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Muon Collider and EDM Complementarity

Thursday 16 May 2024 17:15 (15 minutes)

We examine the possibility of using muon colliders to make complementary measurements if a non-zero electron EDM is observed in future experiments. All particles that couple to electroweak gauge bosons and the Higgs will contribute to leptonic EDMs through Barr-Zee diagrams, at the 2-loop level. These diagrams have analogous contributions to vector boson fusion present at muon colliders. We consider two minimal BSM models, the singlet-doublet and doublet-triplet fermion models, and examine how the presence of these BSM particles in Barr-Zee-like diagrams would manifest in the $W^+W^- \rightarrow hh$ process at a 10 TeV muon collider.

Mini Symposia (Invited Talks Only)

Plenary (Invited talks only)

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