Calhoun County Park, WV. April, 2022

After carefully watching the weather forecast over the weekend, I made the decision to spend the April New Moon at Calhoun County Park, WV. While Cherry Springs actually had the better clear sky prediction, it also was going to be a lot colder, in the mid 20's at night, Birrrrr!!!!! I'd rather try my luck and head south to warmer temps.
So, in addition to the usual food stables, I loaded a mix of cool/warm weather clothing into the camper, packed-up the Astro-equipment, and hooked-up the camper & SUV.
Monday was a wash-out, so I waited one more day before traveling.

Tuesday 04/26/2022:
The day started off rainy. So I waited till mid-morning to let the heavier stuff pass over before starting the drive south. I started off under drizzly skies, but soon the clouds began to lift with occasional peeks of the Sun breaking thru. By the time I hit the WV state border, the roads were dry and it turned into a beautiful drive down I79 thru the mountains. At a rest-stop along the way, I was treated to a close-up look at a giant wind-turbine blade that dwarfed my little camper.

It looked like an older blade that was being replaced as it was discolored from weathering and had several pits and cracks in the structure.

I arrived at the park ~2:15pm to find Dean S (from the ORAS club) waiting for me up on the new observing field. It was a bit of a muddy mess from all the heavy rain the previous day, in addition, the northern section was a construction zone from the local career center working on finishing up the new Astro-Cabin for the Thursday grand opening. And, due to the continued economic supply-chain delays in getting the necessary electrical components, the park has been unable to finish the power pedestals.
After accessing the field situation, we decided to bail on setting up on the new field. So we headed over to the ridge above the Red Barn to camp. The ridge was still a little damp when we drove up, but between the mostly clear, Sunny skies and a steady breeze, it soon dried-out nicely.

After getting camp squared away, I assembled the telescope: an 8” Celestron SCT optical tube @ f6.3 with a ZWO ASI294MC Pro camera and filter wheel 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 the Allsky cam, a ZWO ASI224MC & fisheye lens in a DIY dome.

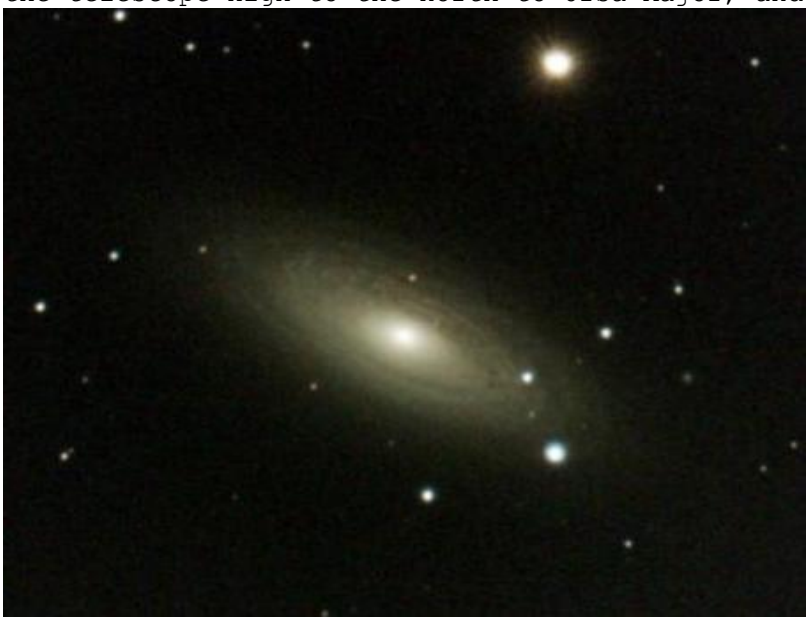
Late afternoon, the wind picked up and it became quite gusty at times. The sky was a clear deep blue and high-altitude jets left barely any contrails to see. It was going to be a really good night of observing, if the wind would die down. Finally, around sunset, without the daytime heating, the winds dropped to an occasional light breeze, just enough to keep the dew away but not too much as to impact guiding. I uncovered the telescope and powered up the laptop and cameras, and prepared my observing notes. Tonight was going to be EAA galaxy hunting using the L-Pro broadband filter and my plan was to use the last several issues of Sky&Tel magazines, packed with galaxy observing articles.

