

Abstract Submitted
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Measurement of the $^{241}\text{Am}(n,2n)$ Reaction Cross Section with the Activation Technique¹ A. TONCHEV, A. CROWELL, B. FALLIN, C. HOWELL, A. HUTCHESON, W. TORNOW, Duke and TUNL, J. KELLEY, NCSU and TUNL, C. ANGELL, H. KARWOWSKI, UNC and TUNL, R. PEDRONI, NC A&T and TUNL, J. BECKER, D. DASHDORJ, R. MACRI, J. WILHELMY, LLNL, E. BOND, J. FITZPATRICK, A. SLEMMONS, D. VIEIRA, LANL — High-precision measurements of the $^{241}\text{Am}(n,2n)^{240}\text{Am}$ reaction have been performed with neutron energies from 8.8 to 14.0 MeV. The monoenergetic neutron beams were produced via the $^2\text{H}(d,n)^3\text{He}$ reaction using the 10 MV Tandem accelerator at TUNL. The radioactive targets consisted of 1mg highly-enriched ^{241}Am sandwiched between four different thin monitor foils. They were irradiated with a neutron flux of $3 \times 10^7 \text{ n cm}^{-2} \text{ s}^{-1}$. After each irradiation the induced activity in the targets and monitors was measured off-line with 60% HPGe detectors. Our preliminary neutron induced cross sections will be compared with recent literature results and statistical model calculations using the GNASH and EMPIRE codes.

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