

CTA Dark Matter searches in dwarf galaxies, dark halos, and galaxy clusters

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The Cherenkov Telescope Array (CTA) represents the next-generation ground-based gamma-ray observatory in the energy range between 30 GeV and 300 TeV. It will open the window to gamma-ray searches for annihilation or decay of heavy (TeV) Weakly Interacting Massive Particles (WIMPs) in astrophysical Dark Matter (DM) budgets with unprecedented sensitivity. In this talk, I will review the current prospects for WIMP searches with CTA in dwarf spheroidal galaxies orbiting our Milky Way, enhanced annihilation in close-by dark halos, and galaxy clusters of the local Universe. I will also outline the current knowledge of the DM targets and foreseen observation strategies, on which the success of the searches crucially depends.

Affiliation

Max Planck Institute for Physics

Primary author: Dr HÜTTEN, Moritz (Max Planck Institute for Physics)

Presenter: Dr HÜTTEN, Moritz (Max Planck Institute for Physics)

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