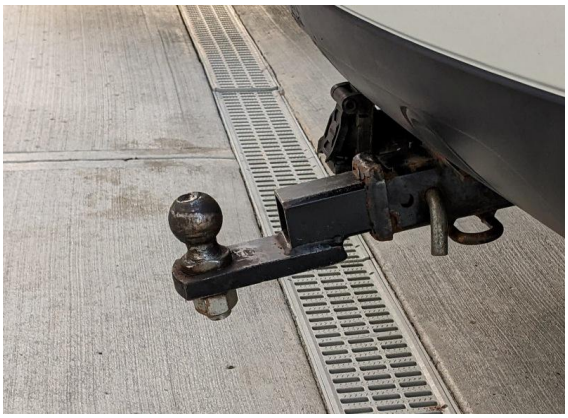
Calhoun County Park, WV. October, 2022

With the October new Moon approaching, I was really looking forward to finally being able to camp on the new stargazing field at Calhoun County Park in West Virginia.
The power pedestals were finally finished with plenty of AC outlets, and while the new restroom wasn't quite ready, the 'shelter' portion of the new building was usable.
The weather forecast was falling into place, and my plans were to head down to Calhoun on Friday, 10/21, where I would join a number of amateurs already there.

Then my tow vehicle threw a big wrench into the trip.
Having finished packing the camper and SUV that Thursday afternoon, the last thing left to do before hooking up the camper was to install the ball into the car's receiver-hitch.
After sliding in the drop-bar, I immediately noticed that it was not pointing straight horizontal out from the hitch, but pointed down at an angle. That didn't look good!



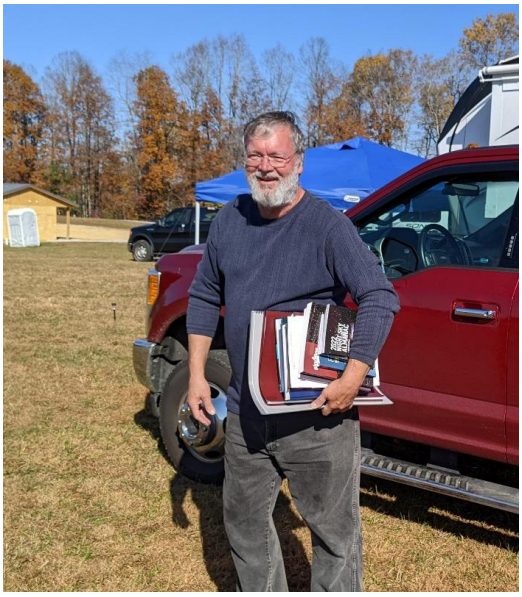
So I drove the SUV down to my local mechanic to take a quick look at the issue, and he agreed that something was wrong. (he didn't see anything obvious, and thought maybe someone had backed into the hitch and bent it, which I sometimes do leave the ball installed for a few days after a trip). So he got out a car jack and after cranking it up under the hitch, straightened it back to horizontal. Told me to try hooking up the camper and taking it for a short drive up and down the street, then check to see if the hitch was still horizontal. If it was, then I was good to go, but if not, then there's something wrong with the hitch and not to take the camper on a trip.
So back in my driveway, I did the 'test' and unfortunately, the hitch bent back down.
I tried calling the shop that originally installed the hitch to see if they could look at it, but they were getting ready to close for the day. But they did tell me to be there first thing in the morning and they would check it out.

So Friday morning, instead of heading for Calhoun, I was waiting at the hitch installer for their mechanic to arrive for work. Long story short, the underneath back end of my SUV's uniframe body had rusted, and the front bolts of the hitch had pulled thru the rusted frame. It was not safe to tow with, and the mechanic doubted that the SUV frame could be repaired. (he recommended that I go car shopping! ☹)

So with my plan to leave that Friday morning for Calhoun crashing, I headed home and began a search for a rental vehicle that could tow my camper. After an hour of frantic searching, I finally found a U-Haul store that had a mid-size pickup truck. But I wouldn't be able to pick it up until Sunday morning!! (and then I would have to figure out how to load the truck with my optical equipment that normally rode inside the SUV).

Sunday 10/23/2022:
Picked-up the U-Haul truck at 10:30am. Once back home, I quickly decided how to load the open back bed. Ended up throwing as much stuff as I could inside the camper and loaded most of the telescope equipment inside the cab in the passenger seat or behind it.
All that led to a late start for Calhoun, and not getting on the road till noon.
On the way, I also needed to stop and air-up one of the camper tires. Arghhhhh!

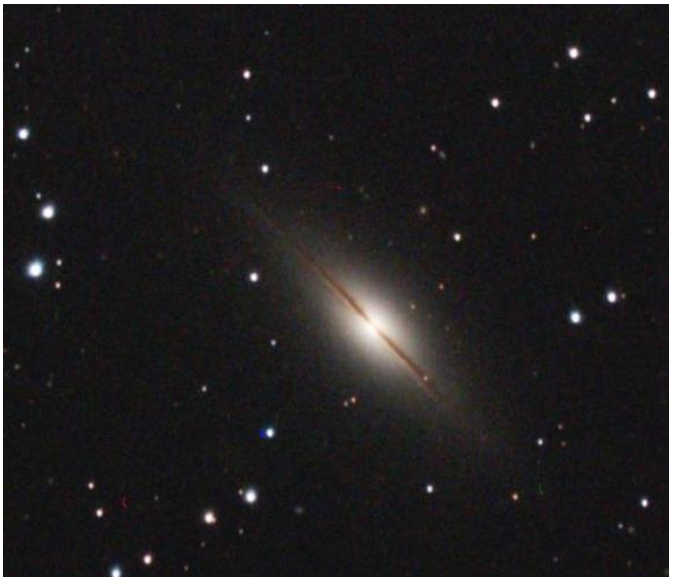
Eventually, I was on the way southbound and after getting use to driving the truck, it was a pleasant trip and was able to enjoy the generally light traffic and fall tree colors along I79 in the WV mountains. Arrived at the park a little after 4pm. Once registered at the Red Barn, I drove up to the new observing field. Already there were a number of 'Calhoun Regulars' including Ed K, Gary S, Dean M and Alexi from the ORAS/Kiski clubs, along with regional amateurs John D, Warren, Jeff (who was staying in the cabin), all from WV, and Andrew from N. OH. There were several other amateurs' setup back on the old ridge above the Red Barn, but I never got over to meet them.



