



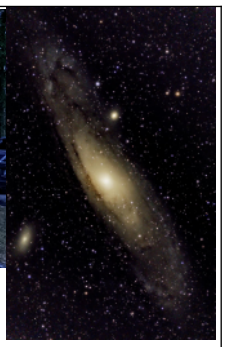

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Monthly Newsletter
Cape Fear Astronomical Society
Serving Wilmington, NC and Surrounding Areas

CAPE FEAR Skies

January 2026

President's Message

by Ben Steelman

First, big thanks to Karl and Mary Jean Adlon for hosting the Society's Christmas party.

Now the bad news: Not enough members showed up. (That Sunday did turn out to be the coldest day of the year, pipe-busting weather.) So, elections for 2026 officers will have to be held at the January meeting.

Just a reminder: The candidates so far are:

- ★ President: Karl Adlon
- ★ Vice President: Jon Stewart-Taylor
- ★ Associate VP: Alan Hilburn
- ★ Treasurer: Ben Steelman

You'll notice there's no Secretary. Nobody volunteered for the job. (George Pappayliou, who's done a terrific job for several years now is stepping down.) Thus, I will have to call for nominations before the election.

No offense to George, but Secretary is not a stressful job. You just show up at meetings and take minutes -- a page or less will do. Also, you help the Treasurer keep track of the roster of active members.

Please step forward and volunteer for the job.

It's been a terrific year for the Society. We got our dome up at the Starfields observatory site. Jon advises we have set up an AstroBin account, for members who want to store and share their astrophotos online. (For details, email Jon.) It looks like 2026 will be even better. And if the Artemis 2 mission goes off successfully, we can expect a surge in public interest. Happy New Year to everybody.

Future President's Message

by Karl Adlon

We need 13 Members to attend the January meeting, either in person or via Zoom, to have a quorum and hold elections. Please attend if at all possible. Thank you!

Reminder: **DUES ARE DUE**

Upcoming Calendar of Events

JANUARY

03 Full Moon

09 Club Observing @ Club Observatory – 5:00 PM

10 Club Observing @ Club Observatory – 5:00 PM

11 Last Quarter Moon

Sunday, January 11

Gastronomy - 5 PM - Watch your email for Location

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

Program: "The 'Caldwell' Observing List" by Jon Stewart-Taylor

Also simulcast via Zoom

16 Club Observing @ Club Observatory – 5:00 PM

17 Club Observing @ Club Observatory – 5:00 PM

19 New Moon

26 First Quarter Moon

2026 Monthly Meeting Dates

January 11th
February 1st (moved due to SB LX)
March 8th
April 12th
May 3rd (moved due to Mother's Day)
June 14th
July 13th
August 9th
September 13th
October 11th
November 8th
December 13th

Presentation Coordinator's Report

by Jon Stewart-Taylor

Our presentation for the January meeting will be "The 'Caldwell' Observing List" presented by Jon Stewart-Taylor. He'll describe why the list was created, what makes it interesting and unique, and discuss his progress through the 109 objects on the list. This will include some images taken using the Seestar S50.

