Friday, April 30, 2021

I had the car all packed last night except for my toiletries and pillow that I put in this morning. I made a list and had everything together either in the basement or the garage. All I had to do was to put it in the car.

I had less items in my car this trip than my trip to 3RF the previous month. I knew what I needed and only took those items.

I had some things to do at work so I worked till 11 am and then headed to Texas and 3RF. I arrived there about 10 pm that same day.

The entire day driving to 3RF the skies were clear and blue. There was a hellish wind from the north and at one point, I was getting 46.8 mpg in my Prius. The weather report called for thunderstorms at 3RF but I was hopeful they were wrong.

I left Amarillo as the sun was setting and the skies were clear. By the time I got to Childress, the sky was totally overcast. On the way to Paducah, it rained on the car.

I was all unpacked and the wind was still howling outside the cottage at 3RF when the rain cut loose. You could hear it on the metal roof of the cottage.

Saturday, May 1, 2021

It was cloudy and threatening rain all day. I finished editing my Dad's biography and then sat on the porch and watched a huge fire off in the hills to the west. A farmer was doing fire mitigation by burning the underbrush. It was neat to see.

I checked the 20" #749 scope and someone had cleaned the mirror. I hooked up my Sky Commander computer and the encoders were working with no skipping. I also brought a new cable from Randy Cunningham in case the rodents had chewed the existing cable on that 20". They have done it before.

They had rodent traps all around the inside and outside of the roll-off building. I think they have the problem taken care of.

Mike arrived about 10 pm that night and it was still cloudy with some areas where the clouds were thinning and you could see stars. I did find where the ancient constellation Herschel's Telescope was that I sketched the next night.

Sunday, May 2, 2021

Using the 20" f/5 Scope #749. I used my 13mm Stratus eyepiece all night.

There is a brisk wind from the SE. It is supposed to die down about 10 pm. High cirrus clouds overhead. These are supposed to be gone at 10 pm also. It is 7:45 pm and warm.

9:00 pm. Wind persists from SE. Sky more clear of clouds. Venus very low and round. Mercury above it and round. Multi-colored. Pretty cool.

| M3 | 9:17 PM | 13 mm – Nice. Sky Commander readout indicates left .2 and down .2. Pretty close alignment. |
|----------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NGC 4327 | 9:20 PM | 13 mm – A single faint star. |
| NGC 4323 | 9:53 PM | 13 mm – To right at 3 o'clock and near M100 is an extremely faint smudge of light. Can barely see it but my eye follows it with AV. Some lists say this is a non-existent object. |
| NGC 4322 | 9:57 PM | 13 mm – A single dim star near M100. |
| NGC 4295 | 10:01 PM | 13 mm – A small, <u>extremely faint</u> uniformly lit glow. Almost not there. |
| NGC 4308 | 10:16 PM | 13 mm – A very small, <u>extremely faint ghostly glow</u> . Barely there. Hard to see. |
| NGC 4311 | 10:23 PM | 13 mm – A small, thin oval, very faint, 3:1 with maybe a hint of a larger, hair brighter core. |
| NGC 4239 | 10:30 PM | 13 mm – A very faint halo around a bit brighter core. 3:1. Oval. |

The seeing and transparency are OK. 14th magnitude galaxies are elusive. Brisk wind from SE. Not as gusty as it was earlier.

| NGC 4329 | 10:44 PM | 13 mm – Caught a glimpse of a small oval, uniformly lit, extremely faint glow. Didn't see it again. |
|-------------------------------------------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NGC 4232 NGC 4231 NGC 4217 PGC 4318533 | 10:50 PM | 13 mm – A small sized dim tilted oval with brighter core. Almost overhead. Then to left is N4231, a smaller version of N4232. A small, dim oval. Both have dim halo and bit brighter stellar cores. P4318533 makes upper arm of N4217 brighter than lower arm. N4217 almost an edge-on but not quite. Very tilted oval. |

