

APR17-2016-020152

Abstract for an Invited Paper
for the APR17 Meeting of
the American Physical Society

Exploring the Dark Sector with the Multiwavelength Sky

TRACY SLATYER

Dark matter constitutes more than $5/6$ of the matter in the universe, but its nature and interactions remain one of the great puzzles of fundamental physics. Dark matter collisions or decays have the potential to produce high-energy particles; such particles could be observable by Earth-based telescopes in the future, and may already have reshaped the history of our universe. I will discuss new theoretical tools for teasing information on dark matter out of the multiwavelength sky, and distinguishing a (hypothetical) true dark matter signal from complex astrophysical backgrounds.