

THE FLINT RIVER OBSERVER

NEWSLETTER OF THE FLINT
RIVER ASTRONOMY CLUB

An Affiliate of the Astronomical League

Vol. 27, No. 12 **December 2023**

Officers: President, **Sean Neckel**; Vice President, **Aaron Calhoun**; Secretary / ALCOR **Mark Grizzaffi**; Treasurer, **Mark Sutton**; Board of Directors: **Dwight Harness, Felix Luciano, and George Ruff**; Program/Observing Coordinator: **Dave and Rosanne Stone**; Facebook Coordinator: **Aaron Calhoun**; Webmaster: **Chelsea Neckel**; Newsletter Editor: **Dawn Chappell**; NASA Contact: **Felix Luciano**

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Club Calendar:

FRAC Holiday Party:

Thursday, December 14, 2023, 7:30pm at the UGA Gardens in Griffin. FRAC will have our annual holiday party. Please bring a dish to share (signup is at the link below), and a gift to exchange. Under \$25 is a good range for a gift.

[Holiday Pot Luck Signup](#)

Public Observing Events:

In December we do not have any public events.

FRAC Observing Events:

On the weekend of December 8th and 9th we have our club observation at Joe Kurz in Gay, Ga.

Remember if you are the last to leave and the gate was locked when you arrived, lock our combination lock to the other lock on the chain when you go.

The lock code is 9321.

Please keep checking your email for updates regarding club events.

President's Message:

Hello FRAC Members,

I hope you all have a great holiday season!

Thanks,
Sean

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Club Projects:

Globe at Night

This month's campaign is December 3-12, and will use the constellation [Perseus](#).

Details of the process are here:

<https://globeatnight.org/6-steps.php>

FRAC T-Shirts

T-shirts are still available, and more are coming. They are \$20 at all future FRAC gatherings.

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Previous Meetings/Activities:

FRAC Meeting - November 9, 2023 - 7:30pm at the UGA Gardens and on Zoom.

15 members attended in person: Sean Neckel, Wade and Carmen Simmons, Dave and Rosanne Stone, Ben and Mercy Barker, George Ruff, Mark and Terri Sutton, Larry and Twila Dove, Bill Evans, and Gina and Chris Cozzi.

11 Members attended the meeting on Zoom: Mark Grizzaffi, Aaron Calhoun, Alan Pryor, Alfred McClure, Chelsea Neckel, Dave Mandell, Felix Luciano, Scott Hasson, and Brian Kennedy.

- Sean is putting together an order for more T-shirts. Will get with Mark G.
- Still have 10" DOB available for anyone who wishes to repair.
- Aaron gave a NASA update.
- George gave a Solar System model update.
- Sean reminded everyone that hunting season is in full swing. If the gate is unlocked when the first person arrives, the gate should remain unlocked after the last person leaves.
- Professor John Chadwick from the College of Charleston gave a presentation on the giant volcanoes of Mars.

Welcome New Members!

Gina and Chris Cozzi joined us for the November meeting, and officially joined FRAC that night.

Welcome to FRAC!!

FRAC Observings:

On the weekend of November 10th, we had our club event held at Joe Kurz. Unfortunately, the weather did not cooperate and it was very cloudy.

Public Observing Events:

On November 3rd, we met at Indian Springs and had a great sky. We had three club members that night. George Ruff, David and Rosanne Stone shared the night sky for about twelve guests.

On November 18th, we had our inaugural event in Sharpsburg. Sean Neckel, Chelsea Neckel, David Stone, Rosanne Stone, Clayton Wilson, Scott Hasson, Ray Goodfellow, Carmen Simmons, Wade Simmons, Jim Heidman, Larry Dove and Twila Dove came out to share the night sky for around twenty guests.

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Solar System Observing - December 2023

Mercury is close to the sun and not observable.

Venus is visible from around 4am until dawn.

Earth is the most photographed planet in the Solar System.

Mars is close to the sun and not easily observable.

Jupiter is visible from about 5:45pm until 4am.

Saturn is visible around 6pm until 11pm.

