

Exploring the U(1) gauged Scotogenic Model within compressed mass spectrum scenarios at the LHC.

Tuesday 5 December 2023 16:00 (20 minutes)

In this talk we present a variation of the Scotogenic Model that extends the gauge group by a global U(1) symmetry, and a scalar singlet that induces Spontaneous Symmetry Breaking to explain the origin of both Majorana masses and Lepton number violation. Then, we make a brief analysis of the viable parameter space that satisfies the conditions for fermionic dark matter, which can be considered in a compressed mass spectrum with the lightest scalar state of the Z2 odd doublet. Finally, we will make a brief analysis of the collider observables and how they compare with the current experimental constraints given by both ATLAS and CMS experiments.

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