Black Forest Star Party. September, 2024

With the September Labor Day festivities fast approaching, it was time to begin packing for the 2024 Black Forest Star Party at Cherry Springs State Park! While the actual starparty wasn't till the weekend after Labor Day, our group decided to head up to the park early to get out usual spots where we like to camp. Denny and I were planning on leaving a day sooner to spend time at the ORAS Observatory setting up new equipment on the club's C14.

Thursday 8/29/2024:

Left Pittsburgh around 8:30am, just in time to catch the tail end of rush-hour. (fun). I was meeting Denny H at the ORAS Observatory to spend the day installing a new guide camera on the club's C14. Arrived at 11am to find Denny and his camper parked up at the observatory. Dean S and Bill W were also there mowing the observing field. The new grass is looking great! I quickly pulled in beside Denny to be out of the way of the mowers.

As we were only staying one night, I setup only the minimal camping gear and didn't bother with any optical equipment. It was a scorching hot day, temp around 87 deg, so I flipped the camper AC on.

Denny and I then installed the new guide scope and rough focused it. We also focused the main camera and adjusted the various data & power cables on the C14. (and we have the software working nicely on the ORAS PC). We also made flats for all filters.

Hopefully later tonight we might actually get a few images,,,,

With scattered clouds about after sunset, we continued working with the C14, getting both cameras sharply focused. Clouds were an issue at dusk, So, sad to say, we were only able to get one object imaged before the clouds took us out. Here's a brief Livestack of M13, using the ASI2600MC Pro, 15 second unguided subs for 30 seconds. (Yep, only two subs).

While we did get the guidecamera focused nicely, we were not able to get the guide scope and the 14" aligned to show the same object. And due to the clouds, we were not able to

get PHD calibrated for guiding. If someone else doesn't get to it, we'll work on those the next time. But we were able to get the mount to finally point to the correct home parked position. So, progress was made on the C14. Called it quits around 10:30pm, closed up the Observatory roof and shutdown/covered the telescope. Stayed up till midnight surfing.

Friday 8/29/2024:

Woke early, 7am, to a foggy morning at ORAS. After visiting with Denny and a quick breakfast, we were packed and were on the road to Cherry Springs by 8:30am.

Rather than dropping back down to I80, we cut northward thru backcountry roads till we reached RT66 and took that North to the city of Kane and RT6. We then headed east to Coudersport. The morning had started off mild, temps in the upper 60's and partly sunny, but soon the sky became overcast and the temp dropped several degrees. As we followed the road up into the mountains we began to drive thru low hanging misty clouds. After stopping for lunch at McD's, we arrived at the park shortly after 12 Noon.
As we approached the park entrance on RT44, we were surprised to see all the earth moving construction work being done at the park. (More later on that).

Ed K was there with his Observatory on wheels, along with about a half dozen other campers in the southwest section of the observing field. I quickly pulled into my usual spot along Orion Way with Denny pulling in just to my north.

It was cold & drizzling, only 64 deg.

After reviewing the weather forecast, I decided it would be as good as it was going to get until Sunday, so I got out the rain jacket and setup my camping canopy and gear, and then assembled my telescope:
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 with a ASI294MC camera (uncooled model),and a 60mm Antaries refractor guidescope with an ASI120MC camera. Attached to the bottom rail of the main optical tube was my ASI290MC camera with a small Canon 5.5-55mm CCTV lens as a super-widefield finder. (the next day I also setup the Allsky cam, a ZWO ASI224MC & fisheye lens in a DIY dome).

After Denny and I had finished setting up, we went for a walk to check out the construction. The area of the field where the vendor tent would go, along with where registration was located and the small parking lot are all torn up. Large Piles of dirt and gravel, and heavy machinery, along with the beginnings of the new access road.

Across the street in the public area, most of the large parking lot was gone, replaced by the makings of a circular drive and sidewalks. Huge new mound barriers everywhere.
The outdoor planetarium seating was gone and that area torn up with new landscaping work in progress. It's quite a project! The park is really getting a makeover!
Exciting to see the work in progress. looking forward to seeing it completed.

Around a quarter till 6pm, Denny and I gathered over in Ed's camper for snacks. I headed back to camp at 7pm to cook dinner and phone home. As we were still camping inside a wet cloud, I spent the evening indoors reading. There be no stars tonight! Early to bed.

Saturday 8/31/2024:

Woken several times during the night by the wind. ☹
Slept in till 8:30am. The observatory field was foggy and wet. Additionally, the power was out. Around 9am Thunderstorms rolled over with a heavy downpour, looks like it's going to do that all day. Shortly before 10am the power came back on.
I hurried to microwave my breakfast.

Drove down to Lyman run at 11am for the showers. Lots of ATV campers at the park.

All afternoon the sky looked like it could rain anytime, but our luck held and the storms went to our south. Throughout the day, more amateur astronomers arrived at the park. Paul E from York pulled in with his new eggshell "Escape" camper shortly after 1pm, followed a few minutes later by Dean S from the ORAS/Kiski club. Paul went across and down from me while Dean setup camp and scope beside Denny.

Later, both Adam N (who had arrived in the rain yesterday), and Tony D (who has been at CS all week), stopped over to visit.

Around 3pm, the Sun began to shine thru the thinning clouds, temperature warmed up into the low 70's, and there were reports of seeing Blue Sky. Everyone was out uncovering their scopes. Denny was out tinkering with his dual scope saddle mount while Ed setup his scope in his Observatory Dome. I even uncovered my scope, hooked up the laptop and setup the software. Ever optimistic, I partly assembled the hatch blackout tent.





I joined Ed and Dean over at Dean's camp for snacks and Denny joined us soon after. But the fair weather was short lived as by 7pm clouds once again rolled in threatening rain to the dismay of the 40 to 50 folks now on the observing field.

After covering up the scope and putting away the blackout tent, I fixed dinner and called home. Then walked the day’s trash down to the dumpster.

Headed indoors at dusk to read and wait to see if the clearing line would reach us soon, or if we would get rained on. Observing didn't look promising.

At 9:30pm, I headed out to close up the back of the camper and covered the telescope. I'll probably stay up till midnight in the hope of it clearing enough to polar align. At least I was able to create a new dark frame for my AllSky camera,,,

At midnight I stepped outside and spotted a couple of hazy stars along with a quick glimpse of Polaris. But as quickly as they had appeared, the stars were covered by thick clouds. Decided to call it a night.

Sunday 9/1/2024:

Slept in till a little after 9am. It was a partly cloudy morning, with hints of a light fog. The outdoor temp was in the mid 60's expected to go up to 76 deg.

Dean reported that at 4:30am, Orion, Gemini the Twins, Jupiter, Mars and other neighbors in the East were bright and crispy. The rest of the stars were nonexistent. Ed was also out after midnight trying to polar align but the fog was too thick. (Denny was the smart one by just going to bed early). After breakfast, with the sky clearing and temps warming, I spent time sitting outside reading thru the current "Reflector" magazine. There's a great article by Rich D, a regular Cherry Springs attendee.

With the nicer weather more amateurs arrived at the park including our Canadian buddy Mike P from Niagara, who setup next to me.

After visiting with Mike, I joined Denny for lunch at his camper. Then drove down to Lyman. Lyman was once again hopping with beach goers and ATVers.

Once back at camp, I sat outside and read. Around 4:30pm, Andrew from NE Ohio, and a Calhoun Cty, WV regular, stopped by for a visit. He and his 22" dob were setup a couple of sections to my SW. There were probably over 100 amateurs now on the observing field, looking like a starparty!

