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Initial Results from the TRIUMF PIENU Experiment

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The $\pi \to e\nu$ branching ratio
$R_\pi = \frac{\Gamma(\pi \to e\nu + \pi \to e\nu\gamma)}{\Gamma(\pi \to \mu\nu + \pi \to \mu\nu\gamma)}$,
one of the most precisely calculated weak interaction Standard Model observables involving quarks, provides a sensitive test of lepton universality and severe constraints on many new physics scenarios with mass reach up to 1000 TeV. The PIENU experiment at TRIUMF aims to measure R_π to a precision of less than 0.1%.
Results will be presented from an analysis of a subset of the data with statistical and systematic uncertainties reduced to the 0.2% level, significantly improving on previous experiments. Prospects for analyzing the full data set and further reducing the systematic error will also be discussed.

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