

Inaugural US Muon Collider Meeting

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Beam Induced Background studies

Muon colliders offer an exciting new physics research avenue because of a variety of reasons including the muon's full energy being available in a collision, final states being much cleaner compared to a proton collider and being able to achieve much higher energies than electron colliders. There are certain challenges though, like the short lifetime of muons needing a variety of accelerator developments for this endeavour to be fruitful. In this poster, we would like to present our recent work on one of the challenges caused by this short muon lifetime namely the Beam Induced Background, which is the background caused by in-flight decay of muons and their interactions with the accelerator. This is necessary in order to take advantage of the clean final state of muon collisions and to achieve the desired sensitivity to new physics.

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