

ORAS Observatory, PA - June, 2021

After nearly a year and a half of being setup in my backyard, my 8" SCT GEM mounted travel telescope was finally heading for darker skies. (yea for being vaccinated!) I was heading up to the ORAS Observatory for a week of New Moon observing at night and helping install two new observing field power pedestals during the day.

Sunday 06/06/2021:

The last few days had been very warm, in the upper 80's, with Sunday predicted to continue that trend. So I was up early to finish packing my little Tab clamshell camper. Was on the road northward by 10am, and after a pleasant drive up, pulled into the ORAS facility shortly after noon. Members Rich and Paul were there setup on the gravel near the observatory and had spent the previous night onsite.



As the field grass was high, (Dan would mow the field later that day), I found a spot over along the eastern edge where the grass wasn't quite as tall and setup camp and telescope. In addition to my little canopy that goes over the camper's clamshell, I also setup another 10'x10' easypop for shade.



Along with the 8" Celestron SCT optical tube on an Atlas EQ GEM mount with a Canon CCTV 25-100mm zoom lens and 60mm refractor guide scope piggybacked, using ZWO cameras ASI294MC Pro, ASI290MC, and ASI120MC, I setup my DIY 'allsky-cam' that uses an ASI224MC camera & fisheye lens in a dome housing to be used for creating time-lapse images, and an old analog Samsung SDC435 security camera & widefield lens in a drain-gutter enclosure as a 'fieldcam' used to monitor the main telescope as it slews. All cameras fed into my laptop and monitors in the workstation under the camper clamshell.



With the temps on the field hitting the mid 80's, I headed inside the observatory in search of cooler shade. I was amazed to find that the observatory 'warm-room' was a chilly 65 degrees. It was now a 'chill-room'! ☺ Mid-afternoon, Dan and Sharon arrived and setup camp north of me, so I headed back out into the heat to welcome them and to relocate my car and power extension cord while Dan used the tractor to mow the field.



At dusk, new members Chris & Kim, with their family, arrived and unfolded a blanket and assembled a small telescope for a little stargazing. Once it was dark enough to get my Atlas mount polar and GOTO aligned, and the cameras focused, I invited Chris & Kim over to see my setup and after I explained how I do EAA (Electronically Assisted Astronomy, formerly known as 'videoastronomy'), I showed them a couple of bright deep-sky objects that were visible over to the Northeast sky - globular cluster M13 in Hercules, and the Ring Nebula (M57) in Lyra. They both enjoyed the objects displayed on the monitors.



(M13 - 8" SCT @ 15 seconds for 5 minutes)



(M57 - 8" SCT @ 30 seconds for 5 minutes)

During the afternoon, daytime heating clouds had begun to build, and now after sunset, they were hanging around with new ones rolling in from the NW, giving partly cloudy skies. Still an occasional clear wave would pass over with windows of observing opportunity to take advantage of.



(allsky cam @ 30 seconds)



(meteor thru the Summer Triangle)

I decided to attempt work on my Arp Peculiar Galaxy project for the night and kept the telescope pointed to the clearer skies over in Hercules and Draco. Using the book "The Arp Atlas of Peculiar Galaxies" as an observers guide with finder charts, Over the course of the evening, while sitting thru cloud & fog delays, I was eventually able to capture a couple of Arps through the sucker holes: Arp125 (UGC10491) in Hercules, and the combo of Arp310 (IC1259) & 311(IC1258 & 1260) in Draco.



(Arp125 - 8" SCT @ 60 Sec for 20 min)



(Arp310 & 311 @ 60 sec for 25 min)

Do to the sky going downhill; there wasn't time to create fresh dark-frames so I was forced to reuse darks from an older session. Still ended up taking shorter exposures than planned. Finally around 2:30am, fog enveloped the observing field and rising overhead obliterated the stars! I decided to call it quits for the night.

Monday 06/07/2021:

During the day, the clouds stuck around and the temps once again rose into the upper 80's with high humidity. At sunset, it looked like the sky might partly clear, so I uncovered the allsky-cam and began acquiring subs. But before long the clouds raced back in and brought rain with them. I let the allsky run overnight while I headed indoors to read. Here's the video titled "A Rainy Night At ORAS": <https://youtu.be/7LzFucKwCyk>

Tuesday 06/08/2021:

Another warm day spent hiding from the Sun while trying to get a little trench-work done on the new power pedestals. Dean arrived shortly after lunch and setup his camper and telescope to the west of me, closer to the observatory building. Later in the afternoon, Barb dropped by to visit and do a little inventory work at the activities building. She stuck around into the early evening, but with cloudy skies and fog rolling in, there was once again no observing this night.

Wednesday 06/09/2021:

Another partly cloudy and warm day, but at least progress was made on trenching with the loan of a small backhoe! A late afternoon thunderstorm forced us indoors for shelter and a three-hour delay which slowed down the work effort. When the Sun came back out, we thought our fortune had changed for the better.



But it was a pot of fool's gold, with the clouds and fog shutting down the sky once again.

No observing for Wednesday night.

Thursday 06/10/2021:

The morning started off foggy with a 5am rain shower. Sadly, no annular solar eclipse was visible at sunrise for us. While it eventually became sunnier, it was also very warm and humid slowing us down. Dean and I made a run into the Cranberry shopping area where we met-up with Gary and his van to help with transporting the long lengths of PVC conduit needed for the power project.

