

Green Bank StarQuest 20th. June, 2025

At the urging of several ORAS club members who attend on a regular basis, I decided to make the journey down to the mountains of central West Virginia for the 20th and possibly last Green Bank StarQuest starparty. (Rumor has it that the radio observatory is going to be mothballed). Having just come off a 10 day trip to the Cherry Springs Star Party, I had two days to turn-around my camper and restock for another astro-camping expedition. This trip would be one where I would be totality dependent on my new solar generator setup and would have to keep a close eye my power usage. Probably a good thing that we weren't allowed to use our microwaves due to the radio interference they cause. Another different aspect of this party is it takes place in a national radio quiet zone where there's no cell phone coverage, thus no internet on the camping field. Fortunately, there was an internet connection up in the visitor center, but they were in demand by everyone. I had last experienced StarQuest back in 2009, so I was looking forward to the trip and meeting a few acquaintances from back in the Laurel Highlands Star Cruise days, and more recently from Calhoun.

Wednesday 06/25/2025:

Up early to finish a few last minute loading. It was already a sweltering hot & humid day, with a extreme heat warning. Left for Green Bank around 9:20am, and arrived at the national radio observatory around 2:30pm.



Stopped first at the main visitors center to register, and immediately ran into folks that I know. Working the desk was Connie A who recognized me from my old Star Cruise days. Her daughter Caitlin was around too. While finishing signing up, John D who I know from Calhoun walked over. While John was showing me where the cafe was, I ran into fellow ORAS member Dean S. After signing up for dinner, I drove down to the camping field where I found an open spot by Dean.



Spent the next several hours sweating buckets while setting up camp and my solar power generator. Clouds had rolled in, so wasn't getting a lot of juice from the panels.



It was pretty cool looking around and seeing the large radio telescopes.



At 5:30pm, I changed into a dry shirt and drove up to the dining hall for dinner, a huge loaded potato with all the fixings. There, I ran into Dr Tim H from Shawnee State University, and joined him at the dinner table where we caught up. I had met Tim a few years back at Calhoun. Also at the table were Christen from NC and her friend Lindsey from Morgantown.

After dinner, I drove back down to camp. Visited with Dean for a few minutes and after freshening up walked back up to the main auditorium in the visitor's center. Along the walk, I met Abby from Montana, who had interned last year at Green Bank.

Sat in on the day's main presentation by Ellie White on the latest SETI research. Kicking off the event was the welcome by StarQuest Chair Connie A and club VP John T.



Then Ellie Was up! Interesting presentation on SETI! I then started to walk back to the campsite when I ran into John D again and stopped to chat with him. Once back at camp, pulled out my camping chair and visited with Dean for awhile. The sky wasn't looking very promising tonight.



I then proceeded to setup my AllSky camera, (a ZWO ASI224MC camera & fisheye lens in a DIY dome attached to a tripod), and started acquiring frames, and then setup & polar aligned the SeeStar S30 smart telescope. With dusk falling, I got out the 8" field mount and assembled enough of it to polar align. Just in time for the "Dippers" to appear. With the sky being a little haze, I decided to use the SeeStar to EAA observe the brighter globular star clusters. I started off with the great Hercules cluster - M13. Then switched to the bright globular in Canes Venatici - M3, but just prior to finishing that observation, the haze thickened giving the stars a bit of a halo.

Here's the observations:



(SeeStar S30, 60 second exposures in EQ mode with the IR filter, darks & flats applied, livestacked for 15 minutes, then AI noise reduction applied in-app)

With the haze growing and wiping-out the faint nebula that I wanted to observe, and it having been a long day, I called it a night.



Thursday 06/26/2025:

Woke around 8am. The camper was already starting to get warm. Overnight temps never went below 68 deg. After a quick light breakfast, I walked down to the white barn for a shower. I then walked up the hiking trail to the visitors center. Along the way, I stopped to admire a cool old (~300 years) white oak tree.



