

ORAS Observatory, PA - September (part-I), 2021

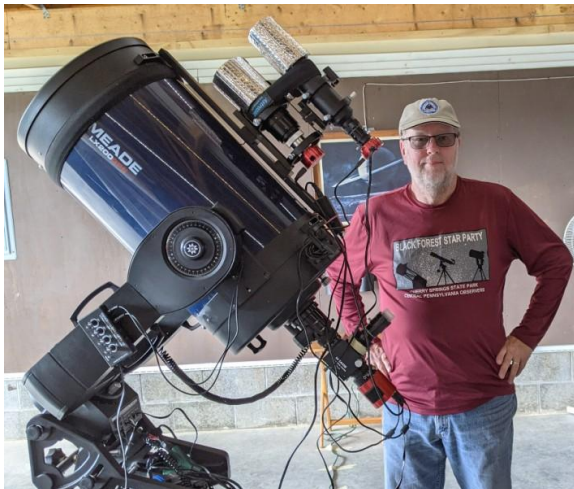
Originally, I was planning on heading up to the ORAS Observatory the Tuesday after Labor Day. But after talking with Denny H and looking at the weather forecast, we both decided to make the drive up on the Thursday before the holiday for a couple of nights. So I spent Wednesday afternoon, 9/1, dodging rain shower remnants from Hurricane Ida and packed my camper.

Thursday 09/02/2021:

As it's only about a 2.5 hour drive to the observatory, there was no rush on getting out the door, so I took my time in loading the car with my gear and hooking-up the camper. I then did yard work. With all the rain this summer, the grass is growing like a weed. Finally, at Noon, I headed out on the road. Arrived at the observatory around 2:30pm to find Denny already there with his camper and the observatory opened-up. I pulled in next to him and quickly setup my camp.



Once finished headed up to the observatory where I joined Denny is prepping both 14" SCT's for imaging. Denny took the C14 on the Atlas pier mount, and I utilized the Meade 14" LX200GPS on its field tripod. I attached my flip-mirror (with f6.3 reducer) and ZWO ASI294MC camera at prime-focus on the 14" optical tube, and piggybacked my widefield-guider kit on top (Canon 25-100mm zoom lens & ASI290MC camera, and 60mm refractor & ASI120MC camera). Denny had his ZWO ASI071 camera on the C14", along with his guide kit.



Later in the afternoon, we were joined by several other ORAS members who were staying overnight on the observing field, including Brian D & his wife, along with Ray L, and Alexi. Ed K arrived a little before sunset with his mobile observatory.



(sorry!!! I didn't get pictures of everyone)

The sky was beautifully clear the entire day, with what few clouds soon dissipating once the Sun went down. And for once, the smoke from the western wildfires was not overhead! At dusk, Denny opened the observatory roof and we fired-up the telescopes and cameras. We also uncovered the 30" Dob, thinking that we would do visual observing in-between imaging, but the usual 1st night gremlins kept us too busy. Soon Jupiter and Saturn were shining brightly in the Southeast, with the stars of the Summer Triangle overhead. The soft glow of the Milky-Way flowed from Cassiopeia in the Northeast overhead thru Cygnus, down to Aquila to the star clouds of Sagittarius. I began my observing over in Sagittarius, starting off with my favorite globular cluster - M22. It was well placed on the meridian and gave a good resolved view.

After a minor delay from a few lake-effect clouds, I then went searching for the remnants of the Sagittarius Dwarf Spheroidal galaxy detailed in the October 'Sky & Telescope' magazine. This is one of the numerous small Local Group dwarf and irregular galaxies that are gravitationally bound to our Milky-Way galaxy, and is in the process of being cannibalized by the much larger Milky-Way.

Not much is left of this little galaxy, having been mostly torn apart, but it has been determined that the globular cluster M54, located in the lower 'handle' of the 'teapot' is actually the little dwarf's remnant nucleus. While I could resolve some stars in the outer halo, the core of M54 was too concentrated to clearly resolve individual stars. Still, the cluster makes for a pretty object, especially now that I know more about it from the magazine article.

Here's a 5 minute image (15 second subs) of both M22 and M54 through the 14" @ f6.3 using the L-Pro broadband filter.



