



# THE LOS ANGELES ASTRONOMICAL SOCIETY

800 MEMBERS LOOKING UP!

## THE BULLETIN

AUGUST, 2017

VOLUME 91, ISSUE 8

### TOTAL ECLIPSE OF THE SUN AUGUST 21, 2017



Photo Credit: NASA/GSFC/CI Lab

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### Field Trip!

Remember the joy of hearing your teacher announce a class field trip when you were in Elementary school? Over 200 members of the LAAS are trekking across the country to various locations to observe the total eclipse on Aug. 21, 2017.

Safe journey, clear skies to all!

Curious about the eclipse? Here are two great links to learn more:

<https://eclipse2017.nasa.gov/eclipse-101>

<https://eclipse2017.nasa.gov/dot%E2%80%99s-resources>

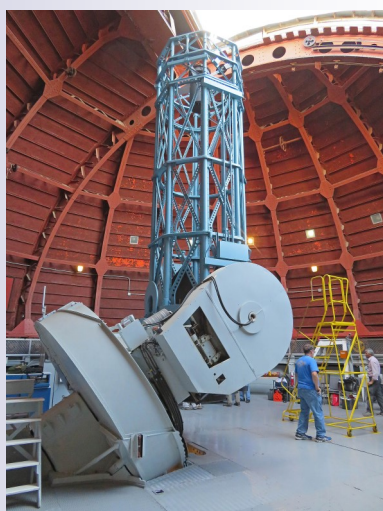
The mission of LAAS is to promote interest in and advance the knowledge of astronomy, optics, telescope making and related subjects. In furtherance of its mission, LAAS conducts public star parties and other outreach events that are intended to enhance the public's understanding of astronomy and its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

# Astro-Imaging on the Mt. Wilson 60-inch Telescope

by Ray Blumhorst

Clear night skies at the Mt. Wilson observatory followed a muggy day as tropical weather began to move out of Southern California on June 24th, just in time for some astro-imaging on the historic 60-inch telescope.

A group of ten eager LAAS members assembled outside the observatory gate at 6:00 a.m. and were escorted to the 60-inch dome by Geo Somoza, the night's session director and telescope operator.



Seeing conditions "could always be better" for perfectionist astro-imagers and fortunately did improve as darkness fell. The dedicated group worked hard to make the best of all factors and achieved a variety of successes (and failures) as high-tech digital photography attached to the 109-year-old, 60-inch telescope.



Vance Tyree added much to the evening session with his capable astro-imaging knowledge and advice. It was an evening of experimentation and discovery of astro-imaging techniques that would work on the 60-inch telescope, while contemplating future adaptations that could improve image outcomes. The learning curve was challenging, but also rewarding as imagers got mixed results, then made adjustments that yielded some improvements.

The equipment and techniques used over the evening were as varied as the people attending the event. Some shot still frames. Others shot video. Some imagers used their camera's live view screen to attain focus, while others used a laptop tethered to the camera. Some imagers used a remote shutter trigger, while others used their computer's software to control the shutter; still others just used the shutter release button on their cameras. The 60-inch telescope was so solid that vibration issues, common in small telescopes, were not present.

The objects imaged over the course of the evening were: Jupiter, Cat's Eye Nebula, Saturn, and Ring Nebula. The Ring Nebula appeared to be the most difficult target of the evening due its dim visual magnitude and diffuse nature. It was my poorest photo of the evening with a lot of noise in the best shot I got. Even though Photoshop can work miracles on dark photos, high ISO noise appears insurmountable – at least for my skill level.



It appears all the participants got some good knowledge and acceptable photos from the evening's session. Many came away with ideas how to improve their imaging techniques on the 60-inch telescope and other telescopes. The evening's work at 5700 feet was educational, inspirational, and also fun.

Ray Blumhorst



Learn more about the Mt. Wilson Observatory by clicking on their logo above or by following this link:

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

# FAMILY NIGHT, JULY 15, 2017

Hi Fellow LAAS'ers,

The afternoon started with Joe Phipps setting up the grille and good eats. We had lots of leftovers from the previous week's New Member Potluck. Many thanks to Joe and others who helped out.

