



Charlotte Amateur Astronomers Club
www.charlotteastronomers.org

CAAC August 2023 Meeting

<p><u>Next Meeting:</u> Friday August 18th, 2023</p> <p><u>Time:</u> 7pm ET</p>	<p><u>Place:</u> <i>Myers Park Baptist Church Education Building – Shalom Hall (Basement) Or Zoom Virtual Meeting</i></p> <p><u>Address:</u> 1900 Queens Road Charlotte, NC 28207 <i>Or Zoom web conference link (See newsletter info below)</i></p>
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James Webb Space Telescope

The James Webb Space Telescope, 25 years in the planning, was launched on Christmas Day, 2021. It is the most complex engineering instrument built by NASA that is now looking back in time to the beginning of our Cosmos. The presentation will look briefly at how we observe our wondrous Cosmos and then look at the complex engineering challenges that enables a whole new window on our Cosmos.

Speaker: Ken Steiner

Ken Steiner, past President of Charlotte Amateur Astronomers Club, also served as CAAC Observatory Director for 7 years during the 2011 major expansion of the Gayle H. Riggsbee Observatory (GHRO). He is presently the Public Outreach Coordinator of the Charlotte Amateur Astronomers Club.

He has served as Interim Executive Director of Pisgah Astronomical Research Institute (PARI), Brevard, NC. He currently is Consultant for Special Projects at PARI including Dark Sky Park Designation and upgrading of the controls of the 4, 12, and 26 meter radio telescope dishes. He arrived in the Charlotte area in 2001 as a Sales Engineer for Enprotech Technologies (Forging and Stamping Press rebuilding) covering the SE USA and Mexico. He has served on numerous national and international non-profit boards. Ken and his wife Deb have been active in the Charlotte Amateur Astronomers Club since their arrival in the Charlotte area.

CAAC Virtual Meeting Login Instructions

1. If you have not used Zoom before, go to Zoom.com and download the Zoom program onto your computer.
2. **To Log In:**

Click on the meeting link below:

<https://us06web.zoom.us/j/82489334922?pwd=dWRsdDFkMjJOWFVNUFIIN1IFL1NoQT09>

If needed Meeting ID: **824 8933 4922**

Passcode: **893125**

This manual “log in” rather than invitation to everyone prevents all the emails showing up on the invite. This is a security issue for your privacy.

3. When on the Zoom screen to prevent chaos and overloading bandwidth:
 - a. Mute your microphone-icon lower left of screen
 - b. Mute Video icon on the lower left of screen.
 - c. You will be able to see and hear leaders of the meeting when they are speaking
4. If you wish to ask questions of the speaker after the main presentation:
 - a. Submit on the chat feature which is at the bottom of the screen. You will then type out your question and hit enter.
5. Excellent Zoom tutorials are available on You Tube:
 - a. <https://www.youtube.com/user/ZoomMeetings>

From the President:

Greetings Friends,

I had the privilege of helping out our Vice President, Benton Kesler, with a star party for members of his church back on Sunday evening, August 6. There were some serious clouds as his guests arrived about 7:30...we planned to start observing shortly after 9 PM. We checked for an ISS pass and we were blessed with one to be at maximum altitude at 9:06, unfortunately the maximum altitude was only 24 degrees in the northeast. After a short inside program, we walked out to be disappointed by the satellite being in the trees. Just as we were about to disperse and turn to the telescopes, Mr. Musk offered us a trail of Star Link satellites about 15 degrees long...headed from the NW to the NE at about 50 degrees of elevation...the only clear spot in the sky. We watched this for over 3 minutes as it slowly marched across the sky, both marveling at the sight and silently (mostly) cursing the fact that the heavens are filling up with more and more things to interfere with the viewing of a pristine sky. Alas...progress.

On a related note, I enjoyed viewing the Perseid meteor shower last weekend from GHRO. It was cloudy early but the clouds gave way to large "sucker holes" in the NE, exactly where the radiant was located. I saw 45+ Perseids along with a few sporadics between 2:15 and 4:15...before the clouds came back with a vengeance. Not as good as it could have been, but a win nonetheless.

