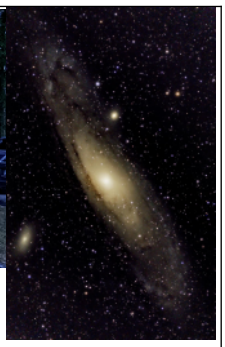






CAPE FEAR Skies

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

January 2025

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

Upcoming Calendar of Events

AUGUST

01 First Quarter Moon

02 Public Observing at Carolina Beach State Park – starts at sunset

09 Full Moon

Sunday, August 10

★ Gastronomy ★ - 5 PM - Watch your email for Location

★ Cape Fear Astro Monthly Meeting ★ 7:00pm – 9:00pm - 212 DeLoach Hall; UNCW

Program: Scott Jackson: "Did Galileo Discover Neptune?" Also simulcast via Zoom

12 Perseid Meteors - ZHR 100 - 3 days after full moon

15 Club Observing @ Club Observatory - 07:00 PM

16 Last Quarter

16 Club Observing @ Club Observatory - 07:00 PM

22 Club Observing @ Club Observatory - 07:00 PM

23 New Moon

23 Club Observing @ Club Observatory - 07:00 PM

30 Public Observing at Carolina Beach State Park – starts at sunset

31 First Quarter

Events in the Future

9/14 - CFAS **Monthly Meeting** - Presentation: Karl: Part 2 of The Software Side of Karl's Planetary Imaging

9/27 - **Public Observing** at Carolina Beach State Park

10/4 – **International Observe the Moon Night** at Cape Fear Museum

10/12 - CFAS **Monthly Meeting** - Presentation: Ingram Planetarium Visit

11/1 - **Public Observing** at Carolina Beach State Park

11/8 - CFAS **Monthly Meeting** - Presentation: Frank Rich: "Using Setting Circles"

12/14 - CFAS **Holiday Celebration**

Presentation Coordinator's Report

by Jon Stewart-Taylor

For August, we have Scott Jackson, Director of the Mount Cuba Planetarium, asking "Did Galileo Discover Neptune?". Scott's summary:

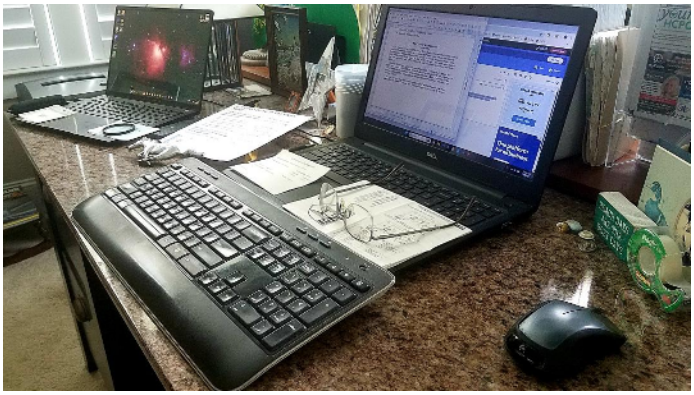
> *In early 1610 Galileo used the newly invented telescope to discover, among other things, the moons of Jupiter. He would carefully observe the moons over several years and would ignore stars until he started to take notice of an object that was not a star. Sketches of his observations clearly showed he was pointing out something while be ignored brighter stars in the same field of view. He even recorded the object being occulted by Jupiter and noted is changing apparent separation to stars. With accurate digital planetarium software, we can recreate his observations and can see exactly what he saw.*

The presentations for the rest of the year are:

- September: “The Software Side of Karl's Planetary Imaging - Part 2”
- October: Ingram Planetarium Visit
- November: Frank Rich: “Using Setting Circles”
- December: Holiday celebration

My 2 Home “Work Stations”

by Karl Adlon



If you consider that I produce “Cape Fear Skies”, the first work station should be obvious – my desk. Yoda would probably say: “*Cluttered it is!*” if you saw it; with pictures of family members, laptop and notebook computers, trinkets, my favorite pen, pocket knife, a hand-made desk lamp from Spring Green, WI, little bits of “junk”, etc. Often, when I can’t decided what to do next, I start here. But I’m catching on that I should also consider my other “work station” . . .

Which is – the garage! Again, Yoda would probably say: “*Cluttered it is!*”; withour SUV, my 74 MGB with it's fuel pump being worked on, two telescopes set up for use, a shelf and a cabinet with telescope equipment, refrigerator, a built-in table top with a telescope having rotating rings installed, oil for the mgb, gardening supplies and equipment, recycles, a roll-out trash can, etc.

