

Research Committee report for December 2015

After the first week, December was a dreary and cloudy month, unfit for astronomical imaging but fine for image processing.

On Dec 5 Clif Ashcraft composed a mosaic of the Moon's terminator region, showing many craters with deeply shadowed floors.

Clif imaged Jupiter on December 6 and 7. He derotated and combined the images to improve the signal to noise ratio to sharpen details such as clear bluish festoons and the Great Red Spot. It's nice to see that the GRS is still hanging in there since we know that careful measurements show that it is gradually shrinking in size. Notice that the South Equatorial Belt is split into three distinct streams and the North Equatorial Belt is chaotic and complex. Even distant Mars is becoming clearer bit by bit, revealing not only the north polar cap but also Olympus Mons and Mare Borealis.

Deep sky tadpoles were shown by Tolga Gumusayak's narrow band imaging in the faint emission nebula IC 410 in Auriga. They are columns of cool dense dust and gas about ten light years long and about 10,000 light years away from us. Their tails have been cut out of the nebula by fierce ultraviolet ionization from a hot young star in the center of the open cluster NGC 1893 in the upper right of the image. On December 5 Tolga imaged the Rosette Nebula in LRGB from the Stokes Star Party at the NJ School of Conservation. This nebula is about 5000 light years away in Monoceros, the unicorn.

On December 6 Helder Jacinto imaged the open star cluster NGC 1528 in Perseus with its 165 stars. From a dark sky it can be seen in binoculars. He also imaged the planetary nebula M76 (the little dumbbell, one of the faintest objects in the Messier catalog) in three hours. This is a dying star returning to the cosmos the chemical elements manufactured by fusion in its core.

The most exciting news is that the 24" telescope is up and running in full GOTO mode, thanks to Jim Nordhausen and Tolga. The Sandy Hook star parties for Spring are scheduled for 3/19 and 5/14.

Respectfully submitted, Mary Lou West, Research Committee Chair



Jupiter by Clif Ashcraft



IC 410, the Tadpole Nebula by Tolga Gumusayak