



CAPE FEAR Skies

Monthly Newsletter
Cape Fear Astronomical Society
Serving Wilmington, NC and Surrounding Areas



*Cape Fear Astronomical Society is a tax-exempt organization
under Section 501(c)(3) of the Internal Revenue Code.*

October 2022

President's Report

by Jon Stewart-Taylor

As I write this, Hurricane Ian has passed well to the west, and become "post-tropical". Most likely we'll have had two public outreach events on one night on October 1st. The October public viewing session is at Carolina Beach State Park, and International Observe the Moon Night is at the Cape Fear Museum.

InOMN is definitely going to happen: I've received an e-mail from Jameson at CFM, and the event is on regardless of weather. And, the forecast from the NWS ILM office is pretty favorable.

Saturday: Mostly sunny, with a high near 75. Southwest wind 11 to 14 mph, with gusts as high as 22 mph.

Saturday: Night Partly cloudy, with a low around 57. Light and variable wind.

I'll call CBSP tomorrow after about 2 pm to see if they're planning to host us Saturday night. At this point, I don't know of any reason why they wouldn't, but you know what they say about assume.

October is the first month of nominations for elected club officers. So far we have possible candidates for VP, AVP, Secretary, and Treasurer. All we need is someone for President.

Is that all, you say? Having served in all elected offices except Treasurer, I can say that President is the one which required the least work. If you feel you could possibly fill that office for even one year, give it a try. If you do well, that's wonderful. If you don't do so well, you'll have learned something.

New Moon comes in the first half of October this year, so our club observing sessions are towards the end of the month. But, we have the Moon, Saturn and Jupiter prominent in the evening sky, and for the next few months we usually get the best observing weather of the year in this part of the world. The planets don't mind sharing with the moon, so get out and look at them.

Calendar

October 2022

Date – Event – Time

- 01 First Quarter Moon; 00:14 UTC
- 01 International Observe the Moon Night (InOMN)**
07:00:00 PM; Cape Fear Museum
- 01 Public Observing, 7:30 PM – Carolina Beach State Park**
- 08 Mercury at Westernmost elongation: 18 deg from Sun; morning; 21:00 UTC
- 08 Moon and Jupiter; Moon is 2 degrees from Jupiter; 168 degrees from sun; evening
- 09 ★ Cape Fear Astro Monthly Meeting ★**
CFAS Monthly Meeting - 7:00pm – 9:30pm
212 DeLoach Hall; UNCW
Also simulcast via Zoom
- 09 Full Moon; 20:54 UTC
- 14 Club Observing @ Starfields (the Club Observatory);**
6:30 PM; 3rd Quarter Moon
- 15 Club Observing @ Starfields (the Club Observatory);**
6:30 PM; 3rd Quarter Moon
- 17 Last Quarter Moon
- 21 Club Observing @ Starfields (the Club Observatory);**
6:30 PM; New Moon
- 21 Orionid Meteor Shower; 10:00 UTC; ZHR 20; 4 days before New Moon
- 22 Club Observing @ Starfields (the Club Observatory);**
6:30 PM; New Moon
- 25 New Moon
- 29 Public Observing, 6:30 PM – Carolina Beach State Park**

Astro phenomena from:

<https://www.universalworkshop.com/astronomical-calendar-any-year/>

2022 Public Events

Date	Time	Event	Where
Oct 1	30 min before Sunset	Public Observing	CBSP
Oct 1	30 min before Sunset	International Observe the Moon Night	CFM
Oct 29	30 min before Sunset	Public Observing	CBSP

Where (Locations):

- ★ CBSP: Carolina Beach State Park
- ★ CFM: Cape Fear Museum

Special Interest Groups (SIGs)

Usual meeting dates – watch emails for exceptions

Phenomena: First Wednesday

Both Eyes: Second Tuesday

Astrophotography: As Requested/Announced

Telescope Usage: Third Tuesday

New Astronomer: Third Wednesday

Outreach: Fourth Tuesday

September Meeting Program

★ ★ ★ ★ ★ Stars - Part 2 ★ ★ ★ ★ ★

Roger Blake will present Part 2 of a Presentation on stars.

Part 2 will track how all the stars die and hopefully explain how all the strange objects like red giants, dwarfs, planetary nebula, neutron stars, black holes, etc are created and show their relationship to one another.

