



Charlotte Amateur Astronomers Club
www.charlotteastronomers.org

CAAC March 2020 Meeting

Next Meeting: To be determined	Place: Myers Park Baptist Church Education Building - Shalom Hall (Basement)
Time:	Address: 1900 Queens Road Charlotte, NC 28207

**March CAAC
Meeting Cancelled**

From the President:

I am sure that everyone has gotten the word that our Southern Star 2020 is cancelled as well as our monthly CAAC meetings, cancelled until further notice. Jim Gaiser, Observatory Director, has canceled any groups or organized club actives at the GHRO. Members are free to utilize the facilities as individuals.

I asked our Vice President Dr. Tommy Megremis, a physician, to prepare a short explanation of the coronavirus situation:

“To My CAAC colleagues:

I am sure my CAAC colleagues are aware of the current coronavirus news. This virus is highly contagious, and was devastating to China and nearby regions. In essence it has just arrived here, and we are yet to know it's full potential at this time. The CDC and governmental agencies have implemented draconian measures to slow the progress of the virus infection such that we do not run out of hospital capacity to treat really sick people. They really don't have much choice judging by what happened in China, and there are real litigious and political concerns for underestimating the outcomes. My own feeling is that the virus worldwide is on a per capita decline but how potent it will be here is not known.. COVID-19 is a respiratory virus which spreads by person to person contact or by transmitting virus from inanimate object to the mouth or nose. It usually presents with a mild fever and dry cough, and maybe a mild sore throat. It doesn't share the muscle aches and high fever and malaise of influenza, at least not at the beginning. If you have diarrhea, you don't have coronavirus. The risk of serious disease possibly requiring hospitalization is around 20% and will involve a varying degree of pneumonia requiring supplemental oxygen even in less severe cases. If you have shortness of breath get help immediately since this probably will represent an advanced pneumonia. Around 2-5% may need help with a ventilator especially if you are over 60 and suffer from other chronic medical conditions such as diabetes, cardiovascular disease, pulmonary disease, or anything that compromises your immune system. The risk of death is debatable and in my belief is not as high as publicized by media sources. The South Korean death rate which has the best data is at 0.28% but others say high as 3%. Eighty percent of infected patients who are largely in a younger age group will have mild to moderate disease, and recover, but relapse can occur. Over the next two weeks we will have a much better understanding what this means for us and our ability to resume normal operations. But for now, it is wise to limit people contact as much as possible, keeps hands washed, keep hands away from your face, cover your sneezes by sneezing into your armpit or kerchief, and use common sense. If you develop any symptoms call your doctor first and ask how to proceed. My hope is that the virus we inherited here in the US is not as potent and some officials believe. Until next time, clear skies.....in your back yard.”

Dr. Tommy Megremis

While we exercise caution with social distancing let us remember the cosmic perspective that we are all made of the same stuff and in this together. Resist the temptation to blame other groups for the situation. The virus is no respecter of ethnic background, financial, religious or political persuasion. Keep a check on your elderly neighbors or others who are at high risk. Take care of yourself and keep in contact with others. We most likely have a long road ahead but this too will past.

Keep looking up.
Ken Steiner

CAAC Treasurer's Report as of 2/29/2020

Part 1 of 2		
Operating Fund		
Purpose: Enable the CAAC to pursue our non-profit goals, maintain our facilities, and run our programs:		
<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 1/31/2020	\$9,558.96
2	Income	
	Dues & Fees	840.00
	Donation	39.00
3	Expenses	
	GHRO Utilities	284.08
	GHRO Facility	219.56
	Fees for Credit Card Service	41.44
	Publications	98.00
	Trailer Registration	27.36
	Observing Guide	98.85
	Meeting Expense	230.25
	Southern Star	(486.00)
4	Operating Fund Balance: 2/29/2020	\$9,924.42

Part 2 of 2		
Non-Operating Funds		
Purpose: Administer gifts and donations for designated use.		
1	Balance 1/31/2020: Non-Operating Funds	
	Scholarship Fund	3989.36
	Contingency Fund	28,105.99
	Long-Term Fund	10,247.86
2	Income	
	Donation:	100.00
	Interest	.74
3	Expenses or Transfer	
4	Balance 2/29/2020: Non-Operating Funds	
	Scholarship Fund	3989.36
	Contingency Fund	27,355.58

DUES and FEES ARE DUE NOW

Club Dues and GHRO fees totaling \$60 are now due for our fiscal year October 2019 through September 2020. You can pay them using your credit card at the CAAC website www.charlotteastronomers.org or by cash or check at the meeting. For those of you who have private pads, don't forget to include your pad fee for the year.

Thanks

-Benton Kesler
CAAC Treasurer

CAAC Outreach Updates

"Due to the current public health situation all outreach events are currently on hold until further notice.

Hopefully this will be short lived and we will be back out there helping people to look up soon.

Thanks.

Neil Easden
Outreach Coordinator.

If you are interested in getting more involved with CAAC Community Outreach please contact Neil Easden at naeasden@gmail.com

From the Southern Star Planning Committee

SOUTHERN STAR 2020 CANCELLED

The CAAC Board has voted to cancel this spring's Southern Star Convention
This difficult decision is based on several considerations:

1. The Covid-19 epidemic is continuing to advance and will likely be worse at convention time next month and may continue for some time.
2. A significant number of our Southern Star committee and attendees are in the over 60 age group who are at higher risk of severe disease.
3. It is doubtful that some or all of our speakers could attend. Some institutions, such as Clemson, have instituted travel restrictions for faculty.

