ORAS – AstroBlast: August, 2023

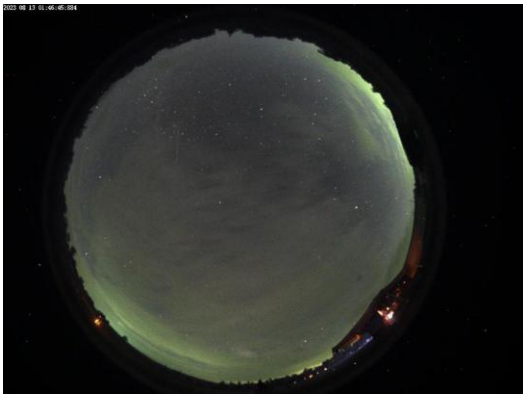
With the month of August comes the Perseid Meteor Shower and the 2023 Oil Region Astronomical Society's AstroBlast convention. I decided to head up to the ORAS observatory facility early in hopes of catching a few shooting-stars.
Packed the car & camper on Friday afternoon and was ready to go.

Saturday 8/12/2023:
At 9:30am, I pulled out of the driveway and headed north to the ORAS Observatory. Along the way on I79, I ran into road construction just past Slippery Rock that delayed me for a bit. The worse part of it was the closed restroom! LOL!

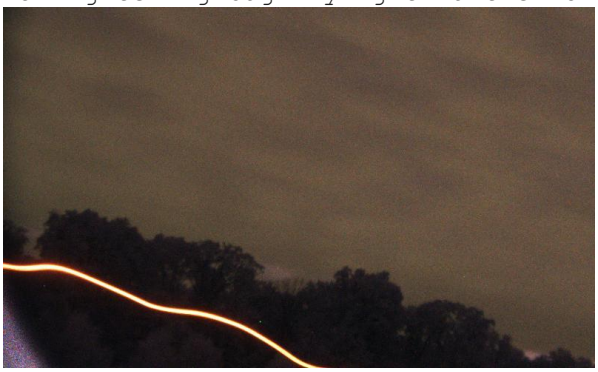
Arrived at the observatory just past noon to find Dean M just setting up over on the western field near Dean S who came up yesterday. I pulled in near the eastern side of the observatory and setup camp & then my EAA telescope. I quickly got my camp setup and assembled my EAA telescope: an 8" Celestron 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 EVO 50mm refractor & ASI294MC camera (uncooled model), a 60mm Antaries refractor guidescope with a ASI120MC camera, and a small Canon 5.5-55mm CCTV lens & ASI290MC camera as a super-widefield finder, also piggybacked on top. And I setup the Allsky cam, a ZWO ASI224MC & fisheye lens in a DIY dome.

Denny arrived around 2pm and setup over across from me.

Around 6:30pm, a heavy downpour and lightening chased everyone indoors. But by 7:30pm the Sun was back out, and the sky cleared. At dusk, as the first stars began to glow, scattered clouds began to move in from the west. Started up my AllSky camera and Canon 5mm lens on star adventurer mount. But by the time I was ready to polar align the main scope, more clouds rolling in had obscured the northern half of the sky, covering Polaris. So I pulled up a chair and joined Denny in meteor watching thru the sucker holes. We actually were able to see a half dozen before midnight, many to our south, and I captured several with the AllSky camera.



My fun shot was of a lightening bug flying thru the FOV of the Canon 5mm lens:



Later we walked over to visit with both Dean's. With clouds continuing to thicken and rain to our west, we called it at night just after midnight.

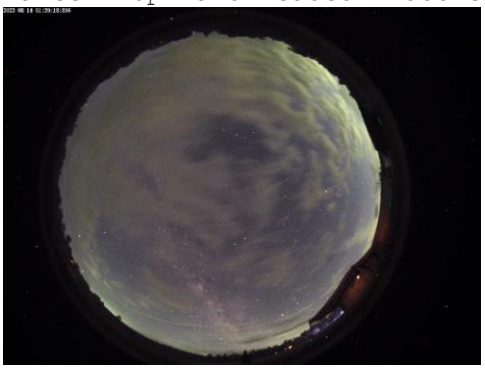
Sunday 8/13/2023:

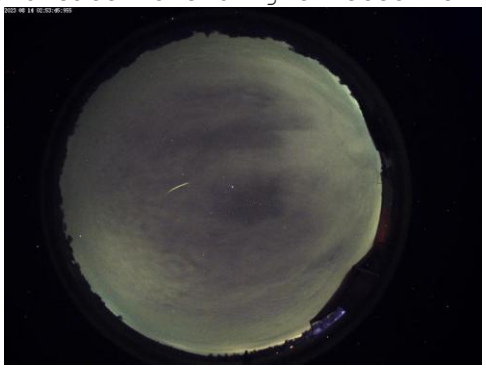
Woke up several times during the wee hours to see if it had cleared, but no luck. Slept in till 8:30am. At 10am, with the sun shining, we gathered over at the observatory for a work session.

It was a busy day at ORAS. New pier installed for the 14" Meade SCT. Final coat of paint on the telescope shed. And the Sun shade installed.

The sky stayed mostly clear and was a warm sunny day. During the afternoon, Bill from Ohio arrived and parked his camper along the road to the south of the observatory. (a new member from one of the ORAS workshops).

AT 6:30pm, we gathered over at Denny's camper for BBQ sandwiches! At sunset, the sky began to cloud over, and after attempting meteor watching, we all called it quits a little after 10pm and headed indoors. I did catch one bright meteor thru the clouds.





Monday 8/14/2023:
Up early to a partly sunny sky. By mid morning both Dean's had left for home, leaving their campers and scopes under Denny and I care.

Denny spent the day outdoors making a few adjustments to the telescope sheds while I was inside the observatory working with the Meade 14", setting up the video astronomy system. The Meade is all wired for video astronomy using my camera. Also, tested controlling the scope from the warm room via the USB with my laptop. Bill dropped by to visit with us.

At 3:15pm we had a heavy rain go over, but dodged severe storms to our north.
With the sky partly clearing at 4pm, Denny grilled the cheeseburgers that I had brought, but it soon began a light steady drizzle. Dan and Sharon arrived at 4:30pm and setup camp down by the activities building. Dan later walked up to visit with us, and then we walked down to say hello to Sharon, and to see Dan's new truck.

The rain continued off/on all evening, and after hanging out for awhile inside the observatory, we all called it a night at 10pm.

Tuesday 8/15/2023:
Slept in till 8:30pm when a heavy downpour woke me. At 9:30, the porta-johns were delivered and I showed the driver where to place them. (gave him a tour of the observatory afterwards).

By 11am, the sun was out drying up the field. Dean M returned to the site.
Denny attached flashing around the shed telescope roof to help with waterproofing, while Dean and I cleaned up the garage floor in the activities building. Marianne and Barb arrived and worked straightening up the activities building. Dan and Sharon ran home for the afternoon but returned in the early evening.

Around 3pm, another shower went over. Afterwards, Denny setup his scope and Bill walked over to visit with us.

At sunset, the sky once again clouded over, and the temperature became chilly. Dan, Dean, Denny, and I visited over inside the observatory, but the weather looked hopeless so we all headed back to our campers at dusk. Spent the evening reading, occasionally checking the sky for any sign of clearing.

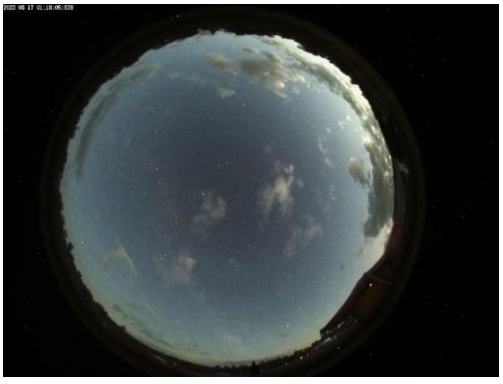
Right before 11pm, the sky rapidly cleared. For about an hour we had mostly clear skies, with just a few clouds bands along the horizon. With the Milky -Way glowing overhead, I soon had the polar alignment done and was just beginning to work on the go-to align and focus when the sky clouded over. Walked over to talk with Denny who was also out working on his telescope and we were soon joined by Dean M.
Eventually the sky cleared just enough to allow me to finish. Called it at night at 1am.