At the center, I checked out the door prizes and dropped a few tickets. Then took in the session on the latest SeeStar upgrades. Ran into Dean in the hallway looking for a different presentation. Lots of planned activities during StarQuest. After the presentation, I walked around the center and checked out the science displays and found a place to connect my phone to read emails and chat with home.



I then headed outdoors for a few photos, including the Jansky Antenna and the Reber Radio Telescope, and then walked back to camp.

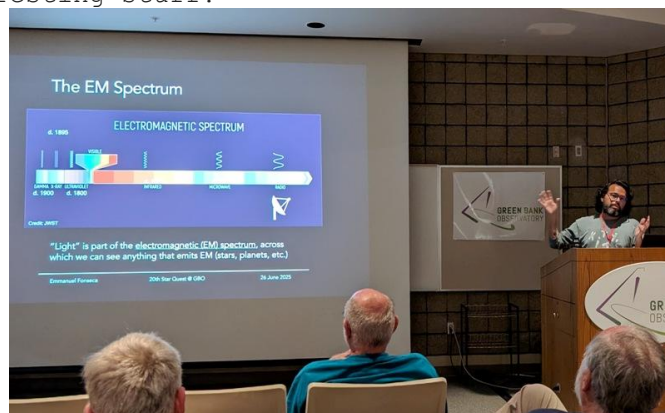


Around noon, dark clouds began to move in.

I had just finished making lunch around 1:10pm and had gone outside to eat when raindrops began to fall. At first it was pleasant, but as the drops increased, I first went underneath my easy-up canopy, but then as the shower turned into a deluge, I headed back indoors. For a good 25 minutes it thundered and poured! The observing field was soaked! But at least the temperature had fallen from the mid 80s down to 70. The downpour finally tapered off into a drizzle that lasted till nearly 2pm. I then drove over to the bunkhouse and joined Dean in the lounge to work on my CSSP trip report from last week. While there, met fellow Calhoun astrophotographer Jeff B, and another SQ attendee, Carl.

Around 3:30pm, I headed back down to camp and finished setting up the optics of the main telescope, attaching the optical tubes and cameras. My usual EAA setup: 8" Celestron SCT optical tube @ f6.3 with a ZWO ASI294MC Pro camera, ZWO filter wheel & focuser, on an Atlas EQ GEM mount, along with a piggybacked Sky-Watcher EVO50mm refractor and ASI294MC camera (uncooled model), and a 60mm Antaries refractor guidescope with a ASI120MC camera.

At 5pm, I headed back up to the dining hall for a pasta bar dinner. 3 kinds of lasagna! I left stuffed. :) I then took in the 7pm keynote speaker of the day, Dr Emmanuel F presentation on radio pulsars. Interesting stuff!



Back at camp around 8:30pm, I uncovered the 8" telescope and attached the SeeStar S30 to its equatorial mount and started up the AllSky. I was going to have to be careful on my power usage tonight, as I did not get the solar batteries fully charged.

Around dusk, 9:30pm, lightening began flashing to our north. Off in the distance, along the horizon, a line of thunderstorms were coming out of the North West and keeping to our north. Out of precaution, I covered the telescopes and stowed a few things. After awhile a spectacular light show developed with near constant lightning flashes with numerous cloud to cloud bolts visible. Dean and I pulled our chairs out to watch. While the storms lit up the sky making imaging or EAA observing nearly impossible, the storms were so distant that you didn't hear a sound from them. Just the lightening and the sound of crickets. The show continued for over two hours. Overhead and to our south it was clear with the stars shining and the Milky Way visible in Cygnus and Sagittarius.



But the nearly continuous lightening flashes illuminating the entire sky didn't make it worthwhile uncovering the scopes. (Besides it was too much fun sitting in our chairs watching all the distant cloud to cloud lightning bolts, lol).