Finally, next month's program will be "Show and Tell". This is where you, the club member, brings your latest "toy" to show off to the rest of the club. Whether it be a new telescope, an eyepiece, binoculars...whatever, please shoot me an e-mail at jegaiser@gmail.com with a short description of your item. If each person that presents takes 4-5 minutes, we have a complete program. I'm looking forward seeing all the new gadgets in September.

Clear skies,

Jim
CAAC President

Secretary's Report:

1. Please see below for the 2023 CAAC annual membership options:
 - Annual individual/family membership, which includes access to the CAAC dark sky [observatory](#) (GHRO) - \$60.00
 - Dues are collected at the October meeting and are pro-rated for members joining in January or later.
 - Students up to 18 years old - \$15.00 per year.
 - Private Observing Pads - additional \$25.00 per year.
Optional fee for members with private concrete observing pads at the club's dark sky location. Contact the Observatory Director for additional information.

Membership Applications are available through the CAAC Treasurer at monthly meetings. Click <https://charlotte-amateur-astronomers-club-2.square.site/> to navigate to the CAAC online store. Then select "CAAC Membership" to add it to your cart

2. The CAAC website, <https://charlotteastronomers.org/> has been updated to provide better service to our members with easier navigation, up to date announcements and postings, and accessible communication. Please explore and enjoy your new CAAC website.
3. If you are a former CAAC member and have not been keeping up with your membership dues, firstly please come back! We'd love to reconnect you with the love of astronomy through our club, use of GHRO observatory, and the camaraderie of our members.

Please also remember to return your badges on the table near the exit at the end of the meeting before you leave! Doing this will significantly reduce the chances of badges getting lost and reduce the amount of time (and cost) of having to re-create your name tag if it is lost. Thank you!

4. Register with the **Night Sky Network!** It is imperative that all members of the CAAC join the Night Sky Network (NSN). Many of the club's outreach activities are managed by the NSN, as well as club communications (newsletters, event notifications, general email). The NSN is a wonderful tool specifically designed for amateur astronomy clubs like ours. Membership allows you to contact other members via email, and receive last minute updates for outreach events via text message:
http://nightsky.jpl.nasa.gov/club-apply.cfm?Club_ID=1468&ApplicantType=Member-Pre-Monthly
5. As mentioned in last month's President's note, we are seeking volunteers to participate in the following standing committees: Room Set Up, Refreshments, Audio/ Video, and Web Master/ Social Media. Please be on the lookout in the next couple of weeks for emails with more details and how to participate. Please contact the CAAC Officers and let us know which committee interests you.
6. The club is seeking participants for the Audit Committee. Additional information forthcoming.
7. The club is adding a new CAAC Astronomy Equipment Sales page to the newsletter. Please check out the offerings at the end of the newsletter.

8. Sign up for CAAC Slack / chat!

Chat with fellow astronomy and astrophotography enthusiasts on our discussion group. This is a free service, we are using the basic plan. See who's going to GHRO, ask questions, or just be sociable. You can access via webpage or native applications on all major platforms and mobile phones. Sign up, introduce yourself, talk to your peers, tell your stories, ask your questions, and share your wisdom!

How do I sign up?

- Visit this link: <http://slack.south40astro.com> or email caac-slack@jamieandamy.com

If you run into issues signing up, email Jamie at caac-slack@jamieandamy.com and he will help you get on the team.

9. Become a NASA Partner Eclipse Ambassador

In October 2023 and April 2024, two solar eclipses will be crisscrossing the US. In an exciting new NASA partnership, undergraduate students and eclipse enthusiasts will partner to engage their local communities in advance of the eclipses to enjoy the awe and wonder of this unique alignment. Eclipse Ambassadors will bring outreach programs to underserved audiences in local libraries, colleges, schools, and other community organizations. Training, partnerships, and resources are provided, and all engagement can be done before the eclipses - there's no commitment when the shadows arrive. Undergraduates will also receive a stipend, plus opportunities to further their involvement in NASA programs.