Uranus is visible in a telescope from 6:30pm until 4am.

Neptune is visible in a telescope starting at 6:30pm until 11:30pm.

Moon: LQ: 12/5 New: 12/12 FQ: 12/19 Full: 12/26
<https://in-the-sky.org/>

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Classifieds:

If you have something you would like to buy, sell, or trade, email the specifics, including your contact information to stneckel@gmail.com

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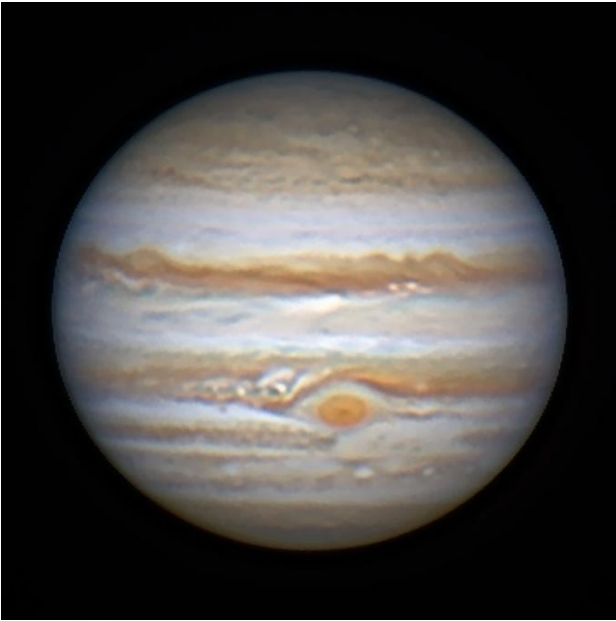


Messier 76, The Little Dumbbell Nebula. Courtesy of Alan Pryor.

Messier 76, the Little Dumbbell Nebula, is a planetary nebula in the constellation Perseus. It is called the Little Dumbbell because of its resemblance to Messier 27, the Dumbbell Nebula. The Little Dumbbell Nebula is estimated to be 2,500 light-years away. It has a magnitude of 10.1 so, it should be visible in a 6" telescope. Presently, it is thought to be the result of 2 stars that exploded to create the expanding cloud that is now being excited by the high energy radiation coming off of the remnant star(s). The remnant that can be detected has a surface temperature of about 150,000 degrees F.

You can locate Messier 76 by finding the star Nembus (in Perseus). Imagine a line from Nembus to Polaris. Messier 76 will be about 3 degrees from Nembus along that line.

This image was taken November 7, 2023 with my 14" Planewave telescope. Its exposure time was 5 hours and 25 minutes. (I wanted enough exposure to bring out the detail in the core of the nebula.) The wide field of view image can be seen at [M76 Full-size](#). The cropped version can be seen at [M76 Cropped](#).



Jupiter at Opposition, Courtesy of Clayton Wilson

Jupiter’s opposition this year fell on November 3, 2023. This event occurs once every 13 months and brings Jupiter closer to Earth than at any other time of year. This year, Jupiter was at a distance of 370M miles from Earth and shining at a magnitude of -2.9.

The image of Jupiter at opposition shows the Great Red Spot and the disturbances in its wake, the cloud bands and zones. Also, visible are white oval storms and some small festoons, atmospheric hot spots.

This image was captured using a Celestron C8, a 3x barlow, and an ASI585MC color camera. The image is composed of 20 one-minute high-speed videos. The best 25% of each video's frames were stacked and sharpened. These 20 stacked images were then de-rotated and further processed in Pixinsight to the final image.



October 2023 annular solar eclipse, Courtesy of Larry Dove

“Just wanted to share a few photos from our trip to Midland, Tx to see the Annular Eclipse in totality.

These photos were taken with an eVscope 2.”

The rest of Larry’s eclipse pictures can be seen [here](#).



October annular solar eclipse, Courtesy of George Ruff

“This cropped picture was taken with my cell phone (without a tripod) from below the dam at Indian Springs State Park. (That's a power transmission line on the right.)”

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