

Abstract Submitted
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Search for the Gamma-Ray Signature of Dark Matter with VERITAS MATTHEW WOOD, UCLA, VERITAS COLLABORATION — A leading candidate for astrophysical dark matter (DM) is a massive particle with a mass in the range from 50 GeV to greater than 10 TeV and an interaction cross section on the weak scale. The self-annihilation of such particles in astrophysical regions of high DM density can generate stable secondary particles including VHE gamma rays with energies up to the DM particle mass. Dwarf spheroidal galaxies of the Local Group are attractive targets to search for the annihilation signature of DM due to their proximity and large DM content. We report on gamma-ray observations taken with the Very Energetic Radiation Imaging Telescope Array System (VERITAS) of several dwarf galaxy targets. We discuss the implications of these measurements for the parameter space of DM particle models.

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