Apply today! www.eclipseambassadors.org

Find someone near you on our [Eclipse Ambassador Map](#)

We make it easy to share about the program:

[Share a Facebook Post](#) or share [NASA STEM's FB Post](#)

[Tweet about it!](#)

[Share it with colleagues on LinkedIn](#)

My Do
CAAC Secretary

CAAC Treasurer's Report as of 7/31/2023

Operating Fund

Purpose: Enable the CAAC to pursue our non-profit goals, maintain our facilities, and run our programs.

*Funds are acquired through ongoing receipts of dues, fees, and annual Southern Star income (or expense).

*Funds are expended to meet operating obligations of the club.

1	Operating Fund Balance: 6/30/2023	\$32,238.64
2	Income: Dues and Fees Sweatshirt sale	 \$150.00 \$20.00
3	Expenses: Monthly Meeting GHRO Utilities (alarm, elec, internet) CAAC Website expenses Service fee to accept credit cards	 \$412.99 \$114.90 \$298.88 \$6.17
4	Operating Fund Balance: 7/31/2023	\$31,575.70

Non-Operating Funds

Purpose: Administer gifts and donations for designated use.

1	Non-Operating Fund Balance: 6/30/2023 Scholarship Fund CAAC Self Insurance Fund Contingency Fund	 \$6,706.87 \$20,000.00 \$7,398.60
2	Income: Interest	 \$4.34
3	Expenses or Transfers:	 \$0.00
4	Non-Operating Funds Balance: 7/31/2023 Scholarship Fund CAAC Self Insurance Fund Contingency Fund	 \$6,706.87 \$20,000.00 \$7,402.94

Scott Goforth
CAAC Treasurer

News from GHRO

1. The next Star Party is Saturday, August 19th beginning at dusk. Current forecast doesn't look promising, but hopefully it will clear.
2. Telescope training for new members (and those wishing to get a review) will be held on Saturday, August 26th, beginning at 6:30 PM. This training is required for all new members who wish to use the facilities at GHRO. The training will take place even if it is cloudy, it will be canceled only if it is actively raining or snowing. If it's clear, you can practice your newfound skills immediately after the training. To sign up please contact Rick Bassham.
3. Please follow the posted startup and shutdown procedures for any club owned scopes. This helps other members when they go to use our equipment.
4. Don't forget that the current sky conditions and weather and the Clear Sky Clock is found at the bottom of our homepage... <https://charlotteastronomers.org/>
5. The new telescope storage building near the all members pad is available for rent. The fee is \$10/month for a 3'x3' spot inside, with a 6 month minimum commitment. There are nine spots available. Users are encouraged to have their contents insured, as CAAC will not be insuring the contents of the building. Please see Rick Bassham if you have any questions.
6. A new state of the art imaging observatory has been constructed and contains a Planewave 12.5" CDK telescope on a Planewave L-350 mount. This roll-off-roof facility will be available for all members of the club who get training, and it will be operated from inside the Outreach Center. The telescope now has first light. Please contact Rick Bassham at ghro@charlotteastronomers.org to learn how to use it. As a primer, if you are new to astrophotography, check out the NINA tutorial by Everyday Astro on YouTube. A special thank you to Dr. Jim Hermann for his generous donations.
7. Construction on the new solar panels is delayed pending permits from Lancaster County.
8. Anyone interested in the "Sponsor a Telescope" program, please reach out. My vision on this is to pair up CAAC members who want to learn more about a particular club owned telescope and/or help pass on the knowledge and history of our club scopes. There would be no monetary commitment involved, only some time. Ideally, we would have two members sponsor each telescope. Sponsors would be responsible for checking their telescope once a quarter and working with the observatory director to address any required maintenance or repairs needed. You would also be expected to attend a new-member training event once a quarter to help pass on your knowledge of the history and operation of the scope. As our club grows, maintenance and knowledge transfers become much more difficult to be done by just one person. If you are interested, please reach out to Rick Bassham, ghro@charlotteastronomers.org
9. Anyone interested in helping out with grounds maintenance, please contact Rick Bassham. It currently takes about 5 hours for one person to mow and trim the full grounds, and any help would be appreciated.
10. The complete GHRO calendar for 2023 is below:

2023 Star Party and Training Schedule

Month	Star Party Date	Moon Illumination	Training Date	Training Start Time (PM)
January	21	1%	28	4:30
February	18	5%	25	5:00
March	18	15% waning	25	6:00
April	22	7%	15	6:00
May	20	1%	13	6:30
June	17	1%	24	6:30
July	15	5%	22	6:30
August	19	9% waxing	26	6:30
September	16	2%	23	5:30
October	14	1%	21	5:30
November	11	4%	18	4:30
December	9	14% waning	No training in December	

Rick Bassham
CAAC Observatory Director

GHRO Information

GHRO is located at [1427 Bloomwood Drive, Lancaster, SC](#). (some GPS show city as Pageland). Gravel road leading to the observatory is located 5.22 miles east of the "522 Grill" on Taxahaw, Rd.

Facebook FAQ

<https://www.facebook.com/CharlotteAstronomers/> scroll down to NOTES, then Frequently Asked Questions page for more information about GHRO. Be sure to share your astronomy photos and observing tips.

Night Sky Network -- "Heading to GHRO"

For updates on GHRO, be sure to join the <https://nightsky.jpl.nasa.gov/index.cfm> "Heading to GHRO" message group.

As always, we care about the safety and security of all visitors to our observing facility, the GHRO. To keep us all mindful for the need to keep alert while visiting the observatory, we provide the following reminder. Please share this with your family and any visitors who may join you at the observatory. Thank you.

*** WARNING ***

This facility (GHRO) and adjoining area may contain uneven terrain, dangerous wildlife, low light conditions, and dangerous man-made obstacles.

By using this facility, users assume the risk of personal injury, and loss or damage to personal property. All persons should use extreme caution at all times.

Users of this facility agree to hold harmless the Charlotte Amateur Astronomers Club, its Directors, and its members for any and all injuries sustained while participating in club activities or using this facility.

CAAC Outreach Opportunities

Since last meeting:

- 7/29 Matthews Library Solar Presentation and Solar viewing
- Solar Viewing clouded out, Solar Presentation attended by 30 participants.
- 8/6 Camp Care, Lake Lure (youth who have or have had cancer, Charlotte based organization)
- Gayle Riggsbee and Benton Kesler attended overnight, clouded out, no observing.

Scheduled:

- 8/24 Providence Rotary Club presentation: "James Webb Space Telescope".

On Deck:

- 10/7 Matthews Library Presentation: Cosmic Perspective.
- 10/26 Charlotte Mecklenburg Library- Independence Regional Library, Solar Presentation and Solar Viewing, 2:30.
- Solar Telescopes needed, 2:30
- 11/20 Southminster Retirement Community presentation: "Cosmic Perspective".
- 11/30 Shepard Learning Center presentation: Cosmic Perspective.
- TBD Catawba Lands Conservancy Star Party, Mount Pleasant, NC.

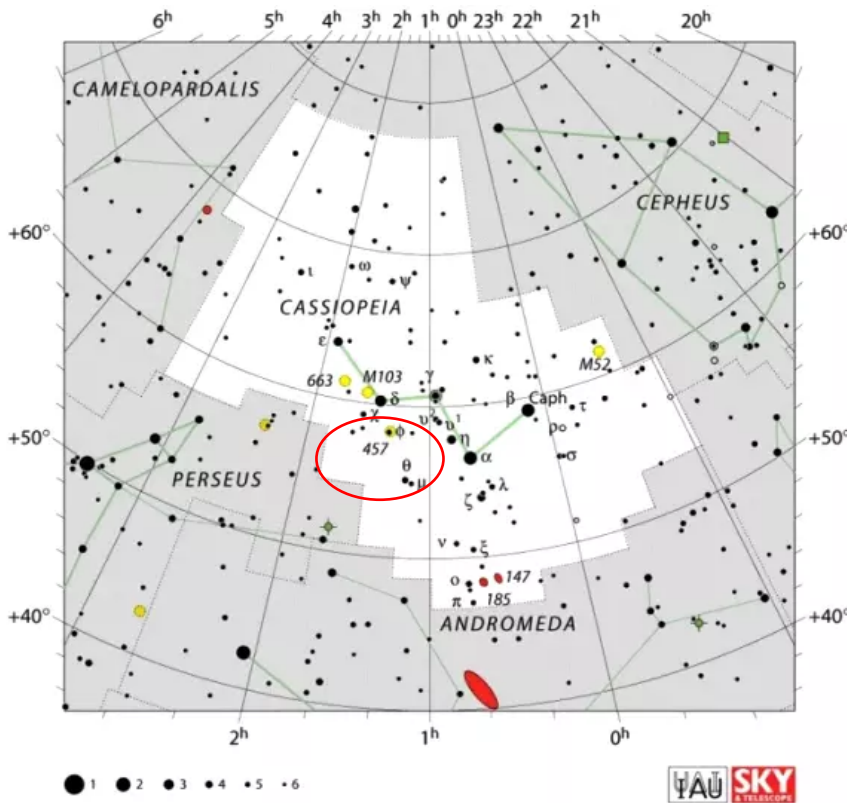
Ken Steiner
CAAC Public Outreach Coordinator