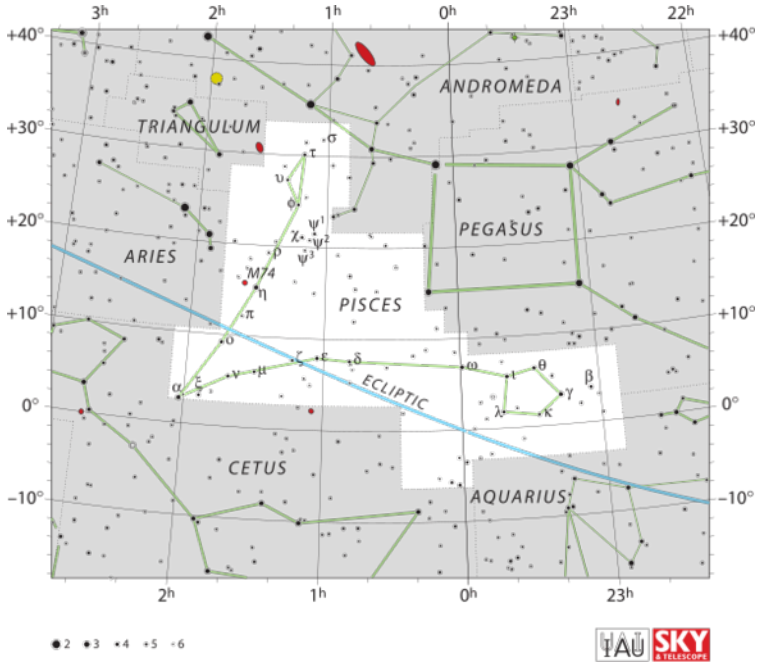
At this time we have no other presentations scheduled. If you have a presentation you'd like to do for the club, or you know of somebody who might be willing to do something for us, please contact Jon. We have 10 more presentations to find, and the sooner we can get started the better.

Pisces

by Jon Stewart-Taylor

Pisces is one of the 48 constellations described by Ptolemy. It is a Zodiac constellation, with the path of the sun and planets crossing it. The March equinox point (where the Zodiac crosses the ecliptic) is currently in Pisces. Pisces is below Pegasus and Andromeda, and bordered in the Zodiac by Aquarius and Aries.

Pisces is depicted as two fish, with cords tied around their tails leading to a knot at α Pisces. The "western fish" is also known as "the Circlet" is below the Great Square of Pegasus. It contains 5 stars in a small pentagon. The "eastern fish" is a small triangle of stars, pointing towards Andromeda.



The stars in Pisces are pretty dim. The brightest star is about mag 3.6.

The only Messier object in Pisces is galaxy M74 (one of the very difficult objects to find at the binning of the Messier Marathon). A few NGC galaxies start at mag 10 and dimmer.

Counting Craterlets and Assessing Optics

by Karl Adlon

Many sites use the included picture and, not knowing who first developed it, I haven't credited the original source. To that person: Thank You!

The number of craterlets visible in the lunar crater Plato with an 8-inch telescope is a classic test of both the atmospheric "seeing" conditions and the quality of the telescope's optics.

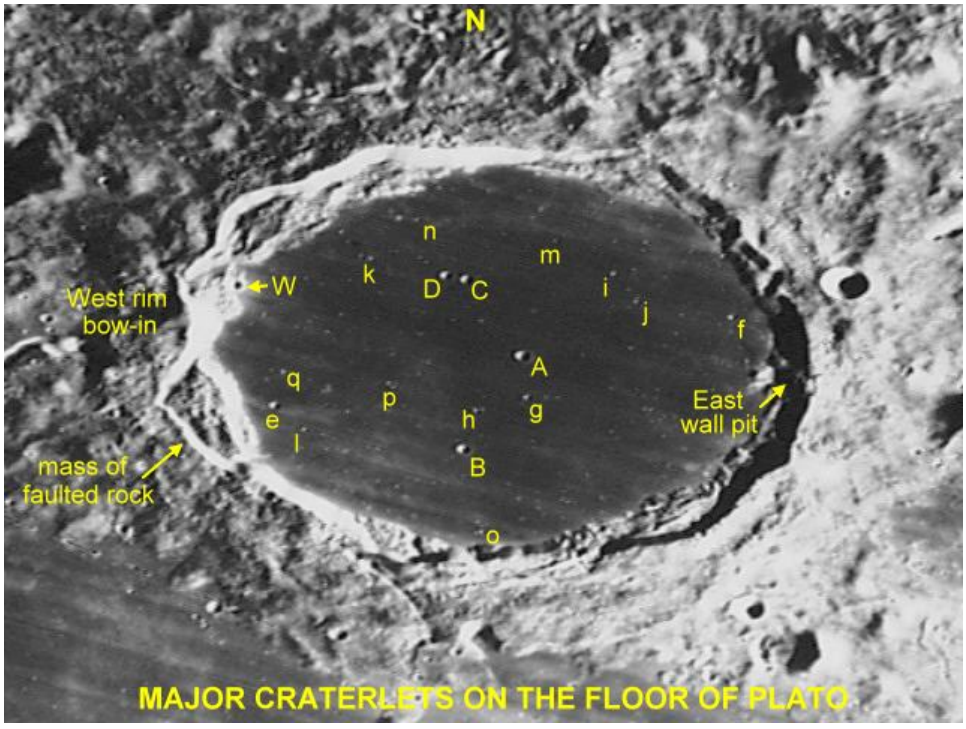
- Required: Excellent seeing conditions. The most critical factor; even a perfect 8-inch telescope will only show a few main craterlets on a night with average or poor seeing. Under excellent seeing conditions, the atmosphere is steady, allowing the telescope to reach its full potential and reveal significantly more detail.
- Telescope Quality: Assuming good seeing, a high-quality 8-inch telescope with well-figured optics, proper collimation, and good thermal management will be able to resolve finer details and therefore more craterlets than a lower-quality instrument.

