

## Black Forest Star Party - September, 2015

Decided to take advantage of the long Labor-Day weekend and head up to Cherry Springs early for the Black Forest Star Party.

### Saturday 9/05/2015:

After a late Noontime start, I finally made it out of Pittsburgh. The drive-up was uneventful, but once I had driven north of I-80 into the PA 'Wilds' region, I began to notice how the summer season was coming to an end, as there were touches of reds, yellows, and browns in the forested hillsides. Being a holiday weekend, all the little campgrounds along the way were full of people, out for one last camping trip of the summer. I arrived at the park just before 5:00pm and hurriedly threw together my campsite for the night, setting up across from Kiski Astronomers member Bob K. and Mike M. from the LVAAS club along 'Orion Way'.



Probably a good 50 astronomers were on the field, along with a number of general public. Got the 8" Celestron SCT optical tube, finder-scope, dew heater, and C-Gem mount assembled and balanced, along with the StellaCam-II and SC-3 video-cameras, just in time for initial alignment at dusk.

During the drive up and upon arriving at the park, the sky was partly cloudy, but cleared off enough to be usable for video-astronomy. I decided to work on my open cluster survey and spent the next several hours finishing off the Berkeley Cluster catalog, observing over in the NE in Cassiopeia, Cepheus, and Perseus. Some of my favorites were Berk -67 in Perseus, Berk-95 and 97 in Cepheus. By midnight, most of the patchy clouds had given way to a light scatter of haze, but by 1:00am, the eastern sky began to brighten. Called it a night and headed to bed at 1:30am, as the waning crescent Moon bounded over the treetops.

### Sunday 9/06/2015:

Woke early and after breakfast, spent some time finishing the campsite by putting up the camper's awning and squaring away a few other camping items. I then replaced the old 1980-s era University Optics 80mm f3 refractor that was piggybacked on the 8" SCT tube with a new (slightly used) Kson 80mm ED f5.5 refractor with a crayford focuser. On that I installed a second StellaCm-3 camera that fellow Kiski Astronomer Tony O had loaned me for this trip. My observing plan for that night was to use both SC -3's on the 80mm and 8" SCT to hunt dark nebula.



That afternoon, more of the 'regulars' started to arrive, Denny H. from Kiski pulled in and setup beside me, and Tracy N. from Delaware and Dennis from the York club setup next to Bob K taking the space to the intersection with 'Star Ave'. Fred K. arrived late and setup on my north side.



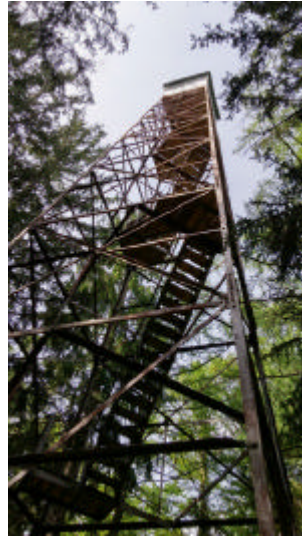
After they were all setup, we spent the afternoon visiting together, along with Conrad and a few others dropping by to say hello. A good number of other folks also arrived to the park, some astronomers, but also a lot of newbie public who kept the park rangers busy telling them about the overnight rules.

The skies stayed clear for the day and once darkness had fallen, I aligned the new 80mm refractor and brought all three cameras to focus. (I continued to use the SC-II on the Orion 50mm refractor as a wide-field video-finder). After spending a bit of time bouncing round the Messier objects over in Sagittarius while waiting for full dark, I finally settled into chasing down the elusive dark nebula objects in Aquila and Scutum. You need a really good dark sky to fully appreciate this class of objects, and Cherry Springs is just such a place! While the 50mm was suppose to be only a 'finder', I ended up also using it to image the larger nebula, taking a series of images with the 50mm, 80mm, and 200mm (8") for each object. These included B-139 in Aquila and B-100, B-103, B-104, B-110, and B-113 in Scutum. I then moved overhead to Cygnus the Swan and went after a number of Barnard's there, B-145, B-157, B-343, and B-364. As I was getting great results from my alignment, achieving up to 60 seconds of unguided tracking with laying 'star-eggs', using the 80mm Kson Refractor, I re-observed the Cocoon Nebula - IC5146, along with the Eastern, Western, and Pickering Triangle portions of the Veil Nebula. I then moved on to several new objects, including reflection nebula Minkowski -92, and emission nebulas IC1318 and IC5068. With it getting late, and moonrise imminent, I finished off the night with a video observation of the Silver Coin galaxy, NGC253, transiting the southern meridian in the constellation of Sculptor.



