Calhoun County Park, WV. July, 2024

With the 4th of July celebration in the bag, a group of us headed down to the Calhoun Cty Dark Sky Park in West Virginia. I was especially looking forward to the low southern horizon that the new observing field at Calhoun offers, with the Starclouds of Scorpius and Sagittarius hitting the southern meridian at a decent evening hour. I was also looking forward to being able to run my camper AC, as there's abundant electrical power on the field, and the forecast for scorching outdoor temps.

Friday 07/05/2024:

Left Pittsburgh around 10am under humid, warm, cloudy skies. As I drove southwards, the sky gradually cleared.

Experienced a Big Issue with the rear clamshell hatch opening twice on the interstate. Even when locked, if I hit a pothole, it was enough to cause the lock handles to pop open. Lost several small items, with the biggest loss being my out-of-print Barnard's Dark Nebula Atlas. I back tracked and was able to find the book lying on the side of the road. It was pretty beat up from hitting the ground at 65mph, but other than three or four pages that ripped out and blew away, along with a few tire tread marks, I was able to find the book mostly intact to be still usable. (Even found the dust cover).

This put me way behind in the trip, so I didn't arrive at the park until 4pm.
Dean M, Dean S and Gary S were already setup, having come down on the 4th.



I pulled in at the far southern end of the observing field next to Dean S and spent the next several hours setting up camp and telescope in the sweltering Sun.
My usual EAA telescope setup: 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 with a ASI294MC camera (uncooled model),and a 60mm Antaries refractor guidescope with an ASI120MC camera. Attached to the bottom rail of the main optical tube was my ASI290MC camera with a small Canon 5.5-50mm CCTV lens as a super-widefield finder.

Finally finished up by 6:30pm in time to join the guys for grilled barbeque chicken sandwiches at Dean M's air-conditioned camper.


While we were eating, a strong storm went over with Gusty winds and torrential downpours. This lasted till almost 8pm. After the storm finally let up, I headed to back to my camper which the AC had finally cooled down comfortably, to phone home.

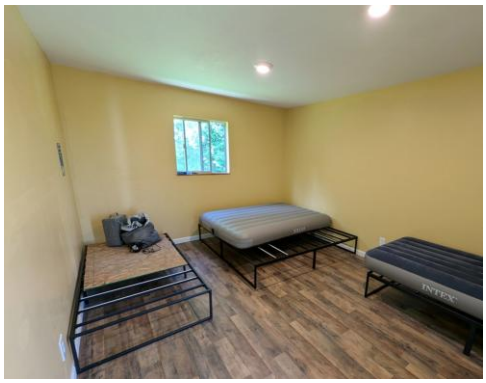
At dust, under a partly cloudy sky with ground fog forming on the observing field, Polaris appeared and I was able to get the mount polar aligned and the scopes focused.

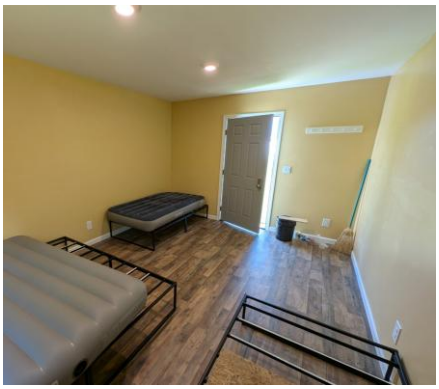
The sky started off somewhat clear, enough for spending a few minutes chasing sucker holes, but the sky began to close up before I could really get in any EAA observing. Covered up the telescope and headed indoors to read. Stay up till half past twelve.

Saturday 07/06/2024:

Slept in till 8:30am. Woke to a sunny, already warm morning.
Stepping outside, you could really feel the humidity pressing down on us.
Enjoyed a breakfast bagel with cream-cheese that Dean M was serving over at his camper, and then had my usual breakfast. Sat around and visited with the guys for awhile, then assembled my AllSky cam, a ZWO ASI224MC & fisheye lens in a DIY dome.

