

# THE FLINT RIVER OBSERVER

NEWSLETTER OF THE FLINT  
RIVER ASTRONOMY CLUB

An Affiliate of the Astronomical League

**Vol. 24, No. 7** **September 2020**

**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, September 10, 2020, **6:45pm** on Zoom. **!!Please note the earlier time!!** Tom Field, President of Field Tested Systems LLC and Contributing Editor, Sky & Telescope Magazine, will be presenting on astro-spectrography.

There will be a short 'club only' meeting scheduled for after this, to review club business.

A meeting invitation will be sent out in early September for both meetings. If you do not get invites to the meetings, please email me at [stneckel@gmail.com](mailto:stneckel@gmail.com) and I will reply with the invites.

**FRAC Observing:** Club observing weekend, Friday and Saturday September 18-19, 2020 at Joe Kurz WMA, sunset until whenever.

**Girl Scout Camp-o-ree:** Friday, September 11, 2020, 8pm at Camp Merriwether, Luthersville, GA has been cancelled due to concerns about COVID-19. The group leader might like to have an event with us. This will be discussed at our September meeting.

**Astronomy in the Park:** Saturday, September 12, 2020 at High Falls State Park has been cancelled.

Please keep checking your email for updates regarding club events

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## Trivia:

1. What is the only moon in the solar system that has an atmosphere?
2. What is the opposite to ordinary matter called?
3. What is the name for the boundary around a black hole, beyond which events cannot affect the observer?
4. Who was the third person to walk on the moon?
5. What kind of star system is Algol?

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## President's Message:

Hello FRAC Members,  
Though we have not met face to face in some time, I am glad that our most recent virtual meeting went so well, and that so many members attended. Dr. Schmude gave a great lecture on Jupiter, its seasonal cloud patterns, GRS flaring, and the newly formed 'Clyde's Spot'.

For our upcoming meeting, we have a guest Zoom speaker, Tom Field, that will present on astro-spectrography. Even if you are not an astrophotographer, I encourage you to join us for this presentation. My intent is to invite some of our other local clubs to join us as well. Hope to see you there!

If you have any suggestions for future meetings, please let me know. Someone out there must have something they would like to share with us (looking at you, Phil Sacco).

Sean

**Aaron's Astronomy Facts:**

Deneb is the brightest star in the constellation of Cygnus the Swan, and is located about 1400 light years away.

Deneb shines with the luminosity of 56600 suns! It is 90 times the size of our sun, and it has 19 times the mass. If it replaced our sun it would extend to the orbit of Mars. A way to imagine that is if the sun was the size of a pea Deneb would be 4 feet across.

Deneb is already at mid-life even though it is only 10 to 12 million years old. For comparison, our sun is 5 billion years old.

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**Previous Meetings/Activities:**

FRAC Meeting - August 13, 2020 - 7:30pm on zoom.us

- 15 members attended our virtual meeting. Sean Neckel, Dr. Richard Schmude, Mark Grizzaffi, Marla Smith, Steve Hollander, Dawn Chappell, Elaine Stachowiak, Aaron Calhoun, Steve Barton, Alan Pryor, Dwight Harness, Erik Erikson, Bill Evans, Katie Nagy, Felix Luciano, and George Ruff.
- Dr. Schmude gave a fantastic lecture on Jupiter and its cloud formations in our first-ever shared screen virtual presentation.

**FRAC Observing:** Club observing August 14-15 was a bust thanks to the weather. Better luck next month!

**Astronomy in the Park** at High Falls State Park on August 22, 2020 was cancelled due to concerns about COVID-19.

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**Solar System Observing – September 2020**

**Mercury** will be visible in the evening sky, low on the horizon in late September.

**Venus** Visible to the east in the early morning sky all month.

**Earth** is where I keep all my stuff. Please take good care of it.

**Mars** rises just after sunset all month, visible until dawn.

**Jupiter** will be visible until the early morning hours all month.

**Saturn** will be visible until the early morning hours all month.

**Uranus** rises just before midnight, visible with a telescope until sunrise.

**Neptune** rises early evening, visible with a telescope until sunrise.

**Moon:** Full: 9/2 LQ 9/10 New: 9/17 FQ: 9/23

<https://in-the-sky.org/>

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**Random bits of information:**

- The Andromeda Galaxy (M31) is 2.5 million light-years from the Milky Way, and it's coming right for us! In about 4 billion years, the two galaxies will 'collide' and form an elliptical galaxy.
- The Triangulum Galaxy (M33), located 2.73 million light-years away, is the farthest permanent object visible to the naked eye.
- The Whirlpool Galaxy (M51) is a spiral galaxy 21 million light-years from Earth. Along with its companion galaxy, NCG5194, is one of the easiest pairs of interacting galaxies to view with amateur astronomy equipment.

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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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Antares and the M4 Cluster, courtesy of Alan Pryor.

Saturday, July 11, I shot this photo of Antares, and the molecular cloud surrounding it. I also captured the globular clusters, M4 (far right) and NGC6144 (top center).

Antares, a red super-giant in the constellation of Scorpius, is an irregular variable star, which is not unusual for stars of this type. It is believed to be about 550 light years away.

M4 is the brighter of the two globular clusters, and it is about 7,200 light years away.

NGC 6144 is about 29,000 light years from Earth.

The photo was taken with a Takahashi TOA 130 scope at 1000mm of focal length. The camera was an FLI 16803. The exposures were all 5 minute exposures. 11 Luminescents, 10 green, 8 reds and 8 blue. The reason for the extra green and luminescent exposures was that satellites went through the image.

The full size photo is located here:

<https://photos.app.goo.gl/jBNFPiSYEhA4XfNS8>

### Trivia Answers:

1. Titan
2. Antimatter
3. Event Horizon
4. Pete Conrad
5. Binary Star System

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