Research Committee report for January 2017

This month continued "the winter of clouds" (Helder Jacinto).

Solar system Observations: Clif Ashcraft shared an image of the tenuous epsilon ring of Uranus taken by Phil in Rubyvale, Australia (ALPO). This is probably the first image of the ring by an amateur.

Star Observations: Helder imaged the Pleiades, M45, for 1.5 hours luminance and got a good result despite sporadic winds.

Deep Sky Observations: Helder reexamined an old image of open cluster M39 and noticed a red blob in the corner, which turned out to be a 13th magnitude planetary nebula (PK93+2.1). Serendipity! Helder also imaged ***IC 405, the Flaming Star Nebula*** in Auriga which is 5 lightyears across. This was the first image he took with his new QHY 143 mono camera. It took 7.5 hours in narrowbands and he processed the data in three ways to compensate for weak Oiii. However, this month his most interesting observation was of IC0 and the dark nebula Polaris Obstructus. (Think about it.)

Clif fiddled with fast lenses (55 mm and 75 mm at f/1.4) and got advice on stopping down the lenses to f/4 from Tolga Gumusayak and Tony Sharfman. He got a huge FOV showing the Flame, the Horsehead, and the Orion Nebulae together in ***the belt and sword of Orion.***

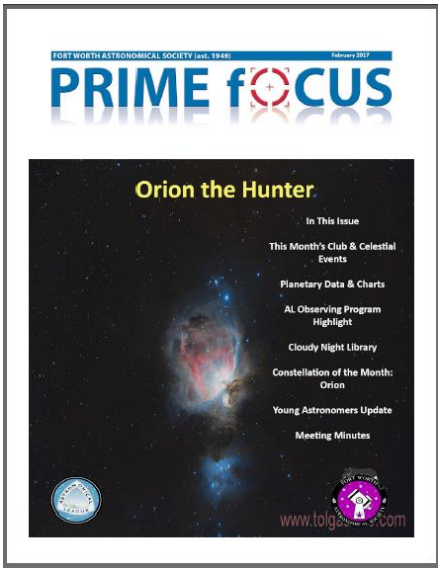
Tolga imaged the wispy Medusa Nebula in 24.3 hours of LRGB and narrowbands.

Tony also shared his 2 hour image in Oiii of the Medusa Nebula (Abell 21) taken about a year ago.

Presentations: Tolga's M42 image was chosen for the ***cover of the Fort Worth, TX, newsletter, Prime Focus*** for Feb 2017.
Stan Honda gave a talk "In the Shadow of the Moon: The Lure of Solar Eclipses," to AAA (NYC) in November which described his trip to Svallbard, Norway, to photograph a total solar eclipse last year. This was mentioned in the AAA newsletter, Eyepiece, in Dec 2016.

Other activities: Jim Nordhausen led an exoplanet training session on January 28 with Steve Lowe, Clif, Mary Lou West, Bob Moore, and Jackie Grundfast (high school student from Warwick, NY).

Our exoplanet group, KELT FUN, was asked to observe three occultations of stars by the New Horizon spacecraft's next target,



KBO 2014 MU69, but our location was not optimal.

Lawrence Molnar (Michigan) made a prediction that two orbiting stars will merge and explode in 2022, but Dennis Conti pointed out that we will be seeing in 2022 an event that ALREADY took place in the year 222 AD, since KIC 9832227 is 1,800 light years away. This was the year that the Roman Emperor Marcus Aurelius Antoninus Augustus was assassinated so maybe this explosion is marking his death!

There will be a KELT workshop at Lehigh University in June and I plan to go.

Respectfully submitted, Mary Lou West, Research Committee Chair