Black Forest Star Party. September, 2023

With the September Labor Day festivities over and the fall equinox approaching, it was time to begin packing for the 2023 Black Forest Star Party at Cherry Springs State Park! The outdoor temps had been oppressively hot the week before, but storms moving in on Friday 8th promised to bring cooler weather, though I might have to spend a night or two inside the camper from being rained on.

I decided to delay the trip until Sunday to avoid most of the heavier wet stuff. Finished purchasing the remaining needed food supplies and loaded up the camper & car on Saturday in-between rain showers. Spent a restless evening chomping at the bit to be on the road to Cherry Springs.

Sunday 09/10/2023:

Headed out at 9:30am under a foggy morning. The sky was overcast and for most of the drive, and it looked like it could rain any minute. Fortunately, other than a couple of sprinkles near the park, the drive was dry. Once in the mountain valleys along RT555, there hints of the approaching Fall season, from the goldenrod in the meadows along the river banks to an occasional splash of yellow and red seen in the forest canopy.

Arrived at the park around 2:30pm. Dean S from ORAS had arrived about an hour prior and was mostly setup in our section. There were probably about 20 amateurs already on the observing field including Paul, Mark, and Brad in their usual spot, along with others to the SW of the field including astrophotographer Adam T with his scopes & Tab camper.

After registering camping with the Iron Ranger, I pulled in next to Dean and began setting up camp, expecting it to rain any minute. Mark walked over to say hello. About an hour later Gary S (ORAS) arrived and setup to the north of Dean. The rain continued to hold off and both Gary and I completed getting our camp arranged, and all three of us assembled our telescopes.

I had my usual EAA kit: 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.

A little later that afternoon, Adam, and then Paul, stopped over to say hello.
Dean then cooked dinner for the three of our group, and we sat around for the early evening checking the weather. For awhile it looked like we might get to Polar align at dusk, but storms moved in from both the west and south and soon the sky was clouded over with occasional flashes of lightning. To top it off, thick waves of fog would also roll over the field obscuring the tree lines to our north and east.

Finally around a quarter after 10pm, it began to sprinkle so the three of us called it a night and headed indoors. At 10:30 pm, under an occasional flash of light and thunder, a heavy downpour began that lasted till nearly 11pm. After it ended, I stepped outside to check on my easy-up canopies. All was well; they came thru the storm fine. (According to Mark's rain gauge, we got a half inch of rain during the evening storm).

Read for a bit and listened to the rain tapping on the camper roof.
Headed to bed at midnight.

Monday 09/11/2023:

Woke to a partly sunny, foggy, wet field. The temps were a little cool, in the low 60's. Made breakfast and spent the morning lounging around camp, socializing with Dean and Gary. Late morning I went for a stroll and visited with Paul, Brad, and Mark, then walked down to the western field and said hello to Jim D. Then sat around camp and read or chatted with Dean and Gary.

Throughout the day, additional amateur astronomers pulled into the park, even though the sky had mostly clouded over. Probably about 40 folks on the field by late afternoon. Around 5:30pm, Denny H (Kiski & ORAS) arrived and setup across from Dean. Denny was nice enough to bring clearing skies with him.

We then sat for a group Barbeque dinner provided by Gary, and was entertained by watching Denny trying to setup his equipment while we asked him silly distracting questions. LOL!

With the prospects of observing looking up, I started the AllSky camera and began accumulating frames.

At dusk, I assembled the Velcro blackout tent that covers the back of my camper's teardrop clamshell hatch, sealing the light from the laptop monitors inside.
A late arriving bank of clouds then delayed our getting polar aligned for the next hour. Finally, around 9pm, the clouds began to break and eventually Polaris popped out from the clouds and we scrambled to align the mounts. After a few false starts from drifting clouds covering the northern sky, I had the mount aligned. Dean was already imaging the 'Iris Nebula' with his WO Redcat071, "Miss Ruby" as he calls it, but Gary was having software communication issues between his scope and laptop, and Denny was struggling with new camera equipment issues, though he finally got everything working and began hunting SH2 nebula in Cygnus.

With the southern sky overcast, I skipped down thru my observing list and pointed the scope to the NE and into Cassiopeia.

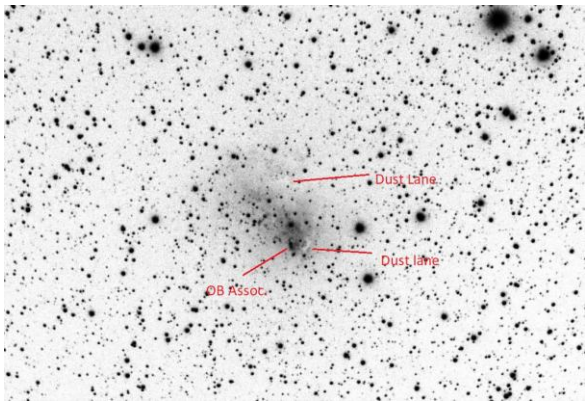
The first targets of the night were the 'Heart' and 'Soul' Nebula. (IC1805 & IC1848). While these two HII emission objects are considered to be "widefield", I used all three optical systems for the EAA observation. While the Canon lens was a bit too wide and the 8" SCT a bit too zoomed in, the EVO50mm was 'just right'!
Here's the group observation of each:




(8" SCT @ f6.3 ASI294MC Pro camera & L-eNhance filter, 60 sec subs livestacked using Sharpcap for 25 min), (EVO50mm @ f4.2 ASI294MC camera & L-Pro filter, 3 min subs, for 15 min), (Canon zoom set to 25mm, ASI290MC camera no filter, 60 sec subs, for 15 min).

Could have used more time on object, but scattered clouds and guiding issues interrupted and cut several of the observations short. As the night progressed, the dew became heavy on the scopes, and there was occasional light fog rolling over the field.

