Calhoun Stargaze - October, 2018

During the last half of September, the weather was very unstable, with heavy rains every other day. For the 1st weekend of October, it was a toss-up as to which of the multiple dark-sky sites that I could choose to go to was going to have the clearest skies. Finally by mid-week the pattern settled down and the Calhoun Stargaze was the winner!

Wednesday 10/03/2018:

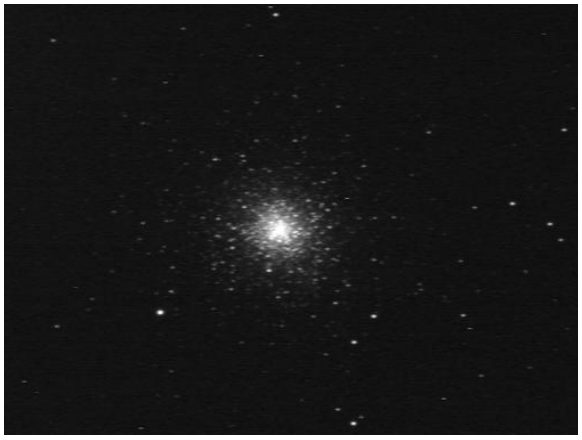
Waited for the overnight storms in Pittsburgh to die down and once the rains had stopped, I hooked-up the camper and by mid-morning was on the road south to Grantsville, WV and Calhoun County Park. Most of the drive was in an occasional light-drizzle but within an hour of the park at the exit from I79 onto Rt5, the sun began to break thru the clouds. Arrived at the park mid-afternoon and setup camp and telescope at my usual spot on the ridge above the Red Barn, next to the shelter building. My main instrument is an 8" Celestron SCT optical tube at f6.3, mounted on a CGem, along with an 80mm Kson refractor and a 60mm guide scope. My video-cameras were the Stellacam-3 on the 8", StellaCam-II on the 80mm, and the ZWO-ASI120MC on the 60mm, used as an autoguider. And a QHY Polemaster USB camera on the mount for polar aligning.

The park had made a few upgrades over the summer, installing 4 additional dual electrical outlets on the lone RV power pedestal on the ridge. That will be handy for later in the week when more attendees arrive and setup further down along the ridge.

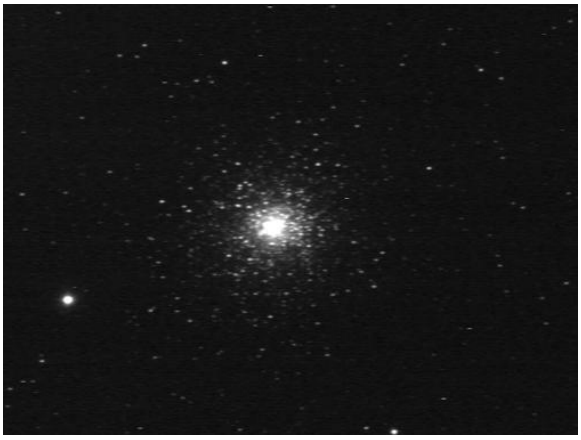
Had a late dinner and made a few phone calls while waiting for sunset. Once darkness had fallen, I watched the planets appear in the evening sky. 1st was ruddy Mars in the south, then Saturn and finally Jupiter low in the SW haze. Soon the bright stars of the Summer Triangle began to wheel overhead, Vega, Deneb, and Altair, and the seven stars of the Big Dipper, Ursa Major, floated above the trees along the northern horizon, pointing the way to Polaris. Before long, using the QHY Polemaster, I was accurately polar aligned and shortly afterwards had the CGem mount's GOTO initialized. With a final tweak of the telescope/camera focus, I was ready to begin observing.

My plans for the evening were to hunt for faint Local Group dwarf galaxies in Andromeda, Cetus, and Sculptor. With a light haze lingering in the sky, dimming the Milky-Way a few notches, I decided to first visit a few bright globular clusters: M15 in Pegasus, located near Enif, the winged horse's nose, and M2 in Aquarius, the water bearer.

To test the 'waters' of transparency, I then went for the 'Deer-Lick' galaxy – NGC7331 in the front legs of Pegasus. Using the November 2018 Sky & Telescope article on going deep in Pegasus, I was successfully able to identify a number of the 'Flea' satellite galaxies around the 'Lick', NGC7335, 7336, and 7337. Video-observing these convinced me that the sky was good enough to go after the really faint fuzzies!



