Sunday, March 23, 2014

Mike Roos, John Figorski and I met near Crowell, TX at the Comanche Springs Astronomy Center to use their 20 inch and 30 inch telescopes. John and I caravanned there together, leaving 7 AM Sunday morning and arrived Sunday evening, about an hour before sunset. Mike arrived Monday afternoon. We setup the two 20 inch scopes for it was clear and the prediction was total overcast tonight.

We were told by Jeff Barton that new Sky Command hardware and computers were ordered for the two 20" and the 18" scopes, but had not been installed yet. He also said we were the last people to use these scopes a year ago. I wanted to use the 30" scope but the roll off roof had damaged the secondary cage and it had not been fixed yet. I never had the desire to use the 30" for the rest of the week because the 20" scopes are nice and able to see the things I wanted to see.

Tonight I used a 20 inch, f/5 Obsession with a 17mm eyepiece, yielding 149x.

It was clear and calm at sunset. While it was getting darker, I used my 8x50 binoculars to see the 'S' asterism in Orion (9:01 PM) and the Boomerang asterism in Canis Major (9:03 PM).

42 degrees. Sky OK. Transparency Good at 9:51 PM.

NGC 2401

10:33 PM

17mm – A small, roundish, faint glow w/AV see a hint of many faint stars on glow.

Sky clouded over after this. Too bad, for we were excited to get another night of observing in. But it is good to go to bed after a long days' drive.

Found the Cygnus 'Cross' asterism 3/24/14 at 4:53 AM on my way to the bathroom.

Monday, March 24, 2014

Installed two Sky Commander kits on the 20" scopes today. Ready to give it a try. Both Commanders worked great all night.

Clear at sunset, 7:54 PM. Brisk breeze from NE.

I used the 20 inch, f/5 Obsession telescope with a 17mm eyepiece tonight, yielding 149x.

Seeing Good. Transparency Good.

Tried for the Southern Arps in Columba but the constellation was just too low in the SW to be able to see them. Then tried for a galaxy in Eridanus but it too was just above the southwestern horizon, so won't get these this trip.

M42 awesome. Lots of nebulosity and 6 stars in trapezium easily seen.

M66,M67,NGC	9:44 PM	17mm – All three in triplet at nice and bright.
NGC 3485	9;44 PM	17mm – Nice. Brighter tilted oval with larger, bright core and lots of extended, dimmer halo.
NGC 2555	9:48 PM	17mm – A small, round, uniformly lit glow with 2 fainter and 1 brighter field stars on glow. None are centered on glow so no nucleus seen.
NGC 2578	9:50 PM	17mm – A dim, smaller tilted glow with tiny star like nucleus in center of glow. Then below and near nucleus and on glow is a very faint field star.
NGC 2695 NGC 2697	9:54 PM	17mm – A small, brighter oval with much brighter, tiny core. Above core and on halo glow is a faint field star. Brighter field star below galaxy and in
f 5 -2691		line with field star and nucleus. Then above and to right and near is this dim, small, oval, uniformly lit glow of N2697.
NGC 2721	9:57 PM	17mm – A small, very dim, tapered oval with hare brighter, larger core.
NGC 2863	10:00 PM	17mm – A <u>very</u> dim, round, uniformly lit glow nestled between two field stars with bottom star brightest.