Having my fill of heart & soul, I moved on to Local Group galaxy IC10, also in Cassiopeia. Wanted a deeper dive into the heavily obscured dwarf irregular galaxy. I was able to identify several dust lanes and a large OB Association in the galaxy.

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

Had to take some time to work thru a few Sharpcap software issues with the latest 4.1 version, I finally reverted back to the 4.0 version that I still had. Afterwards I realized that it wasn't the software, but the 'user' not fully understanding the new features and their settings, LOL.

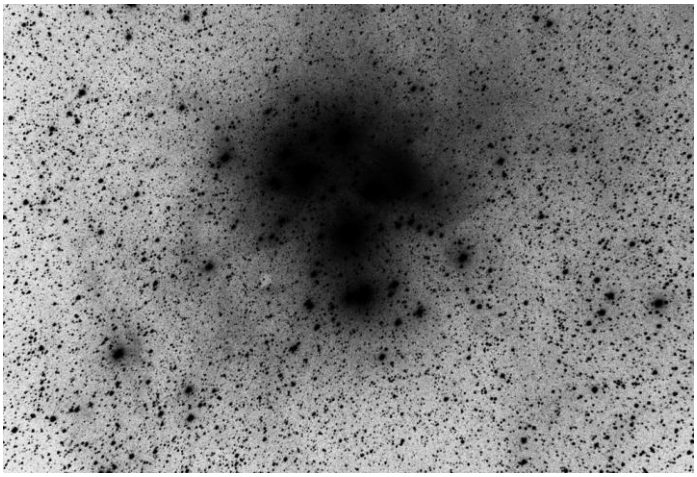
With the time now well past midnight, I slewed the scope over the southern sky, which had finally cleared to EAA observe the 'Silver Coin Galaxy', NGC253 in Sculptor. I once again utilized all three cameras, and enjoyed the EVO50mm pulling in globular cluster NGC288 in the same FOV as the galaxy. Here's the group observation:

(8" SCT @ f6.3 ASI294MC Pro camera & L-Pro filter, 3 minute subs livestacked using Sharpcap for 6 min), (EVO50mm @ f4.2 ASI294MC camera & L-Pro filter, 3 min subs, for 15 min), (Canon zoom set to 25mm, ASI290MC camera no filter, 15 sec subs, for 20 minutes).

I then attempted to replicate my observation from last fall of the Cepheid variable star V1 in the 'Andromeda Galaxy', M31, but sky transparency conditions didn't allow me to go deep enough to pull in V1 with the 8" SCT. But, I got in a pretty picture observation:

(8" SCT @ f6.3 ASI294MC Pro camera & L-Pro filter, 5 minute subs livestacked using Sharpcap for 10 min), (EVO50mm @ f4.2 ASI294MC camera & L-Pro filter, 3 min subs, for 12 min), (Canon zoom set to 25mm, ASI290MC camera no filter, 15 sec subs, for 12 minutes).

After saving the M31 observations, I decided to check the main scope focus with the bhatinov mask. I discovered that the 8" SCT's secondary was beginning to show a slight sheen of dew! Arghh!!! The ground and equipment was soaked (even the AllSky camera heater couldn't keep up), and I didn't trust getting my AC hairdryer out to clear the optics, so I decided to make one last observation for the night of the now well-placed 'Pleiades', M45 using the still un-dewed EVO50mm refractor.
In addition to the reflection nebula within the Pleiades, it is also surrounded by a bubble of IFN (Integrated Flux Nebula). Most imaged don't show this as its processed out, but after saving the pretty picture image of M45, using Sharpcap, I really pushed the histogram sliders and flipped the image to negative to pull out the very faint galactic cirrus that sounds the star cluster. Here are both observations:



(EVO50mm @ f4.2 ZWO ASI294MC camera with L-Pro filter, 15 second subs, dark & flat calibration frames pre-applied, PHD guided, livestacked using Sharpcap for 30 minutes).

With that observation, I called it at night at 3:30am and powered off and covered up the telescope, and threw the unvelcro'd sections of the blackout tent into the car and headed to bed.

Tuesday 09/12/2023:

Slept in late. The sunny mid-morning skies soon gave way to partly cloudy, with the temps warming into the upper 60s to low 70s. After a late breakfast, I uncovered the scope to let it dry out from last night's heavy dew. Then sat around camp visiting with Denny, Dean, and Gary, discussing our observations and troubles from last evening.

After a group lunch of leftovers from yesterday's dinner, I went for a hike along the park trail. It was good to see that the park had replaced the old rotted wooden bridge along the path thru the forest. I then walked over across the highway to the outdoor planetarium and along the old airfield.

Back at camp I freshened up and read a little. Jim D dropped over to say hello.
Then Denny got out his grill and we had a group dinner of burgers and cheese-dogs, with cookies for dessert. A few more amateurs had pulled-in during the day; bring our number up to around 50 people.

The clouds continued to build and around a quarter to 6pm, it finally began to rain.
It soon turned into another long deluge, soaking the observing field and roads.
Finally, after an hour the rain ended and we came out of our campers and visited over at Dean's. Headed back indoors at 10pm to read and then early to bed.

Wednesday 09/13/2023:

Slept in late again, woke to a cool, dreary, damp morning. But soon the sun began to break thru the clouds and the observing field began to dry. Talked with Mark later that day and he said we got about a 1/3 inch of rain last night.
Other than a quick run out to the fridge in the back of the camper clamshell, I spent the morning inside reading, waiting for the temps to warm into the 60's.

After a late breakfast and visiting with the gang, I headed down to Lyman Run Park to the showers. I then drove into Galeton to get gas and stopped at the hardware store looking for glow tape. Once back at camp I got out my solar binocs and took at peek at a few sunspots. With the clearing skies and great looking forecast, more amateur astronomers streamed into the park all afternoon, and by dusk there must have been close to 250+ folks there, both newbie's and returning old-timers.

