

Abstract Submitted
for the APR10 Meeting of
The American Physical Society

A Mini Time Projection Chamber for the PEN Experiment

LORETO ALONZI, University of Virginia, PEN COLLABORATION — The PEN experiment aims to measure the $\pi^+ \rightarrow e^+\nu(\gamma)$ branching ratio with a relative uncertainty of 5×10^{-4} or smaller using a stopped beam approach. Achieving this precision requires strict control of many systematics, including pion decay vertex position and identification of decay-in-flight events. We have designed and implemented a miniature time projection chamber ($50 \times 50 \times 50 \text{ mm}^3$, with 4 anode readout wires) to track beam pions in order to control the aforementioned systematics. This paper discusses the performance of the MTPC during the fall 2009 data collection period at PSI.

Loreto Alonzi
University of Virginia

Date submitted: 23 Oct 2009

Electronic form version 1.4