



# THE LOS ANGELES ASTRONOMICAL SOCIETY

## THE BULLETIN

FEBRUARY 2017

VOLUME 91, ISSUE 2



From Left to right: Heven Renteria, James Rochford, Van Webster, Zoly Dobrovics, Penny Kunitani, Alezzandria Ruvacalba, Joe Phipps, John O'Bryan, Jr., and Gerardo Navejas.

The LAAS' finest and top Outreach Volunteers were awarded at our annual banquet and awards ceremony this year with certificates and the NSN award eclipse pins. These are the members who after a full day of work (and retirement which is busier for some), drive out to schools and organizations with their telescope gear and spend their evenings educating the public about the night sky.

Each of the award recipients went above and beyond the call for volunteers in 2016! Congratulations to all!

Our Outreach Team Leader is Heven Renteria, who schedules and organizes all outreach events for the membership.

If you are interested in joining this incredible outreach team of volunteers, please contact Heven at Outreach@laas.org.

Be apart of something great! Join the team today!

**Secretary's Report:**  
**Membership Total: 710**

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## The LAAS Banquet and Awards Ceremony

The banquet took place on Sunday, January 15, 2017 at the Quiet Cannon restaurant in Montebello, Ca.

The first guests to arrive were Rob Komoto and family, Joe Phipps (our new VP), John O'Bryan, Jr., and my husband Rick and I. We were joined by Heven and Geo a few minutes after our arrival. All of our board members arrived early to find out which table they would host for the evening. The hospitality table and door prizes were set up without issue and the membership arrived in mass! And so it began...



President Geo Somoza Photo Credit: Zoly Dobrovics

We had almost 100 attendees this year. I do believe this is the largest group to attend a club banquet in our history! As more members arrived, the excitement grew! The members milled about the room chatting with friends and meeting new members as they chose their tables for the evening.

By 6:30 PM, the buffet opened for service and everyone took their place in line for dinner. The stroganoff steamed, the vegetables glistened, and the astro-herd returned to their seats to enjoy their food.

After dinner and dessert, our guest speaker, Tom Mueller, the co-founding father of SpaceX stepped up to share his presentation. SpaceX's Falcon 9 rocket launched 10 satellites to low-Earth orbit for Iridium-1 the day prior to the banquet from the Space Launch Complex 4E at Vandenberg Air Force Base. Tom's presentation was exciting and filled with news about the successful launch and landing of the rocket. He also discussed the plans for SpaceX's future mission to Mars.

The award ceremony followed the presentation. Eclipse-themed pins created by NASA's Night Sky Network were awarded to over ninety club members this year. These are members who dedicated their time to volunteering for the club in many different ways, including attending and presenting astronomy at outreach events. Heven chose "runners" this year who were Attila and Andras Dobrovics, and Aiden Rochford. These young men delivered a pin to each recipient through the crowded room. They were each also pin recipients and have attended many outreach events with their fathers, who also won awards for their dedication to our outreach team.



Tom Mueller at the lecturn. Photo Credit: Zoly Dobrovics

Our top outreach volunteers were awarded with certificates for their many hours of outreach efforts and dedication. These members are James Rochford, Van Webster, Zoly Dobrovics, Penny Kunitani, Alezzandria Ruvacalba, Joe Phipps, John O'Bryan, Jr., and Gerardo Navejas. (See photo on Page 1).

Geo took the stage and presented Heven with a unique commemorative coin that was presented by the White House for outstanding dedication to outreach volunteers.



