



Charlotte Amateur Astronomers Club
www.charlotteastronomers.org

CAAC June 2020 Meeting

<p>Next Meeting: Friday June 17th, 2020</p> <p>Time: 7:00 PM</p>	<p>Place: <i>Virtual Meeting – From the comfort of your home</i></p> <p>Address: Zoom web conference link – (See newsletter info below)</p>
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My Giant Mosaic Projects in Amateur Astronomy

Speaker:

I'm Matt Harbison, just a normal guy with a job by day and, like many of you, an amateur astronomer by night! I've loved science my whole life and I spend as much time as possible trying to connect folks with a greater understanding of our universe.

I embarked upon my giant mosaic almost 6 years ago next January - It has been a tremendous journey and I'm almost complete. To date, I've amassed many terabytes of data, countless new friends, and a passion to give back. Now I'm out trying to get more folks interested in long term projects and helping their astronomical communities. In my talk, I'll highlight 10 things I've learned about mosaics and 10 other things the project has taught me.

Among my topics:

- Mosaic parameters
- Time considerations
- Equipment considerations
- Technology considerations
- Surprising results
- Diminished returns

Here's a flyer- and a link to my website: www.spaceforeverybody.com

To see my current progress on my mosaic, hop over to <https://orion.spaceforeverybody.com> I look forward to our meeting!



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/83076485158?pwd=NDIHbkZNS2UvOE9reFdJK2xCN1FHdz09>

3. password: 517099
 - 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. 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 can 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

We continue to face challenges with the Covid-19 virus and at this time we really do not know when the “normal” will return. While we all miss the personal interaction of our monthly meetings the Zoom virtual meetings gives us a means to remain connected with programs and updates from the club. Observatory Director Jim Gaiser will be giving us an update on the GHRO during our virtual meeting on Friday.

Jupiter and Saturn are back in the night sky for our viewing pleasure. Be safe and keep looking up.

Ken Steiner
President
ksteiner30@gmail.com

CAAC Treasurer's Report as of 6/30/2020

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 5/31/2020	\$7756.03
2	Income	
	Dues and Fees	
	Expenses	
	GHRO Utilities	307.08
3	Facility Expense Tree/Stump Removal	1000.00
	Fee for Credit Card Service	
4	Operating Fund Balance: 6/30/2020	\$6448.95

Part 2 of 2

Non-Operating Funds

Purpose: Administer gifts and donations for designated use.

1	Balance 5/31/2020: Non-Operating Funds	
	Scholarship Fund	3989.36
	Contingency Fund	27,356.72
2	Income	
	Interest	.26
	Expenses or Transfer	
3		
4	Balance 6/30/2020: Non-Operating Funds	
	Scholarship Fund	3989.36
	Contingency Fund	27,356.98

Stewardship Balance

\$12,591.03

Thanks
Benton Kesler
CAAC Treasurer

From the Outreach Committee

Virtual Star Parties

Like so many things in 2020, CAAC's outreach is going to have to adapt to our temporary new normal.

Outreach in its usual form is not going to be a viable option for the foreseeable future, but thankfully we can turn to technology to continue our public engagement efforts.

Over the next few months Jupiter and Saturn rise earlier each night while those same nights get progressively longer and all the while we approach Mars coming to opposition. In short, the next few months are just too good to see go to waste!

Virtual star parties that utilize video astronomy and online streaming have been gaining in popularity since social distancing efforts went into effect and were already shaping up as the natural way forward for us too. But now that Comet NEOWISE is showing the potential to generate considerable public interest in the next few weeks, there's an increased urgency to be ready to make the most of it.

With all of the above in mind I would like to put a call out for members who have the capability to live stream a video feed online directly from their scope. Relatively modest equipment has the potential to be a great asset for this project, especially as lunar, planetary and (hopefully) cometary viewing will probably account for the majority of the focus, particularly in the next few weeks to months.

