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Development of the Position Sensitive Ionization Chamber for ANASEN HANNAH GARDINER, JEFF BLACKMON, CATHERINE DEIBEL, EMILY GARDINER, JIANPING LAI, AMBER LAUER, LAURA LINHARDT, KEVIN MACON, CHARLIE RASCO, Louisiana State University, LAGY BABY, YEVEGN KOSHCHIY, GRIGORY ROGACHEV, DANIEL SANTIAGO-GONZALES, INGO WIEDENHOEVER, Florida State University, DAN BARDAYAN, MILAN MATOS, Oak Ridge National Lab — The Array for Nuclear Astrophysics Studies with Exotic Nuclei (ANASEN) is a charged-particle detector array developed for reaction studies using radioactive ion beams to help improve understanding of the nuclear reactions important in stellar explosions. A gas-filled ionization chamber with two position-sensitive anode wire grid planes read out in 32 channels, and 12 alternating anode/cathode planes was developed and tested for use with ANASEN to identify the kinematic trajectory and atomic number of recoiling heavy ions by their relative energy loss. The position sensitive grids are arranged perpendicularly to each other in order to determine the x-y position of each ion with better than 4 mm resolution. This ionization chamber was tested using a stable beam of 12C at FSU. We report on the performance of this test experiment and plans for measurements with radioactive ion beams at FSU. Two other versions of the detector have been constructed and are now in place at the National Superconducting Cyclotron Laboratory and at the ATLAS accelerator facility at Argonne National Laboratory.

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