Abstract Submitted
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**Use of a $CeBr_3$ implantation scintillator in beta-decay studies of rare isotopes**[1] B. P. CRIDER, Y. XIAO, T. H. OGUNBEKU, U. SILWAL, D. P. SIWAKOTI, D. C. SMITH, Mississippi State University, S. N. LIDDICK, K. L. CHILDERS, R. LEWIS, B. LONGFELLOW, S. LYONS, A. L. RICHARD, M. K. SMITH, NSCL/MSU, P. CHOWDHURY, E. LAMERE, UMass Lowell, S. K. NEUPANE, D. PEREZ-LOUREIRO, UTK, C. J. PROKOP, LANL — Beta-decay experiments enable studies of many interesting nuclear phenomena, such as shape coexistence near closed-shell nuclei. Shape coexistence describes where states associated with deformed shapes appear at relatively low excitation energy alongside spherical ones and is indicative of the rapid change in structure that can occur with the addition or removal of a few protons or neutrons. The use of a Cerium Bromide ($CeBr_3$) scintillator as an implantation detector for detecting accelerated rare isotopes and subsequent decays to study shape coexistence far from stability provides a number of desirable quantities, namely high light yield, a fast response, and a high density for the stopping of accelerated ions. A thin $CeBr_3$ implantation scintillator coupled to a position-sensitive photomultiplier tube has been utilized in a recent experiment at NSCL in combination with ancillary detection arrays. First results on the characterization and performance of the $CeBr_3$ scintillator will be presented.

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