Photo credit: Zoly Dobrovics



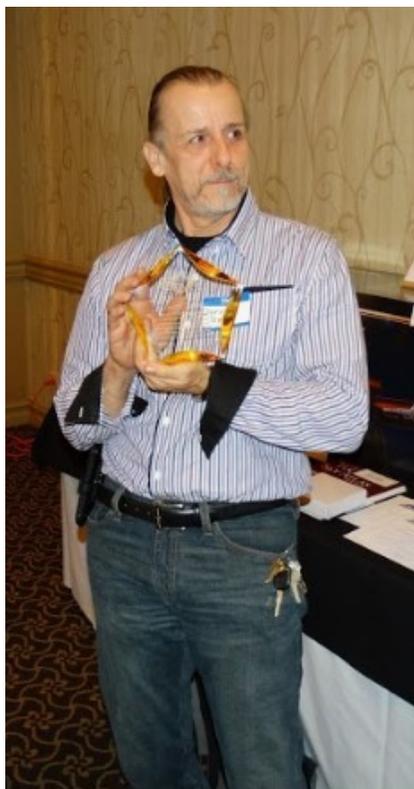
Joe Phipps (photo on the right) can usually be found running the 26 Inch telescope at the Griffith Observatory on any Public Star Party night. Joe was honored with the Golden Burger King crown. When we have an event that requires a grill for making hamburgers or hot dogs, you'll find Joe in a plume of smoke, grilling away! Joe gets the crown for 2016! Atta Boy!

*Below: Photo of Joe and the 26 Inch at Griffith Observatory.*





Richard Roosman took over the lectern and presented the following awards to those individuals whose dedication went far beyond their hobby of amateur astronomy and outreach.



**Darrell Dooley;** Long term achievement for organizing 60 Inch Nights at Mt. Wilson .

Photo Credit: Zoly Dobrovics

Thank you to Nasir **Jeevanjee**, **Zoly Dobrovics** and **Geo Somoza** for sharing photos of activities during the banquet! All of the banquet photos are available on our club's Facebook page at: <https://www.facebook.com/LosAngelesAstronomicalSociety/>

**Greg Thomas:** Invaluable service at Ford Observatory

**Vance Tyree:** For service at the Garvey Ranch Park Observatory.

Greg and Vance could not attend the banquet this year but they each received a round of applause from the membership.



#### SPECIAL THANKS TO THE FOLLOWING:

**Richard Roosman**, for taking time to order and prepare the awards for the membership!

**Tim Thompson**, for time dedicated in setting up the banquet at the Quiet Cannon and inviting Tom Mueller as our guest speaker this year.

Thank you, **Tom Mueller** for being our special guest!

**The LAAS Board, 2016** for helping to make this year's banquet such a grand event!

**Spencer and Janice SooHoo** for the lovely candle centerpieces!

**Dave Pinsky and Dave Beraru** for handing out the door prizes!



**Zoly Dobrovics:** Extraordinary participation in the Outreach Program



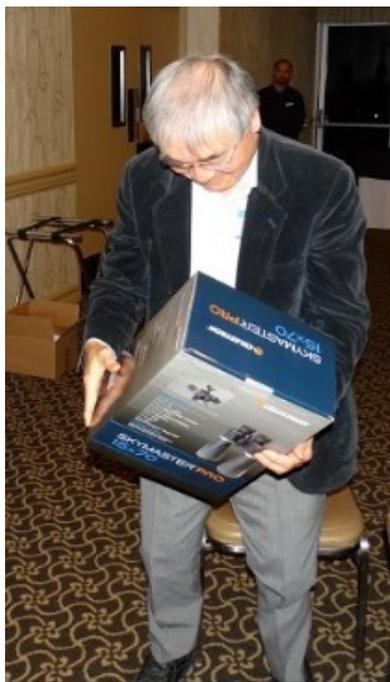
**Lewis Chilton:** Lifetime achievement award and for his work as our Club Historian.



