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.*

***June 2024***

## President's Message

*by Ben Steelman*

First off, stay away from UNCW in June.

Not that there's anything wrong with it. It's just that, instead of DeLoach Hall, we'll be holding **our next regular meeting at 7 p.m. June 9 at Ingram Planetarium**, 7625 High Market St. in Sunset Beach, to watch a program.


Admission will be $10.

The planetarium is about 48 miles from Wilmington, take U.S. 17 to Mile Marker 7, turn left onto N.C. 904, then after 4 miles turn right onto Sunset Boulevard North (N.C. 179 business) at the second traffic light. Then watch for Park Road North and turn right.

★★★★★

I'll echo AVP Jon's **call for volunteers for the Observatory Committee**. Several of our stalwarts are moving away, and we need some help.

As Jon noted in his email, the big goal for the rest of 2024 is erecting our first permanent telescope installation. This will involve building a deck, then buying, installing and weatherproofing a SkyShed POD. (Jon promises this will take less trouble than it sounds.)

If you can spare a little time, get in touch with Jon or me.

★★★★★

**Books** have been piling up on my bedside table for cloudy nights. Here are some new ones:

★ "Under Alien Skies: A Sightseer's Guide to the Universe" by Philip Plait (W. W. Norton, $30). I still miss Plait's reviews of sci-fi movies that Got It All Wrong on his old "Bad Astronomy" website.

In "Under Alien Skies," Plait - a Ph.D.-level astronomer gives us views of what the universe looks like from places like orbit of Saturn, from a planet orbiting a red dwarf, from a planet in a two- or three-star system or from a star-nursery nebula. There's even an obligatory chapter on black holes. Well-written and accessible.

★ "Our Moon: How Earth's Celestial Companion Transformed the Planet, Guided Evolution and Made Us Who We Are" by Rebecca Boyle (Random House, $28.99). One of my favorite books was Neil Comins' "What If the Moon Didn't Exist?" The short answer is, we wouldn't be here -- at least, not humans as we know.

Boyle, a columnist for Atlas Obscura and a contributor to Scientific American, expands on that theme, noting how the Moon and its tides affected evolution, helped early humanoids hunt and aided with early time-keeping.

★ "UFO: The Inside Story of the U.S. Government's Search for Alien Life Here -- and Out There" -- by Garrrett M. Graff (Simon & Schuster/Avid Reader, $32.50). No, this isn't "Ancient Aliens" on The History Channel. Graff is a longtime political writer and editor for Politico. Rather, it's a sober (with footnotes), thorough and fascinating account of the whole UFO phenomenon and of the government's efforts since 1947 to figure out What's Out There.

Graff covers Project Sign, Project Grudge, Blue Book and the modern ages of UAPs (Unidentified Anomalous Phenomena), the updated, PC term for UFOs. Chapters touch briefly on the early contactees (nut jobs, mostly), Fermi's paradox, the Drake Equation and Project SETI. As Carl Jung observed, UFOs are now a modern religious cult that tells us more about how we respond to modern anxiety, Cold War fears, etc., than about ETs.

Still, a residue of incidents remain that defy explanation, like the notorious "Tic-Tac Incident" of 2004 when incredibly fast and maneuverable objects popped up on the radar of the aircraft carrier Nimitz and dodged F/18s like foxes outrunning turtles. A Truth is still out there -- we just don't know what it is.

★ "A City on Mars" by Kelly and Zach Weinersmith (Penguin, $32.;50). The Weinersmiths are a married couple. She's a biologist at Rice University who's worked with NASA. He's a cartoonist who did the book's excellent illustrations. While folks like Elon Musk assume we'll be planting the next Jamestown on Mars within a couple of decades, the Weinersmiths take the theme from their subtitle: "Have We Really Thought This Through?

They're not saying Mars colonization can't be done or shouldn't be done. (To their credit they mostly stay away from the "What about the starving children in India?" arguments.)

