

Abstract Submitted
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Neutron-Induced Partial Gamma-Ray Cross-Section Measurements on ^{238}U Using a Monoenergetic and Pulsed Beam at TUNL¹ A. HUTCHESON, S.T. CHURCHWELL, A.S. CROWELL, B. FALLIN, C.R. HOWELL, J. KELLEY, M. KISER, A.P. TONCHEV, W. TORNOW, R.L. WALTER, TUNL, R.S. PEDRONI, NC AT State University, G.J. WEISEL, Penn State Altoona, J.A. BECKER, J.R. COOPER, D. DASHDOR, R.A. MACRI, LLNL, N. FOTIADES, R.O. NELSON, LANL, I. LANTUEJOUL, CEA — An experimental program is being developed at TUNL to study (n,2n) excitation functions on actinide nuclei using monoenergetic neutrons in the 5 to 18 MeV energy range with the goal of improving the partial cross-section data for the NNSA Stockpile Stewardship Program. Measurements have been performed on a ^{238}U target in the TUNL shielded neutron source area using a pulsed neutron beam with incident neutron energies of 6, 8, 10, and 14 MeV. The emitted gamma rays were measured using different types of HPGe detectors. The pulsed beam permitted the use of time-of-flight techniques to distinguish (n,2n) events from background events. Experimental techniques and analysis of the measurements will be presented.

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