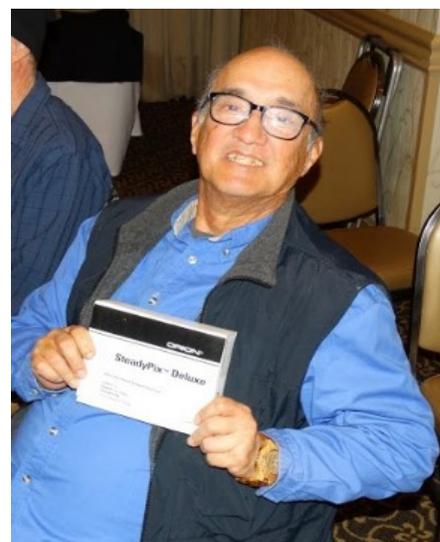


Above: Dave Beraru and Dave Pinsky

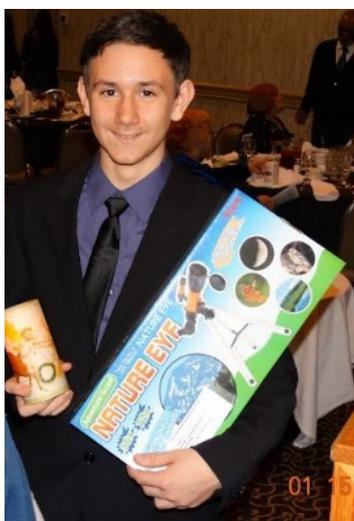
The “Daves,” Dave Beraru and Dave Pinsky entertained the crowd as they pulled the raffle tickets out of the handmade Dobsonian (made by Dave Sovereign) ticket holder. Another Dave! Here are a few pictures of prize winners and their prizes.



Left: Club Secretary, Spencer SooHoo wins a set of SkyMasterPro Binoculars



Below: Paul Boyle wins “SteadyPix Deluxe”



Above: Andras Dobrovics wins a Nature Eye Telescope.

Below: Marc Meehan wins a new telescope. Yes, that man on the floor is our club president!



Above left: James Steenhook wins a new lens.



Above far right: Tom Mueller wins a 60 Inch Night at Mt. Wilson



Right: Ron Thomas wins a new telescope.



Andee Sherwood/Editor



# CONGRATULATIONS! Winners!

The following members were awarded for their volunteer work in the LAAS. These folks donate their time to outreach or handle specific tasks for the club which allow others to participate in outreach events. Each member received an eclipse-themed award pin created by NASA's Night Sky Network. Congratulations to All!

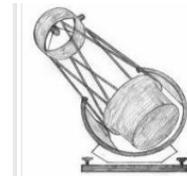
Almoite, Bobbi	Dominique, Jean	Navejas, Jethro	Thomas, Sandy
Artale, Chris	Dominique, Julian	Nolan, Bob	Thompson, Tim
Ashelford, Luis	Dooley, Darrell	O'Bryan, John	Tyree Vance
Attias, David	Dye, Jody	Ogle, Michael	Velarde, Christina
Barajas, Jay	Fisanotti, John	Padget, Bruce	Velarde, David
Barrera, Milton	Gallagher, JIm	Phipps, Joe	Volk, Chris
Belmour, Daniel	Germaine, Al	Pinsky, Dave	Ware, Jenna
Bernstein, Dick	Gibbs, Tre	Powers, Ken	White, Mike
Blumhorst, Ray	Gilchrist, Kevin	Renteria, Heven	Webster, Van
Breaux, Sheri	Gollnick, Daniel	Rochford, James	Whipple, Collin
Brown, Mary and Gina	Hayford, Mike	Roosman, Richard	Wood, Jim
Byrom, Curtis	Hurst, Alecia	Rosales, Manuel	Wu, Robert
Butler, Dominique	Jeevanjee, Nasir	Rubacalva, Alexx	
Campbell, Stephanie	Karch, Carole	Schroeder, Jeff	
Chan, Evan	Kim, Jung	Sherwood, Andee	
Chilton, Lewis	Knapp, Tim	Silveira, Susan	
Chua, Chester	Komoto, Rob	SooHoo, Spencer	
Colon, Javier	Kubota, Karen	Somoza, Geo	
Cook, Guiseppi	Kunioka, Todd	Sovereign, Dave	
Cook, Therese	Kunitani, Penny	Spellman, Chris	
Critch, Elizabeth	Lathrop, Bruce	SooHoo, Spencer	
Critch, Kelly	Meyerdierks, Herman	Steenhoek, Larry	
De Gregori, Don	Nakamoto, Dave	Sunada, Shirley	
Dobrovics, Andras	Navejas, Gerado	Tanimoto, Jim	
Dobrovics, Atilla	Navejas, Jethro	Thomas, Ron	
Dobrovics, Zoly			

