



CAPE FEAR Skies

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

March 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

It is sad to report the passing of one of the Society's stalwarts, Richard C. "Rick" Jennings, who died Feb. 20 at age 72.

Born in Bethesda, Md., Rick spent much of his childhood in Wilmington and graduated from New Hanover High School and UNCW. He was a U.S. Navy officer with 15 years of active duty and five years in the Reserves. According to family, one of his most favorite duty stations was Guantanamo Bay, Cuba, where he could take advantage of the scuba diving.

After separation, Rick returned home, studied at Cape Fear Tech (now Cape Fear Community College) and worked at GE in Castle Hayne until his retirement in 2018.

A passionate observer who was a fixture at "Gastronomy," Rick also enjoyed flying, aviation history and his three cats. He will be missed.

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Did you grow up on The Golden Guide to Stars? Written by Herbert Zim and Robert H. Baker and originally issued in 1951, this little pocket-sized volume was a perfect introduction to backyard astronomy for a young person -- just the thing to fit in a Scout pack.

The book featured clear, simple and accurate (for the time) explanation of how stars worked, how telescopes worked and what caused things like rainbows or phases of the moon. In the book were simple schematics of the constellations. James Gordon Irving's color illustrations were gorgeous, sure to get any kid excited about the night sky/

The Golden Guide doesn't come out any more, alas, but I've found something almost as good: "Stargazing for Kids" by Jonathan Poppele, printed by Adventure Publications out of Cambridge, Minn.($12.95).

It's also a pocket-sized paperback, and it tells young readers about the planets, stars, galaxies and nebulae, and maps out the constellations. All the data is updated for the post-Apollo, post-Hubble age, with reproductions of the "Cradle of Stars," etc. If you'd like to introduce astronomy to a child, grandchild or other favorite youngster, you won't go far wrong with this book. Like everything these days, it's available on Amazon, and you should be able to find it or order it at larger book chains. (I picked up my copy at Wild Bird and Garden in Hanover Center -- check out their binoculars.)

Keep Looking Up!

Calendar

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

Saturday, March 8
Public Observing at Carolina Beach State Park

Sunday, March 9
PHO BASIL Vietnamese cuisine
812 College Rd, Wilmington, NC 28403

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

Saturday, March 28
Star Party for Maritime Museum Members @ Brunswick Town/Fort Anderson State Historic Site

Saturday, April 5
Public Observing at Carolina Beach State Park

Saturday, April 5
Ingram Planetarium State Wide Star Party

Events in the Future

4/5 - Public Observing at Carolina Beach State Park
4/5 – Ingram Planetarium State Wide Star Party
4/13 - CFAS Monthly Meeting
4/25 - 6:30 PM; State Wide Star Party, CBSP
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

Presentation Coordinator's Report

by Jon Stewart-Taylor

As presentation coordinator, i am responsible for finding presentations for each monthly meeting. Since the December meeting is always the holiday celebration, we need 11 presentations each year.

I enjoy researching and presenting a topic, so i'm usually good for a couple of presentations each year. Other members of Cape Fear Astro usually step up to do a presentation at least once per year. I try to reach out to nearby astronomy clubs and institutions for the remainder of the year.

For 2025, we're almost full. We have presentations for March through September. Karl has indicated there may be doing Part Three of his Planetary Imaging series in fall. And, we haven't yet made a pilgrimage to the Ingram Planetarium this year.

So what's planned for this year, you ask?

- March: Jon Stewart-Taylor, "Telescope Limiting Magnitude and Limiting Magnification"
- April: Dr. Barbara Becker: “Cursed Quasars”
- May: Dr. Sheila Kannappan: “Chasing Awe”
- June: Frank Rich: “Using Setting Circles”
- July: Karl: “Planetary Imaging part one”
- August: Scott Jackson: “Galileo discovers Neptune”
- September: Karl: “Planetary Imaging part two”
- October: TBD
- November: TBD
- December: Holiday celebration

If you have a presentation in you longing to come out, or if you know someone who could cover an Astronomy, Space Science, or Physics topic at our level, please contact me. Even if 2025 is nearly full, we still have most of 2026 waiting for us. It never hurts to get a head start on presentations.

March 29 Star Party

by Karl Adlon

Due to heavy rains, last late Fall’s star party for Members of the Maritime Museum was postponed. It has been rescheduled for March 29 will be held at the Brunswick Town/Fort Anderson State Historic Site.