So now I can go to either work station and ask myself “what do you want to work on now?”. Of course, this is AFTER I’ve done things that Mary Jean put on my “To Do List”!

Observatory Update

by Jon Stewart-Taylor

There have been some quiet upgrades at Starfields, some at the club observatory, and some on the surrounding property.

First, biggest, and most beneficial for most folks, Kathleen has had the fields around the observatory cleared. This has improved the observing horizons in almost all directions. It has also created many, many piles of debris, which will be going up in flames over the next several months. If you've been wanting to observe objects low in Scorpius or Sagittarius, you'll have better access to them now.

At left: Our new western horizon

Among the equipment included in the Noll donation is a Losmandy G11 mount on a massive tripod-on-wheels. It was too big to go up and down the existing ramp at the shed. So, as the said ramp began to degrade, we planned to replace it with a wider one. That ramp is now completely rebuilt using all pressure-treated wood, and is a full four feet wide so the tripod will fit.

New ramp

Inside the shed, we more than doubled the electrical storage with a 100 amp-hour battery acquired by club secretary George Pappayliou at a ham-radio swap meet. We can now run the Atlas mount in the POD all night for several nights in a row without having to worry about running out of juice before dawn.

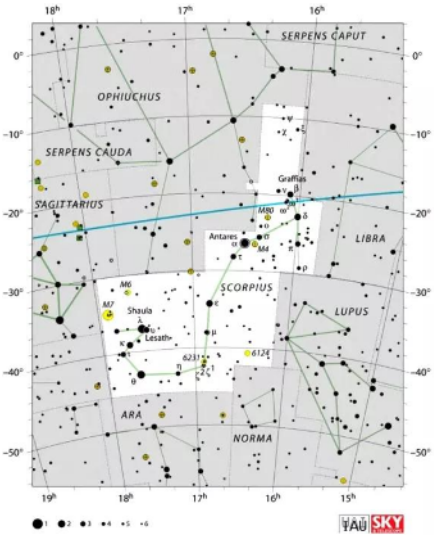
Finally, for those with Seestar telescopes, or other instruments which need to be polar aligned and have photo-tripod-style attachments, we're installing a permanent 4x4 pier with a ZWO tripod head which will be pre-aligned with the celestial pole. That should make aligning and using equatorial mode much quicker and easier. It will have a Telegizmos 365 cover to protect it from the weather.

ZWO tripod head

If you haven't been to the observatory lately, we hope you can come and take advantage of the improvements. If you haven't been yet, come and share the best observing experience for many miles around.

Scorpius

by Jon Stewart-Taylor



Scorpius is one of the oldest constellations, included in Ptolemy's 48, but originating in Babylon and Sumeria several thousand years before. It used to be a much larger constellation. What is now Libra was once the claws of the scorpion. Scorpius is is a Zodiac constellation (though just barely): Much of the ecliptic thought of as belonging to Scorpius is actually in the feet of Ophichus.

At the end of evening twilight on August 1st, the meridian is near Scorpius' brightest star, Antares. By the middle of the month, the meridian is in the tail.

The brightest star in Scorpius for observers on earth is the red giant Antares. Its red hue gives it its name: Antares means "the rival of Ares" (Mars, in Roman mythology). The two stars in the "sting" at the end of the tail are a wide unaided-eye pair called The Cat's Eyes. β Scorpii (Graffias) is the top claw in the chart above, and is a multiple-star system with 7 components, although most amateur scopes show only 2.

Because Scorpius is in the direction of the center of the Milky Way, it's rich in star clusters and nebulae. There are three real showpieces, and a bunch of decent NGC objects

M 6 (at left)

M6 lies just east of the tail. It named the "butterfly cluster" because of the pattern of the stars. It is large and bright enough it can be detected with unaided eyes. In even small binoculars it's a glorious site, and well worth tracking down.

M 7 (at right)

M 7 is called Ptolemy's cluster, and was known as a dim glow in the sky at least as long ago as 200 BCE. It's easy to find: just follow the line of the Cat's Eyes to about half way between the stinger and the Teapot of Sagittarius. It may be best viewed through binoculars. When using a telescope, use the widest field-of-view eyepiece you can.

M4 (at left)

M4 is a globular cluster, meaning it has about 100,000 stars. It's pretty easy to find, since it's quite near Aldebaran. It is easier to see individual stars in it than most globulars.

M 80 (at right)

M80 is another globular cluster. It is much further away than M4, so it looks smaller and is harder to resolve into individual stars. It contains several 100,000s of stars, and is very tightly packed.

Scorpius contains many NGC open clusters. Many of them are quite far south, so they may be hard to find from here. A few of the ones worth tracking down are NGCs 6231, 6322, 6242, and 6400.