Expected Number with an 8-inch Telescope

Excellent Seeing: With stable air and a high-quality instrument, observers can sometimes see 6 to 8 craterlets visually. Exceptional amateur images with an 8-inch scope have even detected up to 16 tiny craterlets under optimal conditions, approaching the theoretical resolution limit.

Viewing Tips

- Ensure the telescope is at ambient temperature (thermal equilibrium with air temperature).
- Use a magnification of 200x to 250x or higher.
- Observe when the terminator is near Plato, ideally about 1 to 1.5 days after First Quarter Moon, or 1 to 1.5 days before Last Quarter Moon.
- Be patient and wait for those brief moments of atmospheric stillness ("good seeing").



** MAJOR CRATERLETS ON THE FLOOR OF PLATO

Rim-to-rim diameters 1 km or larger, based on Lunar Orbiter IV images.

NOTE: Letters used are *not* standard IAU secondary crater designators.

APPROXIMATE CRATER DIAMETERS (+/- 0.2 miles uncertainty)

The "BIG FOUR" (+1)

A = 1.7 miles (2.7 km)

B = 1.5 miles (2.4 km)

C = 1.5 miles (2.4 km)

D = 1.3 miles (2.1 km) W (on west-northwest wall) = 2.0 miles (3.2 km)

NOTES: Although many amateurs rarely seem to see very much on the apparently smooth dark floor of Plato, the above craterlets are the ones most often reported by those lucky enough to get really good seeing. "A" is the easiest of this group due to its fairly prominent ramparts, and has been reported in a 4 to 5 inch aperture, although the unresolved "bump" of craterlet-A's ramparts is visible in only a 3.1 inch. 3 or 4 of these craterlets can sometimes be observed under low sun angle and in good to excellent seeing in apertures 6 inches and *larger*. These four can sometimes be "detected" as very tiny white spots in 3 to 5 inch scopes during the full moon, although to show them all as true pits often requires a 7 or 8 inch aperture. The "East Wall Pit" is a much larger irregular feature (4 miles across) which often

hides in the shadow of the eastern wall during the lunar mornings. It may or may not be an impact crater. There is also a small nearly rimless craterlet "W" low on the west-northwest wall north of the west-rim bow-in which is about 2 miles across. It is considerably more difficult to observe than its size would indicate, as the sun has to be at just the right angle to allow any shadow to fill even part of it to make it visible.

