

Abstract Submitted
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Decay spectroscopy of $^{76-79}\text{Cu}$ and $^{83,84}\text{Ga}$ ¹ C.J. GROSS, K.P. RYKACZEWSKI, D. SHAPIRA, ORNL, J.A. WINGER, S.V. ILYUSHKIN, Miss. St. U., R.K. GRZYWACZ, C.R. BINGHAM, S.N. LIDDICK, C. MAZZOCCHI, S. PADGETT, M.M. RAJABALI, U. Tennessee, E.F. ZGANJAR, A. PIECHACZEK, LSU, J.C. BATCHELDER, ORAU, J.H. HAMILTON, C. GOODIN, Vanderbilt, A. KORGUL, Warsaw, W. KROLAS, Krakow — We have developed a technique to enhance beta decay studies of neutron-rich fission products by ranging-out high Z isobars or tagging all isobars in a transmission ionization chamber (IC). Neutron-rich radioactive ion beams are accelerated to 2.5-3 MeV/u and pass through a microchannel-plate-thin-foil detector (MCP) and the IC. With high gas pressure in the IC, isobars with low Z , pass through the IC and are deposited on a moving tape while those with higher Z are stopped inside the gas volume or mylar exit window. The tape transports the sample to the measuring station. With lower gas pressure all isobars are implanted at the measuring station and the tape is used to remove the daughters. For very short-lived isotopes, time correlations with the MCP can be used to enhance selectivity. Among our results, we have observed for the first time the 730 keV γ ray following beta-delayed-neutron emission from ^{79}Cu . In the decay of ^{84}Ge , our data suggest that the 2^+ state in ^{84}Ge is 624 keV. Additional results on $^{76-79}\text{Cu}$ and $^{83,84}\text{Ga}$ beta decay will be presented.

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