

Abstract Submitted
for the HAW09 Meeting of
The American Physical Society

Accurate Position Calibrations for Charged Fragments AUTUMN RUSSELL, JOSEPH E. FINCK, Central Michigan University, ARTEMIS SPYROU, MICHAEL THOENNESSEN, NSCL/Michigan State University — The Modular Neutron Array (MoNA), located at the National Superconducting Laboratory at Michigan State University, is used in conjunction with the MSU/FSU Sweeper Magnet to study the breakup of neutron-rich nuclei. Fragmentation reactions create particle-unstable nuclei near the neutron dripline which spontaneously break up by the decay of one or two neutrons with energies that reflect the nuclear structure of unbound excited and ground states. The neutrons continue forward into MoNA where their position and time of flight are recorded, and the charged fragments' position and energy are measured by an array of detectors following the Sweeper Magnet. In such experiments the identification of the fragment of interest is done through energy loss and time-of-flight measurements using plastic scintillators. The emitted angles of the fragments are determined with the use of CRDCs. The purpose of the present work was the calibration of the CRDCs in the X and Y axis (where Z is the beam axis) using specially designed masks. This calibration was also used for the correction of the signal of the plastic scintillators, which is position dependent. The results of this work are used for the determination of the ground state of the neutron-unbound ^{24}N .

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Date submitted: 19 Aug 2009

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