



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 2024

President's Message

by Ben Steelman

Now is the time for all good stargazers to come to the aid of their Society.

It's almost election time in CFAS Land. I will call for nominations at the October and November meetings. You must be present, in person or via Zoom, to accept. (We don't draft or shanghai people.) Balloting will be at the December Christmas party.

Our officers are President, Vice President, Associate Vice President, Secretary and Treasurer. They are mostly self-explanatory.

The office of Vice President (currently Karl Adlon) will be vacant. Your job, should you accept it, is to preside at monthly meetings if the President (currently me) doesn't show up.

The Associate Vice President (currently Jon Stewart-Taylor) generally handles programs for the meetings.

Jon is also acting as Outreach Chairperson.

By the way, Jon, thanks for getting the POD dome to the observatory site.

Speaking of which, we still need a Chairperson for the Observatory Committee. Jon can't do it all himself, astounding as he is.

Keep Looking Up!

Calendar

The full club calendar is available at <https://www.capefearastro.org/calendar.htm>

October 2

Monthly SIG (Special Interest Group) via Zoom

October 12

7 PM – 9:45 PM - Public Observing @ Carolina Beach State Park

October 13

★ Cape Fear Astro Monthly Meeting ★

GAStronomy Meeting - 5 PM

Ciana Ristorante Italiano

4724 New Centre Dr STE 3, Wilmington, NC 28405

(Dinner, prior to the Monthly Meeting)

CFAS Monthly Meeting

7:00pm – 9:00pm - 212 DeLoach Hall; UNCW

Presentation: "Determining the Age of Star Clusters"

Also simulcast via Zoom

November 9

Star Party for Maritime Museum Members @ Old Brunswick Town

October Meeting Presentation

by Karl Adlon

The October Meeting Presentation will be "Determining the Age of Star Clusters" by Karl Adlon. He will talk a little bit about stars, their spectra and the Hertzsprung-Russell (H-R) Diagram which plots the various star types' Absolute Magnitude by Temperature. Stars spend most of their lives on the Main Sequence, but as they age they move off of it. By using data from the Sloane Digital Sky Survey for a star cluster's stars and plotting that data as a H-R Diagram, the point at which the stars leaves the Main Sequence is determined, which can be correlated to the stars' age as they leave the Main Sequence and thus the age of the cluster.

Saturday, November 9 Star Party (Tentative)

by Karl Adlon

Please pencil in the date! There may be a Star Party for Maritime Museum Members @ Old Brunswick Town on November 9. I'm told the museum has about 30 members.

HOWEVER, currently, the park's website has this post: "Closure Notice - Brunswick Town/Fort Anderson is closed due to storm damage." Park officials are not sure if the park will be open by this date.

Why Stand When You Can Sit and Relax?

by Frank Rich

I made a few purchases these last few years. This has to be one of the best!!

The Starbound Viewing chair, easily adjustable, folds for storage (although the seat stays in a down position as seen). Purchased from B&H Photo.

I used it last weekend for the 1st time and my back did not ache (for a change) after my observing session!

Highly recommend it!!



Observing "Comet of the Year" C2023 A3 in September and October

by Jon Stewart-Taylor

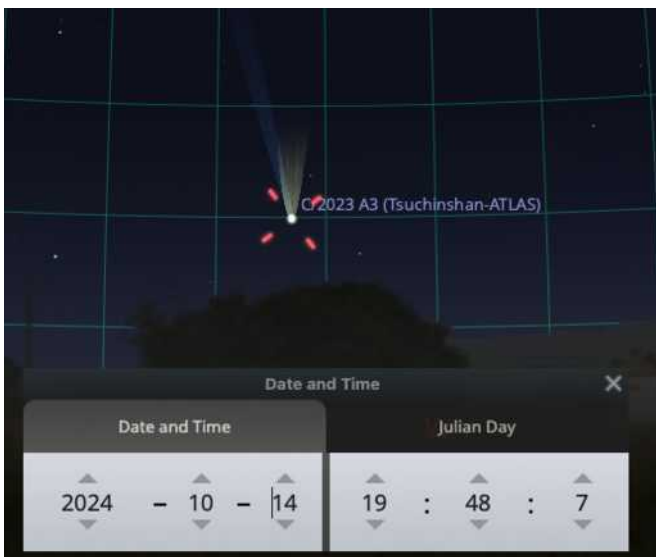
There's been a lot of attention to and frankly hype about comet C/2023 A3 (Tsuchinshan-ATLAS) lately. Comets are like cats: they both have tails, and are unpredictable. The actual observations of