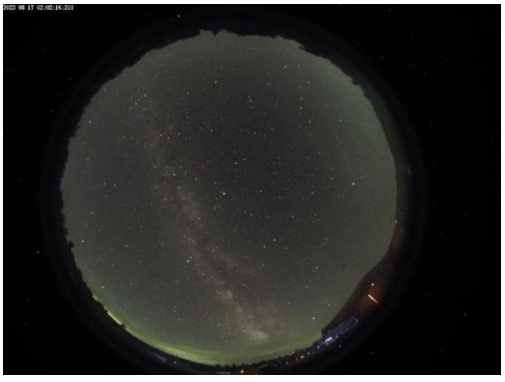
Wednesday 8/16/2023:

Woke at 8:30am to a cloudy, chilly morning. The temp was in the low 60's and the sky looked like it could rain at any moment. After breakfast, Denny, Dean M, Bill, and I restrung the shade sail using ratchet straps that Dan had brought. The ratchets worked much better than the turnbuckles. Denny then caulked the seams on the telescope shed, and Dan fixed the wifi antenna. Dean M and I loaded my car with the AstroBlast signs and drove around placing them. Dean S arrived back on site. The sky cleared and the temp warmed up. Susan arrived and she and Dean S worked on her new scope. Barb arrived and worked registration. We assembled the large tent. Mid-afternoon, Eric L arrived and setup camp to my SE.

Took an afternoon nap, afterwards there was a group dinner with everyone onsite down at Dan's and Sharon's camp. After dinner I headed back to camp and setup my blackout tent and prepped the telescope and my observing notes.

At dusk, with the temps falling I changed into heavier clothes and headed over to the observatory to try and polar align the 14" Meade SCT on its new pier. Al was there to help with the Meade, while Eric was manning the 30” and Dan the C14. Dean S was also inside the observatory instructing Susan & John P on how to use the WO51mm SpaceCat refractor that they had purchased from Dean.



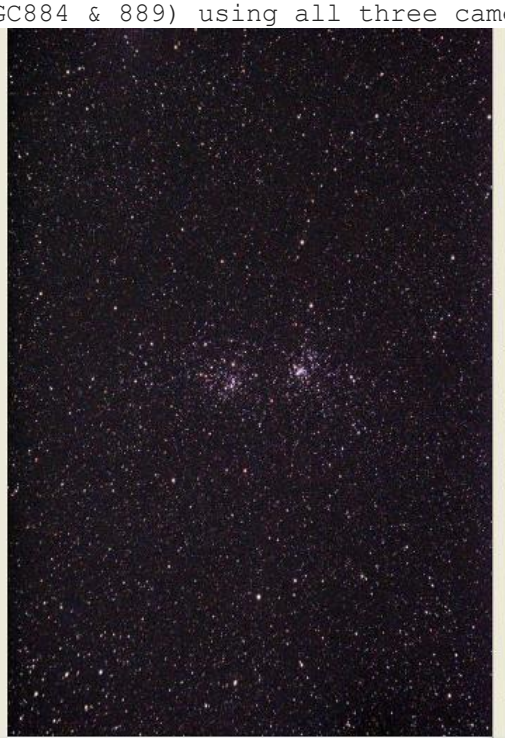


The sky was crystal clear and the Milky Way was nice! Unfortunately, the lower pier height didn't allow us to see Polaris thru the scope, so I just made an educated guess on polar alignment. I must have guessed well, as with the first slew to Arcturus, the scope was only a little off, and we were able to use the finder scope to help center objects.

I then headed back to camp, woke the 8" telescope up from its slumber and began to leaf thru my targets looking for a well placed deep sky object to observe. Unfortunately, by then clouds had begun moving in and the southern sky was obscured. I decided to go galaxy hunting over in Pegasus & Pisces which were rising up in the east.
Here's my EAA observations of NGC7619 in Pegasus, (the core of the Pegasus-I galaxy cluster), and interacting pair of spirals NGC520 in Pisces:

(8" SCT @ f6.3 on an Atlas Gem, ZWO ASI294MC Pro camera with L-Pro filter, 180 second subs, dark & flat calibration frames pre-applied, PHD guided, livestacked using Sharpcap for 15 minutes).

