

The Objective Lens

University Lowbrow Astronomers Monthly Newsletter Supplement

August 2022

CLUSTERS



From **JEFF KOPMANIS**. "Last night [July 9] was a night of software and hardware failures and issues, but in spite of it all, I managed to get 94 subs of M13 that came together in the end. Taken on the Orion f/5 refractor (Orion 120ST which I got for \$250) with an ASI294MC-Pro cam. I'm disappointed to see that the cooler was not on (to lower the temp to -10C), as it would have rid the photo of much of the green-dot noise. 94 10sec frames at 200 gain (apparently stuck in Auto mode). Unity gain for my cam is 130, I believe, so gain is a little higher than I'd have liked. Quick stack and minor massage with Photoshop."



From **GLENN KAATZ**. "Comet C.2017 K2 (PanSTARRS): Imaging was done in Beulah, MI (Bortle 4.0) on July 13, 2022 as it was passing near M10. Imaging specifics:

William Optics Z61 II refractor
Celestron CGX mount
Z61 field flattener
ZWO off-axis guider with an ASI 120MM mini guide camera
ZWO 5-position mini electronic filter wheel
ASI294 MC Pro Pro cooled camera at -15C, gain 120 (unity)
Astronomik UV/IR L-2 block filter
ASI AIR Pro controller

24 X 300 sec images calibrated with darks, flat darks, and flats (25 each)

Total integration time 2.0 hours

Processing done with Pixinsight, Photoshop, and Topaz Denoise AI"



From **HOWARD RITTER**. "Going for the low-hanging fruit as I get used to the new mount, and to having reasonable tracking capability on the Meade 16 at last, I chose M13 to image with a Nikon FF DSLR @ ISO6400. This is a stack of 30 x 60s subs (not even approaching adequacy) done in Bortle 7 with no filter and processed in PS, Topaz DeNoise AI and Sharpen AI, and GradientXterminator. Will probably get better results with less work once I get up to speed on Pixinsight."



From **GLENN KAATZ**. "M51.

Celestron Edge HD 8 inch optical tube
Celestron CGX mount
0.7X focal reducer
Celestron off-axis guider with an ASI 174MM mini guide camera
ZWO 8-position electronic filter wheel
ASI1600MM Pro cooled camera at -15C, gain 139 (unity)
ZWO electronic automatic focuser
ZWO LRGB filters
Orion 7 nm OIII filter
Astromania 12 nm Halpha filter
AsiAIR Plus microcomputer controlling everything

78 X 3 min luminance
45 x 3 min R, G, and B
43 x 3 min Halpha
47 x 3 min OIII

Total integration time 15.15 hours, with all images calibrated with 25 darks and appropriate flat darks and flats for each filter."



From **GLENN KAATZ**. "M101: The Pinwheel Galaxy is a face-on spiral galaxy 21 million light years away in the constellation Ursa Major. It was discovered by Pierre Mechain in 1781 and was communicated to Charles Messier, who verified its position and included it in his catalogue. Imaging was done during June and July of 2022 from my back yard. Specifics were identical to those for M51, above, with a few exceptions:

66 x 300 sec Luminance

24 x 300 sec Halpha

43 x 300 sec Red

41 x 300 sec Green

42 x 300 sec Blue

Calibrated with 25 darks, flat darks, and flats

Total integration time: 18.0 hours

Processing done with Pixinsight, Photoshop, and Topaz Denoise AI"



From **GLENN KAATZ**. "M13: The Great Globular Cluster in Hercules. M13 lies 22,000 light years away and was discovered by Edmund Halley in 1714, and later cataloged by Messier in 1764. Imaging was done in June 2022, again from my back yard. The imaging specifics were the same as for M51, with the following modifications:

30 X 2 min images for L, R, G, and B filters

Total integration time: 4.0 hours

25 darks, flat darks, and flats

ASI Air Plus controller.

Processing done using Pixinsight, Photoshop, and Topaz Denoise AI"



From **MARCUS CLARKE**: "Image M56 captured on July 30, 2022, with a Williams Optics Z81 refractor with flattener, no filter, no calibration frames, 70 sec exposure, 100 subs, ISO 1600, guiding and dithering, deep sky stacker and photoshop processing, Nikon D750. Image captured in my backyard. Used ZWO ASIAir Plus and EAF. HEQ 5 mount."



From **DOUG BOCK**. "NGC 6945 and NGC 6939 - 49 x 300 second light frames

William Optics 105mm f/7 APO refractor

ZWO asi2600MC PRO camera, gain 100, temp 0C

Losmandy G11 mount."