Scorpius is pretty far south in our sky, so it's only in good position to observe in the evening for a few months. Compound that with the poor summer skies in SE NC, and you should take any opportunity you can get to spend time in Scorpius. It repays all the attention you give it, whether unaided-eye, binoculars, or telescope.

Pictures of Astronomy Trip to Marathon, TX

by Kat Davis, July 26, 2025

Hey, I've been down near Big Bend @ Marathon rv & motel astronomy dark site sending pics for newsletter.

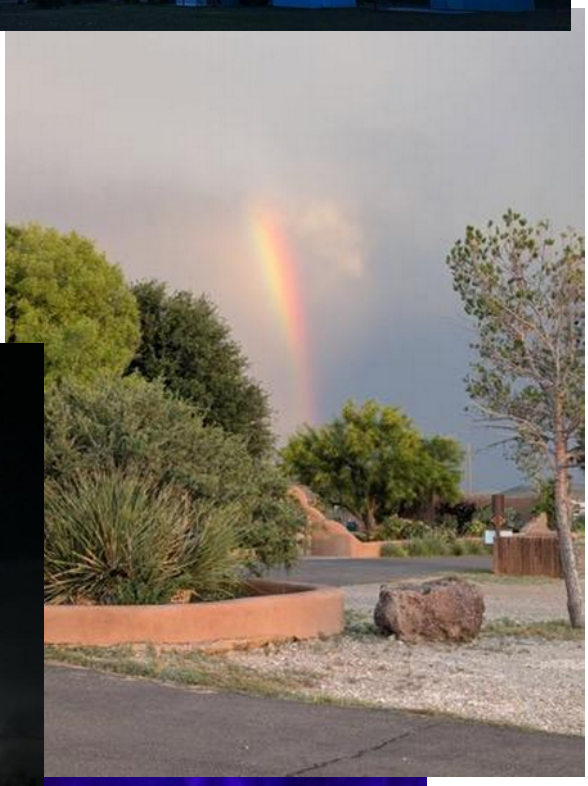
It's been amazing - last 3 days decent weather & tonight should be the best. The pics with people are from Barnard Astronomical Society of Chattanooga.

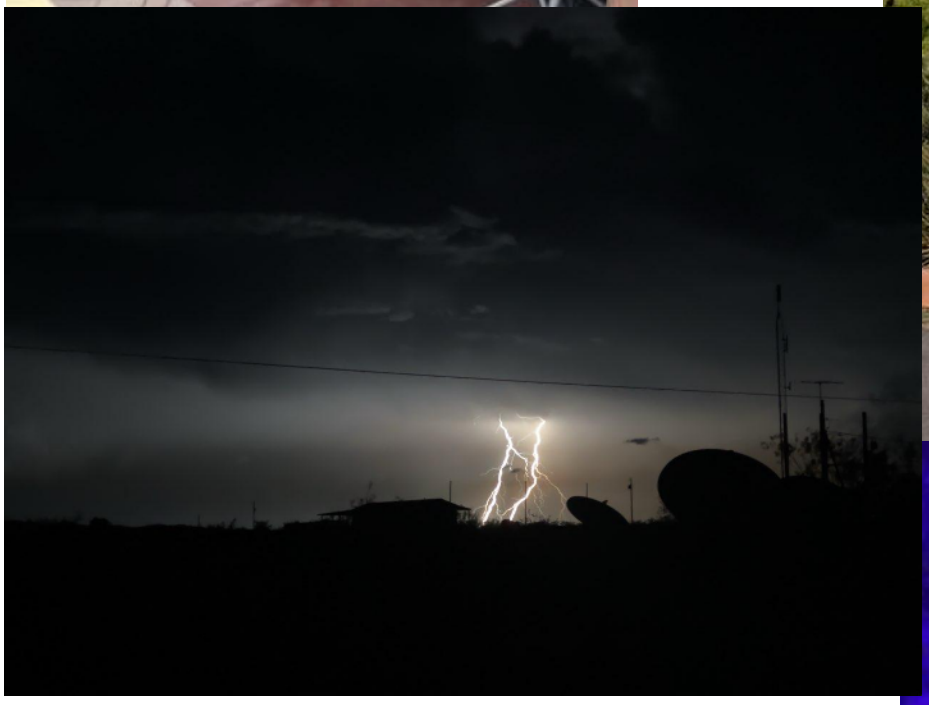
Bortle 4 skies here.