After returning from a trip to the observatory to troubleshoot an issue with the Meade 14", I then slewed the scope over to the northeast for the Double Cluster in Cassiopeia. Here's the cluster duo (NGC884 & 889) using all three cameras, livestacked in Sharpcap:



(Canon zoom set to 5mm, ASI290MC camera no filter, 15 second subs, for 15 minutes)
(EVO50mm @ f4.2 ASI294MC camera & L-Pro filter, 15 second subs, for 15 minutes)
(8" SCT @ f6.3 ASI294MC Pro camera & L-Pro filter, 15 second subs for 15 minutes)

Around midnight Dean M made a pot of hot chocolate with Bailey's to warm everyone up. Having read about a new large storm on Saturn, I pointed the my 8" to the bright planet cruising thru the southern sky. Running the 8" SCT at f6.3 wasn't conducive to planetary observing, the image scale was a little too wide. So while I couldn't pull in the storm, I did get a nice image of the ringed world.

Next, was a deep dive into IC1805 Heart Nebula for an hour long exposure using the EVO50mm & L-Pro filter while I headed back to the observatory to test out using my old Stellacam analog video camera on the Meade 14" using my flip mirror. While I was successful in getting the camera to work, we decided the setup was too cumbersome for members to utilize, so I switched the 14" back to visual mode.
Once back at camp, I finished up the observation of IC1805. I've come to the conclusion that I now need to acquire a L-eNhance narrowband filter for the EVO50mm.

(EVO50mm @ f4.2 ZWO ASI294MC camera with L-Pro filter, 180 second subs, dark & flat calibration frames pre-applied, PHD guided, livestacked using Sharpcap for 60 minutes).

By now it was well after 3am when I headed back to camp. I wanted to get in an observation of IC1848, the Soul Nebula, but after an unsuccessful telescope slew and difficulty in centering the object, (due to my being half-asleep), I gave up, shutdown the telescope & laptop, and headed inside the camper to bed at 4am.

Thursday 8/17/2023:
Slept in till near 10am, woken by nearby road chip& tarring construction noise on Camp Coffman. Spent the morning visiting with everyone and collecting my Stellacam camera and accessories from the observatory. The clear morning sky began to cloud up, and throughout the day it looked like it could rain anytime. After a late lunch, I read for a while then headed inside for a nap. Later that afternoon, Steve & Deb B arrived and setup their Tab teardrop camper to my south.

At 6:30 pm several of us gathered under the new shade sail in our lawn chairs watching the approaching storm move it. At dusk, with raindrops beginning to fly, we all headed indoors. Spent the next hour reading before calling it a night.

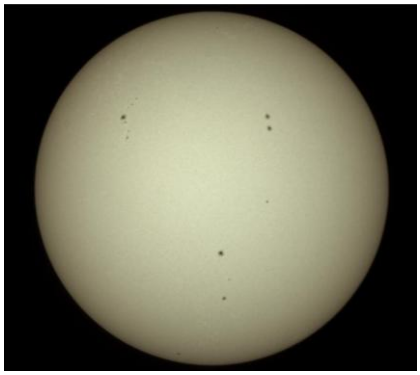
Around 10:45, thunderstorms and a high wind rolled over the observing field.
A close lightening strike took out the observatory wifi antenna, and the wind gust broke Steve & Debs easy up. One gust nearly stripped my campers shade visor off and I had to repair it the next day. Both Denny & Eric had to hold on to their awnings & tents to keep them from blowing away. I crossed my fingers that my easy-up tent would still be there in the morning.

Friday 8/18/2023:
Up by 8am to repair the camper visor. The rear easy up and covered scope came thru the storm with no issues. After breakfast I walked over to Eric's tent where he and Dean S were viewing the Sun with Eric's equipment. Nice views of large prominences on the disk.

After a quick shower I stopped in and visited with the folks at the registration tent, and while Dan had out the clubs Lunt solar scope, clouds had rolled in to block the sun. The sunny morning sky gave way to partly/mostly cloudy with wind gusts. The temperature was unseasonably cool, jacket weather. Still the forecast for the evening looked good.