Went for a short walk around the field and took a few pictures, including the finished bunkhouse and showers. The observatory dome had been cleaned and was awaiting assembly.





Gary and I headed down to Grantsville to Hardman's hardware store where I picked up a few items to do a repair on the camper hatch issue.
Around 2:30pm, Denny H pulled in and setup over near Gary, then about 45 minutes later, Ed K arrived and setup to Denny's north.

Also Ed and Jacob from Pgh arrived and setup over by the bunkhouse where they were staying. And Geoff C from Pgh, with his Casita camper arrived and setup next to Ed. Later, a couple from Charleston, Bart and Whitney arrived and setup a small 10" dob between Denny and Ed K.

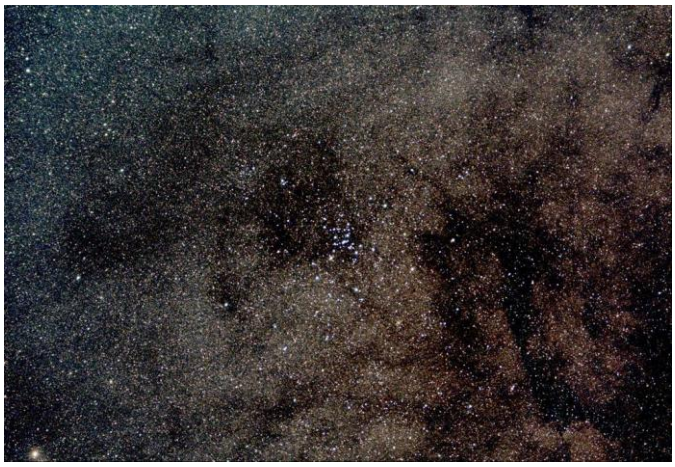
Headed indoors at 4pm for a nap.
At 6pm we all met over at Dean S camper for a group dinner of dogs & brats, potato salad & cole-slaw. We then sat around and discussed news of the world.

At sunset, I prepped my observing notes, assembled the blackout tent, and fired up the telescope and laptop. The deeping blue sky slowly gave way to the soft glow of the Summer Milky-Way rising towards the southern meridian.

First on my EAA observing list was the "False Comet" region at the base of the Scorpion's Tail. This sparkling wide-field area contains the bright triple-star Zeta Scorpii, two open star clusters NGC6231 and NGC6252, and an HII nebula IC4628, along with dark nebula B48. Here's the wide field view using the Canon Lens at 25mm and the EVO50mm refractor.

