Calhoun County Park, WV. November, 2025

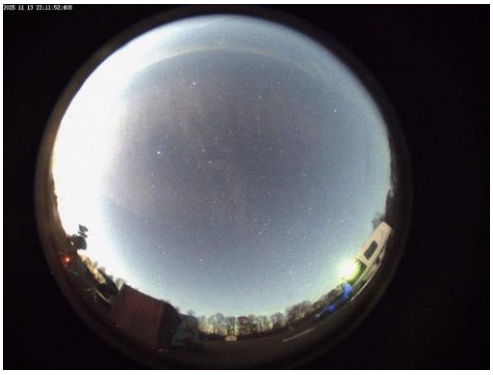
With the November new Moon fast approaching, our little group of traveling astronomers was closely watching the weather forecasts for our usual spots, Cherry Springs, Calhoun, and ORAS. Whichever location had the clearest weather would win. And as usual for this time of the year, the winner was Calhoun. The decision was made Wednesday afternoon (11/12) to head south for clearer skies and hopefully warmer temps.

Thursday 11/13/2025:

After spending the previous day packing both camper and car, a few last minutes items were loaded Thursday morning, and I was on the road southbound to Calhoun County Park in central West Virginia. Joining me this afternoon was Dean S, with several others trickling in the following days.

The drive down was uneventful, and after arriving around 3:15pm and registering, I drove up to the dedicated astronomy observing field. Dean S was already there setting up. After spending a few minutes saying hello to Dean, I picked a spot across from Dean and got going setting up camp and then my telescope. Here's my usual EAA setup: 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 60mm Antaries refractor guidescope with an ASI120MC camera. I also setup my AllSky cam - ZWO ASI224MC camera & fisheye lens in a DIY dome attached to a tripod. And my SeeStar S30 smart telescope on a tripod and wedge for EQ mode.

It was a scramble to get everything setup before sunset, including the blackout tent over the rear camper hatch, and I ended up eating dinner at dusk.



With a slight chance for the continuation of the big aurora earlier in the week, I had pointed the AllSky cam northwards. (Dean S had also setup his Nikon DSLR).
The solar activity had died down so there were none seen, but I did get a different view of the sky than normal. Here's a partial time-lapse from the evening.
https://youtu.be/WoqN2zIjn3U

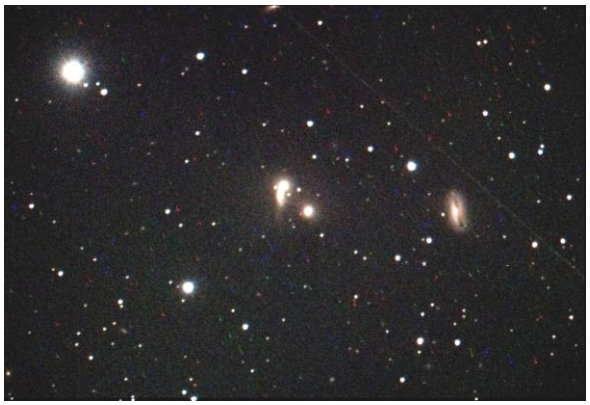
Early evening, Dean S stopped over to visit and checkout my EAA observations.

Spent the evening taking advantage of Calhoun's lower southern horizon and using the 8" SCT worked on galaxies in Pisces Austrinus and later southern Cetus. I also had the S30 imaging IC405 – "Flaming Star Nebula", and later IC410 – "Tadpole Nebula" both located near each other in central Auriga.

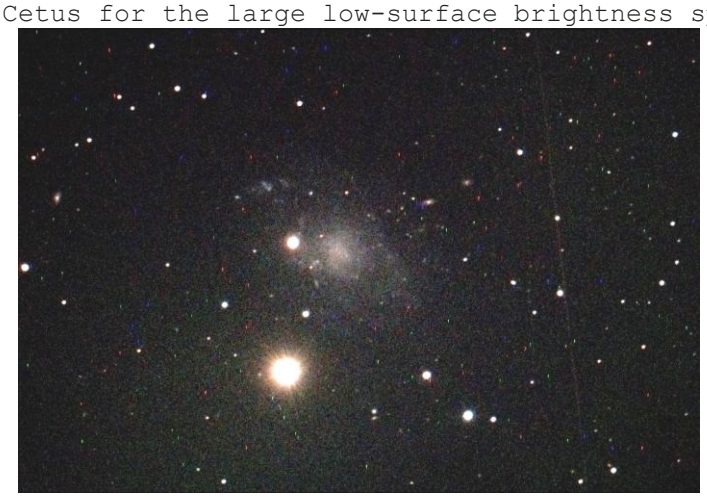
Around 10pm, I stepped away for a restroom break and upon returning found both the C8 and S30 imaged had been zapped by airplanes! Argh!