NGC 2902	10:02 PM	17mm – A small, round, very dim glow with relatively bright core seen w/AV.
NGC 2921	10:04 PM	17mm – A larger, long thin very dim glow with tiny, hare brighter core. Goes from 1-7 o'clock.
NGC 3072	10:07 PM	17mm – A dim, small, thin tilted oval with hint of hare brighter core.
NGC 2904	10:10 PM	17mm – A <u>very</u> dim, larger round, uniformly lit glow. Maybe a larger, <u>hare</u> brighter core.
NGC 2865	10:13 PM	17mm – A larger, tapered oval with brighter, larger core. Medium sized. <u>Very</u> dim halo glow.
MGC 5-23-006	10:17 PM	17mm – A larger, <u>very</u> dim linear glow with very bright field star on lower part of glow. Almost looks like nebulosity but it is the galaxy underneath this star.
NGC 3038	10:20 PM	17mm – A tiny, thin edge on with star like core. To left of core, centered on edge on is a field star on halo glow. Same <u>very</u> faint brightness as core. Seen w/AV.
IC 2511	10:28 PM	17mm – A small, <u>very</u> dim, uniformly lit round glow.
52 degrees. Light bree	eze from NE. S	Sky Good. Transparency Good.
IC 2522	10:25 PM	17mm – A tiny, round to oval glow with hare brighter core. This looks like an out of focus star but in between 2 brighter field stars where it should be.
NGC 3087	10:32 PM	17mm – An <u>extremely</u> faint, roundish, small ghostly glow.
NGC 3001	10:35 PM	17mm – A small, roundish, very dim, uniformly lit glow with brighter field star just below and touching glow.

	NGC 3095 NGC 3100 PGC 28955	10:40 PM	17mm – A small, round, <u>very</u> dim glow. Then in same FOV and near and below is this tiny, faint glow of N3100. And to left is this larger, long, fat cigar shaped dim glow that seems brighter on bottom and tapered off to top of P28955.
	52 degrees. Wind from	m NW now. Sk	xy OK. Transparency OK.
	NGC 3089	10:46 PM	17mm – A small, round, <u>very</u> dim, uniformly lit glow. Maybe a bit more oval than round. Unsure. Seen w/AV.
	PGC 28822	10:49 PM	17mm – An extremely faint linear uniformly lit, small, ghostly glow.
	NGC 3056	10:51 PM	17mm – A thin, dim, small, edge on with brighter, small core and field star below core on halo glow. Goes 11:30-5:30 o'clock.
	NGC 3084	10:55 PM	17mm – A tiny oval with hare brighter core. Above and on top end of halo glow is a faint field star.
	MGC 4-24-014	10:57 PM	17mm – A very small oval with brighter core.
	NGC 3203	10:58 PM	17mm – A small, oval glow. <u>Very</u> dim with 2 field stars on glow. Neither seem to be it's core.
	NGC 2578	11:06 PM	17mm – A very dim, small oval glow. w/AV see a hare brighter core area.
1	MGC 2-22-014 MGC 2-22-015 MGC 2-22-016	11:10 PM	17mm – A very dim, small linear glow. Then below is an extremely faint, roundish, tiny ghostly glow.
	NGC 2736	11:19 PM	17mm – About a brighter field star is this large, bit of halo glow.
	Gum 12	11:26 PM	31mm – Panned around area and can see with O3 a contrast change here and there. Very subtle because so low in south and just above horizon.
	LBN 1088	11:33 PM	17mm – About 2-3 FOVs in diameter is this glow, mottled at times in this area.
	LBN 1089	11:35 PM	17mm – About 2-4 FOVs in diameter is this noticeable, splotchy glow.