(M2 – 8" SCT f6.3 @ 10 seconds)



(M15 - 8" SCT f6.3 @ 10 seconds)

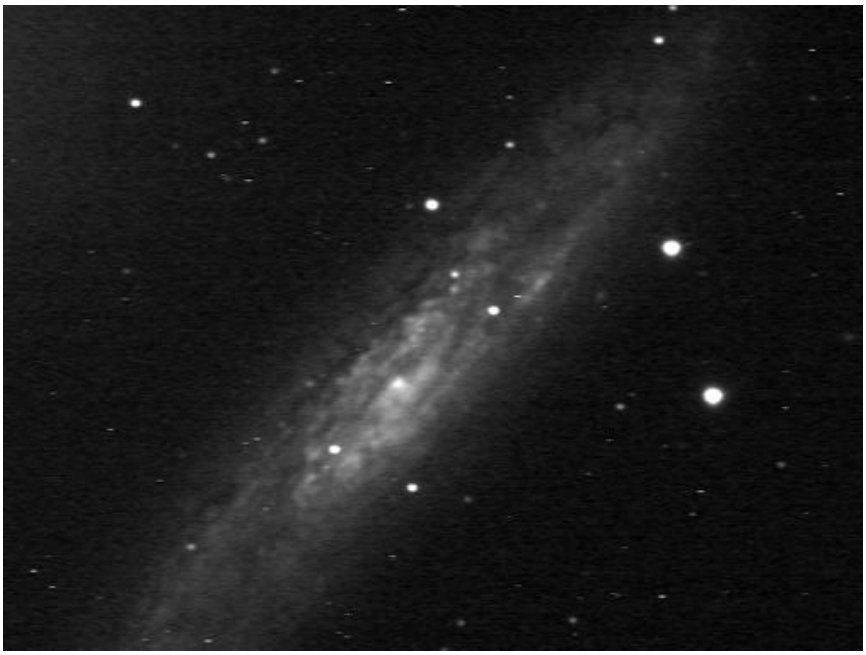
(NGC7331 – "Deer Lick Galaxy" – 8" SCT f6.3 @ 120 seconds)

Shortly after I had finished observing NGC7331, around 8:30pm, a car drove up the hillside and quickly cut its lights when the beams hit my camp. It was Alexi from Pgh!! Driving down to Calhoun straight from work for an imaging session. Alexi pulled in next to me, apologizing for the lights, but I told him 'not a problem'! With videoastronomy, you just wait a few seconds for the next image! ☺ Alexi soon had his telescope and camera up and running and spent the evening wide-field imaging the 'Heart & Soul Nebula' in Cassiopeia.

After showing Alexi my videoastronomy setup, I pulled out Alvin Huey's 'Local Group' guidebook www.faintfuzzys.com and began hunting the elusive AND-I, AND-III, AND-IV, and AND-IX dwarf galaxies, all clustered in the general region of M31 – the Andromeda Galaxy, our sister galaxy to the Milky-Way. AND-I & II were very faint, and I had to go for a long > 3 minute video exposure to bring out even a hint of a glow. And then AND-IV pleasantly jumped right out as a diffuse object at lower exposures.

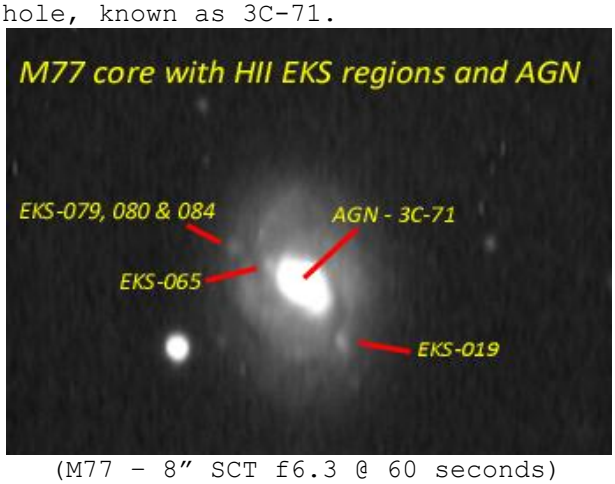
But And-IX proved to be quite frustrating, as even after a long 5 minute exposure there was nothing to be seen on the monitor. I confirmed from the finder charts that I was in the right field, matching up field stars from the map to what I was seeing, and even validated the planetarium program's RA & Dec coordinates matched the chart.
But there was nothing visible. Perhaps it was the less than ideal sky transparency.
I'll have to save AND-IX for another try under better conditions.