Here's the C8 observations:
Galaxy group in Pisces Austrinus, including bright spiral NGC7172 displaying a dark lane bisecting the galaxy, along with elliptical galaxy NGC7173, spiral NGC7174 & another elliptical NGC7176 that appears to be interacting with NGC7174. The grouping is also known as compact galaxy group Hickson-90.

Nearby was another galaxy, the one that was plane-struck, small face-on spiral NGC7229.

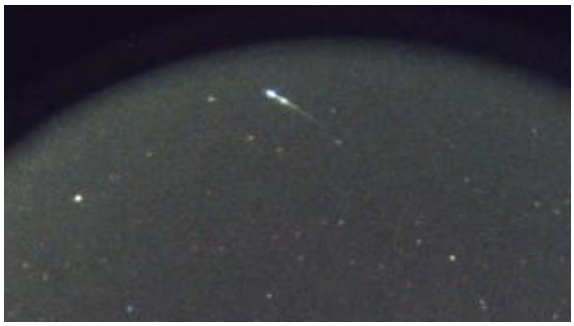


Then over to Cetus for the large low-surface brightness spiral NGC45.



For all three EAA observations: (8" SCT @ f6.3 on an Atlas Gem, ZWO ASI294MC Pro camera with L-Pro filter, 180 second subs, dark & flat calibration frames, PHD guided, histogram real-time adjusted, and livestacked using Sharpcap for 30 minutes).

Several bright meteors visible during the night including this nice bolide to the south.



Here's the S30 SeeStar observations:
"Flaming Star Nebula" – IC405, and "Tadpole Nebula" – IC410, both in Auriga.

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

Around 1:15am the sky transparency dropped and light scattered clouds began rolling in, so I decided to shutdown the telescopes and call it a night.

Friday 11/14/2025:

Woke around 9am to a sunny sky with temps in the mid to upper 50's. Light jacket weather. Headed over to the shower where I had to share the facility. Apparently, the park was going thru a ladybug invasion, as every corner of the restroom/shower had a large clump of the little critters.

Visited with Dean S several times, and then later in the afternoon with Gary S after he arrived on-site. Spent time indoors working on the previous nights observations.
Here's a pretty star-trail that I made from the AllSky camera:

Towards sunset, clouds began to move into the area, and by dusk we were clouded-out for the evening. After visiting for awhile, it was a night of indoor reading.

Saturday 11/15/2025:
Up by 8am to a slightly chilly morning, with occasional sunshine beginning to warm it up outside. But a steady breeze with gusts made it uncomfortable to sit out very long. Spent most of the day inside the warm camper, only venturing out occasionally to visit with Dean and Gary S. Mid-day, Dean M surprised us by arriving on-site earlier than expected. After helping Dean pick-out a camping spot, I headed back indoors while he setup camp.

At 5pm we gathered over at Dean S's camp for drinks and a group dinner of Kielbasa and potato salad. Weather-wise, we were looking at another cloudy night. Around 7pm, it began to occasionally sprinkle forcing us to head inside Dean S's camper for awhile, before calling it a night with everyone heading back to their own camp. About 8:30pm, we had a steady rain. Then a little after 9pm, the weather alert on my phone went off warning of a severe thunderstorm in the area. Fortunately, it went to our southeast and missed the park, though we had several strong wind gusts. Glad I did not setup an ez-up canopy or the camper door awning. Stayed up reading and listening to music, before heading to bed.

