



Charlotte Amateur Astronomers Club
www.charlotteastronomers.org

CAAC June 2020 Meeting

<p><u>Next Meeting:</u> Friday June 19th, 2020</p> <p><u>Time:</u> 7:00 PM</p>	<p><u>Place:</u> <i>Virtual Meeting – From the comfort of your home</i></p> <p><u>Address:</u> Zoom web conference link – (See newsletter info below)</p>
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Early Summer Sky Events and the Ecliptic Plane

Speaker:

Dave Lengyel taught Astronomy and Advanced Placement Chemistry, mostly at Marion L. Steele High School in Amherst, OH for 35 years. He retired in 2010 and soon became the Planetarium and Observatory Coordinator at Oberlin College. In addition to astronomy, Dave enjoys gardening, running, and playing in three bands (Men of Steele - classic rock, Starship Truckers - folk and country, and Front Porch Swatters - Americana). My favorite piece of astronomical equipment is my Canon 15X50 image-stabilized binoculars. I live in Wellington, OH with my wife Arlene and several cats who have shown up over the years.



CAAC Virtual Meeting Log In Instructions

Log in instructions for the Virtual meetings on Zoom.

1. If you have not used Zoom before go to Zoom.com and download the Zoom program onto your computer.
2. ToLogIn;
 - a. Click on the meeting link below:
<https://us02web.zoom.us/j/89081115927?pwd=QUNRVzloMDdNSVZCcFVPai9rK1Z3UT09>
3. password: 946449
 - a. 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.
4. When on the Zoom screen to prevent chaos and overloading bandwidth:
 - a. Mute your microphone-icon lower left of screen
 - b. Stop 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
5. If you wish to ask questions of the speaker after the main presentation:
 - a. Submit on the chat feature. You will then type out your question and hit enter.
6. Excellent Zoom tutorials are available on You Tube:
 - a. <https://www.youtube.com/user/ZoomMeetings>

From the President

To state that we are living in challenging times is certainly an understatement as we face the double threat of the Covid-19 virus and issue of racism.

As we see attempts to reopen and get our economy back on track the presence of the Covid-19 virus is still with us. We need to be even more vigilant concerning attempts to limit the spread of this virus and its potential to overwhelm our healthcare system. The number of infections and hospitalizations has remained high. At this time we do not know when it will be safe or prudent to again gather physically for our monthly club meetings. The virtual meetings via Zoom have provided us with an avenue to stay connected while we continue to have presentations and opportunities to ask questions of our presenters. I encourage you to be a part of our virtual meetings as a means to connect with our local astronomy community.

Please live safe by practicing physical distancing. The wearing of a mask while inconvenient does three things:

1. Reduces the chance of giving the virus to others if we unknowingly have the it
2. To a lesser extent reduces the chance of our being infected from the virus from others and
3. Serves to raise awareness of all with whom we come into contact that the virus is still with us and we need to continually practice physical distancing.

From our constitution:

Charlotte Amateur Astronomers Club shall not discriminate against an individual or group on the basis of race, color, religion, national origin, sex, sexual orientation, age, veteran, or handicap status.

While we as a club can be proud of our commitment not to discriminate we must also acknowledge that we and our society have fallen short of non-discrimination of various groups and races. The current protests force us to confront the racism that exists in our institutions and society. As students of astronomy we offer a unique perspective, the "Cosmic Perspective" that states the oneness of all things. We are all made up of chemical elements that were forged in stars that have since died to give birth to our wonderful Cosmos. The "Cosmic Perspective" is no respecter of differences on which discrimination is based. The "Cosmic Perspective" acknowledges our sameness and connection to our world and each other. I hope that our "Cosmic Perspective" can be used to assist our institutions and society to gain a better understanding of the differences that divide us and provide a framework to construct bridges to understanding.

Ken Steiner
President
ksteiner30@gmail.com

CAAC Treasurer's Report as of 5/31/2020

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 4/30/2020	\$8072.66
2	Income	
	Dues and Fees	210.00
	Expenses	
	GHRO Utilities	289.08
3	Meeting Expense	230.25
	Fee for Credit Card Service	7.30
4	Operating Fund Balance: 5/31/2020	\$7756.03

Part 2 of 2

Non-Operating Funds

Purpose: Administer gifts and donations for designated use.

1	Balance 4/30/2020: Non-Operating Funds	
	Scholarship Fund	3989.36
	Contingency Fund	27,356.45
2	Income	
	Interest	.26
	Expenses or Transfer	
3		
4	Balance 5/31/2020: Non-Operating Funds	
	Scholarship Fund	3989.36
	Contingency Fund	27,356.72

Thanks
Benton Kesler
CAAC Treasurer

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.
2. The trees on the south end of the property are now all down and the debris has been cleared, but the ground is uneven. Please be careful if you are in that area.
3. I will be working at GHRO on Saturday, June 20 beginning at 9:00 AM to clean out the storage container prior to summer. The last of the lumber has been removed and we can now rearrange so we can get to items easier. Please contact me if you'd like to help with this project
4. If you are interested in becoming part of the Observatory Committee, please let me know. The committee helps the Director maintain the facility and provide insight and advice on operations and maintenance of GHRO.