With Sculptor and Cetus approaching the meridian in the south, I slewed the telescope over to NGC253 – the 'Sliver Coin Galaxy'. It displayed very nicely on the video-monitor, with a 60 second exposure bringing out the galaxy's dark lanes embedded within the spiral arms. I then dropped down in elevation and picked-up globular cluster NGC288. Both of these objects would be 'showcase' if only they were a little better positioned for northern observers.



(NGC7331 – "Silver Coin Galaxy" – 8" SCT f6.3 @ 60 seconds)

I then video-observed several of the Sculptor Local Group members – MCG-55512 was a definite soft glow and MCG-631 which was exceedingly faint. I moved higher up in the sky to Cetus and got a good video-capture of Local Group member 'WLM' – MCG-3115. I went after the Cetus Dwarf galaxy, but the sky conditions once again kept me from picking it up, even with a long exposure. After that, I decided to head even higher up the whale's neck to M77 the bright Seyfert galaxy near Mira. Once again, using the November 'Sky & Tel', I was able to identify several of its 'EKS' labeled HII star-forming regions. It's also pretty cool knowing that the bright AGN 'Active Galactic Nucleus' core of M77 is feeding a massive black-hole, known as 3C-71.



(M77 – 8" SCT f6.3 @ 60 seconds)

With the clock reading 2:30am and Moonrise coming up shortly, I said goodnight to Alexi and closed down the telescope and headed for bed. A good night of Videoastronomy!!!

Thursday 10/04/2018:

Woke at 8:30am to a warm camper. Alexi had already packed up at dawn and drove back to PGH for his day job at the university. Once I was out and about, uncovered the telescope to let it dry from the night's dew and charged up the telescope and dew heater batteries. Then spent the rest of the morning sitting outside the camper reading and enjoying the sunny warm weather – had the park to myself. Around noon, dark clouds began to build and the weather radar showed storms in the region, but nothing heading toward Calhoun, yet.

Mid-afternoon, Warren and Stephanie arrived with their large RV and headed back behind the Red Barn to the main campground to setup. I then decided to try and take a nap in the warm camper, with a fan blowing on me, but it wasn't very restful, just too hot and humid (temp in the low 80's) to be inside. After about 30 minutes, I headed back outside and had a better nap in my camping chair sitting in the shade under the shelter building. Around 4pm, a few light showers drifted over the park, sending me underneath the roof. Finally, at sunset, a heavy line of showers rolled in, and I headed inside my Teardrop to read and listen to the rain hitting the camper's roof. That soon put me to sleep, so an early night to bed.

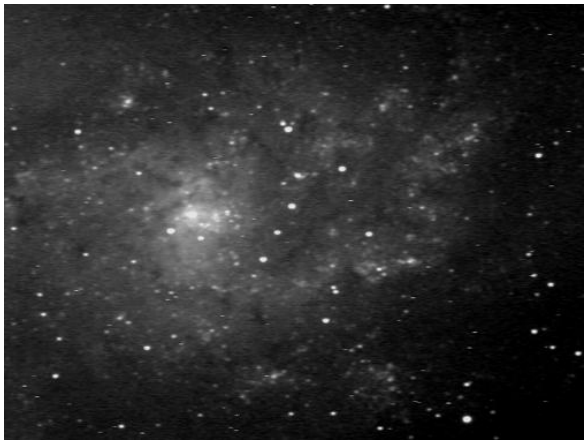
Friday 10/03/2018:

Up early to a damp, cloudy morning. The weather forecast showed improving conditions for later in the day with clearing in the afternoon. It also showed another hot day, with temperatures hitting the mid-80's. After breakfast and a visit to the shower facilities, I reviewed my observing plans for the evening and read one of the books that I had brought with me – Bart Bok's "The Milky Way". It's a little dated, but interesting. Around 10am, Rick from E. PA, arrived, followed an hour later by his friend Paul, who both setup on the ridge. This was their 1st time at the park, so I gave them the lay of the land. After lunch, more folks arrived, including Frank W from Pgh, Brian and his wife who were friends of Warren's, and John D of the Calhoun Stargaze committee. They were soon followed by long-time attendee Craig of NE Oh, and Oz, a friend of Rick & Paul from Hopkinsville, Ky. Then Nick and Mike from the Cincinnati, Oh area, and finally Nate from Tenn. It was getting to be quite a crowd up on the ridge!

