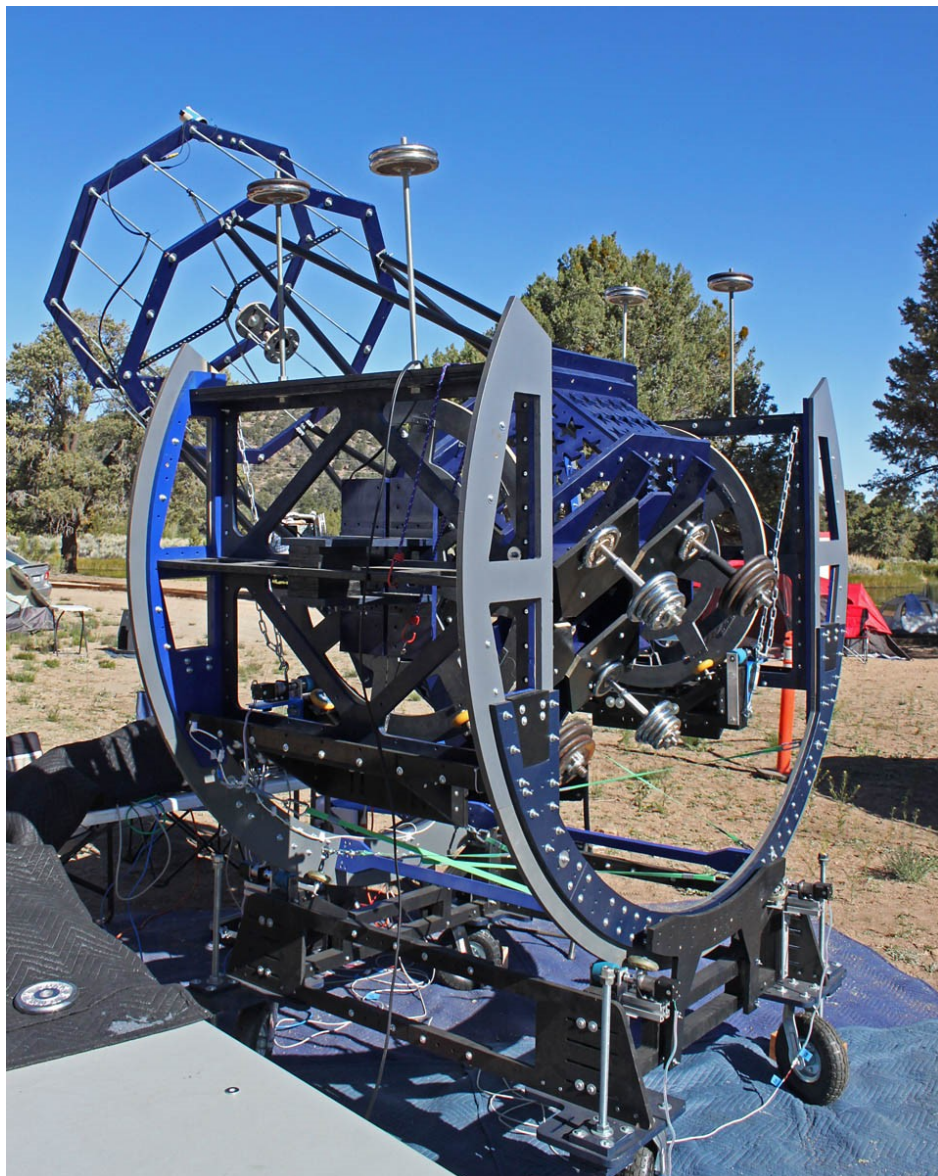
It could also be seen as an equatorial mount for locations at the Earth's equator! Friday night the seeing was pretty bad, but Saturday it had improved considerably. Jupiter, complete with Red Spot looked very good in the Clark, Zeiss and several other telescopes.

