Cherry Springs State Park, PA. August, 2025

With my being in Ionia, NY for the ASRAS RocheStar Fest, once that concluded, I was only 2.5 hours north of Cherry Springs. The weather forecast looked promising enough, so after hitching up the camper I headed south to my favorite dark-sky location. I planned on staying the full week thru New Moon weekend.

Sunday 08/17/2025:

From Ionia, NY: Up at 8am. Packed away the AllSky cam and the SeeStar field tripod, Then made breakfast. Around a quarter after 9am, raindrops began flying over the field, and my dilly-dallying with breakfast, got me soaked while hooking up the camper, lol
As I was heading to Cherry Springs, I let the GPS lead, and it took me over Hill and Dale thru the countryside. Fortunately, the rain let up during the drive.

I arrived at the park at 12:30pm to partly sunny skies. I first stopped at the new ranger station only to find it closed. Then headed over to the observing field, and used the iron Ranger to register. As there were only two other campers on the field, (Elliot was one), and I had my section all to myself, so I decided to try setting up with the camper nose pointing east and the door to the south. The observing field grass wasn't too high, just a little weedy from lack of rain.

By 2pm, I had everything setup, including my usual EAA equipment:
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. I also setup my AllSky cam, a ZWO ASI224MC camera & fisheye lens in a DIY dome attached to a tripod. And my SeeStar S30 smart telescope.

Went for a stroll around the observing field, noticed a few changes since last I was here in June, electrical work going on over at the end of the row where the BFSP folks would setup camp. Landscape plantings around the new mounds and gate, new signage, and new split rail fencing around the field perimeter.

I walked over to visit the old double shelter with its rows of empty picnic tables. Felt strange being the only one walking about on the observing field.

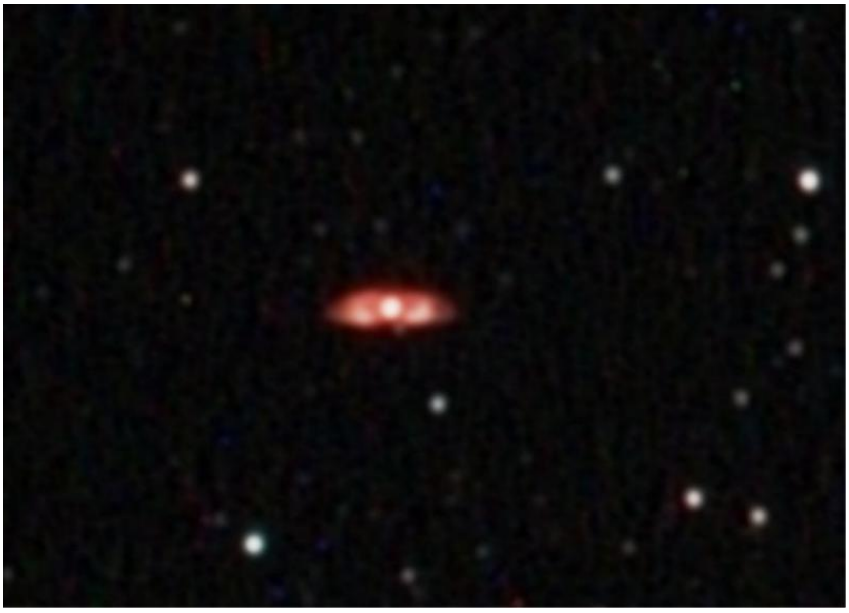
Spent the rest of the afternoon and evening sitting outside reading till dark, then indoors working on the Rochester trip report. Checking the weather forecast, it was going down overnight to 49 degrees! Nippy for mid-August!
Early to bed at 11:30pm.

Monday 08/18/2025:

Up around 8am to a sunny sky. Overnight in the wee hours it had cleared. The day started off chilly, in the low to mid-50's, but soon warmed up to t-shirt and shorts weather. A fine day to sit outside and read. Around Noon, on my way back from the showers at Lyman Run Park, I stopped over on the public field side of Cherry Springs and checked-out the progress on that side of the road. More landscaping had been done, and the new grass was growing in nicely.

