

Research Committee Report for March 2018

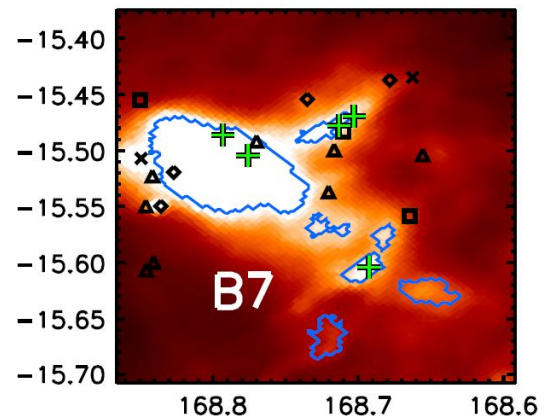
The weather this month included four nor-easters with tremendous rain and wind, so imaging was challenging. The biggest news is that we are published! (see presentations below).

Nebulae: Tolga Gumusayak imaged the chocolate brown *absorption clouds around the LBN 782 emission nebula* in the Taurus Molecular Cloud. This cold (8–15 K) dark cloud is rich in many molecules including *ammonia (NH₃)* which is shown in emission in Seo et al's 2015 paper in the Astrophysical Journal. They measured the amount of cold ammonia with the 100 m Green Bank Telescope. Steve Lowe has continued taking spectra, capturing M42.



Galaxies: Steve has also used his Alpy spectroscope to take spectra of two galaxies in Ursa Major, the edge-on starburst cigar galaxy M82, and NGC3941, a barred lenticular galaxy. Helder Jacinto imaged *M81 and M82 in LRGB* colors and again realized that the skies of New Jersey are quite light polluted.

Presentations: The KELT K-FUN paper (The KELT Follow-Up Network and Transit False Positive Catalog: Pre-vetted False Positives for TESS by Karen Collins et al.) has finally been submitted, so we are published! Five AAI members (Clif Ashcraft, Jim Nordhausen, Tolga Gumusayak, Dennis Conti and myself) are listed as co-authors among 111 people. Sperry Observatory and UCC are listed among 67 observatories. Why does this matter? William Miller Sperry Observatory of Union County College has now become officially recognized as a research institution! Aaron Zuckerman has organized a set of 13 hands-on lessons for QOs on Tuesday evenings from March 13 to June 5 to prepare people to do observing projects. About a dozen people have attended each of the first five sessions. Aaron taught the first two sessions on observing techniques, Tolga and Jim Nordhausen taught the third session on using the 24" for imaging, and Stan Honda taught sessions 4 and 5 on landscape astrophotography.



Dennis Conti taught another online AAVSO-CHOICE course on exoplanets which Clif took.

Other: Clif also began a discussion of AIP's treatment of leap seconds. A few of these are added to our calendar every year because the Earth's spin is gradually slowing down due to tidal friction caused by the Moon.

Bobby Marinov pointed out that Wellesley College is giving away its 24" Boller and Chivens Cassegrain telescope. Anybody interested? For UACNJ?.

Igor Bluestein and his daughter traveled to Chile to view the southern skies.

Respectfully submitted, Mary Lou West, Research Chair

