Tuesday, July 26, 2022

Arrived at 3RF just before noon today. Rented cabin #6 and will support the Saturday night public star party event.

Using the 20" f/5 telescope. Sky almost clear at sunset. Still a breeze from ESE now. 95 degrees. Sunset at 8:41 pm. Smoke along south horizon. Hazy and bit of broken clouds along S -> W -> N horizon. Clear overhead and everywhere else. Air quality shows we are at the edge of the smoke to the east. Hourly forecast shows clear and very low relative humidity tonight. Predicted to be 45 degrees at dawn.

At 9:08 PM it is 92 degrees.

Seeing and Transparency is good.

NGC 4957	10:02 PM	13mm – A small, very faint oval with brighter stellar core seen with AV.
NGC 4961		Below and in same FOV as N4957 is this thin oval, very faint, uniformly lit.
NGC 5203	10:09 PM	13mm – A small, very faint glow with stellar core seen with AV. Seems to be a larger, hair brighter core in center of glow in addition to stellar core.
NGC 5019	10:12 PM	13mm – An extremely faint, round, uniformly lit glow. Very faint yet easy to see it is round.
NGC 4752	10:19 PM	13mm – An extremely faint, very small ghostly glow of a smudge of light.
NGC 5118	10:26 PM	13mm – A small, extremely faint, uniformly lit glow. Fat to roundish oval see with AV.
NGC 5227		An extremely faint, medium sized tilted, fat oval with hint of a larger, complex core that is very faint and seen with AV.

Seeing and Transparency very good. Slight breeze from SE. 85 degrees.

NGC 5369	10:34 PM	13mm – A very small, very faint glow just above and very near a faint field star. Pretty uniformly lit.
NGC 5209	10:38 PM	13mm – A small, round, very faint uniformly lit glow. Maybe a hair brighter stellar core and a field star on halo glow just below this core.
NGC 5208		To left of N5209 and very near is this faint, linear, 3:1 glow with complex, brighter core down center of glow.

NGC 5210		Above and in same FOV is this small, round, very faint, uniformly lit glow. Maybe has a hair brighter core area. Not sure.
NGC 5224	10:48 PM	13mm – A very small, extremely faint glow with stellar core area seen with AV.
NGC 5235		Below and in same FOV and away from N5224 is this linear, 3:1, very faint, uniformly lit glow.
NGC 5478	10:52 PM	13mm – A tiny, very faint oval with a bit brighter core area seen.
NGC 5400	10:55 PM	13mm – A small fat oval. Very faint with larger, bit brighter core seen with AV.
NGC 4827	10:58 PM	13mm – A very small, very faint roundish uniformly lit glow.
NGC 5180	11:02 PM	13mm – A very small, faint oval with a brighter, stellar core. To left of a bit fainter field star than core and almost on halo glow.
NGC 5172		Below N5180 and to left of a bright field star is this larger, long dim glow with maybe arms off each end (top arm off halo glow to right and bottom arm off to left) on a barred spiral. Nice.

No wind. Seeing and Transparency very good. 85 degrees. These objects are low in the west and the sky is good there right now.

NGC 5207	11:06 PM	13mm – To right of a bright field star is this small, very faint, uniformly lit round glow.
NGC 5491	11:09 PM	13mm – A medium sized very faint round glow. Maybe a very faint mottled core in center.
NGC 5618	11:14 PM	13mm – A medium sized, roundish, extremely faint uniformly lit glow.
NGC 5604	11:16 PM	13mm – A medium sized faint fat oval with maybe a hint of a core seen. Otherwise pretty uniformly lit.
NGC 4952	11:18 PM	13mm – A very small, faint oval with brighter core.
NGC 4966	11:19 PM	13mm – A tiny oval under a chain of 5 brighter stars. Faint. With tiny stellar core seen.

