

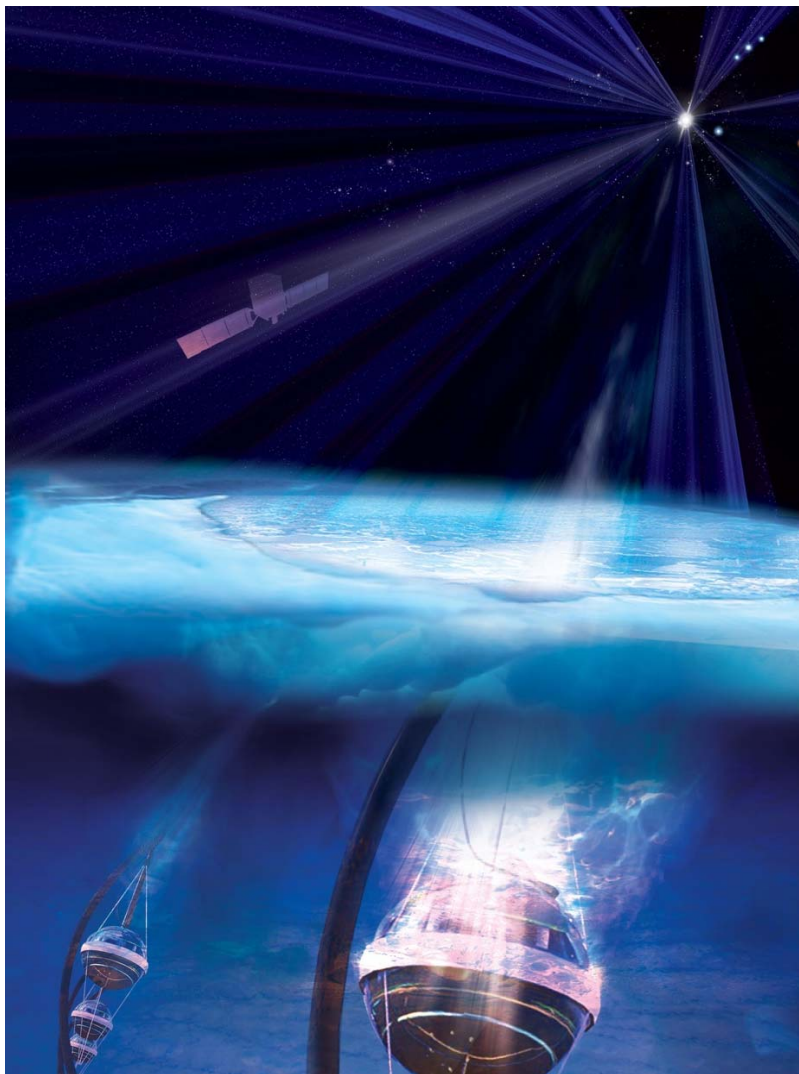
# Celestial

Volume 38 Issue 9



# Observer

September 2018



*NASA's Fermi (top left) has achieved a new first—identifying a monster black hole in a far-off galaxy as the source of a high-energy neutrino seen by the IceCube Neutrino Observatory (sensor strings, bottom). Credit: NASA, Fermi and Aurore Simonnet and Sonoma State University*

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**Next Meeting:** Thursday, September 27<sup>th</sup>, 7PM at United Methodist Church, Wesley Building.

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**Next Star Gazing:** Saturday, September 8<sup>th</sup> at sunset at the Santa Margarita KOA. See inside for directions and a map.

# Upcoming Meeting

Thursday, September 27th in the Wesley Room

1515 Fredericks Street, San Luis Obispo

6:45 Doors Open | 7:00 Meeting Starts

## Topic: Variable Stars



Image Credit: NASA, Spitzer Space Telescope, WISE; Processing & License : Judy Schmidt

Stars this volatile are quite rare. Captured in the midst of dust clouds and visible to the right and above center is massive G79.29+0.46, one of less than 100 luminous blue variable stars (LBVs) currently known in our Galaxy. LBVs expel shells of gas and may lose even the mass of Jupiter over 100 years. The star, itself bright and blue, is shrouded in dust and so not seen in visible light. The dying star appears green and surrounded by red shells in this mapped-color infrared picture combining images from NASA's Spitzer Space Observatory and NASA's Wide-Field Infrared Survey Explorer. G79.29+0.46 is in the star-forming Cygnus X region of our Galaxy. Why G79.29+0.46 is so volatile, how long it will remain in the LBV phase, & when it will explode in a supernova is not known.

# Next Star Gazing

September 8, 2018 at sunset (7:20PM) at the Santa Margarita KOA

Our Sky Star Parties occur once a month, and are free and open to the public, and also weather-permitting. Check our website for all the details!

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## A Trip Through the Milky Way

By Jane Houston Jones and Jessica Stoller-Conrad

Feeling like you missed out on planning a last vacation of summer? Don't worry—you can still take a late summertime road trip along the Milky Way!

The waning days of summer are upon us, and that means the Sun is setting earlier now. These earlier sunsets reveal a starry sky bisected by the Milky Way. Want to see this view of our home galaxy? Head out to your favorite dark sky getaway or to the darkest city park or urban open space you can find.



*This illustration shows how the summer constellations trace a path across the Milky Way. To get the best views, head out to the darkest sky you can find. Credit: NASA/JPL-Caltech*

While you're out there waiting for a peek at the Milky Way, you'll also have a great view of the planets in our solar system. Keep an eye out right after sunset and you can catch a look at Venus. If you have binoculars or a telescope, you'll see Venus's phase change dramatically during September—from nearly half phase to a larger, thinner crescent.