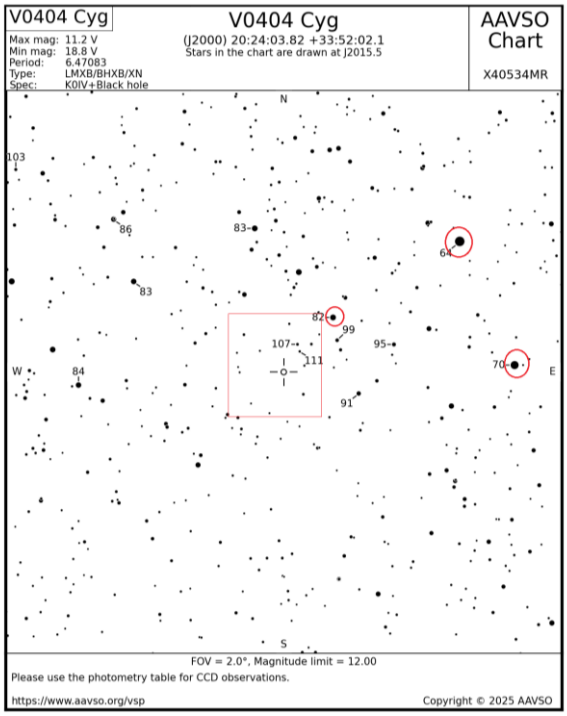
Sunday 11/16/2025:
Slept in late to 9:30am. Was in no hurry to get up as it was a dreary cold morning outside. During the first portion of the day, the sky remained cloudy and windy. Twice a strong wind gust blew over my tall observing chair into the side of the camper till I folded it up and put it inside the car.

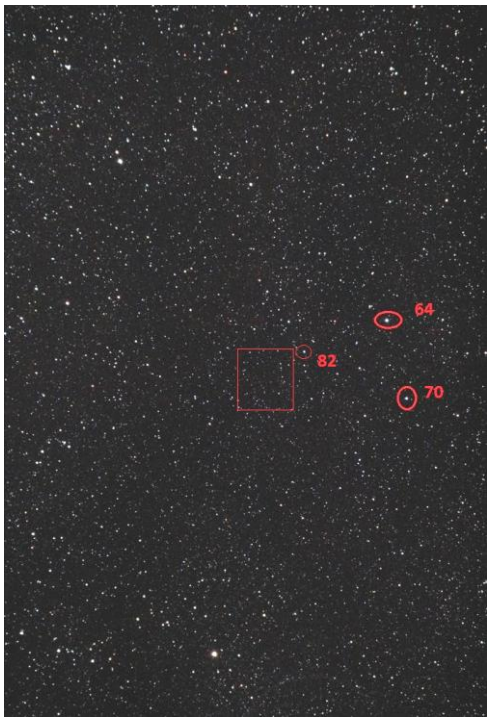
That afternoon, Andrew from OH arrived, bringing clearing skies with him, and setup his large dob telescope to our north near the bunkhouse where he was staying for the night.

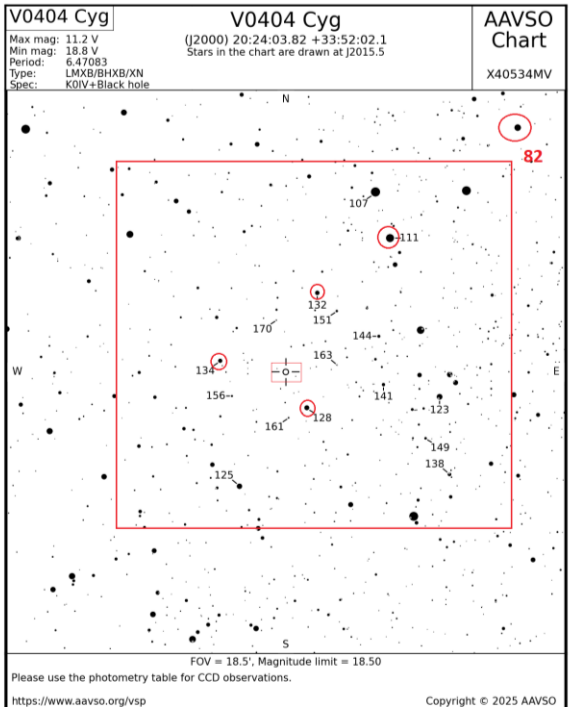
Clear sky and a colorful sunset. Moved the laptop and worked from inside the camper tonight, as the outdoor temps were heading into the 30's overnight.

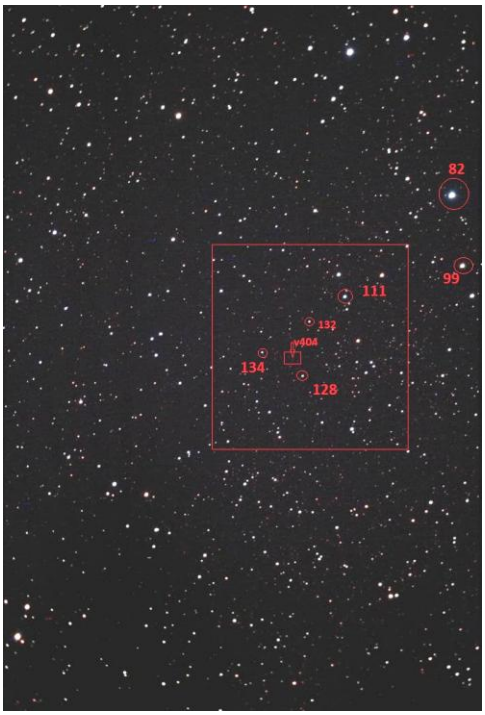
By 9pm, it was already down to 41 degrees! Broke-out the heavy parka to wear when visiting with the guys. Everyone stayed indoors to keep warm.

