

Bethe-Heitler Muon Backgrounds at a Muon Collider

Multi-TeV muon colliders are an important option for a future energy frontier lepton collider. Muon decays are a major source of beam induced backgrounds that can affect the physics seen in a muon collider. Beam induced backgrounds from muon decays include hadrons from photo-nuclear interactions, coherent and incoherent beam-beam pair production and Bethe-Heitler (B-H) muon production. The B-H muons can penetrate the collider ring magnets and shielding and can enter into the detector region.

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