| NGC 4288 NGC 4288A | 11:16 PM | 13 mm – A medium fat oval. Looks uniformly lit but can see speckled core once in a while. Then to right and near is N4288A, a small, very faint, uniformly lit glow. |
|-----------------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NGC 4242 | 11:20 PM | 13 mm – A larger, roundish dim uniformly lit glow. Easy to see. |
| NGC 4280 NGC 4285 | 11:27 PM | 13mm – 3 dim stars. Easy to see. To left is N4285, a small, very faint, uniformly lit glow. Roundish. |
| NGC 4315 | 11:40 PM | 13 mm – A very faint star. |
| NGC 4767 NGC 4767B | 12:08 AM | 13 mm – A very small, round, faint glow. Then above and to left and near is N4767B, a smaller, round glow, fainter than N4767. |
| NGC 4240 | 12:10 AM | 13 mm – A very small, <u>extremely faint</u> ghostly glow. |
| NGC 4252 | 12:15 AM | 13 mm – Above a faint field star is this tiny glow, extremely faint. Field star overpowers it a bit because it is so close. Can see a bit brighter, tiny stellar core in center of glow. |
| NGC 4249 | 12:18 AM | 13 mm – To left of N4252 is this tiny, roundish, <u>very faint</u> , uniformly lit glow. |
| _ | | Had to put brown shirt on because it was getting colder. good. Stars are steady. |
| NGC 4324 | 12:28 AM | 13 mm - A larger, dim tilted oval with brighter stellar core in center. |
| NGC4307 IC 3211 | 12:31 AM | 13 mm – A long, thin 5:1 uniformly lit, dim glow. Fatter in center with tapered arms. Above and to left and near at 11 o'clock is IC 3211, a small, extremely faint, roundish, ghostly glow. Almost not there. |
| NGC 4276 | 12:36 AM | 13 mm – A medium sized, very faint, uniformly lit glow. |
| NGC 4306 NGC 4305 | 12:39 AM | 13 mm – A medium sized, dim fat oval with hair brighter, larger core in center. N4305 is to right and below at 4 o'clock. It is a dim, roundish, uniformly lit glow. Both close together. |
| | 405 | |

| NGC 4309 | 12:43 AM | 13 mm – Below a faint field star is a small, round, dim glow with brighter, tiny stellar core. |
|----------------------------------------------|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NGC 4234 | 12:45 AM | 13 mm – A dim tilted oval with brighter stellar core. |
| NGC 4273 NGC 4268 NGC 4281 NGC 4270 | 12:48 AM | 13 mm – A dim fat oval with bit brighter linear core. A small, dim oval with brighter core. A larger dim oval with brighter core. A smaller oval with bright stellar core. |
| NGC 4255 | 12:54 AM | 13 mm – A small, tilted oval. Faint with a brighter linear core. Looks like 2 stars in core, one centered and second below center on halo glow. |
| NGC 4316 | 12:58 AM | 13 mm – A faint, thin edge-on. Hint of a hair brighter core in central bulge. Has nice tapered arms that are long and thin. |
| NGC 4269 IC 3155 | 1:03 AM | 13 mm – A very small oval, very faint with hair brighter core. To left and near is IC 3155, a tiny oval, uniformly lit, very faint glow. |
| NGC 4334 | 1:06 AM | 13 mm – Below bright field star is this very small tilted oval. Very faint. Has a bit brighter linear looking core. |
| NGC 4325 | 1:07 AM | 13 mm – A small, <u>very faint</u> tilted oval with hair brighter extended core area. |
| NGC 4318 | 1:10 AM | 13 mm - A long, 4:1, very faint, uniformly lit glow. Just under a bright field star and halo glow touches field star. |
| _ | ransparency OK eeze from SE no | . Notes and chair damp from dew. Can smell the water in the w. |
| NGC 4247 NGC 4246 | 1:15 AM | 13 mm – A <u>very faint</u> oval, 2:1 with hair brighter larger core. Above is N4246, a medium sized fat oval that is long, uniformly lit and dim. |
| NGC 4301 | 1:18 AM | 13 mm – To right of M106 is this small oval, uniformly lit, very faint glow. |