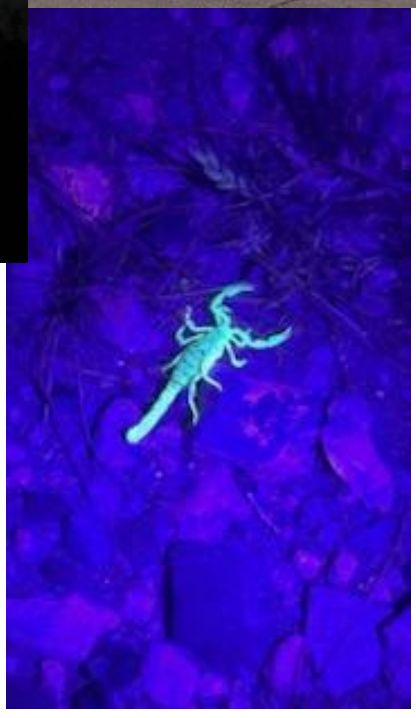
The guy in the middle in the group pic with orange shirt & hat is Kevin Hon - president

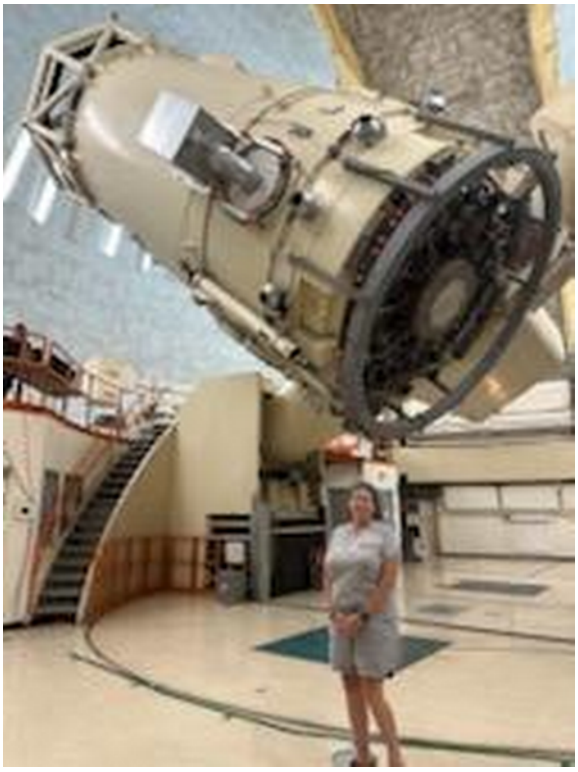
(Editor: The road sign shows a Flying Saucer and airplane hitting each other.)

So the story is: there was a dirt runway there & a guy crashed his plane there & claimed a UFO 🛸 caused it!

