

Abstract Submitted
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Search for Rare Decays in the TWIST Muon Decay Spectrum

RYAN BAYES, University of Victoria, TWIST COLLABORATION — The main objective of TWIST is to measure the muon decay parameters, with a greater precision than previous measurements, using the shape of the muon decay spectrum. However, it is possible to extract additional physics from the experimental data, for example, the search for rare or forbidden muon decay channels. This presentation will focus on a search for isotropic structures within the muon decay spectrum which may reveal the presence of the lepton number violating decay $\mu^+ \rightarrow e^+ X^0$ employing greater statistics than any previous experiment. The method described uses the Feldman-Cousins approach to define an acceptance region for a mass dependent branching ratio.

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