



Charlotte Amateur Astronomers Club
www.charlotteastronomers.org

Next Meeting: Friday, November 17, 2017
Time: 7:00 PM
Place: Myers Park Baptist Church
Address: 1900 Queens Road

CAAC November 2017 Meeting

Program:

Interstellar Travel - Science Fiction vs. Science Fact

Star Trek and the race to the Moon stirred our interest in space travel. Recent discoveries of planets orbiting nearby stars, along with the advent of space tourism and plans to go to Mars, have us thinking again about what it would take to venture beyond our own solar system. What can we actually do? What problems still face us? We will take a look at where we are and where we want to go ... and the problems we still have to solve.

Speaker:

Jack Howard has been a member of the club since 2015 and currently serves as Vice-President. He has previously presented programs on the New Horizons mission to Pluto and the Juno mission to Mars. He started the astronomy program at Rowan-Cabarrus Community College 17 years ago and still teaches courses for the college. Jack got his first taste of astronomy research at Kitt Peak National Observatory in 1970, and he earned a masters degree in astronomy from James Cook University. For the last two years, he has been a Solar System Ambassador, and educational outreach program sponsored by NASA and the Jet Propulsion Laboratory. In January, he will be spending 10 days visiting the observatories in Chile as part of the Astronomy in Chile Educator Ambassador program.

From the President:

Your Board of Directors have decided to discontinue the library cart that is rolled out during each meeting. We have removed a few items and placed them in the Library at the GHRO. The remainder of the items are available to the members of CAAC. You are welcome to take items that might be of interest to you.

In our discussions concerning our meeting room fee for next year we learned that there will be a \$75.00 set up and take down fee for the meeting room. This involves the chairs and tables arrangement for our meeting. We have the option of doing this ourselves to save \$75.00/ month (\$ 825.00/year). We presently have a set up committee for audio and misc signs. I am suggesting that we expand that committee with member volunteers to perform the room set up and tear down. The set up folks would need to do their work at 6:00pm to have things in place by 6:30 when folks begin to gather. Please let me know if you would be willing to help the club in this endeavor.

Finally, please remember the Christmas Part on December 2. Charlie Clayton will be sharing the specifics on this at our November meeting. Per our normal practice there will not be a regular CAAC meeting for the very busy month of December.

Ken Steiner, President

CAAC Treasurer's Report as of 10-31-2017

Part 1 of 2

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 net Southern Star income (or expense).
- Funds are expended to meet operating obligations of the club.

1	Operating Fund Balance 9-30-2017	12,722.64
2	Income	
	Dues & Fees	2555.00
	Donation	375.00
	Prepaid Subscriptions	
	Pad Fees	200.00
3	Expenses	
	GHRO Expenses	379.26
	GHRO Utilities	569.01
	Fees for Credit Card Service	61.39
	Meeting Expense	0.00
	Administrative	0.00
4	Operating Fund Balance: 10-31-2017	14,842.98

Part 2 of 2

Non-Operating Funds

Purpose: Administer gifts and donations for designated use.

1	Balance 9-30-2017: Non-Operating Funds	
	Scholarship Fund	5,315.00
	Contingency Fund	21,654.00
	Long-Term Fund	2,822.97
2	Income	
	Donation:	150.00
	Donation:	0.00
	Interest	.80
	Transfer from Checking	
3	Expenses or Transfers	\$0.00
4	Balance 10-31-2017: Non-Operating Funds	
	Scholarship Fund	5,315.00
	Contingency Fund	23,404.00
	Long-Term Fund	2,825.28

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 were 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

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 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. Mark your calendar for a star gazing event Feb 23rd at Stalling's Blair Mill Park.

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 Skorzinski, Director

Thanks to Jim Gaiser our SkyCam at GHRO is back up and running. Log on to our Weather page to check real-time sky conditions before heading down to GHRO <http://charlotteastronomers.org/weather/>

If skies are clear, club members and their guests are welcomed this Saturday, November 18th for our Monthly Star Party. If you'd like to see the Sun through our H-Alpha solar telescope, come down late afternoon. 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. Yes it will be chilly, dress warm. If you turn on room heaters, please turn them off when you leave, this helps reduce our electric bill.

