



Charlotte Amateur Astronomers Club
www.charlotteastronomers.org

Next Meeting: Friday, October 20, 2017
Time: 7:00 PM
Place: Myers Park Baptist Church
Address: 1900 Queens Road

CAAC October 2017 Meeting

Program:

A Remotely Controlled Roll Off Roof Observatory For Astronomical Imaging

We will explore the construction of a roll off roof observatory, with emphasis on making it available remotely. Software based on ASCOM will be discussed and well as opportunities and limitations.

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 the Southeast Vice-President for Landauer Medical Physics.

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 he still owns...and it is looking for a good home. His astronomical interests include asteroid occultations and astrophotography.

In 2010, he purchased a roll off roof observatory at GHRO and began the journey that culminates in tonight's talk...

From the President:

On Sept 30th, the CAAC Board of Directors held their second officer's meeting.

Please find the highlights of the board meeting below. Your questions and suggestions are always welcomed.

Ken Steiner, President

Charlotte Amateur Astronomers Club

Board Meeting High Lights– Saturday September 30th 2017 – 2PM to 4PM

Attendees:

Jim Gaiser, Joel Levy, Kevin Moderow, Benton Kesler, Jack Howard, Ken Steiner, Karen Achor, Nazim Mohamed

Officers not present at meeting:

Chris Skorlinski (attending funeral)

Highlights:

- [14:08] Ken Steiner opened the meeting with welcoming remarks and a motion to approve the minutes from the previous meeting. **Motion approved.**
 - Karen asked on the level of detail necessary for the minutes. Ken & Joel agreed that the additional detail was preferred from a legal perspective.
- [14:10] Benton reviewed the FY17 year-end treasurer's report
 - Benton proposed we can use FY17 as a baseline for CAAC Budget in year-to-year analysis to determine overall fiscal trend and health of the club. However, Jim noted there were a few unusual expenditures this year (16" upgrade, and night vision binoculars)
- [14:20] Cosmic Camporee recap
 - Ken estimated about 60 attendees were present during potluck/dinner, and up to 80 during night sky observing. There were approximately 10 who camped overnight and stayed for breakfast on Sunday morning.
 - The club purchased 30lbs of meat, and had about 10lbs leftover which was sold to attendees
- [14:23] Insurance Updates and related items
 - Insurance premiums on GHRO facilities were recently paid
 - Liability exclusions: Visitors bringing their own pets, and visitors/members bringing their own alcohol.
 - **ACTION ITEM:** Ken to add fire extinguishers (as required for insurance coverage) to each of the buildings that do not have one
 - All of the batteries in the remote alarm sensors have been replaced.
 - Ken confirmed with county of records that the GHRO property deeds are in the name of CAAC.

- Ken reviewed Insurance coverage amounts. A question to whether or not to raise the covered amount for the Alvan Clark 8". The Board agreed not to raise coverage amount.
- Alcohol Discussion
 - The Board discussed whether or have an official policy on the consumption of alcohol and extent of enforcement of such policy as it has not been an issue to date.
 - Joel recommended to have an official policy to not allow consumption of alcohol in GHRO buildings. Kevin suggested the policy be extended to include general impairment, not specific to alcohol.
ACTION ITEM: Joel to draft official alcohol policy verbiage for Ken to review
- Pet Policy
 - For club-hosted and large events at GHRO (Star Parties, etc) club policy is not to allow pets on the premises
- Director Liability insurance
 - Joel agreed its good idea to have in place in order to indemnify the CAAC Directors against legal action. Ken will check on the arability and cost.
- [14:53] GHRO Access Issues
 - On the astro-imaging scope, someone has moved the scope on the wedge/pier. Ken suggested we restrict access to the imaging scope building to only those who are specifically trained on its operation by changing the door code to something different (until passkey system is implemented, see below point).
 - Discussion on how to handle former members accessing the facility. Consensus among Board members to move towards passkey system to log members activities to the buildings.
Motion approved to get a quote on a passkey system for roughly 150 members, and to charge members one-time fee (\$20?) for their own access card. **ACTION ITEM:** Recommended Chris Skor to follow-up with quote/recommendations on how to implement such a system.
- [15:00] Donation Letter
 - Joel has modified the donation letter with following changes:
 - Gifts donated to CAAC will be for unrestricted use by the CAAC club
 - A new line in the letter for the donor to include estimated value for their donated items to comply with IRS preferences for donated items.
 - Benton will include these updates in donation letters moving forward.
- [15:07] Scholarship Discussion
 - The Board discussed general guidelines on recipients of scholarship award. The Board agreed to identify general requirements and allow the Scholarship Committee to define specific requirements (GPA, major, minority status, etc). A consensus was made on a general requirement:
 - Student should be a resident of the metro NC/SC counties that the CAAC serves as an organization, preferably with ties to the CAAC club or a member.
 - **Motion approved** to appoint Bob Cantu, & Tom Blevins to the CAAC Scholarship Committee, and Ken to ask another member to serve on that committee.