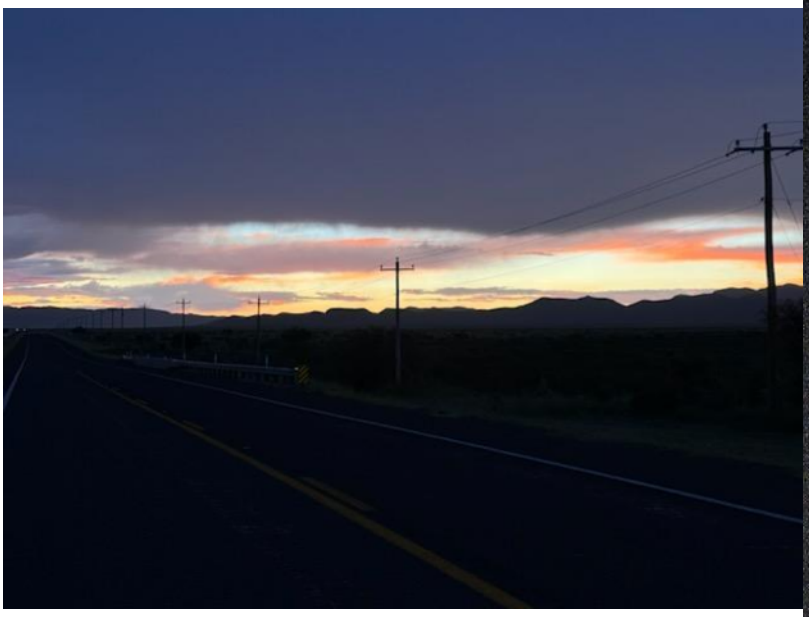




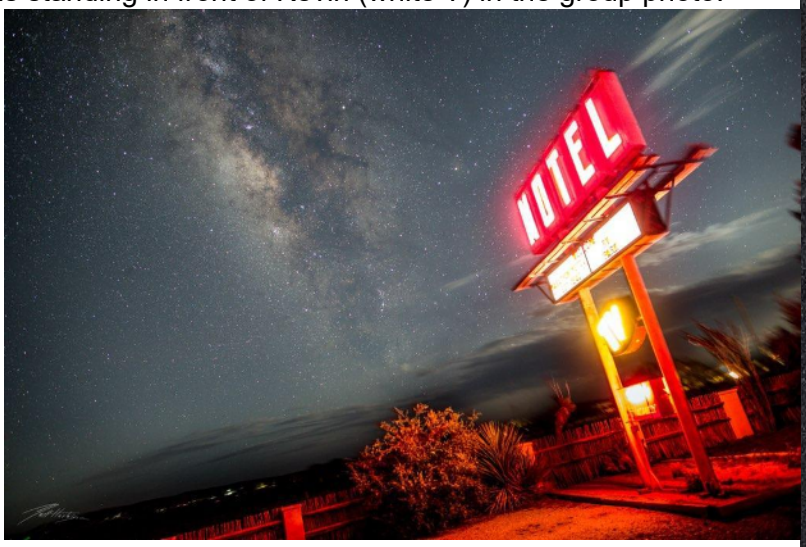


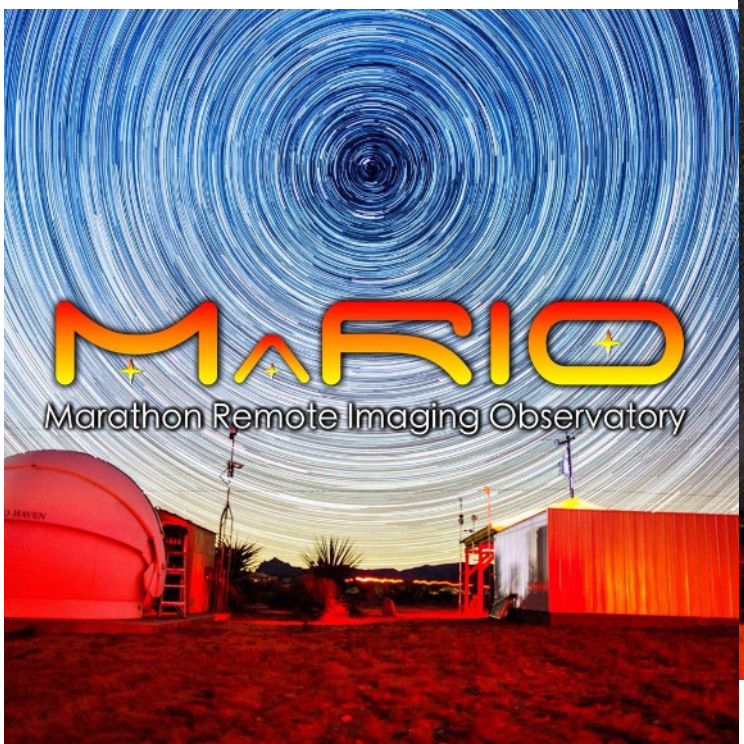


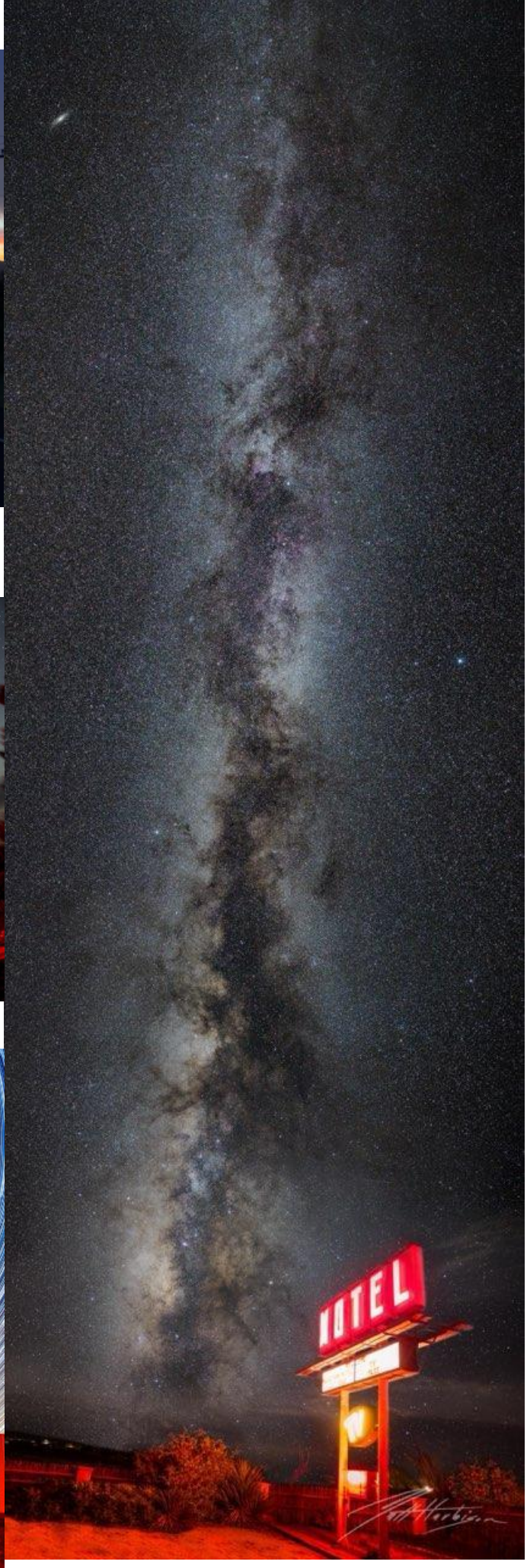
2.1 m Otto Struve Telescope at
McDonald Observatory.