After a brief 'hello' to everyone, I quickly got to work setting up camp, and then assembling my telescope. The astro-gear assembled included my usual EAA setup:
an 8" Celestron SCT optical tube @ f6.3 with a ZWO ASI294MC Pro camera and filter wheel (with Optolong L-Pro broadband & L-eNhance narrowband filters), on an Atlas EQ GEM mount, along with a piggybacked Canon CCTV 25-100mm zoom lens with ASI290MC camera, and a 60mm Antaries refractor guidescope with an ASI120MC camera.
I also setup my DIY Allsky cam, a ZWO ASI224MC & fisheye lens inside a dome on a tripod mount. Finally, I put together my "Guttercam", an old Samsung SDC435 security vidcam & widefield lens housed inside a section of drain gutter, which I use to monitor my telescope at night during meridian flips and GOTO slews.

Barely had everything ready to go by dusk including assembling the blackout hatch canopy, eating cold pizza that I had brought in the fridge while powering up the laptop and initializing the various astro-software needed.
With the fainter constellations already visible, I finally was ready to do the polar and GOTO mount alignments. (Polemaster makes polar aligning such an easy task!)
Once the align was done, I moved on to focus the cameras and readied my observing plan.
The evening sky was looking great, clear with no clouds or even a breeze, and hardly any dew. The late-fall Milky-Way glowed softly, stretching from the NE in Perseus, overhead thru Cygnus, down to the SW in Sagittarius.

So by 8:30pm, I was ready to start the night off by galaxy hunting using the L-Pro filter. There's a couple of small but interesting galaxies in Pegasus that I wanted to EAA Observe, and both were now well placed, riding high in Pegasus towards the meridian. First up was the barred spiral NGC7479. "the Propeller Galaxy". The galaxy's two spiral arms wrap around the central core in a tight 'S' integral-sign shape. It took a 3 minute exposure, but it was neat to see all the little clumps of HII star forming regions embedded in the spiral arms as the Sharpcap livestack built on the monitor screen. I then moved the telescope a little ways to the N.E. and settled on edge-on spiral galaxy NGC7814. The galaxy has a prominent dark lane bisecting the oval shaped galaxy on either side of its bright core. Very pretty!!



(8" SCT optical tube @ f6.3 on an Atlas Gem, ZWO ASI294MC camera with L-Pro broadband filter, 180 second subs, PHD guided, livestacked for 30 minutes using Sharpcap with dark & flat calibration frames pre-applied, and histogram tweaked on the fly).

During the early evening, the local coyotes were quite active, with what sounded like multiple packs to our north, east, and south, yipping back and forth to each other.

Around 11:30pm, with the constellation of Sculptor now starting to pass thru the southern meridian, I slewed the telescope over to globular cluster NGC288 for an observation. The star cluster resolved nicely, even for its low elevation. (the park having trimmed all the trees along the southern horizon really helps with low altitude objects!) I then moved nearby to the face-on spiral galaxy NGC300. After a 3 minute exposure, I was surprised by the detail that was visible. Pink HII emission nebula and blue star clusters knotted the galaxy's thick spiral arms. If this object only had a higher elevation for us northerners, it would be a popular showcase object.

(same scope info as above using the L-Pro filter, 15 second subs stacked for 15 minutes for cluster NGC288, and 180 second subs stacked for 30 minutes for galaxy NGC300).

I then took a short break and pulled-out my camping chair to sit outside of the blackout canopy, visiting with Gary who was about 20 ft away by his telescope, and admiring the Summer Milky-Way, now sliding towards the western horizon, while listening to the coyotes singing in the distance. (but at times, they sounded quite close, LOL).

The outdoor temp had fallen into the lower 50's, enough to be chilly. I hadn't really noticed being inside the blackout canopy where it retained the heat and was comfortable wearing just a sweater and no jacket. Throughout the evening, an occasional visitor

(Gary, Dean M, Warren, and Jeff) would pop-in to visit and see what I was EAA Observing. Though I think they were also interested in warming up under the blackout canopy, LOL!

The rest of the group was keeping busy working on their own observing. Both Warren and John were doing visual, both of them teaming up for an observation of NGC7009 – "The Saturn Nebula" in Aquarius using Warren's Dob. Jeff was out doing Milky-Way imaging with one of his DSLR cameras on a tripod. Once Gary had his 10" scope running, he spent the evening on emission nebula NGC6820 in Vulpecula and later worked the HII nebula SH2-261 in Orion. Ed also had his mobile observatory humming, and it was interesting to hear his dome slew to new targets during the evening and watch it on the AllSky cam.

After my break, with the time now past 1am, I got back to work, slewing the telescope over to Perseus, now high in the NE sky, to observe a few left-over objects from my BFSP observing list. These included reflection nebula IC348 and nearby dark nebula B3.

(same scope info as above using the L-Pro filter, 5 minute subs stacked for 15 minutes for IC348, and 5 minute subs stacked for 30 minutes for galaxy B3).