July 15th's Family Night at Lockwood Valley/SKAS, while not the best night we've had of late, we had a good turn-out of regulars, new members, and guests. We had some clouds, mostly around the horizon, that left us a big, unmoving sucker hole right overhead. At the sunset talk we had about 37 people, then more arrived, mostly people I knew, but we had 4 new members arrive well after dark. They were a bit lost - they drove in, turned around and left, then went to the neighbors, then came back. They had even found their way to The Local Group site. That's what happens when you join on Wednesday and try to attend your first event the following Saturday, in the dark, and probably without their new-member packet. Let's give them a round of applause for perseverance, bravery, and (hopefully) an enduring love of the night sky.



After the sunset talk I retired to my recliner chair in the Gordon Mitchell Observatory to await the falling darkness with the club's 16" Newtonian. First up, Jupiter, with Callisto grazing the northern edge of the planet. On to Saturn, with the Cassini division just visible, and with the usual cast of characters-Titan, Rhea, Dione, and Tethys. The seeing was not the best to begin with and the 16" is not the best instrument to view bright planets. I didn't feel cheated after I looked through a 10" VMC (Vixen Modified Cassegrain), it didn't look much better as we were looking through thin clouds.

So much for planets, it was now dark enough for DSO's (Deep Sky Objects) for which the 16" works well. Examined M4 a good long time, enjoying following the chains of brighter stars. Then I looked for, and found NGC 6144, closer to Antares. Then on to M8 (Lagoon) and M20 (Trifid). Passed through M24, the Sagittarius Star Cloud. Taking breaks here and there to check out other scopes, then returning and locating M27 (Dumbbell, with wide-band nebula filter). Caught the Western Veil (also with wide-band nebula filter), then looked for M101, which didn't look like much due to thin clouds between it and me. There were a few more objects that I didn't take the time to identify on charts, but I could see that our majestic sucker hole was filling in. Not a bad haul of objects for only 2 or 3 hours effort. I had a few visitors, mostly new members, so I wasn't on my feet all that time. The time was getting close to when the Moon would rise, behind clouds, so I shut down the scope and closed up shop.



Photo above credit: Joe Phipps

All other photos are credited to Kevin Gilchrist

Just so you would know, the club's 16" can be used by anyone. It does have a drive, but no GoTo. The single-arm fork, with the arm very close to the polar axis, makes it difficult to point at circumpolar objects, so if you are good with setting circles, then you should try out this scope. It does extended objects very well. If you would like to have a go at driving this beast, feel free to ask. I, and a few others with the experience, will gladly point out what you need to know.

So, with clouds closing in and with the 16" put to bed, a lot of people were packing up and going home. I stayed until morning, sleeping in my car. About 4am I woke up with the Moon high in the East, and few clouds overhead. Back to sleep, then waking around 5am. 6am, beautiful sunrise with clouds accented in red and bright yellow. This is the hour when the Sun is not yet up and the heat of the day is still held in check. Glorious.