Mid-afternoon, I went for a hike over to the future southern observing field. Along the way, I dropped in to visit Warren and Brian. The park had let the field go to hay for the season, and wasn't usable for the starparty. Once back at camp, I took a late day nap outdoors in the shade and then visited with the other amateur astronomers' setup on the hillside.

After dinner, I uncovered the telescope and turned on the laptop and prepared for the evening. At dusk I re-did the Polemaster alignment, as the telescope tripod had slightly sunk into the ground over the past several days, and also put the mount thru a new GOTO align. Shortly afterwards, last year's high-school seniors, now college freshmen, Brie and Nick dropped in to visit with John and I.
Once dark enough, I took them on an extra-galactic video-camera tour of spiral galaxies NGC891, NGC7331, M31, and M33, demonstrating the line-of-sight variations in how galaxies can appear from our perspective, from edge-on, to tilted, to face-on. They enjoyed seeing the details visible on the monitor screen.

(NGC891 – 8" SCT f6.3 @ 180 seconds)

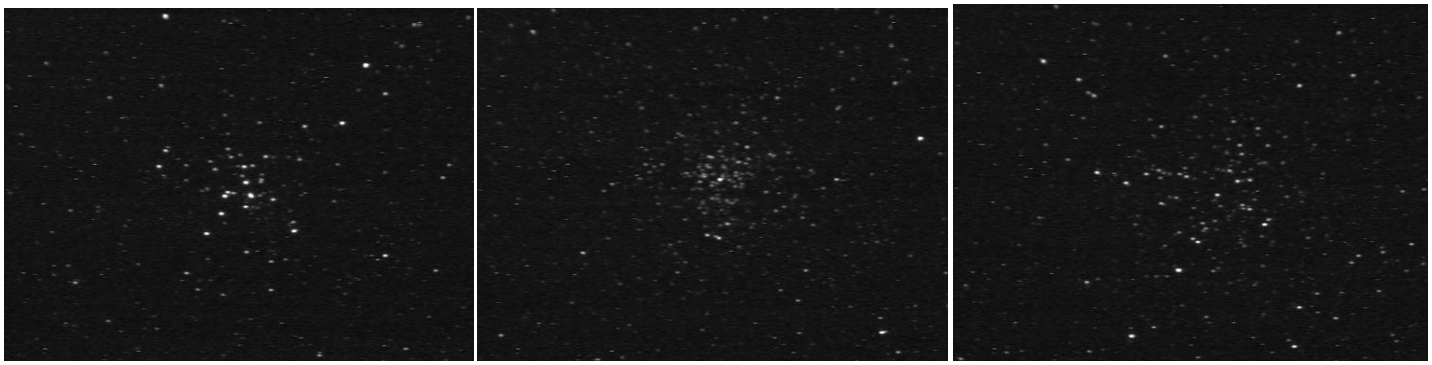


(M33 – 8" SCT f6.3 @ 120 seconds)

John then took them over to his 10" dob for a little olde-school visual observing.
By then the sky conditions had gone downhill, with fog developing along the ridge and the dew so heavy as to almost be raining onto the equipment. Fortunately with the controls on my heaters turned up to high, my optics remained clear of any dew the entire evening.

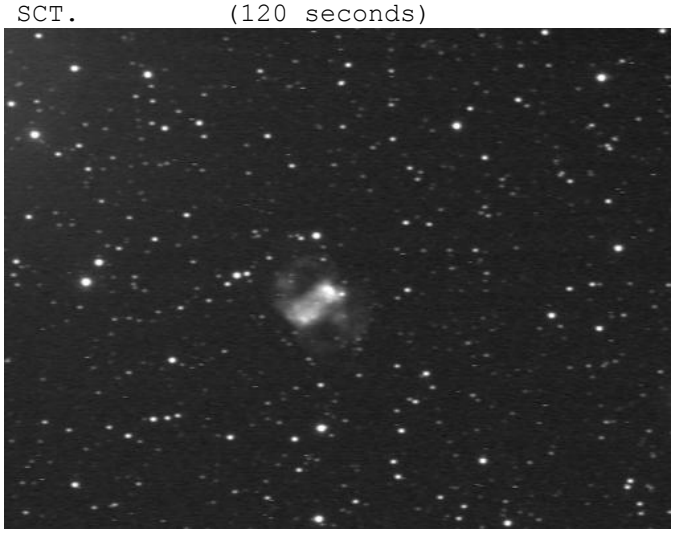
I then attempted to continue with my Local Group survey, back over in Andromeda, rising high in the east. Using Huey's book, I hunted down AND-II, AND-V, AND-X, along with nearby Cetus and Pisces dwarf galaxies. But with the transparency going soft, even long 5 minute exposures failed to pull them up out of the murk. It's frustrating when you are certain that you are in the right location, but nothing is visible! Even the Milky-Way was fading from the mist reaching up past the telescopes.