**Monday 9/07/2015:**

Couldn't sleep in, so was up early. After visiting Lyman Run Park for the shower facilities, I took a drive a few miles down Rt-44 heading east from Cherry Springs. There's a roadside pull-off on top of a hill with a scenic view overlooking the ridges. A few hundred feet further up Rt-44 is the entrance to an old fire tower and CCC camp.



After walking about for a bit, I headed back down toward Cherry Springs and decided to stop in at Keeners for ice-cream. As I pulled in, there was Bob k. just getting out of his car with the same idea. I asked inside the store about the old CCC camp, and the owner told me that it is still used by the local boy scouts, who maintained the building.

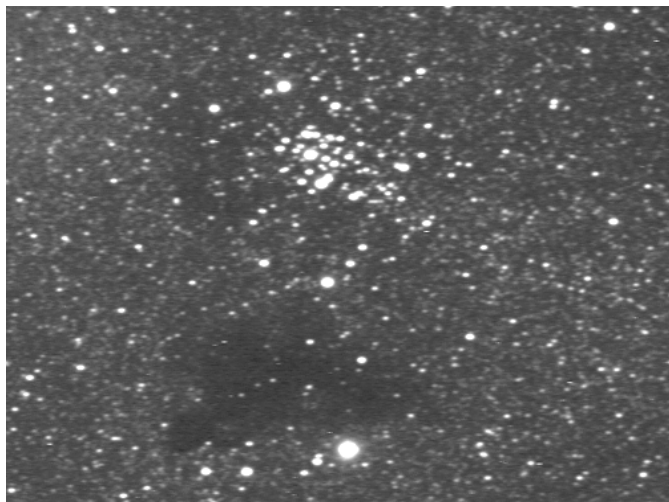
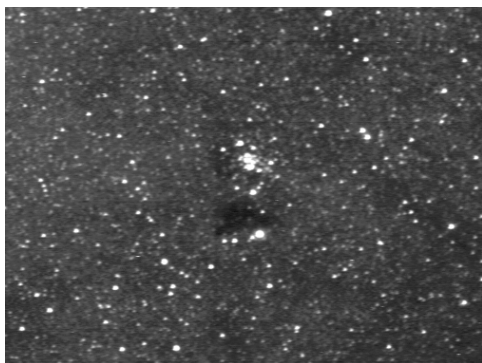
Back at the observing field Nick and Jane from eastern PA soon pulled in and claimed a space next to Tracy.



The afternoon temperature had grown warm, so the day was spent relaxing in the shade from the camper awning and doing a little reading.

The book appropriately was about the life of E.E. Barnard and his dark nebula! (Immortal Fire Within by W. Sheehan, a very good read!)

Once evening fell, inspired by my earlier reading, I picked back up with dark nebula observing, starting with Barnard's favorite object, B-86 the 'Ink Spot', located next to the splashy open cluster NGC6520 in Sagittarius. The dark void stood out quite well against the surrounding brighter Milky-Way region, with both the 80mm Kson and the 8" SCT.



I then headed back over to Cepheus the King for more Barnard's including B-148/149, B-150, B-152, and B-161 the Elephant Trunk. I then moved over to Vulpecula the Fox and video-captured several small emission nebulas: Sharpless-2-88 and 2-90. With Perseus and Auriga now riding high in the north-east, I decided to finish the night out in that quadrant of the celestial sky, capturing galaxies NGC1195 and IC284 in Perseus, and nebulas NGC2242 and IC410 in Auriga. Off to bed at 2:30am with moonrise.

#### **Tuesday 9/08/2015:**

Slept in till mid-morning when the camper getting too warm finally woke me. Tracy showed us a nice aurora shot from his DSLR camera that he had got from the night before. Apparently, we were all too busy with our observing projects to notice it. So I decided to setup my Samsung SDC435 modified security video-camera with a fisheye lens pointed to the north in case of a repeat northern-lights performance later that night.

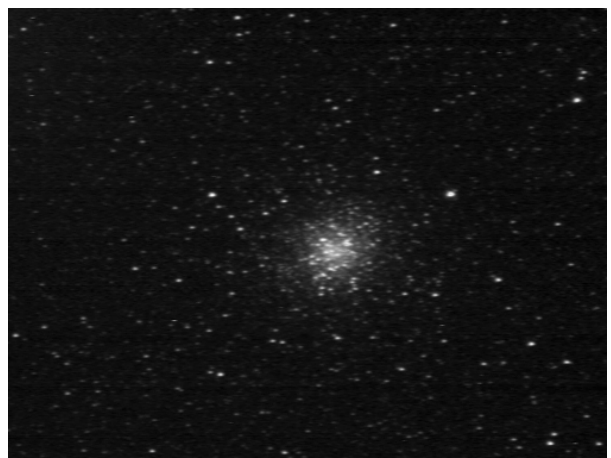
The sky stayed clear with not much of a breeze, and it was soon a scorcher of a day, with the temp eventually hitting 89 degrees! That made it difficult to get any rest that afternoon, as it was too hot inside the camper.