Started the evening off hunting down variable star V404 Cygni using AAVSO finder charts. I had been sitting on a ‘Sky & Telescope’ article from March that talked about the blackhole that the star was in orbit around and thought that would be cool to observe the visible star component of the system. It turned out to be a difficult observation as the variable star was down near its minima just shy of +18.8 mag, but I think I got it! Here’s the observation using both the EVO50mm refractor and the C8 SCT optical tube.

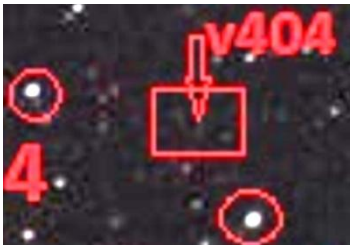








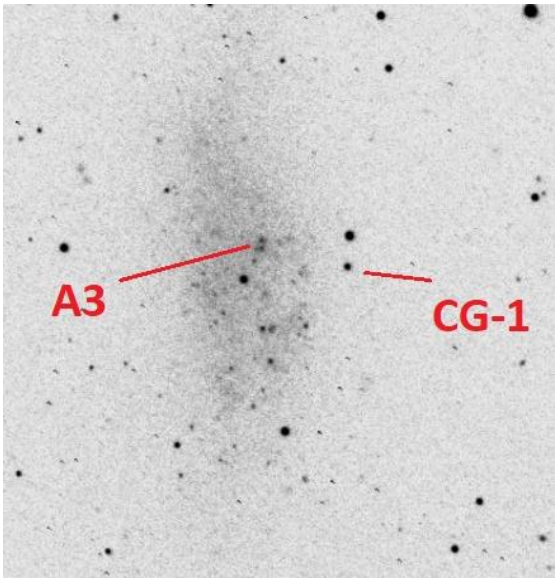
(8" SCT @ f6.3 on an Atlas Gem,
ZWO ASI294MC Pro camera with L-Pro filter,
15 second subs, livestacked for 3 min.
EVO50mm, L-Pro, ASI294. 15 sec subs for 3 min)



After that I went back to hunting galaxies back in Cetus and then a little later in the southern constellation of Fornax. The wind was a pita during the evening, with gusts ruining a number of subs. The outdoor temps also dropped into the low 30's with frost forming once the wind died down for the night. Burr!!!!

Stepping outside a few times during the night to stretch, it was a sad sight, seeing the end of the Summer Milky-Way setting into the West.

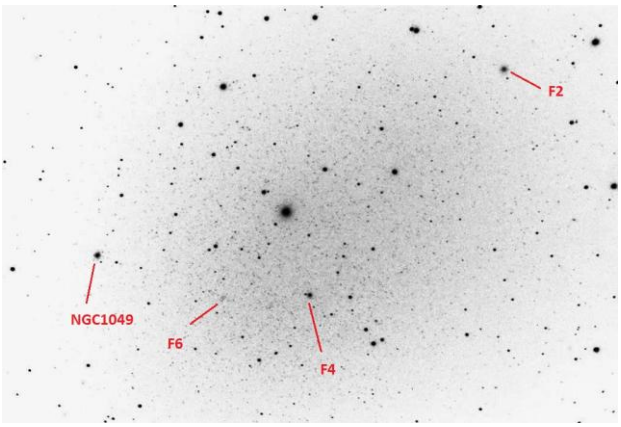
I started off the evening with the C8 re-observing Local Group member WLM in Cetus. WLM (Wolf-Lundmark-Melotte)is a irregular barred-spiral galaxy about 3.5 Mly distant. It has a number of internal objects that are observable, including a stellar-association labeled A3, and a globular cluster CG-1. Here's the observation:



(8" SCT @ f6.3 on an Atlas Gem, ZWO ASI294MC Pro camera with L-Pro filter, 180 second subs, calibration frames, PHD guided, histogram real-time adjusted, and livestacked using Sharpcap for 21 minutes)