A beautiful afternoon at the park, though the sky was a little hazy at sunset with long jet contrails, then clear by dusk. During the afternoon, a few more folks pulled-in at the park, including Mike P from Niagara, Canada who arrived and setup across from me. Also, several other amateurs including Jim D, and Elliot were setup in the western side of the observing field.

At dusk, I walked down and closed the new gate to the observing field. I then prepared my observing notes under my blackout hatch canopy and powered-on the waiting telescopes. First steps were to get the 8”SCT polar aligned and camera focused, then on-target to my first EAA observation. Minkowski 2-9, the "Butterfly Nebula", in Ophiuchus.

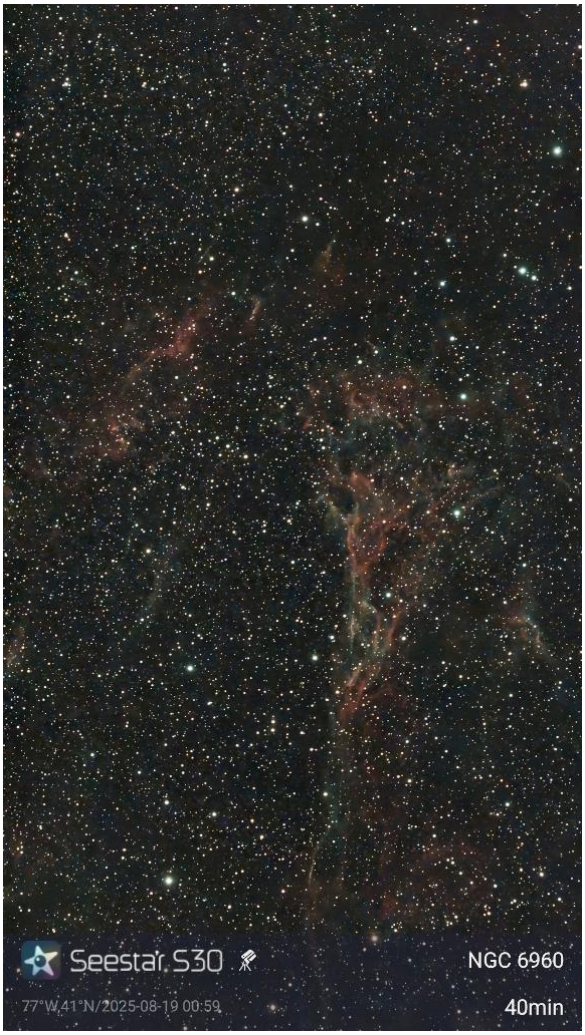


(8" SCT @ f6.3 on an Atlas Gem, ZWO ASI294MC Pro camera with L-eNhance filter, ROI=1024x768 then severely cropped, 180 second subs, dark & flat calibration frames, PHD guided, livestacked using Sharpcap for 45 minutes).

I really had to zoom-in/crop on this tiny little object!
M2-9 is what is known as a PPN (Pre-Planetary Nebula), which is an in-between state where a star having expanded into a red giant, runs out of its hydrogen and begins burning helium prior to its contracting towards becoming a white-dwarf. While the star has generated a large outflow of material, it is not yet hot enough to really begin ionizing its shell and creating a traditional planetary nebula. M2-9 was discovered by Rudolph Minkowski in 1947 and is about 2,100 light years distant and about 1200 years old.
The "Butterfly Nebula", also called the "Twin Jet Nebula" gets its name from its 'wing' shape caused by the high speed jets coming out of the central star.
While I was able to EAA observe the inner 'wing' lobes along with knots of gas in either lobe, there was only a hint of the outer lobes.