Very late in the day, Don H and a buddy of his, Gordon, arrived from the Hamilton Ontario club and joined our group. They had to rush to get their camp tents and telescopes ready for the evening.



Around sunset, the sky decided to cloud over, but in looking at the satellite weather, we knew it was only temporary. By 10:00pm, the sky had completely cleared off into one of those great Cherry Springs night, with the Milky-Way glowing spectacularly overhead in Cygnus, running down to Sagittarius in the southwest.

I spent the first hour or so using the 80mm Kson refractor to visit with a few old 'friends', M8, M17, M20, and m22.



I then moved on to several dark nebula in Ophiuchus: B-47, B-51, and B-77 the Pipe Nebula. After that I switched gears and began working Herschel-II objects up in Cygnus. Once the great Fish, Piscis Austrinus approached the southern meridian, I slewed the telescope over and went fishing for galaxies, hauling in NGC7154, 7163, 7229, 7361, and IC5131 and 5156. As the fish dived back toward the south-west, I moved back eastward to the constellation of Sculptor, which was now on the meridian. Continued the video hunt for faint fuzzy galaxies, capturing NGC131, 148, 491, and IC5332. Also picked off odd-named open cluster Blanco-1.

Around 1:30am, as I was finishing off Sculptor, a cry went up from the southern section of the observing field - Aurora!! We all immediately dropped the imaging that we were doing and raced out of our tents to look north. There it was! Dancing along the three pine trees and above the observatory domes. For the next twenty minutes we watched the northern lights move slowly to the north-east, before fading away. For the most part, the green colored display hugged the northern horizon, but there was an occasional red ray spiking up towards the bowel of the Big Dipper. It was quite spectacular!



The next day I checked my recording with the Samsung videocam, and I had caught the aurora! , , yea! Here's my time-lapse video of it: morning of Sept 9th 2015, starting at 1:35am. Made using a Samsung SDC435 analog video camera with an Arecont 1.55mm F2 FishEye Lens at 1 frame every 30 seconds.

[https://www.youtube.com/watch?v=X2-g\\_R0lfdg](https://www.youtube.com/watch?v=X2-g_R0lfdg) or [https://youtu.be/X2-g\\_R0lfdg](https://youtu.be/X2-g_R0lfdg)

After the auroral display had died down I went back to working Herschel -II objects in Pegasus, Pisces, Triangulum, Perseus, Camelopardalis, and Taurus.

Finally in the wee hours I finished up with a few NGC objects in Gemini, Eridanus and Orion. Called it a night at 4:00am with the Moon once again rising over the trees.

It was a very productive night of observing!

Along the way, I picked up my 3000<sup>th</sup> deep-sky object observation.

### **Wednesday 9/09/2015:**

Slept in late, till 10:00am. Tracy showed us his photos from the previous night's aurora, and to our surprise, another one that had started up around 4:45am and went till dawn.

The second one was actually the better of the two, which we all missed.

After lunch, Bob K. and I went for a drive to visit the scenic overlook that I had been to on Monday. On driving back toward Cherry Springs, we took a gravel road on the left, (called 'Upper Branch Fork') and after a mile or so came upon an even more spectacular overlook, complete with a wooden bench!



When we had got back to camp, Bob N. from the Kiski club had just rolled in and was setting up in the spot that Fred had vacated the previous day. (Fred was having telescope issues with a broken cable that he couldn't resolve and decided to head home).



A number of other campers had also arrived throughout the day and there were probably close to 300 amateurs now on the observing field, including Eric L from Lehigh Valley.



Mid-afternoon, the promised thunderstorms finally began blowing to the north of us, and we got hit with a heavy downpour at 3:15pm. While it soaked the field, at least it cooled off the air temp. Spent the rest of the afternoon working on my observing notes and reading. Another late round of showers went thru around 4:30pm, re-soaking the field. But that didn't slowdown the people arriving and setting up. The observing field was filling up fast!



