

**ISOMERIC TRANSITIONS IN NEUTRON-RICH NUCLIDES OBSERVED
FOLLOWING PROJECTILE FRAGMENTATION OF A ^{136}Xe BEAM AT 120 MeV/A***

B. E. Tomlin^{a,b)}, W. B. Walters^{c)}, P. F. Mantica^{a,b)}, B. A. Brown^{a,d)}, A. D. Davies^{a,d)},
A. Estrade^{a)}, P. Hosmer^{a,d)}, N. Hoteling^{c)}, S. N. Liddick^{a,b)}, T. J. Mertzimekis^{a)}, F. Montes^{a,d)},
A. C. Morton^{a)}, W. F. Mueller^{a)}, M. S. Ouellette^{a,d)}, E. Pellegrini^{a)}, J. Rikovska Stone^{e)},
P. Santi^{a)}, D. Seweryniak^{f)}, H. Schatz^{a,d)} and J. Shergur^{c)}

^{a)}*National Superconducting Cyclotron Laboratory, Michigan State University, East Lansing, MI 48824, USA*

^{b)}*Department of Chemistry, Michigan State University, East Lansing, MI 48824, USA*

^{c)}*Department of Chemistry and Biochemistry, University of Maryland, College Park, MD 20742, USA*

^{d)}*Department of Physics and Astronomy, Michigan State University, East Lansing, MI, 48824*

^{e)}*Department of Physics, Oxford University, Oxford, UK OX1 3PU*

^{f)}*Argonne National Laboratory, Argonne, IL 60439, USA*

An experiment has been performed at the NSCL to study neutron-rich transition nuclei with $Z < 50$ and $N > 82$ in the region near doubly-magic ^{132}Sn . The nuclides of interest were produced by projectile fragmentation of a 120-MeV/A ^{136}Xe beam from the Coupled-Cyclotron Facility. The resulting fast fragments were separated by the A1900 spectrometer and implanted in a 1500- μm thick 40mm x 40mm double-sided silicon strip detector (DSSD). Gamma rays arising from short-lived (nanosecond and microsecond) isomeric states that were emitted within a 20- μs period following implantation were identified using 12 HPGe detectors from the NSCL SeGA array [1], placed around the DSSD. The assignment of isomeric gamma rays in neutron-rich isotopes of Cd, Ag, and Rh will be reported, and new nuclear structure information will be discussed.

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[1] W. F. Mueller *et al.*, Nucl. Instrum. Methods Phys. Res. **A466**, 492 (2001).