



Charlotte Amateur Astronomers Club
www.charlotteastronomers.org

An Amateur Astronomer's Journey – Successes and Failures (more of the latter than the former)

Dr. Gaiser will take us on some of his adventures as an amateur astronomer. As in life, there have been ups and downs and he'll show us the good, the bad and the unfortunate. From Mars photography in sidereal time to Venus transits to forays into astrophotography, tales of success and woe will leave the listener asking themselves...why??

Speaker: James E. Gaiser, PhD

Dr. Jim Gaiser earned his Bachelor's degree in Physics in 1976 and followed that with a Masters and PhD in Atomic physics from Auburn in 1981. After a stint as a physics Professor at East Carolina University in the 80's, where he taught both physics and astronomy, he transitioned into Medical Physics. He is currently a clinical medical physicist with Varian – Advanced Oncology Solutions. His lifelong interest in astronomy began when he looked up to see Echo I in 1961. His first telescope was a 75mm, f15 Unitron refractor which has just been refurbished by Tom Blevins...where his grandchildren will enjoy it. His astronomical interests include asteroid occultations and astrophotography.



CAAC January 2025 Meeting

| | | |
|--|---|--|
| <p><u>Next Meeting:</u> Friday January 17th, 2025</p> <p><u>Time:</u> 7pm ET</p> | <p><u>Place:</u> <i>Myers Park Baptist Church Education Building – Shalom Hall (Basement)</i> <i>Or Zoom Virtual Meeting</i> (See info on next page)</p> | <p><u>Address:</u> 1900 Queens Road Charlotte, NC 28207</p> |
|--|---|--|

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](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 and Happy New Year Friends,

There's a lot of hype in the popular press about the "alignment" of the planets this January. The planets are all in the same celestial hemisphere, but that's all. Occasionally two or more planets come close (in RA) together...a conjunction. Below you see Jupiter and Saturn in the same field of view back on December 19, 2020...a couple of days before closest approach (6' of arc). Finally, if one celestial body eclipses another, it's called an occultation. That is what happens on Monday, January 13 at about 9:00PM...the moon will occult Mars, half-way up in the eastern sky. Fingers crossed for clear skies.



In the similar vein, how many of you will see all 8 planets in January...perhaps in one night? Mercury will be the visual challenge...let me know if you pull it off. I hope to image each planet with the same telescope from the same location...Mercury will DEFINITELY be the challenge for me.

Finally, some sad, notes. Carole Copp, wife of longtime club member Skip Copp, passed away on December 28, 2024. Our hearts are saddened by Carole's passing and we wish only the best for Skip and his family. They are being served by Lowe-Neddo Funeral Home, see their website for details. <https://www.loweneddofuneralhome.com/obituaries/carole-copp/#!/TributeWall>

Virginia Tooker, wife of Roger Tooker, passed away on January 8, 2025. Roger is also a longtime member of CAAC and he and Virginia have worked diligently on the Wine and Cheese Social at Southern Star. Virginia, along with Marge Hoecker and Joyce Riggsbee were the refreshment committee for the club for many years at multiple locations. Arrangements are incomplete at this writing; I hope to have more information at the monthly meeting on January 17.

Clear skies,

Jim
President, CAAC

Secretary's Report:

1. **SAVE THE DATE for 2025 Southern Star Conference!**

April 24-27 at Wildacres Retreat. We will have more information about this terrific event at our Friday meeting.

2. The **2025 CAAC annual membership** began in October and we want to express our gratitude to new joining members and to our renewing members. Your participation is greatly appreciated.
 - 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

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. Are you looking for ways to participate in the club? We would appreciate volunteers for the following standing committees to better serve our members:

- Room Set Up
- Refreshments
- Audio/ Video
- 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. Thank you for your consideration.

6. 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.



7. 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.

8. 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.

Best,

My Do
CAAC Secretary

CAAC Treasurer's Report as of 12/31/2024

| 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: 11/30/2024 | \$10,938.29 |
| 2 | Income: | |
| | Dues and Fees | \$705.00 |
| | Donations | \$2,500.00 |
| 3 | Expenses: | |
| | Zoom charge | \$51.98 |
| | GHRO Utilities (alarm, elec, internet) | \$141.90 |
| | GHRO Maintenance | \$37.80 |
| | Service fee to accept credit cards | \$53.36 |
| 4 | Operating Fund Balance: 12/31/2024 | \$13,858.25 |

| Non-Operating Funds | | |
|--|--|-------------|
| Purpose: Administer gifts and donations for designated use. | | |
| 1 | Non-Operating Fund Balance: 11/30/2024 | |
| | Scholarship Fund | \$6,706.87 |
| | CAAC Self Insurance Fund | \$20,000.00 |
| | Contingency Fund | \$7,430.45 |
| 2 | Income: | |
| | Interest | \$0.29 |
| 3 | Expenses or Transfers: | |
| | | \$0.00 |
| 4 | Non-Operating Funds Balance: 12/31/2024 | |
| | Scholarship Fund | \$6,706.87 |
| | CAAC Self Insurance Fund | \$20,000.00 |
| | Contingency Fund | \$7,430.74 |