New! CAAC Astronomy Ad Listings

We are excited to add an astronomy classifieds section to our newsletter. If you would like to post an ad in the newsletter, please let us know at the beginning of each month and we will list your items. Please provide a brief description and your contact information. David Friday is the lucky first advertiser in the July 2023 newsletter.

- Item 23-001:** 1958 Criterion Newtonian reflector, 6" f/8 for sale with original mount. Asking \$600 with free delivery within the Charlotte area.
- David Friday, wdfriday@twc.com 704-579-1778.

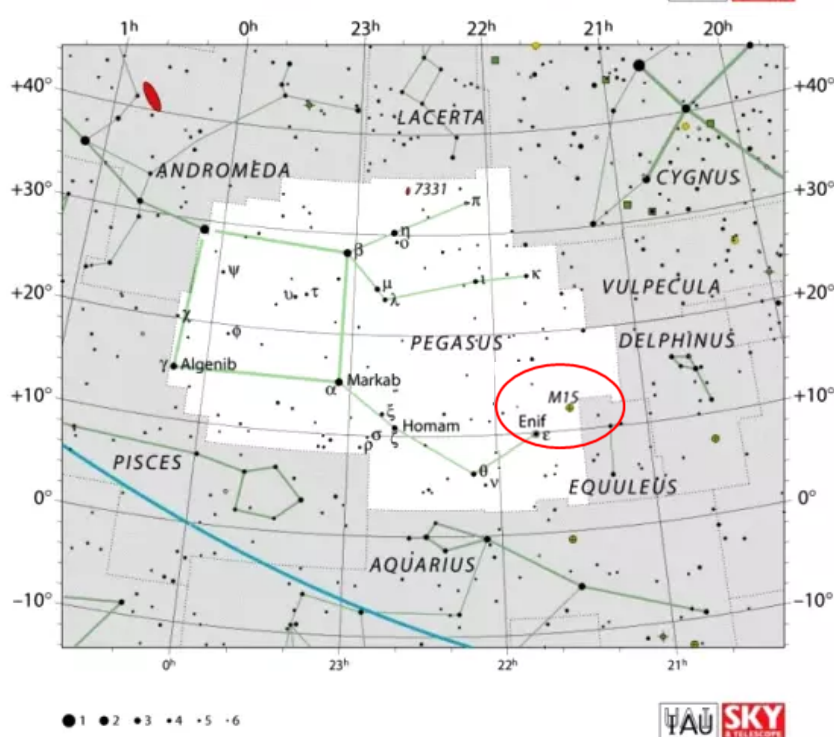
The Night Sky in August 2023



The unmistakable W of Cassiopeia suspends itself high in the north, marking a section of the sky rich in open star clusters.

One of these clusters is **NGC 457**, a bright object located in the rich star fields of the Cassiopeia Milky Way, about four degrees southwest of Gamma Cassiopeiae.

In the eyepiece **NGC 457** appears as a scattered group of stellar points some 10' in diameter, consisting of about 100 stars brighter than 13th magnitude. One bright foreground star, Phi Cassiopeiae, is in the middle of NGC 457 but is not a member of the cluster. A 2.4-inch telescope resolves about two dozen stars, while a 6-inch reveals almost all the stars of the cluster.



