

# Cosmological Constraints on Dark Matter Scattering

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There is a substantial effort in the physics community to search for dark matter interactions with the Standard Model of particle physics. Collisions between dark matter particles and baryons exchange heat and momentum in the early Universe, enabling a search for dark matter interactions using cosmological observations in a parameter space that is highly complementary to that of direct detection. Depending on the form of the interaction, scattering is most prominent either at early times or late times. In this talk, I will describe the effects of scattering in the CMB power spectra and show constraints using Planck 2015 data, and I will discuss the implications of late-time scattering during Cosmic Dawn.

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