Scott Goforth
CAAC Treasurer

News from GHRO

1. The next **Star Party is Saturday, January 25th** beginning at dusk.
2. Septic backup is now fixed (thanks Ken!).
3. I am starting to plan for new pads for members now. If you have an interest in your own pad at GHRO, please reach out and make sure I have you on my list. Please do this even if you have already talked to me about it. I have reached out to a concrete guy the club has used in the past, but have not heard back from him in a while. I'll be reaching out again and to other concrete vendors.
4. If you have a pad or building at GHRO that you are no longer using, please consider selling to another member or donating it back to the club. We have a large number of people interested in their own pads at the observatory. Please reach out to Rick Bassham if you are interested in giving up or selling your pad or building.
5. When observing at GHRO please ensure you minimize the amount of light you produce. Especially for imagers, **please take care to hide lights from your equipment and computers.** Plastic bins are available for use to put your laptop in.
6. Please follow the posted startup and shutdown procedures for any club owned scopes. This helps other members when they go to use our equipment.
7. 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/>
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. Special thanks to Dale Poole for doing a lot of mowing at GHRO.
10. The complete GHRO calendar for 2025 is on the following page:

2025 Star Party and Training Schedule

| Month | New Moon Date | Star Party Date | Moon Illumination | Moon Rise | Training Date | Training Start Time (PM) |
|-----------|---------------|-----------------|-------------------|-------------|---------------|--------------------------|
| January | 29 | 25 | 16% waning | 4:18:43 AM | No training | |
| February | 27 | 22 | 31% waning | 3:06:53 AM | 8 | 5:00:00 PM |
| March | 29 | 29 | New Moon | 7:12:18 AM | 1 | 6:00:00 PM |
| April | 27 | 26 | 2% waning | 5:41:56 AM | 5 | 6:00:00 PM |
| May | 26 | 24 | 9% waning | 4:11:22 AM | 3 | 6:30:00 PM |
| May | | | | | 31 | 6:30:00 PM |
| June | 25 | 21 | 19% waning | 2:43:06 AM | 28 | 6:30:00 PM |
| July | 24 | 26 | 4% waxing | 8:17:51 AM | No training | |
| August | 23 | 23 | New Moon | 7:08:31 AM | 2 | 6:30:00 PM |
| August | | | | | 30 | 6:30:00 PM |
| September | 21 | 20 | 1% waning | 5:58:38 AM | 27 | 5:30:00 PM |
| October | 21 | 25 | 15% waxing | 11:36:38 AM | No training | |
| November | 20 | 22 | 5% waxing | 9:22:37 AM | 1 | 5:30:00 PM |
| November | | | | | 29 | 4:30:00 PM |
| December | 19 | 20 | 0.5% waxing | 8:06:18 AM | No training | |

What would you like to see at GHRO?

Please provide any suggestions on things you would like to see at GHRO! I want to make sure this facility is providing the maximum benefit to all of our members, and I can't do that without your feedback. GHRO is already a world class amateur astronomy location, but it can always be improved. You can always contact the GHRO director, Rick Bassham at ghro@charlotteastronomers.org.

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 Report January 2025

Scheduled:

01/24/25 Outreach at **Westminster Park** in Rock Hill

[4000 India Hook Rd Rock Hill, SC 29732](#)

Setup: 3:30 - 4:00 PM

Program: 4:00 - 8:00 PM

- Set up is near the picnic Pavilion
- Parking is adjacent to the viewing site
- Power is supposed to be available but bring a battery just in case
- We need about 3 volunteers to assist with this event. If you can help with this outreach, please let us know.

02/05/2025 Outreach at **South Park Regional Library** (formerly the Morrison Library)

[7015 Carnegie Boulevard Charlotte, NC 28211](#)

Setup: 6:30 - 7:00 PM

Program: 7:00 - TBD PM

- Set up for viewing site TBD
- Power is supposed to be available but bring a battery just in case
- We need 3 - 4 volunteers to assist with this event. If you can help with this outreach, please let us know.

Clear Skies,

Tom Blevins
CAAC Public Outreach Coordinator

CAAC Astronomy Ad Listings

Welcome to the CAAC classifieds. 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.