An Evening at Starfields

by Jon Stewart-Taylor

Last night (Friday, 9/16) Karl, Tom, Nancy, and I went to the observatory at Starfields for club observing. The weather was forecast to be the best in several months. Tom brought a new Celestron Star Sense 10" Dobsonian. Karl used the club 8" Dob (after his camera dewed over), and I brought a pair of 10x50 binoculars to pursue the binocular targets we covered at the last Both Eyes SIG.

The Star Sense is a compact plate-solving camera which pairs with a cell phone to make a push-to scope out of an unpowered dob. It seemed to work well for Tom last night, as he was finding objects both by swinging through the sky and stopping when the display said there was something there, and choosing objects from a catalog and then following instructions on the cell phone to find them in the sky. Although I'm old-school enough it feels a bit like cheating, it really did allow Tom to spend the majority of his time looking rather than finding.

I spent the night alternating between looking at stuff Karl or Tom found, and laying in the "zero-gravity" chair with the 10x50s. The Summer Milky Way was in excellent position after twilight ended, from the tail of Scorpius all the way up to Cygnus near zenith. Of the 10 binocular targets mentioned in the article, most were easy to pick up, though some will have to wait 'til later so they rise higher.

I was able to get the alpha Persei cluster (low, but reachable), the Scutum star cloud (nicely positioned, with bonus M11), Poniowski's Bull (surprisingly large, and almost visible unaided-eye), the Coathanger, Stock 2 (the Muscle Man, with bonus Double Cluster), and NGC 7000 (again, amazingly large). Cassiopeia and Camelopardalis were very low at the start of the night, and even by 11:30ish they were still in the Wallace light dome, so I had no luck spotting Eddie's Coaster, or either Kembel's Kite or Cascade. I plan to try those again in October. By the time I was ready to try for the Little Queen in Draco, the dew was so heavy I was pretty wet. I may try that one tonight, if it clears.

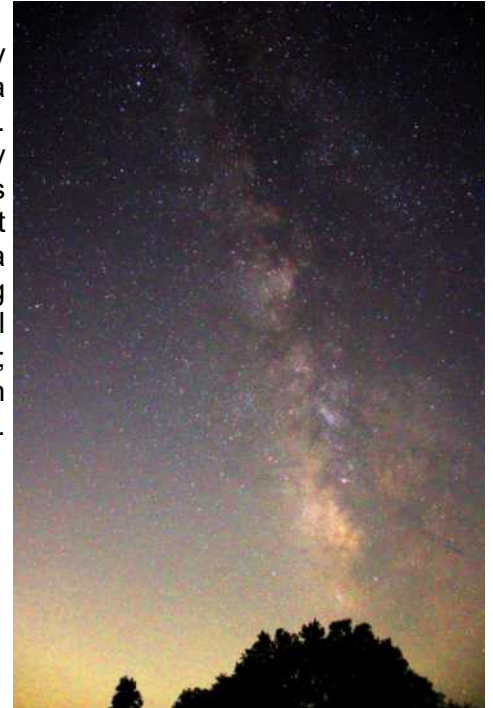
This morning, I got a twitter notification that a lot of smoke from wildfires out west was sweeping over the eastern US. That helped explain why the sky wasn't quite as transparent as it seemed like it should be.

Still, it was a very good night. Thanks to Karl, Tom, and Nancy for coming out and sharing the night sky with me

by Karl Adlon

Like Jon said, I joined him, Tom and Nancy at Starfields and I thought I'd share a couple pictures. "Pics or it didn't happen."

The Milky Way rising above a clump of trees. The bright sky at the bottom is mostly light pollution (with a little evening twilight still present); Wilmington being to the left.



The main red glow is Tom and Nancy at their scope. In the left foreground is Jon with the 8" Dob pointed up to M13. In the right foreground is my SUV with the hatch open.

After taking some Milky Way pictures, I did notice my camera was dewed over, so I removed the lens filter and took a few pictures of the astronomers at work – or maybe, because it is enjoyable, at play?

Next time, I hope we can all get out there!

For Sale

10" Meade Lightbridge Truss-Tube Dobsonian with light shroud, 10:1 Crawford focuser with Cheshire cap, Deluxe viewfinder with multiple reticle settings and plastic cover for primary.