Tony D stopped over after lunch to visit with us. It was good to see him!
Mid-afternoon, I decided to redo all my flats for both the EVO50MM and the 8"SCT.
We then had a group dinner of beef stroganoff prepared by Denny.

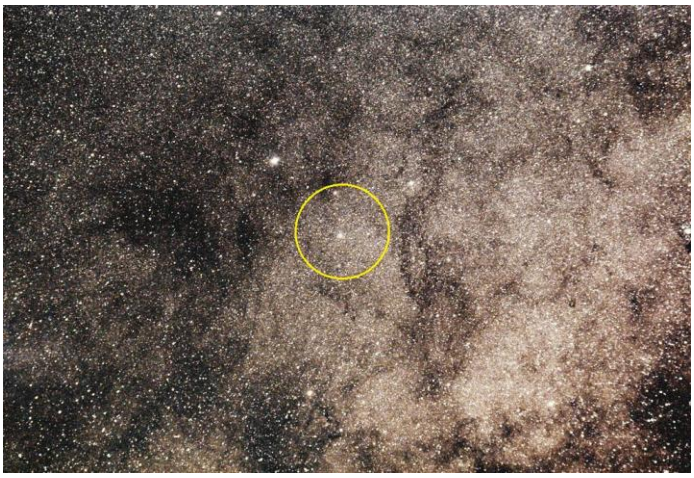
At sunset, I went for a walk, visited with Paul, Brad, and Mark, then headed over to the western side of the field to see Doug, Jim, Tony, and Roxanne. Also ran into Mark M from the Rochester club.



After lending a hand to Doug with a battery issue on his Dob, I headed back to camp at dusk to change into heavier cloths. At sunset the temp began to drop, heading towards a low in the mid-40's. The beautiful clear sky was marred by bands of clouds from the west.


After powering up the scope and syncing the mount on Altair and tweaking the focus, I slewed over to Sagittarius to EAS observe Baade's Window, located around globular cluster NGC6522. (Baade's Window is a gap in the foreground dust that allows us to see further inwards towards the galactic center of the Milky Way). Unfortunately, the incoming clouds along the southwest made for a difficult observation.

But here's the observation of the Baades Window region using all three scopes/cameras: (8" SCT @ f6.3 ASI294MC Pro camera & L-Pro filter, 30 sec subs livestacked using Sharpcap for 5 min), (EVO50mm @ f4.2 ASI294MC camera & L-Pro filter, 30 sec subs, for 5 min), (Canon zoom set to 25mm, ASI290MC camera no filter, 15 sec subs, for 8 min).



Dean was continuing to add data to his 'Iris' shot from Monday night and Denny was chasing SH2 nebula, while Gary was finally getting his guide-camera to work.

Trying to escape the clouds, I pointed the telescope overhead to the star 'Sadr' in Cygnus to observe the bright HII nebula that surrounds the central star of the 'Northern Cross'. But after a few short minutes, clouds once again interfered, cutting the EAA observation short. Here's my brief view using the EVO50mm refractor & Canon 25mm lens:

(EVO50mm @ f4.2 ASI294MC camera & L-Pro filter, 3 min subs, for 15 min), (Canon zoom set to 25mm, ASI290MC camera no filter, 15 sec subs, for 18 min).

I then moved further eastwards into Delphinus for a quick try at bright planetary nebula NGC6891, but the clouds were too quick in following me to get a useful observation. During the encroaching cloud incursion, Gary dropped by for a visit, and then I walked around for a bit commiserating with Denny and Dean. From the satellite view, it looked like the clouds might finally clear sometime after midnight.

And like clockwork, (predicted by Dean), the skies cleared and we were back in business!

Gary, after initiating his imaging software sequencer, headed indoors to bed at 1am. The rest of us continued with our observations. It was a cold evening, with temps down into the upper 40's. The dew was light early on, but became heavy after 2am, giving my AllSky camera issues. Seems like the dew heater on the SW side of the dome isn't working.

Wanting to recreate my observation of V1 from last year, I slewed the telescope overhead to Andromeda and her galaxy, M31. This time, the sky gods were with me, and I was able to successfully re-observe the famous Cepheid variable star that Edwin Hubble used to prove that the Andromeda Nebula was extragalactic. Here's the EAA observations using the 8" SCT and a pretty shot from the EVO50mm refractor:

(8" SCT @ f6.3 ASI294MC Pro camera & L-Pro filter, a single 5 minute sub livestacked using Sharpcap), (EVO50mm @ f4.2 ASI294MC camera & L-Pro filter, a single 3 minute sub),

Being in the mood for recreating more of Mr. Hubble's observations, I moved the scope down a little in altitude to Triangulum and M33. Here's a nice observation of the 'Triangulum Galaxy' using all 3 cameras/scopes:

(8" SCT @ f6.3 ASI294MC Pro camera & L-Pro filter, single 5 minute sub livestacked using Sharpcap), (EVO50mm @ f4.2 ASI294MC camera & L-Pro filter, 3 min subs, for 15 min), (Canon zoom set to 25mm, ASI290MC camera no filter, 15 sec subs, for 5 min).

I then slewed to the SE sky for the interacting pair of spiral galaxies known as NGC520 in Pisces. By tweaking the livestack adjustments in Sharpcap, I could just make out the 'extensions' to coming off of either side of the pair.

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

Would have liked to gone for a longer stack on both M33 and NGC520, but the PHD guider began acting-up, throwing error messages saying there was a cable snag, though I couldn't find where on the scope it was binding. As it was nearly 4am, I decided that I had had enough, powered down the telescope & cameras, covered up, and headed to bed. With all the folks now camping on the observing field, to save time, I left the blackout tent up and clamshell open, not worried about any 4-legged creatures.

