

Abstract Submitted
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Development and First Tests of the SuperORRUBA Silicon Detector Array¹ D.W. BARDAYAN, K.Y. CHAE, S.D. PAIN, M.S. SMITH, ORNL, S.H. AHN, K.L. JONES, U. Tenn., J.C. BLACKMON, L. LINHARDT, M. MATOS, LSU, J.A. CIZEWSKI, Rutgers — Studies of transfer reactions on radioactive beams are critical for elucidating the structure of nuclei away from stability and constraining nuclear reaction rates of astrophysical interest. The requirement of performing such studies in inverse kinematics, however, places difficult requirements on the detection system for reaction products. The detectors must provide large solid angle coverage near 90 degrees in the laboratory along with good position and energy resolution. To meet these requirements, we are developing the SuperORRUBA silicon detector array for experiments at the Holifield Radioactive Ion Beam Facility. The array will make use of approximately 1600 strips of 1.2 mm pitch in order to accurately determine the positions of detected particles. The detector design and the results of first tests will be presented.

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