Friday evening brought an informal show-and-tell. The formal program began Saturday. The large swap meet began around dawn and went on most of the morning. The talks and presentations, many aimed at the beginners and/or kids held in a separate venue, and the rest in the main hall, went on most of the day. Talks of note were Matthew Ota, an overview of the life and work of Edward Emerson Barnard and his pioneering survey of the Milky Way, Tim Thompson told of the various stars that populate the Milky Way then in the afternoon, Tim Hunter discussed the Barnard Objects, many of the Dark Nebulae we see in the Milky Way. Tim Parker then told of the detailed preparations involved in "driving" the Mars Rovers then later on Tim Robertson discussed the history of the Association of Lunar and Planetary Observers (ALPO) (Seem to have lots of "Tims") The evening program began with the awards, not the least of which is the G. Bruce Blair Medal awarded by the Western Amateur Astronomers for meritorious accomplishments in the field of Astronomy and related fields. This year's winner was Wally Pacholka for "Pioneering Work in

Sunday, dawinish, the swap meet continued and, as the day before, presentations were once again given, kids/beginners in

Bose Hall, the rest in the Main hall. 8:30AM (Aaugh!) brought the Western Amateur Astronomer's Board meeting. Happy to report DAS is in good standing, no more lost dues checks! Tim Thompson was elected President. He's also president of the Los Angeles Astronomical Society (LAAS) and director of their Ford Observatory, and an Institute Trustee of the Mt. Wilson Institute, steward of the Historic Mt. Wilson Observatory. He's retired from science Division at JPL. Robert Stephens led off the Sunday session with a historical overview of the 50 years of the RTMC from its beginnings in 1969 and was followed by Don Machholz on his discovery of a comet from a past RTMC. Micheal Fane followed with talk about the Galileo mission to Jupiter and the consternation thanks to the high gain antenna kerffuffle.

In the afternoon, there was another talk by Alan Hale, of Comet Hale-Bopp fame, with sort of a historical overview of comets at RTMC. Wally Pacholka, this year's G Bruce Blair Medalist finished off the session with examples of his beautiful nightscape photography. Truly a full schedule with many more talks and demonstrations going on in an adjacent location!. After dinner Dr. Marc Rayman gave us a discussion of the Dawn Mission, A trip to Vesta then on the Ceres. More door prizes followed then, again, out to the telescopes under a really bright Full Moon!



Large Newtonian on Alt-Alt mount.

Continued on next page...

Dan had to leave, so he reclaimed his AP-900, and we put "Alvan" to bed, helped to make for an early escape back to Colorado. More burning, but not really, deserts, dodged the rest of the dreaded Giant Mojave Sandworms and after a stop in Beaver UT for dinner and a short reconnect with friends made there last year, it was a very pleasant trip back home, still glad to be back.

Yes, will do it again next year, but there's a big worm in that apple---seems the camp won't host us at Memorial Day, so RTMC is tentatively scheduled for third weekend in September. Possible collision with Okie-Tex?! Certainly hope not!!

Jack Eastman



David H. Levy, Jean Mueller (Palomar Obs.) Don Makholtz and Alan Hale of Hale-Bopp fame. (50 comets between them!)

Photography by Don Lynn (DAS, LAAS)

Outreach Report

By Van Webster

Anton Elementary

Date: Friday, June 01, 2018

Time: 7:00 PM – 9:00 PM

Report by Van Webster/LAAS

A small contingent of the Los Angeles Astronomical Society's membership traveled to North East Los Angeles on Friday night, June 1st for an astronomy outreach event at Anton Elementary School. This campus is located on a hill overlooking a densely packed neighborhood of small houses and local shops. This would be the second time that the LAAS team had visited the school.

The event was a STEM program that featured lots of activities for the students and their families. Particularly popular was a mash-up light saber made with an LED, a small battery, several wooden tongue depressors and a plastic soda straw.



With daylight savings time in full effect, the sky was bright when we arrived. The targets for the evening were Venus and Jupiter with 4 moons visible. The bright sky made the views relatively low contrast.

Traffic at the telescopes was steady for most of the evening. The sky got dark enough for some higher contrast views of the planets by 8:30. DJ music and fireworks began to disturb the nighttime quiet.



By 8:45 most of the students had left and we packed up. The school officials are looking to schedule this event next year at an earlier time in the school year when the sky gets darker earlier. Scheduling during Pacific Standard Time will also help to get good views and get the kids home in time for bed.