After an early dinner, with a slightly promising forecast for the evening with no more rain and the Sun trying to peek thru the clouds, I switched-out the fisheye lens on the Samsung for a 3mm CCTV lens in hope of catching a closer view of another aurora. The spaceweather predictions were trending toward Kp 'storm' levels and the possibility was looking good for a repeat overnight.

At dusk, I took a quick stroll with Bob K. to close the observing field gate so the public would quit driving thru the field. On the walk back I decided to cover up the video-camera as the sky was now looking pretty hopeless, with thicker clouds on the way. Headed inside the camper for an evening of reading and movie watching.

#### **Thursday 9/10/2015:**

Woke up a little before 8:00am to the soft tapping of rain on the camper's roof. Rolled over and went back to sleep for another hour. Finally roused out of bed at 9:00am and as it was still rather damp outside, stayed in to finish reading the latest Sky & Tel. By noon, the last of the rain had moved out of the area and the observing field began to dry off. Later in the afternoon, Bob K. and I walked around the field and sold hats for the Dark-Sky Fund. Afterwards, Bob, Denny, Don and I helped Jeff of CCTS unload his vendor items, as Jeff had his arm in a sling from an injury earlier in the week. We were glad he could make the event, as we all were looking to buy a few items from him! All afternoon the Sun had warmed the field, drying it out except for a few large puddles. With the improving weather, more amateurs arrived, including John, Jim, and others from the Hamilton club that I was friends with. After dinner, we all gathered in my tent for the 5:30pm Penn State weather forecast on the local PBS TV station. While the first couple of hours were going to be partly cloudy, the evening was shaping up to be another good one after midnight. I then spent some time reviewing and getting into order my observing plans. As predicted, by 7:00pm, the sky had temporarily clouded over, but with a quick check of the radar and satellite, we began uncovering our equipment, and I prepared the teardrop camper's observing area. Just as on Tuesday night, the sky cleared off to a beautiful evening!

At first, I thought I was going to be dead in the water, as I had taken the cover off of the 8", been distracted by something, and had forgotten to turn on the dew heaters. That was a near fatal mistake, as the dew quickly began to form on the glass corrector plate. Fortunately one of the guys had an electric hair-dryer and after running it for several minutes on high, I was able to dry off the scope and get back in business!

I spent the first part of the night picking off small Herschel-II galaxies in Pegasus, Andromeda, and Perseus. Re-visited a couple of fall favorites in the area, NGC7331 and Stephan's Quintet. As my alignment was still holding up strong, I went for 60 second video-captures of both:



Then after midnight, I turned my attention to the constellation of the Whale, as he breached the southern celestial horizon. It was a feast of galaxies in Cetus! I video-captured 32 new NGC objects, all faint fuzzies and many on the Herschel-II list.

That kept me busy till a quarter after 4:00am, as I finished off the last galaxy listed in the 'Night Sky Observers Guide'. Most of the gang had called it quits by then, with even Denny heading in at 4:00am, leaving just myself still outside observing and Tracy working remote from inside his pop-up camper. If it hadn't been such an awesome night with clear skies and my equipment working flawlessly, I wouldn't have stayed up that long either, but I just couldn't quit. But by then, the 8" SCT optical tube was losing the battle again with dew, (which was heavy that night), so I decided to wrap up the morning with the Horsehead in Orion, and the still clear 80mm Kson, which framed it beautifully in a wide - field.



Then at 4:30am, while I was covering up the telescope, I happened to glance to the north. Once again, the Aurora Borealis was dancing over the trees! I hurriedly knocked on Tracy's camper door to tell him the news, and tried to wake Denny but got no response. So it was just Tracy and I from our group, along with Brian from across the road, who watched the light show. It was even a better aurora than either of the two on Tuesday. In addition to the green horizontal bands, and vertical red rays, you could actually see blues and purples in the rays, with some climbing as high as Polaris!!



Here's my video of the Aurora on the morning of Sept 11th 2015, using the Samsung SDC435 camera, but this time with a Fujinon 3mm Lens. (1 frame every 15 seconds). Unfortunately, like the 8" SC tube, the video camera lens also began to dew up toward the end of the display... [https://www.youtube.com/watch?v=X2-g\\_R0lfdg](https://www.youtube.com/watch?v=X2-g_R0lfdg) or [https://youtu.be/X2-g\\_R0lfdg](https://youtu.be/X2-g_R0lfdg)

By 5:00am, the activity had shifted to the northeast and faded away, I went back to covering up the dripping wet telescope and Tracy headed back inside. Before heading in myself, I paused to look toward the eastern horizon and there was the Zodiacal Light rising up beneath Gemini! Once again, I knocked on Tracy's door and we watched the dusty glow of our solar system in the dawn sky. It was a grand end to a glorious night of observing!!!

