

Abstract Submitted
for the APR21 Meeting of
The American Physical Society

Sensitivity on Dark Sector through the Neutralino Production and Muon Pairs Decay at Muon Collider CHIARA AIME, CRISTINA RICCARDI, PAOLA SALVINI, Univ Degli Studi Di Pavia, INFN-Pavia, ILARIA VAI, Univ Degli Studi di Bergamo, INFN-Pavia — Muon colliders offer a great opportunity to discover and prove new physics beyond the Standard Model. Dark SUSY models, for instance, couple the supersymmetric particles with the dark sector, and long-lived dark matter particles are expected to decay with a clear signature, i.e. very collimated muon pairs. The study of decay channels with dark matter particles coming from neutralinos produced in muon collisions at 3 TeV centre-of-mass energy is presented for the time being without the effects of the machine Beam-Induced Background. Preliminary results of the muon reconstruction performances, obtained by analyzing the final state, characterized by muon pairs, are shown for a possible range of neutralino mass.

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Date submitted: 07 Jan 2021

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