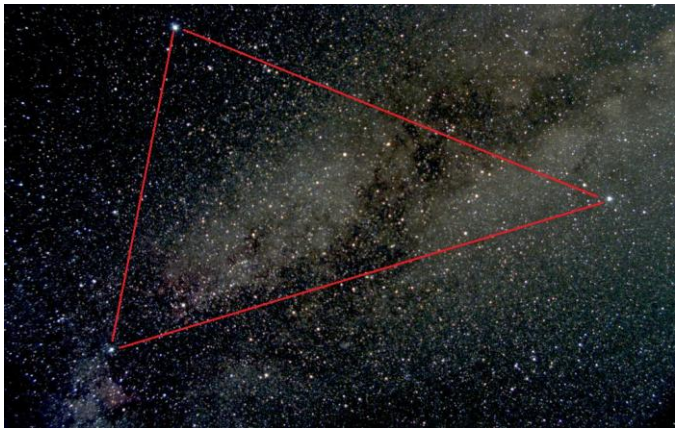
At 5:30pm, Dean, Ed, myself, and later Mike gathered at Denny's camp for snacks.
At 7pm I headed back to camp for dinner and to prep the telescope and the blackout tent.

Around sunset Mike and I rousted out several cars of people who were not planning on staying overnight and didn't read that the gate closes till dawn sign. We then walked down to the gate to find it already closed and we had to reopen to let cars out.

For the next several hours bands of clouds kept rolling in from the NW at times completely obscuring the sky. The wind also kicked-up with gusts. Made it very difficult to even get the scope polar aligned.

Finally around 11pm the clouds let up and I was soon working my way thru various first-night technical gremlins. Around midnight I had enough things working to begin observing the fall Starclouds using the Canon 5mm lens.

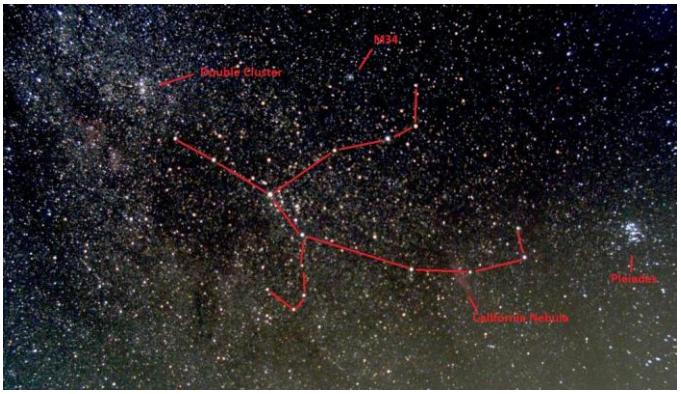
I started off with a repeat observation of the Summer Triangle region of Cygnus, Lyra, and Aquila with their brilliant starclouds.



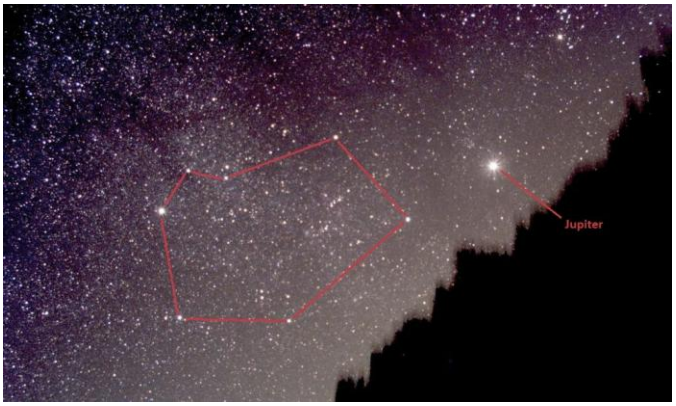
(Canon zoom lens set to 5.5mm, ASI290MC camera with IR filter, 60 second subs, dark & flat calibration frames pre-applied, PHD guided, Livestacked for 15 minutes)

I then followed the path of the celestial river down into Cepheus/Lacerta, then into the Starclouds of Cassiopeia and Perseus.

(Caught M31!)



Finally, I wrapped up the river voyage with Auriga now rising over the NE tree line.



(Canon zoom lens set to 5.5mm, ASI290MC camera with IR filter, 60 second subs, dark & flat calibration frames pre-applied, PHD guided, Livestacked for 15 minutes)

Late in the wee hours Denny stopped over (he had been imaging Barnard dark nebula B111 in Scutum, near M11), and helped me with manually refocusing my guidescope and resolving a software problem with the PHD guiding program. While he was there I also got his help in switching the Canon lens focus from 5mm to 25mm (for use later in the week).

With the time going on 4am and having accomplished my first night's worth of EAA observing, I decided to call it a night, closed up the scope and headed indoors to bed.

Monday 9/2/2024:

Had planned to sleep in late, but after only 4hrs of sleep, several strong wind gusts around 8:30am woke me. My visor shade canopy took a hit with the shock rod poking thru one of the ends. After a quick repair it was back in business. The morning was mostly cloudy with a cold breeze. Visited with Denny, Mike, and Ed and compared our observing notes from the previous evening. Everyone did well. Later in the day, Andrew stopped by and he also had a very good night of visual observing.

Dropped in on Dean and helped him select a couple of photos for an imaging contest. Denny also joined in with his two cents. Went for a hike along the nature trail and checked out where the new future entrance to the observing field will be.

Back at camp had a light lunch, read a little indoors as the outside temp was only 69 deg and still occasionally breezy, then went for a nap.

There was now a Huge crowd on the observing field. At least 300 people!
Our section is nearly full and the southern field is packed with campers.
Brian from NJ arrived and setup across from my spot and Steve from Pa, (who use to have a little Tag boondock camper, now has a big stick camper), also setup across from me.

Also Fran & Michelle M joined our section setting up next to Paul.

Group dinner at Ed's camper with Denny grilling.
After dinner, called home and then prepped my observing notes, tent, and telescope, and changed into heavier clothes. It was going to be a chilly night, the temp was already in the upper 50s and falling.

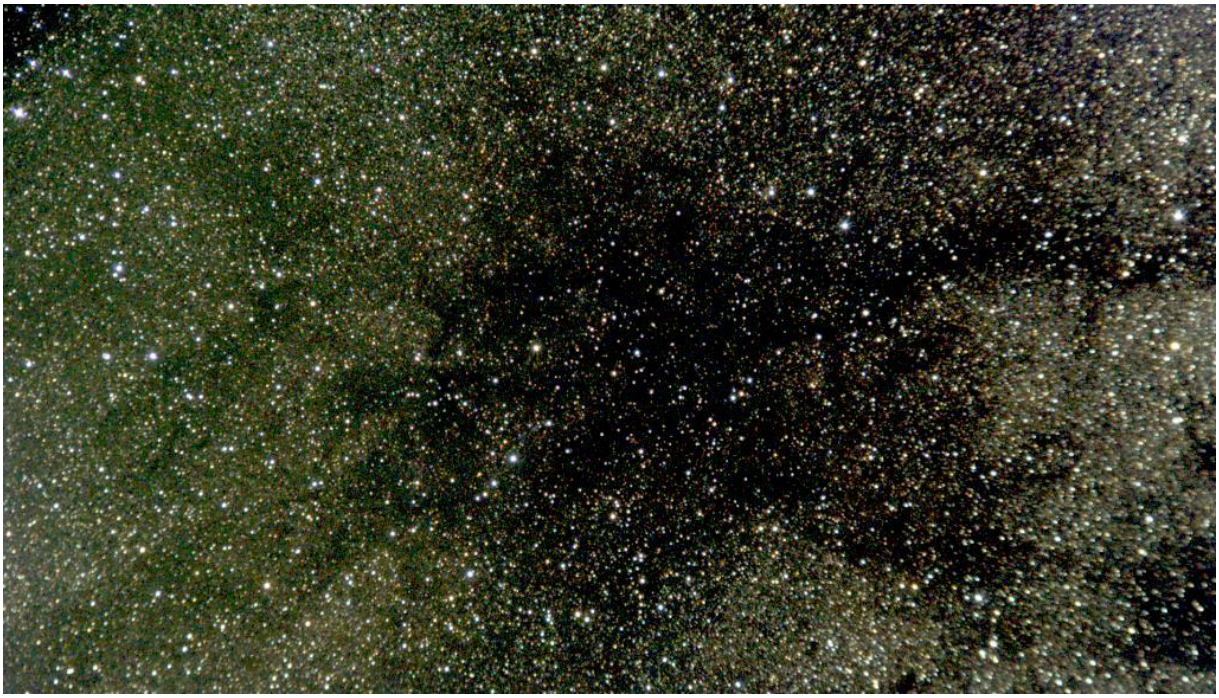
At sunset, went for a stroll around the field and down to the southern section and visited with Adam and then Doug H and Jim D. I then hurried back to camp and powered on the telescope dew heaters. There was a freeze warning forecast for the region.

