

Probing Lepton Number Violation at Same-Sign Lepton Colliders

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Same-sign lepton colliders offer a promising environment to probe lepton number violation. In this talk, we show discuss processes that change lepton number by two units in the context of Majorana heavy neutral leptons and neutrinophilic scalars at μ TRISTAN, a proposed same-sign muon collider. We will show that same-sign lepton colliders, with modest energy and luminosity requirements, can either reveal direct evidence of lepton number violation or significantly constrain unexplored regions of parameter space, especially in the case of a neutrinophilic scalar.

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