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.

November 2023

President's Message

by Ben Steelman

At November's meeting, we will be opening up the floor again for nominations for the upcoming election. Surprising to say, there hasn't been a groundswell of interest. We still need someone to volunteer as Vice President. (unlike General Sherman, CFAS candidates must agree to serve.)

At I said before, VP is not a very tough job. You preside at meetings when I don't show up (which isn't often). You serve on the Executive Board. and you can help with Outreach if you like. It's sort of like being Kamala Harris or Dan Quayle but not as stressful. Ask not what the Cape Fear Astronomical Society can do for you …

Speaking of the November meeting, the executive board basically voted to cancel "Gastronomy" for the rest of the year, given low attendance and a revival of COVID and other bugs. In January, we'll check on the health situation and pick a restaurant at that time for our traditional pre-meeting dinner and gab-fest.

Also I have started up the Cape Fear Astronomical Society page on Facebook again to advertise our public events. I've been posting members' photos so if you have some astrophotography you're proud of, please email it to me (peacebsteelman@gmail.com) in a PDF format, and I'll share it. You should all be "invited" as site members in a few days, as soon as I get caught up.

Apollo 15 at Hadley Rille (curving from the left and heading away, behind the astronaut).

Calendar

October 2023

Date – Event – Time

03 Club Observing @ Starfields (the Club Observatory); 6:00 PM; 3rd Quarter Moon

04 Club Observing @ Starfields (the Club Observatory); 6:00 PM; 3rd Quarter Moon

05 Last Quarter Moon

05 Fall Back; 01:00 AM, End daylight savings

10 Club Observing @ Starfields (the Club Observatory); 5:30 PM; New Moon

11 Club Observing @ Starfields (the Club Observatory); 5:30 PM; New Moon

12 ★ Cape Fear Astro Monthly Meeting ★

CFAS Monthly Meeting - 7:00pm – 9:00pm

212 DeLoach Hall; UNCW

Also simulcast via Zoom

13 New Moon

17 Leonid Meteor Shower: ZHR 10; Waxing Crescent moon

20 First Quarter Moon

23 THANKSGIVING

27 Full Moon

Astro phenomena from:
https://www.universalworkshop.com/astronomical-calendar-any-year/

2023 Public Events

Please plan to join our 2024 public events!

The more members we have, the more enjoyable the event becomes.

2023 Monthly Meeting Dates *and Presentation*

November 12. 2023
"Planetary Imaging"
by Karl Adlon

December 10, 2023 Holiday Celebration (and annual meeting) at Ben Steelman's, 1610 Chestnut St., Wilmington, NC

Special Interest Groups (SIGs)

Usual meeting dates – watch emails for exceptions

Phenomena:	First Wednesday
Both Eyes:	Second Tuesday
Telescope Usage:	Third Tuesday
New Astronomer:	Third Wednesday
Outreach:	Fourth Tuesday

November Meeting Program:
“Planetary Imaging”

by Karl Adlon

I started a presentation called “Planetary and Lunar Observing and Imaging”. It had 88 slides and I wasn’t done! So I decided to concentrate on planetary imaging with the thought that I might cover observing and lunar Imaging later.

A bit of a caveat: I haven’t done much imaging of any sort lately, so I may not be “up” on the latest technology, especially software, but it looks like the basic approach still remains the same.

I did find a reference, which I’ll be providing, that was updated this tear and provides comprehensively covers the subject. My presentation will not delve into the subject in as much detail, so anyone interested will be able to learn more by going there.

I hope you’ll join me for this presentation!

Last Meeting: If anyone wants a copy of the September Presentation on Eyepieces (Powerpoint format) by Frank Rich, send a request to frich1230@gmail.com

