

AAI Research Committee Report for May 2020

Although no one can use the Sperry 24” because Union County College remains closed due to the COVID-19 pandemic, some club members have been doing research from their backyards and presenting their results at online meetings.

Presentations: The AAI annual Members’ Night on May 15 featured

Mary Ducca, Photographing the Milky Way from the North African Desert

Clif Ashcraft, Jupiter and its Great Red Spot, shrinking or not?, Mary’s Chevron on the Moon, Double stars with Bispectrum software

Bobby Marinov, What I’ve learned about imaging and processing

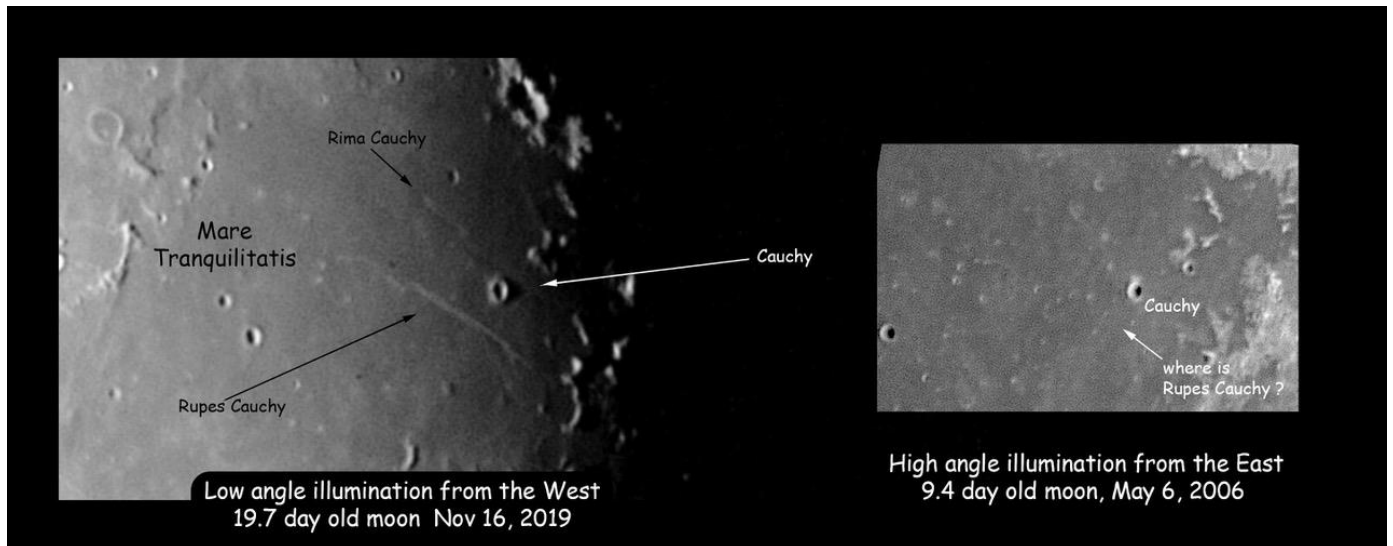
Isbel Gonzalez, Using remote telescopes for deep sky imaging

All these talks were very interesting and, I hope, inspiring to other people to try their hand at these activities.

Clif also gave a talk on “Imaging With Speckles” at Fridays@home on May 22.

Solar System: Tony Sharfman took a video of the Moon setting behind the tree line. It was quick because the spin of the Earth causes the Moon to cross its own diameter in only two minutes.

Clif Ashcraft showed that the shallow *lunar feature Rupes Cauchy* completely disappears when the sunlight comes from the wrong angle.

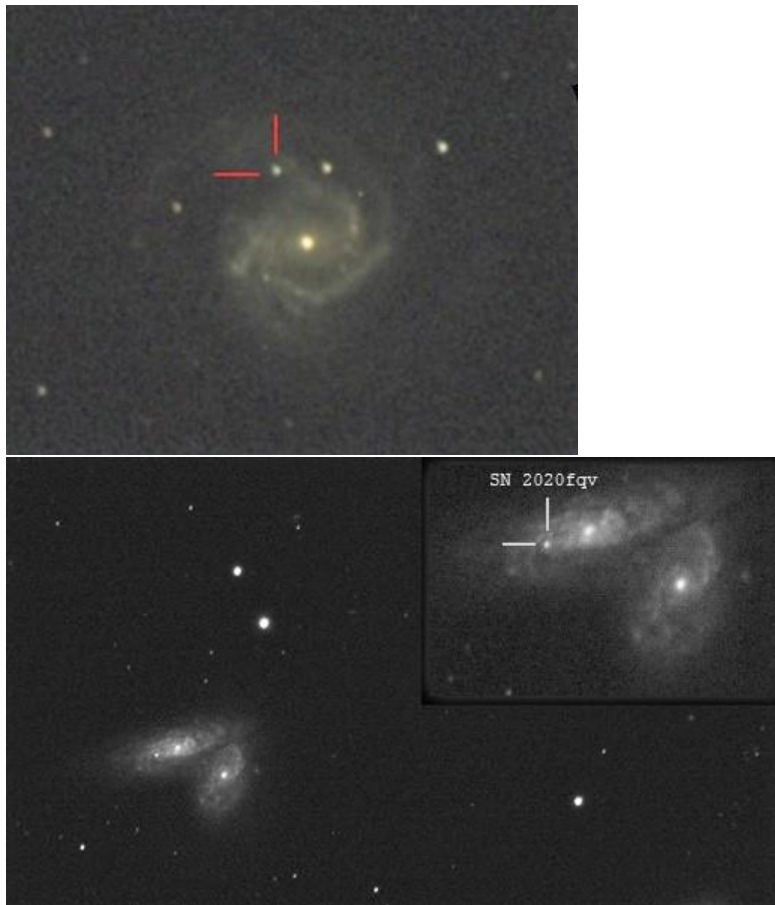


The thin crescent Venus, Jupiter, and Saturn were imaged by Clif who is experimenting with using Bispectrum software to increase resolution on planetary images as it does on double star images. More work is needed.

Deep Space: It is exciting that there are two supernovae visible now in other galaxies. Bobby Marinov and *Mark Zdziarski have imaged SN 2020 jfo in the face-on barred spiral*

M61 in Virgo. This galaxy is similar in size to our Milky Way but has produced lots more supernovae, eight since 1926. This is a Type II supernova, the core collapse of a very massive star after it has run out of nuclear fuel.

Bobby has also imaged *SN 2020 fqv* in *NGC 4568*, *one of the Siamese Twins galaxies* also in Virgo. This is a Type I supernova, a white dwarf star accreting gas from a binary companion and exceeding the Chandrasekar mass limit for runaway nuclear fusion.



Bobby has also imaged the Eagle Nebula, M16 in Serpens, a young cluster of stars and hot gas, about 6000 light years away.

Other: Jim Nordhausen reported that the KELT-FUN project to observe transits of exoplanets has ended, and that the Sperry Observatory team was proud to have participated.

John Kozimbo reported that Tom Cruise is negotiating with NASA to film a movie on the International Space Station.

Respectfully, Mary Lou West, Research Chair