

Abstract Submitted
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Dark Matter Particles Interacting via a Higgs Field JURIJ DAREWYCH, ALEXANDER CHIGODAEV, York Univ — We study a system of two dark-matter particles, treated as scalars, interacting via a Higgs-type mediating field. The variational method in a reformulated Hamiltonian formalism of Quantum Field Theory is used to derive relativistic two-body wave equations. The nature of the interactions is studied, including the non-relativistic limit. Approximate solutions of the two-body equations are presented.

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