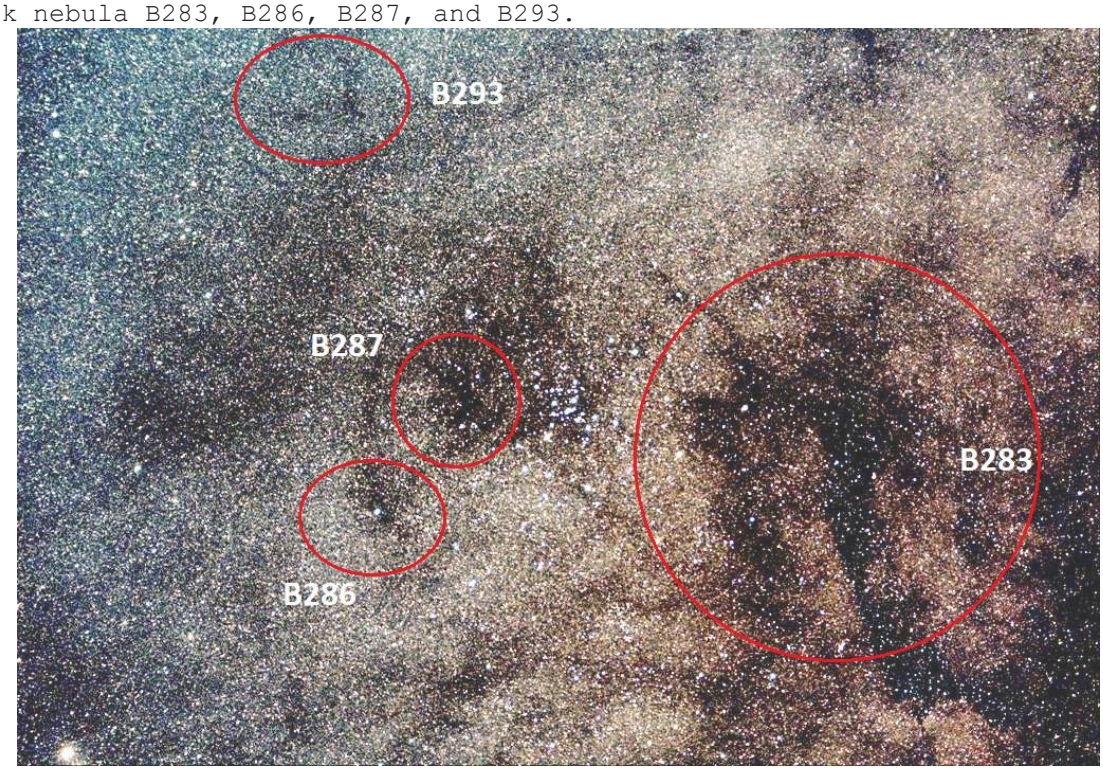
(Canon zoom set to 25mm, ASI290MC camera with IR filter, 60 second subs, for 15 minutes)
(EVO50mm @ f4.2 on an Atlas Gem, ZWO ASI294MC camera with L-Pro filter, 180 second subs, dark & flat calibration frames pre-applied, PHD guided, Livestacked for 15 minutes)

I then slewed the scope a little eastwards to the ‘M7 Starcloud’. Most visual observers and imagers focus on the open star cluster, but if you use a widefield, you can see the cluster is actually embedded within a small Milky-Way starcloud that also contains a number of dark nebula. Here’s my observation using all three optics, starting with the widefield Canon 25mm lens, then the EVO50mm, and finally the 8” SCT:



(Canon zoom set to 25mm, ASI290MC camera with IR filter, 60 second subs, for 35 minutes)
(EVO50mm @ f4.2 on an Atlas Gem, ZWO ASI294MC camera with L-Pro filter, 180 second subs, dark & flat calibration frames pre-applied, PHD guided, Livestacked for 36 minutes)
(8" SCT @ f6.3 on an Atlas Gem, ZWO ASI294MC Pro camera with L-Pro filter, 180 second subs, dark & flat calibration frames pre-applied, PHD guided, livestacked using Sharpcap for 15 minutes)

And here's an overly Sharpcap Livestacked histogram stretch of the EVO50mm showing Barnard dark nebula B283, B286, B287, and B293.

