

Abstract Submitted
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Internal Conversion Coefficient Measurements of Transitions in

¹⁶⁷**Lu** G. GÜRDAL, Clark University; WNSL, Yale University, C.W. BEAUSANG, University of Richmond, D.S. BRENNER, Clark University, H. AI, R.F. CASTEN, A. HEINZ, E. WILLIAMS, WNSL, Yale University, B. CRIDER, R. RAABE, University of Richmond, D.J. HARTLEY, United States Naval Academy, M. CARPENTER, R.V.F. JANSSENS, T. LAURITSEN, C.J. LISTER, D. SEWERYNIAK, S. ZHU, Argonne National Laboratory, A.A. HECHT, Argonne National Laboratory; University of Maryland, J.X. SALADIN, University of Pittsburgh — Experimental internal conversion coefficients can be used to determine the multipolarities of electromagnetic transitions and thus are valuable for assigning or confirming spins and parities of excited states. The normal and highly deformed bands of ¹⁶⁷Lu were populated by the ¹²³Sb(⁴⁸Ca,4n) reaction. Gammasphere and ICEBALL spectrometers were used to detect the coincidences between γ rays and electrons. $\gamma\gamma$ and γe matrices as well as $\gamma\gamma\gamma$ and $\gamma\gamma e$ cubes were produced to analyze the coincidence data. Internal conversion coefficients were measured for the transitions from the normal deformed bands and the triaxially deformed bands, which have the importance of testing the wobbling mode in ¹⁶⁷Lu. The preliminary results of the analysis will be presented. This work was supported by the U.S D.O.E grants DE-FG02-88ER40417, DE-FG02-91ER-40609, DE-FG52-06NA26206, DE-FG02-05ER41379, Contract No. W-31-109-ENG-38 and by the NSF grant number PHY-0300673.

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