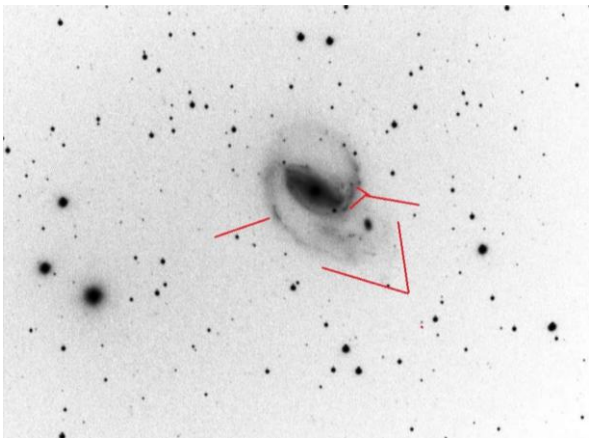
I then slewed the C8 southwards to the constellation of Fornax – "the Furnace", now rising towards the southern meridian. This region of the sky doesn't get very high for us northerners, even at Calhoun where it's still only about 22 deg elevation. Additionally, due to the low elevation, Fornax deep-sky objects don't stay well placed for observing for very long as it quickly crosses the meridian and settles into the SW horizon. All of which meant I had to be quick in my observations.

The first target was another Local Group member, the Fornax Dwarf Galaxy, (MCG-6-7-1). The +9.3 mag galaxy is a small dwarf elliptical located only about 530,000 Ly away. interesting is a number of observable +14 mag globular clusters, including one bright enough to rate an NGC#, +12.6 mag NGC1049.



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

Then I Pulled out a "Sky & Telescope" article from January 2015 on deep-sky objects within Fornax and slewed the telescope over to the large +9.5 mag barred-spiral NGC1097. This galaxy, also known as Arp97, has an interacting elliptical companion named NGC1097A off the main galaxy's NW spiral arm. (lower right center). You can see the distorted material that the companion has pulled from the arm, along with a number of bright knots of star-forming regions in both spiral arms. NGC1097 is a Seyfert active galactic nucleus galaxy with a central black hole estimated to be around 100 million solar masses.



(8" SCT @ f6.3 on an Atlas Gem, ZWO ASI294MC Pro camera with L-Pro filter, 180 second subs, calibration frames, PHD guided, histogram real-time adjusted, and livestacked using Sharpcap for 36 minutes)

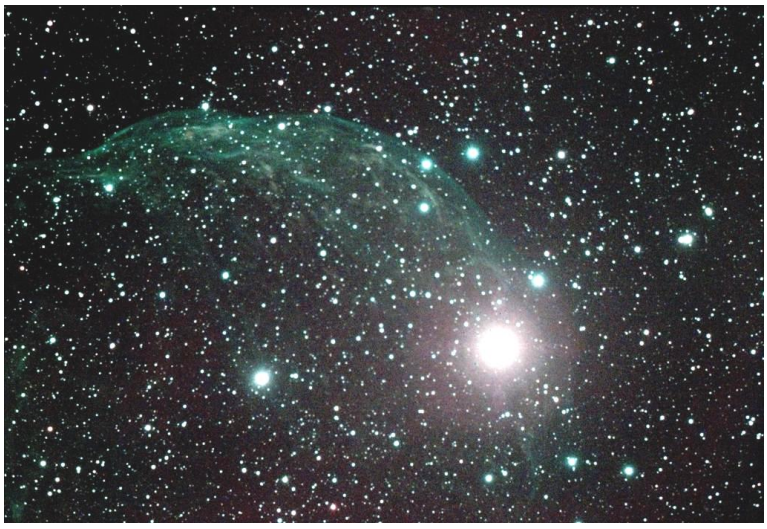
The last Fornax object of the night was another fairly bright barred-spiral, +9.6 mag galaxy NGC1365, with two distinctive spiral arms coming off a thick central bar.

(same scope info and exposure,
livestacked for 30 minutes)

Not wanting the telescope to do a meridian-flip, I slewed it over eastwards into Eridanus for galaxy NGC1687. The +11.5 mag slightly inclined spiral galaxy displays several arms with a prominent dark lane giving the galaxy an asymmetrical look.