While M2-9 was livestacking, I got the S30 SeeStar polar aligned and sent it hunting its first target – NGC6992, the ‘Eastern Veil’, part of the Veil Nebula or Cygnus Loop.
Later I have the S30 slew to the middle of the Veil, NGC6992, also called ‘Pickering’s Triangle’.

Both observations were 40 minutes long.

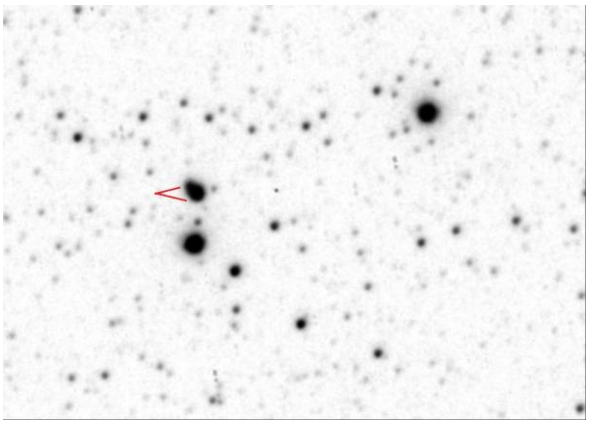


(SeeStar S30, 60 second exposures in EQ mode with the NB filter, livestacked for 40 minutes, then AI noise reduction applied in-app)

Back at the 8” SCT, I was now comet hunting, looking for +11.8 magnitude Comet Atlas C/2025 K1, which was cruising thru southern Hercules near the border with Ophiuchus. After consulting with “TheSkyLive” for the comets RA & Dec, I soon found the little comet. It’s fast moving, so I had to experiment with the exposure time so as not to cause the comet nucleus to streak. Hopefully, Atlas K1 will put on a nice show in October.

(8" SCT @ f6.3 on an Atlas Gem, ZWO ASI294MC Pro camera with L-Pro filter, 30 second subs, dark & flat calibration frames, PHD guided, using Sharpcap for 90 seconds).

A little after midnight, clouds began forming directly overhead then dissipating. This occurred several times over the next 2 hours making observing difficult. Both the S30 and the 8” SCT had difficulty with their last observations. For the 8”, I was attempting to observe M1-92, “Minkowski’s Footprint”, in Cygnus, but had to restart the livestack several times. Here’s the best observation that I could get in:



(8" SCT @ f6.3 on an Atlas Gem, ZWO ASI294MC Pro camera with L-eNhance filter, ROI=1024x768 then severely cropped, 180 second subs, dark & flat calibration frames, PHD guided, livestacked using Sharpcap for 9 minutes).

I was also juggling getting an observation of NGC6888 – “Crescent Nebula” in Cygnus using the S30. After several false-starts, I was finally able to get in a good view.

(SeeStar S30, 60 second exposures in EQ mode with the NB filter, livestacked for 19 minutes, then AI noise reduction applied in-app)

After attempting to view the Titan/Saturn shadow transit and being frustrated by the clouds, I called it a night around 2:30am.

Here's an AllSky time-lapse from Monday evening:
https://youtu.be/52wemJyeFbM?si=ZJgmdEVdFiuPz72P
Watch for the Summer Triangle and Milky-Way popping out. Around 6:30am, a light rain shower went over the field.

Tuesday 08/19/2025:
Woke around 9:30am to overcast skies and cool temps in the upper 50's.
After dressing, I headed outdoors to visit with Mike and compare observing notes from the previous night. Then had a late brunch.

After mid-day the skies partly cleared and the temps rose into the mid 60's. A pleasant day except for when a dark cloud bank would cover the Sun and a chill breeze would pick up, and then it was time to grab a sweater. While Mike went for a walk to explore the park upgrades, I worked on EAA image captures from the night before.

At 5pm, I joined Mike over at this camp for pre-dinner snacks. Then headed back to my camp at 6:30pm to make dinner and phone home. With the weather radar showing incoming rain later that night, I stowed away a few outdoor camping items and with dropping temperatures and a chill breeze kicking up, I headed indoors to spend the evening reading and surfing the internet. Late evening, as the line of rain showers edged closer to the park, the wind picked-up with an occasional strong gust rattling the camper.