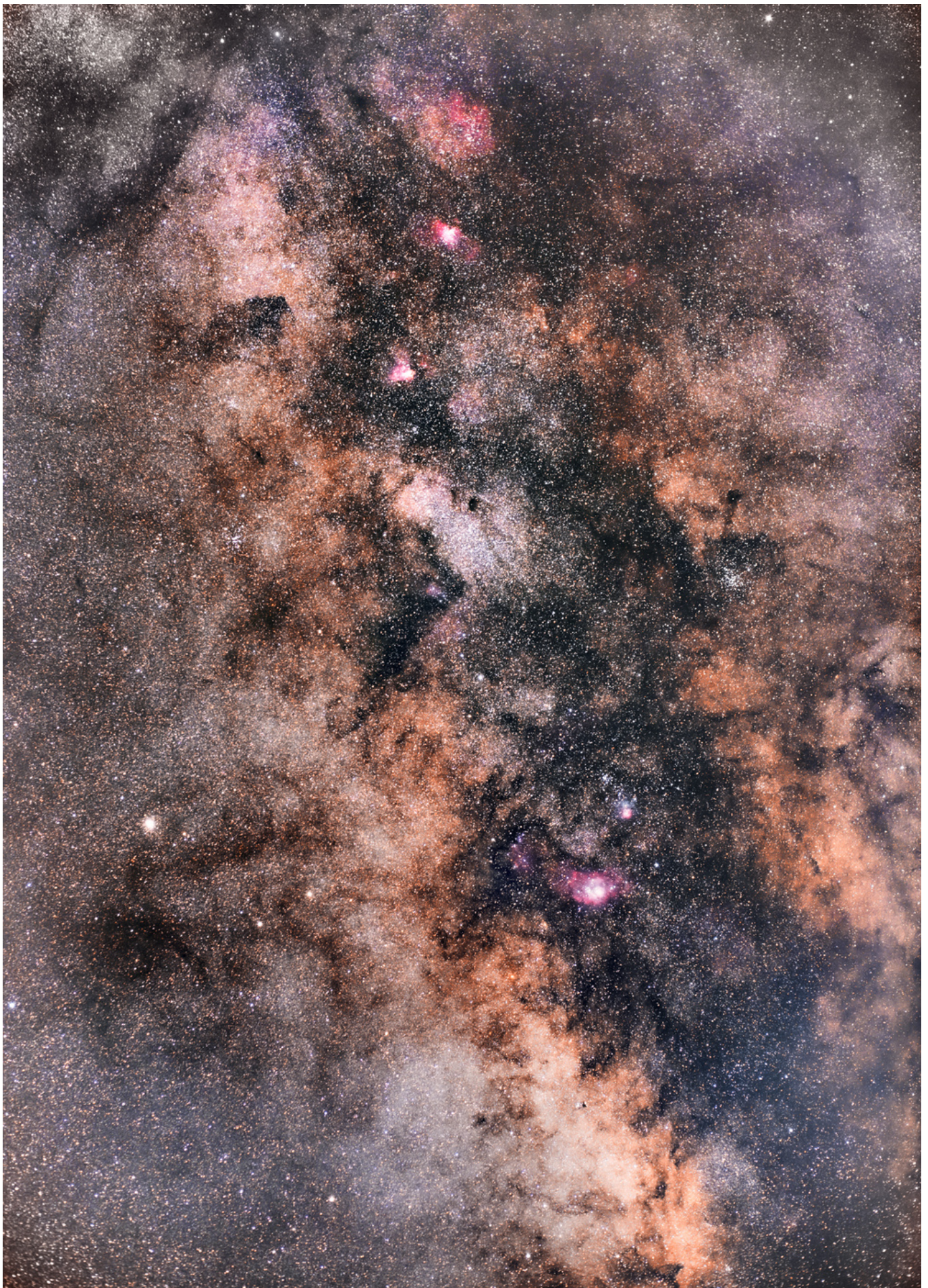
From **AMY CANTU** . "The Beehive Cluster. Taken north of Lapeer, Michigan, with a Redcat51 on a Canon 6D Mk II. 90 minutes of integration, 1600 ISO, 60 seconds."



From **DONOVAN DREW**. "NGC 6603 globular cluster within the great Small Sagittarius Star Cloud. Definitely low in the south but a fun target."