LBN 1090	11:37 PM	17mm – For 2-4 FOVs in diameter is this pretty uniform glow. About the brighter stars is this tiny bit of halo glow.
NGC 3233 PGC 30391	11:48 PM	17mm – A small, very dim oval glow with larger, brighter core. Then above and to right and in same FOV is this round, extremely faint ghostly smudge of light of P30391.
NGC 3313	11:53 PM	17mm – A tiny, very faint oval glow with 2 field stars on glow, very near each other with maybe one of them being the core.
NGC 3393	11:56 PM	17mm – A tiny, thin oval, <u>very</u> faint glow with tiny, star like core in center of glow.
PGC 32515	12:00 AM	17mm – A small, round smudge of light, uniformly lit, obvious glow seen with AV.
PGC 31577	12:02 AM	17mm – A tiny, round, very faint glow. w/AV see a tiny brighter core in center of glow once in a while.
NGC 3285 NGC 3285A NGC3285B PGC 31309	12:06 AM	17mm – B is largest, dim, oval, uniformly lit glow. N3285 is a small, round glow with time, brighter core. To left is a larger, round uniformly lit glow of P31182. Below is A, a <u>very</u> dim, small linear glow.
PGC 31328 PGC 31182	- P31309	Above all 3 is a very faint, linear, small uniformly lit glow of P31309. Then to right is a tiny, round,
8-	≈ - 431284 - 3885	uniformly lit smudge of light of P31328. Makes the upper right part of a 'Y'. A is with main N3285 and is hard to see it individually because it is so close.
g G	- P31182	is hard to see it marvidually occause it is so close.
NGC 3483	12:12 AM	17mm – A tiny oval dim, yet easy to see. Has hare brighter core.
NGC 3137	12:20 AM	17mm – A larger, longer, <u>very</u> faint oval halo with larger, brighter core.
IC 2537	12:26 PM	17mm – A small, round, <u>very</u> dim uniformly lit glow.

NGC 2980 12:31 PM 17mm – A small, oval, uniformly lit glow.

NGC 2969 12:33 PM 17mm – A small, round uniformly lit glow.

Brisk wind from NE. Gusting and bouncing scope too much to use. 46 degrees but feels colder.

1 AM. Too windy to continue. Great night. New Sky Commander worked great with my preloaded computer I brought from home with MGC and PGC coordinates.

Tuesday, March 25, 2014

Clouds along W-N-Ne horizon. Light wind from SE. Light haze overhead. 56 degrees at sunset.

Seeing Good. Transparency Good.

Sky Command's azimuth axis has severe slippage. I turned it and the counts just stopped. Going to star hop to targets tonight.

NGC 2967	9:33 PM	17mm – A medium sized, round, uniformly lit glow. Dim yet easy to see.
NGC 3055	9:53 PM	17mm – A small, thin, linear uniformly lit, very dim glow. Very near bright field star which makes it hard to see.
NGC 2990 PGC 28026	10:19 PM	17mm – A larger, long, thin dim glow. Brighter on upper part than lower part which is the glow of P28026 on top of N2990.
Sky Fair. Transparer	ncy Fair. 54 deg	grees. Brisk wind from SE.
NGC 2906	10:45 PM	17mm – A small, dim, oval, pretty uniformly lit.
NGC 3110 NGC 3518	11:21 PM	17mm – A small oval, uniformly lit. Then to lower left and near is a tiny, round, smudge of light of N3518.
NGC 3456	11:34 PM	17mm – A small, fat oval, pretty uniformly lit that is to the left of a dim field star and near it.
NGC 3411 NGC 3421	11:59PM	17mm – A small, thin, <u>very</u> dim oval, uniformly lit. Then above and near and a bit to the right is this tiny, oval, smudge of light of N3421.
NGC 3715	12:10 AM	17mm – A dim, small fat oval with hint of hare brighter, larger core.
NGC 3667	12:15 AM	17mm – A small, <u>very</u> dim, fat oval with larger, brighter core.
NGC 2749 NGC 2744	12:39 AM	17mm – A nice, bright, fat, small oval with large bright core and small bit of dim halo around it.

Then above and to left is this extremely faint, tiny

sliver of light of N2744.

NGC 2750

1:14 AM

17mm – A <u>very</u> faint, round glow with hare brighter core in center.

Brisk wind from SE. Clouds moving in from west. 48 degrees. Seeing Poor. Background sky bright making spotting galaxies tough. Sky Commander slippage in AZ. Will add the original ground boards tomorrow. Looked also at M42, M13, Omega Centauri, M57, Jupiter, Mars (lots of surface detail) and Saturn tonight.

Wednesday, March 26, 2014

Moved telescopes on north side of main roll off building to get away from <u>Strong</u> wind from south. Clear at sunset but clouds skirting W->NW horizon.