By now the time was heading towards 3am and Orion and his belt was rising high in the SE sky. I decided to go deep on one last object for the night, B33 – "the HorseHead Nebula"! After spending a few minutes trying to move the bright belt star Alnitak off to one side to avoid a annoying glare from it, I decided to embrace having the star in the observation and placed it so that not only would I get B33 in the FOV, but also most of NGC2024, "the Flame Nebula". Here's the final observation of the HorseHead and Flame:

(same scope info as above using the L-Pro filter, 5 minute subs, stacked for 1 hour).

With the clock now past 4am, into the pre-dawn hours, and I was getting tired, and also getting a little spooked from what sounded like either a lost cow or a large buck looking for a doe just over the hillside to our SE. Couldn't see it, but it was loud and sounded really close by. So I decided to close down for the night, parked the scope and powered down the equipment, threw the blackout canopy sections into the truck and headed inside the camper to bed. It had been an awesome evening of EAA observing!!

Monday 10/24/2022:

Slept in till 10am. After dressing, I headed outside into the cool, sunny morning to visit with the group. Andrew had already packed-up his tent & big Dob and left for home. I joined John D and Gary for a tour of the progress on the new restroom/shower that was under construction and work remained. It's going to be very nice once done.

Didn't get around to eating breakfast till nearly noon, LOL! Early afternoon, Warren packed his camper and scope and headed home, followed an hour later by Alexi. (they had all been onsite since Thursday or Friday and had already had 4 good nights). Soon after they had left, Dean S arrived and setup camp in the spot next to Dean M, just vacated by Warren.

I Headed down to the Red Barn showers and once back at camp changed into shorts and a T-shirt with the temps getting into the low 70's. I then spent the afternoon sitting around and tweaking the camping and telescope gear from my hurried setup the previous evening. At 3pm, I went inside the camper and laid down for a good nap to recharge for the evening. As I was getting up from the nap, Donnie stopped by to visit, and gave us the green-light to mount a small plaque that we had made for the $$ donation to cover the cost of one of the power pedestals.

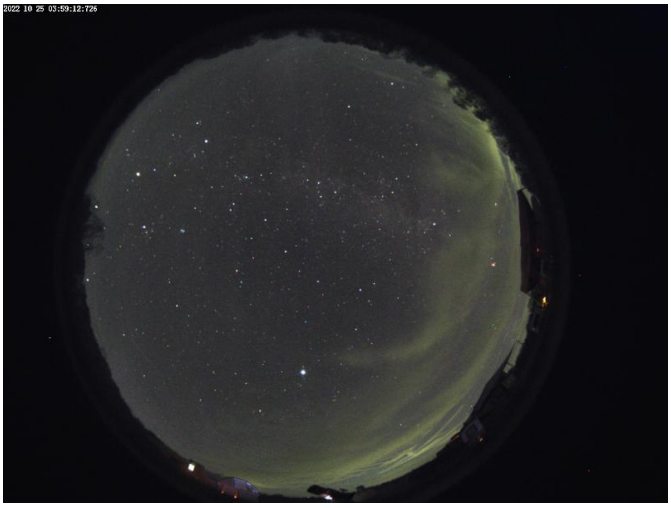
At 5pm, we had a group dinner/happy hour over at Dean's camp and afterwards enjoyed the sunset into a partly hazy sky. There was a nice sundog visible.

At dusk, we gathered our dinner leftovers and chairs and headed back to our individual camps to prepare for the evening. The sky was scattered clouds, with long streamers rolling in from the west, the wind was calm, with light dew forming. Even though it wasn't looking to be a good night, there were enough large clear gaps in the sky to make it worthwhile to uncover the scopes.

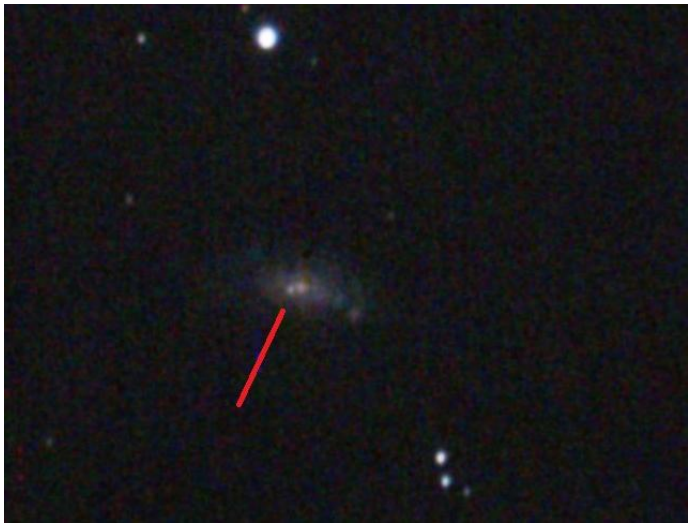
I decided to try my hand at making a mosaic of the Andromeda Galaxy, M31, using the 8" SCT and L-Pro filter. Spent the next several hours slowly working my way around the large spiral, capturing 5 minute subs livestacked for 15 minutes for each composition. The occasional cloud drifting over would interrupt the exposure, but the individual stacked sections looked decent and stitching them all together into one larger picture will make for a good rainy day project later in the week. Here are a couple of finished sections of Andromeda:

(8" SCT optical tube @ f6.3 on an Atlas Gem, ZWO ASI294MC camera with L-Pro broadband filter, 5 minute subs, PHD guided, livestacked for 15 minutes using Sharpcap with dark & flat calibration frames pre-applied, and histogram tweaked on the fly).

During the exposures, I walked around and visited with most of the guys, handing out KitKat snacks along the way. Enjoyed the naked-eye views of the Milky-Way that weren't obscured by the clouds. Only a few coyotes calling could be heard off in the distance.