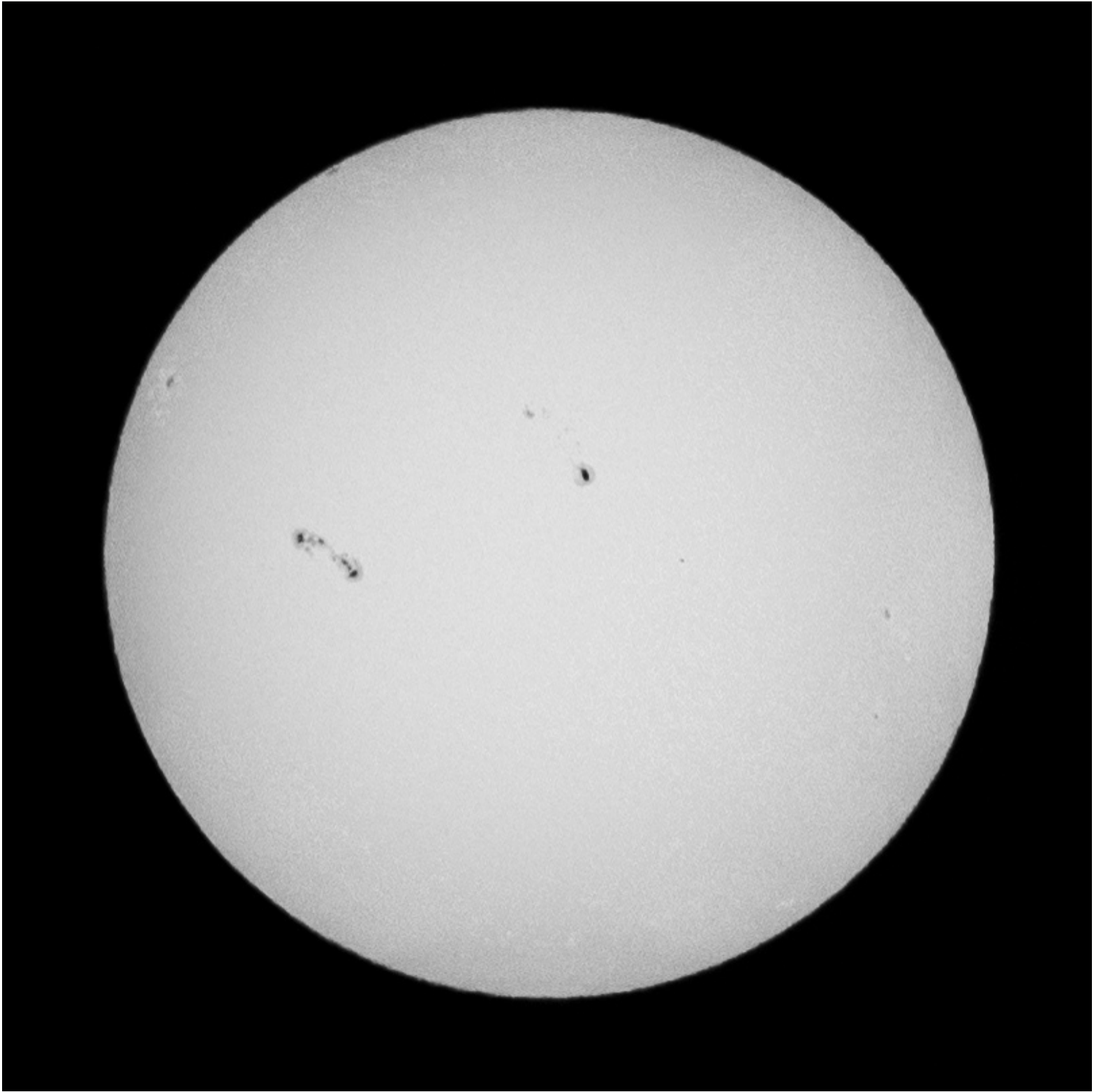


From **AMY CANTU** . "I know it's almost pointless (literally) to go for M13 (bottom right) with an 85mm lens and 25 minutes of integration., but I gave it a go anyway as we were winding down the Ann Arbor Camera Club's night at Peach Mnt. I caught M92 as well (that other fuzzy blob, top left), so it was a two-globs-for-one shot. Cropped."



From **AMY CANTU** . "Clusters/clouds M21, M22, M23, M24, M25 in Milky Ware core. Also taken at Peach Mnt, July 29-30. Canon 6d Mk II, Canon 85mm lens, 40 @ 60 seconds. 1600 ISO, f/3.2. No darks, bias, or flats,"

SUNSPOTS CAN BE CLUSTERS, TOO!



From **DOUG SCOBEL**. "July 10. I used my Canon 5D Mark IV DSLR, Canon 100-400mm zoom, set to 400mm, fitted with a Baader solar film filter. 1/1000 second, f/8, ISO 100, handheld. Minor processing from RAW (.CR2) in Adobe Photoshop Elements 18.0, converted to greyscale."

**Photos from Adrian Bradley
during and after Ann Arbor Camera Club's night on Peach Mnt**



Photo by Adrian Bradley



Photo by Adrian Bradley