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Constraints on Dark Matter Microphysics from Dwarf Galaxies

Thursday 20 May 2021 17:00 (15 minutes)

As luminous tracers of small dark matter halos, ultra-faint dwarf galaxies offer a unique window into dark matter physics. In this talk, I will describe how our census of these faint systems places stringent constraints on microphysical dark matter properties including its warmth, Standard Model couplings, and de Broglie wavelength. I will also describe recent work that combines dark matter constraints from dwarf galaxies and strong gravitational lensing, and new simulations that highlight the effects of self-interacting dark matter in Milky Way-like systems.

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