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Complementary Probes of Lepton Flavor at a Muon Collider

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Low energy probes of lepton flavor violation (LFV) are indirectly probing new physics beyond the TeV scale, with order of magnitude advances expected in the future. A high energy muon collider would have the reach to probe similar processes at higher energies, e.g., via ⊠⊠⟶⊠⊠, which can be compared to the low-energy flavor-violating decay bounds. Alternatively, in particular models of new physics, new particles with flavor-violating interactions can be produced directly, such as mixed slepton pair production in the MSSM. I'll present some first estimates of the physics reach of a muon collider for both of these scenarios, with an emphasis on the complementarity between low-energy precision experiments and high-energy muon collider searches.

Summary

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