## March 20, 2004

Pawnee Grasslands.

There were a few clouds at sunset that thickened as the early evening went on. At the end of twilight, it looked like a repeat of last night, thicker and thicker, but by 8:30, the NE was clear and the clouds moved to the SW. The wind was calm until around 1 AM, and by 3 AM, was blowing pretty good. The sky was clear in the SW sometime after midnight. Although there were clouds, the seeing was really good and steady. Surprising.

About 8:30, saw M51 in Gary's 30". This was the best I had ever seen it. You could see lots of detail in the spiral arms, none of which I had ever seen with my eye before.

Now onto Herschel 400 objects. All viewed with 19mm eyepiece or 133x.

NGC 5373	9:01 PM	Small, round galaxy with a slightly brighter nucleus. Easy to see.
NGC 5374	9:01 PM	In the same FOV as NGC 5373. This is a small, round, uniformly lit galaxy.

M101 was nearby. Bright nucleus with large, dim extended halo. Used this galaxy to hop to these two.

Wind is calm, NE is clear of clouds and SW still has a bunch.

NGC 5631	9:28 PM	Small, round dim halo with a relatively brighter star like nucleus. Quite obvious in FOV.
NGC 4102	9:44 PM	Large, dim oval halo with little brighter nucleus. There are 2 field stars on halo, with one at the end. A third field star at other end of halo. Nucleus is dim, yet easy to see. Nucleus is a bit extended in size, not just a pin point of light.
NGC 4346	10:38 PM	Small oval with relatively brighter and large nucleus. Easy to see w/AV. Nucleus is most of what you can see yet a hint of halo on each end of nucleus.
NGC 4111	10:53 PM	Small, slender sliver of light with brighter nucleus. Whole object looks like an out of focus star yet there is a bright field star to right in FOV that is in focus.
NGC 4143	11:15 PM	Very small and very faint oval of light that is uniformly lit. There is a faint field star on left hand side of oval glow.

	NGC 4051	11:36 PM	Small, circular uniformly lit smudge of light with a little brighter nucleus. Nucleus is small and centered in halo and is almost star like relatively brighter point of light.
	NGC 4361	1:09 AM	Round and dim with star seen right in the center. Uniformly lit.
	NGC 5363	1:18 AM	Small, circular with fairly bright nucleus. Almost all of what you can see is nucleus. There is a tiny bit of halo surrounding nucleus. W/AV, see larger halo, circular in shape with nucleus centered in center of halo.
	NGC 5364	1:18 AM	In same FOV as 5363. Dim, uniformly lit, that is a larget circular smudge of light than 5363.
faint gal	NGC 5 <b>5</b> 76	1:28 AM	An oval, dim galaxy with little brighter nucleus that is easy to see. Halo may extend a bit on each side of nucleus.
5574	NGC 5 <b>3</b> 66	1:28 AM ←p6C 5560	A small, oval with relatively brighter nucleus. There is a field star on left hand side of halo. Just above it is a small, faint smudge of light with a tiny, dim nucleus.
	NGC 5746	1:35 AM	Nice edge on galaxy. ¼ width of FOV. Nice symmetry from arms, into central bulge which is brighter. Hint of a dust lane bisecting arms and nucleus. It is long and slender.
	NGC 5846	1:38 AM	Small, very dim uniformly lit circular patch of light with a tiny, little brighter nucleus.
	NGC 5054 5049 → (1) 0 <-	1:44 AM - NGC 5047  - NGC 5037	Small, very dim, uniformly lit and circular. Maybe hare brighter nucleus. There are 3 other galaxies in FOV, 2 are very faint, circular smudges of light and third is oval in shape with hare brighter nucleus.
	NGC 4856	1:54 AM	Oval, maybe cigar shaped. This is small and dim, and hard to discern a shape. Brighter nucleus which is most of what you can see. There is a hint of a halo up and down from this nucleus.
	NGC 4995	2:01 AM	Very dim oval that is uniformly lit smudge of light.
	NGC 4958	2:04 AM	Small, oval almost edge on. Tiny brighter nucleus surrounded by oval halo.

Sky is Good. Seeing Great. Brisk wind from East.

NGC 4781	2:08 AM	Dim, uniformly lit, larger oval of with 2 very faint field stars on top of glow towards the left hand side.
NGC 4699	2:10 AM	Dim, uniformly lit oval shaped smudge of light.
NGC 4845	2:12 AM	Little smaller than 4699 but otherwise the same. Dim, uniformly lit oval shaped smudge of light.
NGC 4900	2:15 AM	Dim, boxy shaped galaxy with bright field star where nucleus might be. Right in the middle of this uniform glow.
NGC 4666	2:18 AM	Very dim, oval, almost edge on (cigar shaped). W/AV, see it is long and flat. Very dim, yet hare brighter than halo is a tiny nucleus that stands out from glow of halo.
NGC 4753	2:21 AM	Dim oval, almost edge on. Easy to see. Brighter than last few seen. Has tiny, brighter nucleus that dims evenly into an extended nucleus then surrounded on each side by dim halo.
NGC 4697	2:27 AM	Nice and bright. Easy to see. Quite large nucleus that is uniformly lit edge on oval (cigar shaped). Halo much dimmer than nucleus seen on each end.
NGC 4546	2:29 AM	Much smaller than 4697. Bright, circular nucleus that dims into extended nucleus and has a dim halo on each end. Bright field star on bottom of halo.
NGC 4643	2:45 AM	Small, dim, oval-circular shape. Has tiny, hare brighter nucleus.
NGC 4636	2:45 AM	Circular and relatively bright uniformly lit. May be a hint of a nucleus.
NGC 4665	2:45 AM	Very much like 4643. Dim, circular with tiny, hare brighter nucleus.

The above 3 galaxies I moved the telescope at least 2 FOVs to move from one galaxy to the other, but their position matched what was on my star charts, with respect to how each is positioned in the sky.