Abstract Submitted
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PEN experiment: a measurement of $\pi^+ \to e^+\nu_e(\gamma)$ branching ratio[1] EMIL FRLEZ, University of Virginia, PEN COLLABORATION — The experimental $\pi^+ \to e^+\nu_e(\gamma)$ decay branching ratio currently provides the most accurate test of lepton universality. The PEN experiment at PSI, Switzerland, aims to improve the present world average experimental precision of $\Delta B/B = 3.3 \cdot 10^{-3}$ to $\sim 5 \cdot 10^{-4}$ using a stopped pion beam. During runs in 2008-2010, PEN has acquired over $2 \cdot 10^7$ π_{e2} events. The experiment includes active beam detectors (degrader, mini TPC, target), central MWPC tracking with a plastic scintillator hodoscope, and a spherical pure CsI electromagnetic shower calorimeter. We will present a progress report on the PEN analysis. In addition to π_{e2} and the normalizing $\pi \to \mu \to e$ process, we will discuss radiative pion and muon decays, decays in flight, as well as accidental and hadronic backgrounds.

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