The sky remained clear and the breeze calm. The sky transparency was awesome with the Milky-Way sparkling overhead. The wildfire smoke map showed us in the clear.
Overall a good evening of EAA was teeing up.

With the fading sunset lingering in the western sky, and the soft glow of the Milky-Way overhead, I did a quick focus of the 8” SCT using the bright star Altair in Aquila.

I then slewed the telescope higher up to the center of the Northern Cross – Sadr!
I wanted to catch a widefield view using the Canon 25mm of the HII regions that surround the star including the Butterfly Nebula – IC1318:

While in the region, I stopped by a non-Barnard dark nebula called "Le Gentil 3", a large naked-eye dark cloud located between Cygnus & Cepheus. Visited with Mike P and shared the view of the dark nebula with him.



According to Astrometry.net my FOV for the Canon lens set to 25mm = 10.7 x 6.08 deg.

(for both observations: Canon zoom lens set to 25mm, ASI290MC camera, IR filter, 60 sec subs, dark & flat calibration frames pre-applied, PHD guided, Livestacked for 30 minutes)

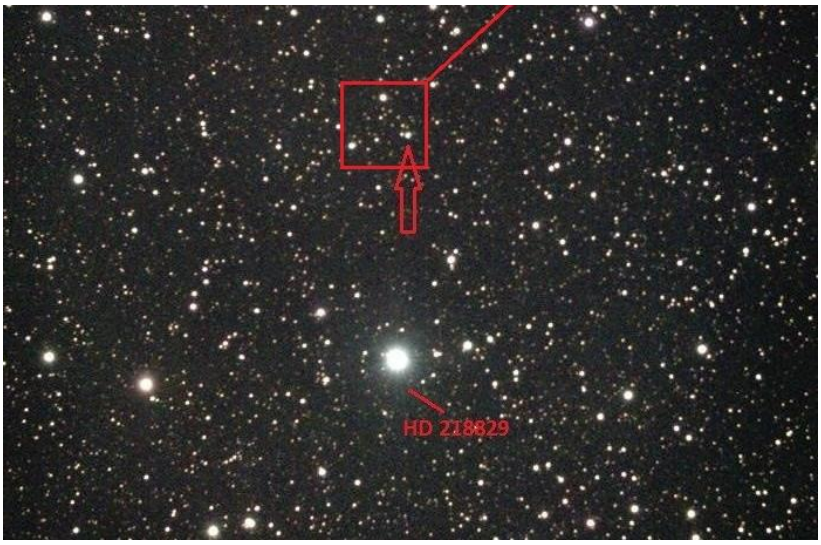
Dracula's Chivito:

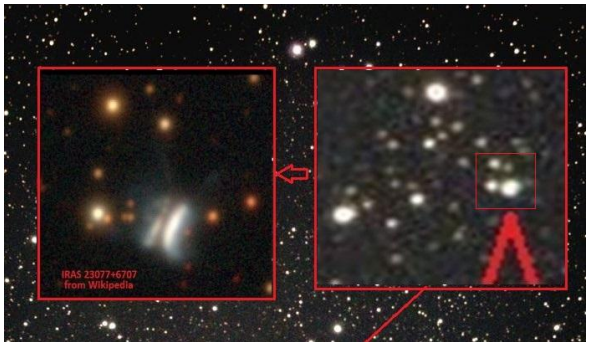
In addition to my usual EAA observing projects, (Arps, SH2's, Hicksons, etc), and bright showcase objects, I occasionally like to hunt more challenging 'exotic' fare.
Over in the 'Deep Sky Observing' forum, there's this thread called "Dracula's Chivito" about a fairly new proto-planetary disk discovered in Cepheus.
https://www.cloudynights.com/topic/911175-draculas-chivito/
In the thread visual observers using 16 - 20"+ scopes were reporting successfully seeing the object. As I've EAA bagged a number of other Proto-planetary disks, such as "Frosty Leo" and the proplyds in the Trapezium, and my EAA kit can easily pull-in what the big guns see visually, I figured this would be easy-peezy. Wrong!!!

So while at the BFSP at Cherry Springs, I went searching for it with my 8" SCT scope. After livestacking 3 minute subs for 15 minutes, I then spent the next 35 minutes trying to find this object in the FOV. Having accurately platesolved during the night, I knew that the object had to be close to the center of the livestack, but I just couldn't find it, even after going online and searching for other images.

Finally, after using Astrometry.net to identify the bright star in the FOV (HD218829) and then finding that star on Wikisky, I realized why I was having so much trouble identifying this object,,,, it was TINY! After banging my head a couple of times, I then zoomed in the Wikisky 'starchart' until I could identify the correct star pattern that matched the online images. I was then able to zoom in my livestack and find the object.

Here's the EAA observation with a cropped/zoomed insert of the red square highlighting the location of Dracula's Chivito protoplanetary disk (IRAS 23077+6707), and another insert of the pro discovery image that I was able to pattern-match too.
Hopefully, my experience will help anyone else who tries for this unique object.





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

After that intense observational effort, I needed something a little 'easier', so I pointed the scope to the nearby galaxy NGC6946 – "Fireworks Galaxy', also in Cepheus, using both the 8" and the EVO50mm which also caught nearby open cluster NGC6930.

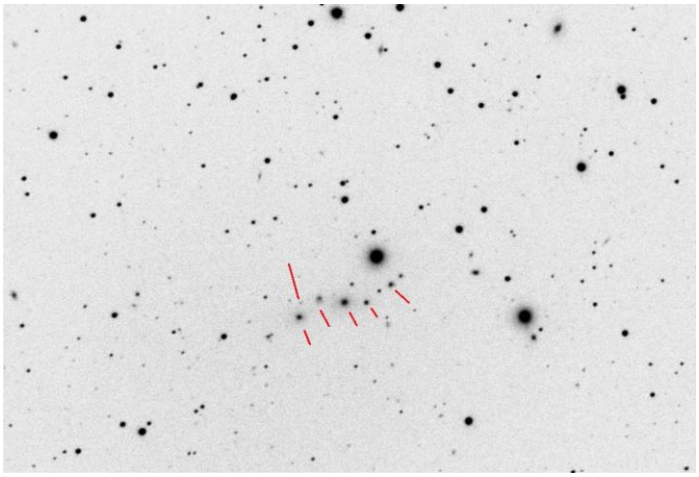
(8" SCT @ f6.3 on an Atlas Gem, ZWO ASI294MC camera with L-Pro filter, 3 minute subs, dark & flat calibration frames, PHD guided, livestacked using Sharpcap for 1 hour)
(EVO50mm @ f4.2 ASI294MC camera & L-Pro filter, 180 sec subs, for 45 min).

The sky continued to look awesome thru the night, as our galaxy wheeled overhead, stretching from the northeast to the zenith to the southwest horizon.

Later in the evening, I had several guests drop in to visit, Dean, Ed, Denny, and Brian. I also went and visited with Denny and Dean. The dew stayed light thru the night, but the outdoor temperature dropped down to a low of 42.

Dean S spent the early evening on imaging the Veil Nebula in Cygnus, then after midnight switched over to M52 & the Bubble Nebula in Cassiopeia. Denny was working emission nebula NGC7822 in Cepheus. Late in the evening Ed worked M1 – "the Crab Nebula" in Taurus.