Sky good. Transparency good. Milky Way awesome. Zodiacal light bright in west.

Found Fly and Fly Swatter asterism in Hydra with my 20x80 binoculars and mount.

NGC 2841	9:17 PM	20mm – Nice, large tilted oval. Large, bright core and lots of extended halo off each end.
Abell 1314	9:24 PM	
IC 705		20mm – A very faint round glow.
IC 708		20mm – A tiny, round, very faint uniformly lit glow.
IC 709		20mm – To lower left of IC 708 is a smaller, round, smudge of light.
IC 711		20mm – Is a ghostly small glow.

9:50 PM. Clouded over. Patchy, thick clouds. Stars poking out here and there.

Jupiter

9:54 PM

20mm - Nice view. Lots of bands seen.

Looked at M51, 1st time this season. Nice. Bright. Hint of spiral structure seen.

Went to be about 11 PM and it was pretty cloudy with brightest stars poking thru here and there.

Thursday, March 27, 2014

Today we had hellish wind all day. It is supposed to stop later in the evening. Clear at 6:15 PM with lots of dust in the air causing a noticeable hazy sky.

Clear at sunset. 7:53 PM. <u>Light</u> breeze from west. Sky a bit hazy from <u>strong</u> winds all day blowing dust into the atmosphere. 76 degrees.

Tried to fix my Sky Commander. The issue is only about 3 threads of the bolt are engaging the fixed nut on the ground board. John and I tried to use masking tape to stiffen the bolt. That almost worked for there was a tiny bit of slippage (counts only missed a few) but it was enough to keep it from working. Will star hop again tonight, using the star maps I loaded on my Surface 2, which worked awesome. I love this computer with the telescope.

NGC 3687	9:34 PM	17mm – A small, round, <u>very</u> dim glow. w/AV, see a longer, hare brighter core that is mottled. Maybe brighter center core and a field star there also.
NGC 3629	9:38 PM	17mm – A <u>very</u> dim, medium size, fat oval with tapered ends. Uniformly lit.
NGC 3510	9:42 PM	17mm – To upper left of a bright field star and near is this very thin, long, <u>very</u> faint small glow that seems to be a hare brighter in middle.
NGC 3512 NGC 3504	9:44 PM	17mm – A small, brighter, tilted oval with small, bright core. Has field star to upper left of core and on halo glow. Then above it is a dim, small, round, uniformly lit glow of N3504. This has a tiny, stellar core in center of glow.
NGC 2964 NGC 2968 NGC 2970	9:53 PM 2970 2963 2964	17mm – A small round uniformly lit glow with tiny, star core. Then above it is a bit smaller, round, dim glow with tiny core of N2968. Then above and near and to left is a tiny, round, uniformly lit glow of N2970.

62 degrees. Seeing Good. Transparency OK.

MRK 408	10:06 PM	17mm – To left of a brighter field star is this tiny, dim round glow.
NGC 3891	10:25 PM	17mm – A small, dim, tilted oval with extended tips. Has larger, hare brighter, linear core seen with AV. Brightest in center of core.

NGC 4020 10:29 PM 1	17mm – A long, thin oval. Very dim. Uniformly lit.
UGC 6968 4008 to UGC 6953 If	17mm – A small, dim, tilted, thin oval with hare orighter core. To right and near is this dim, small linear glow that seems a hare brighter on top than bottom of U6968. Then below N4008 is this smaller, round glow, very dim, with small, brighter core of U6953.

55 degrees. Seeing OK. Transparency OK.

NGC 4017	10:40 PM	17mm – A tiny oval, <u>very</u> faint, uniformly lit glow.
IC 2627	11:00 PM	17mm – A medium sized, <u>very</u> faint, round, uniformly lit glow.
NGC 3673	11:07 PM	17mm – A long and thin, medium sized tilted oval. Very dim. With larger, hare brighter core that is linear, centered on halo glow and is brightest in very center.
MGC 5-28-007	11:14 PM	17mm – A small, dim round glow with brighter, small core in center of dim halo glow.
PGC 38799	11:21 PM	17mm – An <u>extremely</u> faint glow under 2 brighter field stars. My eye is drawn to this glow that appears once in a while.
PGC 39768	11:48 PM	17mm – A small, round glow. W/AV and seen once in a while, see bright, tiny core in center of glow.

