The Observer's Challenge Objects

Submitted by Larry McHenry, Pittsburgh, PA, USA. http://stellar-journeys.org

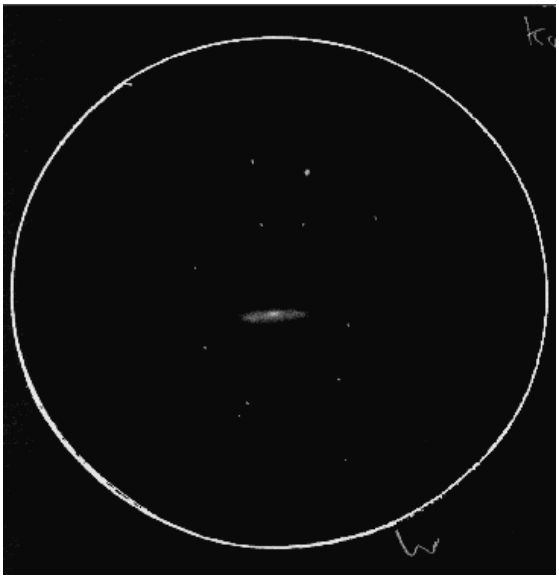
November: **NGC 7331 – Deer Lick Galaxy Group** - Pegasus; mag_v=10.4; RA: 22h 37m 04s Dec: +34° 24' 56"

The "Deer Lick Galaxy", NGC7331, and its attendant galaxies NGC 7335, 7336, 7337 and 7340, are located in the constellation of Pegasus "the Winged Horse". The SA class main spiral galaxy NGC7331 is about 40 million light years distant, about 120,000 light-years in diameter. It is considered to be a close analog to what the Milky-Way would look like. But the rest of the "Deer Lick Group" of galaxies (three spirals and an elliptical) known as the "fleas" are much further away at about 300 – 350 million light years. NGC7331 is thus a foreground object to the much more distant group of 'fleas'.

William Herschel discovered NGC7331 (H1 53) on the night of September 5th, 1784 using his 20 ft reflector at his home's back garden in Datchet. Herschel described the galaxy as "*Very Bright, considerably large, much extended. Much brighter to the middle. Resolvable*". A little over a week later, on September 13th, Herschel discovered the brightest of the 'fleas' – NGC7335 (H3 166) which he described as "*Extremely faint, very small,,*'.

NGC7336, NGC7337, and NGC7340 were discovered in 1849 by Irish astronomer George J Stoney using the 72" reflector at Birr Castle in Parsonstown Ireland. (The 72" 'Leviathan' built by the 3rd Earl of Rosse).

Visual Sketch:
09/08/1991 from rural darksky site south of Pittsburgh, Pa. Using an 8" f4.5 Dob Reflector (Coulter red-tube) 6.5mm Konig eyepiece (141x). "Moderately bright oval shaped galaxy. Has a bright central core."



EAA Observation:
10/01/2021, from Cherry Springs State Park in Pennsylvania, at the BFSP.
Using an 8" SCT optical tube @ f6.3 on a GEM mount, with a CMOS color camera and broadband filter, 60 second guided exposure, live-stacked for 24 minutes.