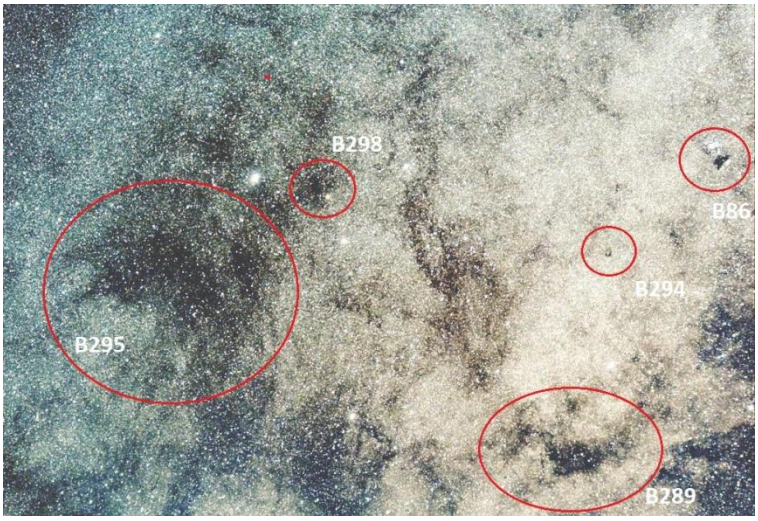


Continuing moving the telescope east to avoid flipping the meridian, I settled on an obscure small globular starcluster NGC6723 in the southern constellation Corona Australis located below the 'Tea Pot'. (This is where Calhoun's low southern horizon helps).
The region below the globular also contains several reflection nebulas – NGC6726/6727, 6729, and IC4812, along with dark nebula SL39 & SL40. Unfortunately, towards the end of the livestack, a slight haze had begun moving in, obscuring and adding noise to the widefield. Here are the observations: EVO50mm of all objects & 8" SCT of just the glob.

(EVO50mm @ f4.2 on an Atlas Gem, ZWO ASI294MC camera with L-Pro filter, 180 second subs, dark & flat calibration frames pre-applied, PHD guided, Livestacked for 27 minutes)
(8" SCT @ f6.3 on an Atlas Gem, ZWO ASI294MC Pro camera with L-Pro filter, 180 second subs, dark & flat calibration frames pre-applied, PHD guided, livestacked using Sharpcap for 33 minutes)

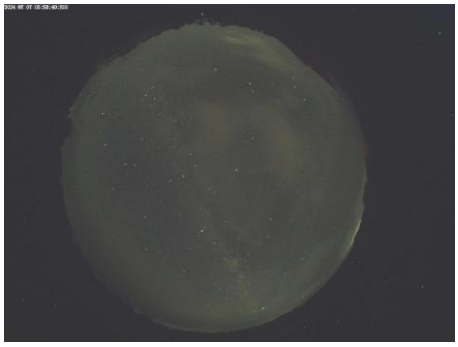
Around 11:30pm, I took a break and walked over to visit with everyone, handing out KitKat snacks. Dean S was imaging IC5070 – 'the Pelican Nebula' in Cygnus and then later M17 – 'the Swan' in Sagittarius. Denny was also imaging the Pelican and later M6 – the Butterfly Cluster' in Scorpius. Dean M was shooting NGC7000 the 'North American Nebula' in Cygnus, Gary was gathering data on M101– 'the Pinwheel' in Ursa Major, and Ed K was narrowband imaging 'the Trifid' – M20 in Sagittarius.

I then headed back to my observing station and directed the mount over to the middle of the Large Sagittarius Starcloud centered on the small globular cluster NGC6522 and a region called 'Baades Window' off the tip of the "Tea Pot" that is somewhat free of foreground gas & dust allowing the observer to see deeper into the starclouds of the heart of the Milky-Way. While the globular isn't much to write home about, the starcloud contain a number of Barnard dark nebula.



(Canon zoom set to 25mm, ASI290MC camera with IR filter, 60 second subs, for 18 minutes)
(EVO50mm @ f4.2 on an Atlas Gem, ZWO ASI294MC camera with L-Pro filter, 180 second subs, dark & flat calibration frames pre-applied, PHD guided, Livestacked for 18 minutes)
(8" SCT @ f6.3 on an Atlas Gem, ZWO ASI294MC Pro camera with L-Pro filter, 180 second subs, dark & flat calibration frames pre-applied, PHD guided, livestacked using Sharpcap for 21 minutes)

Around 12:30am, clouds began creeping into the NW sky. By 2am, the entire sky clouded over. Gave it a half hour to see if it would clear, then called it a night, covered the scope and headed to bed.



Sunday 07/07/2024:

Slept in till 9am, woke to a warm camper. I quickly kicked the AC setting down lower. It was another sunny, humid morning. The forecast was for a hot day, partly cloudy, but clearing overnight. Spent time inside the camper having breakfast, reading/posting to the Internet, and processing a few images on the laptop.