A little before noon, Nate S & Elizabeth pulled in with their popup camper and setup over on the far western field by the trees. During the afternoon, many more amateurs arrived, including Dean M's better half, Karen, then Ray M, Miranda H & friend, Sara, Marianne who setup her tent beside me, Tim S, Barb, Al & his wife, Daylon from PGH, north hills (Astro escape youtube) with his ASI2600 duo and a Dwarfi robotic telescope, and others.
The observing field hadn't looked this full in years!

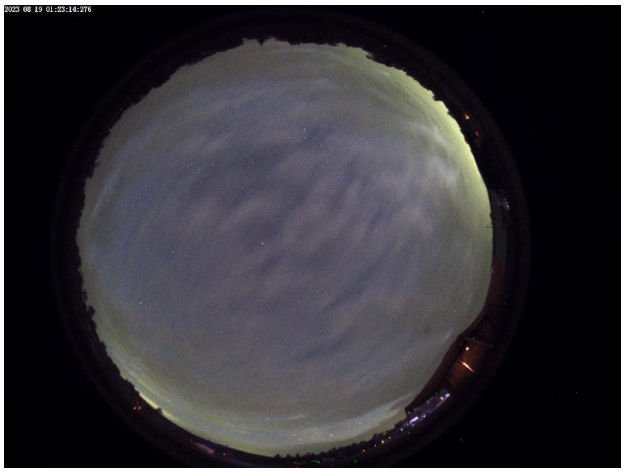
Mid-afternoon, I got out my solar filters and did a little white-light observing of the Sun. There were a number of nice sunspot groups visible. It was a good test of possible equipment for the 2024 Total Solar eclipse.



Dean S and I headed down to the activities building at 6pm for dinner that Tim S & friends had prepared for AstroBlast. Good stuff! I then walked back to camp and assembled by blackout tent over the back of the camper and gathered up my observing notes.

The sky stayed overcast through sunset, but the wind died and the sky gradually began to clear. At dusk, I walked over to the observatory to get the Meade 14" SCT up and running. Al was there to operate the Meade, along with Eric L on the 30", and Dan running the C14. I turned the Meade over to Al, and then headed back to my camp to begin EAA observing.

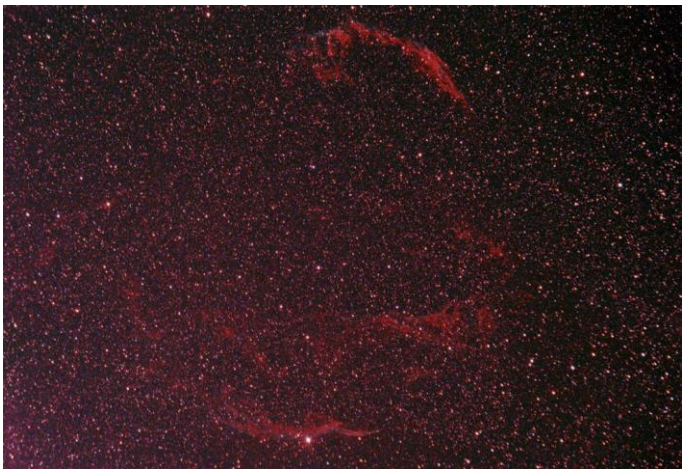
Unfortunately, the scattered sucker holes soon closed up leaving a totally overcast sky. In looking at the weather satellite, it was all lake effect clouds and we just had to wait for it to die down. Walked around and visited with Denny, and joined Dean S and Barb at Susan's camp. Finally, right before 1am, the sky cleared and everyone still awake headed for their scopes. It was showtime!!



After powering up the equipment, my first target of the night was a couple of small planetaries. NGC6891 in Delphinus and NGC7027 in Cygnus. Here's the observations:

(8" SCT @ f6.3 on an Atlas Gem, ZWO ASI294MC Pro camera with L-eNhance filter, 15 second subs, dark & flat calibration frames, PHD guided, livestacked for 7 minutes).