- Scholarship Committee to provide their recommended candidate to the CAAC Board of Directors for final approval for disbursement of scholarship funds.
- [15:22] Monthly Meeting
 - **Motion approved** to not offer the library cart during monthly club meetings anymore due to lack of interest. Some select books and materials from the cart will be transferred to the GHRO Library in the Outreach building. All the remaining items will be given away to club members or visitors during upcoming meetings.
 - Board is open to suggestions on how to improve meeting room décor during meetings, and looking for volunteers to help.
- [15:25] Loaner Telescope Program
 - Follow up item from the last Board meeting to partner with local libraries to carry simplified telescopes for library members to check out, while CAAC will provide expertise & members to help maintain the scopes.
 - Benefits of implementing this program
 - Fast way to increase astronomy outreach to interested parties
 - Increase & improve PR of the CAAC Club
 - Increase membership to the CAAC club
 - Simplify and standardize telescope operation & training (less variables)
 - CharMeck libraries has the circulation, storage, logistics, and ability to run this program if CAAC club provides the expertise in scope selection & maintenance, and the time of its members to help.
 - **ACTION ITEM:** Kevin to reach out to library contacts to write a grant proposal to fund the telescopes for this program
 - **Motion approved** for Ken to purchase 2 of these “standard” loaner scopes outfitted with fixed variable magnification eyepiece for club use in the CAAC members-only loaner program. Existing inventory of loaner scopes will be auctioned or sold to generate revenue for the club.
 - CAAC needs to help new astronomers, Ken is working on securing a Mentorship Program Lead to pair new & experienced members. Further updates to be shared as it develops.
- [15:44] Kevin provided an update on Outreach activities
 - Upcoming dates set for the CharMeck Library Community Read events
 - All requested events have been able to be facilitated by Kevin or CAAC members this year, except for weather cancellations.
- [15:47] Jack provided a review of upcoming monthly programs
 - Meetings programs confirmed through 1Q of 2018. Some keynote guests are still confirming availability, but meeting programs are current planned through May 2018.
- [15:52] Jim provided Southern Star 2018 update
 - Dates have been confirmed and reserved with Wild Acres for April 5th to 8th weekend.
 - Jim to schedule meeting with SS Committee to discuss speakers and planning in next 1-2 weeks.
- [15:54] Karen raised to the Board to discuss any open items from the email Chris Skor sent, dated 9/29.

- On the need for second Open Pad, Ken suggested placement south of existing open pad. Need to follow up with Chris
- Light-blocking fence between street/parking lot and observatory buildings. Need to follow up with Chris on estimates/quotes
- On the concern of new member GHRO etiquette, Nazim will include the Safety & Etiquette Briefing to all new members joining the club.
- [16:03] Use of antenna tower for private or non-CAAC use (i.e. HAM repeater)
 - Ken is open to the idea as long as the antenna or repeater power is electrically separate other CAAC buildings.
- [16:10] Need to have a CAAC lockbox or safe deposit box for important legal documents.
ACTION ITEM: Benton to check with Wells Fargo bank on lockbox cost/options
- [16:12] Ken closed the meeting by reviewing upcoming tentative dates for next Board of Directors meetings: Jan 6th, and March 9th
- [16:13] Jim suggested a topic for future discussion at next meeting: Researching building a secondary CAAC dark-sky observing site in north of Charlotte to serve members/guests too far from GHRO.

From the South Star Planning Committee:

Southern Star 2018!!!!!!!!!!

Dates have been confirmed

April 5th 2018 – April 8th 2018

SAVE THE DATE

More details to follow in coming months

?CAAC Treasurer's Report as of 8-31-2017

<p>Part 1 of 2 Operating Fund Purpose: Enable the CAAC to pursue our non-profit goals, maintain our facilities, and run our programs:</p> <ul style="list-style-type: none"> Funds are acquired through ongoing receipts of dues, fees, and annual net Southern Star income (or expense). Funds are expended to meet operating obligations of the club. 		
1	Operating Fund Balance: 8-31-2017	\$11,932.03
2	Income	
	Dues & Fees	995.00
	Donation - Microsoft	0.00
	Prepaid Subscriptions	0.00
3	Expenses	
	GHRO Expenses	12.38
	GHRO Utilities	90.00
	Fees for Credit Card Service	14.28
	Meeting Expense	34.55
	Administrative	0.00
4	Operating Fund Balance: 9-30-2017	\$12,722.64