Thursday 09/14/2023:

Slept in late till 10am. Woke to a sunny sky with a light breeze. The temps were in the low 50's and not expected to rise past 65 later on the afternoon. It was going to be a brisk day to be outside.

After a later breakfast, I stayed around camp and watched a surge of folks arrive at the park. All the empty space in our section was soon filled. By late afternoon, it looked like the majority of attendees had come a day early, probably due to the great weather forecast for the next several days.



After cleaning up, Denny and I drove down to the Old 'Ben Franklin' hardware store in Sweden Valley to look for glow in the dark tape. On the way back, we stopped in at the Cherry Springs store for ice cream. I then headed indoors for a much needed nap.
It turned into a beautiful afternoon with a deep blue sky.

Not waiting for the official swap meet, Dean put his little 6” RC out on a table beside his camper and within a couple of hours had it sold.
At 6pm, Denny grilled up a batch of cheeseburgers that I supplied for our group dinner. Afterwards, I introduced myself to the new neighbors, George, Jerry, and Steve, who were all visual observers. Also, long time attendees Chris & Mic had setup near their usual spot on the observing field.



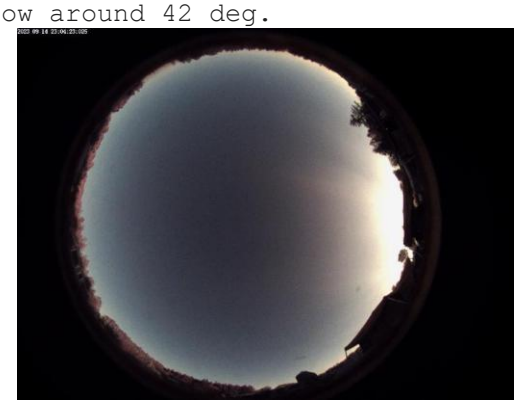
Took a stroll towards sunset, (Dean headed over to the goldenrod fields to photograph birds and insects with his DSLR). The observing field was near capacity. Visited with Paul, Brad, and Mark. Then ran into John & Jelly O (ORAS) walking along the road.

Everyone was out setting up their equipment. It was fun to see all the various kits.



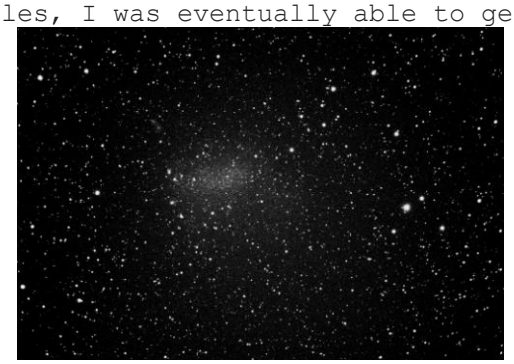



It was a beautiful clear evening, with some interesting shadow rays at sunset. Soon the Milky-Way was brightly shining in the darkening sky. Dew didn't become an issue until well after midnight. At dusk, the outdoor temps plunged into the upper-40's, with the low around 42 deg.




Both Dean & Denny continued to work SH2 nebula overhead, (not sure what Gary was imaging), with Dean spending time on SH2-171 “Teddy Bear Nebula” (part of dark nebula NGC7822) in Cepheus. Dean had a very productive evening, imaging the ‘Wizard Nebula’ – NGC7380, also in Cepheus, and the ‘Witches Broom’ – NGC6960 Western Veil in Cygnus. He also got a nice M45 shot in Taurus.

My first target object of the night was “Barnard’s Galaxy”, NGC6822 in Sagittarius that was approaching the meridian. I wanted to do a deep drive and hunt for the various HII regions visible within the galaxy, but unexpected tracking issues kept popping up during the observation forcing me to restart the livestack multiple times. After re-arranging the camera data/power cables, I was eventually able to get in a brief observation:



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

I then decided to flip the meridian to see if that improved the tracking and hunted one of my favorite Barnard dark nebula – B86 in Sagittarius. The triangular shaped dark cloud is located next to a small splashy open star cluster NGC6520, with both being embedded within a bright starcloud. Very pretty! Here's the EAA observation using all three scopes and cameras.

(8" SCT @ f6.3 ASI294MC Pro camera & L-Pro filter, 3 minute subs livestacked using Sharpcap for 6 min), (EVO50mm @ f4.2 ASI294MC camera & L-Pro filter, 30 sec subs, for 8 min), (Canon zoom set to 25mm, ASI290MC camera no filter, 15 sec subs, for 9 min).

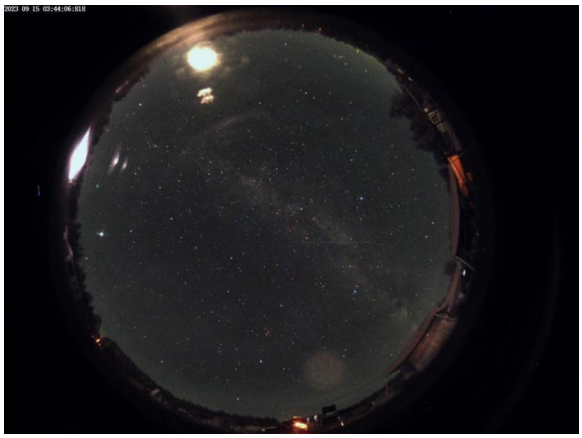
Continuing with the Dark Nebula, I slewed the scope over towards Altair in Aquila for the pair of Barnard nebula, B142 & B143 that form "Barnard's 'E'".
Being much larger in size, I only used the EVO50mm and Canon lens to observe them.
Here's the EAA observation:

(EVO50mm @ f4.2 ASI294MC camera & L-Pro filter, 30 second subs, for3 0 min), (Canon zoom set to 25mm, ASI290MC camera no filter, 15 sec subs, for 30 min).

