

Abstract Submitted
for the DNP13 Meeting of
The American Physical Society

Anode Voltage Response Characterization of a Beam Tracking Detector T.L. JOHNSON, D.M. ROBE, R.L. KOZUB, Tennessee Technological University, S.D. PAIN, Oak Ridge National Laboratory, F. SARAZIN, S. ILYUSHKIN, P.D. O'MALLEY, Colorado School of Mines, B. MANNING, Rutgers University — Fragmenting a primary beam on a thick target and focusing the outgoing fragments using magnetic fields produces secondary radioactive beams. This procedure leads to a large secondary beam spot size on the reaction target. Nevertheless, precise knowledge of the impact point and angle of incidence is sometimes required to calculate scattering angles. For this purpose, multi-wire proportional detectors can be used to provide event-by-event particle tracking. Our prototype design has an anode between two cathodes, each of which is comprised of a plane of wires. The system was mounted in a chamber filled with various gas mixtures and a triple-alpha source was used for testing. Tests were run at various pressures, anode voltages, and gas compositions to characterize the observed signals and tune electronics. Results showing anode voltage effects will be presented. Research supported by the U. S. Department of Energy.

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Date submitted: 31 Jul 2013

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