Rather they suggest things are a lot more complicated than the boosters suggest. For example, how do we protect our astronauts and settlers from cosmic radiation beyond the Earth's shielding magnetic field. Astronaut Sean Kelly is no longer a perfect twin to his brother Mark after all the genetic mutations from his year on the ISS. Once we get to Mars, building a sustainable ecosystem not dependent on CARE packages from Earth will be a lot harder than Mark Watney made it look in "The Martian." The regolith, the Martian surface, contains chemicals that interfere with human physiology. And then there's the cost ...

The Weinersmiths have a sense of humor and don't pretend they know everything. Their skeptical outlook makes a healthy counterpoint to the evangelism of Mars fanatics like Robert Zubrin.

★ "Orbital" by Samantha Harvey (Grove Press, $24). Harvey, a British novelist describes 16 routine days aboard the International Space Station.

This is not as eventful as the made-in-Wilmington SF feature "ISS," in which the crew watch World War III playing out below them. Rather, the six Americans, Russians, Japanese, Britons and Italians live in peaceful co-existence as they run experiments, fix up freeze-dried food and exercise, while thinking of their lives back home.

"The Martian" this ain't. Still, Harvey gets away with moments of poetry like this:

"Out there, electromagnetic vibrations ripple through the vacuum as bodies in space give out light. If these vibrations are translated into sounds, then the planets each have their own music, the sounds of their light ....Neptune's sound is liquid and rushing, a tide crashing onto a shore in a howling storm; Saturn's is that of the sonic boom of a jet, a sound that resonates up through your feet and between the bones."

*Keep Looking Up!*

# Calendar

## June 2024

**Date – Event – Time**

**01 Club Observing @ Starfields (the Club Observatory); 7:00 PM; 3rd Quarter Moon**

02 Moon and Mars; Waning Crescent moon near Mars (~6°): morning

06 New Moon

**07 Club Observing @ Starfields (the Club Observatory); 7 PM; New Moon**

**08 Club Observing @ Starfields (the Club Observatory); 7 PM; New Moon**

**09 ★ Cape Fear Astro Monthly Meeting ★**

**PLANETARIUM VISIT**

**GAStronomy Meeting**
**TBD - Watch your email for time and place!**
**(Dinner, prior to the Monthly Meeting)**

**CFAS Monthly Meeting**
**7:00pm – 9:00pm -**
**Ingram Planetarium**
**7625 High Market St, Sunset Beach, NC 28468**
**NOT simulcast via Zoom**

13 First Quarter Moon

**15 Public Observing @ Carolina Beach State Park, can start observing the Moon about 7 PM; Sun set ~8:20**

20 June Solstice; northern summer solstice

21 Full Moon

28 Last Quarter Moon

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

**2024 Public Events**

**June 15 – CBSP; park closes 10 PM**

**July 13 – CBSP; park closes 10 PM**

**Aug 10 – CBSP; park closes 10 PM**

**Sep 14 – CBSP; park closes 10 PM**
**&**
**Sept. 14 - International Observe the Moon Night**

**Oct 12 – CBSP; park closes 9 PM**

**----------**

**CBSP = Carolina Beach State Park**

**2024 Monthly Meeting Dates**

**Jun. 9 - Field Trip to Ingram Planetarium**

**Jul. 14 -**

**Aug. 11 - Kristin Hendershot (The Astro Ranger) will give a presentation on "Women in Astronomy".**

**Sep. 8, Oct. 13,**

**Nov. 10, Dec. 8**

## We Have A Dream!

And we are working to make it a reality.

The dream is a ready-to-use, somewhat easy-to-use observatory. You open up the observatory and find a decent size telescope on a goto mount. You power up the mount, align on a couple of stars and you are ready to travel the universe (virtually). And if you want, you can easily remove the eyepiece, attach your camera and take images of the sights you see on your travels. At the end of the night, you park the scope, cover it, close and lock the observatory and you are on your way home.

Currently, the telescope pedestal is built and the mount installed. The actual observatory is planned to be a SkyShed POD (Personal Observatory Dome).

The picture at right shows a POD with several extensions (bays) on a deck. Without bays there is no realistic storage, so bays are “needed”. A similar design deck is envisioned, supported by similar blocks, some of which have been donated by Damain.