| NGC 4259 NGC 4320 | 1:20 AM | 13 mm – A small faint tilted oval with hair brighter core. A very small tilted oval that is very faint with tiny, bit brighter stellar core. |
|----------------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| NGC 4282 | 1:28 AM | 13 mm – Below a dim field star is this very small, <u>very faint</u> roundish uniformly lit glow. |
| NGC 4279 | 1:30 AM | 13 mm – A small, round, extremely faint uniformly lit glow. With AV, see an <u>extremely faint</u> stellar core in the center of glow. |
| NGC 4285 | 1:30 AM | $13 \text{ mm} - A \text{ very small, } \underline{\text{extremely } \underline{\text{faint}}} \text{ roundish uniformly lit smudge of light.}$ |
| NGC 4257 | 1:35 AM | 13 mm - A very small, extremely faint thin oval with a uniformly lit glow. |

Seeing and Transparency very good. Light breeze now and then from SE.

Notes were damp. Sky still workable but we thought moonrise was at 1:45 am. I wanted to sketch 5 alternate constellations before the moon rose. Got these done and at 2 am, no moon. What we did was looked at **Sunday's** moonrise. This was **Monday** morning, so moonrise this morning was at 2:40 am. OPPS!!!

My back was sore. Forgot to wear back brace so I didn't want to use the 20" anymore. I did try though. My car windows were covered by water from the heavy dew.

Monday, May 3, 2021

It was cloudy and windy all day. No observing this night.

Tuesday, May 4, 2021

We started using the 30" f/4.5 Then used the 20" f/5 #749 scope. I had planned on looking at a few objects in the 30" and then go outside to use the 20" that I had wheeled out of the roll-off shed while the sun was up. Mike would have kept using the 30".

We started using my 13mm Stratus eyepiece but later in the night used Mike Roos's 13mm Ethos eyepiece which is a nice eyepiece.

Clear skies at sunset. Calm wind. Sky and transparency are very good.

| NGC 5263 | 10:03 PM | 13 mm – A dim, long sliver with a uniformly lit glow. |
|----------------------------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NGC 4287 | 10:10 PM | 13 mm – A very small edge-on with brighter field star below glow. Glow is dim. Has a tiny stellar core. |
| NGC 4282 | 10:18 PM | 13 mm – A <u>very faint</u> , uniformly lit 3:1 cigar shaped galaxy. |
| NGC 4270 NGC 4273 NGC 4281 | 10:28 PM | 13 mm – A brighter, thin edge-on with brighter, small core. To right and near is N4281, a dim, long oval with hair brighter core. Above these two is N4273, a medium sized fat oval that is a uniformly lit dim glow. |
| 70 | 81 | |
| NGC 4266 | | Friends of N4270. A small, thin edge-on with bright field star on glow. |
| NGC 4268 | | A very small, round, uniformly lit, very faint glow. |

We were using the 30" and the first galaxies described above were in Virgo. Then we slewed to a galaxy near M106 and it was not seen in the eyepiece. We had the alignment of the 30" putting the target galaxy in the lower left part of the FOV at 8 o'clock. But the next galaxy was not there. So we slewed to M106 and it wasn't there. We had lost the alignment on the 30".

The sky was very good and I didn't want to waste time realigning the 30", possible more than one more time. I had wheeled the 20" outside earlier so we jumped over there and aligned it. Started using my 13mm Stratus eyepiece.