- Item 24-001:** *Obsession 15 Classic f4.5 with Argo Navis, Custom Equatorial Platform, etc.* for sale in Chapel Hill. \$2700. Local pick up or seller is willing to drive for meet up. Ad can be viewed on AstroMart [here](#), or contact:
- Bob Clemen, rtclemen@gmail.com



- Item 24-002:** *Meade 8" LX200GPS Field Tripod w/ 2" steel legs, in very good condition*, for sale in Charlotte

Asking \$75. Can be picked up in Charlotte or other arrangements may be accommodated, contact:

- Steve Deskevich, Marshbum@gmail.com



- Item 24-003:** *Meade 8" LX200GPS Fork Mount With AC Power Supply, Hand Controller And Serial Cable that creates connection with PC*, for parts in Charlotte
LX200GPS Fork Mount (very good condition)

- 12V 2.5amp power adaptor
- AutoStar II hand controller (updated to latest firmware for GPS fix)
- Meade 8x50mm finder scope and mounting bracket
- Serial cable for connection from LX200GPS fork mount to PC



Offering for parts, \$0. Can be picked up in Charlotte or other arrangements may be accommodated, contact:

- Steve Deskevich, Marshbum@gmail.com

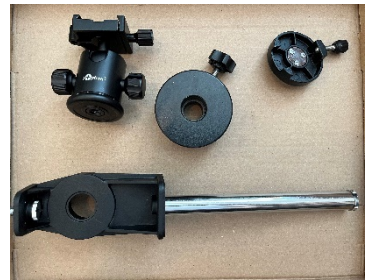
Item 24-004: *Star Tracker for sale: iOptron SkyGuider Pro EQ camera & the optional iOptron SkyTracker Ball Head camera mount, lightly used & in excellent condition. for sale in Charlotte*
Included:

1. iOptron SkyGuider Pro EQ camera (mount model #355)

- internal rechargeable lithium battery, good for 20 hours of operation
- illuminated internal polar scope for polar alignment & built in bubble level
- built in camera trigger port & ST-4 guiding port
- Detachable counterweight shaft & 3-pound counterweight

2. Includes the separately purchased iOptron SkyTracker Ball Head camera mount (model #3305A)

- ball head mount allows for 360 degree panning & makes it easy to tilt a camera into position
- can support a heavy camera lens, bubble levels on each axis & also has a dovetail mounting bracket



List price for this package brand new with the optional ball head mount is \$463 today. Asking \$325 for the full package. Can be picked up in Charlotte or other arrangements may be accommodated, contact:

- David Harris, 704-577-8977, davidharris11@yahoo.com

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.

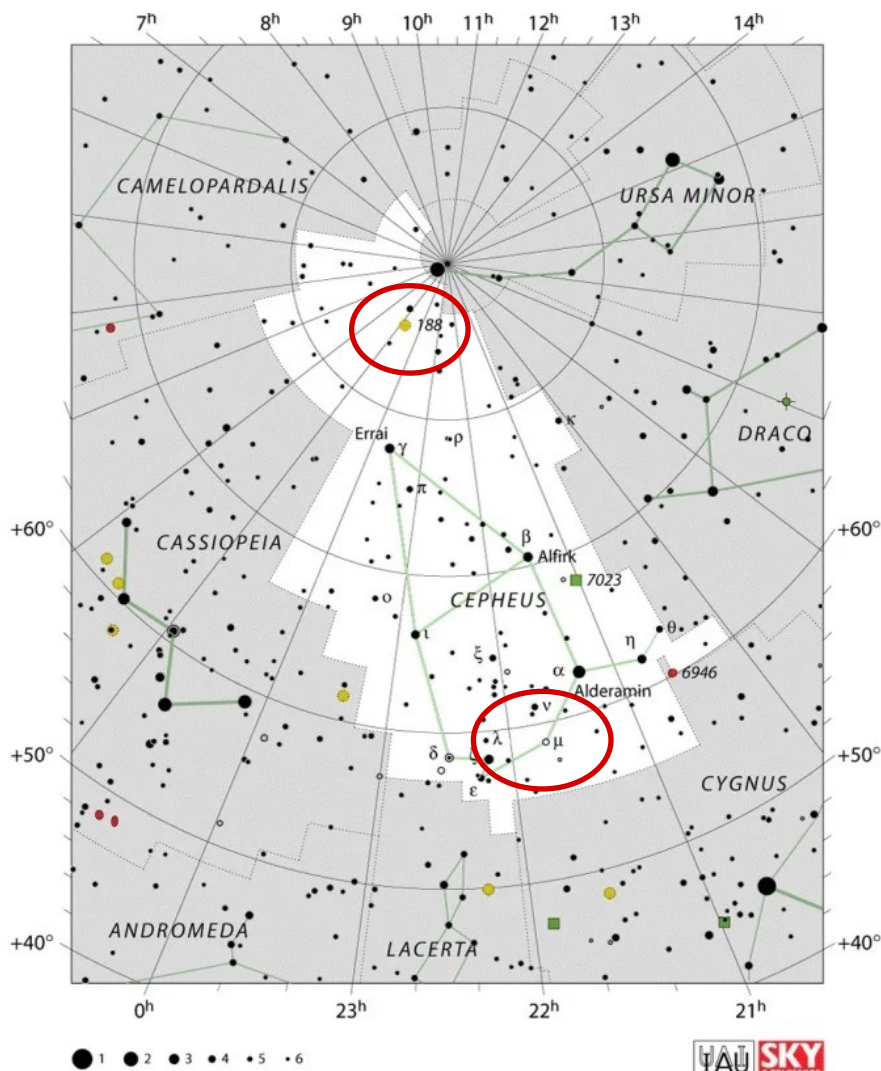
Item 23-002: *New SkyQuest Intelliscope XT8.* List Price \$ 1,300.00.
All manuals with it-including initial purchase paperwork

