

Abstract Submitted  
for the HAW09 Meeting of  
The American Physical Society

**Beta decay studies of isobarically separated  $^{81}\text{Zn}$** <sup>1</sup> STEPHEN PADGETT, UTK, J.C. BATCHELDER, ORAU, L. CARTEGNI, UTK, I.G. DARBY, IKS Leuven, C.J. GROSS, ORNL, R. GRZYWACZ, UTK, S. ILYUSHKIN, Mis.St. U., S.N. LIDDICK, LLNL, M. MADURGA, UTK, T. MENDEZ, ORNL, C. MAZZOCCHI, IFGA, Milan, M. RAJABALI, UTK, K.P. RYKACZEWSKI, D. SHAPIRA, ORNL, J.A. WINGER, Mis.St. U., E.F. ZGANJAR, LSU — A new Low-energy Radioactive Ion Beam Spectroscopy Station (LeRIBSS) dedicated to the beta decay studies of  $^{238}\text{U}$  proton-induced fission products was constructed at the HRIBF at ORNL. The precision tuning of the high resolution magnetic separator allowed for almost complete suppression of the gallium ions produced at the rate of  $10^6$  pps, thus enabling clean spectroscopy of samples of  $^{81}\text{Zn}$  produced at the rate of 30 pps. The beta decay of  $^{81}\text{Zn}$  populated states in the  $N=50$  isotone,  $^{81}\text{Ga}$ , just three protons above  $^{78}\text{Ni}$ . This nucleus is an important case to test the competition between allowed and forbidden beta decay transitions, which is essential to reliably predict beta decay lifetimes.

<sup>1</sup>This work was supported in part by U.S. DOE Grants No. DE-FG02-96ER40983, DEAC05-00OR22725, DE-AC05-06OR23100, and DE-FG02-96ER-41006 and the NNSA through DOE Cooperative Agreement DE-FG52-08NA28552.

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Date submitted: 01 Jul 2009

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