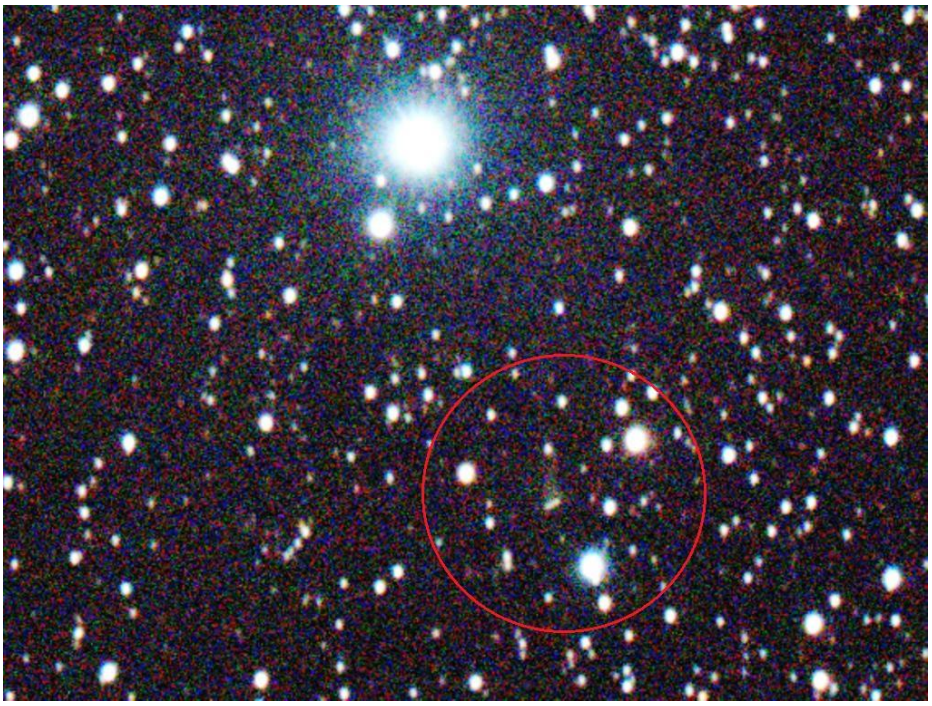
Around midnight, after I was done with M31, I went supernova hunting in Pegasus, capturing an EAA observation of 16th Mag SN2022wsp in the small galaxy NGC7448. The supernova gave the galaxy a look of having a double-core. Tried for several other SN's but the sky conditions didn't allow for it. During this time, Dean S, after aligning his scope, was imaging the North American & Pelican Nebula (NGC7000 / IC5070) in Cygnus, and later the 'Ghost Nebula', IC63, in Cassiopeia, while his brother Gary was working on the 'Spaghetti Nebula', SH2-240 in Taurus. The rest of the group was also busy imaging & observing thru the sucker holes on various objects.



(same scope info as above using the L-Pro filter, 30 sec subs, stacked for 5 minutes).

Around 2:30am, the sky conditions and transparency began to improve, and with Canis Minor now rising above the trees on the eastern horizon, I went for an EAA challenge object: the 'comet tail' debris from the Dart mission to asteroid Didymos/Dimorphos and the resulting impact on Dimorphos. I had seen mentioned over in the CloudyNights "Solar System Observing" sub forum that folks were speculating on whether the 'comet tail' debris could be seen in large telescopes.

So I thought that perhaps there might be a chance to see it using a smaller scope and EAA. After first slewing the telescope to Procyon to sync the scope's GOTO and to check the focus, using the RA/Dec coordinates from "TheSkyLive" website, I moved the scope to the correct position close to the border with Monoceros. I started off using 30 second, then 1 minute and 3 minute livestacked exposures, but didn't see anything on the monitor. Finally, I went with a 5 minute exposure, and there it was!!! ☺

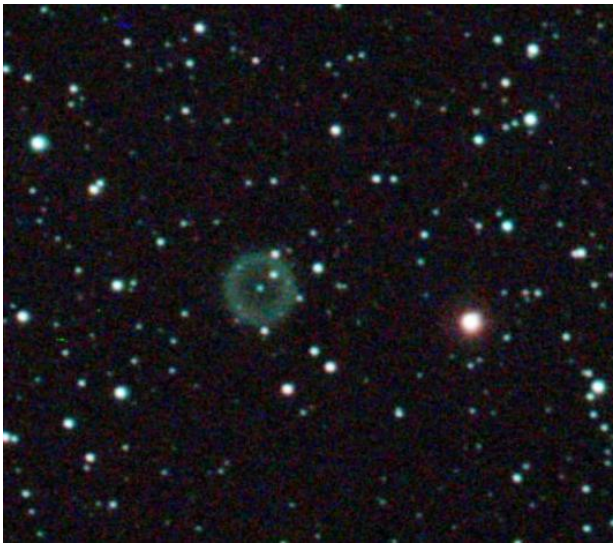


(same scope info as above using the L-Pro filter, 5 minute single exposure).

While the longer exposure had smeared the fast moving asteroid pair into an elongated streak, the fan shaped tail was faintly visible. (but was also distorted by movement). I let the livestack run for to accumulate several more 5 minute frames, but all that did was make the asteroid a longer streak, and actually caused the 'tail' to fade out from view. So the best observation was the single subframe of 5 minutes.

It's pretty cool to think that with just an 8" SCT optical tube and EAA techniques that I could see the results of a year’s long NASA mission to a minor planet to test asteroid deflection that might someday be needed to protect our home world.

By 3am, the sky had cleared-off very nicely, so I pulled out my Abell Planetary project notes and hunted down Abell-20, was nearby in Canis Minor.



(same scope info as above using the L-Pro filter, 3 minute subs, stacked for 15 minutes).