Some tasks needed to complete the build are: more detailed plans for the platform around the pedestal (an 8’ x 12’ deck is envisioned); monetizing some of the donated equipment; building the platform; purchasing the POD either used if a suitable one can be found or new; and assembling the POD on the platform. Can you help with any of these tasks?

Based on the few responses to Jon’s inquiry, the Observatory Committee consists of Jon, Skip, Karl and Ben (ex-officio member, being President). Please contact any or all of us if you wish to join the Committee or help with the tasks.

Hoping to soon say “We Have A Dome!”

# 11 May Club Observing Report

*by Jon Stewart-Taylor*

The weather was not favorable for the Friday, 10 May club observing. But, the forecast looked much better for Saturday the 11th. I arrived around 5 to mow the observing field and entrance. Perry Moon was kind enough to bring a string trimmer, and buzzed around the fence, lights, and buildings. After things were mowed and buzzed, I used water-in ant poison on the ant mounds which had crept onto the field. Hopefully we won't have ant issues for the rest of the spring.

The sky was pretty cloudy most of the day. As evening progressed the clouds pretty much evaporated, leaving beautifully clear skies. Perry Moon planned on imaging M101 to create a 2-hour stack. Thad and Eleanor Coin were making their first trip to the observatory to try to spot some aurorae. We had a crescent moon in the west, not enough to ruin observing, but enough to make faint phenomena such as the Zodiacal light and the aurora hard to see. I was planning to image Omega Centauri, and try out the new (to the club) 13" dob.

Thad and Eleanor put out lawn chairs and blankets with a good view of the north. Perry set up his S50 in the observing field, then helped me set up the 13", collimate the secondary, and align the straight-through finder. After that I waited until it was pretty dark, then set up the S50 at the entrance for access to southern skies. The neighbor's NEMA-head glare-bomb yard light has been replaced with a much less obtrusive LED. We could probably put up a small tarp or plywood shield to block it entirely. The southern horizon is still clear down to about 3º, so if you want to look for stuff in the extreme southern sky, that's the place to set up.

Perry's image of M101 turned out very well, as described and shown in his own post. Thad and Eleanor were skunked on aurora. The moon was probably too much, and aurora may not have even happened until after midnight, which is when Steve Christenen shot his Time lapse from the Triangle.

The S50 did an excellent job on Omega Centauri. When I posted it to the e-mailing list Karl fiddled with it. After I was done with Omega, I set the S50 to image M104 (the Sombrero), and then M5. At that point I packed up the S50, and went back to the main observatory.

*Editor – Jon's images are on next page. -Karl*

The 13" dob was ready when I was. We'd put one of the cheap cell-phone armbands on the trusses to use AstroHopper on it. That was less than a total success. Without a rigid backing, the phone moved too much whenever the screen was tapped, so it wasn't as accurate as one would want. It still worked well enough to get it close to a couple of objects. We were using a 27mm Televiev Plossl, which gave a field of view of a little less than 1º. M13 looked pretty good. M104 and the "Scythe" asterism didn't quite fit in the same FOV.

Conclusions after the first real session with the scope? We'll need to make a better cell-phone mount to use AstroHopper well. I plan to fit a set of wheelbarrow-style handles so it can be wheeled in and out of the shed, rather than lugged in two still-pretty-heavy parts. And, we should probably add some dew control, since we still live in SE NC.

Clouds began to appear to the north-west around 10:30, and grew to the point that we all packed up by about 11. Pretty good night overall. Club members will have another opportunity at the next club observing sessions, on May 31st and June 1st.