- **Make An Offer.**
- Contact Jim Gaiser



The Night Sky in January 2025

Cepheus



On clear, chilly evenings, the dim constellation **Cepheus** is high in the north swinging above the pole. The stars of **Cepheus** are mostly 3rd magnitude or fainter, and not a single deep sky object here made it onto Messier's famous list. On the other hand, Cepheus has a galactic cluster of unusual interest: **NGC 188**. Located only 4° from Polaris, the North Star, **NGC 188** consists of about 130 stars ranging from 12th to 17th magnitude. Together, they merge into an 8th-magnitude glow spanning some 15'.

While some keen-eyed observers have detected the dim presence of **NGC 188** in 7×50 binoculars on extremely clear and dark nights, the cluster's low surface brightness usually makes it a difficult find even in 4-inch instruments. With a 6-inch rich-field telescope, **NGC 188** appears as a soft glow, speckled with tiny, often elusive, individual stars. Through a 10-inch or larger

aperture the view is spectacular, and the whole field is scattered with diamond dust.

Strongly colored stars have always fascinated astronomers. The long history of red-star observations begins in the early 19th century, with famous observers such as Angelo Secchi and Thomas Espin. And those who think that stars are not highly colored need only look at **Mu Cephei**. Often called "**Herschel's Garnet Star**" (honoring both this cool, red star and William Herschel, who discovered infrared radiation), the color of this 4th-magnitude star, easily found in the constellation **Cepheus**, will leave you dazzled. The deep orange-red color of this red giant is nicely brought out in 10×50 binoculars.

Classed as an M2 Ia supergiant, the "Ia" implying the brightest kind, **Mu Cephei** is among the most luminous and largest stars in the Galaxy. The Garnet Star is seen to radiate 350,000 times more energy than the Sun.

We welcome and encourage our CAAC members to come and visit the **GHRO Observatory** to enjoy, learn, and observe these and other celestial wonders.

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

We would like to acknowledge the content for this report was edited from information courtesy of NightSkyInfo,

**Please note that NightSkyInfo has merged with Starlust.org and the original NightSkyInfo content has been migrated to the new site, Tom Urbain (Starlust.org) Acquire NightSkyInfo.com*

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.

An *ENHANCED* Star Atlas – FREE!

Our CAAC member, Mark Hoecker, has used the *Mag 7 Star Atlas – Color Milky Way version* (available on the internet) and added some enhancements including:

- A star map index to quickly identify the individual star chart you are looking for.
- Blue directional arrows at the edge of each chart guiding you to the adjacent chart. Also large page numerals were added in the lower right corner, helpful when thumbing through the charts.
- Finally, he manually added common star names and a selection of deep sky object names to the star charts, helpful in finding your way around the sky.

Such enhancements are allowed under the Creative Commons License by Andrew L. Johnson, author of the original charts.

SUGGESTION: While printing at the largest paper size you have available is helpful, a great alternative if you have a “letter size” color printer with a manual auxiliary feed slot, is to print on “legal size” (8½ x 14-inch) heavy paper or even “card stock”. You could also punch holes and place in a legal-size report cover available at office supply stores. You would then have a wonderful star atlas to help you through the night skies!

If you have access to a color printer that can print on 11 x 17-inch paper (or card stock), you can print a magnificent copy whose readability will rival that of very nice, commercially available atlases.

To download your ***Mag-7 Star Atlas Milky Way version – ENHANCED***, go to the CAAC website and scroll down the left column to “Mag 7 Star Atlas” and follow the link.

Happy Observing!

Endowment Corner

Gifts for the Present

Real-Estate

A gift of property can be a part of one's distribution of assets with certain tax advantages.

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 | Justin Peatross | 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 | Tom Blevins | publicoutreach@charlotteastronomers.org |
| Southern Star | Jim Gaiser | southernstar@charlotteastronomers.org |