the comet as of 26 September are encouraging, showing magnitudes of 3 or brighter as the comet approaches perihelion (closest point to the sun), Actual perihelion is on 27 September, so probably already past as you read this article. At this time, the comet is a pre-dawn object for us. It will be barely above 5° as the sky starts to pale from the rising sun, as shown in the attached snip from Stellarium.



As the days pass after perihelion, the comet will get closer and closer to the horizon. By about 07 October, the comet will be too close to the sun to see.

The comet will be closest to the earth on about 12 October. Unfortunately, the comet will still be too close to the sun to see from our area. It should start becoming visible in the evening sky after sunset by about 14 October. The attached snip from Stellarium shows the comet on the 14th at about 10° altitude.



Each day after that the comet will rise higher and higher. Unfortunately, it should also start dimming rapidly as it moves further from both the sun and the earth. On 12 October it is currently predicted to be between 2nd and 3rd magnitude. By the end of October it is predicted to drop

to between 5th and 6th magnitude. At that time it should still be a decent binocular and telescopic object, but no longer visible using unaided eyes for most of us.

Complicating all this will be the weather, of course. As i write, we're currently scheduled to be clouded out by Helene, and there's another system of the coast of Africa which could visit in a week or so. Maybe we'll get better weather as October passes.

I hope we get at least a couple of chances at what currently promises to be a very good comet, though probably not a great one. But, comets are unpredictable. Maybe this one will surprise us in a good way before it leaves.

Observatory Progress

by Jon Stewart-Taylor

In August and September, we made significant progress on the club observatory at Starfields. Working together, a number of club members set the foundation for the permanent SkyShed POD installation around the existing cement-block pier, and then installed the planking on the foundation.

Deck foundation being set and leveled.

Photo by Jon



Hank evaluating the mount and 'scope height with respect to the newly completed deck.

Photo by Jon



In the last Cape Fear Skies, we mentioned that we planned a funding campaign to purchase a used POD, or a new one if a used one could not be found. Karl suggested putting a classified on Cloudy Nights requesting a used POD within a reasonable distance. Within a week, we received an offer of a donation of a one-bay POD in Rockville, MD. No cost to the club, except the gas to pick up the POD. It is even a better color than green, which seemed to be the dominant color of used PODs listed for sale.

The used POD in storage in Rockville.

Photo by Mike Knapp who is donating.



The POD, loaded on and strapped to the trailer.



By the time you read this, the POD will be at Starfields!

Weather permitting, we'll be assembling the POD the 2nd week of October, so the completed observatory will be available for use at the end of October.

Many thanks to Kathleen Stewart-Taylor and Damain Smith for donating the deck planking.

Thanks to Karl Adlon, Bill Cooper, Skip Hager, Hank Lyon, Perry Moon, George Pappayliou, Damain Smith, and Lawton Smith for all the work they did to make this a reality.