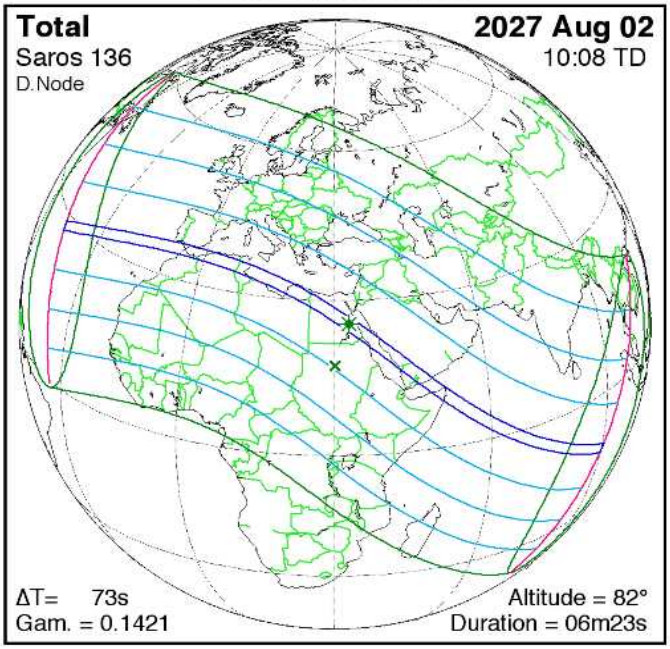

As Jon noted, I did process his image Omega Centauri image, the one on the left above. I just did it to see how it would turnout. I used PhotoShop Elements to sharpen the stars a bit and darken the background. You can see it is different from the other. Better? I leave that for you to decide. -Karl

If you haven't heard, Steve is leaving the area. Undoubtedly he has done more than the few things listed here: participated in meetings, lent me his 5X Barlow for several months, brought a scope to public events and helped obtain the large equipment donation. We will miss him, hope we hear from him in the future and wish him and his family The Best!