Called it a night around midnight.

Wednesday 08/20/2025:
Overnight a line of windy storms went thru with several early morning downpours, one at 5am, and another at 6am, both waking me from the noise. The local weather bug says we got nearly .5" of rain. After rolling back over at 6am, I slept in till 9am, waking to a damp, misty morning and outdoor temps in the low 60's. (the camper was nice and warm! ☺)
Stepped outside to retrieve the milk from my back fridge, said hello to Mike P who was sitting outside reading, wearing long jeans, a sweatshirt and jacket. Too much 'fresh air' for me, so I headed back indoors.

The forecast for today was cloudy skies with rain returning around 5pm and thru the night. Next chance of clear skies, Late Thursday night.

Throughout the day, the weather was cloudy/misty with occasional fog on the field.
Still that didn't stop five campers from pulling-in and setting up, including Brad from York, Pa. I spent the afternoon inside working on trip plans for the fall.

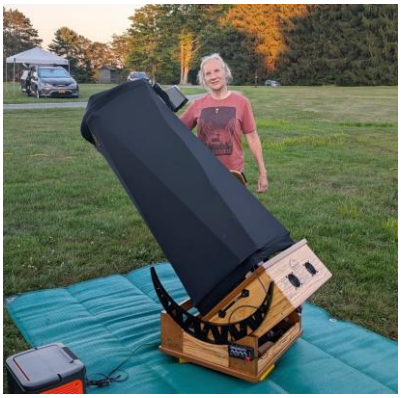
Late afternoon, the temp had warmed up to 68 deg and the drizzle had stopped. Went outside for a bit and visited with Mike. While sitting under Mike's awning, we watched a wall of fog move across the observing field. We were literally living inside a cloud! LOL!!

With the fog filling the air, it became chilly sitting out, so I headed back to my camper to read and watch TV. Called it a night at 11pm.

Thursday 08/21/2025:

Slept in till 8:30am, woke to another foggy, damp morning, with temps in the low 60's. Spent the morning indoors. Another dreary day teed-up. But, there was hope! The forecast showed clearing tonight beginning around 10 pm! So a late day nap may be in the works.

More amateur astronomers began to arrive at the park. Soon I had neighbors on either side of my camper. LHVAAS member Eric L pulled in with his Tab teardrop camper and setup down by the western fence. Also Roxanne K from the ASH club pulled in with her utility camper, And Frank W from Pgh.



A little after 12 noon, Mike and I went for a hike along the park nature trail. It was a nice stroll, and the park keeps the trail maintained.

Spent the afternoon reviewing my observing notes and selecting targets for the night. Also uncovered the telescopes to let them 'air' out.

Uncovered the 8" telescope and AllSky cam, and setup the SeeStar. Assembled the blackout canopy under the camper teardrop clamshell hatch.

Went for a walk around 5:30pm. Visited Art and a group from the Kopernik Observatory, NY. On the way back to camp, stopped in to visit with Mike P and Eric L who was visiting. And met my new tent camping neighbors Carl and Mike. Fixed dinner and phoned home.

At dusk, Mike and I walked down to close the gate. Then headed back to my camp to visit. Around 9:15pm, some fella opened the gate and drove down with his lights on to the end of the road to park. Good thing for him it was cloudy and no one cared.
The expected clearing at 9pm failed to happen, with new predictions now delaying it to 11pm. Went back inside for a bit to read then back out around 10:30pm.

Visited with Mike for awhile at his camp, then around 11:30pm, the sky began to clear. Soon the Milky Way was glowing overhead. I quickly got the SeeStar EQ aligned and working a mosaic of the Veil Nebula. I then experienced GoTo issues with the 8", finally resolved by clearing all the sync points from Monday night.