<p>Part 2 of 2 Non-Operating Funds Purpose: Administer gifts and donations for designated use.</p>		
1	Balance 8-31-2017: Non-Operating Funds	
	Scholarship Fund	5,315.00
	Contingency Fund	21,654.00
	Long-Term Fund	2,822.97
2	Income	
	Donation: Bank of America	0.00
	Donation: Duke Energy	0.00
	Interest	1.51
	Transfer from Checking	1600.00
3	Expenses or Transfers	\$0.00
4	Balance 9-30-2017: Non-Operating Funds	
	Scholarship Fund	5,315.00
	Contingency Fund	23,254.00
	Long-Term Fund	2,824.48

Wonderful things are happening with the Charlotte Amateur Astronomy Club. Opportunities for exploration and outreach are growing. **Membership dues for the 2017/2018 fiscal club year are due in October** as usual. Currently dues are \$60 per family which includes access and privileges of the club's observatory (GHRO) in South Carolina. Dues can be paid online with your credit card, go to <https://squareup.com/store/charlotte-amateur-astronomers-club-2> and select Renewal Membership - Full Year. I can still accept your cash or check (made out to The Charlotte Amateur Astronomy Club) at our monthly meeting. We look forward to sharing the wonders of the night sky with you.

-Benton Kesler
 CAAC Treasurer

CAAC Outreach Updates

Community Outreach needs you and your expertise. Outreach events connect CAAC members with groups in the Charlotte metro area who request star parties, presentations or training.

CAAC has begun a partnership with Charlotte Mecklenburg Library focussed on young adults and STEM. Kevin Moderow is presenting "The Sun Is Also A Star" at CML branches. The presentation coincides with the YA Community Reads book of the same title.

More outreach events for the fall season have already been planned. Contact Kevin Moderow if you are interested in getting involved with outreach.

Kevin Moderow
CAAC Outreach Coordinator

FROM THE SECRETARY:

ATTENTION:

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.

But, in addition to that over the next several weeks I will be undergoing a membership maintenance effort to identify former members who are not current on their dues and clean up the name tags, email, and NSN lists.

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!

Register with the **Night Sky Network!** It is imperative that all members of the CAAC join the Night Sky Network (NSN). Many of the clubs 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

Meeting Gathering Several CAAC members gather at Panera Bread (601 Providence Road, just a few blocks from our meeting place) at 5:30 prior to the monthly meeting. Anyone interested in sharing a meal with them is welcome.

News from GHRO – Chris Skorlinski, Director

Updates from GHRO

On October 14th clear skies at GHRO welcomed young adults from www.eSTEAMclub.com of Gastonia to enjoy the night sky. They were very excited to look through telescopes for the first time. We even got to see ISS fly overhead at 7:30pm as we waited for Saturn to appear. What a special treat.



Club members are welcomed this Saturday, October 21st for our Monthly Star Party. If you'd like to see the Sun, plan to be at observatory before 5pm as the sun sets early these days. If you'd like to cook out, we have portable gas grill available in storage shed which can be easily rolled out and ready to cook in minutes.

No groups will be visiting. The CAAC 8", 16", and 24" telescopes will be available for members use.

Following Star Party is Saturday, November 18th. Yes the skies will be moisture free, yes it will be cold, and yes the building will be warm.

Signup - Cleanup

Remember, the bulletin board list activities such as mowing, vacuuming, and wipe down to keep observatory grounds in top shape. It's up to us to take out the trash and clean the restrooms. As my wife Martie says: "pick that up, I aint your mamma."

Build that Wall

Still in planning stage, but we're exploring building a wooden fence and gates between parking area and observatory to reduce car lights from washing out our night-vision. If you have experience building a wall, let me know. We could use an experienced project coordinator. Thanks, ChrisSkor@hotmail.com

Card Swipe Security System

We're also in very early exploratory for a replacement security system at GHRO. We'd like to look into card-swipe type security system on buildings. If you work for, have worked for, or know someone who works for a company that provides such equipment and services, please let me know. Thanks, ChrisSkor@hotmail.com

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 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.

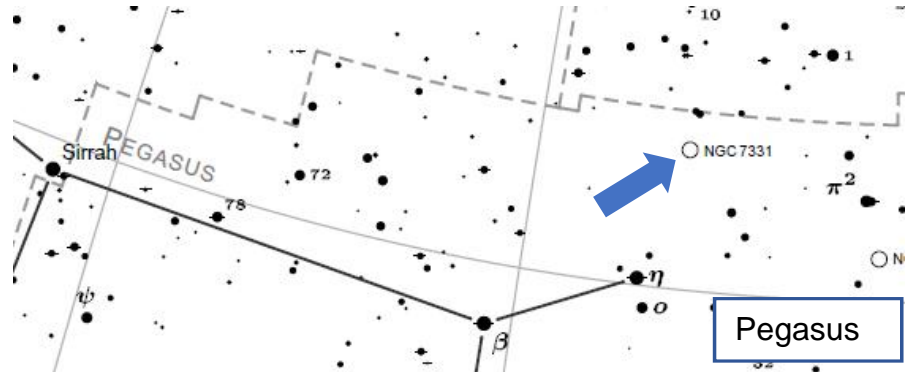
Users of this facility agree to hold harmless the Charlotte Amateur Astronomers Club, its Directors, and its members for any and all injuries sustained while participating in club activities or using this facility.