The following pictures and the picture at right are from Matt Harbison (BAS of Chattanooga editor) of the trip. Matt is standing in front of Kevin (white T) in the group photo.



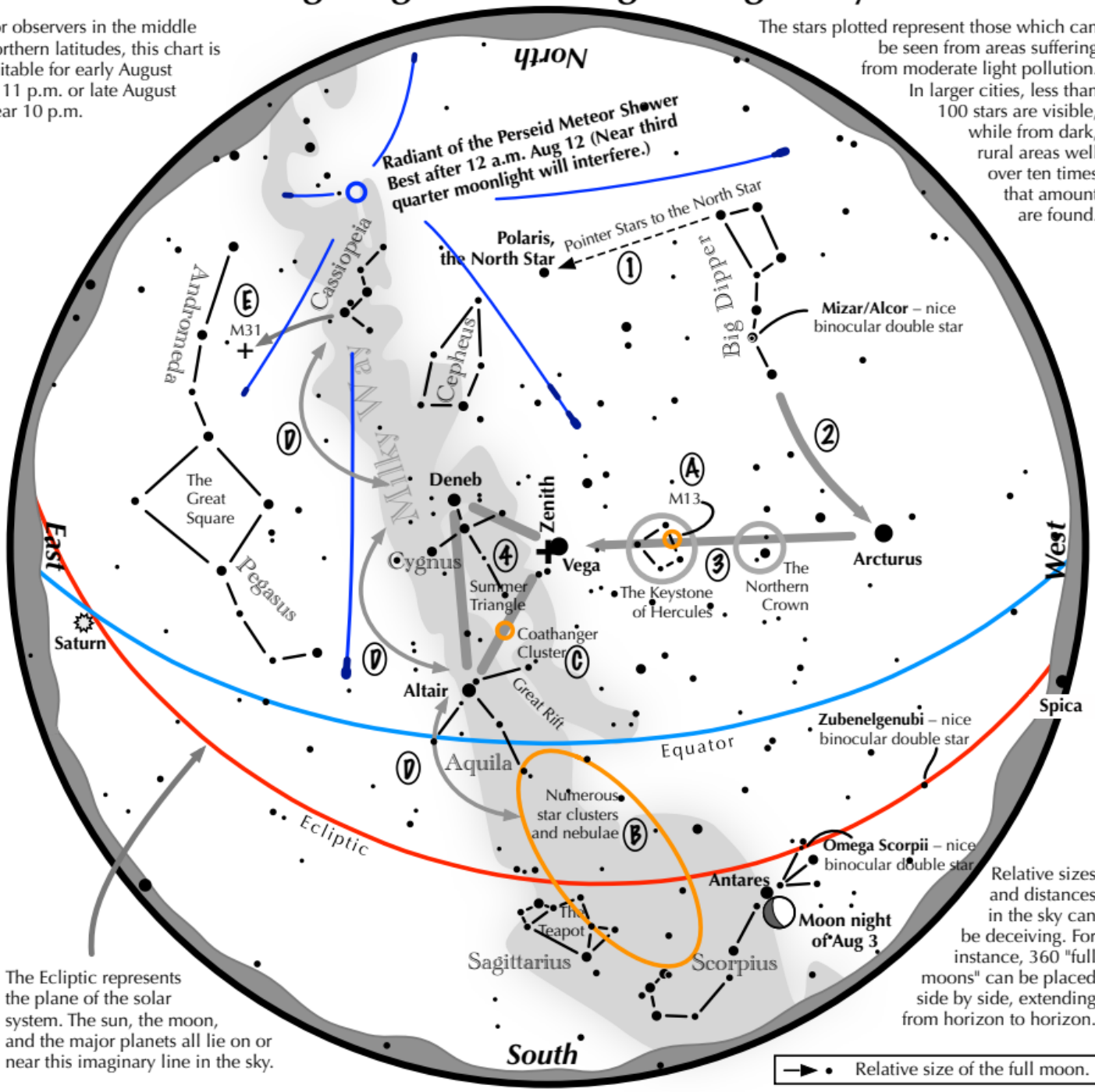




Navigating the mid August Night Sky

For observers in the middle northern latitudes, this chart is suitable for early August at 11 p.m. or late August near 10 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.

