

The Objective Lens

University Lowbrow Astronomers Monthly Newsletter Supplement

May 2022

GALAXIES



From **BRIAN OTTUM**: "A montage of some of the quick images I took during my 'astronomer-in-residence' trips this past winter in Texas and Florida. All were taken with my EAA (electronically-assisted astronomy) rig: 6" f/2.8 reflector, ZWO camera, live stacking about 15 mins of ten-second exposures."

[Brian will be at AADL's 265 Parkland Plaza for a public EAA show on Wednesday, June 1, 2022, beginning at 9 pm.]



From **AWNI HAFEDH**: "The Whirlpool Galaxy (M51), March 13, 2021 and April 27-28, 2022. It has been a while since I processed HaLRGB image. I must say I always do like the look of the final image, both colors and details, but it is a lot of work. Capturing all these subs with different filters requires multiple nights, not to mention the processing steps are always time-consuming and complicated to put everything together. As I mention, this was multiple nights of work. I captured 24x300s of Ha data on 3/13/2021 using an ASI183MM camera (which I sold) and 139x180s (Lum), 30x180s (Red), 30x180s (Green) and 30x180s (Blue) on 4/27-28/2022, which is a total exposure of 13.45 hours. Stacked, combined, and processed to get the final image using AstroPixelProcessor, PixInsight, Astrosurface-R3, Luminar4 and Photoshop. I do hope you like it."

Equipment used:

Celestron 9.25" with 0.7x reducer

ZWO ASI183MM and ASI2600MM Camera

Astronomik Ha, L, R, C, B filter

iOptron CEM60 mount



From **JACK SPRAGUE**: "A triplet in Leo - but NOT 'that' triplet. This triplet features: M105 / NGC3379 an elliptical galaxy, NGC 3384 an elliptical galaxy, and NGC 3389 a small spiral. Shot with an ASI 462MC on a William Optics z73 with 150 minutes of total exposure time (gain 210) employing an ASIAir plus and guided by a 32mm William Optics guide scope using an ASI120mm mini camera. Post-processing was completed entirely with Astrotoaster (using DSS as a utility) as a study in EAA."



From **DOUG BOCK**: "This past month I had one day and night that was clear long enough to do some extensive data collection. The Whirlpool galaxy was the target I worked on April 21, 2022, using the William Optics 105mm f/7 APO refractor and the ZWO asi2600MC PRO camera at a gain of 100 and a temp of 0C. 75 x 300 second light frames were used to generate this image. Stacked the data in Deep Sky Stacker and processed in PixInsight. The image was cropped as well.

According to Wikipedia The Whirlpool Galaxy, also known as Messier 51a, M51a, and NGC 5194, is an interacting grand-design spiral galaxy with a Seyfert 2 active galactic nucleus. It lies in the constellation Canes Venatici, and was the first galaxy to be classified as a spiral galaxy. Its distance is 31 million light-years away from Earth."



From **JACK SPRAGUE**: "The Eyes': NGC4438/NGC4435 from Markarian's chain in Virgo. 2 hrs 45 minute exposure. IR band pass filter 642nm - 850nm. ASI 462MC on a William Optics z73 with a 430mm focal length f/6. Guided on a EQ6-R Pro with a W.O.32mm guide scope and an ASI 120mm Mini using an ASIAIR Plus. Darks/flats/bias. Size: 2.3'x1.4' // 8.5'x3.2'"



From **KENNETH RUBLE**: "M82 and M81. Specs: 11, 60 s light frames and 10, 60 s dark frames processed with ImagePlus. Canon D40 camera and 6" F9 Ritchey-Chretien Telescope on a Celestron advanced CG-5 mount."



From **GLENN KAATZ**: "This is M51 (also known as the Whirlpool Galaxy, or NGC5194) and NGC5195, a smaller galaxy with which M51 is interacting. The Whirlpool is a grand design spiral galaxy positioned face-on from our perspective. These objects lie in the constellation Canes Venatici about 31 million light-years away. The image consists of approximately 10 hours of integration time, with two hours each of Ha, luminance, red, green, and blue filters.

Images were obtained using an Explore Scientific 102 mm f/7 refractor (714 mm focal length) mounted on a Celestron CGX mount, a Hotech field flattener, and an ASI1600MM Pro camera with a ZWO 7 position electronic filter wheel. Guiding was done using an Orion 240 mm guide scope and an ASI290mm mini camera. The ASIAir Plus controlled everything. Ha images consisted of 24 X 300 sec, and LRGB images were 60 X 120 sec. Processing was done using Pixinsight, Photoshop, and Topaz DeNoise AI. All imaging was done in my Bortle 7-8 backyard.

