



Dupont Summit 2017

Science, Technology, and Environmental Policy

December 1, Historic Whittemore House, Washington, DC

Presentation

“The APUS Observatory: Engaging Students in Meaningful Astronomical Research”

The American Public University System (APUS) has a new facility which provides students and faculty around the world remote access to one of the largest visible light telescopes in West Virginia. The APUS Observatory includes a Planewave 24-inch reflecting telescope, equipped with a powerful CCD imaging camera. This telescope is ideally suited for “deep sky” imaging of objects beyond the Solar System, and has been used successfully in 2017 to obtain images of objects such as nebulae, galaxies and star clusters. The telescope will see a dramatic increase in usage in 2018 as more professors and students use it for classwork and research, including asteroid search/study and atmospheric observations of Mars. Two specific APUS-sponsored research projects will use the telescope’s capability to conduct stellar photometry -- the accurate measurement of the brightness of stars and the changes in their brightness over time. One project will use photometry to look for planetary transits -- the passage of a planet between a star and the Earth which causes a tiny change in the light output of the star when the planet passes directly between an observer and the star it orbits. The other project will study RR Lyrae variable stars, which are members of a class of pulsating variable stars known as “instability strip” pulsating stars used as standard candles to measure galactic distances. The RR Lyrae analysis performed by the APUS team will be added to the American Association of Variable Star Observers (AAVSO) data archive.

Speaker

David Syndergaard, *American Public University System*