| NGC 4249 NGC 4252 | 11:26 PM | 13 mm – A very small, round, extremely faint glow with hair brighter tiny core. In same FOV and above is N4252, a 2:1 linear, extremely faint, uniformly lit glow. |
|----------------------------------------------|--------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| many layers of | ansparency are on and started to from sweating i | good. Cool temperature, so I layered up. No wind. I had too o sweat. So I took off the last layer and decided to be a bit in the dark. |
| NGC 4240 | 11:35 PM | 13 mm – This is also NGC 4243. A very small tilted oval. Has a larger, bright core and tiny bit of halo. There is a bright field star at left edge of halo glow that is two times brighter than core is. |
| NGC 4073 | 11:40 PM | 13 mm – A long, thin, 3:1 uniformly lit, very faint glow. A bright field star is above and near and on centerline of this galaxy. |
| NGC 4139 NGC 4077 NGC 4063 NGC 4073 | 11:49 PM | 13 mm – These were from Mike's list. I am sure I've seen them before so I didn't write them up. |
| NGC 4329 | 11:56 PM | 13 mm – A <u>very small</u> , thin glow that has a faint field star, seen with AV in center of it. It is an <u>extremely faint</u> glow. Field star seems to make it appear brighter than magnitude 14.6. |
| NGC 4168 NGC 4165 NGC 4164 | 12:05 AM | 13 mm – A small galaxy with a brighter linear core and surrounded by dim halo. A small, fat, very faint, uniformly lit oval. A tiny, round smudge of light right below a very faint field star. |
| NGC 4304 | 12:09 AM | 13 mm – A medium sized, dim round glow that has a hair brighter larger core that dims into the halo glow. |
| NGC 4186 | 12:18 AM | 13 mm - A very small, round dim glow with larger hair brighter core. |

Seeing and transparency is OK. Light breeze from NE that makes it feel colder than air temperature. Put Mike's 13mm Ethos into focuser now.

| NGC 4292 | 12:27 AM | 13 mm – A small, round faint glow. Just above and near a field star. Core area quite complex and larger that dims slowly into halo glow. |
|--------------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NGC 4301 | | A nearby friend of N4292 is a small, fat oval with maybe a larger, hair brighter core. Otherwise it is pretty uniformly lit. |
| UGC 7411 | | A very small, <u>extremely faint</u> uniformly lit oval glow. |
| NGC 5392 | 12:40 AM | 13 mm – A tiny, extremely faint oval glow. With AV, see 2 extremely faint stars on halo glow, neither one in the center of glow. Looked at SkyTools 4 to see if a PGC is the core of one of the stars. |
| PGC 5950897 | 7 | The core of P5950897 is one of the stars and the other is N5392's core. |
| IC 3091 | | A friend of N5392 is a very small, round glow with tiny, brighter core in center of glow. It is in a line of 3 stars and between and to left of upper 2 stars. |
| IC 3061 IC 3080 | 12:50 AM | 13 mm - A small, long, uniformly lit, extremely faint glow. In same FOV as IC 3061 is this tiny, extremely 1 thin linear glow. There is a brighter core in center. Both seen with AV. |
| NGC 4222 | 1:02 AM | 13 mm – An extremely thin sliver of very faint, uniformly lit light. |

It is 1:45 AM. Neither Mike nor myself are finding magnitude 11.0 and fainter galaxies. A 10.6 galaxy was barely there. No wind. Papers were damp.

I anticipated the dew and kept my log notebook covered with my clipboard so it would be easier to write on the paper and make very legible notes I am transcribing now.

Wednesday, May 5, 2021

Low clouds along south horizon at sunset. Constant breeze from SE. Clear everywhere else.

Using the 20" f/5 #749 scope with Mike Roos's 13mm Ethos eyepiece.

Sunset at 8:25 pm. Moonrise is 4:28 am tomorrow morning. The wind is making it feel cold. Already layered with multiple shirts, long john pants and stocking hat on.

13 mm – A tiny, extremely faint sliver of light with maybe

A very small, extremely faint oval, uniformly lit glow. This

Seeing and transparency good.