Jupiter, Saturn and reddish Mars are next in the sky, as they continue their brilliant appearances this month. To see them, look southwest after sunset. If

you're in a dark sky and you look above and below Saturn, you can't miss the summer Milky Way spanning the sky from southwest to northeast.

You can also use the summer constellations to help you trace a path across the Milky Way. For example, there's Sagittarius, where stars and some brighter clumps appear as steam from a teapot. Then there is Aquila, where the Eagle's bright Star Altair combined with Cygnus's Deneb and Lyra's Vega mark what's called the "summer triangle." The familiar W-shaped constellation Cassiopeia completes the constellation trail through the summer Milky Way. Binoculars will reveal double stars, clusters and nebulae all along the Milky Way.

Between Sept. 12 and 20, watch the Moon pass from near Venus, above Jupiter, to the left of Saturn and finally above Mars!

This month, both Neptune and brighter Uranus can also be spotted with some help from a telescope. To see them, look in the southeastern sky at 1 a.m. or later. If you stay awake, you can also find Mercury just above Earth's eastern horizon shortly before sunrise. Use the Moon as a guide on Sept. 7 and 8.

Although there are no major meteor showers in September, cometary dust appears in another late summer sight, the morning zodiacal light. Zodiacal light looks like a cone of soft light in the night sky. It is produced when sunlight is scattered by dust in our solar system. Try looking for it in the east right before sunrise on the moonless mornings of Sept. 8 through Sept 23.

*This article is distributed 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](https://spaceplace.nasa.gov)** to explore space and Earth science!*

# CCAS Officers

Feel free to connect with us!



President: Joseph Carro

Vice President: Tom Frey

Vice President: Aurora Lipper

Outreach Coordinator: Dave Majors

Treasurer: Lee Coombs

Celestial Advisor: Kent Wallace

Webmaster: Joe Richards

## CCAS Contact Information

*Founded in 1979, the Central Coast Astronomical Society (CCAS) is an association of people who share a common interest in astronomy and related sciences.*

Central Coast Astronomical Society

PO Box 1415

San Luis Obispo, CA 93405

Website: [www.centralcoastastronomy.org](http://www.centralcoastastronomy.org)

Facebook: [www.facebook.com/CentralCoastAstronomicalSociety](https://www.facebook.com/CentralCoastAstronomicalSociety)



## Lectures & Star Parties

### MONTHLY MEETING & LECTURE

On the fourth Thursday of the month (Jan-May, Aug-Oct), we often have world-renowned professionals and amateurs in astronomy speak about their projects during our monthly meetings. The talks are informal and questions are invited.

Meetings begin at 7:30 p.m. in San Luis Obispo. For location and directions, visit our website: [www.sloastro.org](http://www.sloastro.org)

### OUTREACH PROGRAM

We offer a limited number of outreach programs where we bring our star party to you. These custom events include a talk about current topics in space science. After the lectures, we make our telescopes available for your group to observe the wonders of the night sky.

### STAR-GAZING EVENTS

Join us for a star-gazing evening by observing the dark skies through club members' telescopes. It begins just before sunset on one Saturday each month. The Star Party is hosted in Santa Margarita. (See website [www.sloastro.org](http://www.sloastro.org) for dates, times and locations).

**Need help operating your telescope?** Bring your telescope one hour early for help on how to work your telescope by our friendly astronomers.



## Why Join CCAS?

### BENEFITS OF MEMBERSHIP

- Subscription to *Celestial Newsletter*, our monthly bulletin of articles and events
- Interaction with world class speakers as they present cutting edge astronomical research
- Discounts on *Sky & Telescope* and *Astronomy* magazines
- Social events, such as our annual Star-B-Que
- Club telescopes – use one of the club's loaner scopes, complete with instructional lessons
- Access to 'Members Only' are of the website containing observing tips, scope tricks, and educational articles for all levels
- Field trips – to observatories and other locations of scientific interest, such as Mt. Wilson Observatory in Pasadena, Chabot, Space and Science Center, Fremont Peak, and the Stanford Linear Accelerator Center (registration fee may be requested)
- Extended observing hours on public nights and private observing sessions exclusively for CCAS members
- Assistance from club members, and other "how-tos" to help you best enjoy amateur astronomy and astrophotography

*Questions about membership or other events?* Call Lee Coombs at (805) 466-2788 or visit our website at:

**[www.sloastro.org](http://www.sloastro.org)**

## How to Join

### MEMBERSHIP APPLICATION

Membership is annual for each upcoming year, beginning when you first sign up. You can sign up online or mail in this form:

*Membership Categories* (Check one):

- ☐ \$15 Youth/Student  
☐ \$15 Seniors  
☐ \$20 Individual/Family

*Magazine subscriptions* Add specified amount to membership fee for a 1-year subscription.

- ☐ *Sky & Telescope* (+ \$33) only in September  
☐ *Astronomy* (+ \$34) only available in September

**Information: (PRINT CLEARLY!)**

Name(s) \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State, Zip \_\_\_\_\_

Home Phone \_\_\_\_\_

E-Mail \_\_\_\_\_

**Newsletter Subscription:**

You can choose E-Mail (recommended) or hard copy delivery for *Celestial Observer*. (check one)

- ☐ E-Mail (full color)  
☐ Hard Copy (black & white)

Please make checks payable to Central Coast Astronomical Society and mail to P.O. Box 1415, San Luis Obispo, CA 93405.