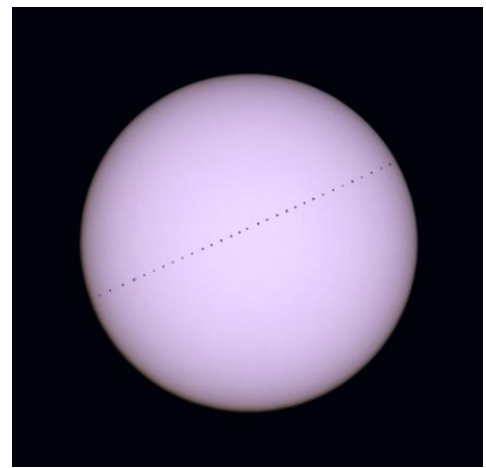


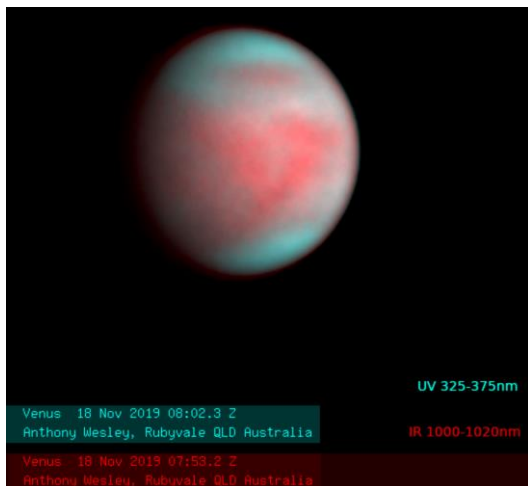
**Although nights were often cloudy, the day for the Mercury Transit was nice and clear.**

**Solar System:** *A star party to observe the Transit of Mercury* across the face of the sun was held at Eagle Rock Reservation from 7 AM to 1 PM on Monday November 11. This event was sponsored by the Newark Planetarium and NJAG. Telescopes with solar filters were provided by Mark Zdziarski, Mary Lou West, Al Witzgall, and Kevin Conod among others. We gave away certificates to about 50 participants including Mary Ducca and Bob Ruggiero. Everyone was struck by how small Mercury appeared, but savored the moment which will not be visible again until 2032 due to the tilts of our orbits. Tony Sharfman used a Coronado PST to image the transit and make an animated gif and Isbel Gonzalez manually *tracked Mercury* for five hours.



Clif Ashcraft combined images taken by his friend Anthony Wesley in Australia to produce a *bicolor rendition of Venus*. The infrared image is colored red and the ultraviolet image is colored blue-green in this composite. It shows the reddish surface of Venus peeking through the cyan atmosphere.

Clif also took some detailed high dynamic range images of the Moon showing the *mountains on the limb* below Crater Tycho with its bright ray system.



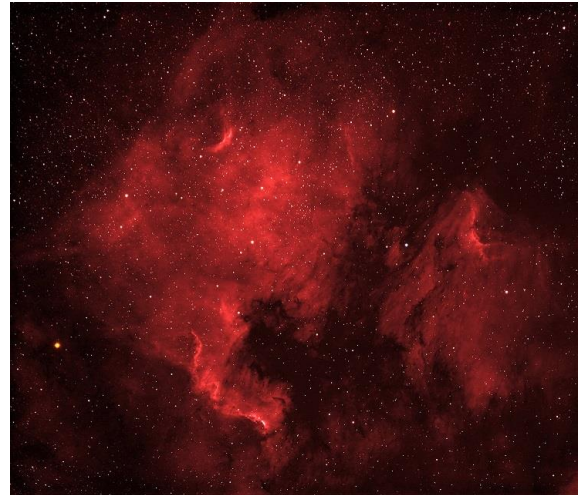
Mark Zdziarski and Clif discussed Jupiter's Great Red Spot and think that it is not disappearing, but nonetheless gradually shrinking over the years.

**Nebulae:** Tony Sharfman reprocessed previous images he had taken of *NGC 7000* (the North American Nebula), the California Nebula, and the Elephant Trunk Nebula with very nice results. He used two telescopes on the same mount, one taking RGB colors for the stars, and the other taking Hydrogen alpha data for the gas between the stars.

**Presentations:** Mary Ducca gave her talk "My Northern Lights Adventure" at the Morris Museum Astronomical Society on November 14.

**Other:** Clif reported that anomalous scattering of electron/positron pairs in Helium leads to speculation about a 17.6 MeV particle, the possible boson for a fifth force of nature with connections to the dark matter problem, from observations at CERN by a Hungarian team.

Aaron Zuckerman and Stan Honda provided information on the new Canon EOS CMOS R6 mirrorless camera for astrophotography. It has less IR blocking, magnification for easier focusing, and longer battery life on a 30 Megapixel sensor.



John Kozimbo reports that the Senate has released a new NASA Authorization bill that, among many other items, would extend the ISS to 2030 and endorses the goal of launching a space-based telescope to find near-Earth objects. NASA is accepting proposals to build a human-capable lunar lander. In response, Blue Origin, the upstart rocket company funded by billionaire Jeff Bezos, built a coalition team of established aerospace companies to compete for the lander. NASA hopes to select at least two proposals for further study early next year.

*Respect submitted, Mary Lou West, Research Chair*