If you would like to assist in getting this off the ground, please reach out and let me know:
naeasden@gmail.com | 704-501-6590

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. Thanks to those who helped cleaning out the storage container last month, we're in much better shape now.
4. The observatory committee wants to thank everyone for continuing to clean up the outreach center whenever they are finished using the facility. Please remember to remove all trash from the cans on a nightly basis, as we do not want a bug problem. There is plenty of Lysol™ in the warmup room, don't hesitate to use it. Finally, a quick sweeping of the bathrooms and the hallway goes a long way.
5. The 10" RC telescope (Astro Imaging) is currently down, updates to follow.
6. 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/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.

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 ***

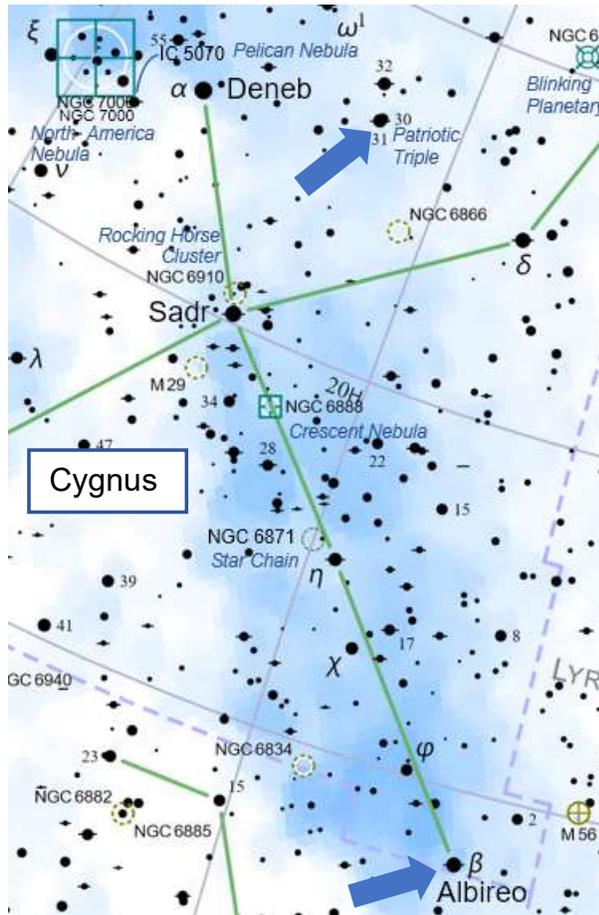
This facility and adjoining area may contain uneven terrain, dangerous wildlife, low light conditions, and dangerous man-made obstacles.

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

July 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, 4 interesting stars, 3 of which might deserve a salute!



Cygnus, often informally termed the Northern Cross, represents the swan into which the god Zeus turned himself to seduce Leda, wife of the King of Sparta. The showpiece of Cygnus is not some large cluster containing hundreds of stars, but a lonely star that marks the head of the swan.

Albireo is one of the most beautiful double stars in the sky, probably the finest in the heavens for small telescopes. The two components are known as Beta Cygni A and B. A is the primary member of the system, a golden yellow or “topaz” star shining at 3rd magnitude, while B is known as the companion, a fainter 5th-magnitude star with a beautiful bluish color. The two components have a wide separation of 35 arcseconds; this means that the system can be seen separately through the smallest of telescopes, and even with good binoculars.

Also in Cygnus...

A spectacular item for July, **30/31/32 Cygni** also known as the **Patriotic Triple**, basically red, white, and blue.

30 Cygni is a class A5III (white giant) star in the constellation Cygnus. Its apparent magnitude is

4.83 and it is approximately 610 light years away based on parallax.

31 Cygni It is an Algol-type eclipsing binary and ranges between magnitudes 3.73 and 3.89 over a period of ten years. The component stars are an orange supergiant of spectral type K4Iab and a blue-white star likely to be evolving off the main sequence with a spectral type of B4IV-V.

32 Cygni A, has a stellar classification of K5 Iab, indicating that it is a supergiant star. Its effective temperature of 3,840 K lies in the range for K-type stars,[7] giving it an orange hue. The companion star, 32 Cygni B, is smaller than the primary and has the blue-white hue of a B7 star main sequence star.

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 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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