Relative size of the full moon.

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.

Astronomical League *www.astroleague.org/outreach; duplication is allowed and encouraged for all free distribution.*

Yes, it really does resemble the outline of a coat hanger.

Brocchi's Cluster or Collinder 399
(but everyone calls it the *Coathanger*)

New to stargazing?
This is a wonderful object to observe through binoculars.

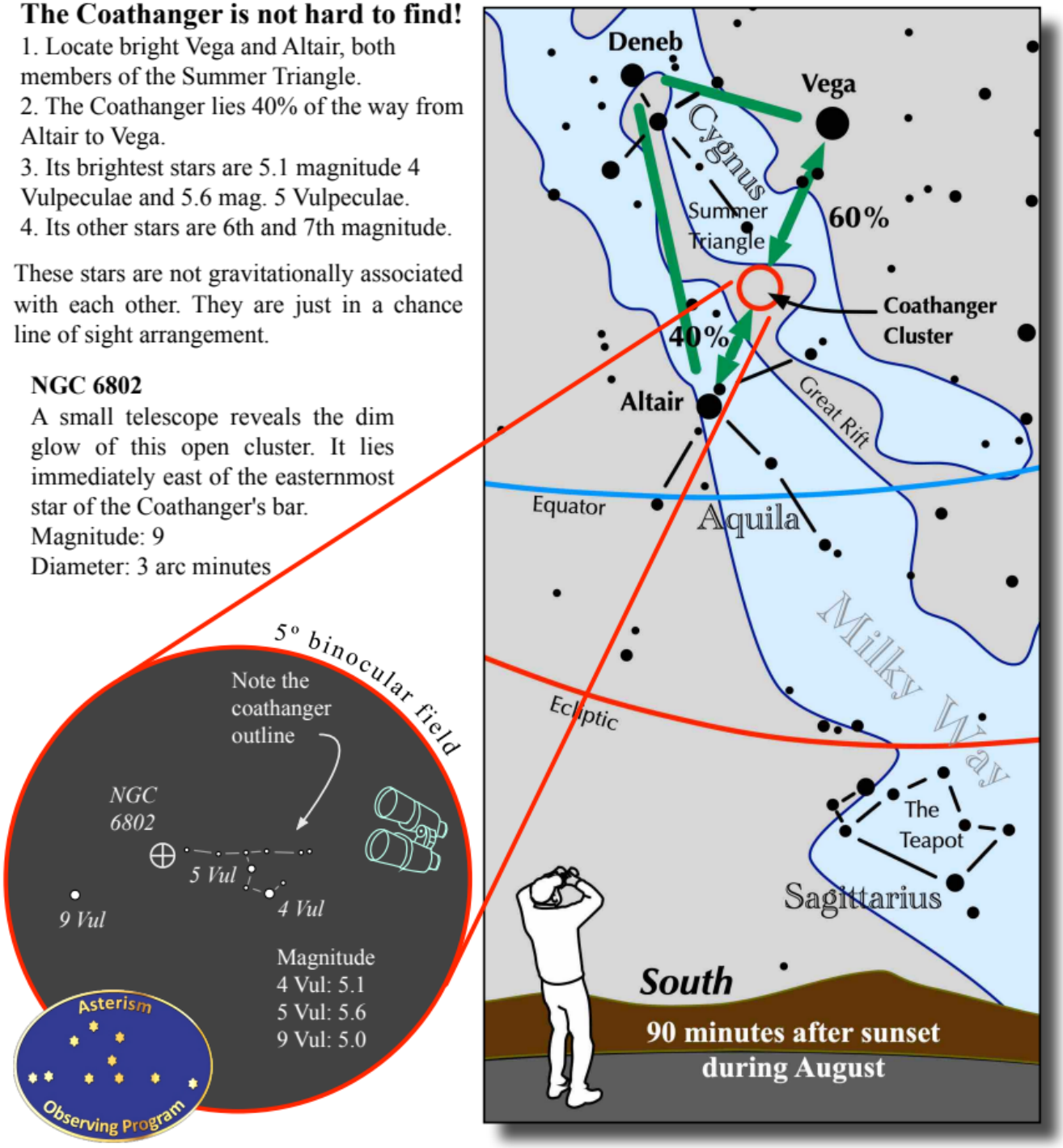
The Coathanger is not hard to find!

