

Spin-3/2 Dark Matter in simple s or t channel models

We consider possible spin-3/2 dark matter (DM) particles which can either interact with the Standard Model (SM) fermions through a vector mediator in the s-channel, or with SM quarks through the exchange of a charged and coloured scalar or vector mediator in a simple t-channel model. Constraints on the parameter spaces of these models are investigated, drawing from the observed relic densities, direct detection from DM-nucleon elastic scattering cross sections, and monojet searches at the Large Hadron Collider.

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