Then went comet hunting for Comet Atlas in Cygnus. This was a fast moving 9th mag comet, making it difficult to capture a good non-blurred image of its nucleus.
Afterwards I did a deep dive into the Veil using the EVO50MM & L-Pro filter.



(8" SCT @ f6.3 on an Atlas Gem, ZWO ASI294MC Pro camera with L-Pro filter, 60 second subs, dark & flat calibration frames, PHD guided, livestacked for 3 minutes).
(EVO50mm @ f4.2 ZWO ASI294MC camera with L-Pro filter, 180 second subs, dark & flat calibration frames pre-applied, PHD guided, livestacked using Sharpcap for 30 minutes).

With the clock ticking towards 5am, and the outdoor temp down to 46 deg, I decided to hunt for newly discovered 8th mag Comet Nishimura, in Gemini. I had to wait a bit for the shallow-sky object to rise above to the trees to the northeast, but was able to observe it in the brightening zodiacal light.

(8" SCT @ f6.3 on an Atlas Gem, ZWO ASI294MC Pro camera with L-Pro filter, 60 second subs, dark & flat calibration frames, PHD guided, livestacked using Sharpcap for 9 minutes).

After showing the comet to Daylon, who was about the last man standing, I shutdown and covered up the telescope. In bed by 6am.

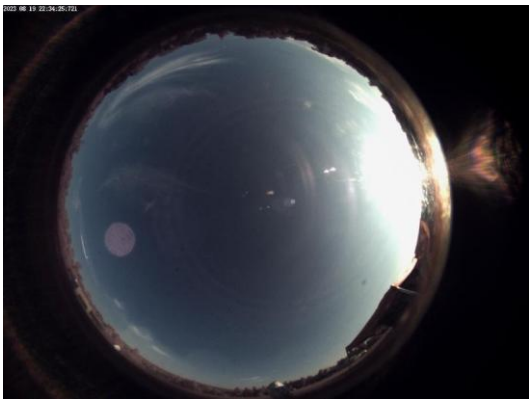
Saturday 8/19/2023:

Got in about 4.5 hours of sleep. Spent the late morning having breakfast and reviewing the night's observations with Denny & Dan.

At noon, we walked down to purchase door prize tickets and take in an inperson talk by our own Dean S on DSLR photographing meteors. A well attended Good talk.
I then headed back to camp. Sat and relaxed for awhile, then took a nap.

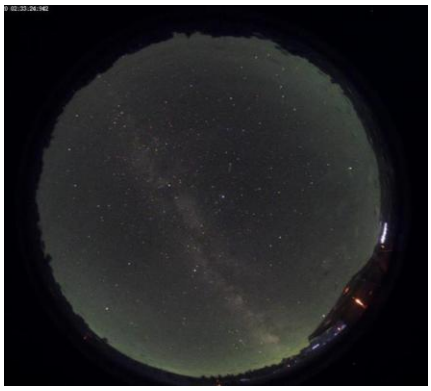
Once vertical, I headed down to the activities building for the 4pm zoom talk on the upcoming solar eclipses. Good info to know!
Afterwards we had the traditional pizza party and door prize raffle, where I cleaned up at the raffle, winning several nice solar eclipse viewing related prizes.

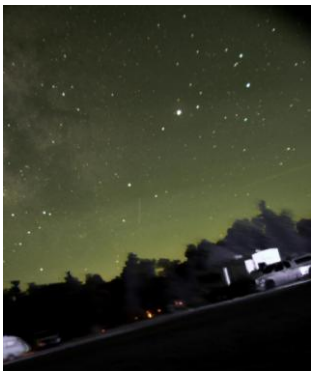
With a little time to kill before the 7pm speaker, I headed back to camp to setup for the evening. I then walked back down to the activities building for an interesting talk by the education director from Yerkes Observatory.