1. Locate bright Vega and Altair, both members of the Summer Triangle.
2. The Coathanger lies 40% of the way from Altair to Vega.
3. Its brightest stars are 5.1 magnitude 4 Vulpeculae and 5.6 mag. 5 Vulpeculae.
4. Its other stars are 6th and 7th magnitude.

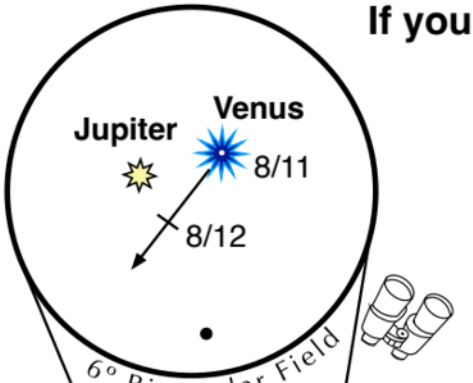
These stars are not gravitationally associated with each other. They are just in a chance line of sight arrangement.

NGC 6802

A small telescope reveals the dim glow of this open cluster. It lies immediately east of the easternmost star of the Coathanger's bar.
Magnitude: 9
Diameter: 3 arc minutes



If you can view only one celestial event this month, view this not this one, but these two!

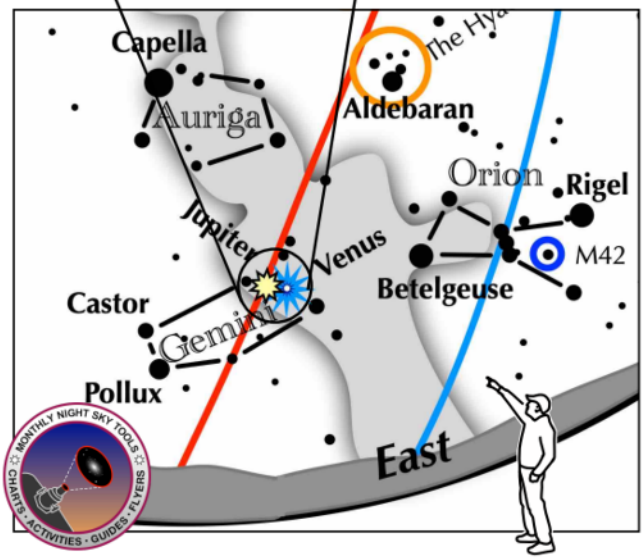


1. Look to the east 90 minutes before sunrise on August 11 and 12.
2. Find Venus and Jupiter shining left of Orion. They will be next to each other.
3. Use binoculars to separate them.

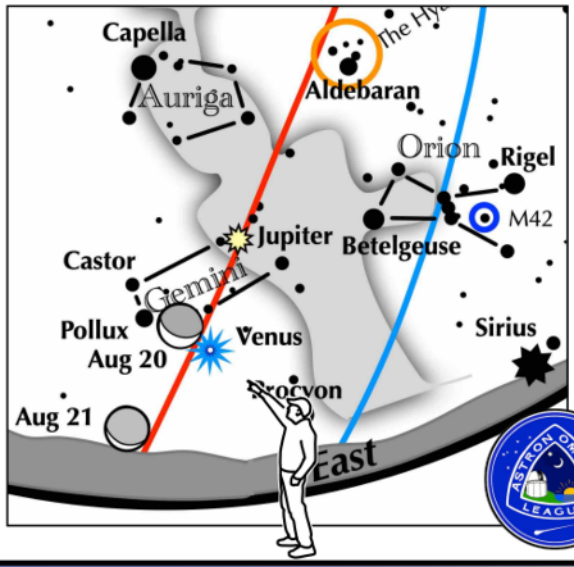
4. On August 20 and 21 about 90 minutes before sunrise look to the east-northeast.
5. On the 20th, the crescent moon, full with earthshine, floats near Venus.
6. On the 21st, a thinner crescent rises shortly before sunrise.
7. You will also see Sirius and Procyon rising.

What great way to start your day!

August 11 & 12



August 20 & 21



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/alphabeticobserving/
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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.

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:

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Associate VP	Karl Adlon
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Dues: Dues for 2025 are $25 for Individual and $32 for Family Membership. Students dues are $5 per year.
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