Photo credit: Van Webster/LAAS

Fireballs in the Sky: A Global Fireball Observatory



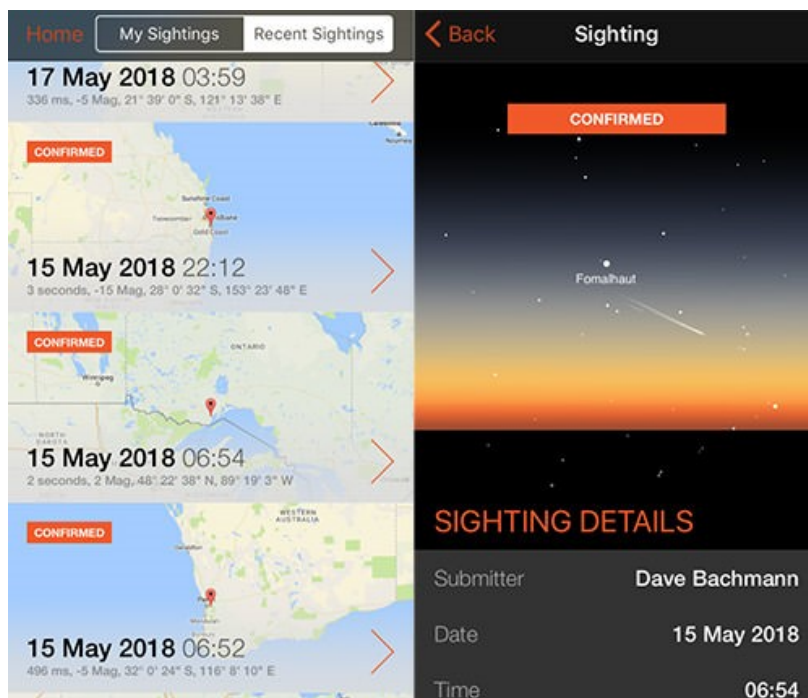
A fireball streaks across the sky.

Image Credit: [Fireballs in the Sky](#) / Desert Fireball Network (DFN)

Near-Earth Objects and fireballs recently made [the news](#) once again, with tiny asteroid **2018 LA** disintegrating over southern Africa just hours after being discovered. Have you observed any interesting shooting stars recently? Did you know that you can contribute your observations to the science of Near-Earth Objects? The [Fireballs in the Sky](#) program makes it easy and fun to become a citizen scientist!

[Fireballs in the Sky](#) is an exciting citizen science program dedicated to tracking the direction of bright meteors across the sky. This project is the outreach arm of the Desert Fireball Network, an all-sky robot camera network set up to record fireballs. The DFN uses multiple sightings of a fireball's path across the sky in order to reconstruct the original, pre-entry orbits of these meteors in an attempt to better understand the makeup of our solar system.

Information about a fireball's path can also be used to recover meteorites from their falls by calculating their final position; as of May 2018, four meteorites have been recovered from these "observed falls" as part of the program. Finding a fresh meteorites, even with this extra help, [is still quite a challenge!](#) By quickly finding and recovering meteorites as quickly as possible, the project scientists hope to get a better look at the original chemical makeup of these space rocks, which helps gain insight into the materials present at the dawn of our solar system.



Screenshot from Fireballs in the Sky app for iOS

How can you participate? [Download the Fireballs in the Sky app](#) (or visit the [website](#)) and keep it handy while you watch the night sky! The app is available for both Apple and Android devices and allows you to submit detailed fireball reports very easily. The app also has a few extra features, including interactive maps of sightings around the world and details about upcoming meteor showers.

Once installed, you can use the app to easily report fireballs. You will first be asked to report on if you heard a sound accompanying the fireball sighting or not. Then you will be asked to point your phone in the direction that you saw the fireball, and recreate its path in the sky by tilting your device to "draw" the path you saw. Once you are satisfied with your recreation, you will then be asked to fill in a few additional details about the duration, shape, brightness, and color of the fireball before submitting the report. You can see recent reports - including yours, once accepted! - on the app or on their website at <http://fireballsinthesky.com.au/maps/app-sightings/>.

More eyes like yours watching for fireballs in the sky will lead to more robust data for the researchers of the Desert Fireball Network. Citizen scientists helps extend their vision beyond what the static set of desert cameras can currently catch. Your sightings could help scientists locate another meteorite fall, or help unlock one of the mysteries of the early solar system!