**Let's send a big THANK YOU to the following astronomy vendors and club members for their generous donation of items for door prizes!**

1. 15x70 Skymaster Pro Binoculars - Celestron
2. 2 FireCell USB battery charger/hand warmers - Celestron



3. 1 subscription to Astronomy Magazine



JMI Telescopes

4. 1 \$35 gift certificate (with purchase of \$75 or more) - JMI Telescopes

5. 1 Sky and Telescope Jumbo Pocket Atlas - Sky and Telescope



6. 1 50mm Nature Eye Vixen Telescope - Woodland Hills Camera



7. 4 IMAX movie vouchers and 1 free parking pass to California Science Center - James Rochford
8. Nagler Type 5 Tele Vue 26 mm - Tom Drouet
9. Nagler Type 4 Tele Vue 17mm - Tom Drouet
10. LV5mm long eye relief 20 mm eyepiece - Tom Drouet

11. Celestron NeXstar 90 mm telescope -- Matt Ventimiglia

12. 2 Star level FOTO membership - FOTO



13. 3 pairs of IMAX tickets with admission to see the shuttle Endeavor - FOTO

14. Celestial Calendars (5-6) - Larry Steenhoek

15. Orion Steady Pix Delus - Joe Phipps

16. Orion planisphere - Penny Kunutani

17. Astrophoto of Orion Nebula - Dave Pinsky

18. Star Trek - The Official Guide To Our Universe - Rick and Andee

*Thank you!*

## Meet Norman James, Past LAAS President

I may be best remembered for my waterborne Spheremounted telescopes of the '60s and '70s. I developed the mounting (patented but not marketed) while working at the General Motors Defense Research Laboratories in Santa Barbara. While a member of the Santa Barbara astronomy club, I also joined the LAAS and attended meetings before it was complete. The telescope had its first public showing at an LAAS Mt. Pinos star party. In August of 1967 I took it to the Stellafane conference and received a First Place award for Mechanical Ingenuity.

That fall, I left GM to join an Industrial Design office to work on Lockheed L-1011 Interiors—moving to Los Angeles, becoming active in the LAAS and serving as president in 1969. Over the some seven years, I continued building prototypes: an 8" f/7; a remount of my original 8" f/4.5, first into a 17" sphere, then into an integrated 20" sphere/tube; and later, a 12-1/2" f/5 RFT in a 30" sphere—all of these in fiberglass.



With completion of the L-1011 contract in 1974, I moved to San Diego to work at Rohr Industries on mass transportation, and later, advanced marine technologies. Telescope prototyping continued for a Coulter 10" f/4 RFT kit and a remount of my Cassegranian. Later, a Coulter 17-1/2" f/4.5 primary mirror was ordered and tooling begun for a 42" diameter sphere. My activities changed, somewhat as I began documenting and posting past work to YouTube—mostly as narrated color slides and occasional videos or audio masters of concepts or processes.

With few exceptions, navigating the links is best done by reviewing finished telescopes, then finding links to those of interest. Some of them, like **TM7a, b** and **c**, have more live video showing techniques of interesting processes. Videos **TM8a & b** also have sequences showing low cost thin-wall truss tube construction. **TM9** reviews clock drive concepts investigated over the years and includes audio tracks of gyro experiments that hold future promise. **TM10** was prepared to document the state-of-the-art and disclose the "Next Generation" Spheremounted design for amateurs. **TT11** (a Test) features a "Virtual Pinhole" methodology for laser collimation of Cassegranian primary mirrors (usually a problem when the optical axis falls in a perforated surface zone).