(same scope info and exposure, livestacked for 30 minutes)

With the time going on 3am, I decided to try for the last remaining object on my list of observable Wolf-Rayet protoplanetary shells, SH2-308, located in Canis Major around the $+7^{th}$ mag star EZ Canis Majoris, about 8 degrees south of Sirius. Somewhat similar to planetary nebula, Wolf-Rayet shells are rings of dust and gas formed by collisions of stellar winds blowing from binary Wolf-Rayet stars, which form a dust shell around the pair. These massive stars (over 20 solar masses), have begun expanding, shedding their outer layers while on the way to eventually becoming supernova.



(8" SCT @ f6.3 on an Atlas Gem, ZWO ASI294MC Pro camera with L-eNhance narrowband filter, 180 second subs, calibration frames, PHD guided, histogram real-time adjusted, and livestacked using Sharpcap for 30 minutes)

While I was hunting deep-sky objects with the C8 SCT, I also had the little S30 doing a two- hour mosaic of IC1848 – "Soul Nebula" in Cassiopeia with the narrowband filter.

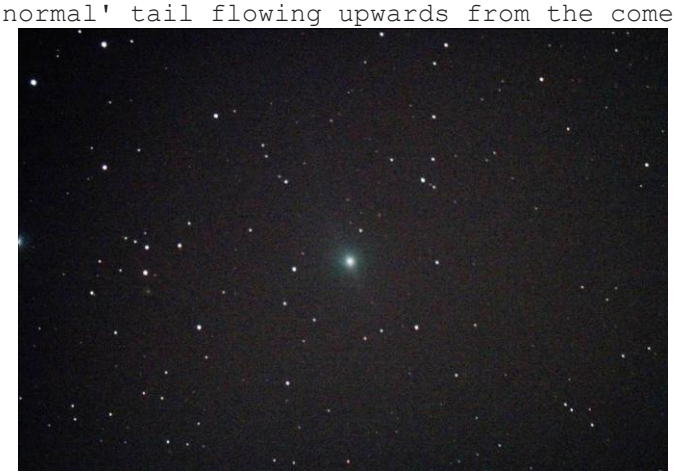
After that completed, I went for a couple of old-friends:
the "Great Orion Nebula" – M42 in Orion, along with the "HorseHead Nebula" – B33, and nearby neighbors NGC2044 – "Flame Nebula", and IC434 that backlights B33. Here's the S30 observations over on the next page. (it still amazes me what the little S30 can do!)

(SeeStar S30, 60 second exposures in EQ mode with the NB filter, livestacked for 121 minutes for IC1848, then 40 & 46 minutes for M42 & B33, AI noise reduction applied)

It was now time for a little “Shallow-Sky” work, I was able to EAA observe three comets: K1 Atlas, 24P Schaumasse, and I3 Atlas (the interstellar visitor).
Here's the observations of K1 and 24P using the S30 SeeStar: While 24P was just a little blue blob, K1 displayed a nice little tail.

(S30 @ f5, EQ mode, 60 second exposures, IR filter, livestacked for 2 & 5 minutes)

Then using the 8" SCT, the visitor from another star-system, Far, Far, Away,,,, I3 Atlas:
You can faintly see both the sunward pointing counter-tail, along with the longer 'normal' tail flowing upwards from the comet coma.




(8" SCT @ f6.3, Atlas Gem, L-Pro broadband filter, 30 second exposure, livestacked for 90 and then 10 minutes seconds).

Here's another observation at the 9 minute mark where I zoomed-in and greatly tweaked the histogram and brightness/contrast to bring out more tail details. You can faintly see at least three tail streamers coming out from the comet.
(but no sign of external engine propulsion, lol)

I also got in a 90 second livestack of Comet K1 Atlas using the C8:

(same scope info and exposure as above).

With the clock now at 5am, I had pulled an all-nighter!!!
I was done for the night, got on my parka and headed out to power down the scopes.
Didn't bother covering them up, figured I let the Sun dry them off in a couple of hours.
Here's a partial AllSky time-lapse from the evening: https://youtu.be/afXbVZlsd7c

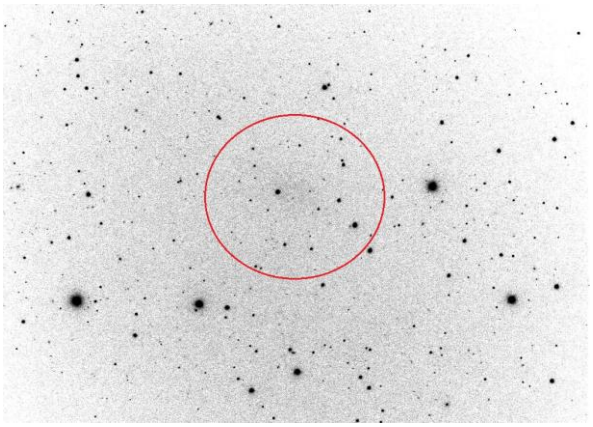
Monday 11/17/2025:

Woken at 10:30am by a buzzing noise outside my camper. It turned out to be Dean S taking his new drone for a spin around camp. Here's a video that Dean made: https://youtu.be/VzpY0WqoweU?si=axlFmIxz2b175BVu

By the time I was dressed and made it outside, the flight was over. I also missed Andrew pulling out for home. Visited with the guys for a bit. It was a sunny day, but not particularly warm enough to sit out in my camping chair. Spent most of the remaining daylight indoors either reading in my camper or visiting inside Dean M, Dean S, or Gary's campers. With rain in the forecast for early Tuesday morning, we all agreed that it might be wise to stop at some point during the night and put away our telescope equipment. I decided to take down the AllSky and pack it away, along with organizing the inside of my car to make it easier that evening to get the equipment cases out without setting off the inside car lights.

At 5pm, Dean M invited us over to his camper for a grilled chicken and burgers dinner inside his camper. (it was too cold to sit outdoors). While finishing up, a couple of stargazers in a camper-van pulled onto the field and setup just north of Dean M.

Once back at camp, I quickly powered-on the equipment and initialized the SeeStar. By 7pm, I was back observing faint galaxies in Cetus. First up was another Local Group Milky-Way satellite galaxy – the Cetus Dwarf. The +14.4 mag, 2.8 Mly distant dwarf elliptical proved to be a difficult observation for my C8 SCT.



(8" SCT @ f6.3 on an Atlas Gem, ZWO ASI294MC Pro camera with L-Pro filter, 180 second subs, calibration frames, PHD guided, histogram real-time adjusted, and livestacked using Sharpcap for 30 minutes)

Next in Cetus was the +10.3 mag three arm barred spiral galaxy – NGC145 (Arp19). Located about 52 Mly distant, the spiral displays two major arms both containing knots of star-forming regions, along with a short stubby third arm. Several small PGC galaxies are in the FOV: PGC1047615, PGC1048844, & PGC1049398. Here's the EAA observation below:

(same scope info and exposure, livestacked for 30 minutes)

I then moved the telescope over to NGC151, a +11.6 mag near face-on barred spiral with a distorted asymmetrical spiral arm that looks like it is extending out to what is actually a much closer foreground star. Nearby is faint PGC987022.

(same scope info and exposure, livestacked for 30 minutes)

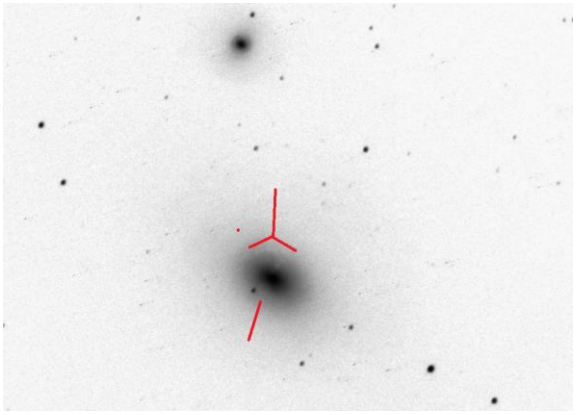
I had two more galaxies left for Cetus before moving on: NGC157 & NGC908.
NGC157 (on the left) is a 62 deg inclined spiral displaying several spiral arms with knots and dark lanes, and a bright core. The +10.4 mag galaxy is 75 Mly distant.
NGC908 (on the right), is a +10.8 mag spiral located about 56 Mly away. NGC908 is a starburst galaxy with a number of bright star=forming regions visible in its spiral arms.

(same scope info and exposure, livestacked for 30 minutes)

I then dived southwards back into Fornax to view the 60 Mly distant Fornax Galaxy Cluster as listed in the January 2015 "Sky & Telescope" article. Here's the observation of the central region of the galaxy cluster, containing NGC1379, NGC1381 (edge-on spiral), NGC1382, NGC1387, and PGC13343.