I resigned myself to abandoning any hope of video-observing anything faint tonight, and instead spent time capturing the bright splashy open clusters of Auriga – M36, M37, and M38 with the 80mm Kson refractor and StellaCam-II vidcam.



(M36 – 80mm @ 8 seconds) (M37 – 80mm @ 8 seconds) (M38 – 80mm @ 8 seconds)

I also paid a visit to the 'Little Dumbbell' planetary nebula in Perseus, M76, which held up well in the foggy sky thru the 8" SCT. (120 seconds)



I tried a few other planetaries scattered around the NE region of the sky, but only had luck with IC1747 in Cassiopeia. By 2am, with no sign of the fog letting up, and in fact, it was actually thickening; I threw in the towel and called it a night. Shut down the computer and cameras, but when I went to use the CGem mount's dew-drenched hand-controller to park and hibernate the telescope, found that it was unresponsive.
After several failed attempts, I finally resorted to hitting the mount's power switch and manually moving the telescope to its 'park' position. Figure I'd deal with the issue in the morning,,,,,

Saturday 10/03/2018

Up by 9am to a quickly warming camper, and opened up the windows and set the roof vent fan to high. Even then, the growing heat rousted me out doors. The weather forecast called for clear skies the entire day into tonight, along with record heat with temps going up to 87F!! Hot!! T-shirt and shorts weather,,, in October!!
I uncovered the telescope to let it dry out from the heavy dew of the night before and set the batteries to charging while I had breakfast. I then took a look at the hand-controller and immediately noticed that there was condensation on the inside of the LCD display window – not good! I carefully disassembled the controller and let it sit on the camper's kitchenette counter to dry out. I then spent the rest of the morning and early afternoon sitting in the shade under the shelter building, talking with Nate, Frank, Nick, Tom, and Craig as we slowly moved our chairs around the building to stay in the shade. The interior of the shelter was filled with heavy picnic tables that none of us felt like moving. During the day, a few more amateurs arrived, including Chuck and his wife, bringing the total up to 16 astronomers from WV, OH, KY, PA and TN.

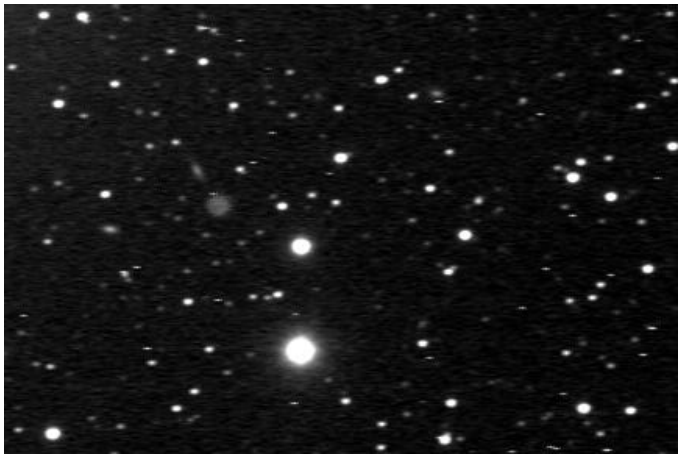
The clear sky and hot sun soon dried off the ground along the observing ridge and around the Red Barn. By mid-afternoon, it was a sweltering 90F! The only thing that made it tolerable was a nice breeze and my neck cooler soaked in chilled water.
The hand-controller looked to be as dry as it was going to get, so I re-assembled it and plugged it into the mount to see what would happen. Unfortunately, it continued to malfunction. I then powered up the laptop and tried directly connecting to the mount, but when I had powered off the mount the night before, I had lost its alignment, and without use of the controller, the laptop's planetarium program would not let me control the mount. It was looking pretty grim for getting any observing done the rest of the weekend, when Paul came to the rescue by loaning me a spare CGem hand-controller that he had with him. A big 'THANKS' goes to Paul for saving the day!!

