

Research Committee Report for January, 2015

by Mary Lou West, February 12, 2015

1. RASKEL exoplanet project

Clif Ashcraft, Mary Ducca, and Jim Nordhausen took part in the first observations of a possible transit at Rutgers on January 10. The group took 51 FITS files of star Qator-1 b over a period of nearly two hours. Clif learned how to use ImageJ for multi-object aperture photometry reduction of this first RASKEL test data. The result was “no observable transit”, perhaps due to thin clouds or Busch campus lights. Clif suggested that we challenge ourselves by using these transit techniques to observe a binary star eclipse which should have a much larger drop in intensity.

2. Comet Lovejoy

Dan Silber, Helder Jacinto, and Clif took images of the naked eye Comet Lovejoy as it passed by Orion and the Hyades in early January. The tail was extremely faint and showed up only on imagery. See Dan’s image from Jan 11 below.

3. Spectra

Steve Lowe, Tolga Gumusayak, Scott Gerum, and I took spectra of Comet Lovejoy and of Alnitak on January 5. Clif suggested that a future target for spectroscopy might be the extremely red star near M42.

4. Helder also took a beautiful detailed image of the sun in H alpha on January 10.

5. Guiding for long exposures

Tolga’s opinion is that the built-in guiding chip on the SBIG STL 11,000 CCD camera is too small to be of much use with our 24” which has a very long focal length.

Tolga has done experiments with his guiding camera in the finderscope with and without a 2x Barlow, using the PHD (Push Here Dummy) software to interact with the Genesis mount, and it seems to be working well. Also, on Friday January 31 he was able to send the image wirelessly from the 24” eyepiece to the projector in the classroom below. It was interesting to see the significant amount of jitter of the Moon’s craters due to the wind.