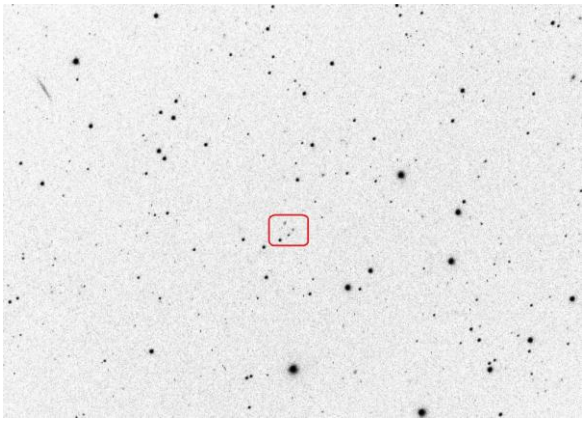
(same scope info and exposure, livestacked for 21 minutes)

The brightest member of the galaxy cluster, at +9.4 mag, is located a little distance out of the FOV of the main grouping, lenticular galaxy NGC1316. Nearby is the small spiral NGC1317 which may be interacting with the larger galaxy (Arp154). NGC1316 is the 4th brightest radio source in the night sky, called "Fornax A".
A dark dust band can just be faintly seen in NGC1316's halo.



(same scope info and exposure, livestacked for 30 minutes)

With the time now past midnight, and my appetite whetted for galaxy clusters, I slewed the telescope up to Pegasus to scoop-up the tiny Palomar Galaxy Cluster – PCG2350+1537. The +15.7 mag cluster consists of four little points of light, each a galaxy!



(same scope info and exposure, livestacked for 15 minutes)

Looking at my watch, I decided that I had time for one last deep-sky object using the C8, so I headed over to Orion and the little rabbit under his feet – Lepus the "Hare".
My target was the +13.7 mag Abell Galaxy Cluster – Abell548. (formally called ACO548).

Tiny little galaxies overflowed the scope's FOV. Flipping Sharpcap to a B&W display made it easier to find the numerous faint PGC galaxies.

Here’s all the ones I was able to identify: PGC17892, PGC17893, PGC17921, PGC17885, PGC17915, PGC17926, PGC17943, PGC17925, PGC17899, PGC17900, PGC17924, PGC17912, PGC17986, PGC17863, PGC17855, PGC17857, PGC17879, PGC17874, PGC17856, PGC75440, PGC75458, PGC75459, PGC75461, and PGC75463. Whew! 25 individual PGC.

(8" SCT @ f6.3 on an Atlas Gem, ZWO ASI294MC Pro camera with L-Pro filter, 180 second subs, calibration frames, PHD guided, histogram real-time adjusted, and livestacked using Sharpcap for 30 minutes)

In-between hunting galaxies with the C8, I had the S30 SeeStar working on mosaics. The first one of the evening was the Alpha-Persei OB Association (Melotte-20) around Perseus’s brightest star – Mirfak for an hour & 20 minutes. I then wanted to get a mosaic of the “Flaming Star” and Tadpoles” nebula, centered on a bright five-star asterism called the “Minnow”. Due to the size of the mosaic, it took the S30 SeeStar two hours and 15 minutes to complete. I think it was worth the wait.

(SeeStar S30, 60 second exposures in EQ mode with the IR or NB filters, livestacked for 80 minutes for Melotte-20, then 135 minutes for the “Minnow”, AI noise reduction applied)

Shortly after 12:30am, Dean S was the first to pack away his telescope. At around 2am, I finished my last observation and began breaking down the 8” telescope and packing it into the car. Before I was finished, Dean M was out putting away his scope. Gary had decided to take a chance and wait till first light, so he just covered his scope as usual.

I stayed up till nearly 3am to let the S30 finish the mosaic of IC405 / IC410. Once done, I quickly disassembled the SeeStar and put it in the back of the camper till morning, and crawled into bed.

Tuesday 11/18/2025:

After about 5 hours of sleep, I was up at 8am to begin packing the camper for home. Gary was outside packing his telescope in a light drizzle. Dean M was the first to pull out for home shortly after 8:30am. At about 9am, Dean S was heading out, and I left the park about 30 minutes later. Gary was doing a zoom meeting and not leaving till later.

After stopping for lunch, I arrived back home around 2:15pm, backed the camper down the driveway and began unpacking.

Thus ends the November 2025 astro-trip to Calhoun. My last outing for the year as I winterized the camper the next day to prep for storage.

While not a fun trip for sitting outside and visiting, due to the chilly temps, it was a good late season observing run, getting in three out of five nights. That gives me 63 nights out astro-camping this year, from a total of 13 trips, on which 33 nights I was able to EAA observe, while 30 nights I was clouded/rained out. Not the best of years, but I still made it a little over 50%. Here's hoping for clearer skies in 2026!

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