NGC 5000	11:22 PM	13mm – A very small, extremely faint uniformly lit glow.
IC 4051	11:24 PM	13mm – A very small, very faint uniformly lit oval glow.
NGC 5293	11:29 PM	13mm – A medium sized, extremely faint oval ghostly glow.
NGC 5251	11:31 PM	13mm – A very small, very faint edge-on with tiny brighter core.
NGC 5492	11:33 PM	13mm – A very small, thin, tilted oval that is very faint with larger, brighter core area.
NGC 5522	11:35 PM	13mm – A very faint, small, 3:1 edge-on with larger, hair brighter core.
NGC 5513	11:38 PM	13mm – A small, dim fat oval. Easy to see. Has bright stellar core.

Seeing and Transparency very good. 81 degrees. Moving higher in western sky to find these galaxies.

NGC 5649	11:41 PM	13mm – On the right is a small, fat, very faint, uniformly lit oval.
NGC 5648		On the left and near N5649 is a small, thin, very faint, uniformly lit oval glow.
NGC 5587	11:44 PM	13mm – A long, thin, faint tilted oval. Has a long, linear, blotchy brighter core down center of halo glow.
NGC 5747	11:46 PM	13mm – A very small, very faint, fat oval with maybe a hint of a larger, hair brighter core area.
NGC 5559	11:49 PM	13mm – A very small, very faint, linear, uniformly lit glow.
NGC 5702	11:51 PM	13mm – A very small, very faint fat oval with hint of a complex core. See 2-3 tiny spots in center of halo glow.
NGC 5710	11:53 PM	13mm – A very small, very faint glow. Has a *star* on upper part of halo glow. No other core seen.
NGC 5711		In same FOV as N5710 and above two field stars is this tiny, uniformly lit, extremely faint oval glow. But I see it and verified it on ST4 chart.
NGC 5737	11:59 PM	13mm – A very small, very faint, uniformly lit oval glow.

NGC 5760	12:02 AM	13mm – A very small, faint, uniformly lit oval glow.
NGC 5695	12:04 AM	13mm – A very small, fat, dim oval with bit brighter core area.

Seeing and Transparency very good. Galaxies are popping right out in the FOV when I get them centered.

NGC 5654	12:07 AM	13mm – A very small, very faint oval glow with larger, hair brighter core area.
NGC 5580	12:10 AM	13mm – A very small, roundish to fat oval. Very faint with a bit brighter core area.
NGC 5589		This is a bit dimmer than N5580. To left and near N5580 is this very small, very faint glow with hair brighter core area.
NGC 5579		To left and a bit away from N5589 is this very small, extremely faint roundish smudge of light.
NGC 5709	12:14 AM	13mm – A very small, extremely faint, 2:1 long oval that is uniformly lit.
NGC 5642	12:16 AM	13mm – A very small, faint oval. Has brighter core area. Has a bit brighter field star than core's brightness on right had side of halo glow. Looks like it has 2 cores.
NGC 5677	12:22 AM	13mm – A small, fat, very faint, uniformly lit oval.
NGC 5852	12:24 AM	13mm – A very small, very faint round glow with hair brighter core.
NGC 5851		To left and near N5852 is a very small, very faint, 2:1 linear glow with extremely faint tiny stellar core.
NGC 5696	12:31 AM	13mm – A small, extremely faint halo glow with brighter, small core in center.
NGC 5630	12:33 AM	13mm – A medium sized, extremely faint, long tilted, uniformly lit oval.
NGC 5708	12:35 AM	13mm – A medium sized, long thin, 3:1 oval that is uniformly lit and very faint. Has a bright field star on right hand side of halo glow.

NGC 5603	12:39 AM	13mm – A small, extremely faint, 3:1 linear, uniformly lit glow.

Seeing and transparency good this low in the west. Don't need a ladder to reach the eyepiece to see these galaxies.