The museum expects about 30 members will attend. There is very little lighting on site and park officials are also interested to find out what we think of the site for astronomy.

Be aware that Route 133 is closed for bridge repair/construction, so if you are coming from the Wilmington area, you would have to take “the long way around”.

Please let Karl (kmja79@yahoo.com) know if you are able to support this. Thank you!

Software for One Shot Color Processing of Astro Images

by Frank Rich

There is a new FREE Download for One Shot Color Processing of Astro images - Called "Seti Astro Photo Suite" Also a website; www.setiastro.com

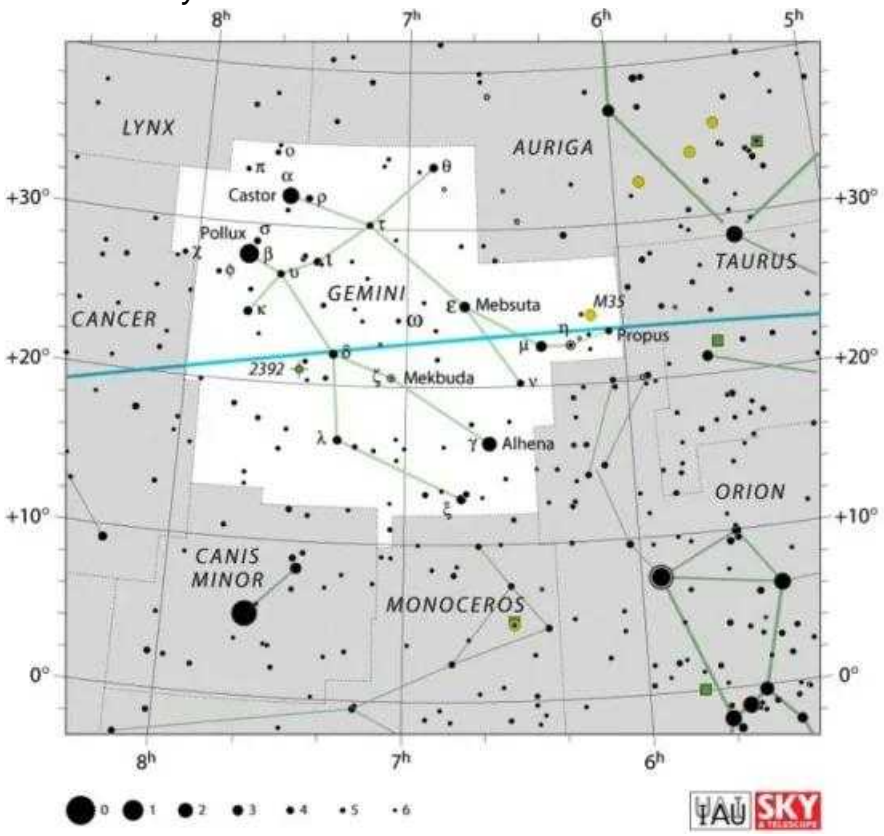
This uses many of the addons that PIXINSIGHT does! Looks very promising.

I suggest you go to YouTube, search for "Cuiz the Lazy Geek" he provides download instructions and a tutorial of how to use this.

Gemini

by Jon Stewart-Taylor

This is one of the ancient constellations, and was included in Ptolemy's 48. Gemini is The Twins. They make a pretty good pair of stick-figures. The bright stars Castor and Pollux are the heads, alphabetical in right-ascension order (i.e. Castor rises first, and is to the east, while Pollux is to the west). They stand with their arms over each-other's shoulders. Gemini is a Zodiac constellation, which means planets and the moon sometimes wander through it.



There is only one Messier object in Gemini, but it's a beauty: M35, sometimes called "the shoebuckle cluster). It's a large, bright open cluster, located near the foot of Castor. As a bonus, the NGC open cluster 2158 is in the same 1º or wider field of view.

Gemini has two NGC planetary nebulae: 2392 (the Eskimo or Clown Face),

and 2371 (the Double-Bubble).

These are both pretty small, so you'll need some magnification to get any detail out of them, as you can tell from these Seestar S50 images:

There are a bunch of other NGC open clusters, but for the most part they're pretty forgettable. Perhaps the best of these is 2420:

All these images were taken with the Seestar S50.

Planetary and Miscellaneous Stuff

by Karl Adlon

As you probably know, most of the planets are up in the evening sky and perhaps you've also noticed the seeing, both forecast and actual, has not been good of late. Clear Sky Chart for Southport had been sponsored and so past sky data was available. Here is similar data from another site and it looks similar to what I remember for us.

