

Abstract Submitted
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Development and Testing of an Improved Active Gas Target Design for ANASEN¹ ALEXANDRA LEVINESS, The University of Alabama, J.C. BLACKMON, C.M. DEIBEL, E. GOOD, A.A. HOOD, K.C. JOERRES, R.T. LEBLANC, K.T. MACON, B.C. RASCO, Louisiana State University, L. BABY, I. WIEDENHOVER, Florida State University — The Array for Nuclear Astrophysics and Structure with Exotic Nuclei (ANASEN) is a charged particle detector array with an active gas target-detector capability for direct measurements of nuclear reactions, which are important in stellar explosions, involving radioactive ions. We have developed a modified active gas target design for ANASEN that both improves the resolution for detection of light ions and includes a new capability for coincident heavy ion detection to improve selectivity. Improvements also include the addition of state-of-the-art fast digital electronics. The performance of the new active gas detector was characterized using measurements with an alpha source and silicon strip detector. We will present the new design and results from performance studies as a function of gas composition and operating voltage.

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