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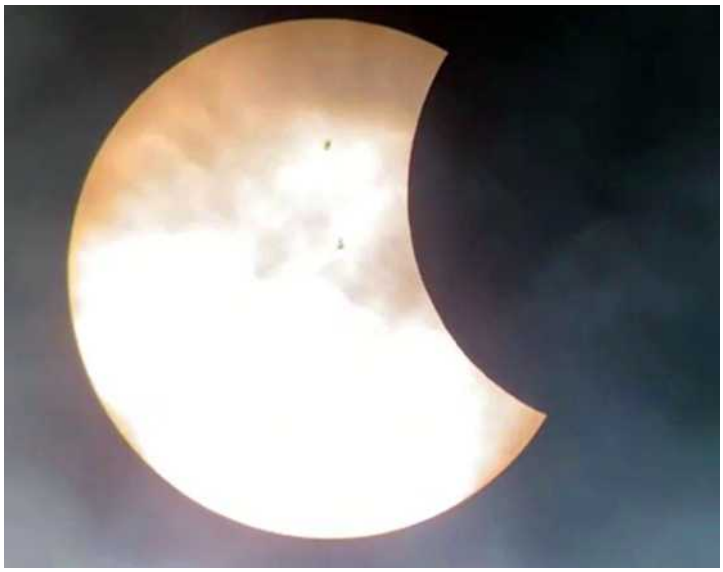
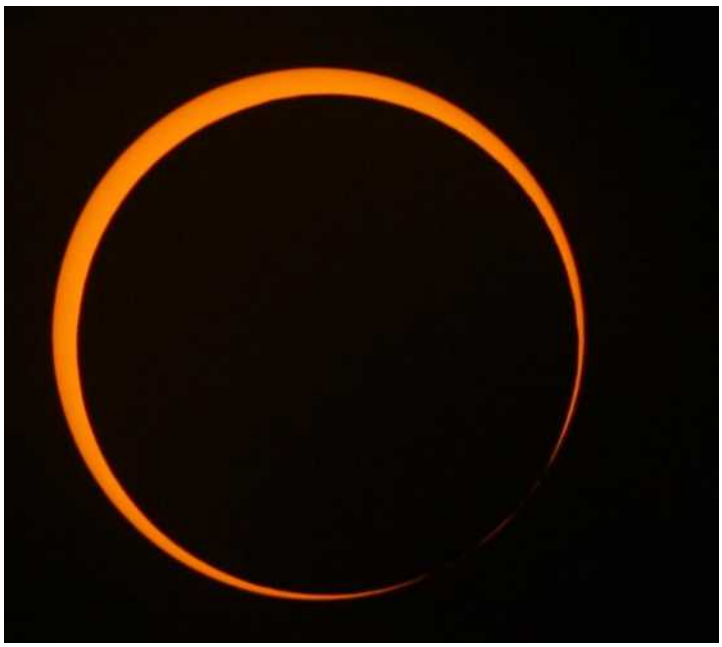
Solar Eclipse



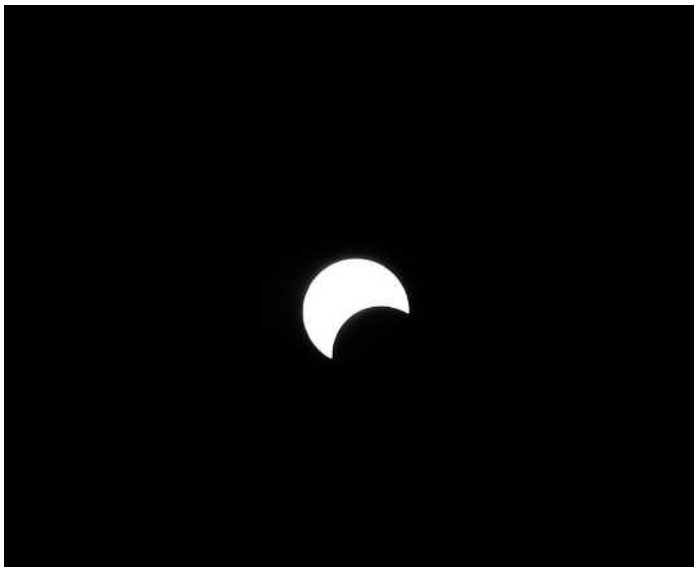
A frame from Steve’s video, which I (Karl) photoshopped, increasing the color a bit.

You can see the thin clouds and sunspots.