If, after doing some citizen science, you find yourself wanting to share some of the amazing science behind near-Earth objects, meteorites, or craters, the Night Sky Network also offers up a wide variety of activities via our [Space Rocks Toolkit](#). A great activity for summertime meteor shower observing parties is our ["Heads Up! It's a Meteor Shower!" handout](#). You may even inspire some future planetary science careers among your visitors, too!

Last Updated: June 4, 2018

Find Astronomy Outreach Tips on Social Media



We invite you to join the NASA Night Sky Network astronomy outreach community on [Facebook](#) and [Twitter](#) for the latest updates on astronomy events, outreach opportunities, and astronomy activities. Pictures of your astronomy outreach and other behind the scenes photos are featured on our [Instagram](#) feed.

Subscribe to the Night Sky Network channel on [YouTube](#) and watch demonstrations of astronomy outreach activities and recordings of our monthly webinars with astronomy professionals and NASA scientists.

The Astronomical Society of the Pacific



The NASA Night Sky Network is managed by the [Astronomical Society of the Pacific](#). The ASP is a 501c3 non-profit organization that advances science literacy through astronomy.

A Summer of Astronomy and Science

Here are some great places to visit this summer with your friends and families in L.A. country.

AstroFest 2018 - "Welcome to the 2018 AstroFest: July 14-22! Join lovers of astronomy from across the city for a week of FREE and family friendly space-themed events. On Saturday July 14 from 2-8pm, [AstroFest](#) kicks off the week with a festival of hands-on activities, robotics demos, creative art displays, planetarium shows and more at the Pasadena Convention Center, with evening star-gazing from 8-10pm at the both the Pasadena Convention Center and The Paseo. Together with scientists from all over the world who will be gathering during the same week for the 42nd COSPAR Assembly, we invite you to take part and explore our place in the Universe."

Official Website: <http://www.cityofastronomy.org/astronomy-week-2018/>

The California Science Center

Website: <https://californiasciencecenter.org/visit>

Youtube: <https://www.youtube.com/watch?v=mseVLmjG36M>

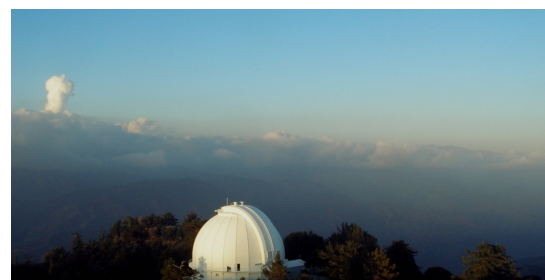


The Columbia Space Memorial

Website: <http://columbiaspacescience.org/>

Discovery Cube Los Angeles (For your children and grandkids!)

Website: <https://la.discoverycube.org/>



Mt. Wilson Observatory - Public Tours

<https://www.mtwilson.edu/>

You might even meet an LAAS member there!

Where's That Star Party Parking Pass???

Every month after I mail out the parking passes for our Public Star Party, someone contacts me asking how to find the pass. They may be using a tablet or their cell phones to find the pass and can't find the pdf file containing the pass. This new technology can be challenging!

If you cannot find the pass, contact me and I will send you a photo of it to print out on your home computer. If you take a moment to login to your Night Sky Network (NSN) account, you can find a link to the pass. Why do you have to login to your account? If you go to our website at LAAS.org and view our club events on the calendar, you will be viewing a public calendar only. If I posted the parking pass on the public calendar, then anyone could print out the pass. As the pass is exclusively for the LAAS members, I created a new event (just for us) to make sure only members access that pass.

From this day forward, you will find another event NSN under our Public Star Party event with all of the information our club receives for each star party from the administrator at the Griffith Observatory. Look for "Members Only" on the private calendar, after you enter your account credentials (your password and username). Click on "Members Only" on the date of the star party and review any information posted for your benefit. Below the images of the sun, the moon phase, and the sky chart, you will find the link to the parking pass of the month available. Click on the link (in blue) to open it on your screen and print it out.

Look at the images below to see where the parking pass link is on the private calendar.

A view of the private calendar

You can't remember your username or password? Oh say it isn't so! And this is why you can't view the private club calendar?