The "Little Four"

e = 1.2 miles (1.9 km)

f = 1.0 miles (1.6 km)

g = 0.94 miles (1.5 km)

h = 1.4 x 0.8 miles (2.2 x 1.3 km)

NOTES: Craterlet-e has been sighted in a good 8 inch, but craterlet-f may take a bit larger scope to see with any regularity. "e" tends to hide in the long early morning shadows, as "f" does also in the low lunar evening. The Lunar Orbiter shots of Plato show that "h" is a tiny double craterlet with 0.9 and 0.8 mile diameter components, forming an elongated 1.4 x 0.8 mile feature visible in larger apertures, but not fully resolved. Again, very high lunar sun may allow some of these cratelets to be "detected" as tiny white spots near full moon. The "Big Four", and the "Little Four" probably represent most of the craterlets on the floor of Plato which might be visible to amateurs using moderate to large apertures under excellent seeing. For larger scopes in great seeing conditions, try:

The "Tiny Nine"

i = 0.7 miles (1.2 km) j = 0.6 miles (1.0 km)

k = 0.7 miles (1.3 km)

l = 0.6 miles (1.0 km)

m = 0.7 miles (1.2 km)

n = 0.7 miles (1.1 km)

o = 0.7 miles (1.1 km) (double craterlet)

p = 0.7 miles (triple craterlet)

q = 0.6 miles (1.0 km) (double overlapping crater)

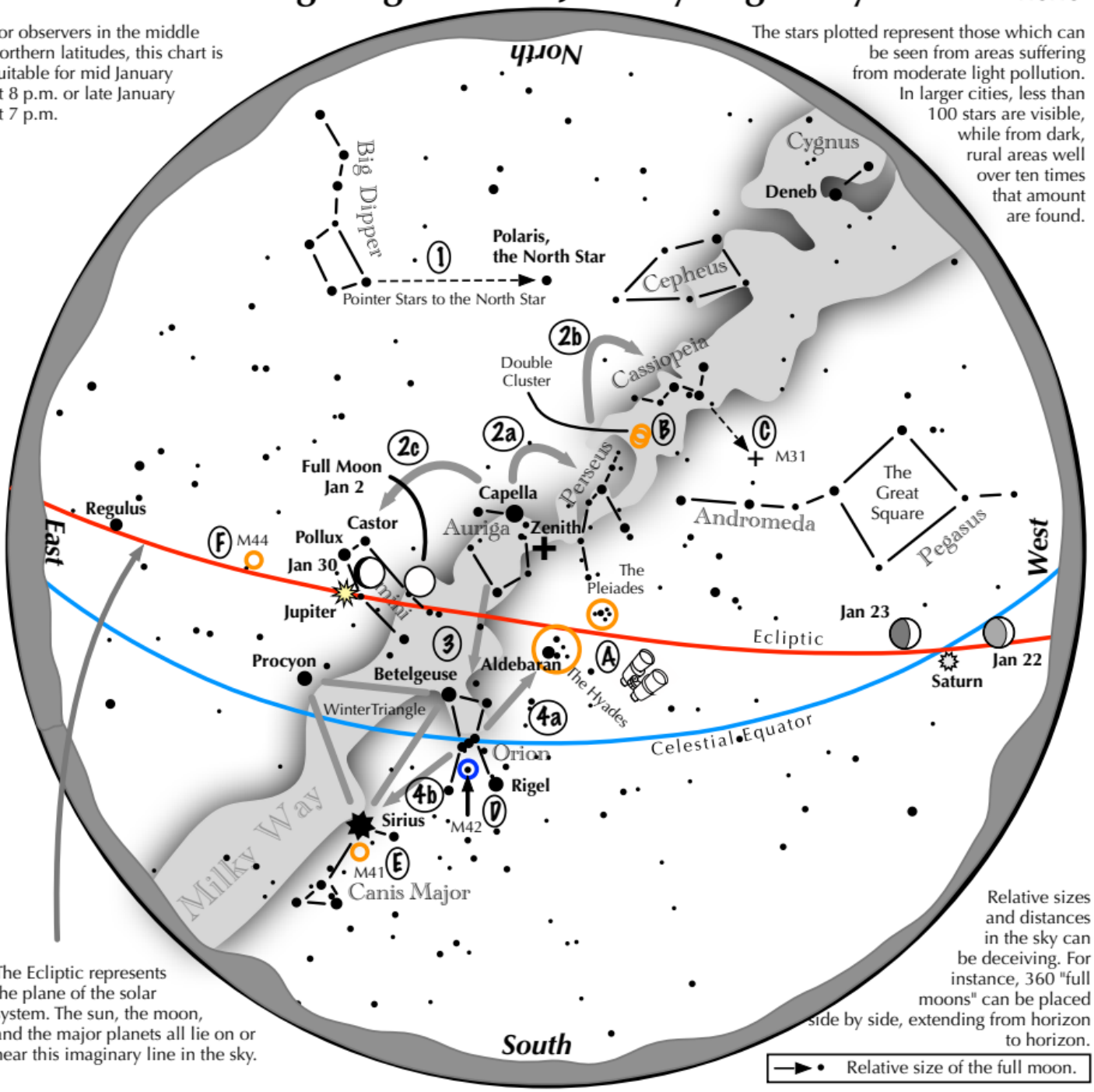
Maybe you can “see” these using imaging techniques.