Spent some time hunting several other nearby Sagittarius Dwarf Spheroidal galaxy globular clusters such as Arp-2 and Terzan-7. Even using the 14", there really wasn't much to see. Here's an image of each, wide-field then a cropped 'close-up' (30 second subs, 5 minutes for Arp-2, then 10 minutes for Terzan-7):

Arp-2

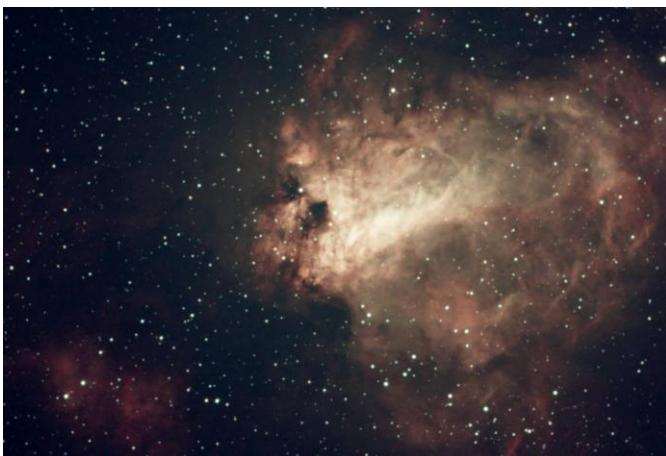


Terzan-7



Still, it was interesting to hunt and observe these galaxy shards.

I then moved higher up in altitude to visit a couple of old Messier 'friends', the "Swan Nebula" M17 in Sagittarius, and the "Eagle Nebula" M16 in Serpens. 30 minute capture of each, (60 second subs), using the narrowband L-eNhance filter.



By now the time was well past midnight. The outdoor temperature was dropping into the upper 40's, and dew was heavy, soaking the telescopes and interior of the observatory. But, inside the warm-up room, where Denny and I were sitting with our laptops and reference books and notes, it was much warmer and dry. Denny was putting the C14 and Atlas mount to good use imaging a number of galaxies including NGC891 in Andromeda, and a couple of Local Group members in Cassiopeia - NGC147 and 185. Both Ray and Ed dropped in to visit during the night, but everyone mostly stayed with their individual observing/imaging. The dew discouraged us from using the 30".

With the Meade's dew heater cranked to high, I decided to risk the dewy conditions and pointed the telescope high overhead in Cygnus to HII emission nebula Simeis-57, also known as the "Propeller Nebula". Even with the 14" at f6.3, the red arcs of the 'propeller blades' prominently filled the ASI294 camera FOV. A fun deep-sky object! (60 second subs for 30 minutes using the L-eNhance filter)



Moving thru my target list, I replaced the narrowband filter with the broadband L-Pro and went galaxy hunting. First on the list was a small lenticular galaxy in Pegasus - NGC16. The little galaxy is oval shaped with a bright core. (60 second subs for 5 minutes)



I then went for one of my favorite, large splashy galaxies: NGC253 - "Silver Coin Galaxy", just hitting its highest altitude on the meridian in Sculptor.



(30 minute exposure of ten 3 minute subs! Guiding was mighty fine!)

Finally, by 3:30am, both Denny and I were running on empty, so we decided to shutdown the telescopes and close-up the observatory for the night. This had been probably the best night all summer for observing!

Friday 09/03/2021:

Slept in till 9am and woke to a sunny morning. Except for Denny, Ed, and I, everyone else was packing up and heading home. The forecast for that evening had deteriorated, and it was going to be a toss-up whether we got any observing in. Late morning, several other ORAS members, Barb R, Tim S, and Dan H, arrived to take an inventory of the misc astro equipment stored in the activities building and do a general cleaning. Before leaving for home, Alexi, and Ray, pitched-in to help, along with Denny, Ed, and myself.

Most of the afternoon was partly cloudy, but toward sunset, the sky began to clear, getting our hopes up that we would get in a little observing. At dusk, I opened up the observatory roof and powered-up the 14" Meade and my cameras and laptop. But soon, our hopes were dashed, as streamers of clouds coming out of the Northwest began to cover the sky. And what few openings in the clouds were filled with haze from a thick band of wildfire smoke that had also dropped in from the North. Not a whole lot was visible, even Jupiter was struggling to break thru the murky sky. I did get a quick avi capture of the 'King World' while it was still visible.



(stack of 62 frame. Io and Europa visible on the right)

So Denny, Ed, and I spent the evening sitting in the warm room sharing our images from the previous night and talking astro shop. Other than a few short-lived gaps in the clouds that allowed quick views of Vega and several other bright stars, the sky never cleared enough to do any observing/imaging. We called it a night at 11pm and closed up the observatory. I went back to my camper and stayed up another hour reading.

Saturday 09/04/2021:

Up a little after 8am and after breakfast began packing up the camper. Denny had already removed his camera equipment from the observatory, and I soon had mine stowed in the car. Ed was the first to hit the road, followed soon by Denny. I was the last man out at 11am for an uneventful drive back to Pittsburgh.

Once home, I restocked the camper and left the car hitched.
I hope to be back to the ORAS Observatory next week!

Larry McHenry

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