# Future Total Solar Eclipses

## The Next Best Total Solar Eclipse

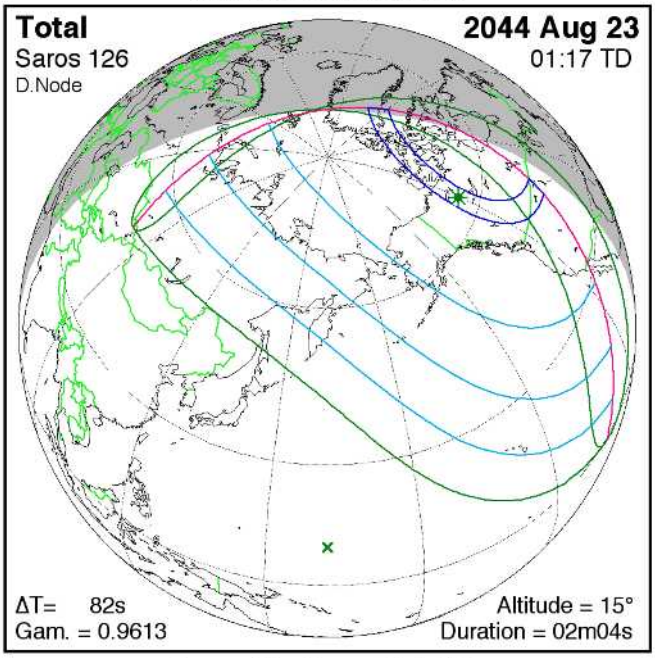
www.EclipseWise.com/eclipse.html




*Thousand Year Canon of Solar Eclipses*

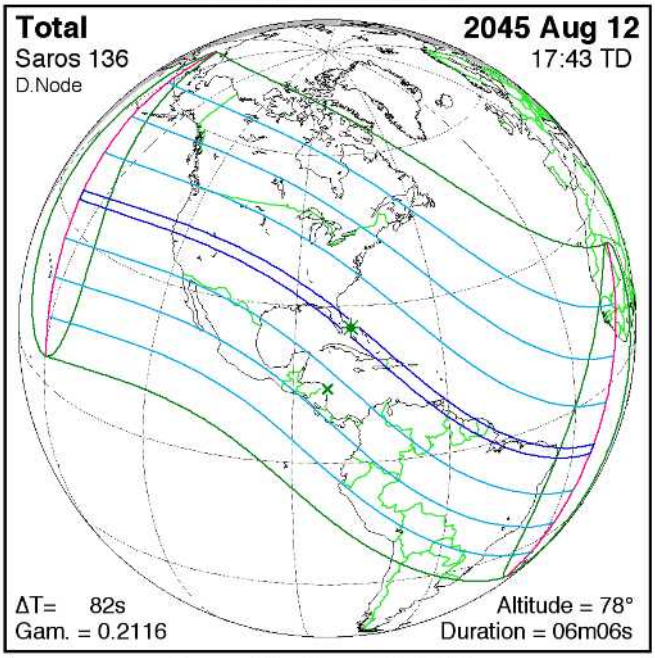

## The Next 2 U.S. Total Solar Eclipses

www.EclipseWise.com/eclipse.html



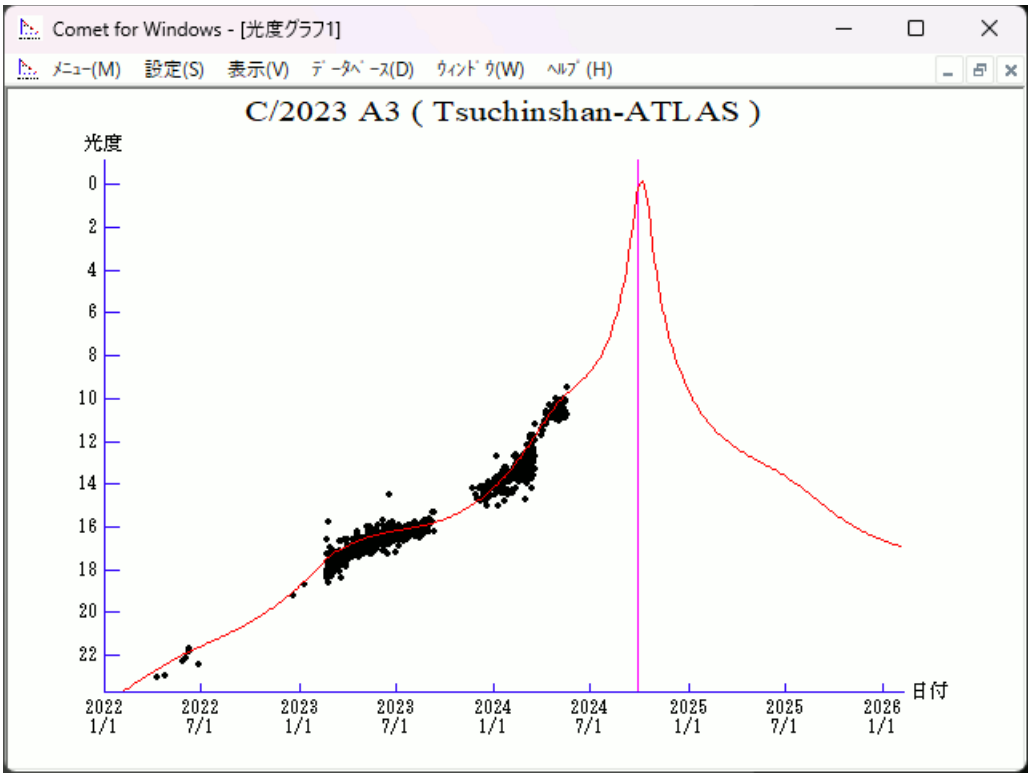

