

# Celestial

Volume 45 Issue 1



# Observer

January - March 2025



*CCAS member Dane Tiemeier captured this transit of the International Space Station across the face of the Sun in August 2024. In this image, you can also see sunspots which will become more common as we approach the solar maximum in 2025. To avoid damage to your eyes and equipment, do not ever photograph, look at, or point a telescope at the Sun without special solar equipment.*

## **Upcoming In-Person Star Parties\*:**

- February 1<sup>st</sup>
- March 1<sup>st</sup>
- March 29<sup>th</sup>
- April 26<sup>th</sup>
- May 24<sup>th</sup>
- June 28<sup>th</sup>
- July 26<sup>th</sup>
- August 23<sup>rd</sup>
- September 20<sup>th</sup>
- October 18<sup>th</sup>
- November 15<sup>th</sup>

\*Weather permitting

## **Club Meeting: Thursday, Jan. 16<sup>th</sup> at 7<sup>pm</sup> (in-person only)**

Speaker: Gary Lopez - American filmmaker, author, and photographer.

Topic: Explore the Cosmos Through the Lens of Renowned Astrophotographer Gary Lopez

Location: United Methodist Church, Wesley Room - San Luis Obispo, CA

# Central Coast Astronomical Society Events

**In-Person Club Meeting:** Thursday, January 16<sup>th</sup> - 7:00pm-9:00pm

**Topic: Explore the Cosmos Through the Lens of Renowned Astrophotographer Gary Lopez**

Join us for an unforgettable evening with Gary Lopez, an award-winning astrophotographer whose breathtaking images have inspired countless stargazers. With decades of experience blending science and art, Gary will share his journey of capturing the wonders of the universe and his passion for connecting people with the night sky.

In this talk, discover the art and science behind capturing the beauty of the cosmos. In this fascinating presentation, Gary will share his expertise in photographing the night sky, including the challenges and techniques of astrophotography, the stories behind his most stunning images, and insights into the wonders of the universe. Whether you're an astronomy enthusiast or simply curious about the stars, this is your chance to learn from a master who combines artistic vision with a deep love for the night sky. Don't miss this stellar opportunity!

Meetings are held at: United Methodist Church, Wesley Room.  
1515 Fredericks Street, San Luis Obispo, CA 93405

For directions and guest speaker details, visit:

[www.CentralCoastAstronomy.org/gary-lopez/](http://www.CentralCoastAstronomy.org/gary-lopez/)

**In Person Star Parties at Santa Margarita Lake Park:**

Arrive before sunset:

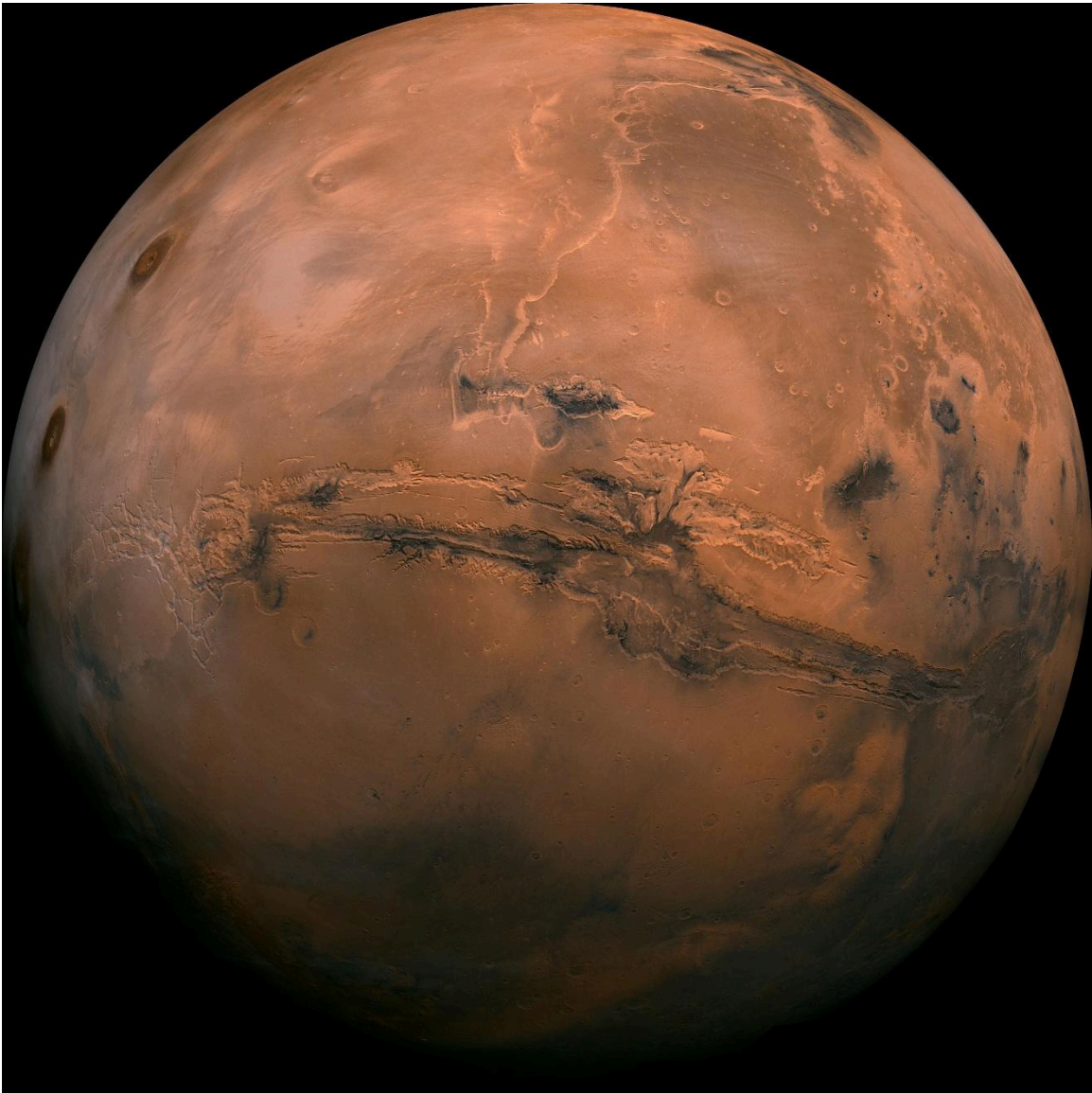
- February 1<sup>st</sup> • March 1<sup>st</sup> • March 29<sup>th</sup> • April 26<sup>th</sup> • May 24<sup>th</sup> • June 28<sup>th</sup>
- July 26<sup>th</sup> • August 23<sup>rd</sup> • September 20<sup>th</sup> • October 18<sup>th</sup> • November 15<sup>th</sup>

Join other amateur astronomers and night sky enthusiasts at Santa Margarita Lake Park to mingle and view the night sky. Bring your own binoculars or telescope, or enjoy looking through others' equipment. These events are weather dependent, but are scheduled monthly on the weekend closest to the new Moon (when possible), and in conjunction with certain holidays. For directions, more information, and best practices visit:

[www.CentralCoastAstronomy.org/star-parties/](http://www.CentralCoastAstronomy.org/star-parties/)

# January's Night Sky Notes: The Red Planet

by Kat Troche



*A mosaic of the Valles Marineris hemisphere of Mars projected into point perspective, a view similar to that which one would see from a spacecraft. The mosaic is composed of 102 Viking Orbiter images of Mars. Credit: NASA/JPL-Caltech*

Have you looked up at the night sky this season and noticed a bright object sporting a reddish hue to the left of Orion? This is none other than the planet Mars! January will be an excellent opportunity to spot this planet and some of its details with a

medium-sized telescope. Be sure to catch these three events this month.

## **Martian Retrograde**

Mars entered retrograde (or backward movement relative to its usual direction) on December 7, 2024, and

will continue throughout January into February 23, 2025. You can track the planet's progress by sketching or photographing Mars' position relative to nearby stars. Be consistent with your observations, taking them every few nights or so as the weather permits. You can use free software like Stellarium or Stellarium Web (the browser version) to help you navigate the night as Mars treks around the sky. You can find Mars above the eastern horizon after 8:00 PM local time.

### **Hide and Seek**

On the night of January 13th, you can watch Mars 'disappear' behind the Moon during an occultation. An occultation is when one celestial object passes directly in front of another, hiding the background object from view. This can happen with planets and stars in our night sky, depending on the orbit of an object and where you are on Earth, similar to eclipses.

Depending on where you are within the contiguous United States, you can watch this event with the naked eye, binoculars, or a small telescope. The occultation will happen for over an hour in some parts of the US. You can use websites like Stellarium Web or the Astronomical League's 'Moon Occults Mars' chart to calculate the best time to see this event.

### **Closer and Closer**

As you observe Mars this month to track its retrograde movement, you will notice that it will increase in

brightness. This is because Mars will reach opposition by the evening of January 18th. Opposition happens when a planet is directly opposite the Sun, as seen from Earth. You don't need to be in any specific city to observe this event; you only need clear skies to observe that it gets brighter. It's also when Mars is closest to Earth, so you'll see more details in a telescope.

