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Light Dark Portals at a High Energy Muon Collider

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Dark portals like the gauge, higgs, and neutrino portals are well-motivated extensions of the standard model (SM). These portals may lead to interactions between dark matter and the SM. In some scenarios, the mediator predominantly decays invisibly, making it challenging to constrain them. The prospect of a future muon collider has triggered a growing interest in the particle physics community. We show how a clean environment and high luminosity can lead to the best bound for masses $O(10-100)$ GeV, even though the proposed collider will have a very high center of mass energy \sim few TeV.

Mini Symposia (Invited Talks Only)

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