*Thousand Year Canon of Solar Eclipses*


www.EclipseWise.com/eclipse.html

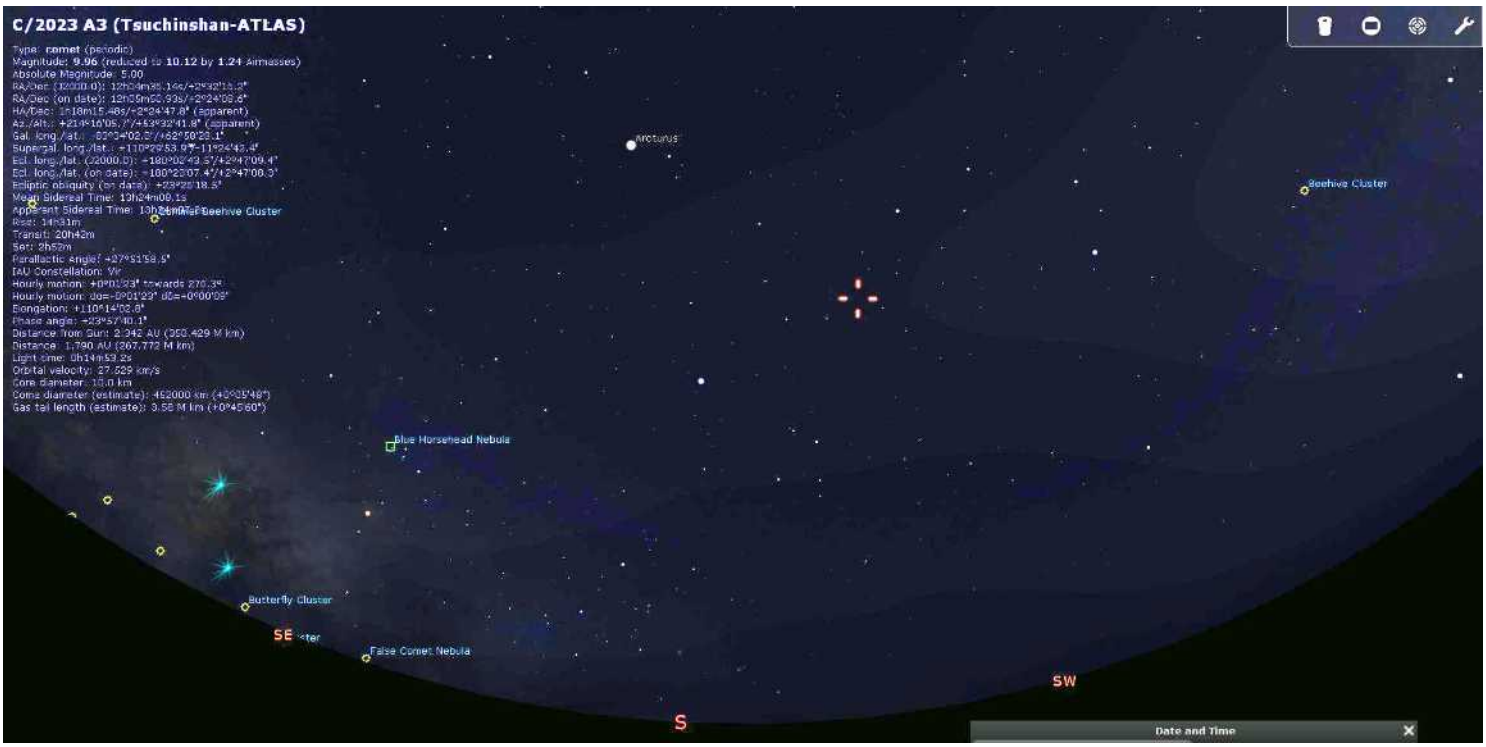



*Thousand Year Canon of Solar Eclipses*

# The Comet is Coming! The Comet is Coming!




From Yeiichi Yoshida's http://www.aerith.net/ the comet is forecast to reach about magnitude 0. Wow!!