10:07 PM

NGC 3005

| NGC 3003 | 10.07 1 101 | a bit brighter field star on glow. |
|----------------------------------|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NGC 3006 | | An extremely faint, tiny, thin oval smudge of light. |
| NGC 3009 | 10:15 PM | 13 mm – A very small, round, <u>very faint</u> , uniformly lit glow. |
| NGC 3010 A, | B,C | Then below and near N3009 are 3 <u>very small</u> to tiny roundish glows almost touching each other and all have tiny, <u>extremely faint</u> stellar cores in center of glows. |
| NGC 4964 | 10:20 PM | 13 mm – A small, extremely faint fat oval. Has maybe a larger, hair brighter core area. |
| NGC 4977 | 10:24 PM | 13 mm - A small, very faint fat oval to round shape. Has larger, hair brighter core area with stellar core seen in the center of core area. |
| Seeing and transit. | insparency good | d. Light breeze from SE. Lightening seen over the horizon in |
| NGC 3073 | 10:41 PM | 13 mm – A small, round very faint glow with larger, hair brighter core. |
| PGC 28990 NGC 3079 | | A very faint, thin, uniformly lit glow. Both near N3079. |
| NGC 4974 NGC 4973 NGC 4967 | 10:47 PM | 13 mm – A small oval. Dim. Has bright stellar core. Then above is N4973, a bit smaller round glow with larger, bit brighter core. Then to right is N4967, a very small, dim oval with a very faint field star just above it and near. Has a |

Seeing and transparency very good.

PGC 45228

NGC 4652 10:58 PM 13mm – A tiny, linear, extremely faint uniformly lit glow.

has Wolfgang's magnitude 15.2.

hair brighter core.

| | | separation spacing. Taking a second look, it pops in and out. |
|-----------------------|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NGC 3220 | 11:20 PM | 13 mm – A small, very faint, uniformly lit tilted oval. |
| NGC 5201 | 11:21 PM | 13 mm – A very small, 2:1 oval with bright core that has maybe a bit brighter linear shape of a bar. |
| NGC 5250 | 11:24 PM | 13 mm – A very small, round, very faint glow with larger, thin linear glow down the center of the halo glow. |
| IC 2574 | | A very large, dim circular mottled glow. Fills center of FOV nicely. |
| Light breeze tonight. | from east. Fron | n NE thru W and to S horizon is soft. No Centaurus objects |
| NGC 5256 PGC 8632 | 11:49 PM | 13 mm – A small, very faint oval with 2 stellar cores seen in center of glow. P8632 is one of the cores seen because it is part of N5256's halo glow. |
| NGC 5278 NGC 5279 | 11:58 PM | 13 mm – A small fat oval that is very faint. Has hair brighter core area. To lower left and near is a very small, round, very faint uniformly lit glow of N5279. |
| UGC 8671 | | A brighter stellar core with tiny bit of halo around it. Hard to tell. |
| Clouds drifting | ng in from nortl | n. Wind from NE now. |
| NGC 5296 | 12:10 AM | 13 mm – An <u>extremely faint</u> , round, uniformly lit glow. |
| NGC 5370 | 12:12 AM | 13 mm - A very small, very faint oval with larger, linear, hair brighter core. |
| NGC 5368 | 12:15 AM | 13 mm – A very small, very faint fat oval with bit brighter |

It is 15.3 yet easy to see at end of a chain of 3 stars at same

The clouds overtook UMa and watched N5368 fade in and out and then gone. This sky change was predicted but came in over an hour earlier than predicted.

core.

We had objects in Libra and by the time we slewed the scope over there, the clouds were there. It was as if the atmosphere just formed clouds out of clear sky. We had 2.5 hours of good observing. I have one more object in UMa and that constellation will be done with relook objects.

Tomorrow is predicted to be clear and will do more observing then. Mike and I shared the 20" alternating by looking at 2 of his objects in western UMa and then 2 of my objects about 50° to the east. This worked out well because it minimized the long slews.

Thursday, May 6, 2021

Light breeze from east. Clear at sunset. Sunset at approx. 8:25 pm.

8:42 PM – Mercury was a full disk. Venus just above horizon and will set in a couple of minutes.

Still in a short sleeved shirt. Last night at this time I was layered up with 2 shirts and stocking hat.

