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Probing the parameter space of Scale Invariant Scotogenic Model at the LHC

Tuesday, 4 July 2023 10:00 (20 minutes)

In this talk we explore the scale invariant (SI) scotogenic model in the context of anomalies observed in various multi-leptonic final states at the Large Hadron Collider (LHC). This model is very well known to accommodate dark matter (DM) requirements in association with scalar sector. In a classically SI framework this model is also motivated by neutrino mass and DM. This model is an extension of the standard model (SM) by a real singlet, an inert scalar doublet and three Majorana singlet fermions. And hence a large parameter space with neutral and charged scalars in association with heavy neutrinos allows various production and decay modes in leptonic final states with missing energy. We use this model to search beyond the SM resonance(s) compatible with observed signal(s) in the scalar sector at the LHC.

Apply to be considered for a student ; award (Yes / No)?

No

Level for award;(Hons, MSc, PhD, N/A)?

N/A

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