

THE FLINT RIVER OBSERVER

NEWSLETTER OF THE FLINT
RIVER ASTRONOMY CLUB

An Affiliate of the Astronomical League

Vol. 25, No. 10 October 2021

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 Observing: Club observing weekend, Friday, and Saturday October 1-2, 2021, at Joe Kurz WMA, sunset until whenever.

FRAC Meeting: Thursday, October 14, 2021, 7:30pm on Zoom.

Public Observing Events:

Friday October 8, 2021, 7:30pm. Astronomy in the Park at Lake Horton County Park in Fayetteville, GA.

Saturday October 16, 7:30pm. Astronomy in the Park at High Falls State Park in Jackson, GA.

Please keep checking your email for updates regarding club events.

Welcome!

Welcome new members David and Jocelyn Mandell!!

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Trivia:

1. When was Pluto discovered?
2. What planet rotates backwards?
3. What is the speed of light?
4. How much more mass would Jupiter need to become a star?

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President's Message:

Hello FRAC Members,
As you've probably noticed, the newsletter is a bit late this month. That's on me. I have been super busy both at work and at home.

I was out of town for the last meeting, and I would just like to thank Aaron for running the meeting, and Chelsea for getting us started on Zoom. Also, a big thanks to Alan for showing us his astrophotography work. Now that we are getting into the cooler months hopefully, we will have some better weather for our club and public observing nights. Hope to see you out there!

Sean

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Previous Meetings/Activities:

FRAC Meeting - September 9, 2021 - 7:30pm on zoom.us.

- 13 club members joined us through Zoom: Alan Pryor, Aaron Calhoun, Steve Hollander, Chelsea Neckel, Dave Mandell, David Stone, Elaine Stachowiak, Katie Nagy, Sean Neckel, Tom Moore, Felix Luciano, John Cruickshank, and Mark Grizzaffi.
- Alan Pryor gave a very detailed presentation of his astrophotography work, including descriptions of his equipment, techniques, and his photographs of solar system bodies, galaxies, nebulae, clusters, and a comet. Thanks for sharing, Alan!

FRAC Observings:

No information about attendance at the September club observing event on 9/3 and 9/4.

Public Observing Events:

The stargazing event at Indian Springs State Park on 9/18/21 was cancelled because of clouds and rain.

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A little scale model:

If the sun was the size of a pea, the Earth would be 2.3 feet (70 cm) from the sun. Pluto would be 97 feet away. Alpha Centauri would be 131 miles away! The exoplanet Proxima Centauri b, around Proxima Centauri (125 miles away) would be only 3cm from Proxima, within its habitable zone. Proxima would be the size of a radish seed. Betelgeuse would be the size of a car 13,700 miles away.

[Video of scale model](#)

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Solar System Observing – October 2021

Mercury is at solar conjunction on October 9 but will be visible in the morning later in the month. It will reach its highest altitude in the morning sky (17°) on October 23 and 24.

Venus is visible in the evening sky, setting about 2 hours after the Sun.

Earth is right there. No, not there. There. Yep, that's it.

Mars is close to the sun and not observable.

Jupiter rises before sunset and will be visible until almost 3am.

Saturn rises before sunset and will be visible until about 2am.

Uranus is visible with a telescope from around 10pm until dawn.

Neptune is visible with a telescope from around sunset until 4am.

Moon: New: 10/6 FQ: 10/12 Full: 10/20 LQ: 10/28
<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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Bubble Nebula, NGC 7635, Courtesy of Alan Pryor

The Bubble Nebula is an emission nebula (H II region) in the constellation of Cassiopeia. It started out as a giant molecular cloud. The apparent “Bubble” was formed when a very massive and very hot star in the region started throwing out a lot of radiation. The radiant pressure and stellar wind from the star pushed the gases and formed the spherical shell that we see as the bubble. The star doing all of this is seen as the fairly bright star that is inside the bubble, but more toward the upper side of the bubble. The UV radiation from the star excites the hydrogen of the bubble and also the rest of the molecular cloud. The excited hydrogen re-emits the energy as the red light that we see.

The full-size photo can be seen at:
[Bubble Nebula NGC 7635](#)

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Trivia Answers:

1. 1930
2. Venus
3. 186,000 miles per second
4. 80 times the mass of Jupiter.

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