I then slewed the telescope over to the bowel of the Big Dipper in Ursa Major to try for Abell-28. But the very low elevation of the object and a little lingering haze to the NE made the observation doubtful, even when using a longer exposure. I decided to save this deep sky object for a better night. With the clock going on 4:30am, and having trouble staying awake, I called it a night, shutdown, and headed indoors to bed.

Tuesday 10/25/2022:

Slept in till around 10:30am. After stepping outside and chatting with Dean & Dean, I headed back indoors for brunch and to read. Later, as the camper warmed from the Sun, I headed back outdoors. It was another 'shorts' day, with the temps once again in the low 70's. Spent the afternoon visiting with the Dean's, Gary, and John. (Ed had to work). Also spent a little time processing my EAA observations from Sunday and Monday nights. This was mainly doing a little cropping, rotating, and resizing, along with comparing the observation to my source documents – books or magazines.

Around 3pm, with the outdoor temp now hitting 76 deg, the inside of the camper was getting warm, so I turned on the air conditioner that I had previously re-installed back into the camper. It's nice to be at a dark sky location that had unlimited electricity and lets you run your AC! ☺

The weather forecast for the evening was not looking good for getting in any observing, with heavier clouds and rain moving in overnight. Around 4pm, thick clouds began to build over the region, with the leading edge of the approaching front arriving.
At 6pm, Dean S and I drove into Grantsville to pick up a pizza order. Once back at camp, the group gathered over at Dean S's camp for pizza & beer night. It was a good time socializing, with folks sharing images and visual observations, and other non-astro topics such as bird watching, and touring old WWII and earlier aircraft.
After we had finished off most of the pizza and cleaned up the table, Gary brought out his laptop and gave a master class in how to do image post-processing. Very interesting!

A little before 10pm, the wind began to pickup and a few raindrops prompted the group to pack in for the night. After securing a few camping items, I headed indoors to read. Asleep by midnight.

Wednesday 10/26/2022:

Woken around 2am by wind and rain hitting the camper, but soon drifted back to sleep. Again woken at 7am by a heavy downpour, but rolled over and back to sleep! ☺
Finally rousted out of bed at 10am to a dreary gray sky and a damp field. The outdoor temps were in the mid 50's and not expected to get any warmer. Visited with the Dean's, Gary, and Ed outdoors for a few minutes until a cold , gusting wind drove us back indoors. John D needed to head back home to Parkersburg for a few days, but left his camper & scope there. We kept an eye on it for him.

I spent the rest of the morning and early afternoon inside the camper reading and surfing the intertubes. Also finished processing the series of M31 captures and tried to put them together into a mosaic. But, didn't have much luck aligning the individual images, there was too much gradient differences, probably from light clouds that night. I passed the files over to Dean S to see if he could work a little post-processing magic, but after a few days of having fun with it, he wasn't able to do much with them either! Owe well!

During the occasional outdoor break, we saw red-tail hawks out soaring with the updrafts, along with a number of monarch butterflies gliding southward at ground level. And I spied an interesting critter walking around the back of my telescope, a giant millipede!

The wind was a bit breezy, with an occasional strong gust. I had to add a few more bungee cords to John's telescope cover as the wind was about to strip it off. With the poor outdoor weather, we decided against doing any group dinners tonight, everyone would be on their own. So at 6pm, I pulled out one of my microwave dinners.
A little later, around 7pm, we gathered over inside at Dean S's camper for liquid refreshment from a bottle of '43' that Gary brought, and spent the evening drinking 'mini beers', and telling stories about UFO's, Big Foot, and other tall tales. LOL!
At 10pm, the group broke up and I headed back in the drizzle to my camper to read before falling asleep.

Thursday 10/27/2022:
Up at 8:30am to another cool, grey, damp morning, with outdoor temps in the low 40's. But according to the weather forecasts, the sky should be clearing by the afternoon and we should have a decent night of observing. After breakfast, spent the morning reading magazines and the internet. Added several additional deep sky objects to my observing plans. Mid-morning, I walked over to visit with Dean, who was still trying to combine all of my M31 images, without much luck. Around noon, I headed down to the Red Barn for the showers and once back at camp made lunch.

The sky was slowly clearing and the temperature had now risen into the low 50's. Late afternoon, I went for a short hike along part of the trail that wraps around the hillside to the north of the observing field and a spur that eventually cuts back up to the gravel road just below the cabin.

Once back at camp, I uncovered the telescope and setup the blackout canopy and prepped my observing notes. With the temps now in the mid 60's, we gathered for a group dinner.

Shortly afterwards, a new amateur arrived on the field, John from Columbus, in his motorhome. John was a visual binocular observer and also a wide-field DSLR imager.
At dusk, I powered on the telescope and started the laptop capturing AllSky frames, before heading indoors to change into heavier clothes. The earlier warm temps were at an end, with it now rapidly falling towards the upper 30's overnight. It was going to be brisk outside this evening!

Once back outside, I attached the scope's dew shield and took control of the mount with the laptop, slewing the scope over to the "W" of Cassiopeia now visible in the darkening sky to focus the optics. The Summer Milky-Way was glowing softly as it slowly wheeled overhead past the meridian towards the west. With the dimmer Winter potions now ascending into the NE, it was definitely the season of 'Galaxies'. So I went with the seasonal theme and planned to spend the evening EAA observing galaxies. I slewed the telescope back over to Sculptor rising in the SE to the near face-on galaxy NGC7793.
There was lots of flocculent detail to make out in the spiral arms.

(8" SCT optical tube @ f6.3 on an Atlas Gem, ZWO ASI294MC camera with L-Pro broadband filter, 180 second subs, PHD guided, livestacked for 30 minutes using Sharpcap with dark & flat calibration frames pre-applied, and histogram tweaked on the fly).