Globular clusters are huge symmetrical systems containing up to a million stars, which lie round the edge of our Milky Way Galaxy. In the neighboring constellation, Pegasus, **M15** is easily found about 4° northwest of Enif (Epsilon Pegasi), the star at the tip of Pegasus' nose. It was discovered by French-Italian astronomer Giacomo Filippo Maraldi in 1746 and rediscovered by Messier in 1764. Shining at magnitude +6.2, **M15** is generally considered to rank among the dozen finest objects of its type in the northern sky.

From a dark site, keen-eyed observers can spot **M15** with their naked eyes. Most binoculars reveal it as a nebulous patch with no visible stars embedded within, although some stellar resolution is barely discernible in larger glasses at 20x if the observer uses averted vision. A 4-inch scope will resolve dozens of stars around **M15**'s strikingly bright core, with star chains winding out from the central region.

Cassiopeia and Pegasus Constellation Maps courtesy of IAU and Sky&Telescope, <https://www.constellation-guide.com/constellation-map/northern-constellations/>

To find more information on open and globular clusters, please visit:

<http://www.nightskyinfo.com/objects/>

Two celestial events will highlight your star gazing activity in late August.

On the evening of August 24, look for Scorpius along the southern horizon and watch the first-quarter Moon as it approaches and occults or passes in front of Antares, the red supergiant heart of Scorpius. Antares will reemerge about an hour later. To learn more, follow this link,

<https://nightsky.jpl.nasa.gov/docs/2023AugMoonAntares.pdf>

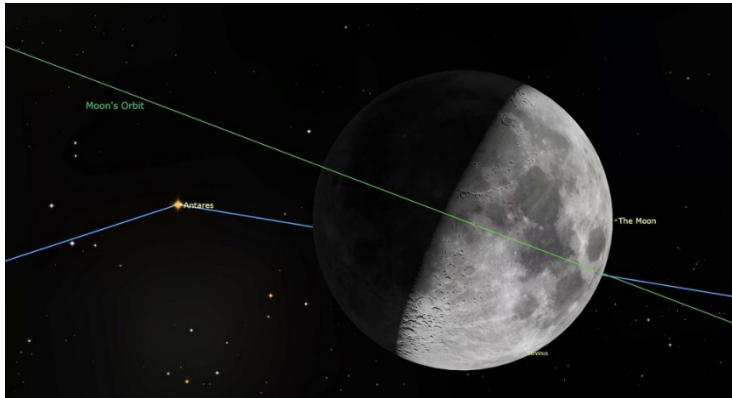


Figure 1 Photo credit: Chris Vaughan/ StarryNight

And on August 30, we will witness a Blue Moon or a second Full Moon phase in August.

If you would like to download a map of each month's night sky, use this link,

<https://www.skymaps.com/skymaps/tesmn2308.pdf> to download, print, and navigate the Evening Sky Map.

Of course, we welcome and encourage our CAAC members to come and visit the GHRO observatory to enjoy, learn, and observe the celestial wonders.

Endowment Corner

Gifts for the Present:

Matching Gifts

Matching gifts from your employer can double and sometimes triple the value of your gift to the CAAC Endowment and your support of the astronomical programs important to you. To find out whether your employer offers a matching charitable gift program, please contact your human resources officer.

To make a contribution or learn more, please visit
<https://charlotteastronomers.org/endowment/>

Ken Steiner
Chair, CAAC Stewardship Foundation

CAAC CONTACTS

President	Jim Gaiser	president@charlotteastronomers.org
Vice President	Benton Kesler	vicepresident@charlotteastronomers.org
Treasurer	Scott Goforth	treasurer@charlotteastronomers.org
Secretary	My Do	info@charlotteastronomers.org
Observatory Director	Rick Bassham	ghro@charlotteastronomers.org
Public Outreach Coordinator	Ken Steiner	publicoutreach@charlotteastronomers.org
Southern Star	Jim Gaiser	southernstar@charlotteastronomers.org