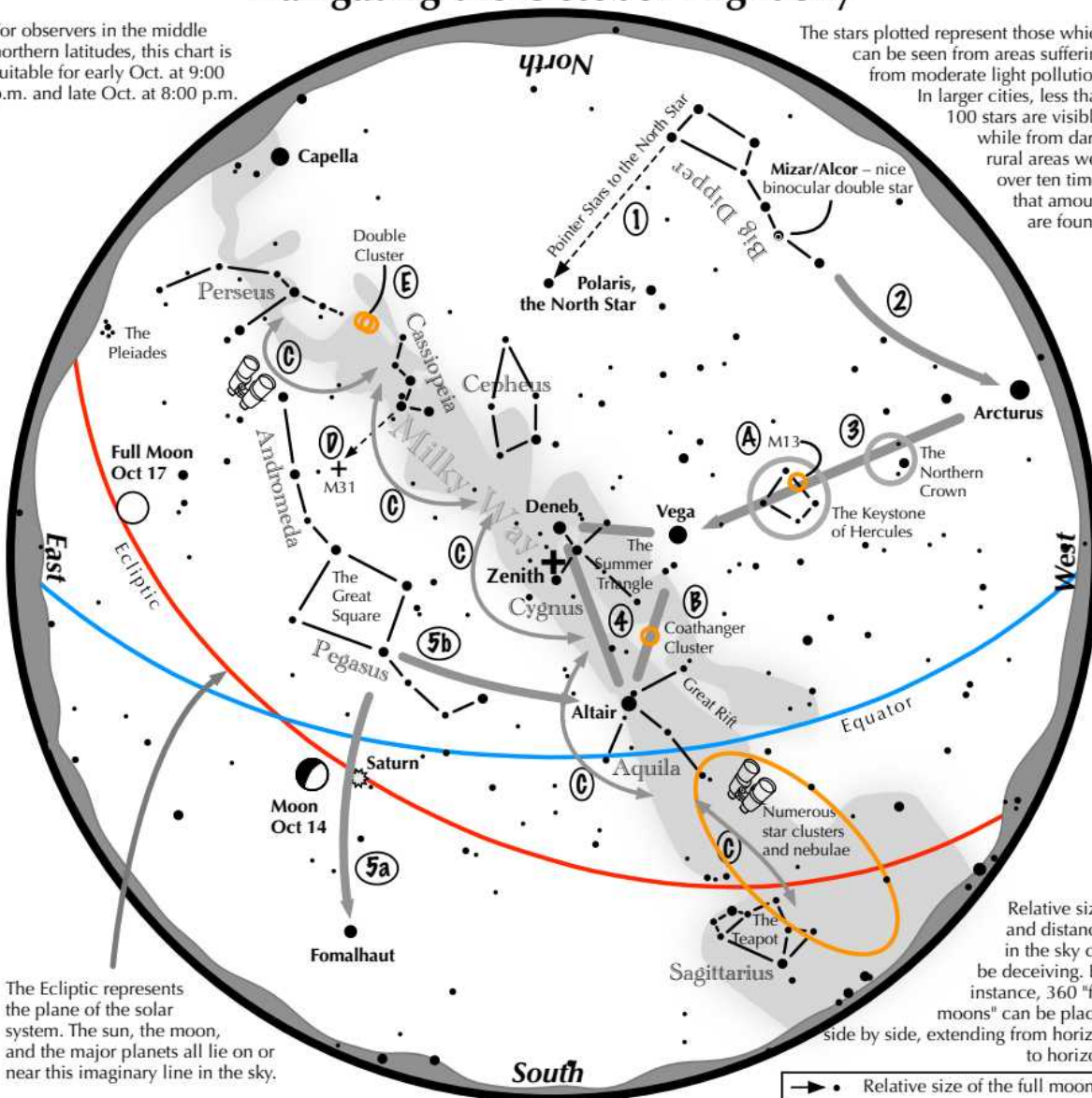
From all of us:

Thank you, Jon, for getting the POD and transporting it back from Maryland!!

Navigating the October Night Sky

For observers in the middle northern latitudes, this chart is suitable for early Oct. at 9:00 p.m. and late Oct. at 8:00 p.m.

The stars plotted represent those which can be seen from areas suffering from moderate light pollution. In larger cities, less than 100 stars are visible, while from dark, rural areas well over ten times that amount are found.



The Ecliptic represents the plane of the solar system. The sun, the moon, and the major planets all lie on or near this imaginary line in the sky.

Relative sizes and distances in the sky can be deceiving. For instance, 360 "full moons" can be placed side by side, extending from horizon to horizon.

Navigating the October night sky: Simply start with what you know or with what you can easily find.

- 1 Extend a line north from the two stars at the tip of the Big Dipper's bowl. It passes by Polaris, the North Star.
- 2 Follow the arc of the Dipper's handle. It intersects Arcturus, the brightest star in the early October evening sky.
- 3 To the northeast of Arcturus shines another star of the same brightness, Vega. Draw a line from Arcturus to Vega. It first meets "The Northern Crown," then the "Keystone of Hercules." A dark sky is needed to see these two dim stellar configurations.
- 4 Nearly overhead lie the summer triangle stars of Vega, Altair, and Deneb.
- 5 High in the east are the four moderately bright stars of the Great Square. Its two southern stars point west to Altair. Its two western stars point south to Fomalhaut.