Let's fix that issue! You can visit the LAAS.org site and click on "Event Calendar" found on the left hand side of the page. Click on any event posted on the calendar after the calendar appears on your screen. You will now be on the NSN site. Look in the upper right hand corner for the blue "login" box and click on the box. The photo on the right is what will appear on your screen.

Underneath the blue "SUBMIT" tab, find the words, "Forgot your password?" Click on those words. You will be magically transported through the internet to the "Login Help" page on the NSN where you can fill in your name, your email address, and look for the name of our club in the field box below. Your login credentials will be emailed to you from the system after you complete these instructions.

If you need help with the NSN, please contact me at Communications@LAAS.org.

Andee Sherwood/Communications

FAMILY NIGHT

Date: Saturday, July 7, 2018

Time: 5:00 PM - TBD by group

Location: Lockwood Valley

Sunset: 8:11 PM

Family Nights are scheduled at our Lockwood Dark Sky site best known as the Steve Kufeld Astronomical Site (SKAS). Here is a link on our website to learn more about this special club facility:

<http://laas.org/joomlasite/index.php/dark-sky-observing>

Family Nights were created in 2011 for all club members and families to enjoy a night of dark sky observation far from the city lights of Los Angeles. You may bring camping equipment or campers and stay for the entire evening. It's a star party and gives our members an opportunity to view celestial objects normally not visible in the sky over the city. Due to extreme weather conditions, we only offer these nights to our members during warmer months.

Gates open at 4 PM and the departure times will be discussed with the group. Please arrive early before sunset to become familiar with the grounds and set up equipment. Some of our members enjoy setting up a pot-luck-style meal which you may find discussed on our Yahoo group.



Family Night -8/27/2017 - Photo credit: Ray Blumhorst

Session Nights

Mt. Wilson Observatory

2018 Session Schedule:

- July 7th (Sat)
- August 4th (Sat)
- September 7th (Fri)
- October 5th (Fri)
- November 3rd (Sat)
- December 1st (Sat)

The price for these nights are as follows:
 \$50 - 60 Inch Nights
 \$170 - 100 Inch Night

All of the dates above have been posted on the club calendar. These are private events exclusive to **current** LAAS members, families, and their guests only.

Please click on the following link to contact Darrell Dooley, our Mt. Wilson Coordinator before submitting payment.

mtwilsoncoordinator@laas.org.

To pay using PayPal or by credit card, please use the following link:

<https://fs30.formsite.com/LAAS/MtWilson/index.html>

To pay by check, please mail your check to:
 LAAS

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

ATTN: Treasurer/Mt. Wilson

*Please write "60 Inch" on your check. Make your check payable to: LAAS



60 Inch group photo from April, 2017

Note: If you pay by check, your check may be held by our Treasurer for several weeks, before clearing your bank.

Meet The New Members



Dave White

Jeff Stepp

Alan Rachman

Noah Adams

Edward Van Orden

Matthew Hughes

Walter Kos

Allan Cox

Nathan and Ian Strange

Mirko Mayer

Barbara James

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 out-reach 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?

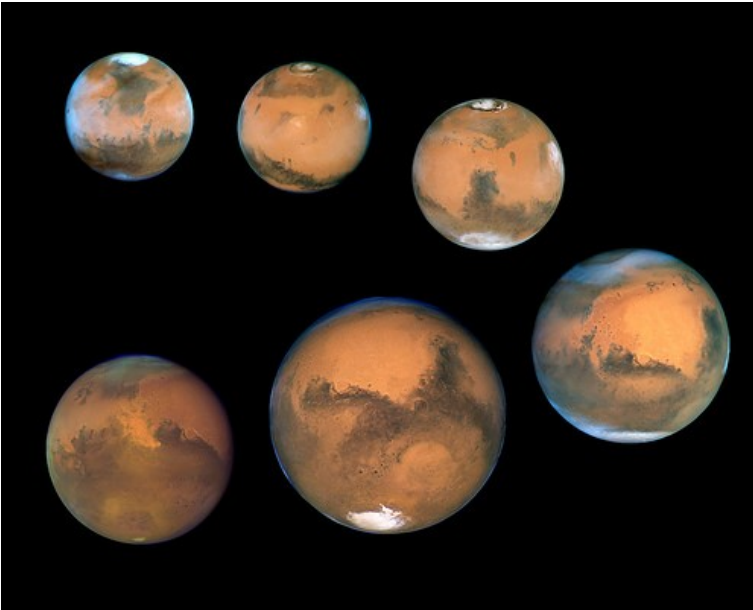
Please remember to renew your membership once you receive notice from the Club Secretary in your email inbox. Use this link to learn how to renew your membership: <https://fs30.formsite.com/LAAS/MemberRenewal/index.html>