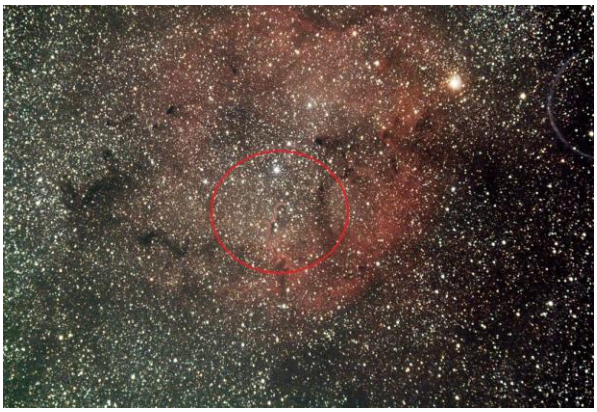
I then went for an EAA challenge object from CloudyNights, the bow shock from the Cygnus X-1 black hole. Supposedly, it is visible as an extended blue arc above the optical star companion of X-1 in long exposures. So I slewed the scope up overhead to Cygnus and the "Tulip Nebula", SH2-101, where the optical star is located nearby. Using a finder chart, I framed the observation to get both SH2-101 and X-1 in the same FOV. After initiating PHD guiding and setting Sharpcap to livestack 5 minute subs for an hour, I took a stroll over to visit with Dean, Gary, and Denny for a KitKat break. Upon returning to my camp close to the end exposure time, I discovered a cable had snagged ruining the livestack. So after resetting the stack, I let it accumulate a few frames and called it a day on that object. I later learned that the bow shock arc is much larger and further away from the optical star than I thought and it was mostly out of the FOV. ☹
Anyways, here's the observation of the 'Tulip Nebula' and Cygnus X-1 star:

(8" SCT @ f6.3 ASI294MC Pro camera & L-Pro filter, 5 minute subs livestacked using Sharpcap for 15 min). I'll try this observation again in October.

Around 11:45pm, someone over in the public parking area got the 'bright idea' to set off fireworks. They had a couple of nice boomers that really lit-up the observing field! There might have been two separate fireworks 'launches' that night. The first one from early in the evening looked to come from the direction of the primitive campsite area. I could barely see the top of those bursts. But from my viewing perspective from half-way down on Orion Ave, the later 'boomer's looked to come from the parking lot.
Here's a subframe from the AllSky camera, (and a flipped and cropped version) showing the first airburst in relation to that tall wood pole that the internet antenna is mounted on, which is why I think it was from the public parking lot.



Another object that I wanted to do a deep-dive on was IC1396 – "Elephant Nebula" a complex region of a mixture of light & dark nebula and stars. So after setting the scope and camera, around 12:30am I walked over to the western field to visit with Tony & friends for about a half hour. Here's the EAA observation waiting for me when I got back:


(8" SCT @ f6.3 ASI294MC Pro camera & L-Pro filter, 5 minute subs livestacked using Sharpcap for 10 min), (EVO50mm @ f4.2 ASI294MC camera & L-Pro filter, 3 min subs, for 60 min), (Canon zoom set to 25mm, ASI290MC camera no filter, 15 sec subs, for 14 min).

Again, something had gone wrong with the guiding, ruining the 8" SCT's long exposure. Guess it's just not a good night to walk around, need to watch the equipment.
But I did get a nice view of B160 & B161 using the EVO50mm refractor!

Moving down my observing list, next in line for me was NGC7023, the "Iris Nebula". I wanted to try and bring in the IFN that extends to the south of the main reflection/dust nebula, but I don't think I was successful. Here's the observation:


(8" SCT @ f6.3 ASI294MC Pro camera & L-Pro filter, 5 min subs livestacked using Sharpcap for 60 min), (EVO50mm @ f4.2 ASI294MC camera & L-Pro filter, 3 min subs, for 60 min)

By now, the time was well past 2am, with both Gary and Dean having called it a night. (Gary was pulling out early Friday morning and couldn't make it a late evening).
I was also running out of gas, so I decided to make one more observation of the night. I chose the shallow-sky object Comet 2P Encke, slowly moving and brightening in the constellation of Gemini. After looking up the comet's coordinates on "TheSkyLive", I slewed the telescope to the comet. Using the 8" SCT, it was a nice little fan-shaped object, blue-green in color. Here's the observation:

(8" SCT @ f6.3 on an Atlas Gem, ZWO ASI294MC Pro camera with L-Pro filter, 60 sec subs, dark & flat calibration frames, PHD guided, livestacked using Sharpcap for 6 minutes).

With that, I parked and powered down, and called it at night at 3:30am.
Thursday night had been a very, very, good night of observing!

Here's my AllSky time-lapse video from Thursday evening:
https://youtu.be/njO6j0vTWow?si=1yYTj0sH2EM6vYGJ

Friday 09/15/2023:
The sound of people and cars moving about woke me at 9:30am.
It was a sunny and cool morning with a light breeze. Jacket weather. But the forecast was for another fine day and evening. Gary has already packed and left for home by the time I made it outdoors. After a late breakfast, I performed a few camp related maintenance tasks, recharged the AllSky camera battery and refilled the camper freshwater tank.

Around noon, Pat & Ryan from the ORAS club arrived and took Gary's old spot. Also Alexi setup across the road from us. More folks continued to arrive and fill the park, including another longtimer, Brian from over in eastern PA.

Denny and I drove down to Lyman Run. Upon returning, we at the registration tent to sign-in and bought door prize tickets. Lots of good ZWO prizes to win.
With the late nights catching up to me, I headed indoors for an afternoon nap.
After about an hour, I rousted from bed to go join the host club, Central Pennsylvania Observers (CPO), at a BFSP staff dinner that they were kind to invite me too.

To walk-off the meal, I strolled around the field and visited again with the ASH club folks and Mark M & friends from the Rochester club.