Working down my observing list, I then went Arp Peculiar Galaxy hunting, Arp330 in Draco. This entry from Arp's catalog isn't particularly impressive, just a chain of a half-dozen tiny, faint galaxies. But one of those galaxies comes in at 19th magnitude!!



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

My last observation of the night comes from the Sept 2024 issue of the "Reflector" magazine, page 7, of small open cluster NGC7129 embedded within reflection nebula IC5134. Here's the view using both the 8" SCT and the EVO50mm:

(8" SCT @ f6.3 on an Atlas Gem, ZWO ASI294MC camera with L-Pro filter, 3 minute subs, dark & flat calibration frames, PHD guided, livestacked using Sharpcap for 30 minutes) (EVO50mm @ f4.2 ASI294MC camera & L-Pro filter, 180 sec subs, for 24 min).

Catching a glimpse of the Zodiacal Light in the northeast, I called it at night, closed up the scope and in bed by 5am.

Tuesday 9/3/2024:

Slept in till 10am, woken by the sound of construction machinery in the distance. It was a chilly morning, temps in the mid 50s, with a calm, blue sky.

During the morning several Labor-Day campers pulled out for home, including Brian. But more continued to arrive as the weather forecast looked excellent for most of the week. (Except for possible wildfire smoke being an issue later in the week).

At noon Denny and I went for a drive over to the Cherry Springs Country Store that's about a mile or so west of the park for a few supplies and ice cream cones. Had a good view of all the earth moving going on over in the public section of the park.
Back at camp, made a quick lunch, read a little, then down for a long 2 hour nap.

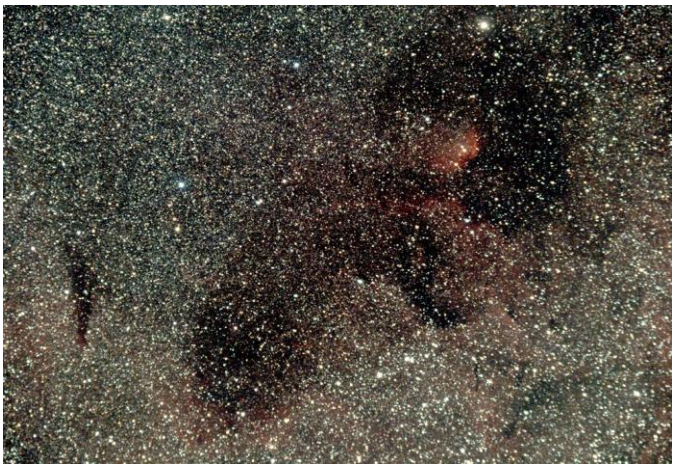
Throughout the day more amateurs arrived, including Eric L and his new Tab clamshell camper who setup in his usual spot along the fence in the far western section of the field. Mike (2) from Niagara pulled in with his Tab clamshell and setup across the road from me. There are now seven Tab campers on the field.
Mark M from the Rochester club also arrived and setup back by Eric.

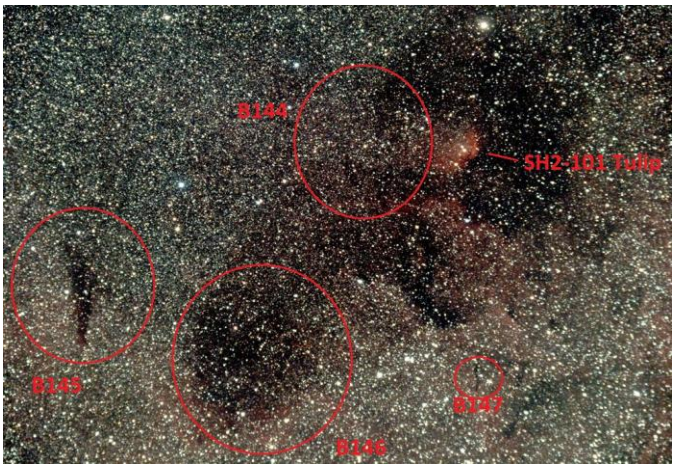
At sunset I uncovered the telescope, assembled the blackout hatch tent and powered on the laptop and cameras. Once the stars of the Summer Triangle appeared, I slewed the scope over to Altair for a focus check using the Bhatinov mask. Waiting for dusk I moved the telescope to the nearby bright planetary nebula M27 in Vulpecula.

The nebulous view of M27 thru the 8” is always feature-filled, but the widefield EVO50mm and the even wider Canon 25mm gives the observer a deeper perspective of how M27 fits in with its surroundings.

(8" SCT @ f6.3 ASI294MC Pro camera & L-Pro filter, 60 sec subs livestacked using Sharpcap for 3 min), (EVO50mm @ f4.2 ASI294MC camera & L-Pro filter, 180 sec sub, for 15 min), (Canon zoom set to 25mm, ASI290MC camera IR filter, 60 sec subs, for 15 min).

With full darkness now upon us, I slewed the telescope up to the Cygnus starcloud for a widefield view using the EVO50mm and Canon 25mm of several Barnard Dark Nebula: B144, B145, B146, & B147: (nicknamed “Fish on the Platter”)





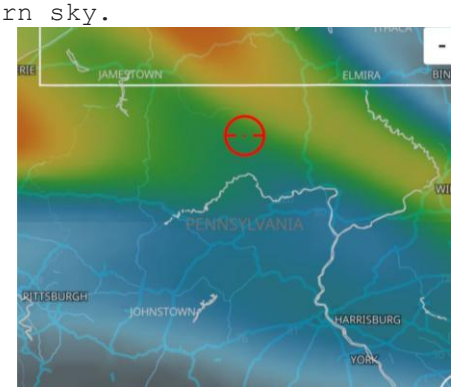
(EVO50mm @ f4.2 ASI294MC camera & L-Pro filter, 180 sec sub, for 15 min), (Canon zoom set to 25mm, ASI290MC camera IR filter, 60 sec subs, for 15 min).

I then moved northwards into the Giraffe, "Camelopardalis" for the 'Hidden Galaxy' IC342. There's a good observing article in the October Sky & Tel regarding this elusive galaxy that's heavily obscured by the Milky-Way.

(8" SCT @ f6.3 ASI294MC Pro camera & L-Pro filter, 180 sec subs livestacked for 1 hr)
Around 11pm Eric L dropped in, along with Mike P. Later Denny stopped by to visit.

I then went for a stroll to see Dean, Ed, and Denny at midnight for KitKat treats. Ed was imaging NGC6946 – "Fireworks Galaxy" in Cepheus. Dean S was having fun imaging the Summer Triangle with his Nikon DSLR & 16mm widefield lens piggy backed on his mount.

It was a mild evening, no breeze and temps only fell to around 46 deg. Transparency not as crisp as Monday night. The Astrospheric smoke map showed moderate levels of smoke moving into the region. Also, around midnight, a few small clouds drifted thru the northern sky.