8" f/7 Newtonian in 24" Ø  
Sphere - Also shown in **TM1**



Remounted 8" f/4.5 Newtonian  
in 17" Ø Sphere - **TM2**



8" f/4.5 Newtonian final  
Remount in 20" Ø Sphere -  
Featured in **TM2**



12-1/2" f/5 RFT First Light –  
Mt. Pinos and Sunland, CA  
Make parts **TM3** Ass'y **TM4**



10" Coulter f/4 in 24" Ø  
Sphere – **TM5**



Tooling Coulter 17-1/2"x 42" Ø  
Sphere - **TM6**



10" Cass Remount - 24" Ø  
Sphere – **TM5**



In Work –  
Never  
Completed

Next Generation Design  
**TM7a,b & c**

Unexpectedly, this fostered two new videos, **TT11a & b**, where a *virtual pinhole* may enable alignment of optical

surfaces to pre-set laser beams (by Hartmann like tests). These adaptations of the Virtual Pin-hole test were suggested to the Thirty Meter Telescope (TMT) team as a means of pre-collimating the mirror segments in day/twilight, perhaps salvaging observing time.



**TM8a**  
**Concept**



**TM8b**  
**Make 4 Parts**



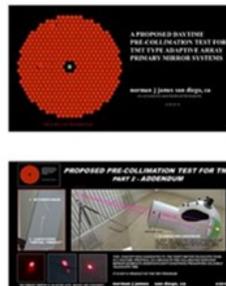
Thin Wall Truss Composite Construction

Summary update **Clock Drives TM9**

Summary **Adv. TM Concepts - TM10**



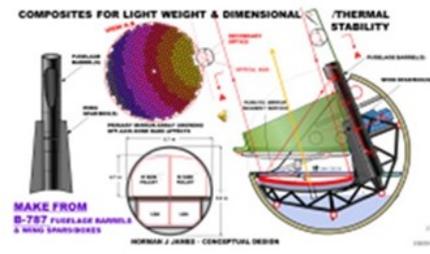
Laser Collimation **Virtual Pinhole - TT11**



Suggestions to **TMT Design Team**

**TT11a**

**TT11b**



**Adv. Observatory Concepts AOC12**

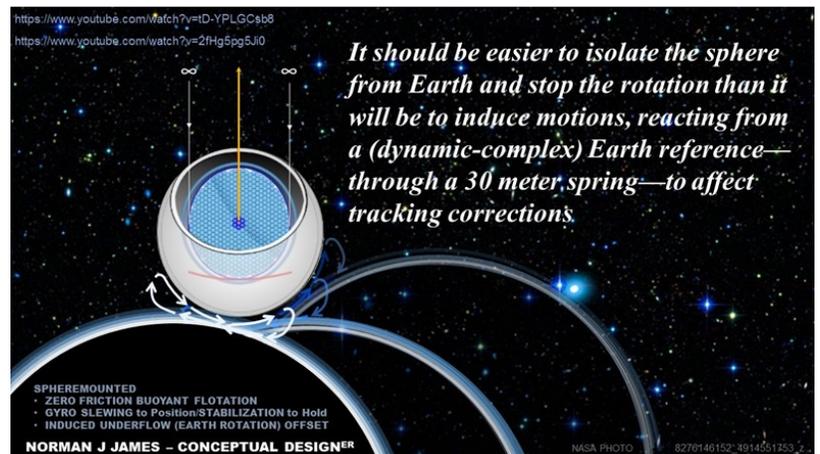
While **TM10** updated the state-of-the-art for amateur telescope making, it was logically followed by the application of best practices for Advanced Observatory

Concepts (**AOC12**). Having completed and proposed those test procedures for the Mauna Kea TMT telescope, the application of Spheremounted systems/technology holds my attention, as I am convinced that Spheremounted Systems applied to Observatory Class Multi-Mirror/Adaptive Optics systems will be worthy of development for the future of these large telescopes. The case may be summarized by this last image:.

**Norm James**

**Check out Norm's videos here:**

<https://www.youtube.com/user/NormJJames>



Meet  
Our  
New  
Members



Jieming Liang

Jeff Miller

Jessica Hirshon

Melinda Cotton

Lisa Morse

Elizabeth Wong

Vasti Carrion

Chris Spacone



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 Magazine Subscriptions

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.

# A Guide To the Night Sky for February, 2017

By Tre Gibbs



***The longest nights of the season are behind us.*** Before you know it we'll be setting our clocks ahead one hour in preparation for Spring. But we are still in Winter's grip and will be for at least another four weeks, although there are signs everywhere that winter will soon be departing. One of those signs is the night sky.

