

### Exploring the Extreme Universe with VERITAS

Astronomy at the highest energies, in the TeV gamma-ray band of the electromagnetic spectrum, probes some of the most extreme environments in the Universe. Photons of these energies can only be produced by the interactions of subatomic particles which have been accelerated to almost the speed of light. This acceleration occurs in a surprisingly wide variety of astrophysical sources: close to black holes and neutron stars, in the blast waves of supernova explosions and in the relativistic jets of active galaxies. Gamma-ray photons might also result from the interactions of dark matter particles, and so provide a non-gravitational method to detect dark matter in the Universe, and to establish its nature. The VERITAS telescope array has been observing astrophysical sources of gamma-rays from a mountain in Arizona since 2007. I will describe the detection method and the array itself, and highlight some of the most exciting recent results.



**Friday, February 6, 2015**

**4:00-5:00 P.M.**

**OPS Room 140**

**Dr. Jamie Holder**

**University of Delaware**