NGC 5598	12:41 AM	13mm – A very small, extremely faint linear edge-on with bit brighter core.
NGC 5698	12:45 AM	13mm – A very small, extremely faint roundish uniformly lit glow.
NGC 5735	12:48 AM	13mm – A larger, extremely faint round, uniformly lit glow. Very hard to see. Almost not there.
NGC 5928	12:51 AM	13mm – A very small, faint oval with brighter core.
NGC 5910	12:54 AM	13mm – This is the top galaxy. It is an oval that is very small, very faint, uniformly lit.
MCG 4-36-36		This is below N5910 and almost touching it. This is a very small, very faint linear oval.
NGC 6012	12:57 AM	13mm – A nice, tilted oval with fat center. Uniformly lit. Very faint. Small.
NGC 6001	1:00 AM	13mm – A fat to roundish oval. Small. Very faint. Uniformly lit.
NGC 6127	1:05 AM	13mm – A larger galaxy. Large, bright core with tiny bit of extremely faint halo around it.
NGC 5881	1:07 AM	13mm – A very small, very faint uniformly lit glow.
NGC 6089	1:10 AM	13mm – An extremely faint, small, round glow with bit brighter, larger core area.
NGC 6142	1:12 AM	13mm – An extremely faint, small tilted oval smudge of light that is uniformly lit.

Sky held steady and to the forecast. Saw lots of H2500 relook galaxies. I had to quit when all the rest of the galaxies on my list were very low in the western sky and the rest on my list were too low to find. The stars were not bloated this low in the western sky. Amazing sky tonight. I didn't need a ladder to reach the eyepiece to see almost all of the above observed galaxies all night. I was working the H2500 relook list as ST4 presented it to me. The list was ordered by the most favorable times to see these galaxies. This order moved from the lower western galaxies to the higher ones in the sky. The

remaining objects on the list just rotated too low in the west for me to continue with this incredible sky.

Looking for other targets in my ST4 lists.

He 2-360	1:25 AM	13mm – A bright, off-white *bloated* star where the other stars in the FOV are blue-white pinpoints. Found it with the OIII filter first where it significantly outshone all other stars in this wavelength.

1:30 AM. Looked at Jupiter and Saturn. Saw 6 moons of Saturn easily. Both planets looked good at this power. Saw lots of red bands on Jupiter but no GRS.

Can see M31 easily naked eye without my glasses. Probably could have seen M13 naked eye if I had gone to my car to get my glasses. M13 did look good in the eyepiece.

Couldn't find other objects so I realigned the Sky Commander to make sure it was not the issue.

NGC 6211	2:01 AM	13mm – A larger, brighter core with tiny bit of very faint halo around it. Maybe circular.

While slewing to next target, noticed Sky Commander missed counts. Decided to call it a night. Really wasn't ready to do any of the other ST4 lists.

2:15 AM. 79 degrees. This was a great night.

I replaced the battery in the Sky Commander the next day.

Wednesday July 27, 2022

National Weather Service said it was 105 degrees today. Car driving to the roll-off said 109 degrees. Thermometer inside the red eyepiece case said 123 degrees when I took it out to put on the observing table. It is still 106 degrees in the shade of the roll-off shed at 7:30 PM.

At sunset it is 95 degrees. Light breeze from southeast.

Barbara put her phone in front of our TV in Colorado and I watched Big Brother while it got dark. Michael won the POV to take himself off the block.

Smoke/clouds along W->NW->N horizon.

9:30 PM. Sky clear. 90 degrees. Slight breeze now and then from SE. Makes it feel cooler. Had trouble collimating the scope. Screws on secondary not working and then noticed secondary mirror had popped out of the holder a lot. With it back in place, used the wrench to untighten the collimating screws on the secondary holder and telescope now collimated. Polaris looks nice.

NGC 5417	10:02 PM	13mm – A small, dim, 2:1 oval with brighter core area.
NGC 5032	10:16 PM	13mm – A small, very faint fat oval. Has 3-4 extremely faint specs at center of the halo glow.
NGC 5116	10:19 PM	13mm – A very small, long, thin, 3:1, very faint, uniformly lit glow.
NGC 5249	10:20 PM	13mm – A very small, extremely faint oval glow. With AV can see a hair brighter, larger core area.
NGC 5691	10:36 PM	13mm – A medium sized, dim oval with larger, bit brighter center in halo glow.
Z 19-74		To right of N5691 is this small, linear, 3:1 faint glow with brighter, linear core down center of halo glow.
NGC 5482	10:39 PM	13mm – A very small, fat, very faint oval with larger, bit brighter core area.
NGC 5650 (NGC 5652)	10:44 PM	13mm – A small, extremely faint glow. Hard to tell shape. Maybe a slender oval. Has a bit brighter core area.