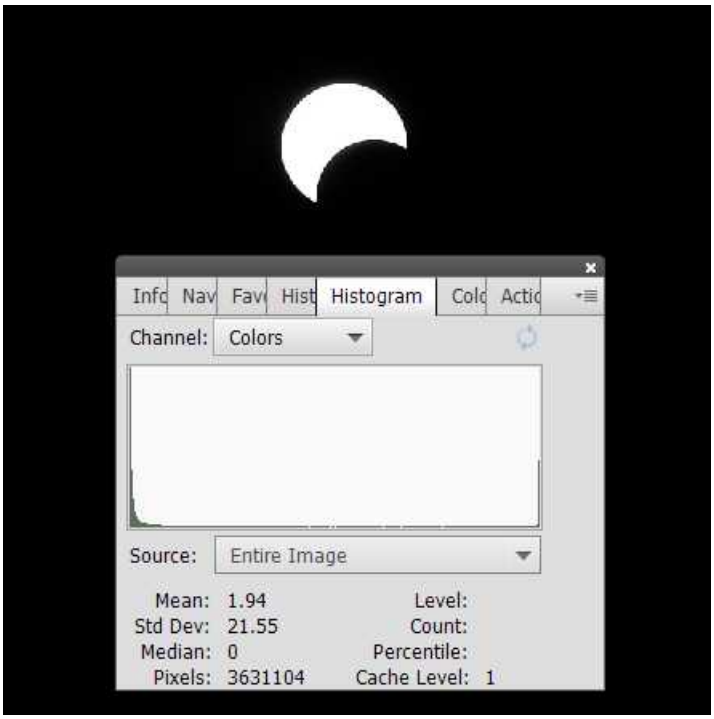


As my frames near contact 3 showed the repeated light and dark spots at the rim of the moon (and then some Googling), the conclusion is: indeed one can !

- J. Thad Coin



Becky sent this image and wrote: “The sun came out just in time. You can use in newsletter if you want. It may need editing.”



Karl’s Suggestion for Next Time

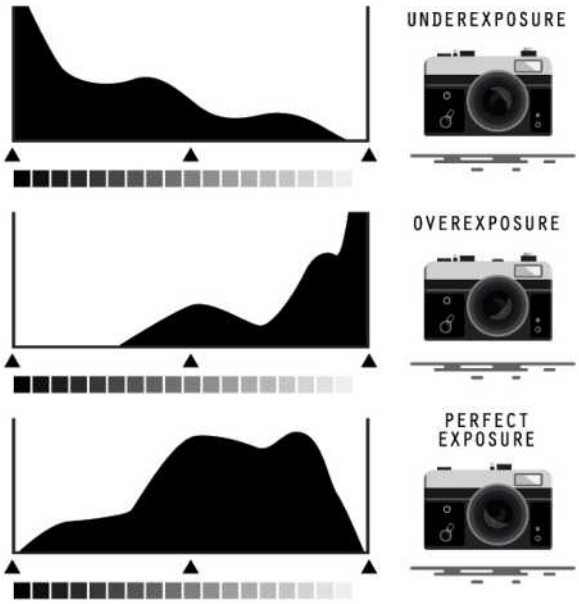
Karl’s Big Mistake: I accidentally deleted my exlipse pictures from my camera!

So anyone who got pictures did better that me!

At left is a histogram for the picture. The spike on the left margin is the amount of black and we’d expect to see this. The spike on the right is the amount of white and it indicate the sun was overexposed.

The chart below shows under-, over- and correct exposures for a typical day scene.

Any picture of the entire Sun will have the dark spike on the left, but a good exposure will have the downward slope on the right intersect the bottom right corner of the chart.

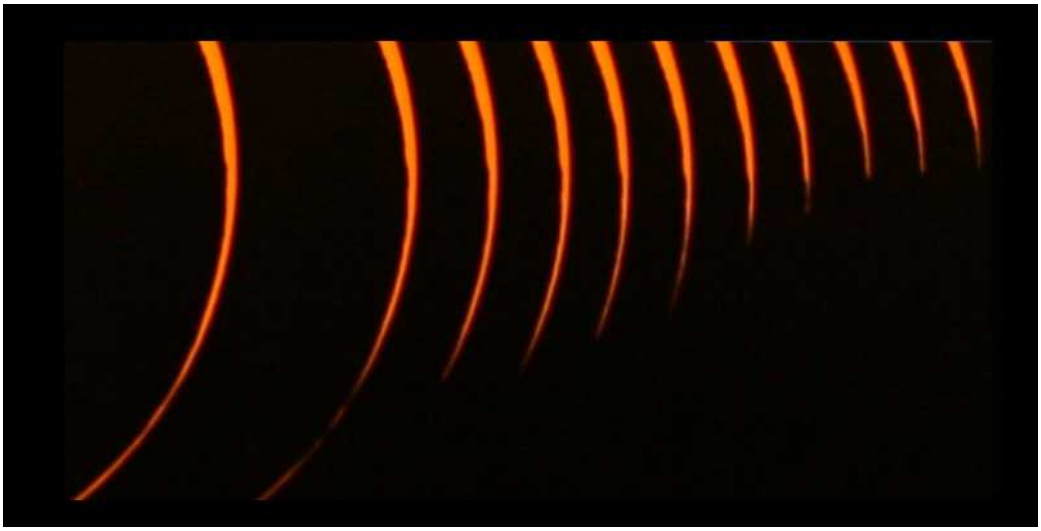


April 8 next year, here’s what I would do with my Canon T7i DSLR:

- Set the camera to Manual.
- Set the ISO as low as possible (100) and turn on the histogram display.
- Set the speed so the histogram and the bottom right corner meet.

If the scene is still too bright, I’ll add the Moon filter, which has a variable darkening effect. Since the scope I’ll use produces a small enough image, I could include a Barlow which will also darken things.

If you had overexposure issues, I suggest you experiment on the Sun (with your solar scope, of course) on a clear day so you’ll be ready next time.



From J. Thad Coin:

I came back from Albuquerque with a massive amount of data. I have been working through images of the entire eclipse, both telescopic and pinhole projection. But I just can't get over the unexpected detail at the leading edges of the moon as it passes through Contact 3. I count around half a dozen each of high elevation and low elevation structures (would be Baley's Beads). I pasted together a series of magnified images of slivers of Moon horizon . The peaks generate dark arcs and the valleys, bright arcs. I have just started to study Moon atlas photos to see if the structures can be identified.

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Hampstead Library Moon Viewing Event

by Karl Adlon

The Hampstead Library hosted a Moon viewing on Tuesday, Oct. 24. Me, Mary Jean and my telescope were able to show attendees (Jon being unable to be there) the Moon. Initially, most of the lit portion of the Moon was visible at ~62 power. Then I switched to 100 power and pointed out Tycho Crater and its associated rays. We received many, many “Thank You”s and the Librarian was most appreciative.

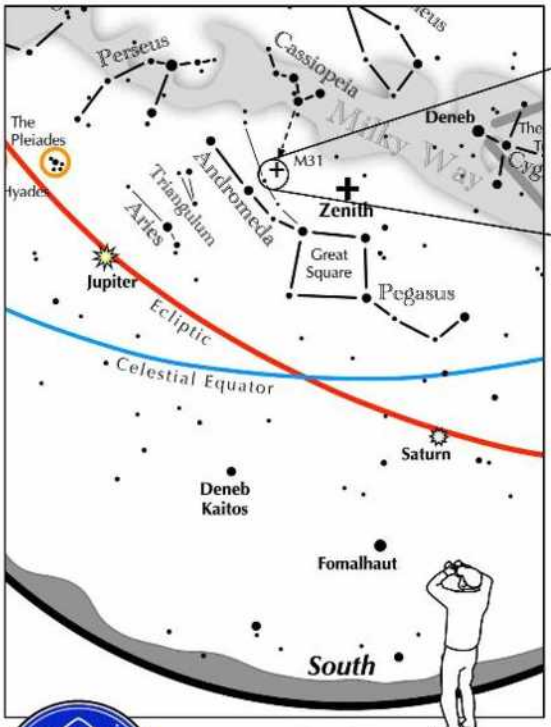
This quite young girl pressed her eye to the eyepiece, whereupon I said “move your head back a bit”. Then I pressed my forefinger to her forehead and she suddenly saw the Moon!

Looking at the Moon, this young man stated he wanted to be an astronaut and he and his Mom said they just bought and were building a tall Saturn 5 model. He returned several times to the telescope.

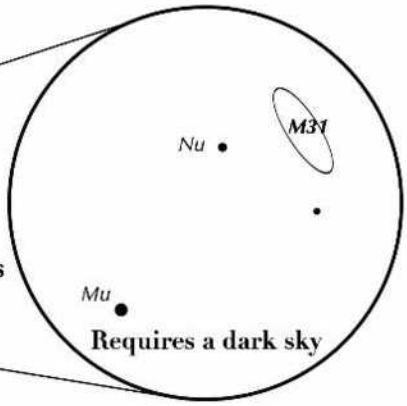
Terri, the Librarian, said she counted 48 people there. Here’s a small portion of the very polite crowd who organized themselves into a line, somewhat to my surprise.

Astronomical League Information

If you can observe only one celestial event this month, consider this one:



South
90 minutes after sunset



Have you seen M31, the Andromeda Galaxy?

