



CAPE FEAR *Skies*

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

April 2025

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

President's Message

by Ben Steelman

Keep Looking Up!

★★★★★★★

Associate Vice President's Message

by Karl Adlon

Per Ben, he is AWOL. He's grading mid-term papers. Doesn't that sound like fun?

So I guess you have to settle for the Officer with the longest Title and the least Duties! I can't figure out why nobody wanted this position. Can you give me a clue?

Our April Meeting will feature a talk by Dr. Barbara Becker titled "Cursed Quasars". I'm looking forward to hearing what *THAT's* about. "Quasars" reminds me of my very first astronomy club meeting because that was the topic and it heavily involved red shifts. This was around 1967, I was a freshman in college, I didn't know what a red shift was, nobody explained it and I was too shy to ask.

I ordered a cell phone holder that clamps on your car dash's lip and it came yesterday. My intention was to remove the holder part from the clamp part and, somehow, attach it to my 8" Dob. Looking at the device, I thought, "I wonder if I can clamp it to the scope tube lip and fold the holder down so it's pointed along the scope axis." So I went to the garage, took the OTA cover off and clamped it on. I think it will work. And an advantage is it's easily removable. I think Tuesday is the next "clear" night to give it a try. NOW can I find those things I can't see in the finder given all the light pollution?

**Please try to participate in the Friday, April 25
State Wide Star Party at Carolina Beach State Park.**

Past the Visitor's Center, make the first left. Move the cones if there are any and replace them. Tell anyone who asks that you are with the Astronomy Club. Wear your CFAS badge. They will set up tables on the road to pass out astronomy information, so get there early or the road will be blocked.

Calendar

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

Saturday, April 5

Public Observing at Carolina Beach State Park

Saturday, April 5

Ingram Planetarium State Wide Star Party

Sunday, March 13

★ Gastronomy ★

Watch your email

★ Cape Fear Astro Monthly Meeting ★

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

Dr. Barbara Becker: "Cursed Quasars"

Also simulcast via Zoom

Friday, April 25

6:30 PM; State Wide Star Party, CBSP

(get there early)

Events in the Future

5/3 - Public Observing at Carolina Beach State Park

5/4 - CFAS Monthly Meeting

6/7 - Public Observing at Carolina Beach State Park

6/8 - CFAS Monthly Meeting

7/5 - Public Observing at Carolina Beach State Park

7/13 - CFAS Monthly Meeting

8/2 - Public Observing at Carolina Beach State Park

8/10 - CFAS Monthly Meeting

8/30 - Public Observing at Carolina Beach State Prk

9/14 - CFAS Monthly Meeting

9/27 - Public Observing at Carolina Beach State Prk

10/4 – Intl Obs the Moon at Cape Fear Museum

10/12 - CFAS Monthly Meeting

10/25 or 11/1 - Public Observing at Carolina Beach State Prk

11/8 - CFAS Monthly Meeting

12/14 - CFAS Holiday Party

Last Call for 2025 Club Dues

by Jon Stewart-Taylor

According to the club constitution:

Annual membership dues will become due and payable in January of each year. Members whose dues are not paid before or during the March meeting will be dropped from the roster and email list. Members deciding to rejoin later that year will pay the full yearly dues regardless of the time remaining in that year.

We're giving you a bit of leeway, but: If you have not already paid your dues for the year, you will no longer be a member of Cape Fear Astro if we haven't received your payment by the end of the April meeting (13 April). If you prefer digital payment, you can pay here:

<http://www.capefearastro.org/payment.htm>

We don't want to lose you! Please renew, so you can take advantage of the improved observatory, new library feature, e-mailing list info, and even the monthly SIG meeting.

Update on the Cape Fear Astro Library

by Jon Stewart-Taylor

Changes are coming to the club library. The biggest is that, after much study, Kathleen has chosen Library Thing as the on-line repository. Choosing Library Thing means that the public catalog (the part that club members will use) is TinyCat.

TinyCat will allow you to see a list of all the items in the library, or to search the library by title, author, or keyword. Once you have a list of items, you can read a short summary, see if other club members have left a review, and send the librarian a question about the item.

We have made a start on cataloging items, and you can try out TinyCat and see what it can do here:

<https://www.librarycat.org/lib/CFAS>

We don't have anywhere near the entire library in there, and even the entries we've created may not be complete. In particular, many of the books need proper keywords attached. But, you can at least get a feel for how it works and what it's like.