I then dropped lower in altitude to the spindle galaxy NGC55, but soon realized that I was mostly pointing at the top of Ed's camper! LOL.
So needing to wait for the galaxy to rise higher, I pointed the telescope up to the "Silver Coin Galaxy" – NGC253, riding in the clear. NGC253 is a bright highly inclined spiral, with great views of its dust lanes and core.

(same scope info as above using the L-Pro filter, 5 minute subs, stacked for 30 minutes).

Once finished observing the Silver Coin, the previous galaxy, NGC55, had now cleared the campers, so I slewed the telescope back to that spindle shaped galaxy. Good detail to be seen in the spiral arms that stretched to either side of the FOV.

(same scope info as above using the L-Pro filter, 3 minute subs, stacked for 30 minutes).

Now finished with Sculptor, I moved the telescope eastwards into the winding river of Eridanus to "S" shaped barred spiral NGC1300. The knotty arms coming off of either end of the central bar was tightly wound around the galaxy's core. A very pretty observation.

(same scope info as above using the L-Pro filter, 3 minute subs, stacked for 30 minutes).

After calling over a few of the guys to see this beautiful galaxy, I stepped outside for a few minutes to take in the naked-eye night sky view. Another great night at a dark-sky location! Though tonight, the evening coyote chorus seemed to be missing.
I stopped over to visit with Gary who was sitting out by his scope, gathering more data on NGC6820 in Vulpecula. A little later, he began working on the 'Cone Nebula', part of the large NGC2264 complex in Monoceros. Dean S was shooting the 'Ghost nebula' IC63 in Cassiopeia, and then later B33, the 'HorseHead' in Orion. Dean M was busy imaging the 'Wizard Nebula', NGC7380 in Cepheus, and Ed were busy imaging emission nebula.

There were a number of nice meteors throughout the night, including this bright bolide from 7:39pm that fell down thru the Milky-Way.

Back inside the blackout canopy, I moved on to my next object. As I was already in the Eridanus area, I dropped in on triple star ’40 Eridanus’, mentioned in the December Sky&Tel, which consisted of an orange K type star, and a white and red dwarf.
A very interesting view of a couple of exotic deep sky objects.

(same scope info as above using the L-Pro filter, a single 3 second image).

I continued my Stellar Journey further eastwards to Camelopardalis, now rising high in the NE sky, to observe the large, very dim, face-on spiral galaxy IC342. The galaxy lays near a rich section of the Milky-Way and is somewhat obscured by foreground stars. Still, with a longer exposure, you could make out various HII regions in the galaxy’s spiral arms. A pretty livestacked sight on the monitor.

(same scope info as above using the L-Pro filter, 5 minute subs, stacked for 30 minutes).

By now it was well after 1:30am, approaching 2am, so being in the general area of Abell-28 in Ursa Major, I switched over to the L-eNhance narrowband filter, refocused the camera, and slewed the telescope to the planetary’s celestial position. I was hoping to get a better observation that the one from Tuesday night, but after only being a few minutes on-target, large hazy streamers began to arch across the sky, flowing out of the SW. In a short time, my second attempt at Abell-28 was ruined. I gave the sky another half-hour to see if the streamers were going to fade, but instead they flowed together making the overall sky hazy. Jupiter was now sporting a halo.

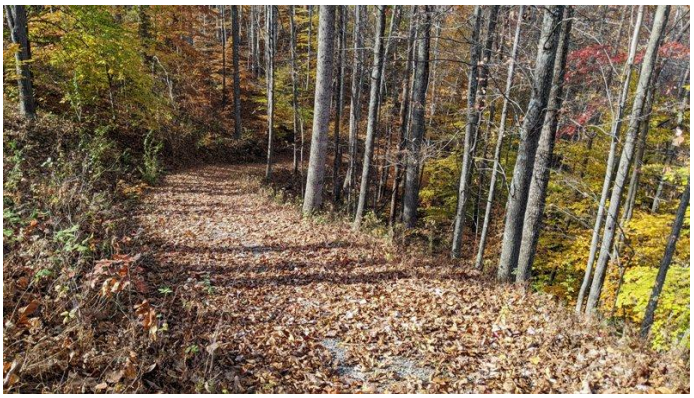
After consulting the weather apps, I powered down the telescope, folded-up the blackout canopy and headed indoors to bed.

Friday 10/28/2022:

Slept in till 10am. Another chilly morning, with the temps dipping down to 34 deg overnight, but now slowly recovering towards the low 60's later in the afternoon. The sky started off hazy, but soon began to clear. The forecast was calling for a great night of observing. After visiting with Dean S, I had breakfast indoors and spent the morning writing up my observing notes and reading. Around 11am, John D returned from home and brought us donuts! Yum!!

Spent the early afternoon shifting thru about 1000+ AllSky frames looking for meteors from the previous night and found several mentioned above.

Mid-afternoon, I went for a long hike around the park, taking the northern trail that dips down into the valley before climbing back out of the woods by the big fish pond.



Walking back along the gravel road, I stopped in at the Red Barn to visit with John who was assembling park telescopes for an event Saturday night on the ridge and then back up by the cabin with Donnie, who was waiting for a group of cabin renters from Columbus to arrive. Back at camp, I headed indoors for a short power nap. Once back up, I found that about another half-dozen amateurs had arrived onsite and were setting up scopes on the field. These included Phil C and a group from his Columbus club who had rented the cabin, Jeff B who had returned for the evening, and several others who setup to the north of John's trailer. Donnie thought this was the largest crowd yet on the new field.