After spending more time than I preferred, working thru a few equipment issues, (mainly from lack of practice out in the field), I had the telescope mount polar aligned and GOTO calibrated and the cameras all focused and ready to go. Though we were a little concerned earlier from looking at the forest-fire smoke map, Tuesday evening turned into a really good night. Skies that had cleared at dusk stayed clear and transparent, though the breeze did kick back up a little till close to 11pm.

After bouncing around several of the Messier galaxies in Leo as a warm-up, the first true video/EAA observation of the night was the large, nearly face-on, barred spiral M83 in Hydra "the Water Snake". Even at Calhoun, it's a low southern object to observe, only reaching about 21 deg in elevation. Here's the observation:

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

While wrapping up the observation of M83, I noticed on the planetarium program that NGC5139 – the great globular starcluster 'Omega Centauri' was nearing the meridian.
So I waited till it was at its max altitude of ~3.5 deg around 12:30am before slewing the telescope. Much to my disappointment, the cluster was buried inside the trees!
After visually sighting down the SCT's tube, I noticed a small clear notch in the tree-line that Omega had probably passed thru 20 minutes earlier. By waiting for the cluster to reach max altitude, I had actually missed my chance for observing it that night. Argh!
I resolved to come back much earlier on Wednesday night to give it another shot.
So I then hurried to slew the telescope higher in elevation to galaxy NGC5128 – 'Centaurus A', hoping to catch it, but again was foiled by the trees, giving me only a glimpse of the peculiar Arp galaxy. But the same notch in the tree-line that will hopefully allow me to observe Omega should also work for the slightly higher galaxy tomorrow night. Having made my plans to ride the centaur again the next night, I pointed the telescope high to the north to Ursa Major, and spiral galaxy NGC2841.



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

Using EAA, I was able to observe great detail of fragmented patchy knots in the galaxy's inclined spiral arms. NGC2841 is known as a 'flocculent galaxy', where a burst of star formation gives its arms a mottled, broken appearance.

At 2am Dean started to notice clouds to our north, the satellite image showed an incoming thick line of clouds from the NW. Then shortly after, by 2:30am the sky was completely wiped out. Nothing to do other than power down the equipment and call it a night.

Wednesday 04/27/2022:

Woke to a sunny and breezy day. Sometime before dawn, the clouds had moved on.
I spent the morning sitting around camp, talking with Dean and reading a few magazines. After lunch, I made a few tweaks to the images from the previous evening, and posted a few emails. Then it was time for an afternoon nap. Throughout the day, the skies were mostly sunny with a steady breeze that occasionally became very gusty. The transparency though was somewhat soft, not as clear as yesterday. In checking the forest-fire smoke map, the western wildfire season was off to an early start! A moderate plume of high-level smoke from fires in New Mexico and Colorado was moving over the region. But there was a break further back that would hopefully arrive at dusk.

Late in the afternoon, several very strong 30+ mph wind gusts nearly ripped the visor canopy off the side of my camper. It actually broke one of the fiberglass shock-rods that holds it up. With help from Dean, who had earlier wisely closed his camper's awning just before the gust hit, we were able to remove the visor canopy before it was badly damaged. Not long afterwards, ~4pm, Columbus amateur astronomer and CloudyNight member 'Al' arrived and joined us up on the ridge, setting up his tent and 17" Dob to my west.