Every club member will get a "patron account". The patron information will be on the Cape Fear Astro badge we give you each May. This will allow you to put holds on items. The librarian will make an appointment for an agreed-upon location and date, and bring the item and check it out to you. The loan period will be 31 days. The usual assumption is that you would place the hold, and receive the item at the monthly meeting. Then you'd bring it back at the next monthly meeting, and the item will be checked in.

You've probably noticed the word "item" in the above paragraphs. That's because the library will have more than books. It will also contain magazines, planispheres, and observing equipment, up to and including telescopes.

Kathleen and I are currently in the process of cataloging all the items now in the library. We will gladly accept donations of new items, though we don't promise to take everything offered. We also don't promise to keep every item currently in the library.

As an example of the items we are inclined to weed out:

The system of the stars, by Agnes M. Clerke, which is a book published in 1890.

The book asserts that any idea that the distant nebulae might be galaxies like our own Milky Way has been largely disproven. The book has a lot of historical value, but Cape Fear Astro's library isn't really a suitable archive for items like this. We should probably see if we can sell it to fund items more useful to our members.

We'll try to keep you posted with further articles in Cape Fear Skies as we make progress. Let us know if you'd like a presentation on how to use TinyCat, or have suggestions about items to acquire. This library is for you, the members, and we want to make it the most useful to you that it can be.

Cancer

by Jon Stewart-Taylor

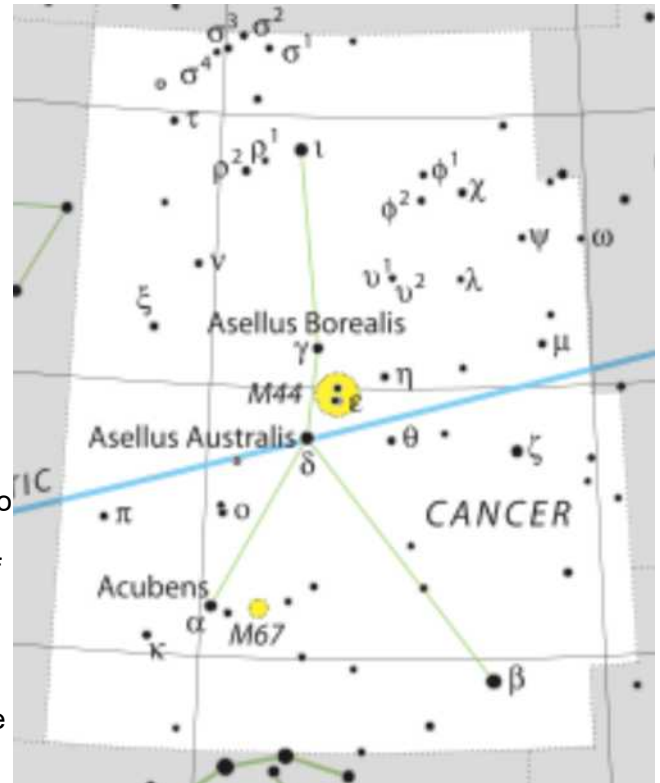
Cancer is a medium-sized dim constellation, but it's worth learning where it is. It's an ancient constellation, included in Ptolemy's 48, but known well before that in Sumeria and Babylon. It is a Zodiac constellation, tucked in between Leo and Gemini. It's good that those constellations have bright stars, because the stars in Cancer are dim: the brightest is only 4th magnitude, making it the dimmest Zodiac constellation.

Since it is a Zodiac constellation, the moon and the planets wander through Cancer. They often pass near the deep-sky objects, and can make good binocular or telescopic targets while near them. But, unless the moon is pretty young, it can wash out the other objects.

*Map by IAU and Sky & Telescope magazine
(Roger Sinnott & Rick Fienberg)*

Open cluster M44 is known as the Beehive, or Praesepe (manger). M44 is quite large, and together the stars of the cluster make it visible to the unaided eye as a dim glow in dark skies. Two stars near the cluster (γ and δ) are the donkeys eating from the manger. M44 is so large that it doesn't fit conveniently into most telescope fields of view. It does look very good in almost any pair of binoculars or a finder-scope.

The other Messier object is M67, which I've seen called the "King Cobra" cluster. I don't get it, but maybe you will. Most of the other deep-sky objects in Cancer are galaxies, 11th magnitude and dimmer.



