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# The VERITAS Dark Matter Program

*Wednesday, 28 August 2013 14:00 (20 minutes)*

In the cosmological paradigm, cold dark matter (DM) dominates the mass content of the Universe and is present at every scale. Candidates for DM include many extensions of the standard model, with a weakly interacting massive particle (WIMP) in the mass range from 50 GeV to greater than 10 TeV. The self-annihilation of WIMPs in astrophysical regions of high DM density can produce secondary particles including very high energy (VHE) gamma rays with energy up to the DM particle mass. VERITAS, an array of atmospheric Cherenkov telescopes, sensitive to VHE gamma rays in the 85 GeV-30 TeV energy range, has been utilized for the indirect detection of DM. The possible astrophysical objects considered to be candidates for indirect DM detection are VERITAS dwarf spheroidal galaxies (dSphs) of the Local Group, the Galactic Center among others. This presentation reports on our extensive observations of these targets and constraints of the dark matter physics from these objects.

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**Session Classification:** Indirect searches for dark matter