

# THE FLINT RIVER OBSERVER

NEWSLETTER OF THE FLINT  
RIVER ASTRONOMY CLUB

An Affiliate of the Astronomical League

**Vol. 26, No. 10** **October 2022**

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

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## Club Calendar:

**FRAC Meeting:** Thursday, October 13, 2022, 7:30pm at the UGA Gardens in Griffin and on Zoom. A couple of representatives from the National Park Service will be joining us to discuss how we can help them get a couple of their sites designated as International Dark-Sky Association (IDA) Urban Night Sky Parks (UNSP).

## Public Observing Events:

### Stargazing at Lake Horton, Fayetteville, GA, Fayette County Rec Department

Friday October 7, 7:30pm. Weather date is Saturday October 8, also at 7:30pm. Students from Liberty Tech School in Brooks may be joining us.

### Solar Observing Event at Fernbank Museum of Natural History, Atlanta, GA

October 8, 9am-2pm. We will be conducting a solar observing event in conjunction with Space Explorer Day at the Fernbank MNH. Scopes will be set up in the Dinosaur Plaza at the front of the museum. Alan Pryor and Carlos Flores will be giving presentations on astrophotography inside the museum, and George Ruff will be setting up our Solar System model on the forest

paths. Members of the Georgia Tech Astronomy Club will be participating as well.

Setup will start at 9am, with the event running from 10am-2pm.

### Astronomy in the Park, High Falls State Park, Jackson, GA

Saturday, October 15, 7:30pm. Public observing event at High Falls State Park, in the parking lot near the tennis courts and swimming pool.

### FRAC Observing Events:

Friday and Saturday, October 21-22 from sunset until whenever at Joe Kurz Wildlife Management Area.

Please keep checking your email for updates regarding club events.

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### President's Message:

Hello FRAC Members,

September and October really got really busy for us, but that's a good thing. In addition to all the public observing events we've had and are having, I've had several requests for homeschool groups, charter schools, library presentations, and others. A lot of these have been rolled into our 'regularly' scheduled events, and a couple have been taken on by individual volunteers or small groups.

I'd just like to say thanks to all of you who are helping get our name out there and supporting astronomy outreach. Keep getting involved!

Thanks,  
Sean

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### Club Projects: Starry Skies South

Starry Skies South has connected us with the National Park Service, to see if we can support local efforts to get a pair of historical sites designated as International Dark-Sky Association (IDA) Urban Night Sky Parks (UNSP). These locations are the Jimmy Carter National Historical Park and Andersonville National Historic Site. Look for meeting reminders for the chapter Zoom meetings that occur on the first Thursday each month.

### Solar System Model

We will be setting up our Solar System model for the Space Explorer Day at the Fernbank Natural History Museum on October 8, in conjunction with a solar observing. Hope to see you there!

## FRAC T-Shirts

T-shirts are now available. They will be \$20 and at the next meeting, and at all future FRAC gatherings. They look great and really stand out in a crowd.

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## Astronomy Trivia: Farthest and Closest Edition

1. What is the distance to the edge of the observable universe?
2. Which planet, *on average*, is closest to Earth?
3. How far away is the farthest star from Earth in the Milky Way?
4. Which natural satellite (moon) orbits its planet closer than any other in the solar system?
5. What is the farthest away from home a human being has ever been?

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## Previous Meetings/Activities:

### September Events:

FRAC Meeting - September 8, 2022 - 7:30pm at the UGA Gardens.

- 20 members joined the meeting in person at the UGA Gardens: Sean, Chelsea, and Gianna Neckel, Richard Thomas, Carlos Flores, Tom Moore, George Ruff, Wade and Carmen Simmons, Bill Evans, Dave and Rosanne Stone, Nelson and Kathy Stephenson, Kelly Witte, Mark and Terri Sutton, Ben, Steve, and Mercy Barker.
- 9 Guests from the Foundry Academy's Astronomy class joined us for a telescope demonstration. Although the skies were cloudy, we all set up 'scopes outside and had some great discussions about telescopes.

### FRAC Observings:

The September observing events on 9/23 and 9/24 were clear and crisp, with great seeing. On Friday, David and Rosanne Stone, Sean, Chelsea, and Gianna Neckel, Wade Simmons, Richard Thomas, and Nelson and Kathy Stephenson set up scopes. We hosted the Foundry Academy students that night, and showed them some great views of Jupiter, Saturn, and some DSOs.

### Public Observing Events:

Lake Horton public observing event, September 16, 2022. 8 members set up scopes on a perfectly clear and cool night: George Ruff, Richard Thomas, Sean and Chelsea Neckel, Dave and Rosanne Stone, Wade Simmons, and Felix Luciano. Approximately 85 guests enjoyed some amazing views of Jupiter and the Great Red Spot, Saturn, Andromeda, and the Hercules Cluster.

Those guests and members who stayed late got to see Io emerge from in front of Jupiter.

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## Solar System Observing – October 2022

**Mercury** is about 8° above the horizon at dawn, and not easily visible.

**Venus** is separated from the sun by about 5°, and not easily observable.

**Earth** is where the trouble started.

**Mars** is approaching opposition, visible starting around 11:30pm until dawn.

**Jupiter** is just past opposition, visible from 9:40pm until almost dawn.

**Saturn** is visible around 9:40pm and sets about 2:30am.

**Uranus** is visible with a telescope at around 11pm.

**Neptune** is visible in a telescope starting around 9pm until 4:30am.

**Moon:** FQ: 10/2 Full: 10/2 LQ:10/17 New: 10/25

<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](mailto:stneckel@gmail.com)

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NGC7293, The Helix Nebula, Courtesy of Alan Pryor.

The Helix Nebula has many names. The Eye of God, NGC 7293 and Caldwell 63 are a few of the names of this large planetary nebula in the constellation of Aquarius. It is faint, but a 10" scope under a dark sky should reveal some of its ring structure. An OIII or UHC filter may help bring out the inner ring. October is an ideal time to observe this nebula, but you need a good southern horizon. It is about 2 degrees NNW of the

bright star Fomalhaut. (In October of 2022 you can also take in Saturn and Jupiter while hunting for the Helix.) The Helix is about 650 light-years away. The outer most ring is almost half of a degree in diameter. The dying star that made the Helix started blowing its outer atmosphere off about 10,000 years ago. Compared to the life of a star, a planetary nebula does not last very long. The inner part of the nebula is a blue reflection nebula which is surrounded by the red emission portion of the nebula. The full-size photo shows some of the knot structures that appear as little red globs in the blue reflection part of the nebula.

A full size photo can be seen at [NGR7293](#)

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### **Trivia Answers:**

1. About 46.5 billion light years.
2. Mercury. While Venus approaches Earth more closely, on average Mercury is closer to Earth (and all other 7 planets). Explanation is [here](#).
3. [About 1 million light years!](#) Stars in the Milky Way's halo, which extends hundreds of thousands of light years from the center are the most distant stars still in our galaxy.
4. Mars' moon Phobos orbits just under 6,000km (3700 miles) above the planet's surface.
5. 400,171 km (248,655 miles). In 1970, Apollo 13 orbited around the back of the moon at an altitude of 254 km (158 miles), making that mission's crew the record holders for over 52 years. (If you want to get picky, the astronaut in the 'outside seat' was a couple feet further away)

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