Planetary is best in Summer and Autumn. Deep Sky is . . . well you can see for yourself.

Month	Days of Month		Planetary	Data Pts	Deep Sky Max 60%
January	1st to 10th	Night	28%	754	27%
January	11th to 20th	Night	30%	756	25%
January	21st to end	Night	29%	828	19%
February	1st to 10th	Night	30%	760	21%
February	11th to 20th	Night	20%	740	20%
February	21st to end	Night	28%	628	27%
March	1st to 10th	Night	33%	756	18%
March	11th to 20th	Night	30%	756	29%
March	21st to end	Night	34%	830	16%
April	1st to 10th	Night	33%	760	25%
April	11th to 20th	Night	42%	751	25%
April	21st to end	Night	46%	760	24%
May	1st to 10th	Night	43%	682	17%
May	11th to 20th	Night	50%	554	15%
May	21st to end	Night	63%	599	13%
June	1st to 10th	Night	62%	442	16%
June	11th to 20th	Night	60%	380	16%
June	21st to end	Night	67%	550	15%
July	1st to 10th	Night	70%	540	12%
July	11th to 20th	Night	72%	539	8%
July	21st to end	Night	66%	614	11%
August	1st to 10th	Night	64%	558	8%
August	11th to 20th	Night	61%	655	11%
August	21st to end	Night	64%	814	15%
September	1st to 10th	Night	66%	760	24%
September	11th to 20th	Night	59%	760	24%
September	21st to end	Night	48%	760	17%
October	1st to 10th	Night	57%	760	18%
October	11th to 20th	Night	51%	760	26%
October	21st to end	Night	53%	836	28%
November	1st to 10th	Night	48%	764	28%
November	11th to 20th	Night	43%	760	27%
November	21st to end	Night	45%	760	26%
December	1st to 10th	Night	36%	760	21%
December	11th to 20th	Night	38%	760	24%
December	21st to end	Night	35%	827	17%

Above is a more detailed look at the data. White denotes conditions are too bad for astronomy; the darker the better.

I looked at jet stream data for several past years and I decided that the problem for planetary work is the jet stream is usually overhead or close by, which very negatively affect seeing.

The accepted way to do planetary imaging, sometimes called "lucky imaging", is to use a camera capable to taking videos to record to your computer (usually a laptop or notebook) and then process the best video frames (stills).