50 degrees. Sky Fair. Transparency Fair. Had to get out of deep south because it was too hazy there.

NGC 3692	12:15 AM	17mm – A medium sized, dim, long, slender sliver of light. Hint of a hare brighter, larger core in center.
NGC 3876	12:30 AM	17mm – A very small oval, <u>very</u> faint glow with larger, hare brighter core that shows mottling in its brightness that is seen w/AV.

NGC 3976	12:34 AM	17mm – A medium sized, long tilted oval. <u>Very</u> dim halo. Core larger and brightens to a small, brighter core.
NGC 4215	12:37 AM	17mm – A small, long, very tilted oval. Dim halo. Small, bright core seen in center.
NGC 4246	12:42 AM	17mm – A small oval. <u>Very</u> faint. Has hare brighter small core on halo glow. To left of core is an extremely faint field star seen with AV.
NGC 4235 NGC 4191 NGC 4224 UGC 7339 NGC 4246 NGC 4233	12:47 AM	17mm – Near N4180, is this group of 6 galaxies. N4191 is a small, dim oval with a small, brighter core. To left and below is N4235, s small, round, uniformly lit, very dim glow. Then just under this is N4246, a small, dim oval glow with small brighter core. Below and to right is U7239, a small, thin oval with small, brighter core. To left of N4919 is N4224, a tiny, oval, uniformly lit very dim glow. To lower left of N4191 and the lowest of all the galaxies is N4233, a small, round, uniformly lit, dim glow. All galaxies are very near each other and easily seen in same FOV.
NGC 4180	12:53 AM	17mm – A small, long, slender, uniformly lit sliver of light.
NGC 4277 NGC 4273	1:02 AM	17mm – N4273 is a small, tilted oval with larger, linear core on dim halo glow with an even brighter center. Then above and to right is a bit smaller, round to oval, dim glow with small, hare brighter core of N4277.
		st along south and another finger along north. 56
NGC 5739	1:41 AM	17mm – A small oval, dim, with larger, brighter core.
NGC 5784	1:43 AM	17mm – A small, round, dim glow with small, bright core on glow.

NGC 5633	1:49 AM	17mm – A small fat oval, dim, with tiny star like core in center.
NGC 5515	1:56 AM	17mm – A small, dim oval with hare brighter larger core.

Brisk wind from NE. Sky is too soft to find galaxies. Going to bed.

Friday, March 28, 2014

U4367

NGC 2764

9:54 PM

Cady Alverado brought Blue Locktite to *lock* the AZ bold to the ground board of scope #749 (#737 doesn't have Locktite for the threads grabbed by themselves and there is no AZ slippage). Preliminary tests showed this solved the slippage issue (didn't see missed counts) and I used the Sky Commander the rest of the night. The blue masking tape down the threads from the night before just didn't do it. It slipped right after the setup steps.

6:50 PM. Clear, Brisk breeze from NE. Sunset at 7:54 PM. 61 degrees. Smoke low along western horizon.

9:05 PM. Sky Commander works. M42 awesome. 6 stars seen in trapezium. Slewed between M41 and M42 twice and object in FOV both times.

G205.5+00.5	9:10 PM	17mm - Cool. This. Easy to see with O3. Thick
	J.10 1 1/1	filaments in a loop on bottom and arc that thickens
		at top. 2 FOV wide and 3 FOV tall.