Navigating the mid January Night Sky

2026

For observers in the middle northern latitudes, this chart is suitable for mid January at 8 p.m. or late January at 7 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 winter night sky: Simply start with what you know or with what you can easily find.

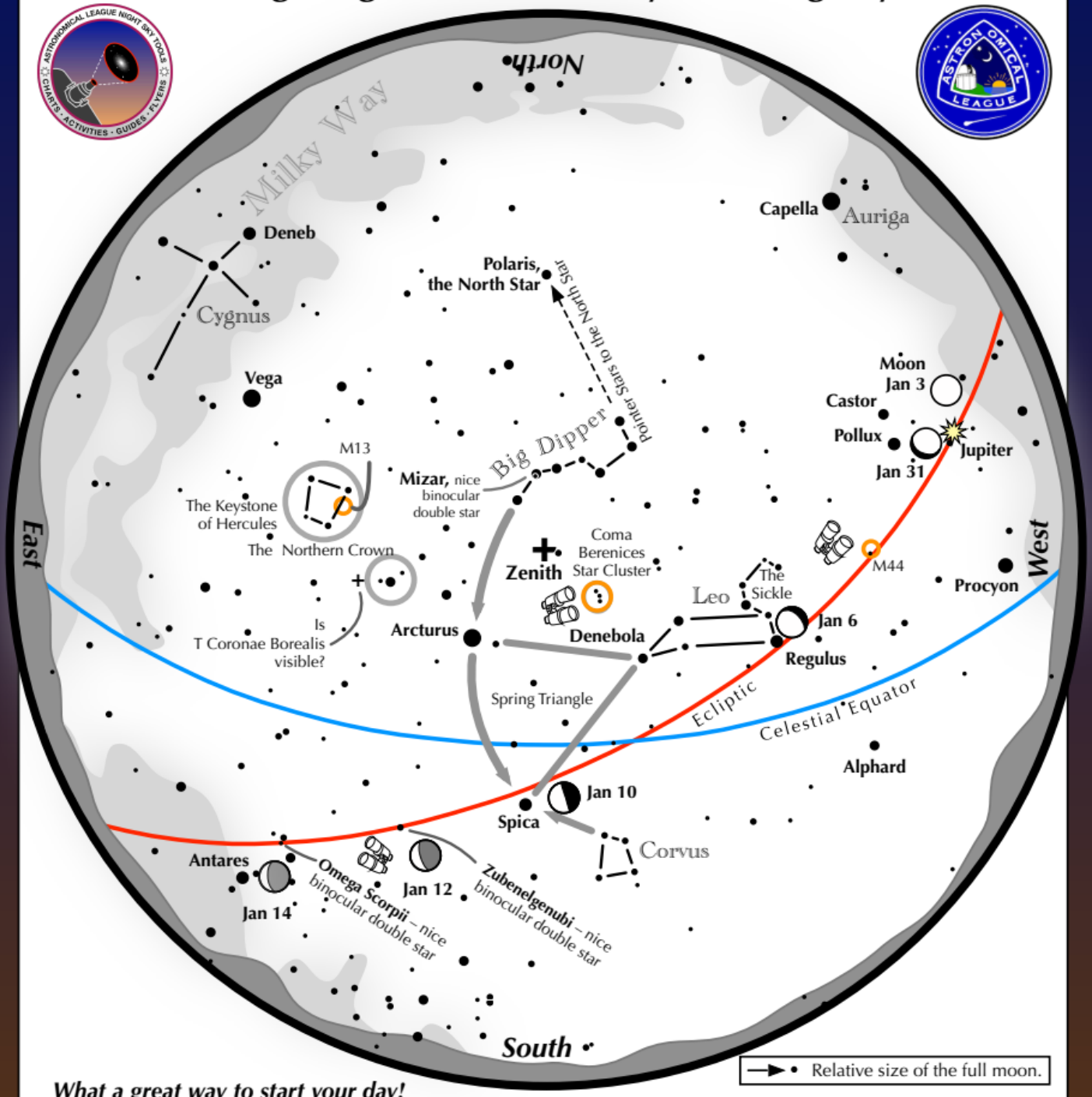
1. Above the northeast horizon rises the Big Dipper. Draw a line from its two end bowl stars upwards to the North Star.
2. Face south. Overhead twinkles the bright star Capella in Auriga. Jump northwestward along the Milky Way first to Perseus, then to the "W" of Cassiopeia. Next Jump southeastward from Capella to the twin stars Castor and Pollux of 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 to the red star Aldebaran, then to the Hyades, and the Pleiades star clusters. Travel southeast from the Belt stars to the brightest star in the night sky, Sirius.