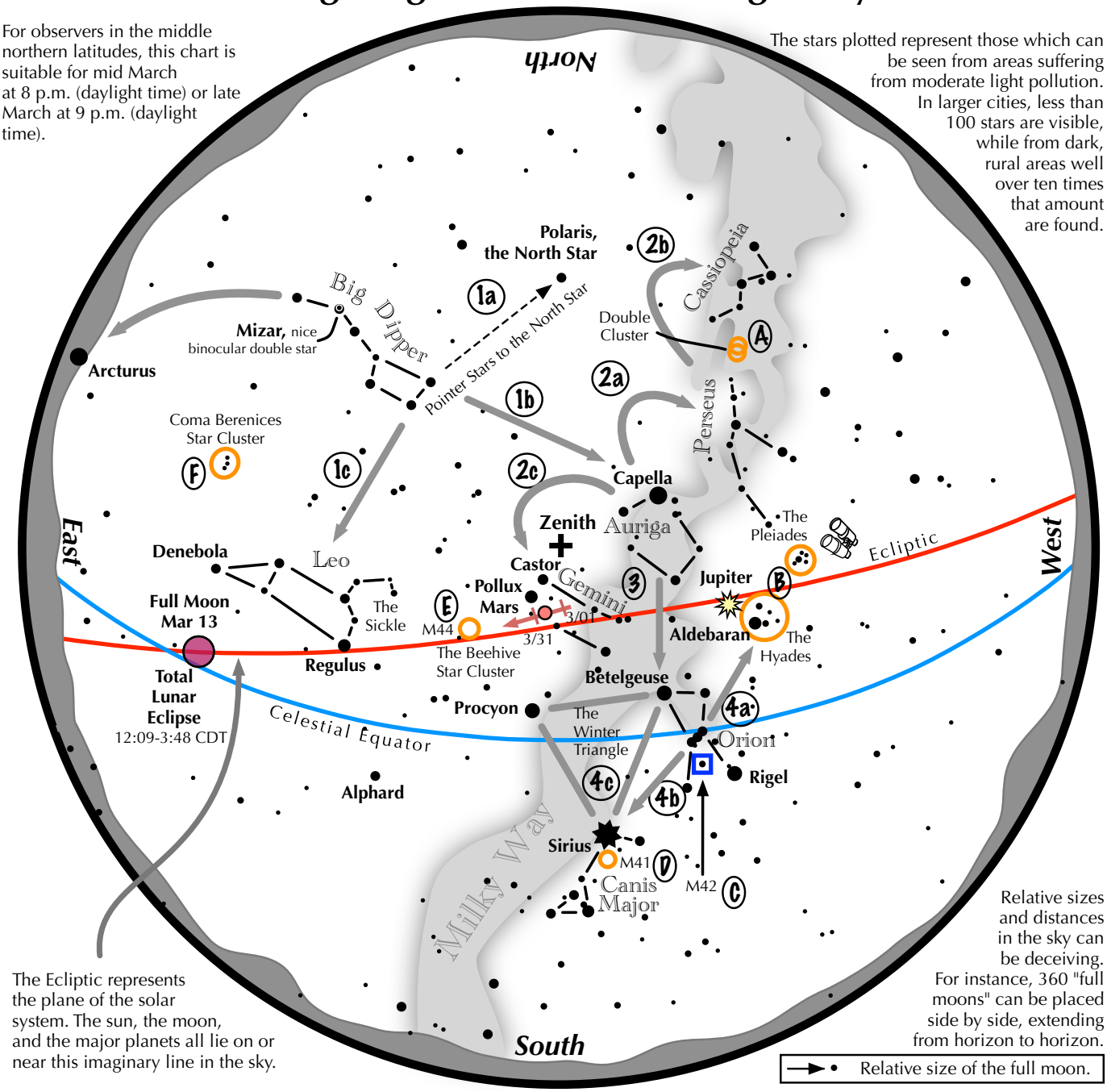
I did this more before I moved here and seeing the information given above, thought I should do more. A couple years ago, though, my Windows 7 bios became corrupted and I was told by a knowledgeable person that, with Windows 10 then being current, Windows 7 could not be installed and 10 was not compatible. So I found a computer at a price I was will to pay and bought it. Now I find that the camera and software kept stalling on the new laptop. That's when I decided to check the laptop hardware specs. Crap! Only 12 GB of memory installed (16 is recommended) and only 1.19 Ghz speed max. I now have less money on the bank and a new notebook that WORKS. A quick test and it achieved 37 frames per second on full frame, so it'll be faster using a crop that is usually used.

This has gotten me more interested in planetary imaging, so I'm hoping to do more than I have lately and I'll be giving presentations on this subject in the near future.

Navigating the mid March Night Sky

For observers in the middle northern latitudes, this chart is suitable for mid March at 8 p.m. (daylight time) or late March at 9 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.

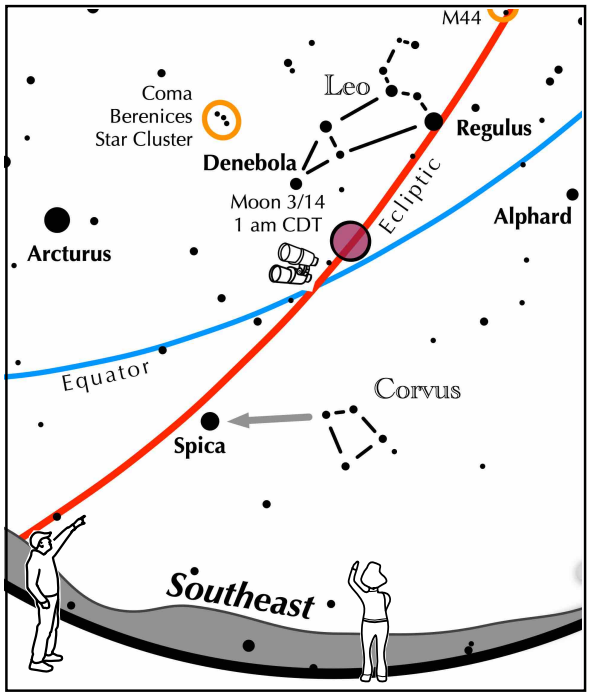
Navigating the March night sky: Simply start with what you know or with what you can easily find.