News from GHRO

1. While scheduled star parties and training are on hiatus due to Corona Virus concerns, GHRO is open for your personal use. It is also open for ongoing maintenance. I will be working the next two weekends (March 21 and March 28) on Saturday mornings to continue to clear the trees and remove fallen timber from our southern field. In addition, there are three new observatories being installed, so contact me if you'd like to help. I plan to start at 8:30 AM and work until I'm tired...I suspect early afternoon. My e-mail is jegaiser@gmail.com.

GHRO Information (see <http://1drv.ms/1m2wPUn>)

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.

Jim Gaiser, Director GHRO.

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 ***

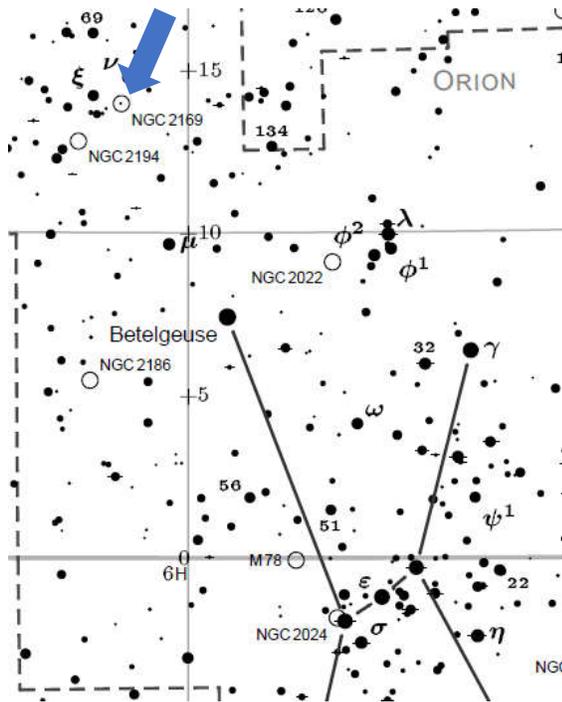
This facility and adjoining area may contain uneven terrain, dangerous wildlife, low light conditions, and dangerous man-made obstacles.

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.

March 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!

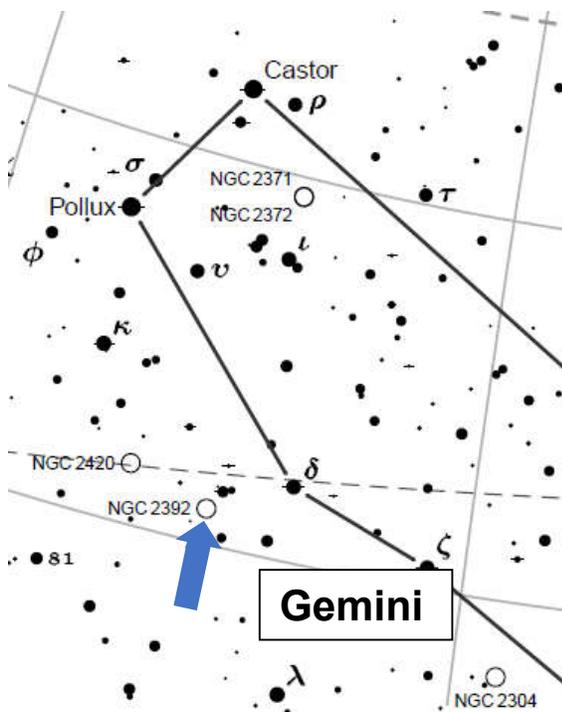


Orion

NGC 2169 Open Star Cluster

Many clusters are named by their number in the New General Catalog (NGC), which was compiled between 1864 and 1908. Our highlight deep sky object this month is a little-known member of this catalog – **NGC 2169** in Orion.

NGC 2169, nicknamed “The 37 Cluster” due to its striking resemblance to the number 37, is located about 3,600 light years away from us. As far as open star clusters go, NGC 2169 is a small one, spanning only 7 light years across. Its stars are about 8 million years old and are expected to disperse over time as they encounter other stars, interstellar clouds, and experience gravitational tides.



Gemini

NGC 2392 Planetary Nebulae

Some planetaries appear more like a ring – or even a face – than a disk. This is true especially for the **Eskimo Nebula** (NGC 2392) in Gemini the Twins. NGC 2392 is easily located about 1° southeast of the wide double star 63 Geminorum. With low power it is an unimpressive sight, appearing to be little more than a star surrounded by dim haze. However, increased magnification and a little patience bring out some interesting details. It just may look like a face surrounded by an Eskimo’s white fur collar! Try using averted vision with this one.

Like all planetary nebulae, the Eskimo Nebula is expanding, and has now reached a diameter of more than half a light-year. The gas shell probably first left the Eskimo’s central star some 1,500 years ago, making this planetary one of the youngest known.

Acknowledgements:

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

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

Edited by Mark Hoecker

What's Up in the Sky?

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.](#)

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!

CAAC CONTACTS

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