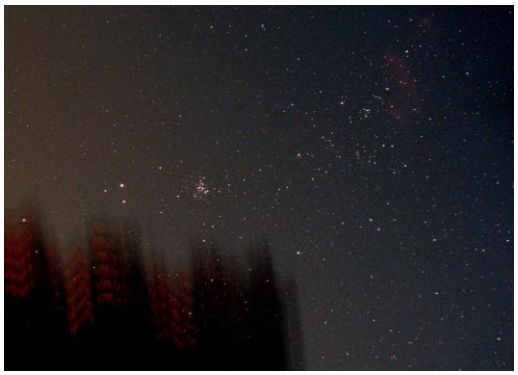


Fterwards, with the Sun setting in a clear sky, I headed back to camp and uncovered my scope and powered up the laptop, then headed over to the Observatory to do the same for the Meade 14". Noticed that several members were using one of the 10" Dobs from the newly finished telescope storage shed. Nice!

At dusk, with the temps falling into the low 60's, I changed into my observing clothes and headed outside to begin a night of EAA. Wildfire smoke had moved in late in the afternoon, but the sky was still usable. I started off in Scorpius EAA observing the "False-Comet" region of the scorpion's tail using both the Canon 5mm lens and the EVO50mm scope. The main 8" was on the Prawn Nebula – IC4628. Guiding was rather poor that low to the horizon, the scope being nearly horizontal, but I was still able to get the observation in.







(Canon zoom set to 5mm, ASI290MC camera no filter, 15 second subs, for 6 minutes)
(EVO50mm @ f4.2 ASI294MC camera & L-Pro filter, 30 second subs, for 6 minutes)
(8" SCT @ f6.3 ASI294MC Pro camera & L-Pro filter, 60 second subs for 30 minutes)

I then slewed the telescope a little higher in elevation over to the 'stinger' for observing several SH2 HII nebula – the "Cats Paw" SH2-8, and the "Lobster" SH2-11.

(8" SCT @ f6.3 on an Atlas Gem, ZWO ASI294MC Pro camera with L-eNhance filter, 60 sec subs, dark & flat calibration frames, PHD guided, livestacked using Sharpcap for 15 min).

And I visited both of the nearby bright Messier open clusters M6 and M7, where I used all three cameras on each object. It was cool to be able to observe using a super-wide field, wide field, and close-up of each cluster all at the same time using the Canon 5mm lens, EVO50mm, and the 8" f6.3 SCT.

M6:

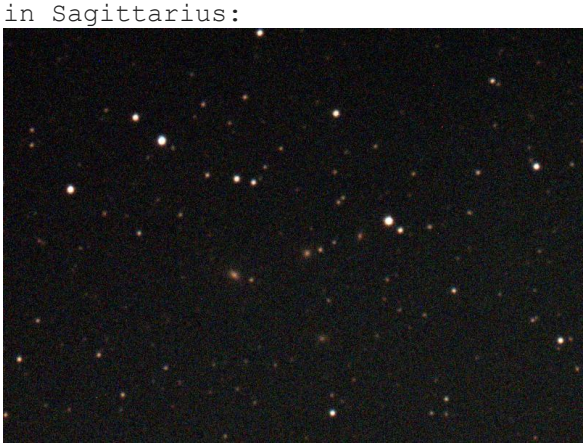
M7:

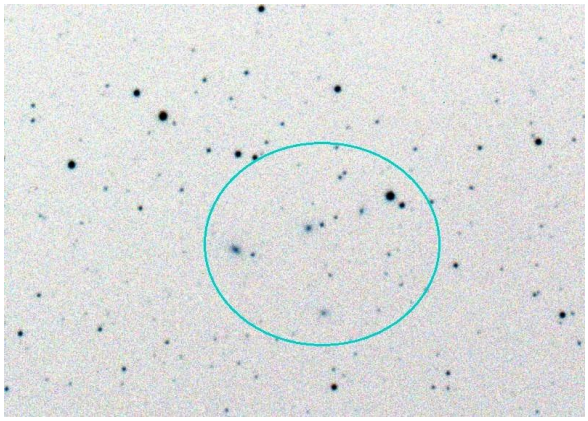
(Canon zoom set to 5mm, ASI290MC camera no filter, 15 second subs, for 15 minutes)
(EVO50mm @ f4.2 ASI294MC camera & L-Pro filter, 30 second subs, for 15 minutes)
(8" SCT @ f6.3 ASI294MC Pro camera & L-Pro filter, 60 second subs for 15 minutes)

Around midnight, Dean M made a batch of hot choc chip cookies for everyone and walked around the observing field delivering them to those still awake. Yum!
I had just finished up the last observation of M7 when a layer of ground fog began to form on the field obscuring the southern horizon. That forced me to hunt higher elevation targets.