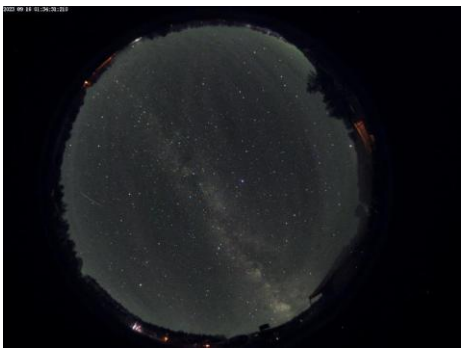
The field was now full, hadn’t see that many attendees at BFSP in a few years! Taking the fireworks issue from last evening in perspective, when you're at a 500+ starparty you got to be prepared to expect light violations and not let it get under your skin. People sometimes are gonna do crazy things like shooting fireworks, or driving off the field and crashing the gate, or build a campfire on the observing field, or lighting tiki torches, or my favorite from the 2016 BFSP was when someone on the old airfield launched a series of paper lantern candle balloons that flew over the observing field. That had everybody freaked-out that they were going to come down and set someone's tent on fire, or start a forest fire over where the Herons roost!

Still, even with the minor fireworks disturbance and some occasional poor lighting etiquette from both imagers and visual folks, it has been a great time at this year’s BFSP. I personally enjoyed the large crowd (it wasn't so bad that people had to camp next to the porta-john's, which I've seen happen in years past), and I was happy to see the diversity at the event. I thought it was great that there were all the scout & youth groups’ tent camping all around the swap tent.

Once back at camp, I uncovered the telescope and prepped my observing notes.
I then headed indoors at dusk to dress in warmer clothes as the temps were diving into the low 40’s once again.

It was another great evening at Cherry Springs with the Milky-Way appearing out of the falling darkness.





Once fully dark, I began the evening galaxy hunting up in the northern sky for the 'Draco Trio', galaxies NGC5981, 5982, & 5983, two spiral galaxies, one nearly face-on with the other edge-on, and a elliptical in the middle. Here's the EAA observation:

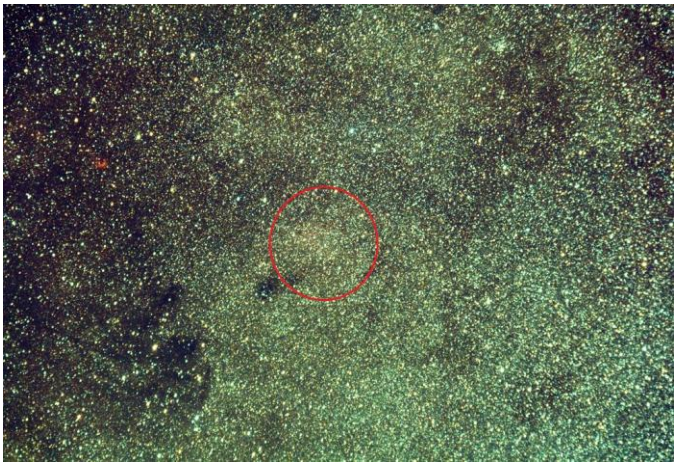
(8" SCT @ f6.3 on an Atlas Gem, ZWO ASI294MC Pro camera with L-Pro filter, 5 minute subs, dark & flat calibration frames, PHD guided, livestacked using Sharpcap for 1 hour).

Switching gears, I decided to spend the evening working on my Sharpless Nebula project, which I'd let lapse for most of the summer. First target was SH2-86 in Vulpecula, also known as NGC6820 & 6823, a mix of bright & dark nebulosity and star cluster.


(8" SCT @ f6.3 ASI294MC Pro camera & L-Pro filter, 5 min subs livestacked using Sharpcap for 15 min), (EVO50mm @ f4.2 ASI294MC camera & L-Pro filter, 3 min subs, for 30 min)

I then moved over to SH2-87 and later SH2-92, both still in Vulpecula. Both were in rich Milky-Way fields.



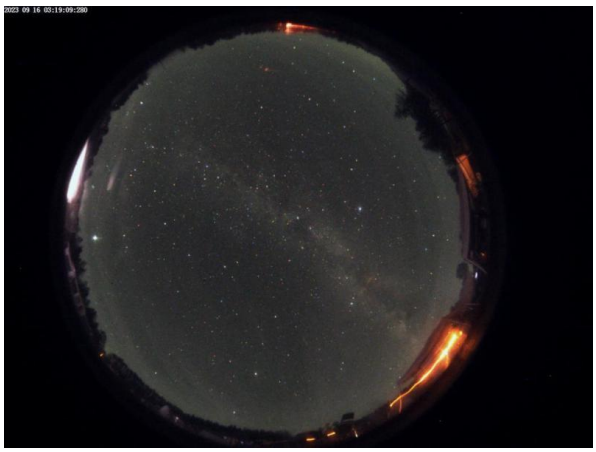



(8" SCT @ f6.3 on an Atlas Gem, ZWO ASI294MC Pro camera with L-Pro filter, 3 minute subs, dark & flat calibration frames, PHD guided, livestacked using Sharpcap for 15 minutes), (EVO50mm @ f4.2 ASI294MC camera & L-Pro filter, 3 min subs, for 15 minutes)

Both Dean and Denny were also hunting SH2's, Dean getting a nice image of the "Ghost of Cassiopeia", a 'spooky' nebula near Gamma Cas.

I then slewed over to Lyra for SH2-85, which is very faint and mostly not there. Didn't bother using the widefields as even the 8" only showed a hint.

Funny how time flies when you're having fun. By the time I finished trying to dig out SH2-85, it was already approaching 2am! As I was slated to give a presentation Saturday afternoon, I reluctantly called it a night.

