

SHARP GAMMA-RAY SPECTRAL FEATURES IN INDIRECT DARK MATTER SEARCHES

Gamma rays from the annihilation of dark matter particles in the Galactic halo provide a particularly promising means of indirectly detecting dark matter. Notably, pronounced spectral features near the kinematic cutoff at the dark matter particles' mass - a generic prediction for most models - represent a 'smoking gun' signature for dark matter indirect detection. In this talk, we present projected limits on such features and show that they can be much more efficient in constraining the nature of DM than the model-independent broad spectral features expected at lower energies. In particular, we discuss how they can significantly improve the sensitivity of current and future gamma-ray telescopes to dark matter signals.

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