I went ahead and setup the laptop and blackout canopy in advance and uncovered the telescope. Around 6pm, the group gathered over at Dean M's camper for homemade burgers! For dessert, Ed baked choc-chip cookies. Delicious!!! At dusk, we cleaned up from the meal and I waddled back over to my camp. The laptop and AllSky cam had already been collecting frames since late afternoon, so all I needed to do was power on the telescope and cameras, turn on the dew heaters and pull out my observing plan for the evening.

After changing into thicker clothing, I installed the dew shields and slewed the telescope over to Cassiopeia high in the NE sky, selected the L-eNhance narrowband filter and focused the camera.

Tonight I was going to hunt planetary nebula using the December Sky&Tel article on planetaries in Cassiopeia. But first, being inspired by Dean S's observation from a few days back, I slewed the scope to the bright "W" star Caph, and then to the "Ghost Nebula", IC63 and the nearby reflection nebula IC59 in the same FOV.
There I executed a deep exposure to bring out the spooky details of the nebula.

(8" SCT optical tube @ f6.3 on an Atlas Gem, ZWO ASI294MC camera with L-Enhance narrowband filter, 5 minute subs, PHD guided, livestacked for 1 hour using Sharpcap with dark & flat calibration frames pre-applied, and histogram tweaked on the fly).

Once I had put that ghost to rest, I then moved on to the planetaries listed in the article, starting with planetary nebula HDW2, also called SH2-200. The planetary shell was moderately bright and large, displaying striations along one side.

(same scope info and L-eNhance filter as above, 3 minute subs, stacked for 30 minutes).

I then observed several other planetary nebulas from the article including very small nebula IC289, IC1747, and the larger diffuse planetary HFG1. During this, Dean M was working the Pegasus galaxy cluster centered on NGC701, and Gary was imaging the 'Pacman' nebula. Dean S was also re-imaging the Ghost nebula using his Ha filter.

With so many amateur astronomers on the field, the coyotes were nowhere to be heard. Guess they got tired of all these 'people' on their field and headed elsewhere.
I did have a number of 'two-legged' guest pop in during the evening to see my EAA setup in the back of the camper under the canopy. There were the usual suspects – Both Deans, Gary, and Ed, along with Jeff B, and John D. They all enjoyed seeing on the monitor what I was observing, along with getting warmed up as inside the canopy the temp stayed in the mid 60's all night.

With Cassiopeia how high above Polaris and crossing the meridian, I slewed the telescope over to Auriga, now rising above the trees along the NE horizon, to the 'Flaming Star Nebula' – IC405. There I settled-in for another deep dive observation to bring out the dark and bright knots of emission nebula. It was well worth the wait.

(same scope info and L-eNhance filter as above, 5 minute subs, stacked for 1 hour).

While waiting for the long livestack of IC405 to complete, Gary and I walked over to visit first with John, and then the three of us went over to see Jeff B's robotic eVscope in action. It was pretty neat!!

I then pulled out my SH2 objects project notes and began hunting HII emission nebula in Auriga. These included SH2-217, 218, 226, 227, and 228. The best being SH2-217 & SH2-226: With the exception of SH2-217, most of these nebulas were not very large. SH2-226 contains an interesting faint blue 'streak' to the right of the reddish emission nebula. I haven't been able to identify any nebulous object in the area, so I am leaning towards it being some type of lens flare from a star.


(same scope info and L-eNhance filter as above, 3 minute subs, stacked for 15 minutes).

With the time going on 2am, I then decided to make a third try for planetary nebula Abell-28 in Ursa Major and slewed the telescope to the now familiar field. It took a deep 5 minutes exposure, but I was finally able to put this observation to rest! With that success, I realized that nearly all of the remaining Abell planetary nebula from the catalog that I still needed would be shortly rising in the east.

I slewed the telescope over to Sirius in Canis Major, checked my focus and synced the GOTO mount. Then I moved over the border into Puppis and hunted Abell-23 and 26, both small, round and dim. I then moved further eastwards into Pryx for Abell-27 and 29, with 27 being a small egg-shaped red oval, while 29 was a larger broken shell. Being at Calhoun with its darker skies, slightly lower latitude, and low tree horizon greatly helped with bagging these four southern objects. The next couple planetaries were higher up in Monoceros, Abell-18 and 25. Abell-18 was a nice looking, moderately bright shell, while 25 was a much more fainter, extended ethereal object.
Out of all these Abell observations, I thought the best two are Abell-18 and Abell-23.


(same scope info and L-eNhance filter as above, 3 minute subs, stacked for 15 minutes).

I was now down to one last Abell planetary nebula! Abell-35 in Hydra, near the border with Corvus. From my planetarium program, I quickly determined that Abell-35 would rise above the tree line a good 30 minutes prior to the beginning of astronomical twilight around 6am, giving me a chance to observe it. So I slewed the telescope over to the northeastern horizon where Abell-35 was just rising, but still hidden from view by trees.

As I waited out the last 15 minutes, I began to notice the sky brightening to the NE underneath Leo on the AllSky cam. What the heck was going on? After stepping outside from under the blackout canopy, I realized what the problem was.

It was the Zodiacal Light rising up in advance of dawn in the northeast!

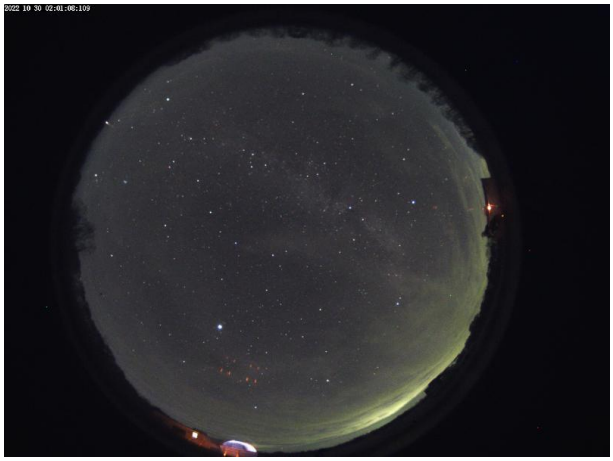
The faint Abell planetary would be washed-out by the dusty glow from the plane of our solar system. Arghhh!!! I cursed the sight of what normally I would be delighted to see. Guess I'll have to wait a few more months to observe that last Abell Planetary nebula. LOL!
So with dawn beginning to break at 6:30am, I shutdown and covered up the equipment, collapsed the blackout canopy, and headed to bed.