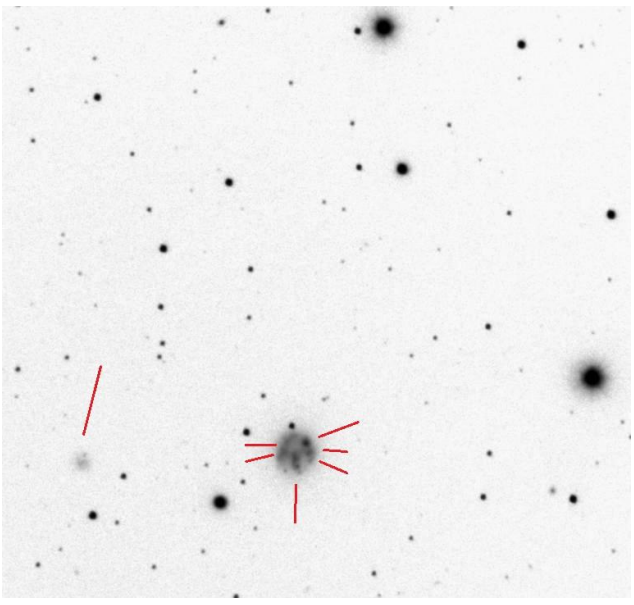


To go with my "Galileo" talk later in the week, I paid a visit to the planet Saturn whose rings are currently nearly edge-on, much like how Galileo observed it 414 years ago:

(8" SCT @ f6.3 ASI294MC & L-Pro, 116 millisecond subs planetary livestacked)

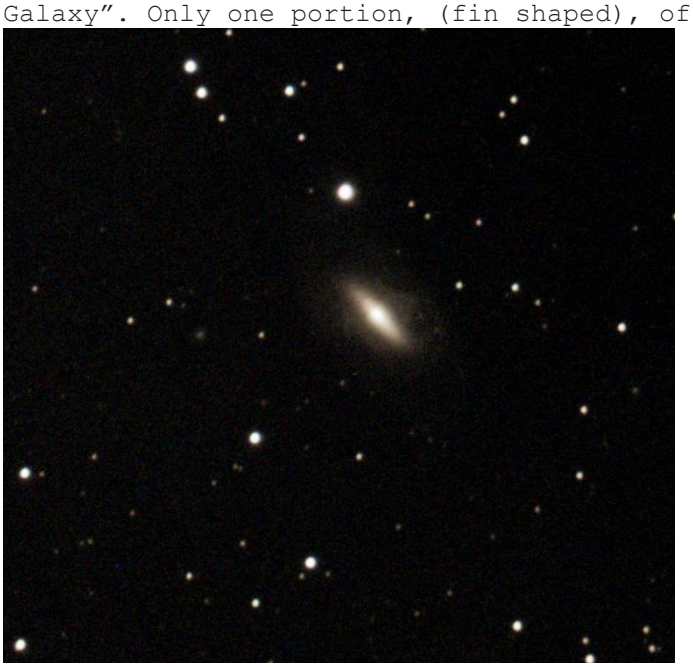
With the southern sky becoming a little hazy, I pointed the scope over to the northwest into Ursa Major to hunt bright Arp galaxies. I was able to EAA observe Arp6 & Arp336:

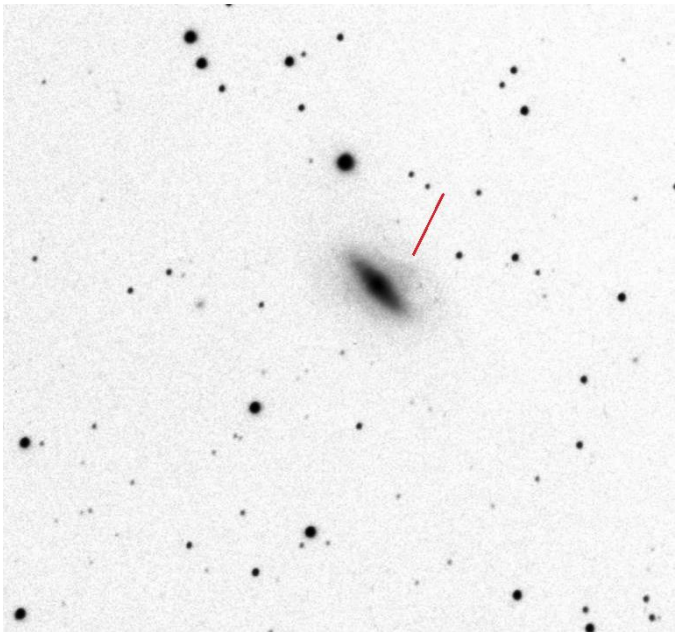
First up, horseshoe shaped Arp6, (NGC2537 & NGC2537A) nicknamed the "Bearpaw Galaxy" with several small knots and dark lanes visible within the galaxy.



(8" SCT @ f6.3 ASI294MC Pro camera & L-Pro filter, 180 sec subs livestacked for 24 min)

I then moved over to nearby Arp336, NGC2685, a polar ring galaxy nicknamed the "Helix Galaxy". Only one portion, (fin shaped), of the ring was visible.





(8" SCT @ f6.3 ASI294MC Pro camera & L-Pro filter, 180 sec subs livestacked using Sharpcap for 24 min)

The hour was growing late, Orion was rising. Time for one last observation of the night – M42 – the Great Orion Nebula! Then I called it quits at 4am.

Here's the view using the 8" SCT, EVO50mm, & Canon 25mm all at 60 sec subs for 5 minutes.

Wednesday 9/4/2024:

After about 5hrs of sleep, woke at 10am from the camper getting warm from the sun.
I foresee another afternoon nap in my future, lol.
The morning was sunny and slightly cool, temps in the mid to upper 50s and warming fast.
A beautiful day lined up.

Walked down to visit Eric L and stopped along the way to take a few pics. Lots of scopes out sunning themselves:








Ran in to Roxanne K, and also stopped by to say hello to Doug H and Tony D. Will from CN arrived and setup his tent across the road from me. Lots of good astro-friends on the field.



Purchased a new sky watcher alt-azm mount, and back at camp I attached my little 80mm refractor to it. Hope to do a little visual widefield sweeping tonight.

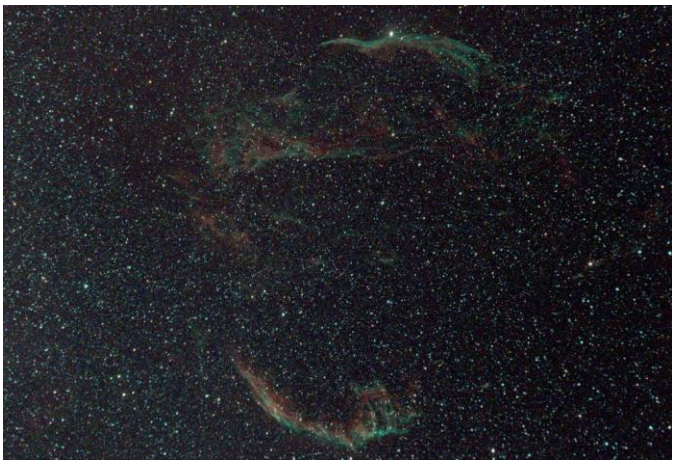
Another afternoon nap. Didn't sleep well. Joined the gang for another group dinner.

Prior to sunset, Eric stopped by with Tab camper questions that I couldn't answer as I had an older model, so I introduced him to Mike (2) and his newer Tab similar to Eric's. Also Geoff from Pgh/ Calhoun arrived and had questions on EAA.

At dusk there wasn't a cloud in the sky, and before long the Milky-Way's soft light shone down upon us. Another great night of EAA observing was at hand.

I started the night off with a long soak on the Veil Nebula using the widefields while I played with the visual 80mm scope. Invited Mike P over for a few views of M8, M24, M31, and Double-Cluster. Later Dean stopped over and I shared a view of the Pleiades.
The sky transparency started off good, but around midnight went downhill as thick smoke moved in overhead. No real breeze but dew was light.