1. Above the northeast horizon rises the Big Dipper. Draw a line from its two end bowl stars upwards to the North Star. Its top bowl stars point west to Capella in Auriga, nearly overhead. Leo reclines below the Dipper's bowl.
2. From Capella jump northwestward along the Milky Way to Perseus, then to the "W" of Cassiopeia. Next jump southeastward from Capella to the twin stars of Castor and Pollux in Gemini.
3. Directly south of Capella stands the constellation of Orion with its three Belt Stars, its bright red star Betelgeuse, and its bright blue-white star Rigel.
4. Use Orion's three Belt stars to point northwest to the red star Aldebaran and the Hyades star cluster, then to the Pleiades star cluster. Travel southeast from the Belt stars to the brightest star in the night sky, Sirius. It is a member of the Winter Triangle.

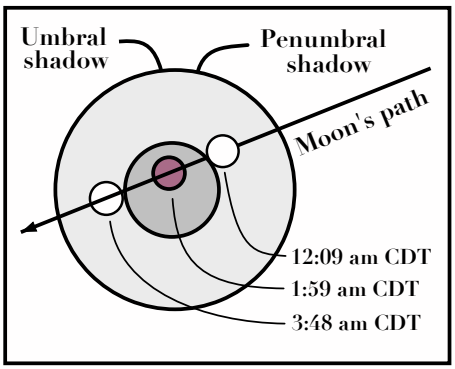
Binocular Highlights

A: Between the "W" of Cassiopeia and Perseus lies the Double Cluster. **B:** Examine the stars of the Pleiades and Hyades, two naked eye star clusters. **C:** M42 in Orion is a star forming nebula. **D:** Look south of Sirius for the star cluster M41. **E:** M44, a star cluster barely visible to the naked eye, lies to the southeast of Pollux. **F:** Look high in the east for the loose star cluster of Coma Berenices.

If you can observe only one celestial event in the evening this March, see this one.



View to the southeast on March 14 at 1 am CDT

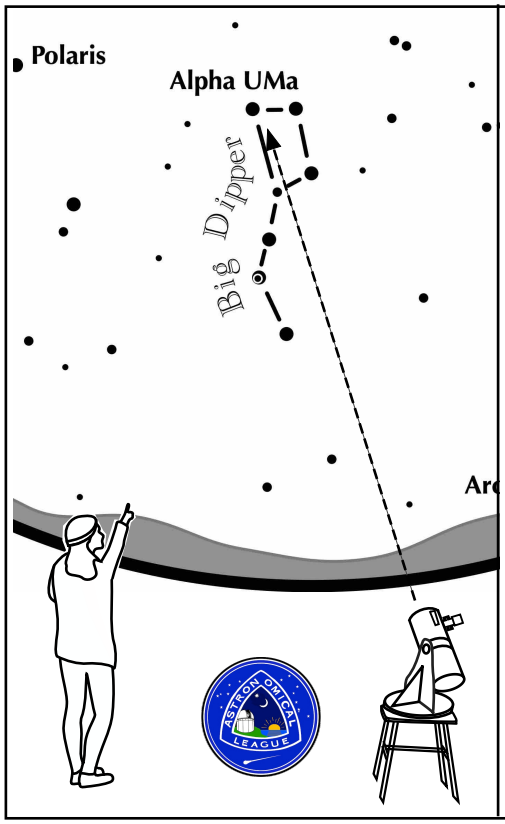


The Moon slides through a total eclipse

In the hours just after midnight on March 14, the brilliant full moon slides into Earth's shadow.

- Even though the partial umbral eclipse begins at 12:09 am CDT, darkening might not be noticed for another 5 minutes.
- When totality is reached, the full moon's brilliance is gone, allowing the stars to appear. Can you see that the moon lies mid-way between Regulus to the upper right and Spica to the lower left?
- At mid eclipse, what color is the moon? How red is it?
- During the partial phases, can you notice that the shadow's edge is not straight, but curved?

ASTRONOMICAL LEAGUE Double Star Activity



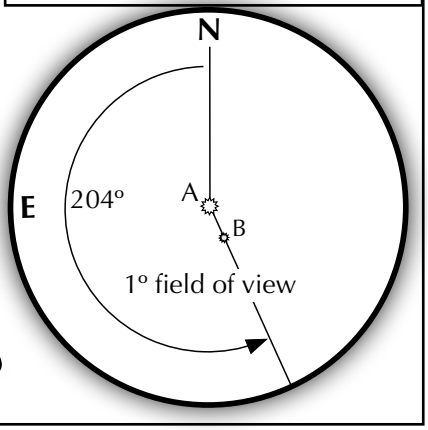
Other Suns: Alpha Ursae Majoris

How to find Alpha Ursae Majoris on a March evening

Face northeast. Look for the Big Dipper standing upright on its handle. Alpha is the star on the upper left corner of the bowl.