Here's the AllSky time-lapse of Friday night: https://youtu.be/2m2MYPfu6wQ

Saturday 10/29/2022:
Slept in till 11am, missing Ed's omelet & bacon breakfast that he prepared for the group. (fortunately for me, Ed had saved enough to make me one when I finally crawled out of the camper). Spent the remaining hour of morning and early noon saying goodbye and watching most of the folks pack up to head home, including Dean M and Gary from our initial group. Only John, Dean S, Ed, and myself were staying overnight Saturday. After checking the weather forecast, I understood why, rain expected Sunday morning. Still, there looked to be a window of several hours of observing before the heavy clouds would arrive after midnight, so we decided to stay.

Spent the afternoon packing away most of the outdoor camping gear and some of the telescopic equipment, such as Guttercam. My plan was to observe as long as I could that evening, then pack up what I safely could in the dark. Got in a late afternoon nap, and phoned home during dinner. Towards sunset, John and Ed headed over to the ridge above the Red Barn for the public astronomy event, while Dean and I held down the fort.

At dusk, we uncovered our scopes and started up our imaging. The sky had unexpectantly gone a little soft ahead of what was predicted, but the transparency was still good to the northeast.



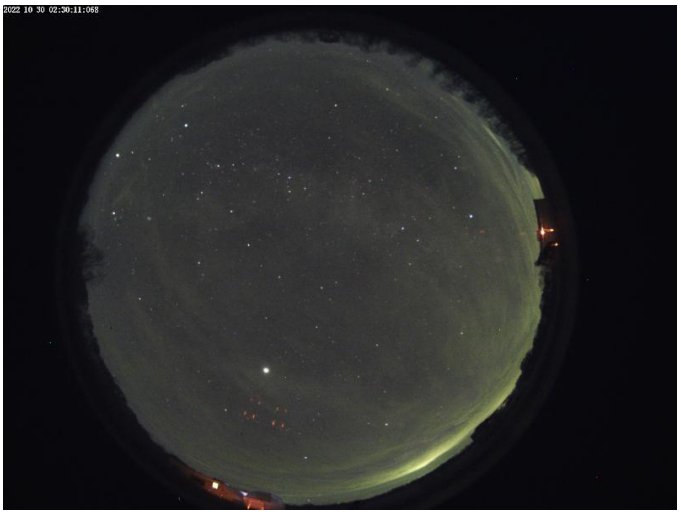
So I pointed the telescope over to Cepheus to EAA observe the “Cave Nebula” – SH2-155. I decided to do another deep observation, taking a long exposure and letting it stack for an hour. That really brought out the dark nebula intertwined with the bright glow of the surrounding emission nebula.

(8" SCT optical tube @ f6.3 on an Atlas Gem, ZWO ASI294MC camera with L-eNhance narrowband filter, 5 minute subs, PHD guided, livestacked for 1 hour using Sharpcap with dark & flat calibration frames pre-applied, and histogram tweaked on the fly).

I then moved eastward into Cassiopeia to SH2-188, the “Dolphin Nebula, where after rotating the image, you could easily make-out lots of good details of the dolphin jumping out of the sea.

(same scope info and L-eNhance filter as above, 5 minute subs, stacked for 30 minutes).

Around 10:30pm, shortly after completing that observation, John and Ed arrived back from a successful park mini-starparty. But, unfortunately, following them back to camp were large cloud streamers that soon heavily obscured most of the sky. I decided to call it quits, shutdown the telescope, and put away a few items.



The timing of the rain had shifted and was now not expected till late Sunday afternoon, so there was no need to try breaking down the telescope in the dark. Instead, I joined Dean for a nightcap, or two. I then headed back over to my camper, took a long last look at the cloudy sky, and headed indoors to read a little. In bed by midnight.

Sunday 10/30/2022:

Woke up around 7am, but after taking a look at the still cloudy sky, rolled back over and slept in till 8:30am. Dean and John had been up since dawn, and both finished packing and headed for home around 9am. After dressing and having a quick bite for breakfast, I headed outdoors and began disassembling the telescope. This is always a kinda sad activity, especially, coming off a good run of observing. Once the equipment was loaded into the camper and truck, I pulled the truck around to the camper front and hitched it up. Said my goodbyes to Ed, who was now outdoors breaking down his equipment.

Was on the road home by 10:45am and after a uneventful drive, I was home by 3pm. Once the truck was unloaded, I returned it to the U-Hail rental.

So, after a bit of a hitch fiasco at the start of my trip, I was able to still make the 3.5 hour drive down south to Calhoun where I was able to EAA observe five out of seven nights, with Friday 10/28 being a spectacular all-nighter! Got in a lot of great observing, 41 objects in total, the majority new. Galaxies, planetary nebula, emission nebula, supernova, double stars, and a banged-up asteroid!

It was great to be able to finally observe on the new astronomy field at Calhoun and utilize the new power pedestals! The completed cabin looks great, and the new restroom/shower pavilion will be awesome to have on the field.

For most of the week, except Wednesday and part of Thursday, the weather was warm and sunny, letting us enjoy the secluded observing field and the great hiking trails. Overall, it was a very good trip, especially for late October, and I look forward to getting back down to Calhoun in the spring of 2023.

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