Mars has fascinated humanity for centuries, with its earliest recorded observations dating back to the Bronze Age. By the 17th century, astronomers were able to identify features of the Martian surface, such as its ice caps and darker regions. Since the 1960s, exploration of the Red Planet has intensified with robotic missions from various space organizations. Currently, NASA has five active missions, including rovers and orbiters, with the future focused on human exploration and habitation. Mars will always fill us with a sense of wonder and adventure as we reach for its soil through initiatives such as the Moon to Mars Architecture and the Mars Sample Return campaign.



This article is distributed by NASA's Night Sky Network (NSN).

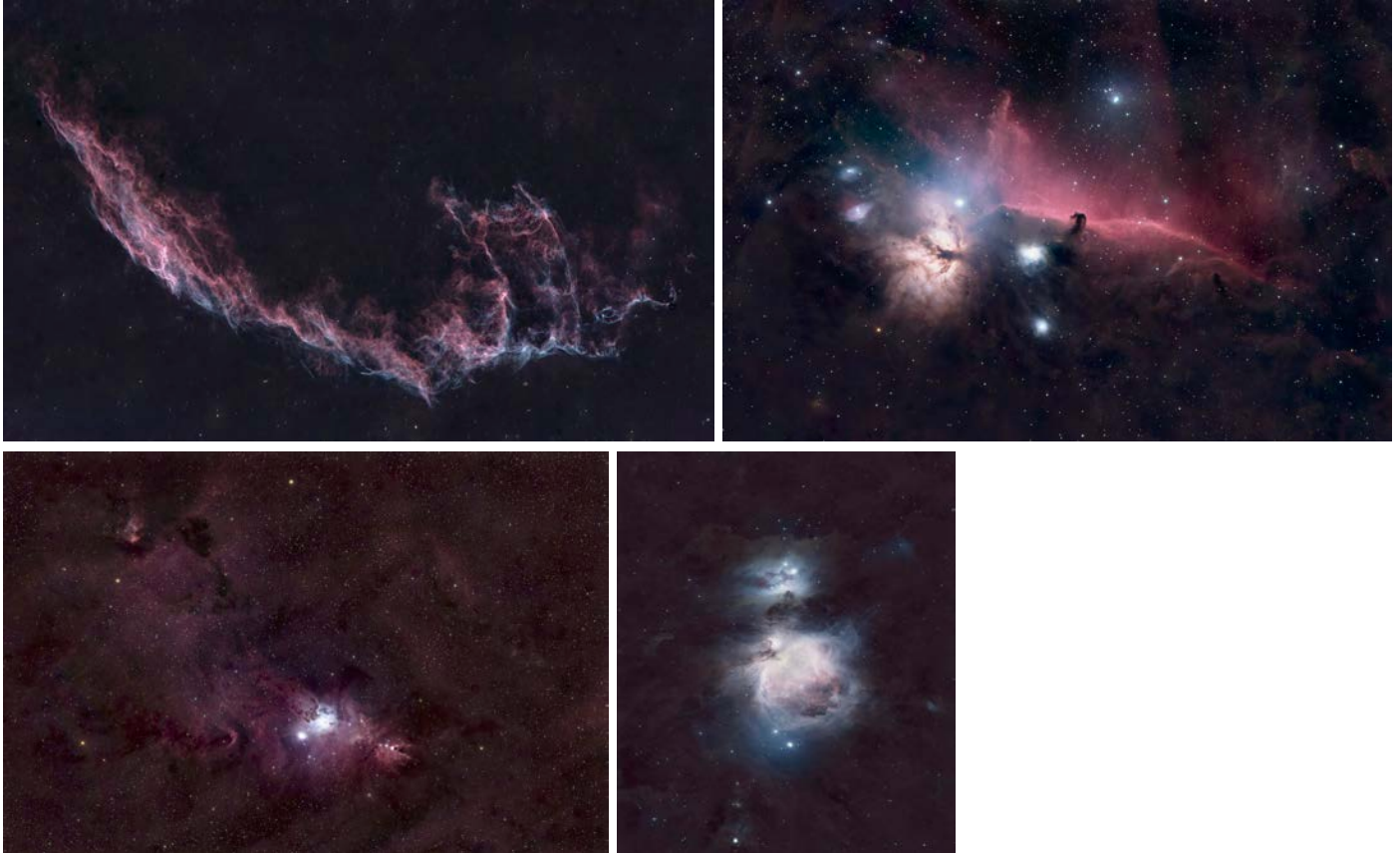
The NSN program supports astronomy clubs across the USA dedicated to astronomy outreach. Visit [nightsky.jpl.nasa.gov](https://nightsky.jpl.nasa.gov) to find local clubs, events, and more!