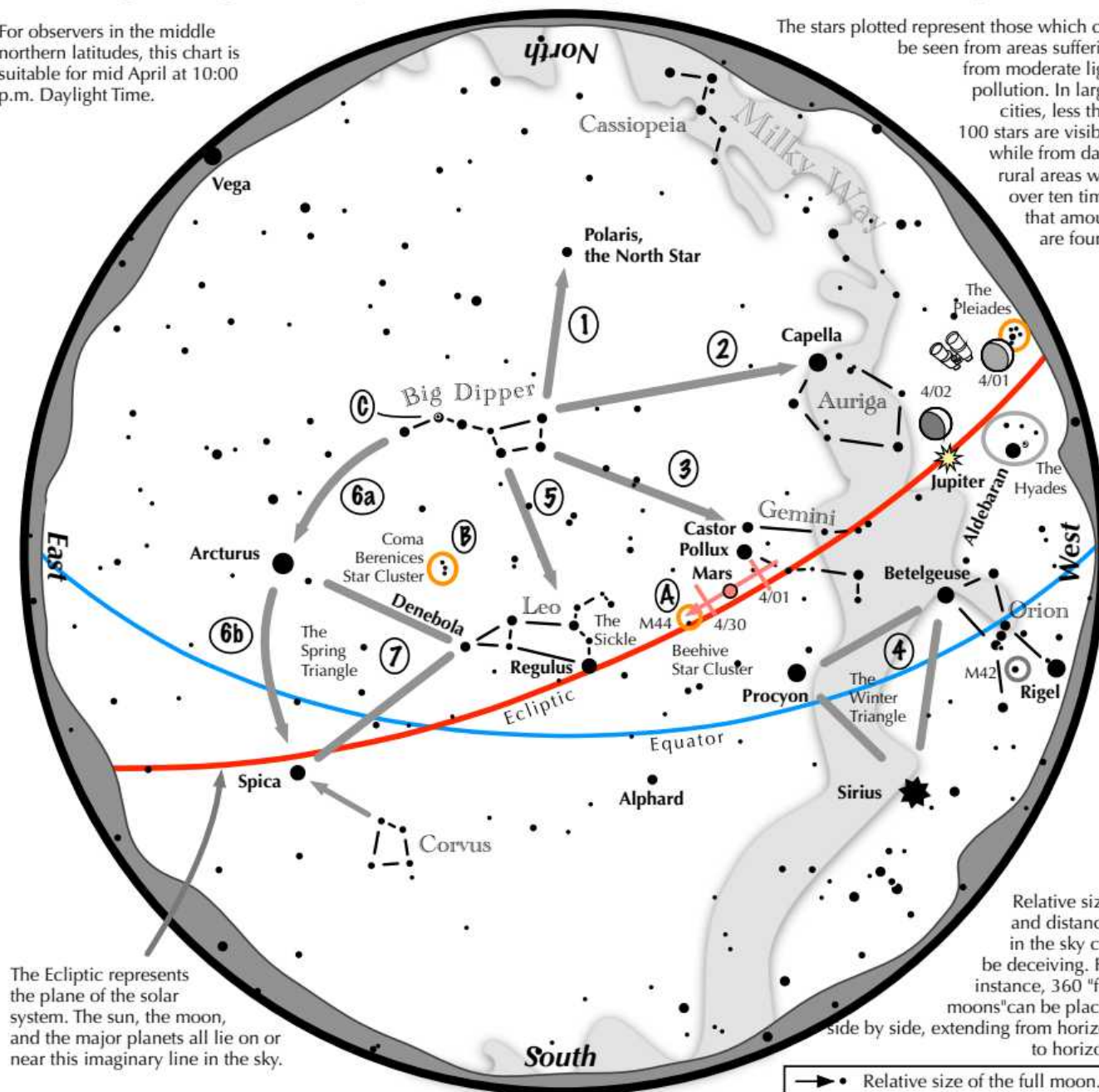
M44 (the Beehive or Praesepe) at left and M67 (the King Cobra?) above. Both images by Jon, taken with a Seestar S50. Exposures were under

2 minutes to keep the stars from running together.

Navigating the April Night Sky, Northern Hemisphere

For observers in the middle northern latitudes, this chart is suitable for mid April at 10:00 p.m. Daylight Time.

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.

→ • Relative size of the full moon.

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

- 1 Extend an imaginary line north from the two stars at the tip of the Big Dipper's bowl. It passes Polaris, the North Star.
- 2 Draw another imaginary line west across the top two stars of the Dipper's bowl. It strikes Capella low in the northwest.
- 3 Through the two diagonal stars of the Dipper's bowl, draw a line pointing to the twin stars of Castor and Pollux in Gemini.
- 4 Look in the west-southwest for the bright Winter Triangle stars of Sirius, Procyon, and Betelgeuse.
- 5 Directly below the Dipper's bowl reclines the constellation Leo with its primary star, Regulus.
- 6 Follow the arc of the Dipper's handle. It first intersects Arcturus, then continues to Spica.
- 7 Arcturus, Spica, and Denebola form the Spring Triangle, a large equilateral triangle.

