

Title: Astrophysical interplay in dark matter searches

Abstract: I will discuss several recent instances in which understanding the large scale distribution of dark matter in dwarf galaxies and in the Milky Way has affected the interpretation of results from dark matter searches. In the case of Fermi-LAT, modeling of dwarf galaxies has set robust limits on the WIMP cross section, while for direct WIMP detection experiments understanding the highest velocity WIMPs in the halo strongly affects current upper limits (or possible signals). I will then discuss how modeling the distribution of dark matter in Local Group galaxies informs us about cold, warm, and self-interacting dark matter, and the physics of baryons on these scales.