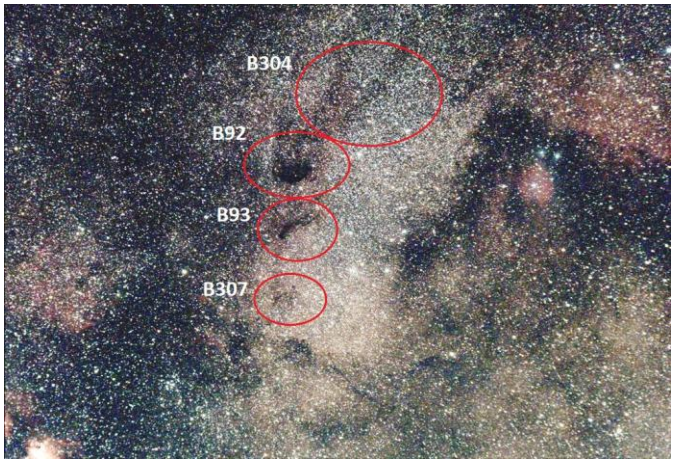
Stepped outdoors and visited with folks for awhile, occasionally ducking back inside to chill. Pulled out a few magazines and caught up on reading.
Made a late lunch, went for a shower, and then an afternoon nap.

Found I had an "ant" problem in the back hatch area. They were crawling up on the stabilizer jacks and USB cables and getting inside. They were even climbing up the legs of the easy up canopy. Discovered that Deep Woods Off spray works as an effective area ant killer just as well on one's arms & legs for mosquitoes and ticks.

At 7pm, we did another group dinner over at Dean S camper, this time was grilled corn, shrimp, and leftover dogs, and various sides including baked beans and watermelon.

After sunset and a phone home, I prepped my blackout tent and powered on the telescope. The sky started off clear, with a thin Crescent Moon hanging in the west, but by dusk, hazy streamers of clouds had begun rolling overhead.

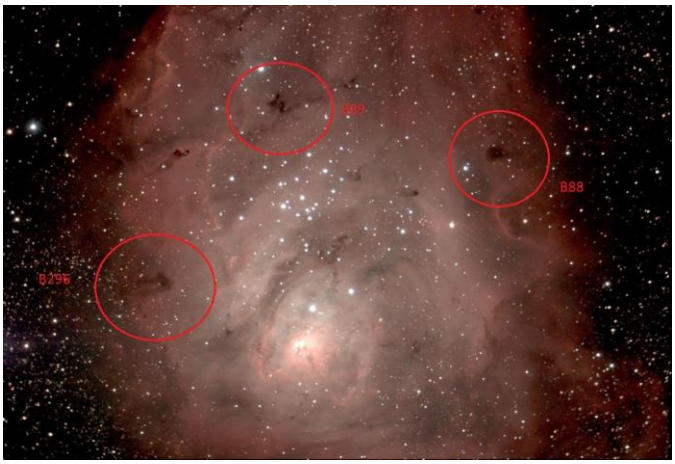
Before long, the sky had gone mostly cloudy. Killed some time visiting with the guys, comparing weather app forecasts, and grumbling about our bad weather luck. Then around 11:30pm the sky opened enough for us to begin observing.
I continued my "Starcloud" hunt by slewing the telescope to M24 – the "Small Sagittarius Starcloud", located above the lid to the "Tea Pot". The Canon Lens at 25mm gave a great wide-field view of the starcloud, along with nearby emission nebula M16 & m17.
The EVO50mm refractor brought out a number of Barnard dark nebula around the cloud, while the 8" SCT filled the monitor with countless stars. Here are the EAA observations:

