

Research Committee report for March 2017

This month's clouds raise the question of whether climate change has pushed the jet stream over us to make more clouds than previously.

Solar system Observations: Clif Ashcraft imaged the first quarter Moon on March 6, focusing especially on dramatic Alpine shadows, and on the *Ptolemaeus region* where supposedly, if you were standing in the middle of the large crater, the walls would be below the horizon and you would think you were standing on a flat plain extending forever.

Star Observations: Dennis Conti observed an exoplanet transit for the KELT FUN group.

Milky Way Observations: Tolga Gumusayak and Mike Selby in Thailand imaged the *Eagle Nebula* and compared their picture to one taken by the European Southern Observatory. Their image shows particularly good contrast in the region of the upper arch. The "pillars of creation" are the dark dusty formations in the lower center of the emission nebula.

Galaxy Observations: Helder Jacinto imaged a peculiar *broken-arm spiral galaxy NGC 4088 and its edge-on companion NGC 4085* about 50 million light years away in Ursa Major, despite problems with light pollution and confusion with the red filter. NGC 4088 is a grand design spiral galaxy with sharply defined spiral arms. It was included in Arp's "Atlas of Peculiar Galaxies" because of the broken arm.

On March 25 Tolga imaged the cigar galaxy M82 as first light with our C14 HDedge at Jenny Jump. On March 22 he and Mike Selby imaged the southern *supernova SN 2017cbv in the spiral galaxy NGC 5643* about 60 million light years away in Lupus. This standard candle Type Ia SN had been discovered on March 10 by an automated search. This is a runaway fusion reaction in a white dwarf which has sucked the outer layers off a companion star. Another supernova appeared in this same galaxy in 2013.

Other activities: Jim Nordhausen announced the occultation of Aldebaran by the Moon on March 5, but it was cloudy. Clif pointed out a new citizen science project, Astronomy Rewind, and also a Pluto project. Tolga opened a sad discussion about abandoned observatories.

Respectfully submitted, Mary Lou West, Research Chair

