

Abstract Submitted
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Scrutinizing the gamma-ray sky for dark matter subhalos DANIEL NIETO CASTANO, Columbia University, VERITAS COLLABORATION — Galactic dark matter subhalos are promising targets for dark matter searches in the gamma-ray band. Unlike other more conventional targets, like dwarf spheroidal galaxies, galaxy clusters, or the Galactic Center and Halo, the locations of these hypothetical sources remain unknown. Under the assumption of a self-annihilating dark matter particle of mass above 100 GeV, dark matter subhalos may emerge in the gamma-ray sky as sources without counterpart at longer wavelengths. Gamma-ray instruments mapping large fractions of the sky, like the LAT on board the *Fermi* satellite and the HAWC observatory, are well suited to pinpoint the locations of these sources, while imaging atmospheric Cherenkov telescopes like VERITAS offer the possibility of deeper follow-up observations for a better spectral characterization. We elaborate on the synergy between the before-mentioned instruments regarding searches for dark matter subhalos and present the results of VERITAS observations on an intriguing dark matter subhalo candidate from the Fermi-LAT Second Point Source Catalog.

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