

# Testing heavy WIMPs at the Cherenkov Telescope Array Observatory

*Monday 7 July 2025 10:00 (30 minutes)*

Upcoming gamma-ray telescopes offer the prospect of sensitivity to the canonical thermal-relic annihilation cross section up to mass scales of tens of TeV. I will discuss new precise predictions for high-energy gamma-ray signals from the classic “minimal dark matter” benchmark models, including bound-state formation and resummation of large logarithms, in the case where the dark matter inhabits a real representation of the Standard Model SU(2) group. I will show that under conservative assumptions on the dark matter density profile, the Cherenkov Telescope Array Observatory (CTAO) should be capable of detecting or excluding almost all these scenarios.

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