At dusk, the wind finally died down and the cloud forecast for the evening was looking good! While the sky transparency had improved, it still wasn't as good as Tuesday night, and there was another thin plume of smoke heading our way that might impact us towards midnight. The net affect was if you went for objects with a high elevation, the observing should be ok. I soon had the telescope uncovered and powered on. With Virgo/Coma Berenices approaching the meridian, I began working in that area, focusing on several galaxies in Markarian's Chain. The best non-Messier observations were the interacting pair of galaxies nicknamed "The Eye", NGC4435 & 4438, (also called Arp120), along with nearby highly inclined spiral galaxy NGC4216.

Here’s the EAA observation of both:

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

Around 11pm, I left the chain unfinished and slewed the telescope southwards towards the horizon where the stars of Centaurus were hovering over the tree tops. After first settling on a nearby bright star to check the camera focus, I then moved the telescope further south to the lower position of Omega Centaurus.

Talk about low-elevation observing! I'm happy to report that Dean and I have joined the '*Observed Omega Centauri from Calhoun*' club. It was literally thru the trees. Using the Canon lens set to 100mm, I could see the large diffuse glow of the cluster shining thru and around the limbs. I walked over to the telescope and once again sighted down the nearly horizontal tube to see where I was pointing. I quickly realized that even with the approaching notch in the tree-line, the globular was never going to actually clear the tree tops. But it was nearing a thinner section of limbs where I had a chance to get in an observation. I quickly called Dean and Al over, and within a few minutes NGC5139 moved into a slight gap and I quickly made an EAA observation with the main camera on the 8” SCT. Soon afterwards the cluster dived back into the thicker foliage and was lost to view. But, at least all three of us got in a quick view! The timing was really good for making this observation thru the trees, as the foliage was noticeably thicker a few days later as warm weather really brought on the leaves.

While not a 'pretty picture', this is more of a completed EAA challenge observation.
The object: globular cluster NGC5139 - "Omega Centauri".
Location: Calhoun County Park in central West Virginia. Setup on a ridge of about 1100 ft in elevation. (more about Calhoun at: http://stellar-journ...calhounpark.htm)
At the time of observation, NGC5139 had an elevation of about 3.5 deg.
First the widefield 'finder' image of NGC5139 (Omega Centauri) peeking thru the trees using my Canon-100mm video lens & ASI290MC camera

(single 5 second snapshot from 4/28 at 12:27am)

Here's the main EAA observation of Omega Centauri, again thru the trees, from 4/28 at 12:28am.

(8" SCT @ f6.3 on a Atlas Gem, ZWO ASI294MC camera with L-Pro filter, 20 second subs, no dark or flat frames, not guided, livestacked using Sharpcap for 80 seconds).

With having to use a very short exposure time, we were able to see the dark feature called the "Eye of Omega", which is possibly a dark molecular cloud that is in front of the cluster in our line-of-sight. This is generally only seen visually, as most images are longer exposures to pull-out more of the fainter cluster stars. (to me the feature kinda resembles a skull,,,,)

And finally, here's an observation of galaxy NGC5128 - "Centaurus A" made about 20 minutes prior to the hunt for Omega. With a higher elevation of 8 deg, I was able to catch the galaxy sailing thru a clear gap between trees, before it too eventually dived back into the limbs.

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

After celebrating our success in Centaurus, I pointed the telescope higher up to Coma Berenices and galaxy NGC4559, an inclined spiral that showed good spiral arm details:

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

During the EAA observations with the telescope, I also enjoyed keeping an eye on the AllSky cam in its DIY dome. After midnight, the Milky-Way put in an appearance, along with the occasional meteor.

Here's a time-lapse video from the evening: https://youtu.be/tXzdgZSXKOw

By now it was going on 3am, and having getting chilled from the 36 deg temps, I decided to shutdown the telescope and head inside the camper to a warm bed.

