

Abstract Submitted
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Theory of Interactions of Non-Relativistic Flavor-Mixed Particles and its possible Implications to the Physics of Dark Matter and the Cosmic Neutrino Background¹ A. FORD, M.V. MEDVEDEV, U. Kansas — Neutrinos and some dark matter candidates are mixed particles. Here we explore scattering of a non-relativistic stable particle with flavor mixing off of a weak potential. We demonstrate that, in addition to known phenomena such as flavor oscillations, conversions from one mass state to another are possible through elastic scattering and calculate the associated differential cross sections. Finally, we discuss implications of mass conversion to cosmology with flavor-mixed dark matter and to the cosmic neutrino background.

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