# 2024 CCAS Member Photos In Review

Thank you to our members who submitted their photos to be featured in our newsletter. We're thrilled to continue to see your work and progression, whether as a hobby or a profession. To be featured in future newsletters, you may submit photos at any time to [Newsletter@CentralCoastAstronomy.org](mailto:Newsletter@CentralCoastAstronomy.org). With your submissions, please include a brief description of the photo; where and when it was taken, and equipment used.

## Catherine Hyde

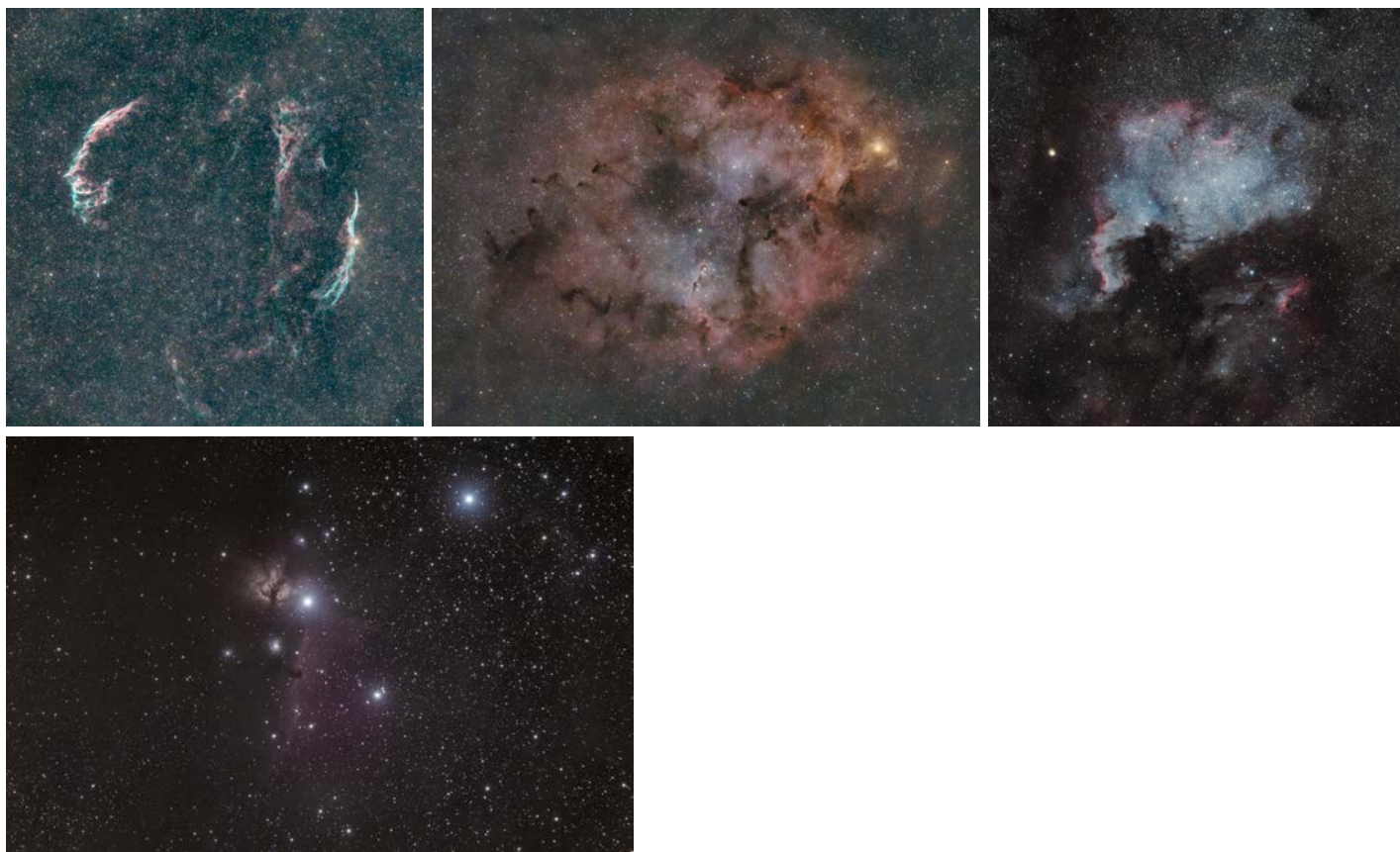


