

Research Committee report for September 2016

A cloudy start to fall prompted members to take deep sky images, and discuss astronomical issues.

Helder Jacinto imaged distant (33 000 light years) globular cluster M56 in Lyra. This old cluster has an estimated age of 13 billion years and is following a retrograde orbit through the Milky Way, which suggests that it may have been acquired during the merger of a dwarf galaxy. He has finally achieved full automation with help from Tolga Gumusayak, and says “Automation rocks!” Sequence Generator Pro was used for full acquisition, focus and guiding (even meridian flipping and centering), taking dark frames, and refocusing every hour. He also imaged NGC 6940, a large open cluster in Vulpecula while he slept. Finally he took an image of the open cluster M52 and the Bubble Nebula in Cassiopeia. The bubble is an expanding emission nebula caused by the fierce stellar wind from its hot central star.

Tolga took long images of the Heart Nebula (29.5 hours in narrowbands), the Cocoon Nebula and a nearby dark cloud, and M27, the Dumbbell Nebula with delicate blowout regions at both ends.

Tony Sharfman also imaged M27. He made a wide field mosaic of the whole Veil Nebula in Cygnus. This led me to find a paper by Jennifer West (no relation) suggesting that this nebula is actually two superimposed supernova remnants rather than just one.

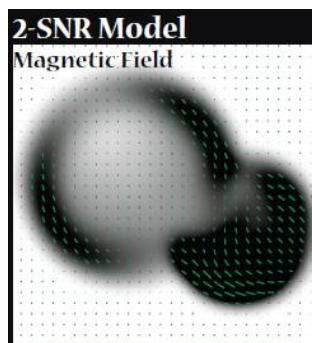
Presentations: Clif Ashcraft gave a talk on “Speckle Interferometry of Double Stars from my Backyard Observatory” to the North West Jersey Amateur Astronomers in Blairstown on September 9.

Other activities included several interesting online discussions. Aaron Zuckerman pointed out the comparison of images of Jupiter and its Great Red Spot taken by Damian Peach in Barbados and Christopher Go in the Philippines. Both images were very detailed, but Damian’s was better due to less atmospheric turbulence “only because the seeing in Barbados was superb and the seeing in the Philippines was only fantastic” (Clif). Jason Kendall opened a dialogue on using image processing activities to inspire students in basic astronomy classes. Clif spotted a paper by Stacey McLaugh on whether dark matter is really necessary in galaxies, and I asked for input on a five-year plan for research at Sperry , and got some excellent suggestions. (More are welcome.)

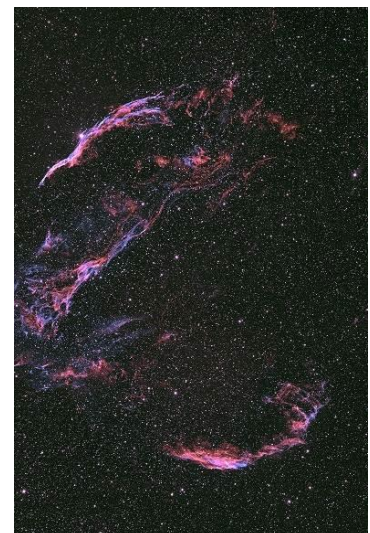
Respectfully submitted, Mary Lou West, Research Committee Chair



M27 by Tolga Gumusayak



Model of Veil by J. West



Veil by Tony Sharfman