THE

FLINT RIVER OBSERVER

NEWSLETTER OF THE FLINT RIVER ASTRONOMY CLUB

An Affiliate of the Astronomical League

Vol. 25, No. 11 November 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 November 5-6, 2021, at Joe Kurz WMA, sunset until whenever.

FRAC Meeting: Thursday, November 11, 2021, 7:30pm on Zoom. FRAC VP Aaron Calhoun will give a presentation on exoplanets.

Public Observing Events:
None scheduled for November or December.

Please keep checking your email for updates regarding club events.

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Trivia:

1. What 3 stars make up the Winter Triangle?
2. Which star is nicknamed "The Demon Star"?
3. What is the heaviest element that can be produced by fusion inside a star?
4. Which element was first detected on a body other than Earth?

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President's Message:
Hello FRAC Members,

Welcome to fall weather! Cooler temperatures mean better skies (usually), so get out there and set up the scopes!

Since it's nearly Thanksgiving, I would like to list off (in no particular order) some people that I'm thankful for this year. A big round of thank-yous go out to:

- Our members and guests who have participated in our meetings this year, and especially to those that helped by presenting or finding presenters: Members Katie Nagy, Aaron Calhoun, George Ruff, Dr. Richard Schmude, and Alan Pryor, and guest speakers Don "Comet Hunter" Machholz, planetary geologist Scott Harris from Fernbank Science Center, amateur astronomer Larry McHenry, and Dr. Douglas Leonard from San Diego State University all contributed to our meetings this year.
- Everyone who has made it out to our public outreach events over the past month. It was really great to get back out and meet some people after over a year and a half.
- Ben Fields, Doug Maxwell, and the UGA - Griffin staff for letting us use the Garden again, and for setting us up to hold online meetings. We look forward to having more in-person meetings this year.
- FRAC's officers and board members, for keeping the club running smoothly.
- Our members - there is no club without you!
- Dawn Chappell, who always puts together a great newsletter!

Sean

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Previous Meetings/Activities:

FRAC Meeting - October 14, 2021 - 7:30pm on zoom.us.

- 11 club members and one guest joined us through Zoom: Sean and Chelsea Neckel, Mark Grizzaffi, Aaron Calhoun, Steve Hollander, David Stone, Steve Benton, Bill Evans, Wade Simmons, Dave Mandell, and Terry Morgan.
- Dr. Douglas Leonard, Associate Professor of Astronomy at San Diego State University gave a fantastic presentation titled, "When will

Betelgeuse Explode?" Dr. Leonard went into great detail regarding the physics of Betelgeuse and other supergiant stars, and how and why supernovae occur. He also presented the 2 prevailing theories about why Betelgeuse dimmed in late 2020 through early 2021.

FRAC Observings:
No information about attendance at the October club observing event on 10/1 and 10/2.

Public Observing Events:
Astronomy in the Park at Lake Horton County Park in Fayetteville, GA, Saturday October 9th. FRAC members Mark Grizzaffi, Sean Neckel, Chelsea Neckel, Bill Honea, George Ruff, Mike Stuart, Steve Hollander, Wade Simmons, and Dave Mandell attended, and fought through an epic dew-soaking to show 20 guests Jupiter, Saturn, the moon, and some deep-sky objects.

Astronomy in the Park at High Falls State Park in Jackson, GA, Saturday October 16th. Club members Sean Neckel, George Ruff, Bill Honea, Dave and Rosanne Mandell attended. Weather conditions were much better, and a perfectly clear sky allowed us to show approximately 75 guests planets, stars, and some deep sky objects.

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Solar System Observing – November 2021

Mercury is visible low on the horizon as a dawn object, rising about 1.5 hours before sunrise until it fades into daylight. It will pass behind toward the end of the first week of November.
Venus is visible in the evening sky, setting about 2.5 hours after the Sun.
Earth is keeping it real.
Mars is close to the sun and not observable.
Jupiter rises before sunset and will be visible until about 1am.
Saturn rises before sunset and will be visible until about midnight.
Uranus is visible with a telescope from around 9pm until just before dawn.
Neptune is visible with a telescope from around sunset until 2am.
Moon: New: 11/4 FQ: 11/11 Full: 11/19 LQ: 11/27
https://in-the-sky.org/

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Classifieds:

Home / Observatory for Sale
OneStarryPlace, an observatory and home on approximately 2 acres in the New Mexico Skies Astronomy Enclave, in Mayhill, New Mexico located in the Sacramento Mountains at approximately 7,300 feet adjacent to New Mexico Skies.
https://www.cloudynights.com/classifieds/item/257073-home-observatory-in-southern-nm/
https://search.futurerealestate.com/idx/details/listing/b386/164729/33-Starry-Pl-Mayhill-NM-88339

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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NGC 147 / DDO3 / Caldwell 17
Courtesy of Felix Luciano, processed by Alan Pryor

About: Wikipedia: NGC 147
NGC 147 (also known as DDO3 or Caldwell 17) is a dwarf spheroidal galaxy about 2.58 Mly away in the constellation Cassiopeia. NGC 147 is a member of the Local group of galaxies and a satellite galaxy of the Andromeda Galaxy (M31).

Details:
TAK TOA 130, FL 1000mm
MACH1 GTO
Camera/Filters: ST8300M @ -10C, FW5, Baader 36mm RGB

Exposures:
RGB: 7 subs X 600 sec

Image capture - Felix Luciano
Processed - Alan Pryor, via PI
See the full-size image here:
NGC 147

NGC 7023 Courtesy of Alan Pryor

NGC 7023 is a reflection nebula in the constellation of Cepheus. The nebula is about 1300 light years away. The nebula is relatively bright since a 7th magnitude star illuminates it, and it should be visible in 8" to 10" telescopes. The photo shows the most prominent part of the nebula. However, the cloud around the star extends out a good bit farther. The link below shows the uncropped version and reveals the much larger dark cloud around the region.

See the full-size image here:
NGC 7023

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Trivia Answers:

1. Deneb (Cygnus), Altair (Aquila), and Vega (Lyra)
2. Algol (Perseus) is a translation of the Arabic name, Ra's Al-ghul, which means "Head of the Demon." It also represents Medusa's head being held by Perseus.
3. Iron.
4. Helium was detected on the sun by spectroscopy in 1868. It was discovered on Earth in 1895.

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