Here's the Veil observation with the EVO50mm and the Canon 25mm where the Veil is almost lost among the starclouds:

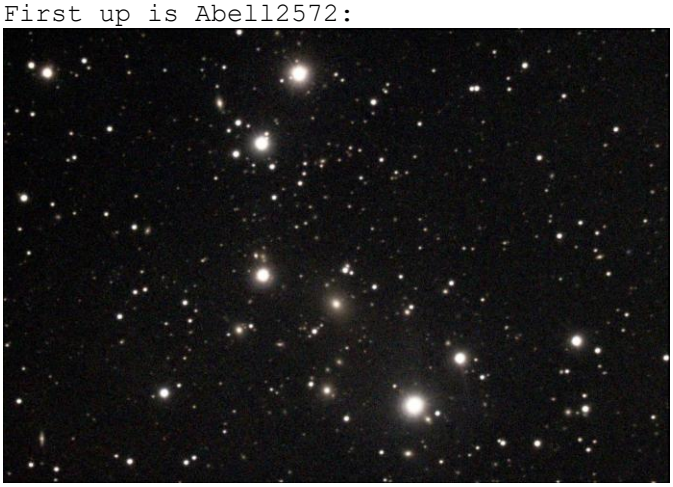
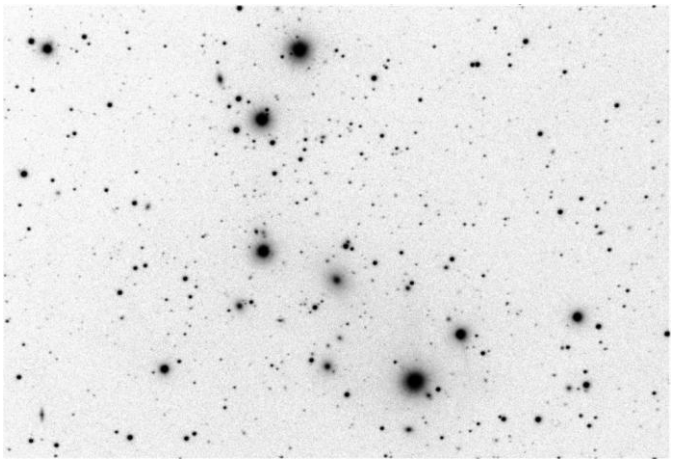


(EVO50mm @ f4.2 ASI294MC camera & L-Pro filter, 180 sec sub, for 60 min), (Canon zoom set to 25mm, ASI290MC camera IR filter, 60 sec subs, for 60 min).

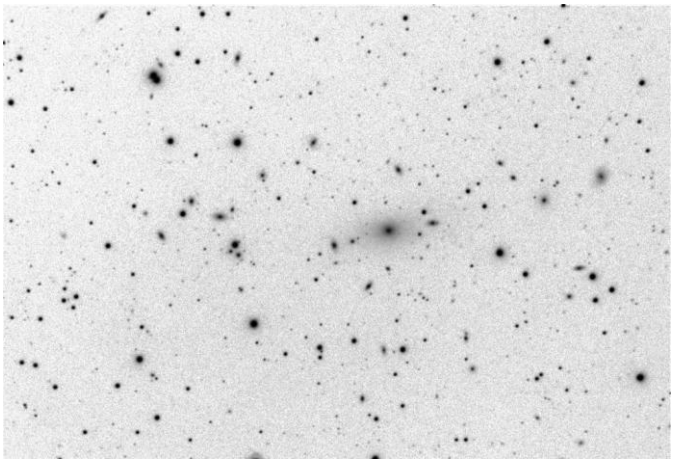
While I enjoying the retro visual views with my little 80mm scope, Ed was continuing to image NGC6946 – "Fireworks Galaxy" in Cepheus. Denny was imaging M102 – "Spindle Galaxy" in Draco and fighting with satellite trails. Dean S was back working the Veil Nebula, but started the evening off using his widefield Nikon on M24 – "Sagittarius Star Cloud".

Having put away the visual scope, I now turned my attention to my Abell Galaxy Cluster survey project, starting in Pegasus. Most of these galaxy clusters are faint, even with long exposures, but it can be a kick when all these tiny galaxies pop into view.
Each image is generally centered on the brightest galaxy near the cluster's core.
I have a page on my site devoted to Abell Galaxy Clusters:
http://stellar-journeys.org/AbellGalaxyTour.htm

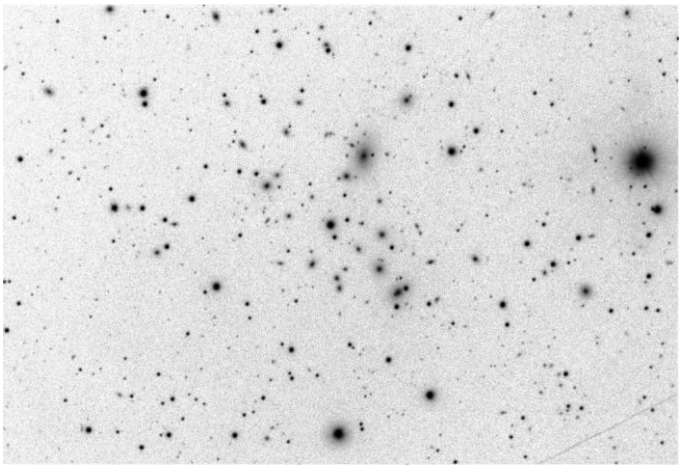
First up is Abell2572:

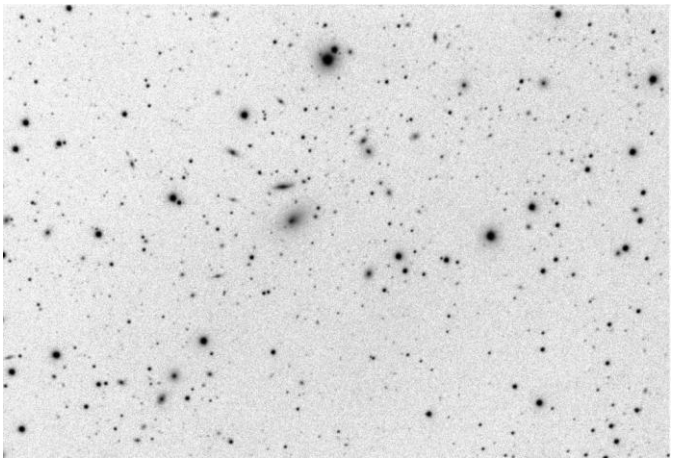
Next Abell2589:

Then Abell2593:

Finally, Abell2626:



For all of these:
(8" SCT @ f6.3 ASI294MC Pro camera & L-Pro filter, 180 sec subs livestacked using Sharpcap for 30 minutes)

Around 1:30am, having wrapped up the last Abell observation in Pegasus, I suddenly became very tired, so called it a night at 2am. Too many galaxies, not enough time,,,,

Thursday 9/5/2024:

Had a long sleep, woke at 10am to a sunny day, temps at a pleasant 60deg, a light breeze drying off the dew, and the beep! Beep! Beep! of construction machinery.

After 'brunch', I sat outside and read. Around noon, I broke out the PST solar telescope and observed the sun. Mike P also had his PST out and we compared views.

Seeing that I had slept in late, didn't really need to take a nap. Around 5pm we had a group dinner with hamburgers and hotdogs

I then went for a walkabout and visited, with various folks, Roxanne, Tony, Jim, Eric. Our section was now completely filled, and most of the field was the same. It was great seeing all the various telescopes setup.





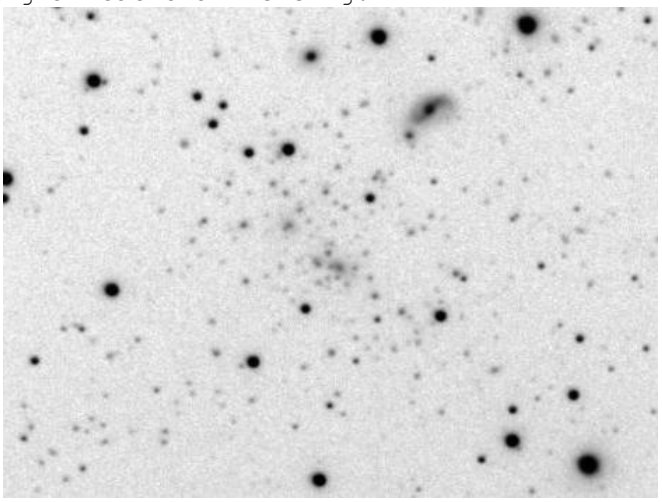

At sunset, I uncovered the telescope and fired up the cameras. Before long it was another night of “Milky-Way”!