October Sky Challenge

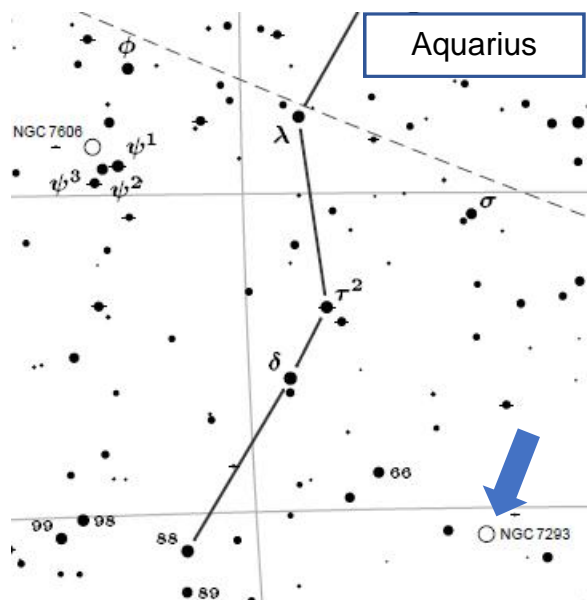
Are you looking for something to discover in the night sky? Try these with a modest size telescope, with some patience and persistence! Or come down to the GHRO and get a really fine look! This month, a galaxy similar to our Milky Way and a planetary nebula.

Pegasus NGC 7331

Located about 4.5° northwest of Eta Pegasi, near the border of Lacerta, NGC 7331 was discovered in 1784 by William Herschel, and was one of the brightest galaxies overlooked by Messier in his catalog. It appears nearly edge on, tilted at an inclination of 77°. Its structure is remarkably similar to our own Milky Way Galaxy, with a comparable overall mass, spiral structure, distribution of stars, and central supermassive black hole.



Shining with the combined light of a 9th-magnitude star, NGC 7331 appears as a small fuzzy patch when viewed through binoculars. With an 8-inch telescope, a bright core appears and the beginnings of wispy arms. At 12-inches in aperture, spiral patterns emerge, and with good seeing conditions you will observe “patchiness” in the structure. Nebulous areas are revealed and the western half of the galaxy is deeply outlined with a dark dust lane.



Helix Nebula, NGC 7293 in Aquarius

This nebula may be a little harder to find, but the search is worth it. The planetary appears bright at magnitude 7.3, and a huge 12.8 arcminutes across. This is about half the size of the Full Moon! However, despite its large size the nebula is faint and has a low surface brightness, making it hard to pick out from the sky background.

Small scopes show NGC 7293 as a circular misty patch, and a 150-mm telescope reveals that the center is dark and contains a 13th-magnitude star.

If observed from a dark location the Helix is visible even with binoculars, that show the object as a large circular hazy spot. Rich-field instruments with wide-angle eyepieces are ideal for picking up objects like this on the night sky.

Acknowledgements:

NightSkyInfo www.nightskyinfo.com/archive for target descriptions, adapted.

Mag Star 7 Star Atlas Project © 2005 Andrew L. Johnson for star maps (clipped)

What's Up in the Sky?

Highly Recommended Download and print a good *FREE* star map (including interesting objects to look for) monthly from:

Skymap <http://www.skymaps.com/downloads.html>

You'll also find a good monthly sky map in each issue of *Sky & Telescope* or *Astronomy* magazines.

New to the Night Sky?

Are you puzzled by folks in the club who point up in the sky and say “There’s Gemini... and you can see Leo rising over there...and doesn’t Regulus look clear tonight”? Are you trying to figure out where those darn constellations are? Those large star atlases are pretty intimidating... confusing... and expensive.

A good starting point could be called, *My First Star Atlas*.... but in reality it is 4 simple but very helpful FREE star chart pages from the Stephen F. Austin State University – called **SFA Star Charts**. Pages 2 & 3 show you about 90% of everything you need to get started. There are even a couple pages that explain how to use a start chart. Clear and straight-forward.

Go to this link and print out the pdf file on the largest paper you have available, though standard letter paper is fine:

<http://observe.phy.sfasu.edu/SFAStarCharts/SFAStarChartsAll.pdf>

While these charts do not show the myriad of deep sky objects, they DO show the constellations and brightest stars – a good introduction to the night sky!

Happy Observing!

CAAC CONTACTS

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