NGC 2532	9:37 PM	17mm – A small, round, dim glow. Can see mottling of glow, maybe 2 CCW arms. In center of glow is a tiny, hare brighter core.
NGC 2649	9:42 PM	17mm – A small, round, very dim, uniformly lit glow. Has brighter field star on upper part of halo glow.
NGC 2604	9:46 PM	17mm – A very faint, fat oval, uniformly lit glow.
NGC 2577 UGC 4367	9:49 PM	17mm – A very small, tilted oval. Dim. Has larger, brighter core. Then above and to right and near and under a bright field star is this smaller, roundish, uniformly lit, very faint glow of U4367.

17mm – A small, long thin, very dim glow with larger, linear core that is brighter with small, bright core in center. Core faint but easy to see w/AV.

Gum 12	9:59 PM	17mm – With O3, an extremely faint glow. Just above horizon. On right hand side, one long thick filament approx. 3 FOV long. To left and approx. 2 FOV up and down is a subtle, splotchiness here and there. Very subtle yet O3 sees it nicely.	
NGC 3430 NGC 3413 NGC 3396 NGC 3395 UGC 5927 NGC 3424	10:04 PM	17mm – A medium sized, tilted oval with larger, hare brighter core. Then below is N3424 a bit smaller oval, uniformly lit glow. Then below and near is N3413, a small oval with bright, tiny core. To right are two very dim ovals, almost touching each other of N3496 and N3495, each with hare brighter core. Both look the same. Then below these two and away is this extremely faint round, uniformly lit glow of U5927.	
NGC 3070	10:12 PM	17mm – A very small dim oval glow with a tiny, brighter core.	
NGC 3041	10:14 PM	17mm – A larger, face on. <u>Very</u> dim. See splotchy nature to glow which looks like 2 CCW arms. Has tiny, extremely faint core and 3-4 faint field stars on glow.	
NGC 3053	10:18 PM	17mm – A thin, small, very dim edge on with larger, hare brighter core area.	
50 degrees. Light breeze from NE. Seeing Good. Transparency Good.			
NGC 3153	10:21 PM	17mm – An extremely faint, thin, small, uniformly lit glow.	
NGC 3299	10:23 PM	17mm – A larger oval, <u>extremely</u> faint, ghostly, uniformly lit glow.	
NGC 3300	10:25 PM	17mm – A very dim, small tilted oval with hare brighter, larger core that brightens to a small brighter core.	
NGC 3367	10:28 PM	17mm – A small, round, dim glow with tiny, star like core in center of glow.	

NGC 3346	10:29 PM	17mm – A larger, round, dim, uniformly lit glow.
NGC 3370	10:31 PM	17mm – A small dim oval with hare brighter, linear core centered on oval halo glow that has an even hare brighter central core.
NGC 3773	10:35 PM	17mm – A tiny, dim halo with brighter, small core. Looks like an out of focus star. Missed it first time I saw it.
NGC 3506	10:37 PM	17mm – A very small, round, very dim glow with brighter, small core.
NGC 3433	10:38 PM	17mm – A larger, <u>extremely</u> faint uniformly lit, ghostly glow.
NGC 3332	10:40 PM	17mm – A very small oval, very dim. Has larger, brighter core.
NGC 3462	10:42 PM	17mm – A very small, round, very dim glow with larger, hare brighter core that is even brighter in small center. Seen w/AV.
NGC 3356	10:44 PM	17mm – An <u>extremely</u> faint, small, oval, uniformly lit glow.
NGC 3423	10:45 PM	17mm – A larger, <u>very</u> faint fat oval, uniformly lit glow. On upper part of glow are 2 evenly bright, dim field stars.
NGC 3434	10:47 PM	17mm – A very small, round, <u>very</u> faint glow with brighter, larger core.
NGC 3495	10:48 PM	17mm – A larger, long, evenly thin dim uniformly lit glow. Just above a bright field star. Have to put star out of field to see this. It is square on right hand side and tapers to a point on left hand side.
IC 443	10:55 PM	17mm – With O3, see a long, fat glow. Very dim. Under lots of stars. 1 ¼ FOV long. Goes from 10-4 o'clock. Upper left pointed and lower right has a thinning then a fat oval that extends right of long, fat part. Nice!