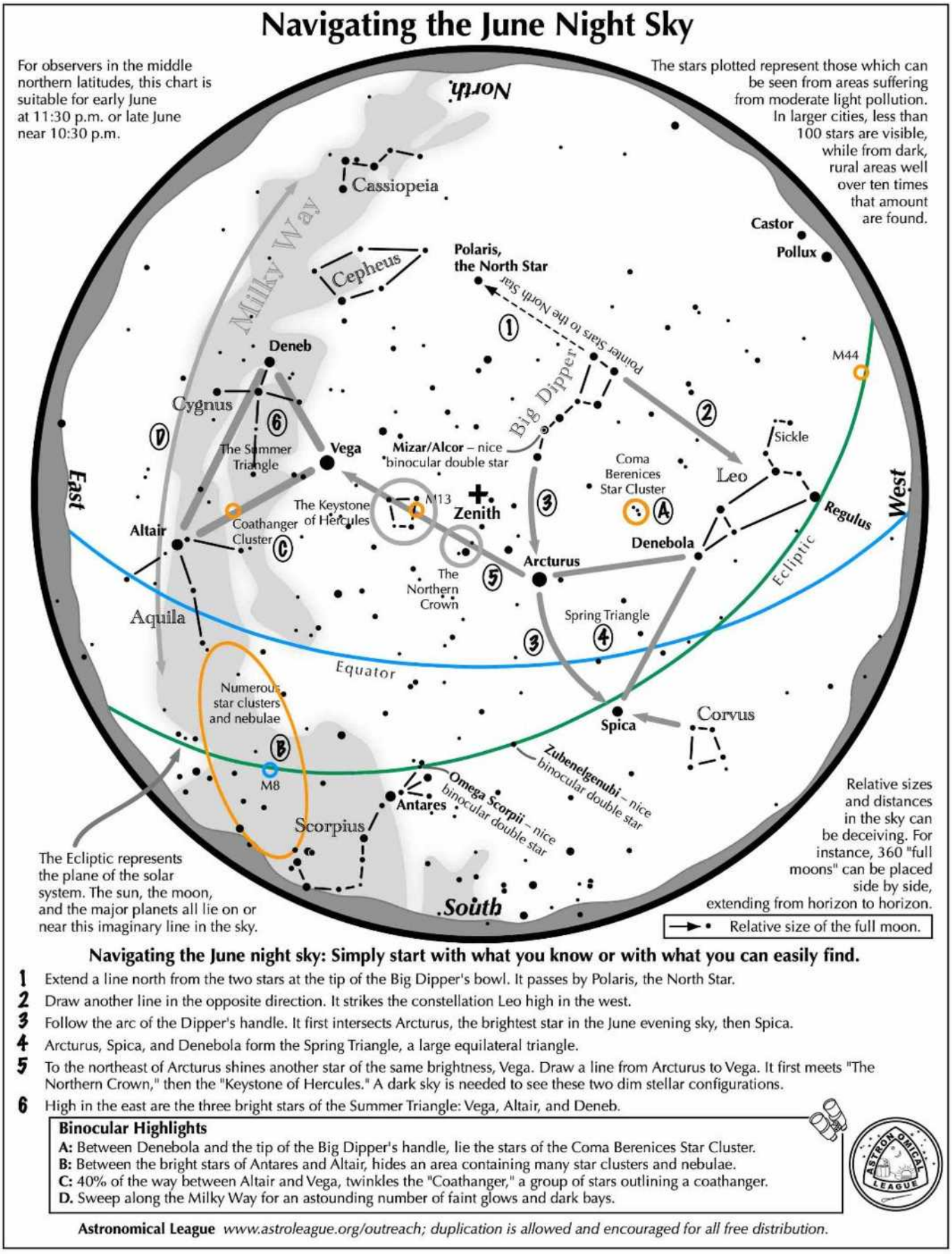



Current location of the comet at 10 P.M., per Stellarium.

At ~10th Magnitude, you'll need a good size telescope to see it.

Imaging it might be easier.