Toward the end of the day, Barb returned to help and stayed overnight thru Saturday. Earlier in the week, a bear had been spotted several different times on the edges of the observing field, and had even passed over the gravel road between the activities and observatory buildings from the scat that we found left behind. Everyone now kept an eye out for Ursa Major, and I repositioned my analog fieldcam to now watch the tree-line behind my camper. Evening thunderstorms around us prevented any astronomical observing, but they did put on a nice light show for us!

Friday 06/11/2021:

A partly cloudy and much cooler day!! Spent the day running wire, laying conduit, and backfilling the trenches with help from Denny who arrived mid-day and setup his camper between Dan and I. For awhile at sunset it looked like we might get in some observing, fooling both Deana and I to uncover our telescopes. While finishing-up framing my first image for the night, the little galaxy that I had on the monitor began to fade away. Thick fog had formed directly over our heads and that soon got the scopes re-covered and after sitting around for a bit, it was another early night to bed. (Dean at least was a little quicker and got one image in of Markarian's Chain).

Saturday 06/12/2021:

The day dawned sunny and cool. The team worked on installing the outdoor boxes and making the indoor electrical connections as the day grew warm and humid. Barb and Dean both had to leave for other home commitments. With the final connections made, the power to the new pedestals was activated and they successfully passed their test. We sat around and enjoyed a hard earned beer! Then we noticed that the sky had cleared and was looking pretty good for observing that evening.

I uncovered the main telescope, setup the allsky and fieldcam, and readied my observing notes. My plan was to continue Arp galaxy hunting. Once dark, I slewed the 8" over to Hercules to finally image Arp208 that I've been trying for all week. I then moved on to a nearby Arp312.

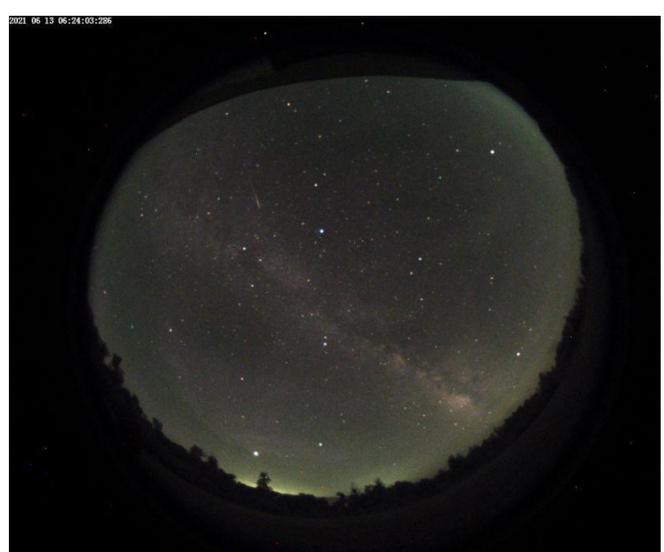


(Arp208 - 8" SCT @ 60 Sec for 30 min)



(Arp312 - 8" SCT @ 60 sec for 30 min)

Meanwhile, the allsky-cam caught a few meteors:



No sign of Ursa Major on the field-cam!

Around midnight, Denny, who had been catching a nap, came over and joined me, and while the cameras were collecting photons, we did a little naked-eye and binocular observing. At the start of the evening, the sky was beautiful, but once we got past 12:30am, the fog began forming overhead and it became, (as Denny put it), a game of 'cat and mouse' with me chasing after clearings. With the area that I had been working around Hercules hitting the meridian, I was worried about dew forming on the SCT's corrector plate, even though I was using a dew shield and had the heater strap cranked to high. So I slewed the telescope over to the SW to catch globular cluster M5 in Serpens.



(M5 - 8" SCT @ 15 seconds for 5 minutes)

That was to be the last image for the night, as the local fog nebula enveloped the entire sky. With the clock half-past 2am, I decided to call it a night.

While I has hoped for a full night of clear skies, we did get treated to a nice view of our home galaxy, the Milky-Way.



Here's a time-lapse from Saturday night:

"A Half-Decent At ORAS": <https://youtu.be/kIihe5lM6U4>

Sunday 06/13/2021:

Slept in till 8am, then up to begin tearing down the telescope equipment and stowing away the camping gear. Afterwards Denny and I took a little hike thru the woods to check-out the rock quarry just to the NW of the observing field.



It's a fairly good size hole with steep, high walls along where they're excavating. If anyone decides to take a walk back to it, probably easier to follow the gas-well road down by the activities building than bushwhack thru the undergrowth like we did. LOL!

Back at camp, Denny and I finished hooking up the campers to our vehicles' and being the last one out; I locked the gate behind me and headed back home to Pittsburgh.

As for the 'day-time' work that occurred during the week, We now have 4 great looking power pedestal posts, each consisting of an outdoor box containing four GFI AC plugs, giving an installed electrical coverage over a large area on the observing field to the East, Southeast, South, and West around the observatory. (sorry 'North', no pedestal yet for you, but a 100' extension power cord from the NW or NE observatory walls will get you some distance up the hill). Including the original dual-outlets along the sides of the observatory building, this now gives us a total of 32 individual AC plugs that members can utilize for their observing needs.

Here are a few pictures of the project:





ORAS club members pitching in include: Gary P, Denny H, Barbara R, Dean S, Ed K, Bob K, Tim S, Dan H, and Sharon.

So this concludes my trip report to the ORAS Observatory.
I hope to be back prior to the August Astroblast event.

Larry McHenry

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