Binocular Highlights

A: Examine the stars of the Pleiades and Hyades, two naked eye star clusters. **B:** Between the "W" of Cassiopeia and Perseus lies the Double Cluster. **C:** The three westernmost stars of Cassiopeia's "W" point south to M31, the Andromeda Galaxy, a "fuzzy" oval. **D:** M42 in Orion is a star forming nebula. **E:** Look south of Sirius for the star cluster M41. **F:** M44, a star cluster barely visible to the naked eye, lies to the southeast of Pollux.

Navigating the mid January Morning Sky

2026



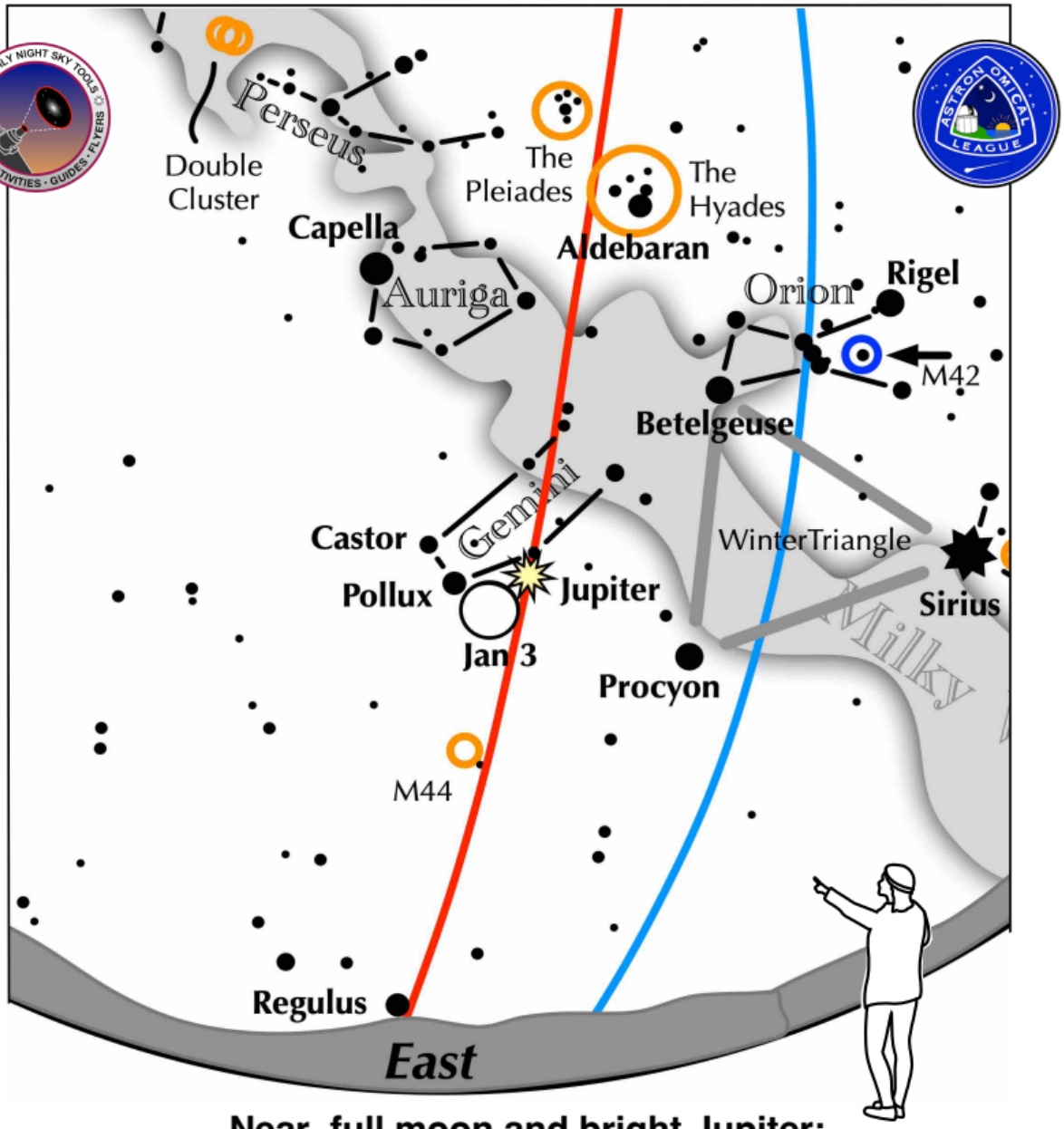
What a great way to start your day!

For observers in the middle northern latitudes, this chart is suitable for mid January at 5:30 a.m.

Late sunrises in January provide opportunities for early morning skywatching.

- Bright Jupiter shines in the west-northwest and moves below Pollux in Gemini.
- The third quarter moon floats near Spica on January 10.
- The waning crescent moon glows near Antares on January 14.
- Continue watching for a sudden and rapid brightening of T Coronae Borealis. When will it explode?
- A great time for viewing the Big Dipper, Leo, and Hercules. And it is time for galaxy viewing!

An observing activity for this January 3.



Near–full moon and bright Jupiter: What can you see in the moon glow?

In the evening of January 3, look for Jupiter to the upper right of the moon.

- How well can you see -2.7 magnitude Jupiter just 4° away from the moon? Look at stars further from the moon.
- Can you spot these luminaries?

  1.1 mag. Pollux, 3° away followed by 1.6 mag. Castor 7° away,
  0.4 magnitude Procyon 20° away,
  1.7 mag. Alnilam, Orion's middle Belt Star, 40° away,
  and the much dimmer Pleiades, 55° away.

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 AL links 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/
Night Sky Tools	https://www.astroleague.org/navigating-the-night-sky-guides/
Remembering Al Nagler	https://www.astroleague.org/wp-content/uploads/2025/10/Nagler.pdf
Current and Past Issues of *Reflector Magazine*	https://www.astroleague.org/reflector/

AL Related News, Information and Reminders

Information: Click HERE for the Astroleague News Page and be sure to check the Astroleague Home Page weekly for new and important posts.

REMINDER - Beware of Fraudulent Emails appearing to originate from the AL. Click HERE for more information.

Contact Hank Lyon, hlyon8448@gmail.com, for any changes to your Reflector delivery preferences (US Mail, Email or Both).

CFAS Correspondence:
Please contact the society at: CFAS, P.O. Box 7685, Wilmington, NC 28406

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 2026 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:
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