Contribution ID: **2** Type: **Regular Talk (20' + 5')**

Feasibility to probe the dynamical scotogenic model at the LHC

In this talk we present an variation of the Scotogenic Model, that extends the gauge group by a global U(1) symmetry, and a singlet scalar 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 compatible parameter space for both fermionic and scalar dark matter, which can be considered in a compressed mass spectrum between the lightest fermionic and scalar states. Then, we make an analysis of the behavior of the production cross section of the DM candidate particle, for both Drell-Yan and Vector Boson Fusion mechanisms and different compressed mass spectra scenarios, as a function of the mass and compare it with the latest results given by the ATLAS and CMS experiments to establish the detection feasibility of the model at the LHC.

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