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



A Guide To The Night Sky

By Tre Gibbs



This month will be a good time to view multiple planets without having to be up just before sunrise, as Saturn and Mars return to our evening skies.

Venus, The Goddess of Beauty and Love, and Jupiter, The Roman King of the Gods, have been gracing our evening skies together for a little over a month now, Venus low in the west northwest and Jupiter in the southeast, both appearing shortly after sunset, when the sky gets dark enough to see their glow. As Jupiter continues to move westward, Venus has begun her slow, long decent towards the glare of the sun, on her way to becoming The Morning Star by the end of the year.

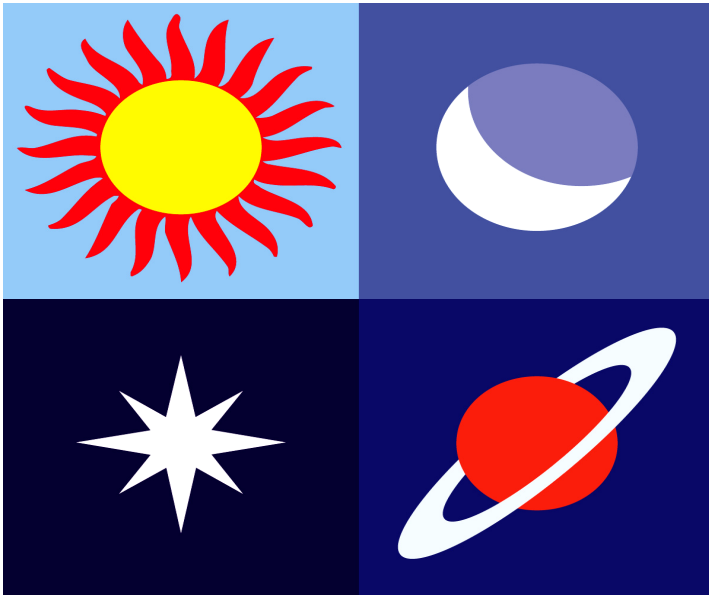
Early in the month, Saturn, in Sagittarius The Archer, rises in the southeast at sunset. Saturn is so far away (roughly 840 million miles - or 76 light minutes) that it doesn't stand out nearly as much as Venus and Jupiter. It simply appears as a prominent, non-twinkling star. Mars, The God of War, in Capricornus The Sea

Goat, rises in the southeast around 11:00 - 11:30 pm, with its unmistakable reddish hue. Jupiter, in the constellation of Libra The Scales, appears high in the south at sunset, which makes it ideal for viewing. Even with a pair of good binoculars, you should be able to see four of its 69 moons, known as the Galilean Satellites, since Galileo discovered them back in 1610. Looking through binoculars, they will appear as small pinpricks of light, all in a straight line. Galileo first thought that they were background stars until, over time, he noticed that they stayed with Jupiter - even as Jupiter moved across the sky. They also appeared sometimes on the left side of Jupiter, sometimes on the right...and different combinations, too - two on either side of Jupiter, one on one side, three on the other... That's when Galileo realized something astounding: these things were moons that orbited Jupiter, which suddenly meant **Earth was not the only center of motion in the universe** - a truly radical challenge to the way of thinking by The Catholic Church at the time. This discovery would eventually lead to Galileo imprisoned by the church, spending the rest of his life under house arrest. FYI, the Catholic Church eventually issued a formal apology to Galileo, in 1992, 350 years after his death. So grab a pair of binoculars - or better yet, get a telescope and see these history changing objects for yourself!

By month's end, Saturn (still in Sagittarius) appears in the south southeast at sunset, while Mars rises at sunset, much like Saturn did at the beginning of the month. Jupiter (still in Libra) will appear high in the south southwest at sunset, and all three wanderers will appear to keep moving slightly further west every day, as Earth speeds past them, continuing her orbit around our nearest star, The Sun.