Around 11:30pm, I walked my trash down to the dumpster at the white barn. While on my walk, the sky went to overcast, and clouds appeared to our northeast to east. I decided to throw in the towel and put the SeeStar away and closed up the camper hatch. Watched the diminishing lightning flashing for a few more minutes and then headed indoors at midnight to bed. Here's a time-lapse video from the AllSky camera:

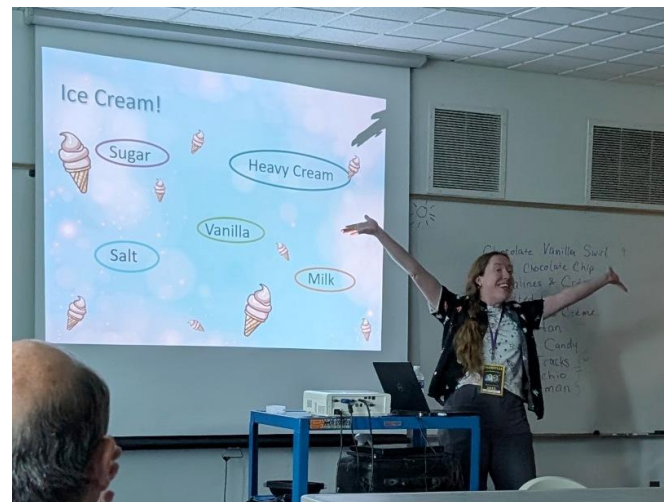
https://youtu.be/of90EuScrJE?si=WL3Z_jW-Ho3T1N2C

Friday 06/27/2025:

Woke early, around 7:30am, to try and beat the heat. It was a foggy morning with occasional sunshine. The outdoor temp was a pleasant 65 deg. After breakfast and a cooling shower, I was ready for the day, which included a number of presentations I wanted to hear. I met my neighbor Bill L from Ashville NC and his radio telescope. I then drove to the bunkhouse lounge to stay out of the heat and worked on images.



At 2pm, I attended the talk by Dr Caitlin A on the different 'flavors' of solar system cryovolcanoes. It was a great talk that showed Caitlin's enthusiasm for her research!



During the presentation, heavy thunderstorms moved thru the area, nearly drowning her out a few times with the rain and thunder. So much for drying out my tennis shoes that I had left sitting out back at camp. There were multiple heavy downpours for the next 45 minutes. Headed back to camp, to find a little storm damage. (blown over tripod).



A number of tent campers suffered blown down tents and soaked bedding.

Also, a kind person had seen my shoes and bath towel sitting out and had gathered them under the camper where they stayed dry. (Thank You! whoever that was) With all the cloudiness and storms, my solar generator and panels wasn't keeping up, so I decided to sacrifice my milk and turned off my camper fridge and let it defrost. Dean was also having issues powering his camper with his solar setup, and we went for a drive to the local country hardware store for a cooler and ice for his perishables.



At a quarter after 5,pm, I headed to the cafeteria for dinner: chicken fried steak, mashed potatoes and gravy, with green beans. Yum!

Road up with Dean to the 7pm keynote presentation by Dr Benne H on occulting galaxy pairs. We both enjoyed hearing the latest research.



Afterwards, I road back to camp with Dean and we sat out for a little bit to have snacks and beverages. The sky remained cloudy with fog developing on the observing field. Thunderstorms were in the area lighting up the sky to the NW and SE. Off in the distance, the GBT had a surreal look, with the 300' dish rising out of the fog.



As it didn't look like there would be any observing that evening. I joined Dean on a stroll around the field to visit with "meteor man" Dave H. Later, back at camp I headed indoors and worked on the time lapse of Thursday night's thunderstorms. After about an hour of reading I was falling asleep and called it a night at 11:30pm

Saturday 06/28/2025:

Up before 8am to shower and have breakfast.

At 9:30am, Dean and I drove up to the visitor's center for the group photo. While Dean went off in search for ice, I headed indoors to the science exhibition area where I was able to connect online and check the weather forecast. It did not look good!