Seeing and transparency good. 85 degrees. No wind.

NGC 5638	10:51 PM	13mm – A medium sized, round, faint glow. Large core area that dims slowly to edge.
NGC 5636		Just below N5638 is a linear, 2:1 extremely faint smudge of light. I can barely see it. Seen with AV.
NGC 5679	10:54 PM	13mm – A small, extremely faint, round halo glow. Very hard to see. Has a tiny, extremely faint stellar core in center of halo glow. Was very hard to see. I was here before and missed it because it was so faint.
NGC 4986	10:58 PM	13mm – A very small, very faint thin oval. Has a tiny core and maybe a bit brighter field star to right of center on halo glow. Field star made it hard to find and see this galaxy.
NGC 5839	11:02 PM	13mm – A small, faint, roundish glow. Has brighter, complex core. More than 1 bright area in core. Maybe 3 or more bright areas in core.

Sky not as good as it was last night. 84 degrees. The 14.5 galaxies are hard to find tonight where last night they were easy to spot.

Sky Commander not working well tonight. Just realigned it 2 times.

NGC 5731	11:29 PM	13mm – A small, roundish, faint, uniformly lit glow.
NGC 5500	11:31 PM	13mm – A small, tilted oval. Very faint. Has a bit brighter, linear core down center of the halo glow.
NGC 5732	11:35 PM	13mm – A small, tilted oval. Very faint. Uniformly lit glow.
NGC 5684	11:45 PM	13mm – A very small, roundish, very faint glow with hair brighter core area.
NGC 5686		To right of N5684 is a very small, round, extremely faint, uniformly lit glow.
NGC 5673	11:52 PM	13mm – A nice, faint, small edge-on. Has brighter bar down central area and a lot brighter small core in center.

Seeing and transparency OK. Hard to find 14.1 galaxies. 84 degrees. Light breeze from south once in a while.

NGC 5787	12:00 AM	13mm – A very small, faint oval with hair brighter, larger core area.

The Sky Commander had issues tonight. Had to realign it often. I was not prepared to find objects without it.

There were deer in the field to the south. Heard the hoofs hit the ground as they galloped by. The night before I heard two wild pigs squeal very near me. One in the dirt field to the south and one by the remote telescopes. They were watering the grass there and it might have been after the cool water.

It is 12:58 AM. 84 degrees.

The next day I found a lose screw on the azimuth encoder dead-man bar. I don't think this was the cause of the missed counts but was a contributing factor when I was panning the eyepiece around to find the faint galaxies. There was enough backlash in the dead-man moving back and forth that after a few of these pans, the alignment was gone. That is the other error I saw. After realignment, I could find a couple of galaxies but not a third. Did another realignment and found two more. It was annoying to do the constant realignments, but it made the night worthwhile.

In the future, I need to put my new encoder cable on the 20-inch as soon as I get there and then take it off when I am ready to go home. This will fix any cable problems which could be the cause of the missed counts. I did unplug and plug in the connectors several times to shine up the copper but that didn't help as much as I would hope it would.

Was a nice night despite the less than idea seeing, even though the forecast was identical to last night's forecast. Saw lots of galaxies on my relook list during both nights.

Thursday July 28, 2022
Friday July 29, 2022

The weather and clouds returned. No observing these nights.

Walked to the water marker Friday morning. Not too hot. Saw a roadrunner that was about 5 feet from me while we chatted.

Saturday July 30, 2022

Helped a girl scout troop understand basic celestial mechanics and how to use a Planisphere to find constellations in the sky.

That night, I operated the 20” for a public star party. The clouds made it difficult to show the people objects. It would be clear and then cloud over the area you were looking in.

There were about 60 people who showed up.