The evening started off good, but around midnight the transparency went south.
I Started off with an EAA widefield observation of M8, chasing it down close to Mike P’s camper. (Thought I was going to have to ask Mike to open a camper window to finish, lol).


(EVO50mm @ f4.2 ASI294MC camera & L-Pro filter, 180 sec sub, for 30 min), (Canon zoom set to 25mm, ASI290MC camera IR filter, 60 sec subs, for 30 min).

Ed was continuing his quest to image NGC6946 – "Fireworks Galaxy" in Cepheus.
Dean also went back to M24 for more data.

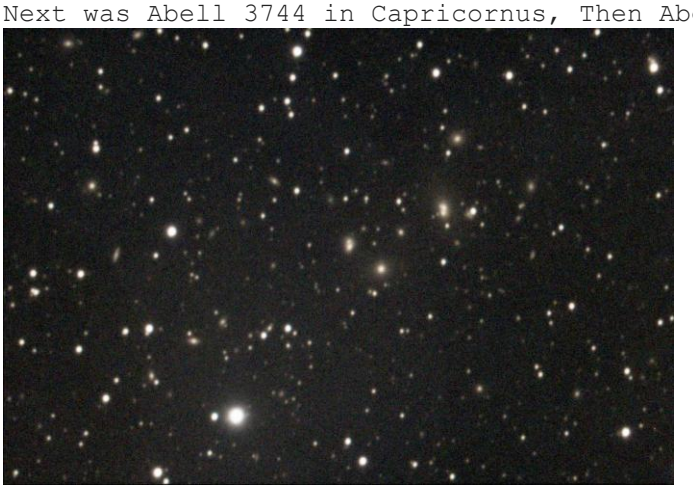
I then continued with my Abell Galaxy Cluster observations, starting with Abell2218 in Draco. This large cluster of over 200+ individual galaxies located over 2 billion light-years away is known for its Hubble photo showing gravitational lensing.

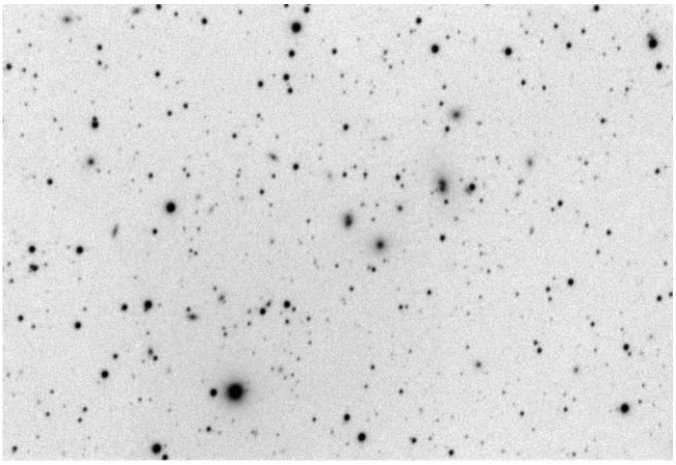


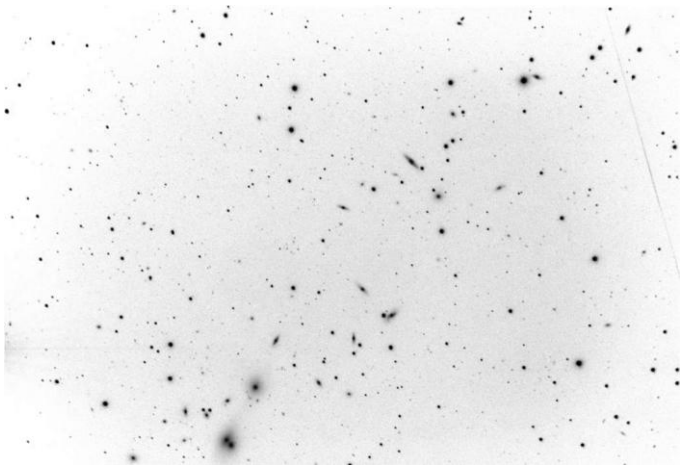
It was an incredible sight! (every one of those tiny 'dots' is a galaxy!!!) I had to call over the guys to see this view of one of the largest structures in the universe!!!

(8" SCT @ f6.3 ASI294MC Pro camera & L-Pro filter, 180 sec subs livestacked using Sharpcap for 1 hour)

Next was Abell 3744 in Capricornus, Then Abell194 in Cetus:

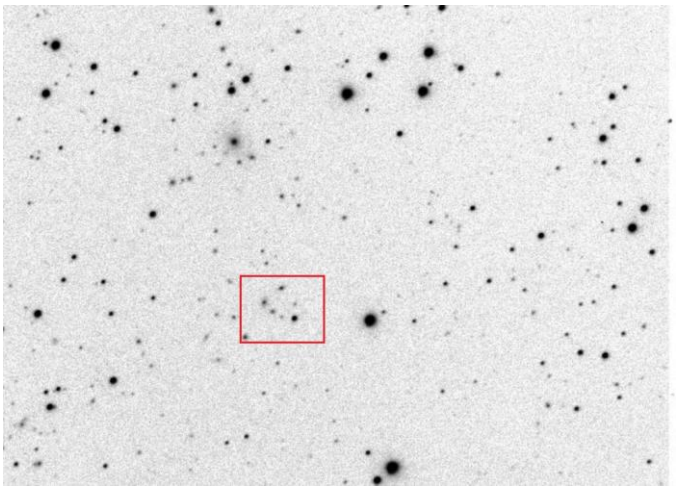






(Both of these were with the 8" scope, 180 second subs stacked for 30 minutes)

I then switched it up and hunted down a tiny Palomar Galaxy Cluster, PCG2312+1017 in Pegasus. While not much to look at, can only usually see just the galaxy cores, they're still fun to observe, if you like galaxy clusters,,,



(8" SCT @ f6.3 ASI294MC Pro camera & L-Pro filter, 180 sec subs livestacked for 15 min)

I then hunted one of the CloudyNights September EAA challenge objects – galaxy NGC2146 in Camelopardalis, known as the "Dusty Hand Galaxy". Interesting shaped skeleton hand.

(8" SCT @ f6.3 ASI294MC Pro camera & L-Pro filter, 180 sec subs livestacked using Sharpcap for 15 min)

And with it being 4am, that was my last observation of the night.

Friday 9/6/2024:

Slept in late again till 10:30am. The forecast for tonight didn't look good. I'll probably get a good night's sleep tonight. A lot of folks who either didn't have a ticket for the starparty or didn't like the looks of the weather had packed up and pulled out. This included Ed and Dean S from the ORAS club, along with Mike (2) from Niagara and Paul. Mike P was in the process of packing and would head out around noon. There was now quite a bit of open space. Denny and I are sticking it out thru the starparty.

Sat outside and read a little. At noon I headed over to the registration tent to sign in and to buy raffle tickets.

During the afternoon, folks arrived for the starparty, setting up tents in the empty space around us. By starparty standards, it was still a small crowd, maybe 275 people.

Walked down the old forest path to check out the new entrance to the observing field.

Then attended a group dinner with the CPO club. Afterwards, Denny and I walked across the road to see the construction work done on the public side. As Mike P had earlier mentioned to me, it's kinda incredible to think about all the money the state is sinking into a park purely for astronomy!!

The afternoon has been sunny and warm, but by 7pm storm clouds began to move in while Denny and I were out for our earlier walk.

Around sunset I walked down to the western field to visit with Eric L.
Later, back at camp, Tony D stopped by to visit with Denny and I.

With dark clouds and lightening flashing off to our NW, I headed indoors to read.
Fell asleep around 10:30pm.