Binocular Highlights

A: On the western side of the Keystone glows the Great Hercules Cluster, a ball of 500,000 stars. **B:** 40% of the way between Altair and Vega, twinkles the "Coathanger," a group of stars outlining a coathanger. **C:** Sweep along the Milky Way for an astounding number of fuzzy star clusters and nebulae amid many faint glows and dark bays, including the Great Rift. **D:** The three westernmost stars of Cassiopeia's "W" point south to M31, the Andromeda Galaxy, a "fuzzy" oval. **E:** Between the "W" of Cassiopeia and Perseus lies the Double Cluster.





Scan the area with binoculars for asterisms and stellar groupings



Between the First Point of Aries and the Water Jar

The **First Point of Aries** marks the intersection of the celestial equator and the ascending ecliptic which defines the location of 0 hrs Right Ascension.

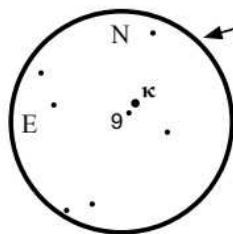
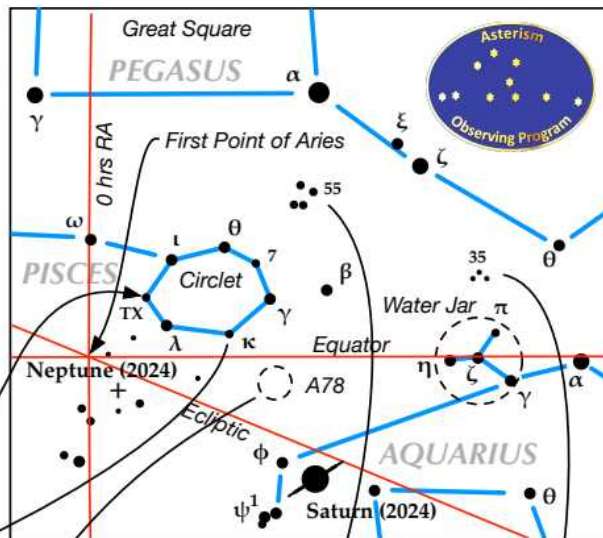
Naked eye and binocular sights

Circlet. These six, maybe seven depending on sky clarity and visual acuity, 4th and 5th magnitude stars trace a squashed circle at the far southwestern corner of Pisces.

It lies 10° below the southern edge of the asterism the **Great Square** in Pegasus, and less than 15° east of another asterism, the four 4th & 5th magnitude stars of the **Water Jar** in Aquarius.

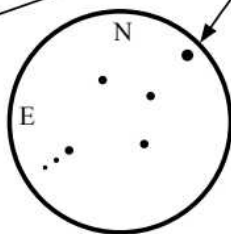
These features are subtle, not bright. Best seen from a dark location with a transparent sky.

Binoculars users enjoy studying **TX Piscium**. The star varies between 4.8 and 5.2 magnitude, a noticeable amount to the careful observer. It appears as a distinct orange-red hue and its period is irregular, but averages around 224 days.



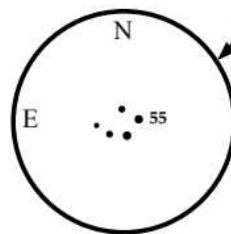
6° Field

Binocular Double
4.9 mag. Kappa Psc
6.2 mag. 9 Piscium
Separation: 9 min



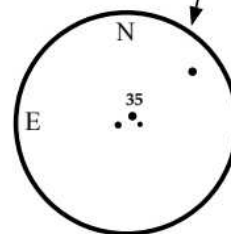
1° Field

Asterism A78
7 stars of 7-8 mag.
tracing the outline
of a "rocketship"



6° Field

Binocular sight
A stellar quintet
Four 5th mag stars
& one 6th mag star.