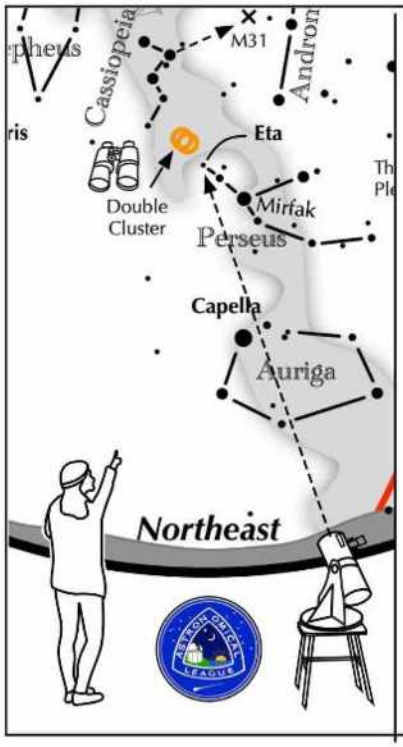
Look high in the south 90 minutes after sunset in November.

- Find the Great Square nearly at the zenith.
- Identify the line of four stars beginning at the northeast corner of the Great Square and extending northeast.
- Identify a second but dimmer line extending more northeasterly than the first line. These two lines represent Andromeda.
- Identify the third star on each line.
- A line passing through those two stars and extending northwest for the same length lands on M31.

or ...

- Draw an arrow pointing southward through the three westernmost stars of Cassiopeia's "W."
- Extend that line for the same length as Cassiopeia is wide.
- It ends on M31.

ASTRONOMICAL LEAGUE Double Star Activity



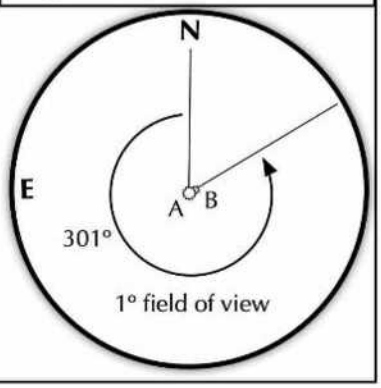
Other Suns: Eta Persei

How to find Eta Persei on a November evening

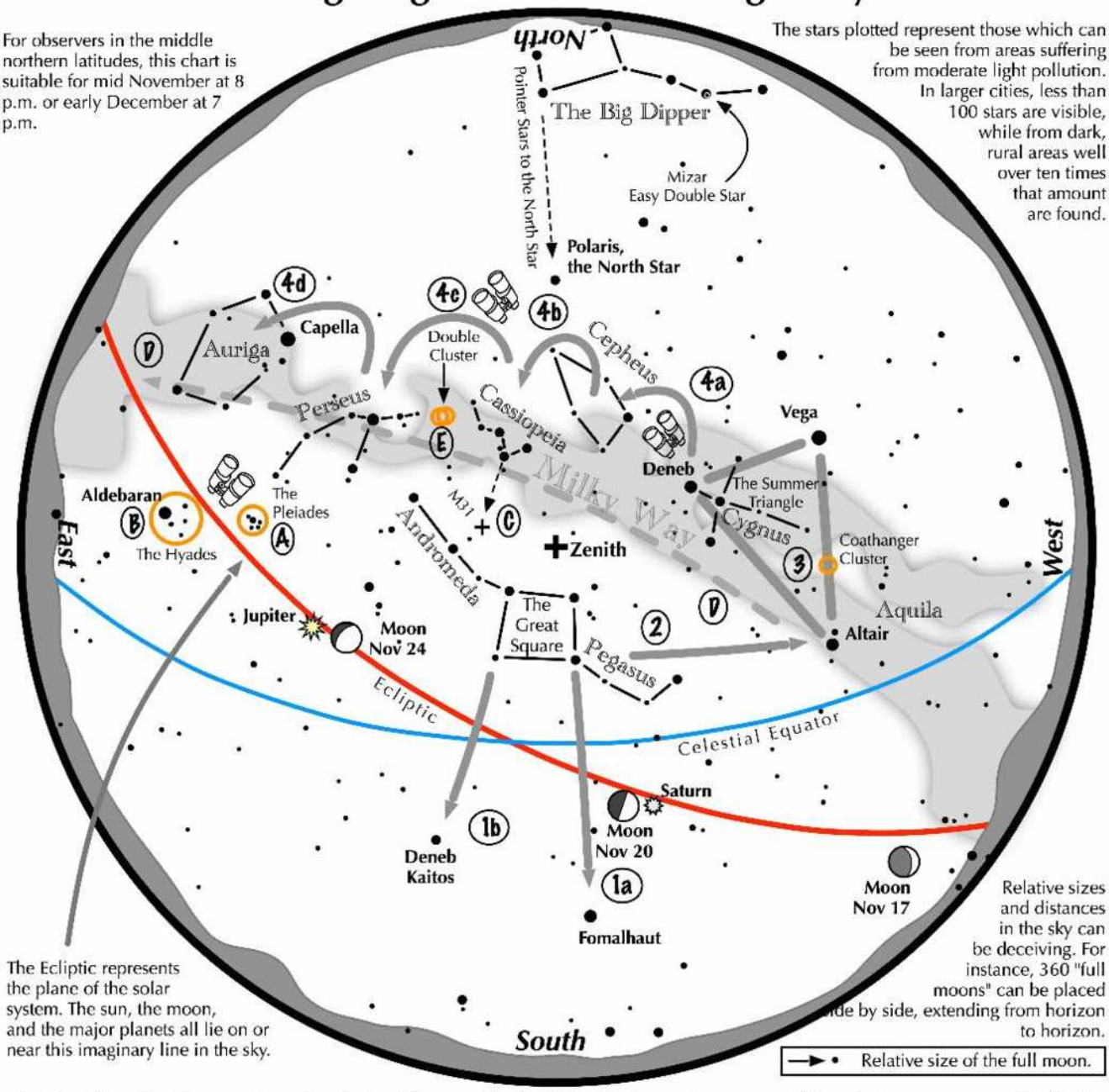
Face northeast. Between bright Capella and the "W" of Cassiopeia, is the constellation Perseus. Eta Persei is not quite mid way between Mirfak, the brightest star in Perseus, and the eastern edge of the "W." It lies close to the Double Cluster.