Before there were calendars, ancient people used the night sky to gather all kinds of information vital to their survival. Our ancestors also knew that living in a rhythmic, seasonal harmony with our planet gave them the best shot at longevity and continued propagation.

One major component of the night sky is the annual parade of stars and constellations. As Earth continues it's yearly orbit around the sun, at night we see different patterns of stars at different times of the year. This is how our ancestors knew not only what time of year it was, but perhaps more importantly, what time of year was coming. This information enabled them to prepare for the coming rains, the winter's cold, the planting, growing and harvesting seasons, all of which were necessary for survival.

Our ancestors also used the moon to measure time. Like the sun and stars, the moon also has a consistent cycle. Roughly every 28 days or so the moon completes one orbit around Earth, marking one month. FUN FACT: our word "month" comes from "moon".

From down here on Earth though, it's a little more difficult to keep track of the planets. Even though they too follow the same path in the sky as the sun and moon, their movement can seem quite random and erratic since each one is traveling in it's own separate orbit, at it's own different speed. Mars and Venus, Earth's two neighboring planets, are visible early in the evening, just after twilight high in the southwest. While Venus is obvious - the brightest star-like object in the sky - Mars has diminished to the point where it looks just like another small star with a hint of color to it. But don't fret, the moon is also a cosmic guide and will help you find Mars!

On the evening of February 1st, look to the SW after sunset to find a young crescent moon above the tiny but pinkish Mars, which is just above and to the left of the brilliantly glowing Venus. The three objects will appear to be in a straight line, with almost equal space between them. But the moon doesn't hang out for very long. By the following night, February 2nd, the moon will have drifted eastward, away from the planetary duo, continuing in it's own monthly orbit around Earth. In fact, the next time the moon comes around to visit with Mars and Venus will be on the nights of February 28th and March 1st - one month later. FYI - Jupiter returns to our evening skies this month! Rising in the east around 11:30 pm early in February, by month's end the Roman "King of the Gods" will rise almost two hours earlier - at 9:30 pm.

More on Jupiter (and Saturn) next month... until then stay warm, stay dry and KEEP LOOKING UP!

Tre Gibbs



Source: Lutfar Rahman Nirjhar, Wikimedia Common,  
CC BY-SA 3.0

## Eclipse Trip, 2017 Update and News

### Alert All Eclipse Chasers!

LAAS is now in Phase III of sign ups for our 2017 Total Solar Eclipse Tour! Changes include the following:

- Package A, with reservations at the Fairbridge Inn and Suites Hotel is no longer available unless someone cancels. The hotel required that at this time, we release all rooms that we will not use.
- Package B, with the Rodeway Inn, will continue to be available for purchase until March 24, 2017 or until sold out.
- Package D (viewing site use, rehearsal & lunch, t-shirt, and solar viewing glasses) is now available at \$75/person. The registration and payment can be done on our LAAS website, [laas.org](http://laas.org). Note that all participants must be LAAS members and if not registered, cannot be present on the viewing field. This is required for insurance purposes.

For those already registered, a lengthy information sheet was emailed on our Yahoo Chat Group on 10/24/16 at 1:19 am, and on our Yahoo Announcement Group on 10/24/16 at 3:27 pm. If you need a copy, please email your request to Penny at [kunitani@ucla.edu](mailto:kunitani@ucla.edu). There was an important but short questionnaire at the end. If you have not yet emailed your responses to Penny, please do so now.

# Almanac



**February 11 - 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 00:33 UTC. This full moon was known by early Native American tribes as the Full Snow Moon because the heaviest snows usually fell during this time of the year. Since hunting is difficult, this moon has also been known by some tribes as the Full Hunger Moon, since the harsh weather made hunting difficult.

**February 11 - Penumbral Lunar Eclipse.** A penumbral lunar eclipse occurs when the Moon passes through the Earth's partial shadow, or penumbra. During this type of eclipse the Moon will darken slightly but not completely. The eclipse will be visible throughout most of eastern South America, eastern Canada, the Atlantic Ocean, Europe, Africa,

**February 26 - 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 14:59 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.