## From The Astronomical League



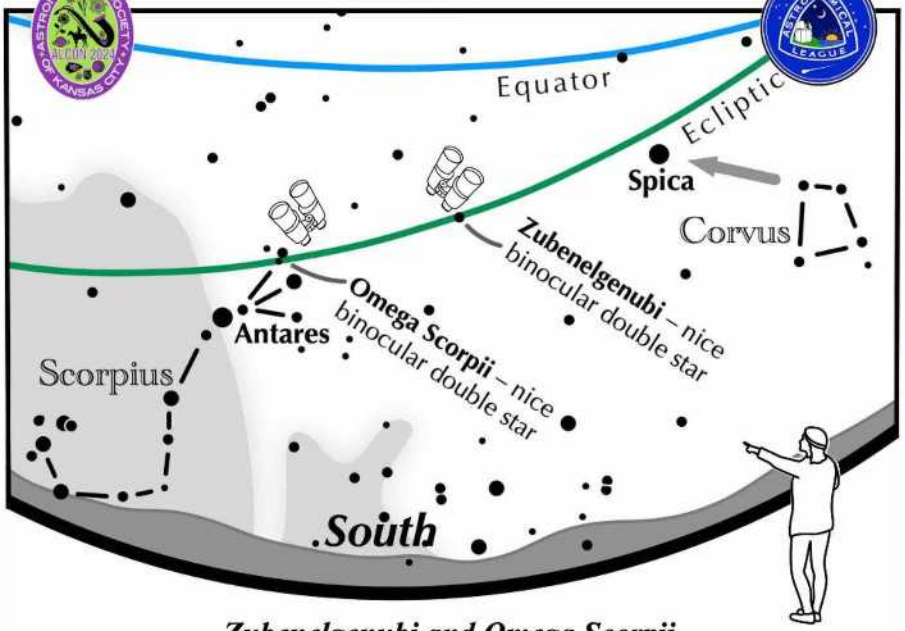

**Navigating the June night sky: Simply start with what you know or with what you can easily find.**

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. Draw another line in the opposite direction. It strikes the constellation Leo high in the west.
3. Follow the arc of the Dipper's handle. It first intersects Arcturus, the brightest star in the June evening sky, then Spica.
4. Arcturus, Spica, and Denebola form the Spring Triangle, a large equilateral triangle.
5. 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.
6. High in the east are the three bright stars of the Summer Triangle: Vega, Altair, and Deneb.

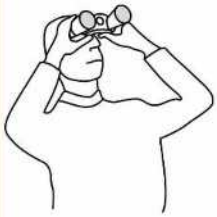
**Binocular Highlights**

**A:** Between Denebola and the tip of the Big Dipper's handle, lie the stars of the Coma Berenices Star Cluster.
**B:** Between the bright stars of 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.

# If you can see only one celestial event this June, see this one.




***Zubenelgenubi and Omega Scorpii, two easy binocular double stars.***



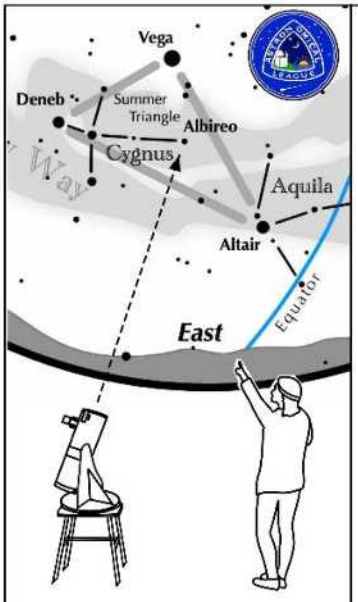
**Enhance the scene – use binoculars!**

Throughout June ninety minutes after sunset, look low in the south for the bright stars Spica and Antares.

- Almost mid–way between them shines the moderately bright star Alpha Librae, also called Zubenelgenubi.
- Aim binoculars at it and two stars will be seen.
- To Antares' right are the three "claw" stars of Scorpius. Directly below the uppermost claw, Graffias – or Beta Scorpii – is Omega Scorpii.
- Binoculars will easily show two 4th magnitude stars, Omega 1 and 2, separated by nearly a full moon width. The two Omega's are a chance line of sight pair. They are not gravitationally bound to each other.

***The keen-eyed skywatcher will discern two stars when gazing at both Zuben and Omega.***

www.astroleague.org



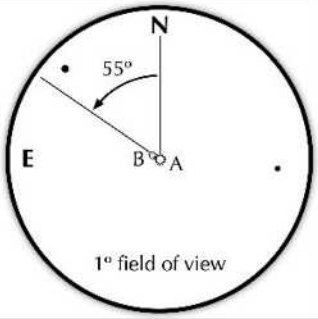

## Other Suns: Beta Cygni (Albireo)

**How to Beta Cygni on a June evening**

Look in the east for the Milky Way and Cygnus. The Northern Cross shape of Cygnus lies in a horizontal position. The southernmost star of the Cross is Beta, also known as Albireo.

**Beta Cygni**
A-B separation: 35 sec
A magnitude: 3.4
B magnitude: 4.7
Position Angle: 55°
A & B colors: orange, blue

Suggested magnification: >30x
Suggested aperture: >2 inches




Try 10x50 binoculars to separate Albireo.

# 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/ |
| 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/ |
| **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.<br><br>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: | 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/