9:28 PM – Waiting for it to get dark. Mars tiny round red disk. M13 looks good.

9:33 PM - 10 Starlink satellites moving from SW to NE and had a bit of separation between them. Brightened as they were overhead.

9:37 PM - 50+ more Starlinks stretched across the sky from SW horizon to NE horizon, almost in the same orbit as the previous 10. These had the same separation as the previous 10. Way cool!!! They were yellowish in color in the eyepiece of the 20" as they shot thru the FOV.

Seeing and transparency good. Slight breeze.

| 0 | | |
|----------------------------------------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NGC 4841A NGC 4841B | 9:49 PM | 13 mm – A very small, round, very faint glow with bit larger, bright core. Then above and near is a bit smaller round glow of N4841B. <u>Very faint</u> . Approx. same magnitude as N4841A with a brighter stellar core. |
| NGC 5402 NGC 5379 NGC 5389 NGC 5376 | 9:55 PM | 13 mm - A very small, extremely faint thin uniformly lit oval glow. N5379 and N5389 together and brighter. N5376 is brighter than N5402. All 3 are in same FOV. N5402 to left of these in the next FOV over. |
| 9:56 PM – 20 | more Starlinks | low in the north. Used binoculars to see them. What a treat. |
| NGC 4136 NGC 4150 | 10:06 PM | 13 mm – A larger, round, uniformly lit dim glow. A small, dim oval with larger, brighter core. |
| UGC 7190 | 10:12 PM | 13 mm - A tiny, extremely faint glow with stellar core. It is to left of a very faint field star. |
| NGC 4514 | 10:26 PM | 13 mm – A very small, fat oval. Very faint, uniformly lit. Maybe something at core but not sure. |
| NGC 4676A NGC 4676B | 10:32 PM | 13 mm – The Mice. 2 very faint galaxies right next to each other. Lower one has brighter, linear core and is a 2:1 oval. Other is 70° of perpendicular to first. It is a bit smaller, uniformly lit, no core. Both are very small. |
| Casina and the | | d 15.0 magnitude colories are not nonning out 14.0 mag |

Seeing and transparency good. 15.0 magnitude galaxies are not popping out. 14.0 mag are obvious. Light breeze from east.

NGC 4880 10:46 PM 13 mm – A fat, dim oval with a uniformly lit glow.

| NGC 4999 | 10:50 PM | 13 mm – A larger, round, very faint halo glow with hair brighter, larger core in center. |
|------------------------------------------------|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NGC 4819 NGC 4821 PGC 44196 NGC 4983 | 10:53 PM | 13 mm – A very small, round glow with larger, bit brighter core. Below and near is N4821 which is to left. It is a <u>very small</u> , <u>very faint</u> glow with tiny stellar core. To left and a bit away is P44196, a <u>very small</u> , <u>extremely faint</u> glow with hair brighter stellar core that is <u>very faint</u> . N4983 is a <u>very small</u> to tiny oval, <u>extremely faint</u> glow with tiny, bit brighter stellar core. |
| UGC 8229 PGC 45579 | 11:02 PM | 13 mm – To left of a very faint field star is U8229, a very small, very faint oval with linear hair brighter core. P45579 is to right of field star and away from the UGC. It is a tiny glow with bit brighter stellar core. The PGC is between 2 very faint field stars. |
| Seeing and tra | ansparency are | very good now. |
| NGC 5020 | 11:09 PM | 13 mm – A larger round glow with larger, brighter core that dims slowly. Maybe CCW spiral arms. At 7 o'clock on glow is possible spiral arm. |
| Sky Comman | der battery died | l. Put new 9V in and realigned. Off and running again. |
| NGC 5129 | 11 01 DV | |
| NGC 5132 | 11:21 PM | 13 mm – A very small, very faint oval with brighter complex core. A <u>very small</u> , extremely faint roundish smudge of light that is uniformly lit. |
| | 11:21 PM 11:25 PM | complex core. A <u>very small</u> , extremely faint roundish smudge of light that |
| NGC 5132 NGC 4979 | | complex core. A <u>very small</u> , extremely faint roundish smudge of light that is uniformly lit. 13 mm – A <u>very small</u> , extremely faint oval. There is something that draws my eye to a possible core. Then above is IC 4202, an <u>extremely faint</u> , uniformly lit |
| NGC 5132 NGC 4979 IC 4202 | 11:25 PM | complex core. A <u>very small</u> , extremely faint roundish smudge of light that is uniformly lit. 13 mm – A <u>very small</u> , extremely faint oval. There is something that draws my eye to a possible core. Then above is IC 4202, an <u>extremely faint</u> , uniformly lit elongated glow that I couldn't see again but think it's there. 13 mm – A small oval, uniformly lit. Has bright field star |
| NGC 5132 NGC 4979 IC 4202 NGC 5768 NGC 4418 | 11:25 PM 11:41 PM | complex core. A <u>very small</u> , extremely faint roundish smudge of light that is uniformly lit. 13 mm – A <u>very small</u> , extremely faint oval. There is something that draws my eye to a possible core. Then above is IC 4202, an <u>extremely faint</u> , uniformly lit elongated glow that I couldn't see again but think it's there. 13 mm – A small oval, uniformly lit. Has bright field star on left side of halo glow. 13 mm – A very small, faint oval with bit brighter complex core. Above and to right and near is P40790, a <u>very small</u> , |