NGC 3571	10:59 PM	17mm – A small, very dim, tilted oval with small, hare brighter core.
NGC 3318	11:11 PM	17mm – A small, fat oval. Very dim, uniformly lit glow.
NGC 3250	11:14 PM	17mm – A small, round glow with center uniformly lit and large and tiny bit of extremely faint halo around this. Most of what is seen is core.
NGC 3275	11:23 PM	17mm – A very small, very dim oval with much brighter small core that is easy to see.
NGC 3347A NGC 3347A NGC 3347B NGC 3358	11:27 PM	17mm – A very dim tilted oval with larger, hare brighter core. Almost touching N3347 is this tiny star, which I think is A. Then underneath, near and to left is B, a tiny, thin, uniformly lit sliver of very dim light. The below and to left is N3358, a round, tiny, very dim glow with tiny, hare brighter star like core in center.
PGC 30857	11:36 PM	17mm – A tiny halo glow, dim, with larger, bright core. Looks like out of focus star.
PGC 31677	11:38 PM	17mm – A tiny, round, <u>extremely</u> faint ghostly glow with hare brighter star like core on glow.
NGC 3281	11:39 PM	17mm – A small, <u>extremely</u> faint glow. Oval. Uniformly lit.

Abell 1060	11:41 PM
NGC 3305	117.11 1111
NGC 3308	
NGC 3307	
NGC 3309	
NGC 3311	
NGC 3312	
NGC 3316	
NGC 3314	
PGC 31495	
PGC 31488	
33H ~ 33H ~ 33H ~	230°C -230°C -350°7
- Jan 83	05 H98

17mm – N3305 is a thin oval, very dim and uniformly lit. Below and to right is N3308, a smaller very dim, uniformly lit oval. Then below this and to right is N3307, a small, dim oval with small, brighter core. To left of these 3 and between 2 field stars is N3311, a very small oval with a hare brighter, small core. Below and to right is N3309, a very small, very dim oval, uniformly lit glow. Below N3311 and to left is N3312, a very small, uniformly lit, dim oval. To lower left is N3316, a roundish, very dim glow with star like hare brighter core. A bit away from these three is N3314, a very dim, round, uniformly lit glow. Then below this one and a bit farther away is P31495 and P31488, to tiny oval smudges of light, that are at an angle to each other and look like alien eyes.

P31495- 1 - P31488

NGC 3564	11:50 PM	17mm – A thin oval, small, with tapered arms. Has a small, bright core.
NGC 3557	11:50 PM	17mm – Above and to right of N3564 is this very small, thin edge on. Very dim yet has hare brighter, larger core in center.
NGC 3573	11:57 PM	17mm – A very small oval, extremely faint, uniformly lit glow.
NGC 3533	11:57 PM	17mm – A tiny, round, very faint glow with tiny, hare brighter core.
NGC 3742 NGC 3749	11:59 PM	17mm – An <u>extremely</u> faint, linear, small cigar oval. Uniformly lit. Below, near and to left is N3749, a very small, tilted oval with larger, hare brighter core. Very dim.