The moon will be passing by all of the above mentioned planets, which is a great way to make certain of which planet you are seeing. On the 15th, the thin waxing (getting bigger) crescent moon is incredibly close and to the left of Venus, low in the west just after sunset. Five days later, on July 20th, the moon has moved further east in its orbit around Earth, now half full and will travel the sky with Jupiter. Four days after that, on the 24th, the moon - still moving eastward away from the sun and getting even bigger - is now right above Saturn. Finally, three days after that, on the 27th, the moon is directly opposite the sun, the biggest it will get (FULL!) and pairs up with Mars for the evening, both traveling the night sky as a pair. FYI - this particular full moon is known as "The Full Buck Moon" since this is the time of year young bucks grow new antlers. And speaking of the moon, it's slowly leaving us! On July 16th, 1969, Apollo 11 launched from Cape Kennedy in Florida. Four days later on July 20th, Neil Armstrong would be the first man to walk on the moon. In addition to placing an American flag and a commemorative plaque on the moon, he also placed something that is still in use today - a lunar laser ranging reflector, which is a two foot wide panel covered with mirrors. With the help of a laser beam shot from Earth and reflected back to us, we can measure the ever growing distance between us and the moon, which is about 3.8 centimeters per year. So don't take the moon for granted - it won't always be there. Yet another reason to **KEEP LOOKING UP!**

Almanac



July 12 - Mercury at Greatest Eastern Elongation. The planet Mercury reaches greatest eastern elongation of 26.4 degrees from the Sun. This is the best time to view Mercury since it will be at its highest point above the horizon in the evening sky. Look for the planet low in the western sky just after sunset.

July 13 - 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 02:48 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.

July 13 - Partial Solar Eclipse. A partial solar eclipse occurs when the Moon covers only a part of the Sun, sometimes resembling a bite taken out of a cookie. A partial solar eclipse can only be safely observed with a special solar filter or by looking at the Sun's reflection. This partial eclipse will only be visible in extreme southern Australia and Antarctica.

July 27 - Full Moon. The Moon will be located on the opposite side of the Earth as the Sun and its face will be fully illuminated. This phase occurs at 20:22 UTC. This full moon was known by early Native American tribes as the Full Buck Moon because the male buck deer would begin to grow their new antlers at this time of year. This moon has also been known as the Full Thunder Moon and the Full Hay Moon.

July 27 - 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 Europe, Africa, western and central Asia, the Indian Ocean, and Western Australia.

July 27 - Mars at Opposition. The red 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 Mars. A medium-sized telescope will allow you to see some of the dark details on the planet's orange surface.

July 28, 29 - Delta Aquarids Meteor Shower. The Delta Aquarids is an average shower that can produce up to 20 meteors per hour at its peak. It is produced by debris left behind by comets Marsden and Kracht. The shower runs annually from July 12 to August 23. It peaks this year on the night of July 28 and morning of July 29. The nearly full moon will be a problem this year, blocking out all but the brightest meteors. But if you are patient, you should still be able to catch a few good ones. Best viewing will be from a dark location after midnight. Meteors will radiate from the constellation Aquarius, but can appear anywhere in the sky.

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

Need Help With A New Telescope?

Visit the Garvey Ranch Observatory on any Wednesday night 7 PM to 10 PM for tips and assistance from your fellow LAAS members.

Learn more: [The Garvey Ranch Park Observatory](#)



JULY

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4 Garvey Night - Closed due to holiday 	5	6	7 Family Night 60 Inch Night
8	9 General Mtng	10	11 Garvey Night Board Mtng	12	13	14 Dark Sky Night
15	16	17	18 Garvey Night	19	20 Outreach in San Dimas	21 Public Star Party
22	23	24	25 Garvey Night	26	27	28
29	30 Mars Opposition	31				

Additional events with updated information may be posted on the calendar. Please log on to your account on the Night Sky Network (NSN) to view the complete schedule of club events. Link: <https://nightsky.jpl.nasa.gov/>

The 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 beauties 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?>



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>



Amazon Smiles

Raise Funds For the LAAS



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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