At 5pm, Park chairman Donnie and his wife Susan threw us a dinner down at the air-conditioned Red Barn. Homemade vegetable soup, chilly, sandwiches, and even dessert! Thank you Susan and Donnie!!

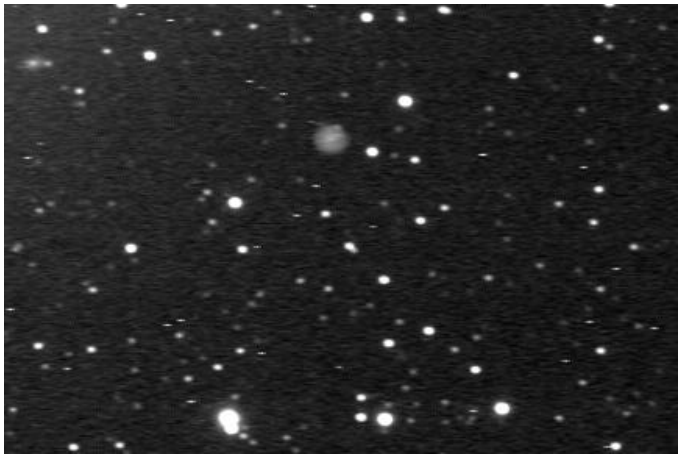
At sunset, a group of local Girl Scouts and their parents dropped in at the shelter, so a number of us demonstrated how our telescopes worked. I gave them a green-laser tour of the sky and told a few mythology stories of the night sky. Unfortunately, soon after they arrived, the sky went mostly overcast, making it hard to point out the Milky-Way and constellations. Still, they enjoyed seeing some of the sky and hearing the stories of Perseus and Andromeda, and the Great Bear, along with looking thru a few telescopes.

Around 10pm, the forecasted clearing finally arrived from the west, and soon we had a clear dark nightsky overhead. The transparency still wasn't the best that Calhoun could offer, but it was pretty decent! I quickly pulled out my Arp Peculiar Galaxy guidebook and began video-hunting a number of Arp's over in the Cetus, Pisces, Aquarius region. These included Arp3, 15, 50, 110, 146, 150, 182, 256 and 323.

At midnight, I took a short break, and then went back to observing Local Group galaxies in Camelopardalis – UGCA86, 92, and a nice NGC galaxy – 1569 that was nearby. With the sky transparency holding stable, I then decided to try my hand at video-observing faint Abell Planetary nebula, so out came Huey's guidebook on Abells, and I soon had vid-captured Abell-4 and 5 in Perseus, Abell-21 in Gemini, Abell-10, 12 and 13 in Orion, and Abell-22 & 24 in Canis Minor.



(Abell-4 – 8" SCT f6.3 @ 180 seconds)



(Abell-10 – 8" SCT f6.3 @ 180 seconds)

By now it was going on 4am, and I was running out of gas, so I reluctantly decided to call it a night and closed down the telescope. As Paul, Rick, and Oz were all still out observing, I returned the borrowed hand-controller to Paul and once again thanked him for its use. I then headed indoors to bed, a happy videoastronomer!!

Sunday 10/03/2018:

Slept in till 9am, woken by a warm camper. I quickly packed the inside of the camper, and moved outside to begin disassembling the telescope. Once that was finished, I folded up the easy-up tent, stowed the remaining camper items, and said my goodbyes to the other attendees. Nick and Tom, along with Craig, and Charles and his wife were also packing to head home that day. But a number of astronomers were staying over Sunday night on the ridge, including Rick and his friends, and Frank and Nate. By 11:30am, I was on the road heading back to Pittsburgh.

Even though this year's starparty was informal, overall, the 2018 Calhoun Stargaze was a success. The weather wasn't the most cooperative, being way too hot and humid for October, which probably contributed to the nightly fog, heavy dew, and less than stellar sky transparency. But, I was able to get in two good nights of observing on Wednesday and Saturday, and a partial night on Friday.
I look forward to future Calhoun Stargazes under dark skies!!!

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