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.

August 2024

President's Message

by Ben Steelman

Through its 40-some years, the Cape Fear Astronomical Society has been in steady retreat.

When I first got involved, back the '80s, the Society was fondly thinking about developing an observatory site in Rocky Point. Then, our sights moved to Hampstead -- which, back then, really was a quaint village.

We settled for a while in the Holly Shelter Game Preserve, either in an open field (you had to be careful during hunting season) or at the boat launch.

Clint North was nice enough to rent us a field near Currie for many years -- until flooding and overgrowth of surrounding trees made it untenable.

Over that time, however, the southern glow from the lights of Wilmington and suburbs kept steadily creeping northwards.

Which is why we should be thankful for Starfields. After decades of talking about it, the Society finally has an observatory with bases for mounts, auxiliary buildings and even a pod dome (at least, pretty soon). We've talked and talked about it, but thanks to the generosity of Jon and Kathleen Stewart-Taylor, it's finally a reality.

If you haven't been there yet, you should go. (Observing times are posted regularly on the email feed, and Jon can provide directions.) If you have some spare time, you should volunteer to help out up there with the chores. The Observatory Committee always needs help.

From the bookshelf: "Comet Madness" by Richard J. Goodrich (Prometheus Books, $27.95. (Remember the hoopla over Comet Kohoutek? Or the tizzy over Shoemaker-Levy 9?) None rivaled the return of Comet Halley in the year 1910. Crackpots concocted the theory that cyanogen gas in the comet's tail would pass through the atmosphere, snuffing out all life on Earth.

Unfortunately, this was the age of sensationalistic "Yellow Journalism" (think about the movie "Citizen Kane"), and newspapers were all too glad to give plenty of headline space to extreme claims. Soon, thousands of people were buying "comet insurance." Some went crazy. A few committed suicide.

Goodrich, a Ph.D.-level historian, gives a vivid account of the frenzy, which of course holds lessons for astronomy in the digital age.

Keep Looking Up!

Calendar

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

August 7

Monthly SIG (Special Interest Group) via Zoom

August 10

Public Observing @ Carolina Beach State Park

August 11

★ Cape Fear Astro Monthly Meeting ★

GAStronomy Meeting - 5 PM
Aromas of Peru at University Landing
417 S College Rd. #22, Wilmington, NC,
(Dinner, prior to the Monthly Meeting)

CFAS Monthly Meeting
7:00pm – 9:00pm - 212 DeLoach Hall; UNCW
Presentation: "Women in Astronomy"
by Kristin Hendershot (The Astro Ranger)
Also simulcast via Zoom

August 11 / 12

Perseid viewing at Starfields - Sunday night/Monday morning

Lesson Learned

by Frank Rich

With the Nebula season approaching, and hopefully clear crisp skies, I decided to set up my imaging & visual Rigs. That said I wanted to buy a new diagonal so both rigs could stay assembled. Owning a Di-electric 2" diagonal, I decided on the Baader 2" Prism diagonal (PHOTO 1 below). I chose this because both eyepiece & nosepiece sides were removable. This was needed for the visual train to insert a Filter Drawer. What ensued was both frustration & a learning experience.

I have learned to remove any piece from the diagonal a "rubber" hand grip is essential. Once removed from the Nosepiece side, determining the thread sizes is next. Usually the norm is M48 or M42, where "M" is for Metric, and the # is the thread pitch along with the nominal outside diameter of the adapter. Connecting to a camera or image piece requires a "T" adapter (PHOTO #2). After much research on the Baader website and speaking with Alpine Astro, I received my adapters. Easier said than done working for a few hours I could not get this puzzle to work. At this point I am now frustrated thinking the wrong parts were sent! I left them alone for a day, returning on a Sunday morning, I was able to piece it together in 5 minutes!! LESSON LEARNED: walk away and approach with a clear mind.

After that success I decided to set up my imaging rig. This consists of a Williams Optics (WO) Z61, WO Field flattener, ZWO Electronic Filter Wheel (EFW) and a ZWO ASI533 One Shot cooled astro camera (PHOTO #3).

I had known that my camera needs 55mm of Back Focus. Again, I researched what the heck this was. To state simply: for Optimal Camera performance the sensor in the camera needs to be 55mm from the last piece of glass in the image train. The last piece for me is my Field Flattener (which according to WO must be set for my scope at 12.9mm on the scale integrated with the flattener. (Read the instruction manuals for any piece of equipment.)