Suggested magnification: >20x
Suggested aperture: >3 inches

Alpha UMa
A-B separation: 381 sec
A magnitude: 2.0
B magnitude: 7.0
Position Angle: 204°
Colors:
orange
dark orange

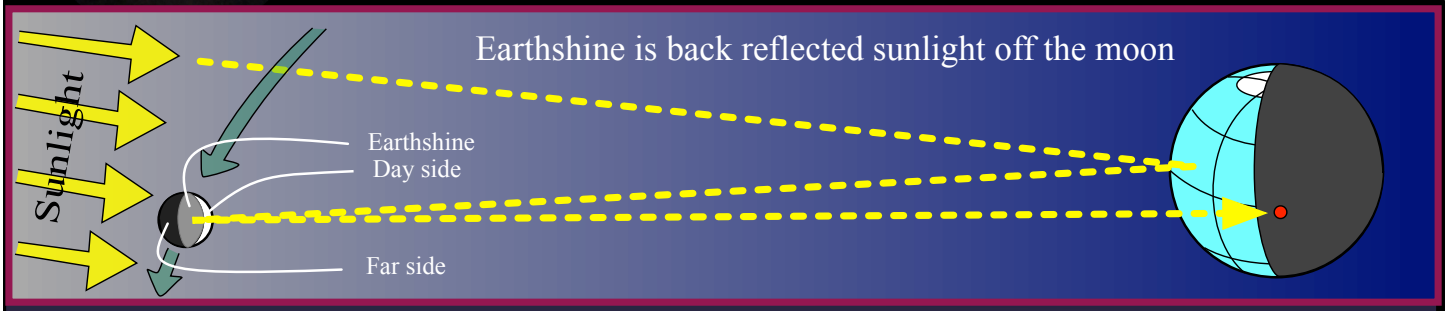


Try binoculars!

Evening Earthshine

aka "The old moon in the new moon's arms"

In a very strange sense, Earthshine is the reflection of Earth on the moon.



Older than 4 day-old moon:
Distinguishing Earthshine with the unaided becomes harder with each passing evening. However, the moon's night side can still be seen through a telescope for a few more nights.

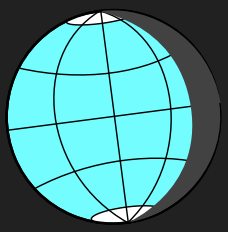
4 day-old moon:
- Sets up to 5 hours after sunset.
- The glare from its brightly lit day side begins to make seeing Earthshine slightly more difficult.

3 day-old moon:
- Sets up to 3.5 hours after sunset.
- Earthshine is very prominent.

2 day-old moon:
- Sets up to 2 hours after sunset.
- The bright twilight mutes the diaphanous glow of the Earthshine.

1 day-old moon:
- Typically sets 60 minutes or less after sunset.
- Earthshine appears very subdued because of the moon's placement in the bright twilight, and the thinness and relative dimness of the crescent.
- Binoculars help pick up the very thin lunar crescent in the twilight just above the horizon.

New Moon, 0 day-old moon:
- Sets with the sun.



A very bright Earth

- When the moon shows a thin crescent phase in Earth's sky, the Earth shows a thick gibbous phase in the lunar sky.
- A thick gibbous Earth covers 16 times the sky than the full moon from Earth does – and it reflects 4 times more light. This means that the near full Earth in the lunar sky is nearly 64 times brighter than the full moon is in our sky.
- For an observer on the unlit near side of the moon, the lunar landscape is illuminated by bright Earthlight.

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 (*NEW!*)	https://www.youtube.com/channel/...
AL Observing Programs *(Alphabetical Listing)*	https://www.astroleague.org/alphabeticobserving/
Night Sky Tools	https://www.astroleague.org/navigating-the-night-sky-guides/
Astroleague Store	https://store.astroleague.org/
Current and Past Issues of *Reflector Magazine*	https://www.astroleague.org/reflector/
AL Facebook Page:	https://www.facebook.com/search/top?q=astronomical%20league
Additional AL News, Information and Reminders	**Reminder: The March 2025 Reflector will not be issued in hard copy. When available, please use the link above to download the March 2025 edition. The AL hopes to resume hard copy issues 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. 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).

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/