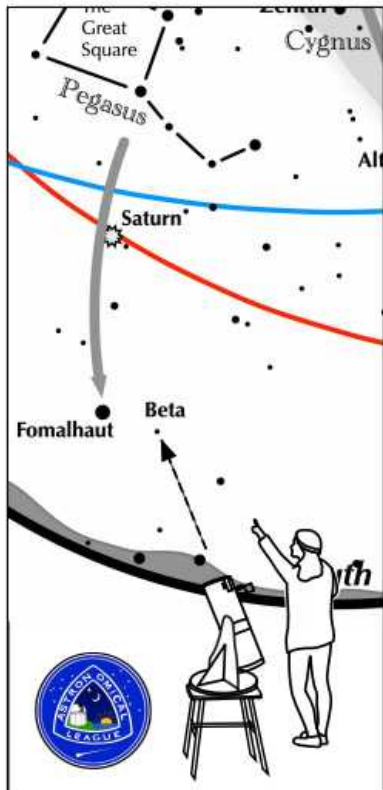


6° Field

Binocular sight
A stellar trio
One 5th mag. star &
two 6th mag. stars.

In 2024, Saturn lies 10° southwest of the Circlet and Neptune hides just 5° to its southeast.

ASTRONOMICAL LEAGUE Double Star Activity



Other Suns: Beta Piscis Austrini

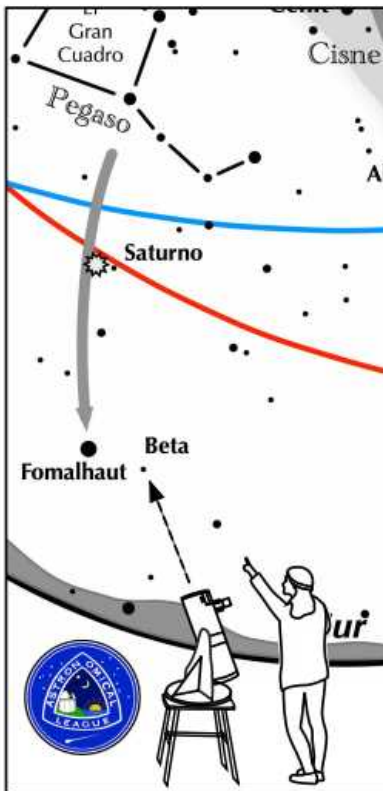
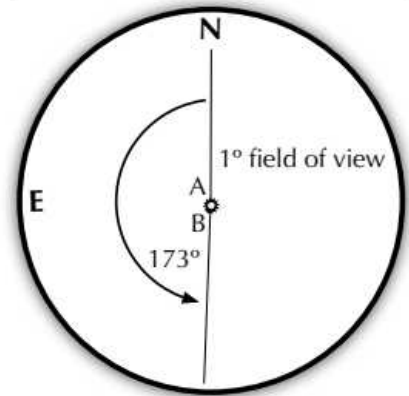
How to find Beta Piscis Austrini on an October evening

The two western stars of the Great Square point southward to the bright star Fomalhaut. One binocular field west lies 4.3 magnitude Beta Piscis Austrini.

Beta Piscis Austrini

A-B separation: 30 sec
 A magnitude: 4.3
 B magnitude: 7.1
 Position Angle: 173°
 A & B colors:
 white, white

Suggested magnification: >20x
 Suggested aperture: >2 inches



Otros Soles: Beta Piscis Austrini

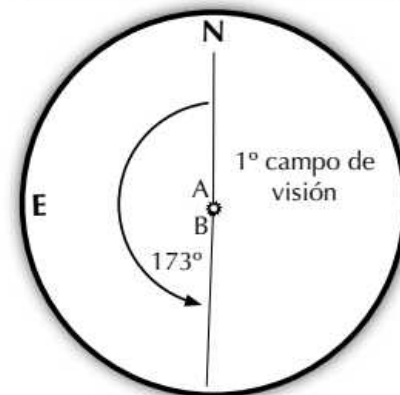
Cómo encontrar Beta Piscis Austrini en una tarde de Octubre

Las dos estrellas occidentales del Gran Cuadro apuntan hacia el sur, hacia la brillante estrella Fomalhaut. Un campo binocular al oeste se encuentra Beta Piscis Austrini, de magnitud 4,3.

Beta Piscis Austrini

A-B separación: 30 sec
 A magnitud: 4.3
 B magnitud: 7.1
 PA: 173°
 A & B color:
 blanca, blanca

Ampliación sugerida: >20x,
 Apertura sugerida: >50 mm



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.

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

Dues: Dues for 2024 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/>