Thursday 04/28/2022:

Slept in till 9am. After breakfast, spent time around camp visiting with Dean. Al had only come down to Calhoun for one night to try it out and was busy packing up his tent and telescope. Before long, he was headed back to Columbus, leaving the ridge to Dean and myself. Around noon, another CloudyNighter, Glen, stopped in to visit. He told us that he had just spoken with Rodger J from the park and that we were all invited to the Astro-Cabin grand opening festivities and luncheon. So at 1pm, Dean and I hiked over to the new observing field for the ribbon cutting, where we met up with another local CloudyNighter John D who was there. Here's a few pictures of the cabin and event from the afternoon:

It was a beautiful day for the festivities and the cabin looks great!
Afterwards, we enjoyed a nice lunch at the Red Barn prepared by the culinary students from the career center.
Here's a link to a local news story about the grand opening: ridgeviewnews

Dean and I then walked back up the ridge to our campsite, and spent the afternoon back at camp where both John and Glen dropped in later to visit and see our equipment.
As we sat there in our chairs, we watched the sky slowly become hazy, thickening into a sky obscuring overcast. After checking the weather forecast, we decided to have an extended happy-hour and drown our sorrows. Dean then pulled out a bunch of leftovers from his fridge and invited me to dinner-el-fresco. We stayed outdoors and watched a fiery sunset thru the clouds, and we both headed indoors to our campers. Stayed up till 11pm reading, and got a good night's sleep.

Friday 04/29/2022:
Woke up around 7am, rolled-over and slept in till 9am. LOL!
It was a partly sunny day, with the overnight low temps in the mid 40's slowly rebounding to the mid 60's by 11am. It was a pleasant late morning to sit outdoors in the Sunlight.
The forecast for the evening was a little iffy and while we thought about breaking camp and heading home, we decided to stay for one more night.

Around noon, Dean and I went for a hike along the trail that runs along the hillside below the ridge where we were setup, past the Red Barn and campground up to the new observing field and cabin. After walking around the field and inspecting the progress on the electrical pedestals, we headed back to our camp on the ridge. Both of us are really looking forward to observing from the new field, once the electricity is hooked-up.

While Dean headed indoors to process images and take a nap, I spent time reorganizing several of my astro-accessory cases and then worked on creating a new set of calibration flats for the 8" SCT using the L-eNhance, L-Pro, and IR filters.
Then I pulled my chair over under some shade and enjoyed a little reading.

After dinner, the sky once again became overcast. Upon checking the updated weather forecast, it was apparent that the night's observing was a lost cause, with rain expected before dawn. UGH!!! So Dean and I reluctantly began to pack up our equipment and had most everything stowed by dusk. Dean left his scope and mount setup as he wanted to try and sight on a star so he could adjust the focus on his guidescope. Fortunately, Sirius popped thru a gap in the clouds and Dean was successful. Afterwards, I assisted him in putting away the last of his equipment and we then sat out for a bit under the darkening clouds enjoying an adult beverage or two. With a chill in the air, we then folded up our chairs and called it a night. Back in the camper, I pulled-out my 1950's "Flash Gordon" DVD set and watched a few episodes. Both the plot and special effects were hilarious! Called it an early night.

Saturday 04/30/2022:
Up early to a dreary, damp morning to finish packing the camper interior. Had to be quick with breakfast as a heavier rain band was approaching from the west and I wanted to get the camper & SUV hitched before it started to really pour. Dean was also up and about finishing his packing. We both finished around the same time, said our goodbyes, and were both back on the road to home. After about a half-hour on the road, the rain stopped and the sky cleared for the rest of the trip. Arrived back home early afternoon, unpacked the camper and car, and even had time to cut the grass!

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So overall, It was a successful observing trip! Dean and I got to spend several days down in WV at Calhoun Cty Park. Tuesday and Wednesday evenings were decent observing, but Thursday & Friday were clouded-out. (two nights of observing out of four, 50%, not bad).

The park's new observing field will have clear sight-lines to the horizon (next ridge over). Omega should be 'in the clear' from there!
Unfortunately, I'll be at the Cherry Springs Star Party for the next New Moon, and the ORAS Observatory for June. Next trip to Calhoun won't be until July, so a better observation of Omega will have to wait for one more year.
Looking forward to making it back down south to Calhoun later this summer.

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