Binocular Highlights

- A:** M44, a star cluster barely visible to the naked eye, lies to the southeast of Pollux.
B: Look nearly overhead for the loose star cluster of Coma Berenices.
C: In the Big Dipper's handle shines Mizar next to a dimmer star, Alcor.



Astronomical League
www.astroleague.org

Duplication allowed and encouraged for all free distribution.

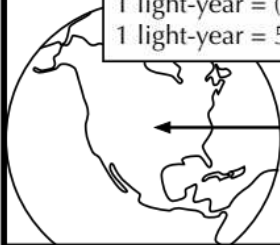


A light-year is a unit expressing distance, not time.

Understanding the Light-Year (ly)

**One light-year equals the distance that light travels through a vacuum in one year:
about 5.9 trillion miles (or about 9.5 trillion km)**

1 light-year = distance that light travels through a vacuum in 1 year
1 light-year = (velocity of light) x 1 year
1 light-year = (186,000 miles/sec x 3600 sec/hr x 24 hrs/day x 365.25 days/year) x 1 year
1 light-year = 5,870,000,000,000 miles = about 5.9 trillion miles



Distance to the Moon = 1.25 light-seconds



... another 498 light-seconds (or 8.3 minutes) to the Sun →

Distance from the Sun (light-minutes)

Orbit of
Neptune
249
(4.1 light-hours)

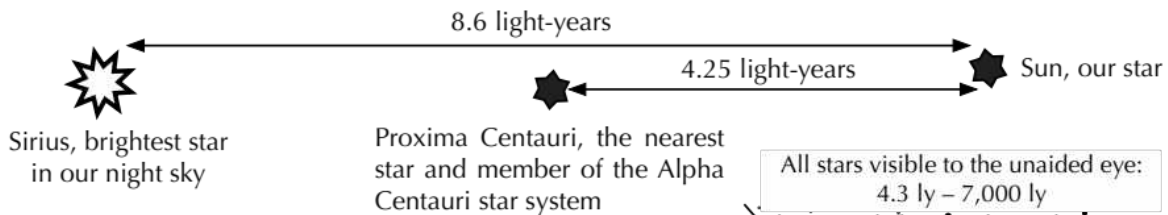
Orbit of
Uranus
160
(2.7 light-hours)

Orbit of
Saturn
80
(1.3 light-hours)

Orbit of
Jupiter
40
(0.7 light-hours)

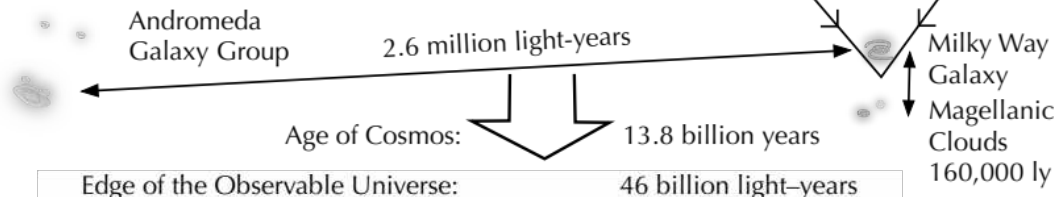
Mars 12
Earth 8
Mercury 3
Sun

Distance to the Stars – and beyond (light-years) ...