Extras include lockable casters on the base for ease of movement, Bob's Knobs on the primary and secondary mirrors and battery operated cooling fan mounted behind the primary.

Soon after acquiring this I ended up finding a 12.5" dob and I find myself using that one more, so I am looking to pass this one along for \$375

Contact Steve at 910-617-8705 or asheville2017@gmail.com



Focusing Facts

by Roger Blake

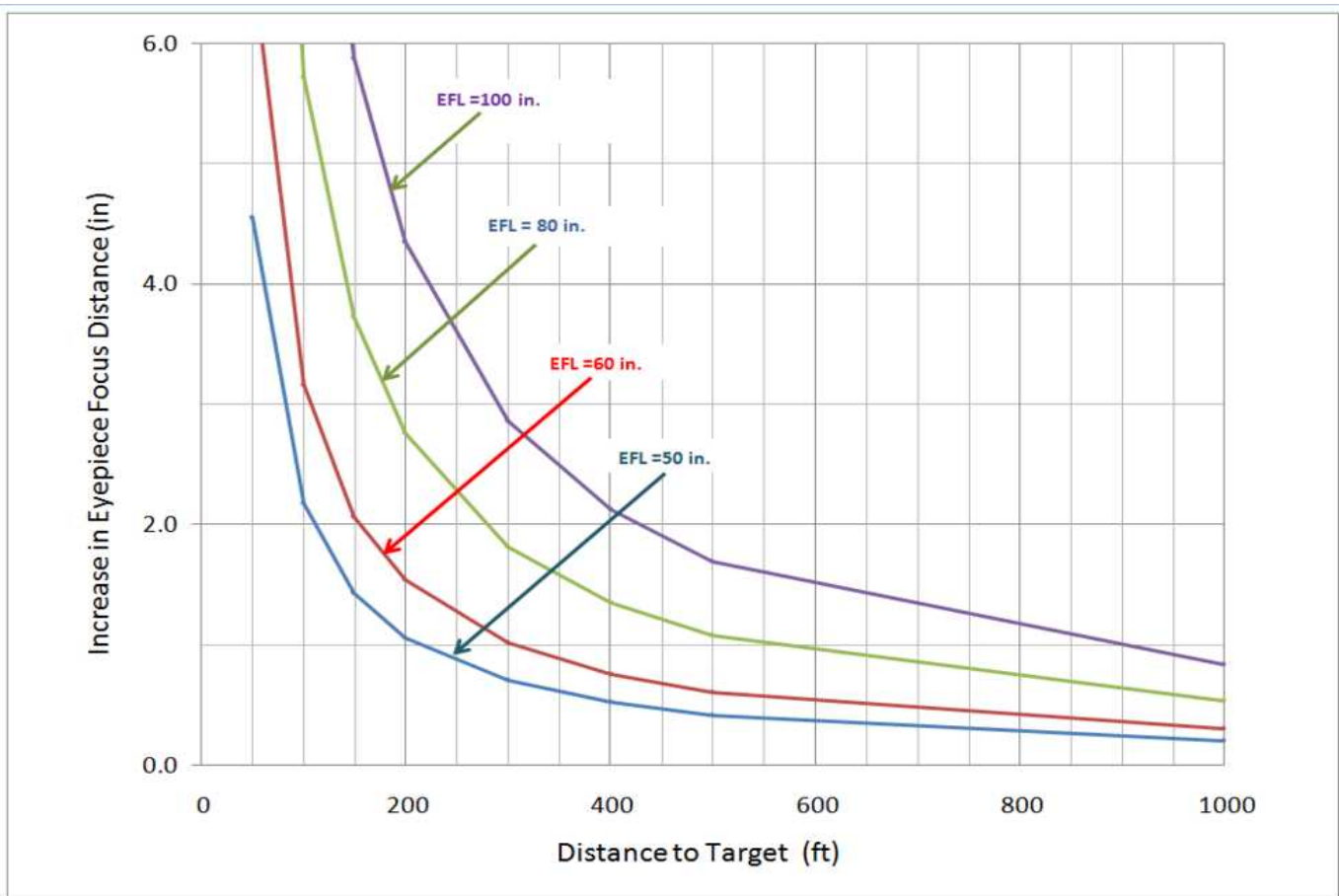
Last week, a club member had a problem focusing his telescope. It turned out that he was trying to focus on a nearby earth based target and needed to use an extension tube for his focuser. I thought I'd explain the optics behind this issue.