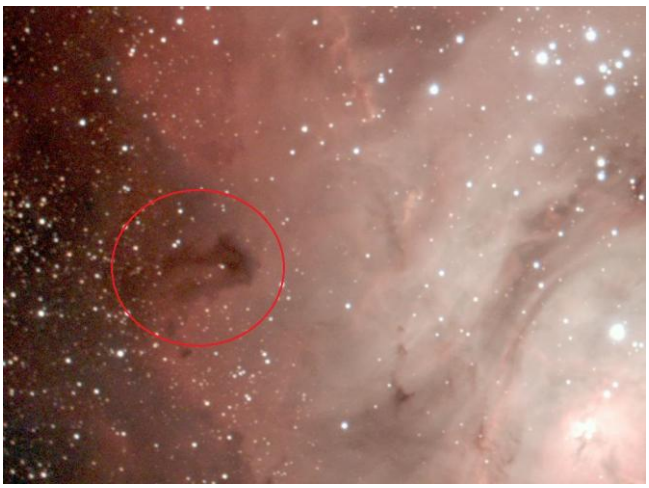


(Canon zoom set to 25mm, ASI290MC camera with IR filter, 60 second subs, for 19 minutes)
(EVO50mm @ f4.2 on an Atlas Gem, ZWO ASI294MC camera with L-Pro filter, 180 second subs, dark & flat calibration frames pre-applied, PHD guided, Livestacked for 21 minutes)
(8" SCT @ f6.3 on an Atlas Gem, ZWO ASI294MC Pro camera with L-Pro filter, 180 second subs, dark & flat calibration frames pre-applied, PHD guided, livestacked using Sharpcap for 15 minutes)

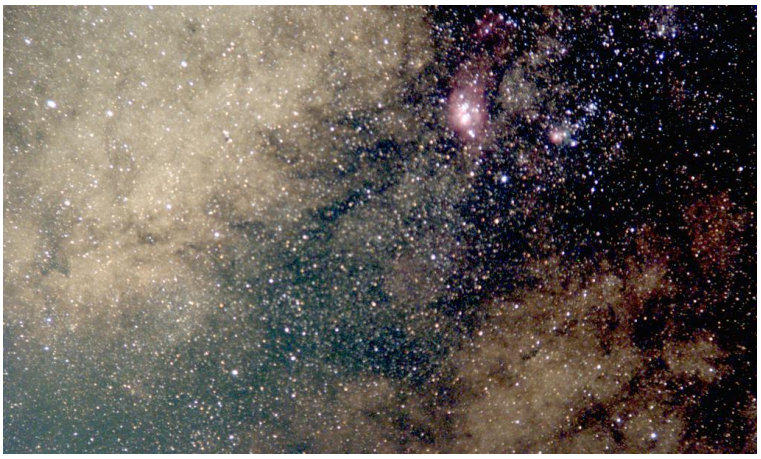
While I was observing M24, Dean S was imaging M16 – 'the Eagle Nebula' in Scutum, Gary continued to image M101 and also began imagining M16, Ed continued with the Trifid, Dean M continued with the N American Nebula, and Denny continued with the Pelican Neb.

Looking for a few easy dark nebula, I next sent the telescope over to M8 – 'the Lagoon Nebula', also in Sagittarius. In addition to the dark lane that gives the Lagoon its moniker, there's a number of dark globules backlit by the bright Ha emission nebula, including several Barnard's: B88, B89, and B296. Here's the 8" SCT observation:





And the starcloud view using the Canon 25mm Lens and the EVO50mm refractor that pulled in the nearby bright emission/reflection nebula M20 – 'the Trifid Nebula':



(Canon zoom set to 25mm, ASI290MC camera with IR filter, 60 second subs, for 21 minutes)
(EVO50mm @ f4.2 on an Atlas Gem, ZWO ASI294MC camera with L-Pro filter, 180 second subs, dark & flat calibration frames pre-applied, PHD guided, Livestacked for 21 minutes)
(8" SCT @ f6.3 on an Atlas Gem, ZWO ASI294MC Pro camera with L-Pro filter, 180 second subs, dark & flat calibration frames pre-applied, PHD guided, livestacked using Sharpcap for 21 minutes)