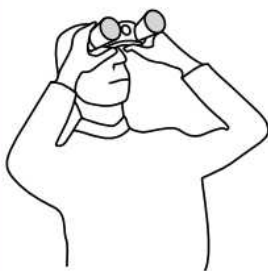
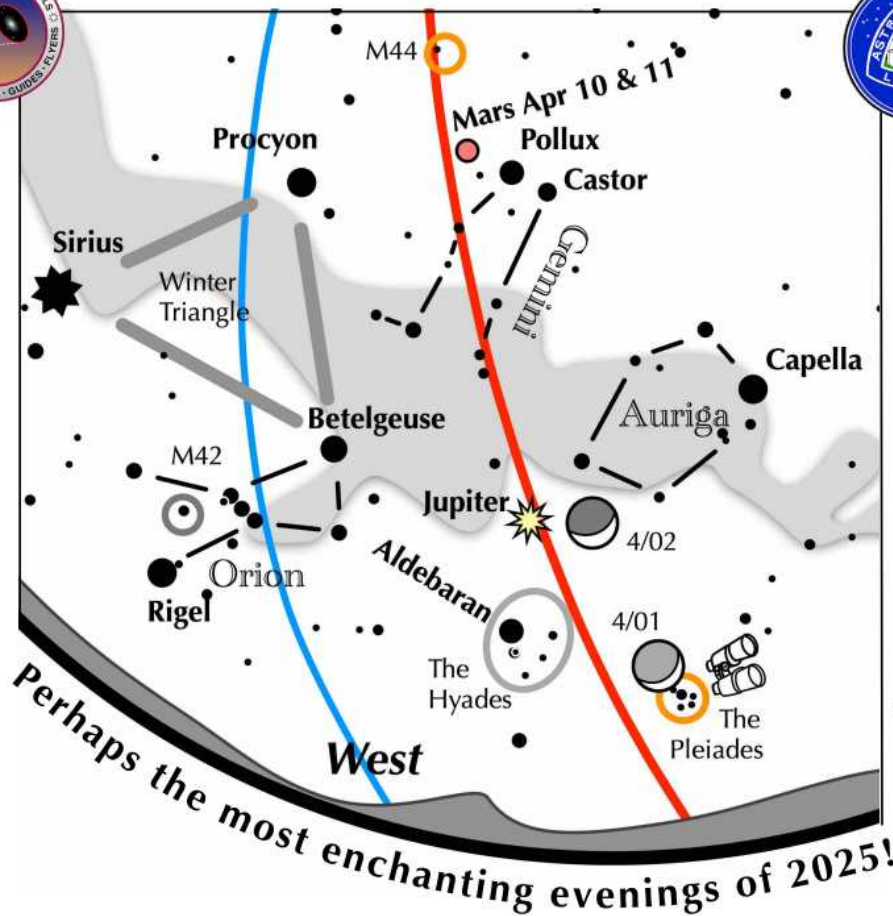


- ★ Distance to nearest star, Alpha Centauri: 4.3 light-years
- ★ Distance to next spiral arm in Milky Way: 7,000 light-years
- ★ Distance to center of the Milky Way Galaxy: 27,000 light-years
- ★ Diameter of Milky Way Galaxy: > 100,000 light-years

- ★ Distance to the farthest object a person can see with the unaided eye: M31, the Andromeda Galaxy – 2.6 million light-years



If you can see only one celestial event this April, see this one.



**Enhance the scene –
use binoculars!**

www.astroleague.org

On April 1 & 2, look low in the west-northwest 60 minutes after sunset.

- On the first evening, the crescent moon, glowing full with earthshine, floats immediately above the delicate Pleiades star cluster. To its upper left, shine Aldebaran and the intriguing Hyades star cluster. And bright Jupiter lies above that.
- On the second evening, the slightly thicker, but more pronounced crescent moon moves above the Pleiades and next to Jupiter.
- Above it all, red Mars plows through Gemini, reaching alignment with Castor and Pollux on April 10 & 11.

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.

Astroleague Home Page	www.astroleague.org
Astroleague YouTube Channel	https://www.youtube.com/channel/...
AL Observing Programs (Alphabetical Listing)	https://www.astroleague.org/alphabeticoobserving/
Messier Marathon 2025	https://www.astroleague.org/al-observing-program-division-announcement-messier-marathon-2025/
Night Sky Tools	https://www.astroleague.org/navigating-the-night-sky-guides/
Astroleague Store	https://store.astroleague.org/
Current and Past Issues of <i>Reflector Magazine</i>	https://www.astroleague.org/reflector/
AL Related News, Information and Reminders	<p>Awards: Congratulations to Jon Stewart-Taylor for completing the Herschel 400 Observing Program!! More about this in the upcoming April regular CFAS meeting.</p> <p>Information: The AL hopes to resume hard copy issues of Reflector with the June 2025 edition. Click HERE for the Astroleague News Page and be sure to check the Astroleague Home Page weekly for new and important posts.</p> <p>Contact Hank Lyon, hlyon8448@gmail.com, for any changes to your Reflector delivery preferences (US Mail, Email or Both).</p>

The Astroleague Correspondent (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 anything new.

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

Dues: Dues for 2025 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

Or you can pay electronically by following this link: <https://www.capefearastro.org/payment.htm>

Contact Us:

You can contact CFAS at info@capefearastro.org

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