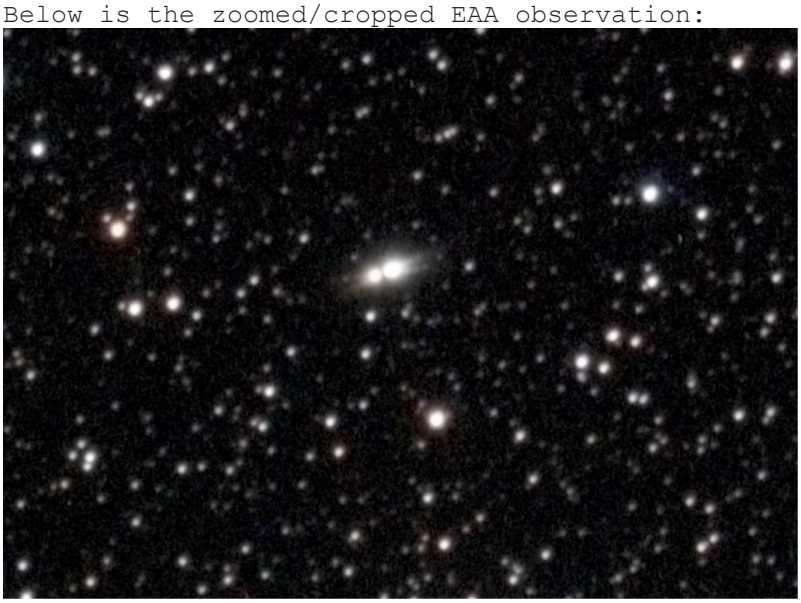
I started off the night by EAA observing dark Nebula LDN673 in Aquila using both the 8" SCT and the EVO50mm refractor, using the L-Pro filter. The nebula can be found in western Aquila near the Great Dark Rift by Omega Aquilae, and is about 600 light-years distant.

The 8" SCT view is on the left, EVO50mm to the right. Red box is the FOV of the 8".
The EVO50mm is slightly obscured by haze that moved in, degrading sky transparency.

The main reason I was hunting LDN673 was that it contained one of the easier Herbig-Haro objects to observe – HH32. These objects are a type of small emission nebula found around young protostellar stars. Shockwaves from the newborn star interacts with the remaining gas in the system causing it to glow. The red circle below shows the location of HH32, with a zoomed/cropped image on the left. (see the July 2016 Sky&Tel for more details).

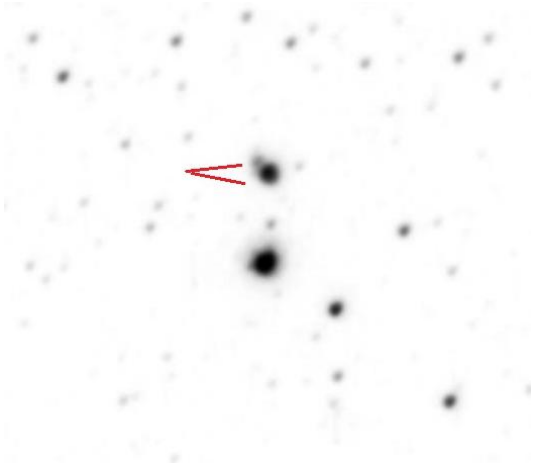
(8" SCT @ f6.3 on an Atlas Gem, ZWO ASI294MC Pro camera with L-Pro filter, 180 second subs, dark & flat calibrations, PHD guided, livestacked using Sharpcap for 30 minutes). (EVO50mm @ f4.2 ZWO ASI294MC camera with L-Pro filter, 180 second subs, dark & flat calibration frames pre-applied, PHD guided, livestacked using Sharpcap for 15 minutes).

