DPF-PHENO 2024

Contribution ID: 667 Type: not specified

Light Dark Portals at a High Energy Muon Collider

Monday 13 May 2024 14:45 (15 minutes)

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 $\tilde{}$ few TeV.

Mini Symposia (Invited Talks Only)

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Session Classification: Dark Matter

Track Classification: Dark Matter