

Abstract Submitted
for the DNP16 Meeting of
The American Physical Society

Proton Source for Characterizing and Testing Charged Particle Silicon Detectors¹ KEVIN BASS, Univ of Tennessee, Knoxville — Improvements in experimental design and equipment have increased our capability for future neutron beta decay measurements. The upcoming experiments have the potential to test the Standard Model at the same level as the superallowed nuclear beta decay measurements but without the need for nuclear corrections. Part of the improvement comes from new large-area pixelated silicon detector technology. The precision and accuracy that is demanded by the neutron beta decay experiments require detailed characterization of the detectors. Such characterization can be achieved using a low current, variable energy proton beam. The design and simulation of a proton beam from source through accelerator will be presented.

¹University of Tennessee Physics Summer Fellowship

Kevin BAss
Univ of Tennessee, Knoxville

Date submitted: 25 Jul 2016

Electronic form version 1.4