I then slewed the telescope up overhead to Cygnus to hunt for the "Egg Nebula" – CRL2688. This object is a pre-planetary nebula located near Epsilon Cygni, and is about 1,400 light-years distant and about .25 of a light-year in size. Hubble images show the planetary with concentric rings with searchlight beams extending on either bipolar side. Below is the zoomed/cropped EAA observation:



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

Being in the celestial neighborhood, I decided to make a re-observation of M1-92, – "Minkowski's Footprint located near Albireo in the Swan's head. But this time using a much shorter exposure along with the broadband L-Pro filter so as an attempt to not to blow-out the bi-polar lobes of this pre-planetary nebula. Now, I was able to more cleanly separate the two lobes of the planetary into the bright 'heel' and much fainter 'sole'. I could not resolve the central star of the planetary. The 11th magnitude PPN is about 8,000 light-years distant and about a third of a light-year in diameter.
(for more details on these pre-planetary objects, see the June 2021 Sky&Tel magazine).
Here's the EAA observation: (negative version on the right better shows the lobes).



(8" SCT @ f6.3 on an Atlas Gem, ZWO ASI294MC Pro camera with L-Pro filter, 15 second subs, dark & flat calibrations, PHD guided, livestacked using Sharpcap for 5 minutes).

With the clock now well past 3am, my last object for the night was dark nebula Barnard 10 located in Taurus by the border with Perseus near Zeta and Omicron Persei. This is a historically significant dark nebula as its observation by American Astronomer E.E. Barnard in 1907 was what convinced Barnard that these dark voids were actually obscuring dark matter in front of and blocking the view of the more distant Milky-Way. This was considered a huge discovery among the astronomical world, as now all the various galaxy formation models would have to take into account these dark clouds of dust and gas.

B10 was well placed in the sky, about 8 degrees to the left of the Pleiades'. As the nebula was large, the EVO50mm would be my primary instrument, with the 8" centered on the reflection nebula LBN782, located within B10.
Here's the observation:

(8" SCT @ f6.3 on an Atlas Gem, ZWO ASI294MC Pro camera with L-Pro filter, 180 second subs, dark & flat calibrations, PHD guided, livestacked using Sharpcap for 30 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 9 minutes).

Due to the ground fog that had started building on the field after 2am, I had to cut short the EVO50mm as the image was washing out. Stay up till 4:30am. Spotted the zodiacal light rising thru Gemini as I crawled into bed.

Here's an AllSky time-lapse from Thursday evening:
https://youtu.be/t5rMBHMB1Bk
Cloudy and dark for the first third, then a little "Cherry Springs Magic" happens!
Watch for Milky-Way popping out, and the Zodiacal Light appearing before dawn.

Friday 08/22/2025:

Slept in till 10am. Once dressed I stepped outside to shutdown the AllSky camera and compared observing notes with Mike P. Then time for brunch. During the day more amateurs continued to flow into the park, and I picked up a new neighbor, Dana from Philly. He setup his tent and camera equipment next to my car. People were also setup across from me where I would normally be. Mid-day, Andrew stopped by to say hello. He and his big dob were down along the hiking trail to the west.

Took a long afternoon nap! 2 hours! Woke to find all kinds of new neighbors. There's probably about a 100 people on the field here at CS.

I think the new solar panels have made a difference. Ran my coffee maker, nuked dinner, ran my vent fan all afternoon, charged stuff, I've done everything but run my AC! And I'm only about 3% down in battery power. Currently getting 195 watts from the panels, should be back to full battery in about 25 minutes. We'll see how it goes thru the night, but I think I'm good for Okie-Tex in October. Here are the panels soaking in the midday sun, and then prepped to catch the next morning's first rays.

(footnote – overnight ran the power down more than expected, will need to be more careful in power management,,, lol).

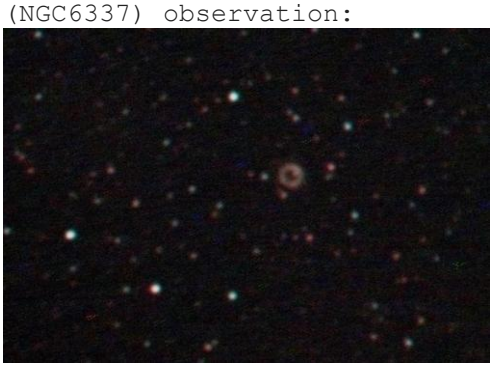
More people continued to arrive and setup astronomy equipment. I'm guessing at least 150 to 200 people on the field. Talked with one of the rangers and he said the number reminded him of a starparty crowd.

