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New Strategies and Targets for Probing of Velocity-Dependent Dark Matter Annihilation

Thursday, 7 July 2022 10:10 (15 minutes)

We consider the well-motivated scenario of dark matter annihilation with a velocity-dependent cross section. At higher speeds, dark matter annihilation may be either enhanced or suppressed, which affects the relative importance of targets like galactic subhalos, the Galactic Center, or extragalactic halos. We consider a variety of new strategies for determining the associated J-factors, and for extracting information about the velocity-dependence of the cross section from gamma-ray data, including the study of non-Poisson fluctuations in the photon count, and the use of likelihood-free inference.

In-person participation

No

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