Kevin Gilchrist

**Date: Saturday, Sept, 23, 2017**

**Time: 4:00 PM - 11:59 PM**

**Location: Lockwood Valley**

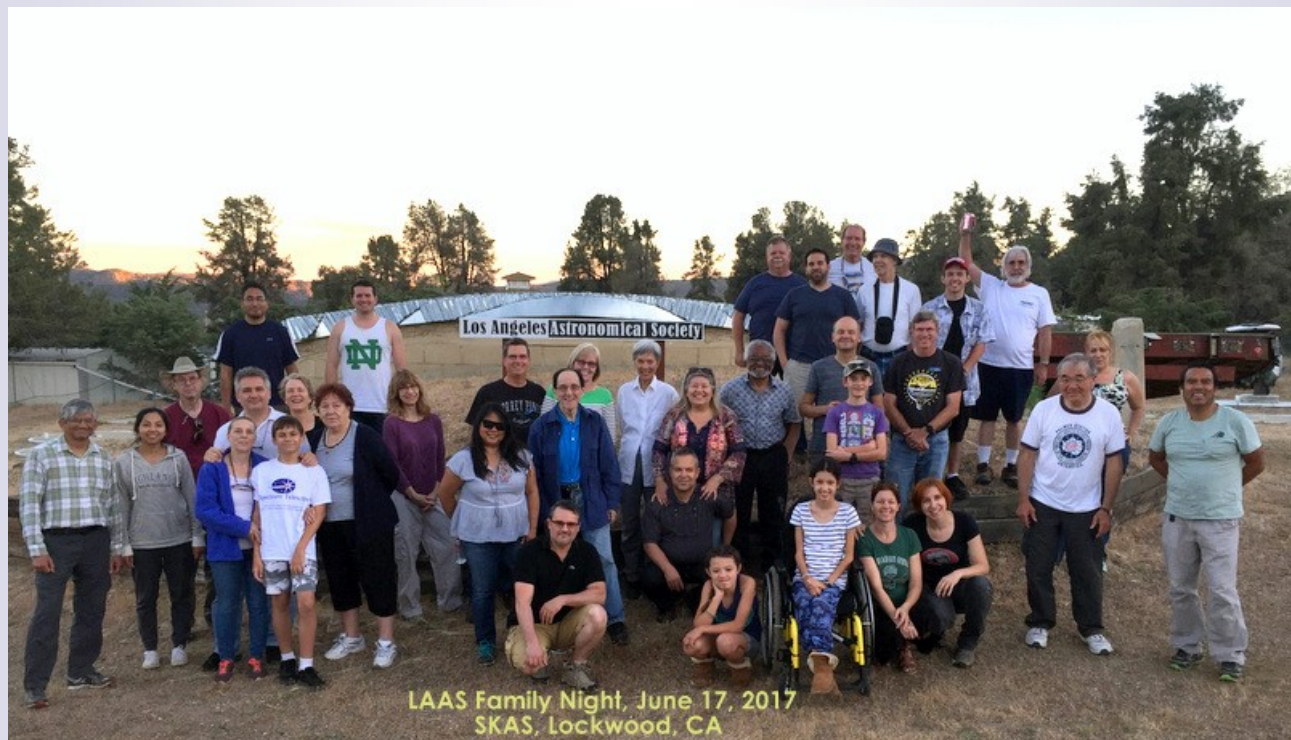
In 2011, the first Family Night was scheduled at our Lockwood Dark Sky site best known as the Steve Kufeld Astronomical Site (SKAS).

Here is a link on our website to learn more about this special club facility:

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

Family Nights are scheduled 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 potluck-style meal which you may find discussed on our Yahoo group.



**Friends and fellow members gathered together at Lockwood  
for our first Family Night of the season on June 17, 2017.**

**Photo credit: Kevin Gilchrist/Lockwood Committee Chairperson**

**BOOK NOW! ONLY THREE SESSIONS  
LEFT FOR THE SEASON!**

**MT. WILSON NIGHTS ARE BACK!**

**Make Your Reservations Soon!**

**60 Inch Nights:**

~~Friday 4/21 (Half)~~

~~Saturday 5/20 (Full night)~~

~~Saturday 6/24 Imaging Session - 4 Spots Open!~~

~~Friday 7/21 (Half)~~

**Saturday 9/16 (Half)**

**Saturday 10/28 (Half) (Moon night!)**

**Saturday 11/11 (Half)**

**100 inch nights:**

~~Friday 6/23 (Half)~~

Email Darrell before using the PayPal link to guarantee space available.

Contact Darrell Dooley at [Mtwilsoncoordinator@laas.org](mailto:Mtwilsoncoordinator@laas.org)  
for further information



# OUTREACH REPORT

First Southern Baptist Church  
Date: Thursday, June 22, 2017  
Time: 6:00pm – 9:00pm  
Reported by Van Webster/LAAS

A strong contingent of Los Angeles Astronomical Society Outreachers convened on the playground of the First Southern Baptist Church in Monterey Park for an afternoon of solar viewing and a short evening of night sky observations. The church is located nearby to the Garvy Ranch Observatory facility.



Solar telescopes in a wide range of sizes in both white light and Ha were available for the children participating in a camp event to view. There were lots of non-telescope events going on at the church so small groups of children came to the scopes in sporadic waves of activity.

Church members provided a pizza and nachos meal for the astronomers. Who had plenty of time to eat between viewing groups. As the Sun set, we had a break fro the sky to get

darker. Observers with computerized scopes were able to find Jupiter and 4 moons while the sky was still blue. Earth's own orbital companion did not make an appearance that night. Saturn showed up at about 8:45 low in the eastern sky, blurred by turbulent air and dirty air.