That evening the rangers gave an outdoor planetarium program across Rt44 in the new event area. There must have been hundreds there, as cars were lived up on the road to enter. After dusk, the headlights from the new, (now higher in elevation), parking lot were really bad, sweeping across the road overtop the stockade fence and lighting up the observing field. Also people were constantly driving up the new road and entrance to the observing field, lighting up the area around the gate. You could see their headlights illuminating the trees. The park is going to need to address that problem.
(I talked with a ranger the next day, and they estimated the crowd at close to 1,000).

Based on the weather, for what would probably be my last night of observing, I continued the week's "theme" of observing planetary nebula, starting right at dusk with two low-elevation targets in Scorpius – NGC6302, the "Bug Nebula", and NGC6337, "Cheerio Nebula". I had to be quick in my EAA observations of these two as both are not much more than 10 degrees above the horizon when they make their meridian crossing.

The Hubble images of the "Bug" shows it more like a beautiful winged insect giving its nickname as the "Southern Butterfly Nebula", but my 8" SCT could only display a bi-polar shaped "buggy" looking object with a few extended filaments. But "Cheerio" shaped NGC6337 did live up to its "Fruit Loopy" looking name, and was a nice, small ring-shaped planetary. (for more details on these planetary nebula objects, see the June 2021 Sky&Tel magazine).Here's the "Bug" (NGC6302) Cropped and really cropped!

And the "Cheerio" (NGC6337) observation:

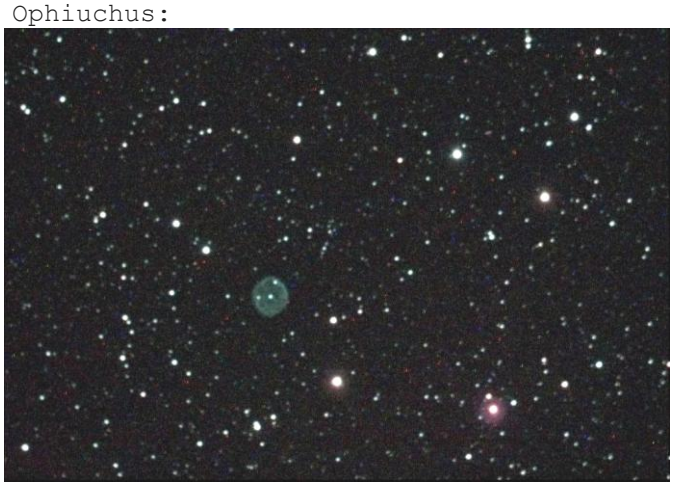


(For both: 8" SCT @ f6.3 on an Atlas Gem, ZWO ASI294MC Pro camera with L-Pro filter, 180 second subs, dark & flats, PHD guided, livestacked using Sharpcap for 30 minutes).

The S30 SeeStar in EQ mode was plugging away at a deep-dive into the North American and Pelican Nebulas near Deneb in Cygnus. Eventually, before the mosaic could complete, the degraded sky transparency caused the little scope to begin dropping images, so I stopped the livestack. When a mosaic doesn't successfully complete, the app won't allow the AI de-noise function. Interestingly, I discovered the next day that once the SeeStar image had uploaded to my Pixel Phone, I had a new feature in the phone photo edit that allowed me to do a further AI enhancement with a single click. Here's that version on the right.