| NGC 5239 | 12:24 AM | 13 mm – A larger, very faint fat oval. Has a subtle texture to it with maybe a hint of a larger core area. |
|-----------------------------------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| UGC 8614 | 12:29 AM | 13 mm – Under a bright field star is this easy to see oval glow. Other stars in FOV make a loose 'V' with galaxy at apex of 'V'. |
| NGC 5300 | 12:34 AM | 13 mm – A small, round very faint halo glow with larger, bright core. |
| NGC 5252 | 12:38 AM | 13 mm – A <u>very small, very faint</u> oval with very faint stellar core seen in center. |
| Seeing and tra | insparency goo | d. |
| NGC 5490 | 12:42 AM | 13 mm – A <u>very small</u> , <u>very faint</u> glow with hair brighter core. |
| IC 982 IC 983 | | A very small but brighter, with a larger core. To left of IC 982 is a roundish, small smudge of light. |
| NGC 5257 NGC 5258 | 12:58 AM | 13 mm – A small, faint, uniformly lit linear glow. 3:1. Then below and near is N5258, a more round, faint, uniformly lit glow. |
| NGC 5327 | 1:07 AM | 13 mm – A medium sized, round, very faint glow with tiny stellar core in center. |
| NGC 5532 NGC 5532B NGC 5531 | 1:11 AM | 13 mm – A larger, dim tilted oval with larger, bright core. Above and to right is N5532B a tiny, round, extremely faint glow. Below is N5531, a small, dim oval with a linear brighter core. |
| NGC 5329 | 1:18 AM | 13 mm – A very small tilted, very faint oval with bit brighter stellar core. |
| UGC 8787 | 1:18 AM | 13 mm – A 3:1 <u>extremely faint</u> sliver of uniformly lit light in same FOV to upper right of N5329. |
| NGC 5600 | 1:21 AM | 13 mm – A small, round dim glow with tiny hair brighter stellar core. |
| NGC 5343 NGC 5339 | 1:27 AM | 13 mm – A small fat oval that is very faint with larger, hair brighter core that dims into halo glow. A very small, faint galaxy with brighter core. To right of N5343 and in same FOV. |
| NGC 5669 | 1:37 AM | 13 mm – A large, faint roundish, uniformly lit glow. |

