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Development of a Position Sensitive Heavy Ion Detector for Nuclear Astrophysics EMILY NEED, Elon University, J.C. BLACKMON, C.M. DEIBEL, J. LAI, L.E. LINDHART, K.T. MACON, M. MATOS, B.C. RASCO, Louisiana State University, G. ROGACHEV, I. WIEDENHOVER, Florida State University — The Array for Nuclear Astrophysics Studies with Exotic Nuclei (ANASEN) is a charged-particle detector array used to study reactions with radioactive beams at FSU and the NSCL. One of the main goals is to improve our understanding of nuclear reactions important in stellar explosions. One important component of ANASEN is a heavy ion detector located downstream of the target that is used to identify the atomic number of heavy ions based upon their energy loss through the gas-filled chamber. We have developed a new version of this detector with major design changes to improve data collection and allow much greater selectivity for the reactions of interest. These changes include anodes based on custom printed circuit boards that provide position sensitivity, larger grids to provide greater acceptance, and a change in wire spacing on the grids to improve transmission. We will present the new design and results from initial tests.

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