(60 second exposures in EQ mode with the NB filter, livestacked for 127 minutes)

After finishing off the EAA observations in Scorpius, I then pulled out my Abell Planetary Nebula observing book to re-observe a number of Abell's using my newer ZWO color camera, replacing the old StellaCam-III analog B&W observations. Abell Planetary Nebula are old and faint, but these ethereal soap-bubbles are always fun to observe. Here's Abell39 in Hercules, Abell43 in Ophiuchus:

(for both: 8" SCT @ f6.3 on an Atlas Gem, ZWO ASI294MC Pro camera with L-Pro filter, 180 second subs, dark & flats, PHD guided, livestacked using Sharpcap for 30 minutes).

Around 1am, light haze and thin clouds began moving in, spoiling the transparency all along the horizon, except to the NE and straight overhead. I quickly slewed the telescope to the NE for Abell2 in Cassiopeia and Abell4 in Perseus. Here's the observation:


With the field becoming a little foggy and the heavy dew, I called it a night at 3am.

Here's an AllSky time-lapse from Friday evening:
https://youtu.be/--FWz6GO7-o
A beautiful night of Milky-Way! Lots of ground 'red-light' activity from the crowd.

Saturday 08/23/2025:
Up early, around 8:30am, from all the car door noise from people packing up.
By the time I was dressed and made it outdoors to uncover the scope to let it dry, half the observing field had already left. Mike P from Niagara, along with my next door neighbors Carl and Mike were all busy packing, and my other neighbor Dana had already left. Other familiar faces on the field, including Frank, Andrew, and Roxanne were also packing up or had already left.

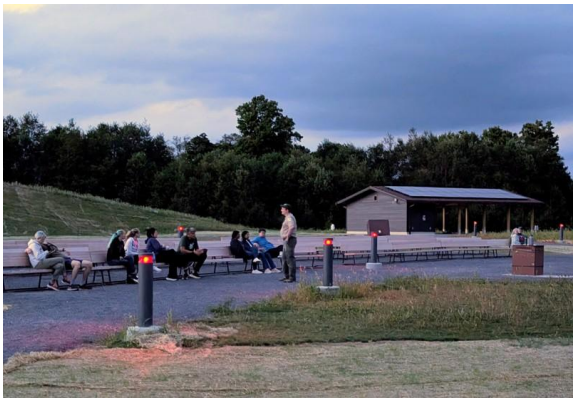
After breakfast and consulting the weather apps, I decided to pack away my 8" telescope and AllSky camera, but stay one last night on the field. If we should get a clear sky, I'll use the little SeeStar and put to use my visual 80mm refractor.

Was feeling tired, so I got in a short nap around 4pm. The wind had picked-up whipping the camper shade visor up and down, occasionally waking me from my snooze.

With a few late-day tent campers having arrived and setup, there were probably still about 20 amateur astronomers on the field. Eric stopped by to visit. We kicked around various ideas for how a club could perhaps put on a different type of starparty over at the new event center. The old airport definitely has plenty of space!

After phoning home and dinner, I zoomed into the ORAS club's public night for an interesting talk on the new Vera Rubin Observatory. Looking forward to seeing the great deepsky photos that will come from it.

At dusk, I verified that the observing field gate had been closed, and while down that way, decided to cut around the old wood fence and walked across Rt44 to checkout public night. While not nearly as large as a crowd the night before, there were a fair number of folks in the planetarium outdoor seating, on the hillside above, or out on the airfield.



I didn't stick around for long, as I needed to see how to cut back thru the woods.

Back at camp, I stowed a few more items in the car, and as dark clouds were beginning to move in from the west, I headed indoors to read for awhile.
Around 10pm, I checked outside and ,,,,,,,,,,,,,,,,,

Spent the rest of the evening reading and watching TV. Early to bed.

Sunday 08/24/2025:
Up around 8am. After consulting the weather gods, I decided to drive westwards to the ORAS Observatory and join several club members camping on the field there. After a quick breakfast and packing away the indoor items, I had the camper hitched and was on the road westward to the ORAS Observatory.

Thus ends my last trip to Cherry Springs for the year. Seven nights in total, but was only able to do EAA observing on three. My streak of bad luck for clear sky continues,,,,

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