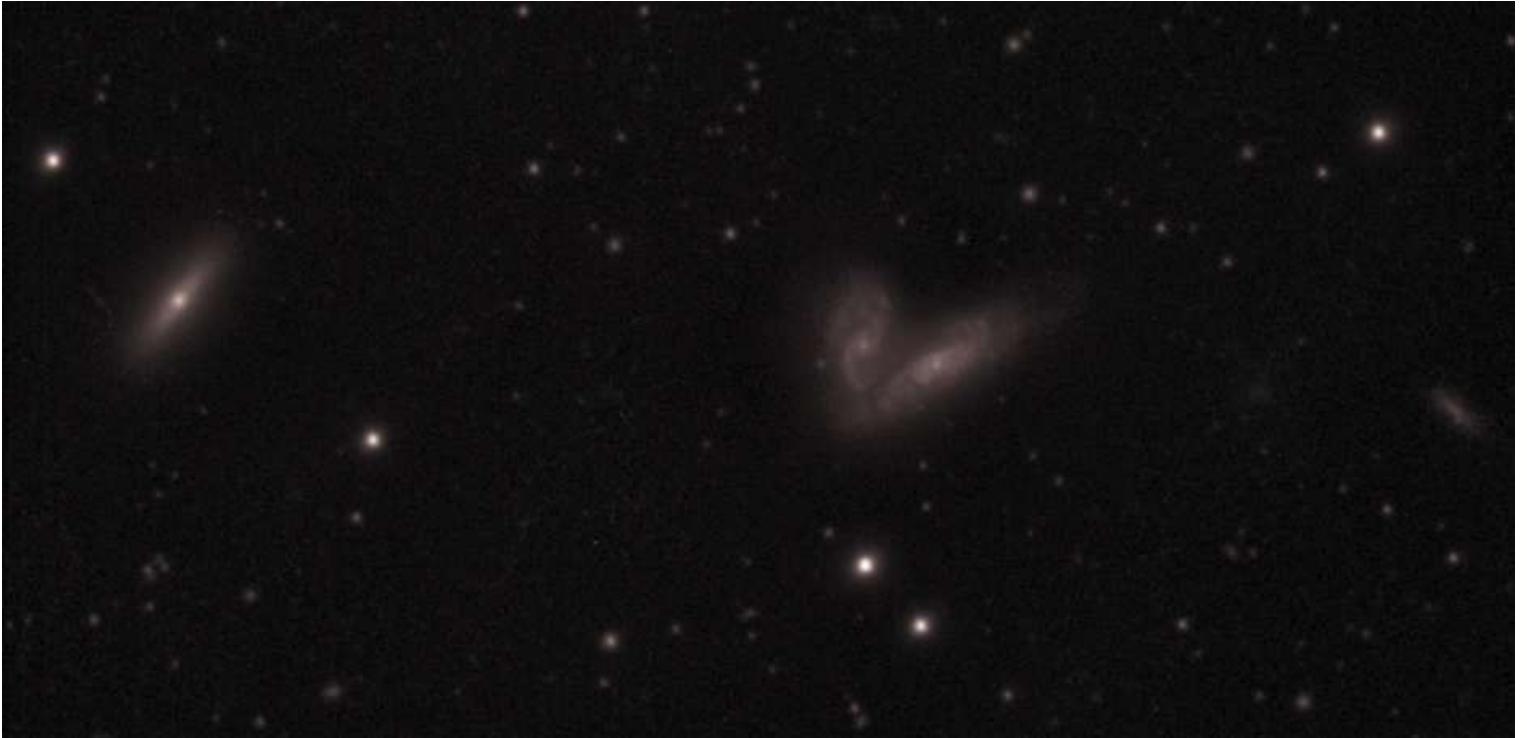
If you look very closely there are several additional galaxies present: elliptical galaxies NGC5198 (center left) and NGC5173 (lower left). Also present are spiral galaxies NGC5169 (just right and slightly below NGC5173) and IC4263 (directly right of NGC5173, about halfway to the Whirlpool Galaxy). IC4278 is another elliptical located just above and to the right of M51, but is not well resolved in this image."



From **DONOVAN DREW**: "Had a pretty clear night last night and decided to image M64 The Black Eye Galaxy. It's about 17 million light-years away and about 54,000 light-years in diameter located in the constellation Coma Berenices."



From **AMY CANTU**: "My goal was to see if I could find the Leo Triplet in my light-polluted backyard in the middle of Ann Arbor with a new Redcat 51 and no light pollution filter or guiding. I had some focusing issues, but I found it! Specs: Canon 6D Mk II, Redcat51 (250mm) 400 ISO, 94 60-second lights, 35 darks, 25 flats. Cropped. Skywatcher Star Adventurer 2i. Processed with AstroPixelProcessor and PhotoShop."



From **JACK SPRAGUE**: "Butterfly Galaxies: NGC4567 and NGC4568 create the illusion of colliding galaxies but are not interacting in actuality. NGC 4564 off to the left. IC3578 as the faint fuzzy on the right. Size 4.6' x 2.1': at the practical resolution limit of my tools. 6.5 hrs of integration in 175-second exposures with a z73 430mm f/l refractor on a EQ6-R pro using a ZWO 462MC camera imaging in IR and the near-IR bands. Processing in DSS and Startools. Shot on April 21/22 of 2022."



From **DONOVAN DREW**: "Here are galaxies NGC 4527 and 4536 located in the constellation Virgo about 49 million light years away."



From **DONOVAN DREW**: "Coma Galaxy Cluster. These galaxies are roughly ~300 million light-years away. My image consists of 186 subframes at a 120s exposure time a piece with an asi294mc-pro through an 8" F5 Newtonian on a Celestron avx. My backyard is in a bortle 3 location. Processed in Pixinsight"