

Abstract Submitted
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Characterizing a Charged Particle Detector Telescope¹ GEORGIA VOTTA, NATHAN FRANK, Augustana College, THOMAS BAUMANN, MSU/NSCL, JAMES BROWN, Wabash College, PAUL DEYOUNG, Hope College, MONA COLLABORATION COLLABORATION — Performing experiments on neutron-unbound nuclei requires the detection of a neutron, a charged particle, and in some instances, gamma rays. The development of a charged particle detector telescope will facilitate the detection of these particles for future experiments performed at the National Superconducting Cyclotron Laboratory at Michigan State University. This system will allow charged particle detection along with efficient detection of gamma-rays by a device like the CAESium-iodide scintillator ARray (CAESAR) and neutrons with the Modular Neutron Array (MoNA). In order to construct this system, each charged particle detector (Si-PIN, position sensitive Si, or CsI(Tl)) needs to be tested to ensure each detector's response along its area is uniform and to verify the manufacturers' specifications. The construction of a raster scanner facilitates the process of the position-dependent testing inside a grounded metal box. The raster scanner consists of two stepper motors controlled by Arduino software that allow a ^{210}Po source to be reproducibly transported across the surface of each detector and a mask that collimates the direction of the alpha particles. Results of detector characterizations will be presented.

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