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## Effects of Dark Matter Distribution Uncertainties on Milky Way Satellite Galaxy Dark Matter Searches

*Friday, July 27, 2018 2:40 PM (20 minutes)*

Milky Way satellite galaxies are compelling targets for dark matter searches due to their proximity, high dark matter content, and low astrophysical backgrounds. Detailed studies of the stellar kinematics of satellite galaxies provide information on their dark matter content and velocity distribution. In this talk, I will discuss the systematic uncertainties in determining the dark matter content and phase space distribution from stellar kinematics. They have important impacts on several dark matter constraints such as dark matter annihilation/decay cross section limits for both velocity-independent and velocity dependent models. Finally I will discuss how forthcoming survey data and future facilities will improve our understanding of satellite dark matter distributions.

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