No groups will be visiting, the CAAC 8", 16", and 24" telescopes will be available for members use. If you're familiar with using a telescope and would like to learn how to use our 16" telescope, let me know, I'd be glad to spend 1-1 time going over the operation of this great telescope.

Club Star Parties are also scheduled for Saturday December 16th, and Saturday January 13th. Can't make a Star Party, no problem, the observatory grounds are open year-round to all paying members.

Wifi Internet Fees

We've hit another record month, but not in a good way. We've exceeded our internet allowance at GHRO. Please, before coming to GHRO, download that movie you plan to watch while waiting for the stars and wait until you're home before uploading your astro images into the internet. These steps will help reduce our WiFi usage and overage charges.

Build that Wall

We're finalizing details on light-blocking fence between parking lot and observatory grounds. I hope to have everything worked out for our next board meeting in January. If you have experience building a wall, let me know. We could still use an experienced project coordinator. Thanks, ChrisSkor@hotmail.com

Chris Skorzinski, Director GHRO.

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 *****

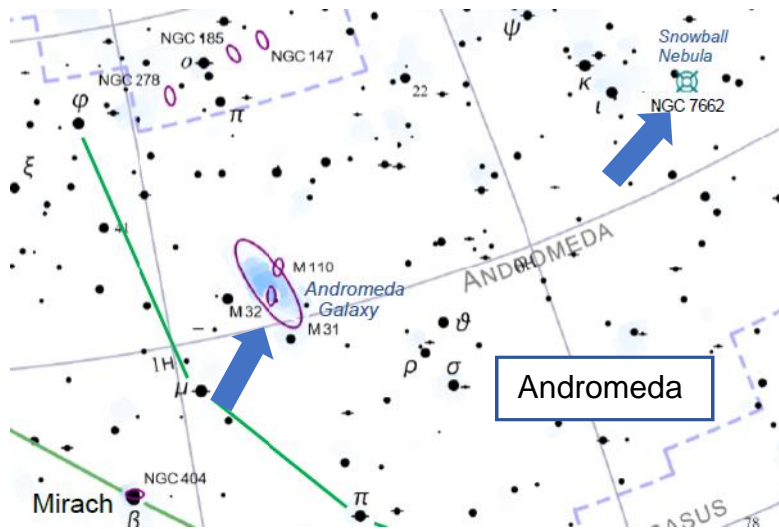
This facility and adjoining area may contain uneven terrain, dangerous wildlife, low light conditions, and dangerous man-made obstacles.

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.

November 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, three galaxies and a planetary nebula.



Andromeda M31, M32, M110

M31, the great Andromeda Galaxy, is one of the most famous objects in the entire sky, and the nearest of all spiral galaxies. This object is first mentioned by the Persian astronomer Al Sufi in the 10th Century, but the world becomes aware of its existence only in 1764, when Charles Messier includes it in his catalogue.

On clear nights M31 can be seen with the naked eye as a hazy smudge, and binoculars show its elliptical shape that can be traced to its full extent of over two degrees. That is four times the width of the full Moon! M31 is not very spectacular when observed with a telescope. Even the largest instruments reveal only the brightest central part of the galaxy, an elongated patch which gradually brightens in the center to a nearly star-like nucleus. When observing M31 use a wide-field eyepiece, otherwise you won't be able to fit the galaxy in the visual field.

Two more satellite galaxies lie near M31. The brightest of these is 9th-magnitude **M32**, located half a degree south of M31. The other satellite is **M110**, one degree northwest of M31. These two satellite galaxies are pretty faint, and the key to viewing them is to set up your scope away from local lights on a dark, transparent, moonless night.

NGS 7662 [Snowball Nebula] in Andromeda

... is a bright planetary nebula in Andromeda, one of the easiest objects of its type to see with small amateur telescopes. To find it, center your telescope on the 6th-magnitude star 13 Andromedae and you will have the nebula in the eyepiece's field, half a degree southwest of the star. The blue color of NGC 7662 is common in most planetary nebulae. Ultraviolet light coming from the hot central star excites the nebula's gas, and the strong emission by oxygen in the gas produces the bluish hue.

MORE... Search "planetary nebula" online to review how this phenomenon is formed and where the name came from! Hint: there is no "planet" involved!

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 star 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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