| NGC 5345 | 1:41 AM | 13 mm – A very small, faint tilted oval. Has tiny hair brighter stellar core and an <u>extremely faint</u> field star on left hand side of glow. It is below and near a bright field star. |
|----------------------------------------------------------------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NGC 5334 | 1:43 AM | 13 mm – A large, round, very faint, uniformly lit glow. |
| NGC 5356 NGC 5363 NGC 5364 NGC 5348 NGC 5338 UGC 8818 | 1:46 AM | 13 mm – A 3:1 thin cigar, uniformly lit, very faint glow. To right and above is N5363, a small, bright galaxy with large, bright core. To upper left and near is N5364, a larger, roundish, uniformly lit faint glow. To lower left of N5356 is N5348, a 4:1 thin extremely faint linear sliver of light. To lower left is N5338, a very small, round faint glow with bit brighter stellar core. To right of N5348 is U8818, a medium sized tilted oval, very faint with tiny hair brighter core. |
| NGC 5690 | 1:58 AM | 13 mm – To right of a bright field star is this thin, faint, uniformly lit, 5:1 glow with a tiny, bit brighter field star on upper part of glow. |
| NGC 5374 | 2:01 AM | 13 mm – A very faint, very small fat oval with very tiny, extremely faint stellar core in middle. |
| NGC 5382 | (Th) | A tiny, thin, very faint oval. |
| NGC 5386 | 3 8Z | A very small, very faint oval glow with brighter stellar core. |
| NGC 5384 | * | A very small, very faint oval with brighter stellar core. |
| NGC 5387 | 84 | A 4:1 thin, extremely faint linear, uniformly lit glow. |
| | | |

Seeing and Transparency very good even though Milky Way is washed out.

| NGC 5775 | 2:22 AM | 13 mm – A round, dim glow with bit larger core. |
|-----------|---------|-----------------------------------------------------------------------------------|
| NGC 5774 | | A long, thin, dim, uniformly lit glow. |
| PGC 53245 | | A tiny, extremely faint smudge of light. |
| | | Above 3 galaxies were all near each other. |
| IC 1067 | | To left is a small, roundish, faint glow with brighter core. |
| IC 1066 | | A bit smaller than IC 1067. A very faint, uniformly lit |
| | | glow. IC 1066 to left of IC 1067 and near. |
| IC 1068 | | A tiny, extremely faint glow with tiny stellar core. |
| NGC 5776 | | 13 mm – A very small, very faint glow with tiny, bit |
| | | brighter stellar core. |
| | | |
| NGC 5472 | 2:49 AM | 13 mm – A thin tilted oval. Small with brighter, larger core that dims into arms. |
| NGC 5476 | | 13mm A larger, roundish uniformly lit faint glow. |
| | | |

| NGC 5549 | 2:52 AM | 13 mm - A very small, very faint oval with brighter center that dims quickly. |
|----------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NGC 5546 | | Below N5549 is a similar looking one to N5549 but core not developed as much. Just a tiny, stellar core. |
| NGC 5542 | | To left is this tiny, roundish, extremely faint, uniformly lit glow. |
| NGC 5538 | | To left of N5542 is a tiny, uniformly lit, <u>extremely faint</u> oval that is barely there. |
| NGC 5543 | | This galaxy is below all the above ones and all these galaxies are in the same FOV. This is a <u>tiny</u> , round, <u>extremely faint glow with a very faint stellar core seen with AV.</u> |
| NGC 5596 | 3:21 AM | 13 mm - A very small, extremely faint oval with 2 stars on glow, one in center and other above center on halo glow. |

Sky is now gone. Hard to find galaxies now. Stars are bright and steady.

The weather forecast predicted this to happen over 2 hours earlier. Mike and I were treated to this bonus viewing which we took full advantage of.

Friday, May 7, 2021

The weather was predicted to be extremely windy for the next two days. Mike confirmed Friday was windy. I decided to leave today. I had breakfast in the cottage, packed up the car and left about 11 am CDT.

Somehow, I hit something in the road or a tough tumble weed because the right front inner fender was broken and had pulled the front plastic bumper off. I had wire cutters to cut off the broken inner fender and snapped the plastic front bumper back into place. Made it home about 7 pm with no more issues with it.

Philip repaired it in his garage on May 15, 2021 and it is good as new.