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Constraining a top-philic dark matter model featuring contact terms

Thursday, 26 August 2021 16:00 (20 minutes)

We investigate the astrophysical and collider constraints of an effective model featuring a scalar top-philic heavy dark matter candidate and a dimension-five contact interaction term, as motivated by possible underlying extensions of the Standard Model such as composite Higgs models. We show that the presence of contact interactions can have a major impact on the dark matter relic density as well as on its direct and indirect detection prospects, while the collider phenomenology of the model is unaffected. This underlines the complementarity of collider and cosmological constraints on dark matter models.

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