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Next-to-minimal dark matter at colliders

Thursday 26 July 2018 17:00 (20 minutes)

We present an economical model of WIMP dark matter in which the dark sector consists of the dark matter candidate, a fermionic singlet, and its coannhihilation partner, a fermionic SU(2) n-plet with n>=3. The dark sector is coupled to the SM Higgs boson via non-renormalizable interactions. We map the viable parameter space of this model, taking into accounts constraints from direct detection and collider experiments. In particular, the near-degeneracy between the n-plet-like states naturally leads to long-lived particles and hence to interesting signatures at the LHC.

Parallel Session

Dark Matter, Astroparticle Physics

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