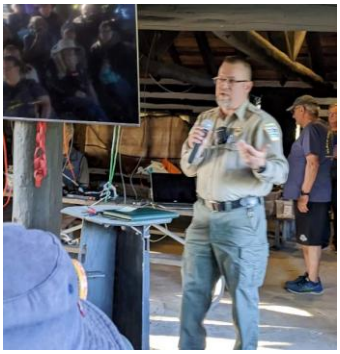



Saturday 09/16/2023:

Woke at 9am to a sunny sky. The air temp quickly warmed up to light jacket or sweatshirt weather. After a quick breakfast, Dean, Pat, Ryan and I walked over to the swap tent where Denny had a table setup selling a few items. The "pickings" were sparse so I'll be bringing cash back home this year. (Denny did make a sale, his old WO71 refractor).

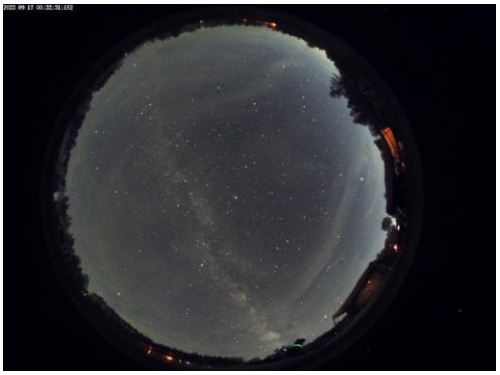
Pat & Ryan needed to head back home for a sporting event early Sunday, so they packed up but stayed until late afternoon. But a number of other folks, spooked by an unfavorable weather forecast left for home. But additional new folks filled in the open spots.

After lunch, Denny and I headed over to the pavilion at 1pm to take in the talk on imaging the solar eclipse by Nico Carver. Good info to know!
I then gave my presentation on "Edwin Hubble- The Surveyor of the Universe" to a good size crowd. The talk was well received with good questions afterwards. I then joined Denny for the keynote presentation on the Web telescope by Dr. Stefanie Milam, "Revealing the Infrared Universe with JWST". It was a great presentation!
The new Av system that the CPO folks installed for the event, (3 large TV monitor screens and sound-system) worked great, and was a hit. Now you could sit anywhere inside the pavilion and still get a good view of the slide presentations.
Denny and I then stayed for the dark sky fund and parks report, followed by the raffle prize drawing. (Denny won a gift certificate!).



We then headed back to camp, where we said goodbye to Pat and Ryan, then cleaned out the fridges for one last group meal.

At dusk, everyone uncovered they telescopes and prepared for the night. Lots of attendees were walking around, stopping in to ask questions about our gear. A few hazy waves appeared and stayed around for the early evening, but we just worked around those.



While trying to decide what my first target of the night would be, a cry rose up from all around the observing field. Cherry Springs was being photo-bombed by a bright SpaceX Starlink satellite train! It was coming out of the NW just below Arcturus, passed straight overhead near Deneb in Cygnus, and disappeared into the Earth's shadow.



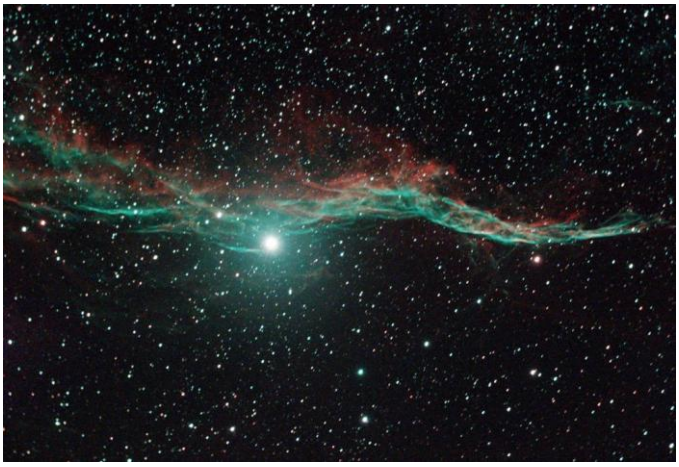
That was the first one that many of the folks there had ever seen and made quite an impression. Here's a quick video that I assembled from the AllSky:
https://youtu.be/9Fr7cVlgE0M

After the excitement of Starlink, once it was dark enough, I hurriedly pointed the scope over to the Sagittarius "Teapot" for the "Triffid Nebula", M20. I wanted to catch the object with the EVO50mm before it sat behind my neighbor's tent. The small widefield refractor did a really nice job on it, even getting M8 in the FOV.


(8" SCT @ f6.3 ASI294MC Pro camera & L-eNhance filter, 3 minute subs livestacked using Sharpcap for 6 min), (EVO50mm @ f4.2 ASI294MC camera & L-Pro filter, 3 min subs, for 48 min), (Canon zoom set to 25mm, ASI290MC camera no filter, 15 sec subs, for 18 min).

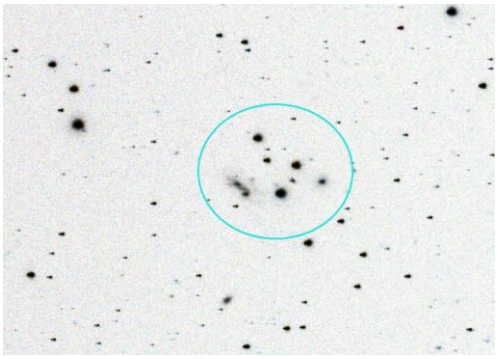
While M20 was livestacking, I got out my Minolta 12x50 wide-angle binoculars and pulled a chair over by Denny to scan the Sagittarius Summer Milky-Way slowly setting in the SW. All the bright Messier objects popped-out. M8, M22, M16 & M17, then up to Aquila/Scutum for M11, then over to the NE for M33 and M31, finally settling on the Double-Cluster. It was a bit of optical fun.