So reading the manuals I learned my EFW is 20mm wide, (PHOTO #4&5) the ASIAIR 533 sensor is 6.5mm back from the face. Thus 55mm – 6.5mm – 20mm =28.5mm. So off to find some adapters and determine thread sizes. First the T adapter I needed was mounted inside the EFW, on the Telescope side, an 11.0mm adapter was next, followed by an M48 to M42 adapter 16.5 mm wide followed by a M42 Female to Male Adapter 1mm wide (PHOTOS #4 & 5)

Now taking the 55mm back focus requirement – 6.5mm-20mm-11mm-16.5mm-1mm=0

So the point of all this is do your research, ask questions, take your time and success will be yours.

Photo #1

Photo #2 Filter Drawer and Adapters

PHOTO #3 left to Right; Flattener, Adapters, EFW, T Adapter, ZWO ASI533

PHOTO #4

PHOTO #5

The Perseids Are Coming!

by Jon Stewart-Taylor

The annual Perseid meteors are predicted to peak on August 12, 2024, at 14:00 UTC. Since our time zone is currently UTC - 4, that means 10 AM on the morning of August 12th. Because the Perseids have a narrow peak, that means the strongest showing should be the night of the 11th / morning of the 12th (Sunday night/Monday morning). If the weather doesn't favor us on the 11/12th, we can try the 12/13th. Or maybe do both nights if you can.

The Perseids used to be the best show of the year with a ZHR (an imaginary number made up to compare different meteor showers) around 150: an average of around 2 meteors per minute. Over the last decade or so the ZHR has dropped to about 100, giving about one per minute most of the night. That's only an average, because meteors tend to be "clumpy" with several in a short span, then perhaps five minutes or more with none visible.

We're fortunate this year, because the moon is at first quarter on the 12th. That means it will have set well before the best hours for watching the shower, from midnight 'til dawn. We'll still be at the mercy of the weather, of course. The darker and clearer the sky, the better. There's a lot of dimmer meteors in the show which are drowned out by light pollution or high haze.

To watch the Perseids, you just need open horizons and dark skies. We'll be holding a Perseid session at the club observatory at Starfields on Sunday night/Monday morning. Feel free to bring a sleeping bag, blanket, or lawn chair. Spread out on the observing field and stay 'til dawn. You're welcome to sleep in on site after the shower.

So, mark your calendar for the Geminiids in December. But, since the moon is full for that shower, the Perseids may well be the best shower of this year. Hope you can join us on the 11/12th.

Ed Ting's 16" Dob from a Kit

by Karl Adlon

Ed Ting does astronomy equipment reviews. Originally, they were posted on a website but now are YouTube videos. This is the video I was watching: https://www.youtube.com/watch?v=kwLzWvVTJRw&list=RDCMUCEQnX-WohTBNGBV5gdhAS5w&start_radio=1 when he said something that I hadn't thought of.

Big Dobsonian telescope values are decreasing. I had noticed this while perusing used Reflectors for sale on Cloudy Nights. The latest one that caught my eye was a 20" Obsession for $3500. That's about 1/3 the original price!

He speculates that young amateur astronomers are drawn to imaging rather than viewing through big scopes, so those scope values are decreasing.

That makes me wonder what Club members are drawn to and if CFAS is helping advance their goals.

Makes me also wonder if that's the reason so few members help with Public Observing and Starfields observatory construction.

I'd love to hear what you think of this and you can let me know at kmja79@yahoo.com

Because, while I could be wrong, I have the feeling that, though I am Vice President, I don't have a good understanding of the membership's astronomy aspirations.

My Astronomy Equipment through the Years

by Karl Adlon

Here's a synopsis:

- A 3" f10 Newtonian on a ball mount ~1962
- A self-made 10" f5.6 ~1981
- A used orange Celestron C8 in1985
- A used Sky Designs 18" Dob in 1991 that I built a lighter mount for ~1997
- A used Canon D20 digital single lens reflex (DSLR) camera ~2007
- A used Meade LXD75 goto mount
- A used TeleVue NP-101 refractor
- A used Losmandy G11
- A used carbon fiber C11 OTA
- A used 8" f3.8 for imaging ~2008
- A used Meade 8" LX50 SCT OTA ~2017