Suggested magnification: 40x
Suggested aperture: >3 inches

Eta Persei
A-B separation: 28 sec
A magnitude: 3.8
B magnitude: 8.5
Position Angle: 301°
A & B colors:
yellow, blue



Navigating the November Night Sky



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

1. Face south. Almost overhead lies the "Great Square" with four stars about the same brightness as those of the Big Dipper. Extend a line southward following the Square's two westernmost stars. The line strikes Fomalhaut, the brightest star in the south. A line extending southward from the two easternmost stars, passes Deneb Kaitos, the second brighest star in the south.
2. Draw a line westward following the southern edge of the Square until it strikes Altair, part of the "Summer Triangle."
3. Locate Vega and Deneb, the other two stars of the Summer Triangle. Vega is its brightest member, while Deneb sits in the middle of the Milky Way.
4. Jump along the Milky Way from Deneb to Cepheus, which resembles the outline of a house. Continue jumping to the "W" of Cassiopeia, then to Perseus, and finally to Auriga with its bright star Capella.

Binocular Highlights

A and B: Examine the stars of the Pleiades and Hyades, two naked eye star clusters. **C:** The three westernmost stars of Cassiopeia's "W" point south to M31, the Andromeda Galaxy, a "fuzzy" oval. **D:** Sweep along the Milky Way from Altair, past Deneb, through Cepheus, Cassiopeia and Perseus, then to Auriga for many intriguing star clusters and nebulous areas. **E.** The Double Cluster.

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
AL Observing Programs *(Alphabetical Listing)*	https://www.astroleague.org/alphabeticobserving/
Celestial Savings *(Vendor Discount Program)*	https://www.astroleague.org/celestial-savings/
Saros Cycle Determination	https://www.astroleague.org/determining-the-saros/
Public Outreach Downloads	https://www.astroleague.org/outreach/
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. Check back each month to see updated links and information. Contact Hank Lyon, hlyon8448@gmail.com, for any changes to your Reflector delivery preferences (US Mail or Email).

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).

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:	Brendan O'Byrne
Associate VP	Jon Stewart-Taylor
Secretary:	George Pappayliou
Treasurer:	Bill Cooper
ALCor	Hank Lyon

Dues: Dues for 2023 are $25 for Individual and $32 for Family Membership. Students dues are $5 per year.

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You can contact CFAS at info@capefearastro.org

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