The event was scheduled to end at 9:00 PM and sure enough at 9:00 the entire camp came out to take a look at the night sky. We stayed a few minutes longer than scheduled to be certain that everyone had a look. With sleepy toddlers draped over their shoulders, weary mothers lead their families away for the trip home.

Van Webster/LAAS



Join your fellow club members by becoming an Outreach Volunteer . It's a fun and very rewarding experience for all cub members. For more information, contact Heven Renteria at

[Outreach@laas.org](mailto:Outreach@laas.org)

Photo Credit: Van Webster

# MEET THE NEW MEMBERS



Katie and Reinhard Kargl

Max Seib

Richard Wilkerson

Blake and Anna Marie Estes

Barney and Sher Mayerson

The Houghtaling Family

Elle Anderson

Jacob Cohen

Christopher Rorke

David Alvarez

Marco Antonini

Martin Glazer

Kevin and Cyrielle Van Der Meirin



**Please remember to renew your membership once you receive notice from the Club Secretary. Use this link to learn how to renew your membership:**

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

## SUBSCRIBE

## ASTRONOMY MAGAZINES

Sky and Telescope renewals should be sent directly to Sky Publishing.

To start a subscription at club rates, send a check payable to "Sky & Telescope" in the amount of \$32.95 for a one year subscription to:

**Los Angeles Astronomical Society**

**C/O Griffith Observatory**

**2800 East Observatory. Road**

**Los Angeles, 90027**

**ATTN: Treasurer**

Be sure to include the exact name and mailing address for your subscription. Then, thereafter, send the renewal bills directly to Sky Publishing. **For a club rate subscription to Astronomy**, send a check payable to Kalmbach Publishing Co. in the amount of \$34 for one year or \$60 for two years to the above address.

Be sure to include the exact name and mailing address for your subscription. That magazine also requires later subscription renewals to be handled through the LAAS Treasurer.

# FUNDRAISING 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/>

**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 returned 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.

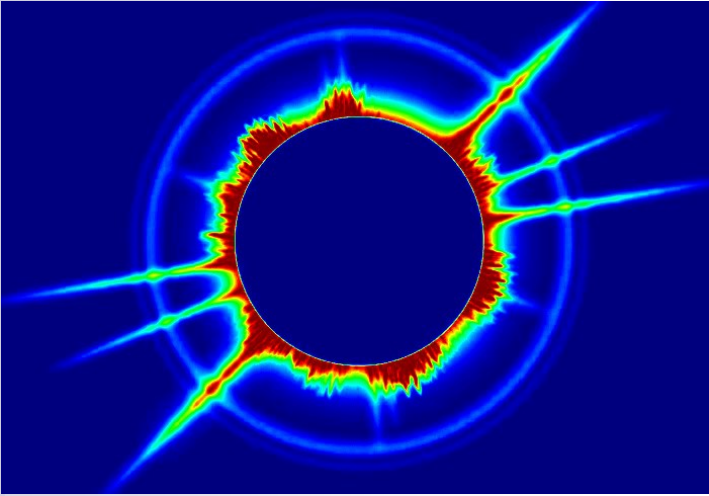
John O'Bryan, Jr./Treasurer



*Thank you for your donation!*

# A GUIDE TO THE NIGHT SKY

## FOR AUGUST, 2017



Get ready for the **TOTAL SOLAR ECLIPSE!**

On Monday August 21st, beginning around 9:30 am, the moon - slowly moving eastward - will begin to move in front of the sun and almost completely block it out. In fact, from my location here in Northern California, a little more than 80% of the sun's disk will be covered, while in Northern Oregon, 100% of the sun will be covered. Though our friends in Southern California will only see about 70% of the sun's disk blocked.

While solar eclipses are not very rare events (they happen more often than presidential elections) the path of totality traveling across the United States is rare. In fact, the last time the U.S. saw a total solar

eclipse was back in February of 1979, so this will be a rare treat for all of us. Expect the daylight to dim noticeably - creating an eerie light for about 30 minutes or so. By 11:30 am the moon will begin to move beyond the disk of the sun and everything will go back to normal.

Take the time to find and purchase some solar eclipse glasses since it's the **ONLY** way to view this spectacle with your eyes. Never, I repeat NEVER look at the sun directly, even during an eclipse. Just a sliver of the sun's bright light can permanently damage your retina. Be safe - use specially designed glasses for viewing ([amazon.com](http://amazon.com)). The next Total Solar Eclipse after this one isn't until 2024, and that one happens over the southern and eastern part of the U.S. We'll have to wait until August of 2045 to see one travel across California again....