Seeing OK. Transparency	Good this low about t	he horizon. 44 degrees.	No wind. 🕲

	NGC 3903	12:04 AM	17mm – Under a bright field star is this very dim oval glow with star center on oval glow. No other stars in FOV have this halo glow around them but this one.
	PGC 36964	12:07 AM	17mm – An extremely faint, small, thin oval, uniformly lit glow.
,	IC 764 PGC 38734 PGC 38712	12:12 AM	17mm – An extremely faint, thin, small oval, uniformly lit, ghostly glow. To left and near is P38734 and P38712, to identical looking round, dim glows with small, bright cores. They are almost vertical to each other with P38734 on top.
	PGC 39125 PGC 39212 M104 Awesome. Fo Good.	१ ३५३। इ	17mm – A small, thin oval, extremely faint, uniformly lit glow. Then below and to left is this bit smaller oval, ghostly, uniformly lit glow of P39212. sm. 12:32 AM. 42 degrees. Sky Good. Transparency
	NGC 4603	12:47 AM	17mm – A small oval, very dim, uniformly lit glow.
	PGC 43717	12:52 AM	17mm – Above and to left of bright field star is this small, round, ghostly smudge of light.
	NGC 4832	12:56 AM	17mm – A very small, <u>very</u> faint round glow. Has brighter star core. To left and near dim field star.
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	PGC 47151	12:59 AM	17mm – A tiny, round, very faint glow with brighter star core.
	NGC 5121	1:02 AM	17mm – A small, round, dim glow with larger, brighter core that is mottled.
	NGC 5063	1:06 AM	17mm – An <u>extremely</u> faint, thin oval, uniformly lit ghostly glow.

NGC 4947 NGC 4947A	1:08 AM	17mm – An extremely faint, fat oval, uniformly lit glow. Then below and to right and near is this tiny smudge of light of N4947A that I see once in a while.	
PGC 42871	1:13 AM	17mm – A small, round, uniformly lit, <u>extremely</u> faint smudge of light.	
PGC 46298	1:17 AM	17mm – A very small, <u>very</u> faint oval, uniformly lit glow.	
PGC 47345	1:20 AM	17mm – A small, fat oval, <u>extremely</u> faint, uniformly lit glow.	
MGC 5-31-039	1:24 AM	17mm – An <u>extremely</u> faint ghostly glow. A small, cigar shaped oval.	
NGC 5124	1:26 AM	17mm – A small tilted oval. <u>Very</u> faint. Has larger, hare brighter core.	
NGC 4936	1:28 AM	17mm – A very small, dim oval with larger, brighter core.	
NGC 4955	1:31 AM	17mm – A very small, <u>extremely</u> faint glow with tiny, star core in center.	
PGC 44663	1:35 AM	17mm – A tiny, round, <u>extremely</u> faint glow with tiny star core in center.	
NGC 4806	1:37 AM	17mm – A very small, round, <u>very</u> faint, uniformly lit glow.	
36 degrees. Sky Good. Transparency Good.			
NGC 5264	1:52 AM	17mm – A huge, dim oval glow. Mottled texture to glow. Small bright core. Almost fills FOV.	
NGC 5464	1:55 AM	17mm – A very small, <u>very</u> faint oval glow. Uniformly lit.	
NGC 5556	2:00 AM	17mm – A very small, very faint, uniformly lit, oval glow.	

Spent about another hour looking for galaxies in northern Centaurus but they were not popping out. Decided to look at brighter things and call it a night.

Mars incredible at 200x. See both caps and green marks on red disk.

Saturn awesome. See brown band and Cassini's Division is jet black. Best view of this I have had in quite some time.

M13 lots of BW stars. M51 nice spiral arms easy to see. M57 nice.

Was in bed at about 3:15 AM. Had a great time at 3RF this week. Even though the Sky Commander didn't work as I had hoped, I still star hopped and found objects. Did finally get the Sky Commanders to work, which was a nice accomplishment for us to donate to 3RF.

The weather threatened to be lousy seeing each night but we were treated to very good skies often. Good weather for this time of year in north Texas.

Saturday, March 29, 2014

Woke up about 8:30 AM, showered, had coffee and Danish, finished packing the car and I headed for home about 9:30 AM.

I had a very strong southern wind pushing me home. From Amarillo to Limon, my Prius got 45.3 mpg. I spent a total of \$123 on gas for this trip. Dodged lots of tumble weeds on the road and smacked a bunch.

The meals at 3RF for the week were outstanding. The desserts were to die for. They said the lady that made the meals and desserts owns a restaurant in Crowell and she is only open a little while and sells out of food every time. She is a great dessert maker. It was worth the \$40 per night for meals and lodging.

I had a great time and will return soon.