With the observing field growing quiet from the imagers one by one putting their scopes on auto and hitting the sack, I continued the starcloud hunt by next turning my EAA kit towards the Scutum Starcloud. In addition to the countless stars, several Barnard's were located near the cloud, B103 & B188:

(Canon Lens at 25mm - 60 second subs, for 15 minutes)
(EVO50mm @ f4.2 - 180 second subs for 15 minutes)

As I was wrapping-up the dark nebula observations in the Scutum Starcloud, more local 'terrestrial' clouds began to quickly march in from the west, and soon covered the sky. After consulting the weather satellite and giving it a half-hour to see if the clouds would dissipate, I called it a night at 3am, powered down and covered the scope, disassembled the blackout tent, and headed indoors to bed.

Monday 07/08/2024:

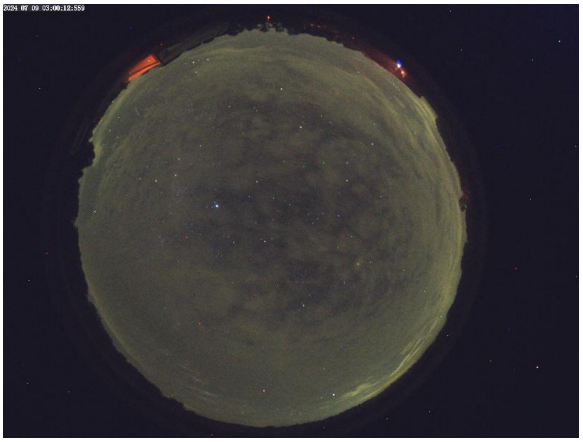
Another late wakeup call. By 9am it was already to getting hot outside, the temps expected to hit the lower 90s this afternoon. Visited with Gary and Dean S for a bit, and then headed back inside the camper for breakfast.

Ed & Jacob from Pgh packed up and headed northwards. Denny was also packing up, having decided to head home, (and was on the road by 11:15am), but the rest of us had decided to stay one more night. The remnants of Hurricane Beryl were expected to pass thru on Wednesday bringing clouds and rain. But the weather forecast for tonight (Astropheric and Windy) showed we should get in one more partly cloudy night.

I decided to pack away my easy up canopy and a few other camping items to make it easier on loading up on Tuesday when I was planning on heading home. I left one of the window blinds open (was tired of the cave effect), and the inside camper temp climbed to 75. (Was currently 88 outdoors). Fixed that! Brought the camper temp back down to 72.

Took a long afternoon nap, and then phoned home.
At 6:30pm, we had a last group dinner with Geoff C joining us over at Dean S camper. Tonight was grilled chicken and baked Mac & cheese & beans. (I'm putting on weight).

Afterwards I prepped the blackout tent and scope. Sky wasn't looking too great, with hazy clouds rolling in at sunset.