## Corrina Jones





**Dane Tiemeier**

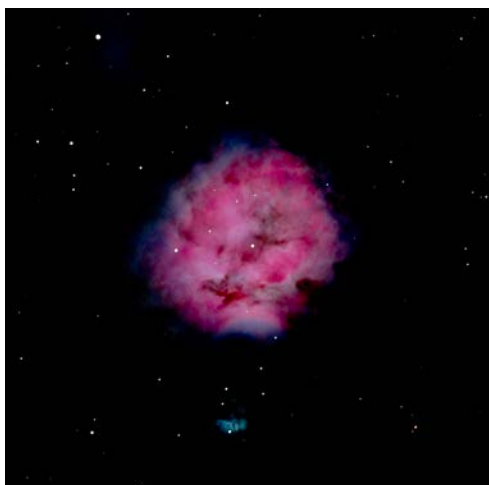
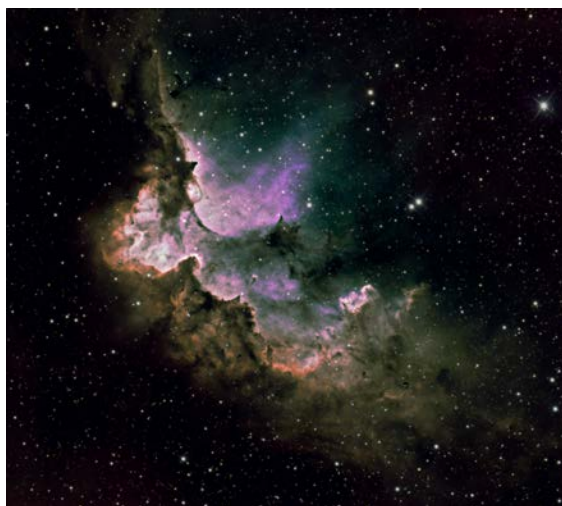
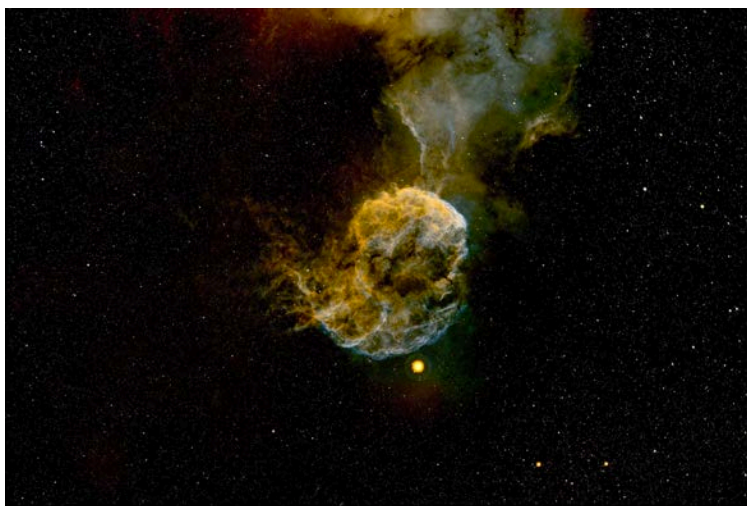


**Frank Widmann**

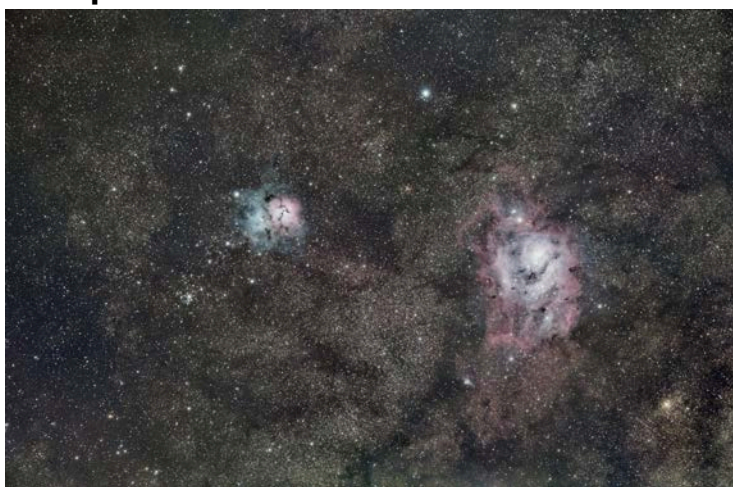




**Peter Bresler**



**Phillip Klein**



## **CCAS Contacts**

President	Aurora Lipper
Vice President	Tom Frey
Treasurer	Lee Coombs
Communication	Brian P. Cox

## **CCAS 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.*

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