**February 26 - Annular Solar Eclipse.** An annular solar eclipse occurs when the Moon is too far away from the Earth to completely cover the Sun. This results in a ring of light around the darkened Moon. The Sun's corona is not visible during an annular eclipse. The path of the eclipse will begin off the coast of Chile and pass through southern Chile and southern Argentina, across the southern Atlantic Ocean, and into Angola and Congo in Africa. A partial eclipse will be visible throughout

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

## NASA Megamovie Information

Observations from the ground including high altitude observatories coupled with advanced image processing and stabilizing techniques can yield a wealth of information about the cosmos. For the 2017 eclipse a number of observing programs are being developed to explore the sun and corona through imaging and spectroscopy.

Ground-Based Operations: <https://eclipse2017.nasa.gov/ground-based-observations>

Learn more about the Megamovie:

Night Sky Network Eclipse 2017 Megamovie Webinar Link:

<https://eclipse2017.nasa.gov/ground-based-observations>

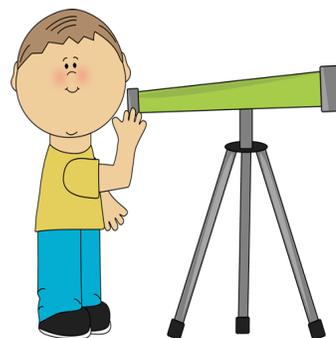


Free Downloadable Eclipse Posters:

<https://eclipse2017.nasa.gov/downloadables>

## 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.





# February, 2017

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1 Garvey Nights	2 Outreach Pasadena	3 Outreach E. Los Angeles	4 <b>Public Star Party</b>
5	6	7	8 Garvey Nights <b>Board Meeting</b>	9 Outreach North Hills	10	11
12	13 <b>General Meeting</b>	14 Valentine's Day 	15 Garvey Night	16 Outreach S. Pasadena	17	18
19	20	21	22 Garvey Nights	23	24 Outreach Highland Park	25 Dark Sky Night
26	27	28				

# ORION NEBULA

Universe  
Discovery Guide  
For February



Orion Nebula, Hubble Space Telescope. Credit: NASA, ESA, M. Roberto (STScI/ESA), and the HST Orion Treasury Project Team.

## Discover the universe with your family and friends!

» ORION NEBULA, NURSERY OF NEWBORN STARS » SKY FEATURE: ORION NEBULA » TRY THIS! » ACTIVITY: STARS AND THEIR LIVES » CONNECT TO NASA SCIENCE

Download the February guide using the following link:

<https://nightsky.jpl.nasa.gov/docs/02UDGOrionNebula.pdf>



Explore the dusty secrets of the Orion Nebula through Spitzer's infrared vision

<http://www.spitzer.caltech.edu/video-audio/381-hiddenuniverse026-Orion-Nebula-Gallery-Explorer->

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

## Club Contact Information

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Treasurer@laas.org

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outreach@laas.org

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Communications@laas.org

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mtwilsoncoordinator@laas.org

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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

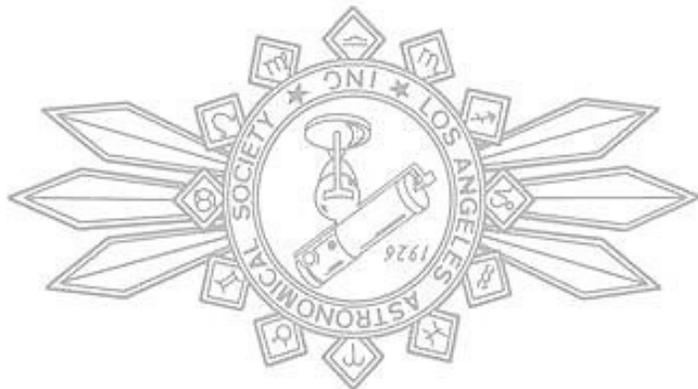
Not answered, arrange time with caller.

Outgoing calls – collect or calling card



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





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