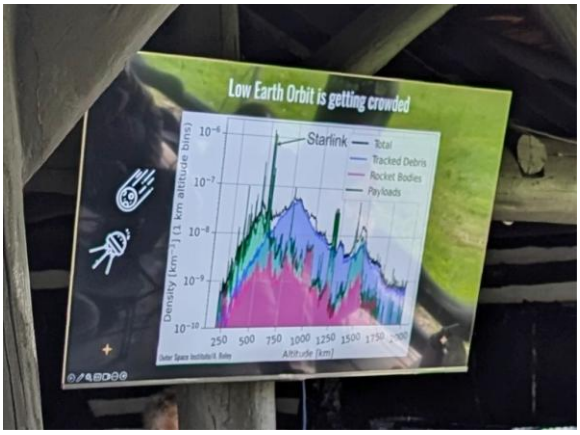
Saturday 9/7/2024:

Woken at 3:30am by rain hitting the camper roof.
Then discovered that the window above my pillow had developed a small leak, enough to soak one side of the pillow and the sheet. After spending some time fixing the leak and stripping off the wet pillow case and sheet, I went back to bed, listening to the occasional shower and finally fell back to sleep.

The alarm clock set to 8am woke me to a dreary grey day, with chilly temps in the low to mid 50s and occasional light drizzle.

Fixed breakfast. Checked out the swap meet, bought a few more raffle tickets. Denny and I then walked over behind us and checked-out the radio-astronomy demo. Appropriate day weather-wise for it.

After a quick lunch, At Noon I caught the first speaker, Phoebe Sandhaus, an Astronomy and Astrophysics Ph.D. candidate from Penn State. Her talk – "The Consequences of Satellite Mega-Constellations and Space Junk" was about all the satellite orbital junk. Beginning to get a little crowded up there! No good prospects for the future.



I then gave my presentation on “Galileo – The First Optical Astronomer” to a large crowd. Other than several gale force wind gusts that tore thru the pavilion, and took out a canopy or two on the observing field, the talk went well with good follow-up questions. Here’s a YouTube video that CPO recorded:
https://youtube.com/@centralpennsylvaniaobserve4783?si=ZLVMrS9cPyPD62yC

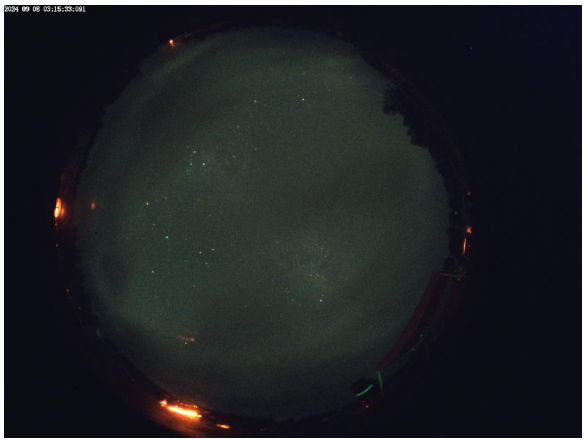
After taking my laptop back to camp and switching to my heavy winter parka, Denny and I walked back over to the pavilion to hear the keynote speaker Dr Darren Williams a Professor of Astronomy and Astrophysics, and Planetary Science at Penn State Behrend in Erie, Pennsylvania. Dr Williams presentation was on "Ways to Form the Moon", where he discussed the various ideas on how the Moon formed. Very interesting, good graphics.

We then had a short report from the CSSP Dark Sky Fund Folks, Eric L & Maxine H.

The door prize raffle was immediately after. Unfortunately, neither Denny nor I came away with any of the major door prizes, (and not from a lack of buying tickets, lol)
But Denny did win a BFSP T-shirt!

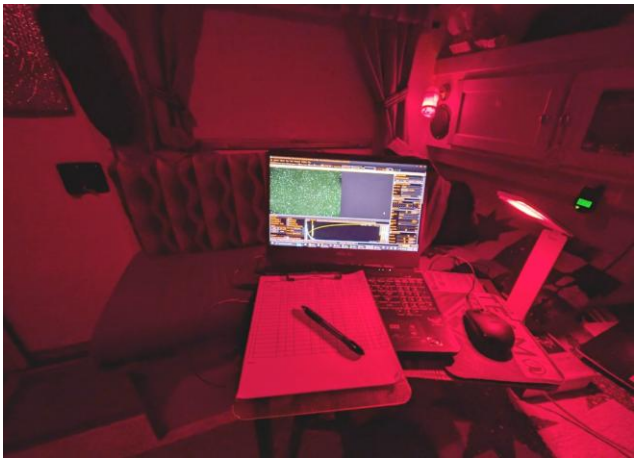
Headed back to camp for dinner, then joined Denny in his camper at 7pm for the ORAS public meeting via zoom.
At sunset, the sky partly cleared for 5 to 10 minutes at a time, then clouded back up.
The radar showed most of the rain staying to our north.

Around 9:15pm, the sky was not looking too bad thru the partial clouds, I decided to uncover the scope and work from inside the camper, Making Lemonade,,,

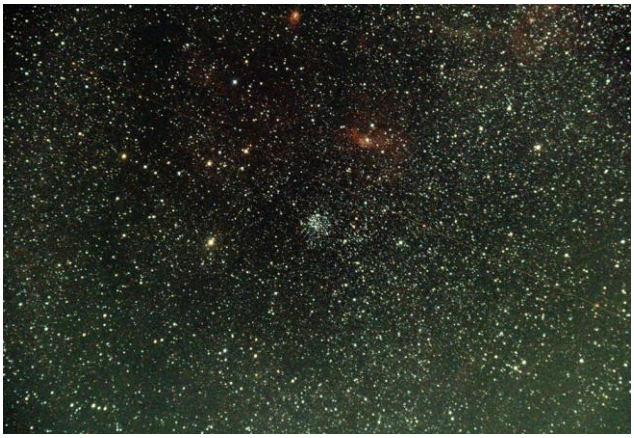


With Clouds coming and going, couldn't really take long exposures and PHD guiding was difficult, constantly loosing the guidestar. So it was a Cluster Night!
The northeast seemed more cloud-free than the rest of the sky so I focused there.

First up was the splashy open cluster M52 in Cassiopeia.



Using the widefield scopes I was also able to pull in the nearby Bubble Nebula – NGC7635.



(8" SCT @ f6.3 ASI294MC Pro camera & L-Pro filter, 15 sec subs livestacked using Sharpcap for 10 min), (EVO50mm @ f4.2 ASI294MC camera & L-Pro filter, 180 sec sub, for 3 min), (Canon zoom set to 25mm, ASI290MC camera IR filter, 60 sec subs, for 20 min).

I continued following the Milky-Way down thru Cassiopeia to NGC7789:

Then the much smaller & fainter NGC7790:

Several big gusts of wind during the evening! Between that and the clouds it was amazing that I could plate solve and do EEA in these conditions. But nice and cozy inside the camper with my laptop.

I continued with EAA observing clusters in Cassiopeia centering the scope on M103:

As the time was now past midnight and I had to pack in the morning, I decided to make one more cluster observation, the Double-Cluster! NGC869 & NGC881 in Perseus.

(same scope/camera stats as above but with shorter exposures due to clouds & wind)

And with that last observation of the 2024 BFSP, I shutdown and covered up the scope.

Sunday 9/8/2024:

Woken at 7:30am by the sound of car doors and people packing. Denny was already outside disassembling his telescope. I hurriedly dressed and joined in with packing up. It was a foggy morning with temperature in the mid 40s. Soon the sun began to break thru warming it up. While eating breakfast I finished packing the inside of the camper, then moved outside to tackle the telescope and canopy. Denny was the first to leave, heading for the dump station. After I had hooked-up the camper, I walked down to the western field to say goodbye to Eric and his friends. After changing into dry shoes, I was on the road back home by 11am. It was a misty drive starting off down thru the mountain valleys, but the further south I went the sunnier and warmer it got. Finally pulled into the home driveway at 3:30pm and began unloading.

So out of a total of 10 nights of this astronomical journey, I was able to get in some EAA observing on six of those nights, (seven if you count the very brief session at ORAS). More than breaking even and in my book that's a successful trip!
As always, I'm looking forward to next year's Black Forest Star Party!

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