

Grand Unification of a simple extension of Minimal Dark Matter and collider signatures

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The Minimal Dark Matter (MDM) model suggested by Cirelli et al. is an extended model that introduces one $SU(2)_L$ multiplet to the Standard Model so that the neutral component of the multiplet plays as the role of dark matter (DM). On the other hand, the stability of DM is not guaranteed because there is no mechanism to inhibit the DM decay process. We have built a model that makes DM automatically stable by embedding the MDM model into $SO(10)$ grand unified theory. I will explain the model and report the results of studying the phenomenological limitations and predictions of the model.

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Session Classification: Short talks