

Abstract Submitted
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The β decay properties of $^{83,84}\text{Ga}$ ¹ J.A. WINGER, S.V. ILYUSHKIN, Mississippi State, K.P. RYKACZEWSKI, C.J. GROSS, D. SHAPIRA, ORNL, R. GRZYWACZ, S.N. LIDDICK, C. MAZZOCCHI, S. PADGETT, M.M. RAJABALI, U. of Tennessee, J.C. BATCHELDER, UNIRIB/ORAU, A. KORGUL, Warsaw University, W. KROLÁS, Polish Academy of Sciences, E.F. ZGANJAR, A. PIEC-HAZEK, Louisiana State, C. GOODIN, J.H. HAMILTON, Vanderbilt University — In an experiment at the Holifield Radioactive Ion Beam Facility, post accelerated beams were used to measure the decay properties of $^{83,84}\text{Ga}$. The high resolution isobar separator was tuned with with aid of an ion chamber to provide beams with enhanced Ga purity. The decays were observed using four Ge clover and two plastic β detectors. In both decays, the strongest γ rays come from the delayed-neutron branch. For ^{83}Ga we observed for the first time the transition between the $s_{1/2}$ first excited state and the $d_{5/2}$ ground state in ^{83}Ge , with confirmation from the β delayed-neutron decay of ^{84}Ga . The energy separation between these states is much lower than suggested by an earlier particle transfer measurement. For ^{84}Ga , the γ rays assigned to this decay are in contradiction with those previously published.

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