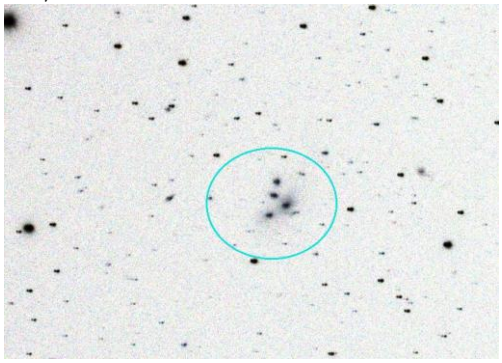
Putting the binocs away and finishing the observation of M20, sticking with the L-eNhance narrowband filter, I then slewed the scope overhead to NGC6960 – "Witches Broom" of the Western Veil Nebula.



(8" SCT @ f6.3 ASI294MC Pro camera & L-Pro filter, 3 min subs livestacked using Sharpcap for 15 min), (EVO50mm @ f4.2 ASI294MC camera & L-Pro filter, 3 min subs, for 45 min)

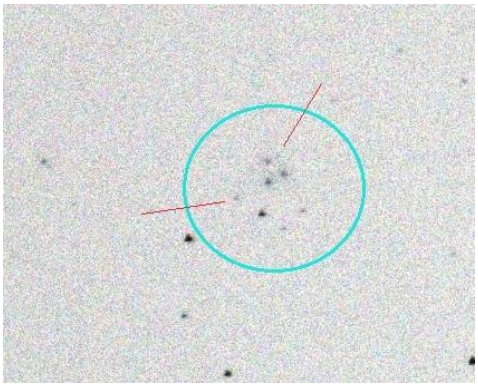
With it being the last night of the starparty, (and the weather forecast for Sunday & Monday being rainy), I wanted to make progress on my Hickson Compact Galaxy cluster project, so I switched back to the L-Pro broadband filter and began galaxy hunting in Andromeda. (Dean was also imaging galaxies, doing M33 and later M31).
My first cluster was HGC-1, followed by HCG-8, and HCG-10. Here's HCG-1 & 8:



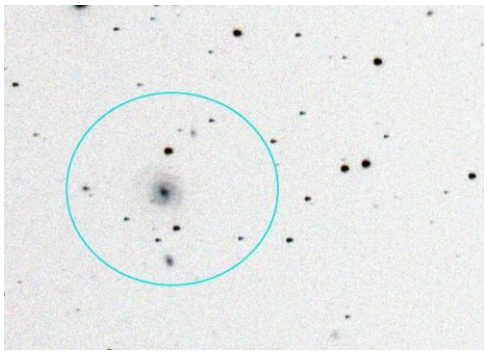


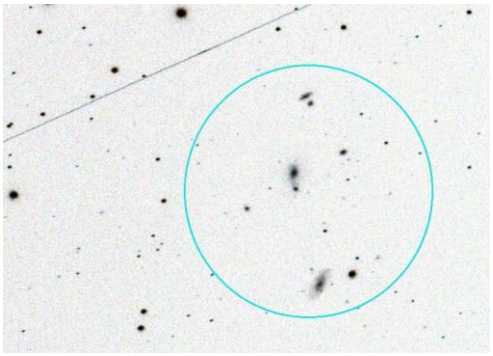
(8" SCT @ f6.3 on an Atlas Gem, ZWO ASI294MC Pro camera with L-Pro filter, 180 sec subs, dark & flat calibration frames, PHD guided, livestacked using Sharpcap for 15 minutes).

I then dropped down to Aries for HCG-17, 18, and 20: with 17 & 18 being the best.
I was particularly happy with getting all the galaxies of HCG-17 as two of the galaxy components are mag+18.8 and +19.3.



Had to take a break around 2am to get out the hair-drier, as my dew controller had shutdown from running 4 straps full-out, and the 8" corrector plate had gone misty. Once I had handled the dew, I then moved on to Cetus for HCG-11 and HCG25. Both of these galaxy clusters have larger size galaxies and extended FOV.





Being focused on my Hickson observing project, I had lost track of time. Noticing that the outdoor sounds around me had gone quiet, I realized the time was now 4am! LOL.

Stepping outside of the blackout tent, I spied Orion well placed in the southeast, and as I was beginning to feel tired, I decided to make one last observation, going for the widefield dusty "Witch Head Nebula" IC2118 near the border of Orion and Eridanus using the EVO50mm. While the camera was collecting deep photons, I pulled out my binocs and quickly toured Orion. M42 is always a great view in optics. I also noted the rising pyramid shape of the zodiacal light rising in the tree line below Gemini.
Here's the final EAA observation of the night:

(EVO50mm @ f4.2 ZWO ASI294MC camera with L-Pro filter, 180 second subs, dark & flat calibration frames pre-applied, livestacked for 1 hour).

With that, I powered down and covered the scope and headed inside at 5am to bed.
AllSky time-lapse from Saturday evening: https://youtu.be/uOpmCHwegsU?si=dPAziQtiGwBA1Nsl

Sunday 09/17/2023:
Didn't get to sleep in for long. Was woken at 8am by the noise of hundreds of people packing. Rolled over and slept for another hour, and then got out of bed for breakfast. It was a dreary, chilly day with rain on the way. Slowly packed away the telescope and camping gear while watching the exodus of amateur astronomers from the park.

Denny was the first to leave from our little group, followed soon by Dean. I hit the road home at 1:30pm, and after a slight delay on Rt555 between Driftwood and Dents Run by a small landslide onto the road, I was backing the camper into the driveway at 6:30pm. (Good entertainment for my neighbors, lol).

So far, this has been my best starparty/observing trip of the year. Between Sunday 9/10 thru Saturday evening 9/16, I had 5 nights of observing out of 7 in total, with the last three being excellent! Pretty good odds! Overall, a very good deep-sky camping trip. As always, it was a good time being with other fellow amateur astronomers at Cherry Springs. Looking forward to next year's Black Forest Star Party!

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