Jim Gaiser
Observatory Director
jegaiser@gmail.com

GHRO Information (see <http://1drv.ms/1m2wPUj>)

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.

*** WARNING ***

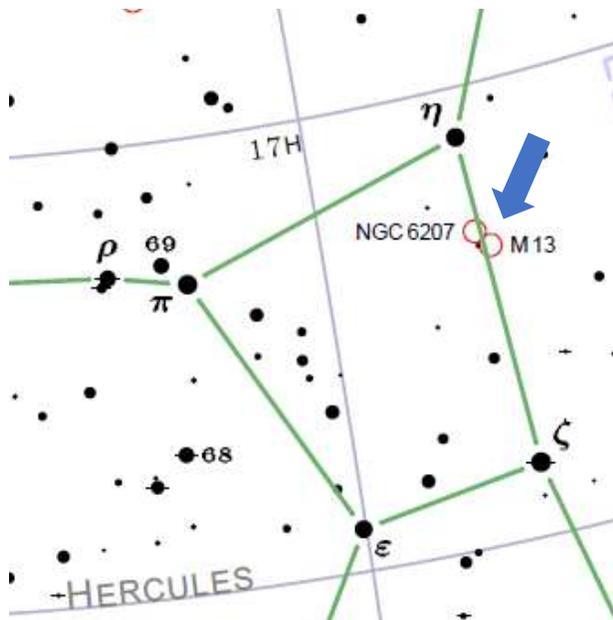
This facility and adjoining area may contain uneven terrain, dangerous wildlife, low light conditions, and dangerous man-made obstacles.

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.

June Sky Challenge

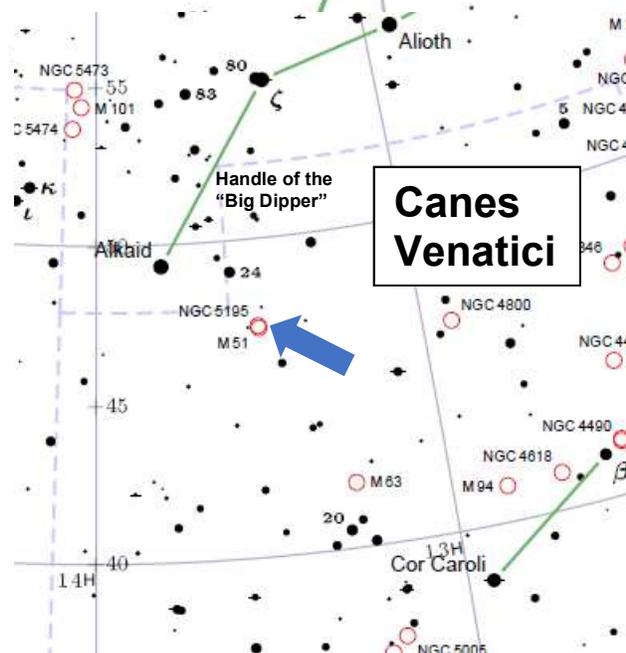
Are you looking for something to discover in the night sky? Try these with a modest size telescope, with some patience and persistence! Or come down to the GHRO and get a really fine look!



Hercules

Globular clusters are gravitationally bound concentrations of stars, which form a nearly spherical system around our galaxy. **M13**, the Great Cluster in Hercules, teeters on the edge of naked eye visibility and appears in binoculars as a small, circular, hazy glow. It contains over 300,000 stars, and its luminosity is 300 thousand times the Sun.

- The cluster is located in the “Keystone” of Hercules. Small refractors or large binoculars show a large, bright smudge, but resolution of individual stars is difficult. A 4.5-inch telescope starts to show stars at the cluster’s edge as individual points, and with a 6-inch scope their images are strong and steady.



Canes Venatici

Of all the countless island universes scattered across the sky, none seem as exciting as **M51**, the renowned **Whirlpool Galaxy**. Once believed to be a great swirling nebula, M51 is now known to be the finest example of a face-on spiral galaxy. The Whirlpool, just a few degrees southwest of the end star in the Dipper’s handle, is visible as a hazy patch even in binoculars. From dark, clear sites, high-quality 6- to 8-inch telescopes will readily show M51’s graceful arms arcing around its bright central core. Don’t overlook M51’s companion, **NGC 5195**, which apparently Messier did when he observed M51 in 1773. Conspicuous in the small telescope, this satellite system gives the appearance of being attached to the north spiral arm of M51.

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?

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!

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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