When viewing celestial objects like the moon, planets and stars, with a specific telescope and eyepiece combo, all objects are at the same focus position. You can focus on one and view all others without refocusing, unless you change eyepieces. This is not the case with earth-based targets.

If you focus your scope on a celestial target, then move it to look at an earth target, you'll find that it will be out of focus and that you will have to refocus by moving your eyepiece farther out, away from the scope. I call this the "Increase in Eyepiece Focus Distance" in the graph below.

This increase depends only on the Effective Focal Length or EFL of your telescope, and the distance from your scope to the target. The EFL is just your actual focal length unless you use a tele-extender lens (Barlow) or focal reducer lens. If you use 2x Barlow then the EFL = actual FL x 2.

Example: If you are using an 8 inch f/10 Dob, your EFL = 8 x 10 = 80 in. If you focus on a nearby target 200 ft away, the graph below indicates that the "Increase in Eyepiece Focus Distance" will be 2.8 in. This means that you would have to refocus by moving your eyepiece out 2.8 inches. If your focuser can't rack out that far, you'll need an extension tube.





Get to Know YOUR Astronomical League



The Astronomical League (Astroleague or AL) is one of the largest amateur astronomical organizations in the world. The organization serves to encourage an interest in astronomy (especially amateur astronomy) and promote the

science of astronomy by:

- ✓ fostering astronomical education;
- ✓ providing incentives for astronomical observation and research;
- ✓ assisting communication among amateur astronomical societies.

CFAS is one of over 300 member societies affiliated with the Astroleague. Your membership in CFAS allows you take full advantage of this relationship so periodically review the information below to see how the Astroleague can support your astronomical interests and endeavors.

AL Home Page	www.astroleague.org
Observing Programs	https://www.astroleague.org/observing.html
NEW! Moons Observing Challenge (see link Items 2 & 3)	https://www.astroleague.org/content/al-observing-challenge-special-observing-award
Solar Neighborhood Observing Program	https://www.astroleague.org/content/solar-neighborhood-observing-program
Astroleague Store (<i>The Holidays are Near!</i>)	https://store.astroleague.org/
Current and Past Issues of <i>Reflector Magazine</i>	https://www.astroleague.org/reflector/april-2022-reflector-magazine
CFAS ALCor	Hank Lyon, hlyon8448@gmail.com
AL News Bites and Reminders	The Moons Observing Challenge has two parts: 1) Our Moon, recognizing International Observe the Moon Night – Complete observations by October 9th ; 2) Solar System Moons – Complete observations by November 30th . Our Astroleague roster is being revised for submittal; please let your ALCor know of any email/physical address changes or <i>Reflector</i> preference changes ASAP . Remember that your quarterly <i>Reflector</i> magazine will arrive via US Mail unless you specify the digital/email version.

The Astroleague Correspondent (or ALCor) is your link between CFAS and the Astroleague. Don't hesitate to contact your ALCor if you need assistance with anything Astroleague related whether its general information or detailed coordination of observing program completions for certification. Check back here each month to see any new links, postings or reminders.

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CFAS Correspondence:

Please contact the society at: CFAS, P.O. Box 7685, Wilmington, NC 28406

Members are welcome and encouraged to submit articles or other input for "CAPE FEAR SKIES". Submit any and all interesting items for publication to Karl Adlon, Editor (email kmja79@yahoo.com).

Cape Fear Astronomical Society is a tax-exempt organization under Section 501(c)(3) of the Internal Revenue Code.

CFAS Officers:

President: Jon Stewart-Taylor
 Vice-Pres: Skip Hagers
 Associate VP: Karl Adlon
 Secretary: George Pappayliou
 Treasurer: Ben Steelman
 ALCor: Hank Lyon

Dues: Dues for 2022 are \$25 for Individual and \$32 for Family Membership. Students dues are \$5 per year.

Mail to :CFAS, P.O. Box 7685, Wilmington, NC 28406

Contact Us:

You can contact CFAS at info@capefearastro.org

Our website is <http://www.capefearastro.org/>