

Abstract Submitted  
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**Fusion reactions using the new and improved focal plane of SASSYER**<sup>1</sup> A. SCHMIDT, A. HEINZ, R. WINKLER, J. QIAN, Yale University, G. HENNING, Yale University, ENS de Cachan, J.R. TERRY, Yale University, Z. BERANT, Yale University, Nuclear Research Center Negev, M. BUNCE, Yale University, University of Surrey, R.J. CASPERSON, R.F. CASTEN, V. WERNER, E. WILLIAMS, Yale University — The Small Angle Separator System at Yale for Evaporation Residues (SASSYER) is a gas-filled magnetic separator used to transmit recoils from fusion-evaporation reactions to detectors at the focal plane. Improvements to the focal plane of SASSYER, including the addition of a Multi-Wire Avalanche Counter (MACY) as well as two 2400-pixel Double-sided Silicon Strip Detectors (DSSDs) with multiplexed electronics, were completed in the spring of 2008. Recoils can now be identified at the DSSDs by time-correlated alpha decays. The observed alpha decays are then correlated to prompt gamma events detected at the target position. The physics program at SASSYER is aimed at the study of the structure of neutron-deficient trans-lead and actinide nuclei. We present the results of the first experiments performed with the improved focal plane investigating  $^{208}\text{Rn}$ ,  $^{215}\text{Ac}$  and  $^{216}\text{Th}$ .

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