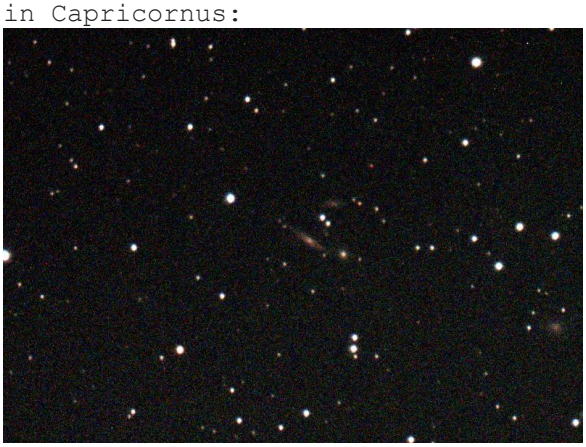
I pulled out my Hickson guidebook and hunted a couple of galaxy clusters in the far western portion of Sagittarius and into Capricornus. HCG86 & HCG87.

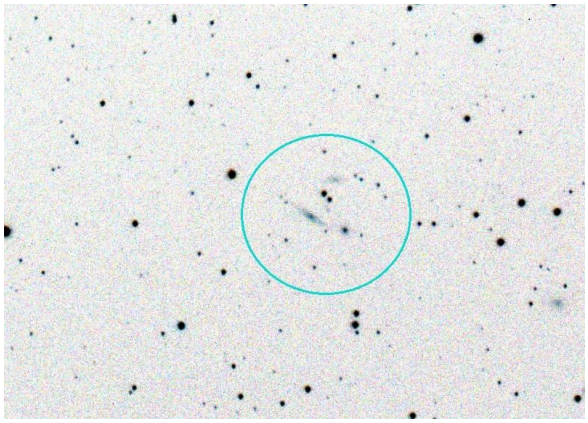
Here's the EAA observation of both:
HCG86 in Sagittarius:





HCG87 in Capricornus:





(8" SCT @ f6.3 on an Atlas Gem, ZWO ASI294MC Pro camera with L-Pro filter, 180 sec subs, dark & flat calibration frames, PHD guided, livestacked using Sharpcap for 15 minutes).

I then slewed the telescope to the Andromeda Galaxy, M31, now high overhead. I hoped to repeat an observation of variable V1 that I made last fall at Cherry Springs.

While the great galaxy looked very nice on the monitors, the smoky sky prevented viewing V1. Will have to save that re-observation for next monh's BFSP.

(Canon zoom set to 5mm, ASI290MC camera no filter, 15 second subs, for 30 minutes)
(EVO50mm @ f4.2 ASI294MC camera & L-Pro filter, 180 second subs, for 45 minutes)
(8" SCT @ f6.3 ASI294MC Pro camera & L-Pro filter, 300 second subs for 25 minutes)

With the fog continuing to build and everything soaked from the heavy dew, I decided to called it a night at 2am. Closed down the scope and headed indoors.

Sunday 8/20/2023:
Slept-in till about 8am, then after dressing, began to pack.
Pulled out for home at 11:30am. The trip home was uneventful, except for the hour delay from road construction on I79 near Slippery Rock.

So, eight nights spent at the ORAS observatory for AstroBlast this past week, (now known as "AstroSplash"), only three of those nights were we able to observe on, less than 50%. Another 2023 astro-camping trip that was less than successful. Still, it was a good time being with other fellow amateur astronomers, and we got a lot of improvements done at the ORAS observatory. Looking forward to next year!

Here's my AllSky time-lapse videos from the three nights that we were able to observe:
Wednesday: https://youtu.be/lp8HfkuX6r4
Friday: https://youtu.be/bOgyy45hu9k
Saturday: https://youtu.be/1JVAoz-8boI

Larry McHenry
Astronomical Webportal: http://www.stellar-journeys.org/