**SATURN** is currently the prominent planet this month, appearing somewhat high in the south just after sunset. Although it's so far away from us, it's rather difficult to spot, since it looks like just one of the other thousands of "stars" in the night sky, But thanks to the moon (which travels the same path in the sky as the planets), we can easily locate Saturn. On the night of August 3rd, look for the moon slightly above and to the right of Saturn. Then about 26 days later, the moon will return to almost the same spot, slightly above and to the right of Saturn.

**JUPITER** has been the prominent light in the sky for several months up till now, but the Roman King of the Gods is slowly departing our evening skies as he heads towards the glare of the sun. If you have an unobstructed view of the western horizon, look for Jupiter paired with the moon, low in the west on the evening of the 24th.

**VENUS** puts on a show of her own for the early morning risers! All month long, Venus appears low in the east just prior to sunrise. You can't miss Venus - it's the third brightest object in the sky (after the sun and moon). So incredibly bright, it can even cast a shadow if you're in a dark location.

So, enjoy the eclipse on Monday morning, August 21st beginning around 9:30 am - enjoy it safely - with appropriate eyewear. And as always, keep looking up !

Keep Looking Up!

Tre Gibbs



# ALMANAC



**August 7 - 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 18:11 UTC. This full moon was known by early Native American tribes as the Full Sturgeon Moon because the large sturgeon fish of the Great Lakes and other major lakes were more easily caught at this time of year. This moon has also been known as the Green Corn Moon and the Grain Moon.

**August 7 - Partial Lunar Eclipse.** A partial lunar eclipse occurs when the Moon passes through the Earth's partial shadow, or penumbra, and only a portion of it passes through the darkest shadow, or umbra. During this type of eclipse a part of the Moon will darken as it moves through the Earth's shadow. The eclipse will be visible throughout most of eastern Africa, central Asia, the Indian Ocean, and Australia. ([NASA Map and Eclipse Information](#))

## Need Help With A New Telescope?

Need help with your new telescopes or other astronomy gear? 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:

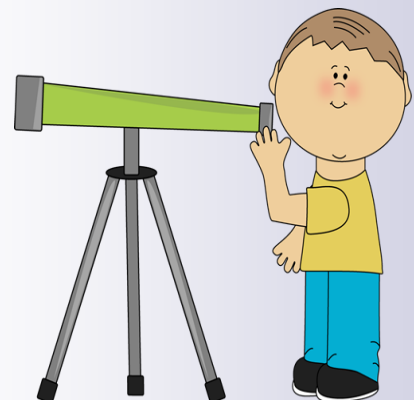
[Garvey Ranch Park/Observatory](#)

**August 11,12 - Perseids Meteor Shower.** The Perseids is one of the best meteor showers to observe, producing up to 60 meteors per hour at its peak. It is produced by comet Swift-Tuttle, which was discovered in 1862. The Perseids are famous for producing a large number of bright meteors. The shower runs annually from July 17 to August 24. It peaks this year on the night of August 11 and the morning of August 12. The waning gibbous moon will block out many of the fainter meteors this year, but the Perseids are so bright and numerous that it should still be a good show. Best viewing will be from a dark location after midnight. Meteors will radiate from the constellation Perseus, but can appear anywhere in the sky.

**August 21 - 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 18:30 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.