### **Friday 9/11/2015:**

Woke at 10:00am to sunny skies. After breakfast, I visited the vendors tent to pickup a few needed items, such as a new 1000 Oaks dew heater controller. Also found an interesting book by Sissy Haas on Double Stars, along with an ADM dovetail for my home observatory telescope. I also dropped off my Celestron CG-5 to CCTS to sell for me on consignment. With the weather forecast looking bad for the weekend, Mike M. and Tracy N. packed-up, pulled out and headed home. But, as the skies stayed deceptively sunny, more people kept arriving during the day, (a lot of 1<sup>st</sup> timers to the park), and before long their abandoned spots were taken. The observing field was nearing capacity, but a few open spaces could still be found.

Denny and I went for a drive in the early afternoon to the Cherry Springs lookout point, as he had never seen it either. While we were there at the bench overlook on the gravel road taking pictures, a tri-axle truck came flying up the narrow road and nearly took us out. Fortunately the truck didn't send us crashing down over the cliff, but it did give us a good dusting from the cloud that was following it.

Back at camp, a group of us ordered a pizza from Fox's and we sat around Denny's tent canopy, enjoying it and checking the weather forecast. It looked like we might get a few hours of partly cloudy skies early-on, but the rain was definitely moving in after midnight. As a lot of folks were uncovering their telescopes, I went for a stroll around the field and took a few pictures:





The Bob's decided to pack up their telescopes for the night, but Denny, Don, and I left ours out in hope of the clouds moving in slower than expected. At sunset, the skies became more cloudy than not, and we spent some time jumping around sucker-holes. I spent the first hour or so hopping around the Messiers, demonstrating video-astronomy to the attendees that were walking about the field. At 10:00pm, Denny decided to give up and packed his telescope away, and Don covered his up for the night. But with the crowd dying down, I decided to work a little on my Webb Objects survey, and taking advantage of the holes was able to video-observe a number of "W" objects in Aquila and Cygnus including some odd-named planetary and emission nebulas ME1-1, M1-74, M1-92, and HU1-2.

At midnight, the sky finally entirely clouded over with a thick overcast and after an online check of the radar & satellite, I spent the next hour disassembling the video - cameras and telescope and loaded it all into the car. Headed to bed at 1:30am.

### **Saturday 9/12/2015:**

Slept in late, but woke to the sound of heavy rain. The front had finally arrived bringing a monsoon!! For most of the day, it was a constant downpour! Bob K. recorded nearly 2" of precipitation in his rain gauge! The air temperature also dropped to only a high of 59 degrees for the day. Chilly and wet!! Many of the tent campers packed up miserably in the rain and headed home. By late afternoon nearly half the field was empty.

I spent the morning leisurely reading and reviewing the week's observations inside the warm and dry camper. Propane radiator heating is awesome! I'm really, really glad I packed my telescope equipment away Friday night after it clouded over.

At 1:00pm, we headed over to the speakers pavilion to take in Don P's presentation on amateur radio-astronomy. Interesting stuff may have to try it out at home.



Afterwards, we gave Jeff a few hands in packing up CCTS and then headed back over to the pavilion for the 4:00pm keynote talk on the New Horizons mission by Dr. Carey Lisse. He had a lot of great info and latest images and analysis.

Following the keynote, Chip and Maxine H. gave an update on the park and Dark-Sky fund activities. Then it was time for the door prize raffle!! The Kiski club kept up its winning tradition with Denny taking home three prizes! To celebrate, Denny, Bob K, Bob N, and I headed over to Foxes for one last dinner. Once finished, as it was cold and drizzly, and getting dark, everyone said goodnight and headed in to their campers. I read a little and stayed up and watched a sci-fi DVD, "John Carter" till 11:00pm.

### **Sunday 9/13/2015:**

Awoke to the sounds of Bob N. and Denny packing up their campsites. Bob K, being the early bird that he is, had already pulled out for home. The rain had finally stopped, but it was still overcast and dreary. I quickly packed the interior of the camper and moved outside to tear down the tent canopy with help from Don and Eric L. Soon Bob N. drove off, and by 10:00am Denny and I were both ready for the journey home. So while this year's BFSP ended on a wet note, it was still overall a very good trip, especially earlier in the week.

Not only did I observe my 3000<sup>th</sup> deep sky object, but I also saw two auroras!! That made me a very happy camper!

Already looking forward to my 2016 trips to Cherry Springs, the "Astronomers Paradise!"  
Larry McHenry

Astronomical Webportal: <http://www.stellar-journeys.org/>