

The three planets of summer are blazing forth as Al Witzgall said they would at May's Astronomy Day.

Solar system: Jim Nordhausen reports that the sun is generating some small sunspots and prominences during sunspot minimum.

He also recommends a video of Mars' dust storm
<https://www.youtube.com/watch?v=cZFvbP4gnkA>

Clif Ashcraft recommends Maps of Mars
<https://britastro.org/node/10895> with the BAA as his favorite version.

Bobby Marinov imaged Jupiter and *Saturn from JJ* with a 14" Dob.

Clif has imaged the crescent Moon, Mars, *Jupiter* and Saturn. He believes that the dust is settling on Mars, but surface details are best seen in the NIR, so he will experiment with a deep red filter.

Stars: Jack Cleeve is continuing his summer project of observing photometry and spectra of several roAp stars (rapidly oscillating A stars with peculiar chemistry) with Steve Lowe and me. He is using a cadence of 1 minute or less on the 24".

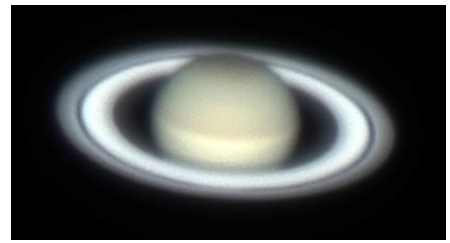
Steve continues photometry of Cepheids in globular cluster M5.

Nebulae: Helder Jacinto imaged *NGC 6888, the Crescent Nebula* in Hydrogen alpha and Oxygen III in 8.7 hours. Strong winds from the central Wolf-Rayet star shock the gas formerly emitted by the star.

Bob Vanderbei took a *spectrum of the Ring Nebula* with his new SA100 grating adding up 22 minutes of 30-second subframes on a 10" RC. Above the plain image of the ring are images in Ne-III (386nm, very faint), O-III (504nm, bright), and H α (656nm, medium).

Other: Clif has installed his 7.5" Schupmann telescope on his new AP1200GTO mount. He reports that after the electronics were repaired from a lightning strike, the beautifully corrected aperture is a perfect match for NJ sky conditions.

Jim reported that Ice Cube, the large neutrino detector at the South Pole has traced a neutrino to a distant elliptical galaxy near Orion. It is a blazar with a central supermassive black hole, about 3.7 billion light years from us. Perhaps blazars are the main source of high energy cosmic rays.



On a cruise on the Annisquam River in Massachusetts Jim spotted the house and dome of Mario Motta who will be our speaker in January, 2019. Unfortunately Mario was not home to offer a tour.

Tolga Gumusayak reported on Kandaow Raw+, a new tool for stacking low light images.

Presentations: Helder gave a Friday talk on “The Basics of Astrophotography - Using a Camera to Capture the Night Sky” on July 27.

Respectfully submitted, Mary Lou West, Research Chair