

# CARPE NOCTEM

THE NEWS OF CENTRAL TEXAS ASTRONOMICAL SOCIETY

## PRESIDENT'S LETTER

BY JOHNNY SCARBOROUGH, PRESIDENT CTAS

Greeting CTASers,

I hope everyone had a pleasant holiday season. Another new year has begun.

The software upgrade is progressing and as the software is being updated, this process has brought to our attention just how old some of our equipment is. Some equipment has been repaired and some replaced. Thanks to all our members who have helped with this process.

Everyone who is working on this project has put in a lot of time to get PJMO fully operational and it will be soon.

One of the biggest astronomical events of the year is occurring Saturday, Oct 14, 2023 @ 1023-1333. An Annular Solar Eclipse is taking place. Please consult internet maps for specific locations but it will be visible in Texas, just south of San Antonio. Make your travel plans now!

Thanks again,  
Johnny Scarborough, (jscarborough55@gmail.com)

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## CTAS January Calendar

3-4 = QUADRANTID METEOR SHWR  
6 = FULL MOON  
13-15 = BOY SCOUT CAMPOUT  
17 = CTAS ANNUAL MEETING  
21 = MEYER OBSERVATORY OPEN  
HOUSE  
30 = LUNAR OCCULTATION OF  
MARS



## The Moon Occults Mars

BY JOHNNY BARTON

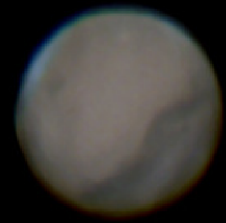
On the night of December 7th, the Moon occulted Mars for most of North America. The southern observable limit to see the occultation was from a region of south-central Texas running northeast towards New England.

The event was to start at 8:54 pm and end at 9:17 pm CST. The visibility was not good with streams of clouds, with occasional breaks, tracking right across where I needed to look.



Fortunately, I did get a few breaks just before and during the entire event. The above photograph, taken with my Canon T4i DSLR, and my 12.5" Newtonian, shows Mars at the moment the occultation began, which has Mars appearing to be touching the lower edge of the Moon.

This particular event is not exceptionally rare, but the timing is. It happened with the Moon being at full phase and Mars being at opposition, both occurring just two hours apart. The next time anything close to this happens will be May 28, 2048, but Mars will be at opposition two days after the full Moon. The next Moon/Mars occultation visible from the US will be January 31, 2025 during the next Mars opposition.



### Mars Composite

DAVE EISFELDT

Image of Mars taken on 12/9/2022. This photo was taken with ZWO ASI120 color camera through a C11 with a 2.5 X barlow. The image was composed of the best 70% of 3815 video frames stacked with AutoStakkert. Wavelet processing was completed with Registax 6. Seeing and transparency were poor. Polar cap and some detail were visible. Mars reached opposition on December 8, 2022.



# Comet ZTF Update

JOHNNY BARTON

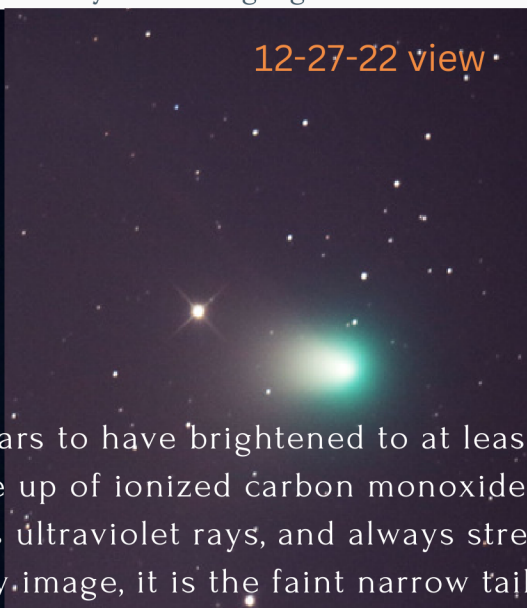
Back in September, I sent an email observing alert along with an image that I had taken of the newly discovered comet, C/2022 E3 ZTF.

I have been waiting until the comet became visible in the morning sky to see how it has progressed. In the early morning of December 15, I braved the 37 degree temperature to take advantage of a rare clear morning sky. What I found was very encouraging.

12-15-22 view



12-27-22 view



<--This image was the result of what I was able to capture despite having the sky illuminated by a 66% last quarter Moon overhead. After processing the results of my efforts, I was excited to discover that the comet has developed an ion tail and

appears to have brightened to at least 8th magnitude. The ion tail is made up of ionized carbon monoxide molecules glowing from the Sun's ultraviolet rays, and always streams straight away from the Sun. In my image, it is the faint narrow tail streaming slightly up and

straight to the left from the top of the comet's coma. The dust tail is made up of small bits of rock and is affected by the Sun's gravity.

This is observed in the wider coloration tail that is curving to the lower left. The carbon-nitrogen and diatomic carbon gases are also starting to show that common teal green glow around the coma.

What is really encouraging is the comet is showing all of these signs and is still over 133 million miles out. It will be only 26 million miles at the closest approach to Earth on Feb. 1st, 2023. That is five times closer! Predictions have the comet at 5th magnitude at its best, but comets have a mind of their own, and anything can happen.

I'll be keeping an eye on it when the sky allows, and be sending out observing alerts as it gets closer, or if anything unexpected happens.

The Central Texas Astronomical Society is a member of the International Dark-Sky Association. We are also a member of the Astronomical League, which supports astronomical societies worldwide. The Central Texas Astronomical Society is a 501(c)(3) tax exempt education organization. Contact us by telephone or via email.

Contact us via email or call  
254-326-1027