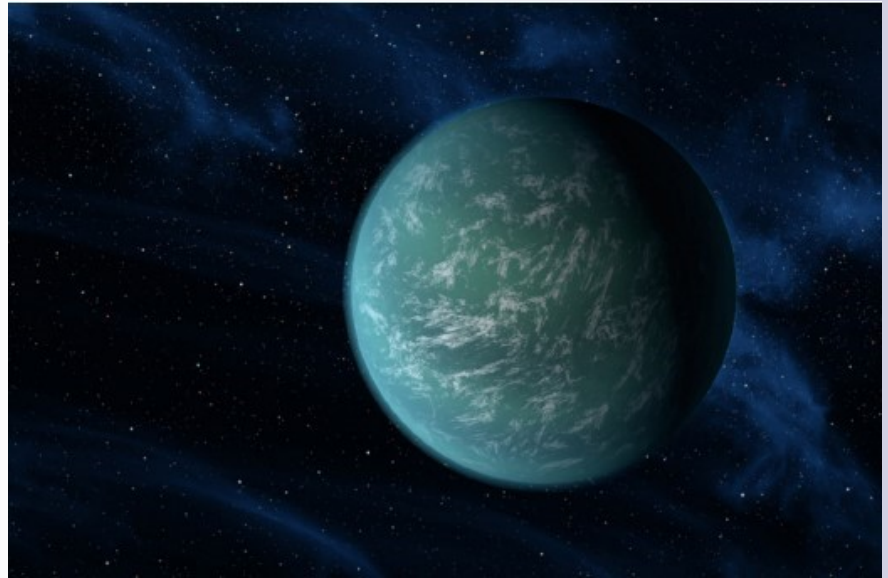
**August 21 - Total Solar Eclipse.** A total solar eclipse occurs when the moon completely blocks the Sun, revealing the Sun's beautiful outer atmosphere known as the corona. This is a **rare, once-in-a-lifetime event** for viewers in the United States. The last total solar eclipse visible in the continental United States occurred in 1979 and the next one will not take place until 2024. The path of totality will begin in the Pacific Ocean and travel through the center of the United States. The total eclipse will be visible in parts of Oregon, Idaho, Wyoming, Nebraska, Missouri, Kentucky, Tennessee, North Carolina, and South Carolina before ending in the Atlantic Ocean. A partial eclipse will be visible in most of North America and parts of northern South America. ([NASA Map and Eclipse Information](#) | [Detailed Zoomable Map of Eclipse Path](#))

Source: <http://www.seasky.org/astronomy/astronomy-calendar-2017.html>



# The Search for Habitable Worlds

Universe  
Discovery Guide  
For August



Artist's conception of Kepler-22b, the first planet NASA's Kepler mission confirmed to orbit in a Sun-like star's habitable zone. Credit: NASA/Ames/JPL-Caltech

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

## IN THIS GUIDE:

ARE WE ALONE? » SKY FEATURE: KEPLER MISSION FIELD » TRY THIS! » ACTIVITY: WHAT'S THE "HABITABLE ZONE" AROUND A STAR? » CONNECT TO NASA SCIENCE » Acknowledgements » Appendix: August Star Map

Download the June guide using the following link: <https://nightsky.jpl.nasa.gov/docs/DiscoveryAugust.pdf>

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.

**September 2017 (No webinar in Aug. due to eclipse plans)**

9:00 PM Eastern/ 6:00 PM Pacific

**Topic and Speaker TBD**

More information coming soon.

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

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





Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
30	31	1	7:00 PM Garvey 8:00 PM Board Meeting	2	3	4
						5 Sunset: 7:51 PM
6	7:30 PM General Meeting	7	8	7:00 PM Garvey	9	10
						11
						12 7:00 PM Outreach - Chilao VS Sunset: 7:45 PM
13	14	15	7:00 PM Garvey	16	17	18
						19 Dark Sky Night (Private) Sunset: 7:36 PM
20	21	22	7:00 PM Garvey	23	24	25
						26 2:00 PM Star Party Sunset: 7:28 PM
27	28	29	7:00 PM Garvey	30	31	1
						2

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

**Be advised all scheduled events may not be visible on the calendar above.**

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

## Club Contact Information

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geovanni\_somoza@hotmail.com

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**Webmaster:** Steve Dashiell

Webmaster@laas.org

**Club Communications:** Andee Sherwood

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mtwilsoncoordinator@laas.org

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**Bulletin Editor:** Andee Sherwood

communications@laas.org

## Club Contacts

### Club Phone Numbers

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213- 673-7355 - Checked daily

**Griffith Observatory:**

213-473-0800

**Sky Report:**

213-473-0880

**Lockwood Site:**

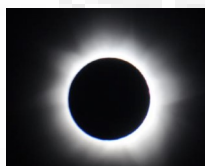
661-245-2106

Not answered, arrange  
time with caller.

Outgoing calls – collect



Click on one of the images below to view hyperlinks  
attached with information about astronomy and for fun.





Visit our web site at  
www.LAAS.org

Call us for more information  
about our organization and  
outreach program.  
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