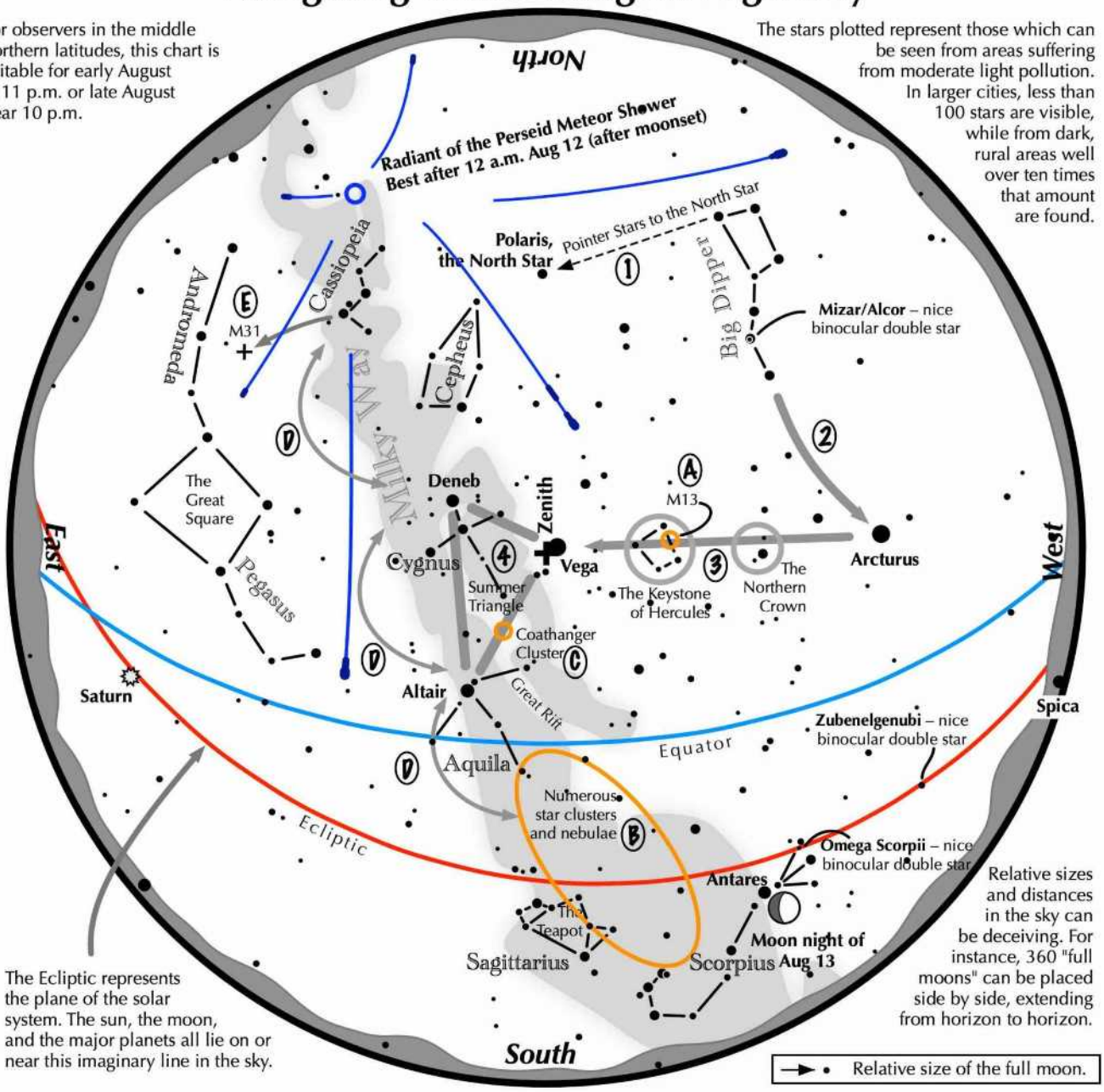
The Canon 20D was followed by a 450D, then a modified T3i and finally a T7i.

Looking at the list above and considering Ed Ting's speculation, I can see that last century I was interested in visual astronomy and with the availability of digital cameras early in this century, my interests changed.

Like many in this hobby, I'm older (we all are but you know what I mean) and less motivated in general. I did get the 18" out to Starfields last year – that was the last time I used it. I've tried to set up for some astrophotography but skies or equipment didn't cooperate.

While I know that computer guiding of scopes for astrophotography; Electronically Assisted Astronomy (EAA) and Night Vision equipment are the latest technology, I'm not inclined to do any of that. That's why I made that last statement of the previous article.

Navigating the mid August Night Sky



Navigating the mid August 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 June 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. High in the East lies the summer triangle stars of Vega, Altair, and Deneb.