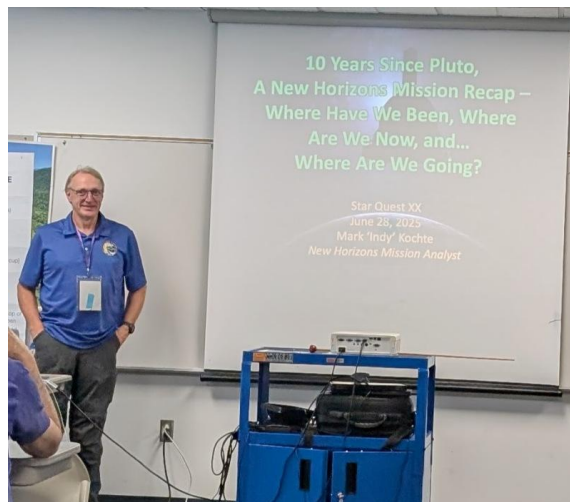
Thunderstorms predicted for this afternoon and early evening. So after walking back to camp along the hiking trail, I decided to pack the telescope, AllSky camera, SeeStar, and as much camping equipment as possible. Left the camper 'porch' visor up to protect the solar generator from rain.

I then walked down to catch the last of the rocket launch and visited with John D and his granddaughter Hanna from Louisville. Also met Eddie from Uniontown with his refractor.



Grabbed a cold water bottle from the white barn, as it was sunny and hot. Back at camp, I gave Dean the bad news on the weather, and he decided to break down his scope too. Lots of others on the field were also packing.

Made a quick lunch, and drove up to the center for the 1pm talk on astronomers Cecilia Payne and Nancy Grace Roman by John T. Good discussion afterwards. Then stayed for the 2pm talk by Dr Mark K on the New Horizons mission recap.



Mark had a little problem with his laptop connection and the SQ staff jumped in to help.



It was nice being in the AC and spending time checking out the radio astronomy exhibits.

Headed back to camp for a bit and sat out and visited with Dean. Then I put on a fresh shirt and headed for dinner. Afterwards, back at camp, I finished packing the outdoor camping gear, and then headed up to the keynote presentation: Dr Seth Shostak on the latest SETI info. It was a fun and interesting talk.

Then it was time for the big door prize raffle! I won an Astronomical League beanie. Yea!



With the last prize drawn a little after 10pm, a number of us then drove back down to the observing field. A thin waxing crescent was in the western sky, along with a few faint stars, but most of the sky was cloudy with distant thunderstorms to our north, and a much closer one within earshot was rumbling past to our east, filling the sky with bright flashes.

Visited with Dean for a few minutes and then Dean decided to call it a night and headed indoors. I stayed out for another 10 minutes watching the hazy moon before finally heading inside to read. Around midnight I walked to the restroom and the sky had gone mostly clear with just a few scattered clouds and fog. The Milky Way was rising in the east looked nice and bright. A few amateurs were out with their scopes but the field was mostly quiet. I thought about getting the SeeStar out of the car, but the lights would bother people and I was getting tired from the long day, so I just admired the naked eye view before heading indoors to bed.

Sunday 06/29/2025:

Up at 7:30am. While eating breakfast, I packed the inside of the camper, and then moved outside to crank up the stabilizer jacks and hookup the SUV. Dean was also out prepping for home, along with the few remaining campers on the field. Dean pulled out at 9am, and I was on the road by 9:15am, and arrived home at 2:15pm.

Thus ended my return to the Green Bank StarQuest after 16 years. It was a good week of attending presentations by both amateurs and professionals in a comfortable air conditioned setting in a beautiful radio astronomy science center, within eyesight of the world's largest steerable radio telescope dish. Unfortunately, the weather didn't cooperate with fully clear skies. Other than brief windows on Wednesday night and a much better Saturday night after midnight, the starparty was mostly clouded out every night with very hot temperatures every day, along with storms nearly every afternoon. The heat was a real drag, Not very comfortable camping... ☹

Still, the indoor activities, great food, outstanding presentations, and friendliness of fellow amateur astronomers made the trip worthwhile! Hopefully, if StarQuest is able to continue, the next time I attended the observing weather will be better.
Next year's 2026 StarQuest: June 10th to 13th.

Larry McHenry

Astronomical Webportal: <http://www.stellar-journeys.org/>