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Dark matter searches with the Cherenkov Telescope Array

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Dark matter searches with the Cherenkov Telescope Array

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The current paradigm of the Universe states that more than 80% of its mass content consists of dark matter of unknown origin. Since its discovery more than eighty years ago, the quest for dark matter identification is one of the most important questions in physics. Strongly motivated candidates in form of weakly interactive massive particles could give rise to detectable signatures in gamma rays. The Cherenkov Telescope Array, the next generation of imaging atmospheric Cherenkov telescopes, will possess incomparable sensitivity to gamma-ray signal from few tens of GeV to few hundreds of TeV rendering possible to test a wide range of dark matter scenarios. In this presentation, I will review CTA prospects to detect dark matter from different target observations, including the galactic centre, dwarf galaxies and galaxy clusters.

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