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Development of the Position Sensitive Scintillator Detector (PSSD) for ANASEN P. HEDLESKY, University of Dallas, S. MARLEY, J. BLACKMON, C. DEIBEL, A. HOOD, R. MALECEK, A. RYAN, G. GUZIK, M. NAUMAN, B. ELLISON, LSU — The Array for Nuclear Astrophysics and Structure with Exotic Nuclei (ANASEN) will be used to study reactions that are important to the formation of elements using beams of radioactive nuclei at the Tri-University Meson Facility (TRIUMF). This program will focus on the cosmological lithium problem and X-ray burst nucleosynthesis. We will describe the development of an upgrade to ANASEN and testing at Louisiana State University. The detector system uses two different types of detectors to measure reaction products and reconstruct the excitation function. Two rings of silicon detectors will measure the trajectory and energy of the reaction products. The Position Sensitive Scintillator Detector (PSSD) is being developed to measure the x-y position and intensity of the radioactive ion beam. The PSSD uses an array of 4x4 silicon photomultipliers (SIPM's) to accomplish these measurements. Preliminary results from testing will be presented and performance of the PSSD discussed.

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