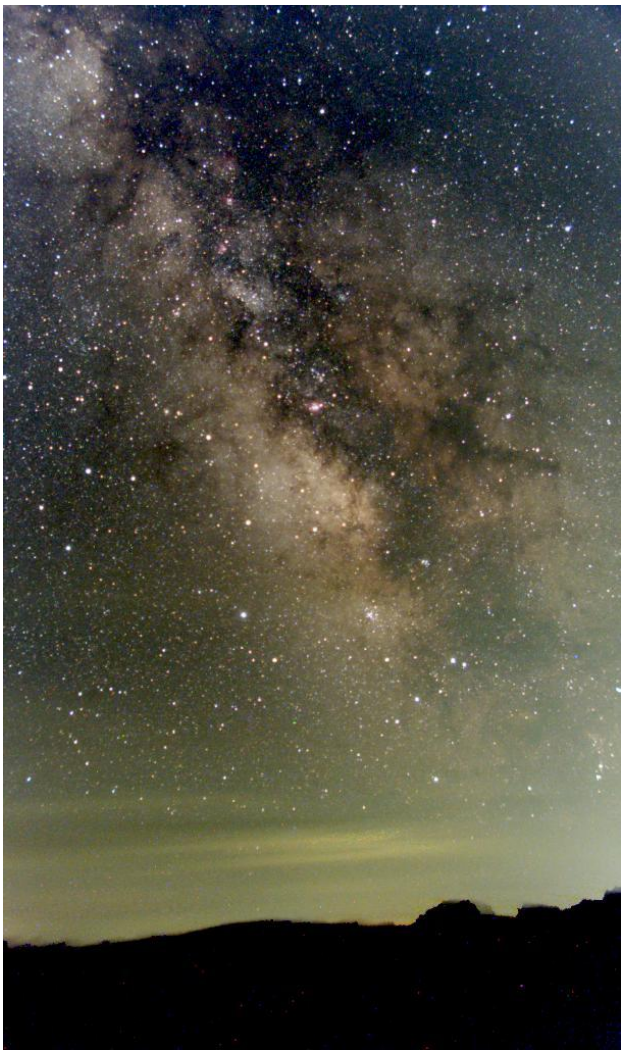


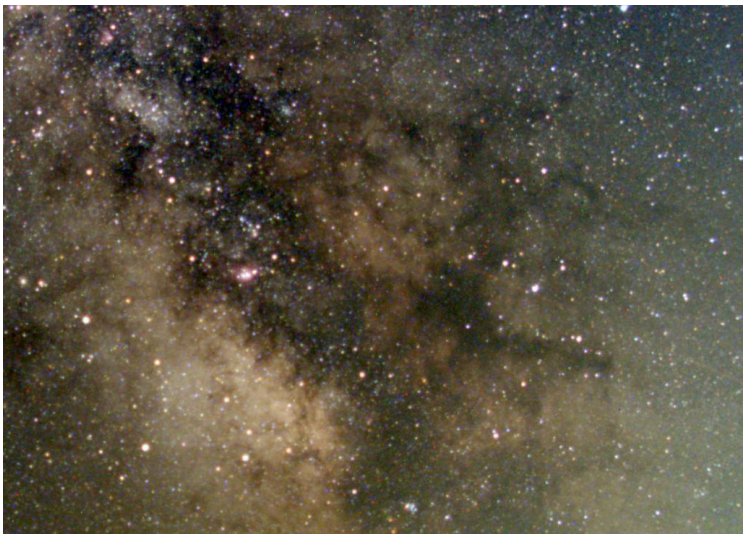
It stayed mostly cloudy till 11:30pm when it partly cleared.
I spent the next hour observing the center of our galaxy using the Canon lens set to 5mm, fighting with periodic bands of haze and light clouds drifting thru the field of view.

Ed K spent the evening imaging the 'Crescent Nebula' in Cygnus. Gary and Dean S both continued with M16.

Feeling drained from the heat over the past several days, along with getting a late start this evening from the clouds, I called it an early night at 1am.

Cloud bands kept interfering, but here's a close-up of the 'Galactic Dark Horse', and the un-cropped "down to the horizon" view:





(Canon Lens set to 5mm, ASI290MC camera with IR filter, 60 second subs, for 15 minutes)

Tuesday 07/09/2024:

Set an alarm and was up early to pack away the telescope before it became too hot. Both Dean's and Gary S were busy packing. Geoff was also breaking camp. Only Ed K was planning on sticking it out thru the week. Dean M was the first off the field, followed a half-hour later by Dean S and Geoff. By 10am I had finished hitching the camper and after changing into a dry T-shirt was on the road home to Pittsburgh. Gary wasn't too far behind in leaving. By Noon, it was just Ed K and the coyotes left on the field.

This concludes my trip report for the July outing to Calhoun. While it was a hot and humid camping trip, the AC made the daytime temps tolerable, and I was able to EAA observe three out of four night, though none were all nighters or completely cloud free. Still, I was able to meet my primary observing goal – the starclouds of Scorpius, Sagittarius, and Scutum.
Looking forward to returning to Calhoun later in 2024!

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