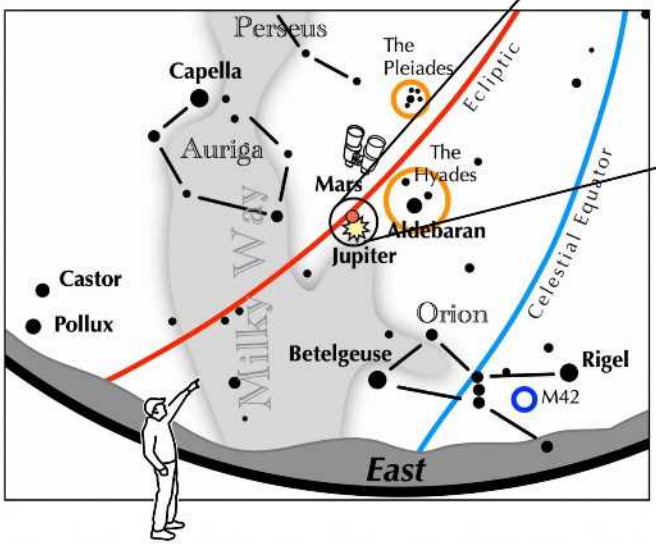
Binocular Highlights

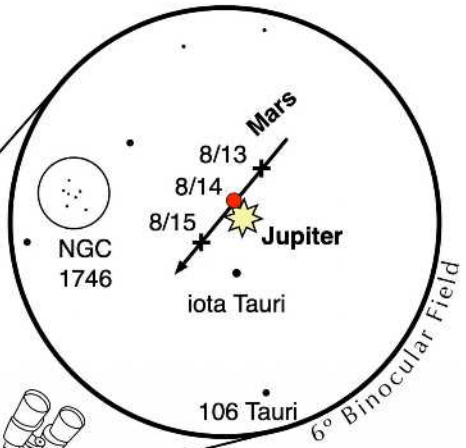
A: On the western side of the Keystone glows the Great Hercules Cluster.
B: Between the bright stars Antares and Altair, hides an area containing many star clusters and nebulae.
C: 40% of the way between Altair and Vega, twinkles the "Coathanger," a group of stars outlining a coathanger.
D: Sweep along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

If you can view only one celestial event this month, view this one.

A slowly brightening Mars passes immediately north of the much brighter Jupiter.

1. Look to the east 90 minutes before sunrise on August 13, 14, and 15.
2. Find Mars and Jupiter shining left of the red star Aldebaran. Mars' brightness will nearly match that of Aldebaran.

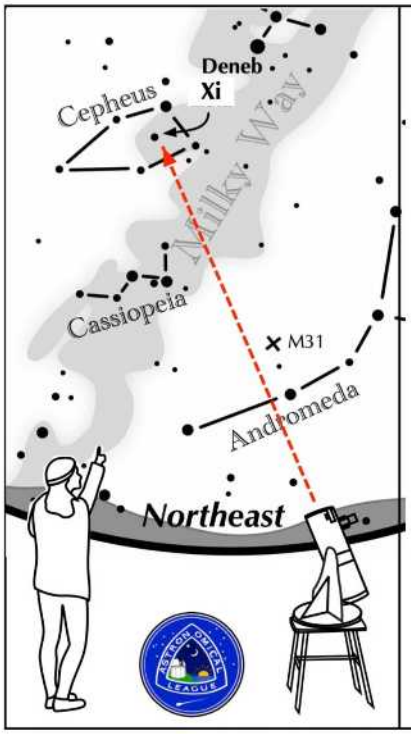




Binocular View

3. Aim binoculars at Mars and Jupiter.
4. On the morning of August 14, they will be only 20 minutes apart.
5. They will be just 1.5° southwest of the open cluster NGC 1746.
6. A telescope at > 100 power will reveal Mars' tiny red disk and Jupiter's larger disk along with its four Galilean moons.

ASTRONOMICAL LEAGUE Double Star Challenge

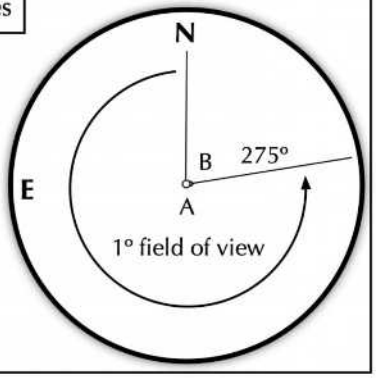


Other Suns: Xi Cephei

How to find Xi Cephei on an August evening

Find the stars forming the house shape of Cepheus, which is the constellation above Cassiopeia in the early evening in August. Xi is the central star in the southerly portion of the house shape of Cepheus.

Suggested magnification: >50x
Suggested aperture: >3 inches



Xi Cephei
A-B separation: 7.9 sec
A magnitude: 4.4
B magnitude: 6.4
Position Angle: 275°
A & B colors: white & blue

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
About the Astroleague	https://www.astroleague.org/about-us/
AL Observing Programs *(Alphabetical Listing)*	https://www.astroleague.org/alphabeticobserving/
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Astroleague Store	https://store.astroleague.org/
Current and Past Issues of *Reflector Magazine*	https://www.astroleague.org/reflector/
Additional AL News, Information and Reminders	Click HERE for the Astroleague News Page and be sure to check the Astroleague Home Page weekly for new and important posts. Contact Hank Lyon, hlyon8448@gmail.com, for any changes to your Reflector delivery preferences (US Mail, Email or Both).

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.

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).

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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/