

Abstract Submitted
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Short-lived fission product-yield measurements from $^{238}\text{U}(\text{n},\text{f})$ at $E_n = 4.6 \text{ MeV}$ ¹ ANTHONY RAMIREZ, CHRIS HAGMANN, JACK SILANO, MARK STOYER, ANTON TONCHEV, LLNL, MATTHEW GOODEN, TODD BREDEWEG, DAVID VIEIRA, JERRY WILHELMY, VANESSA LINERO, LANL, SEAN FINCH, WERNER TORNOW, CALVIN HOWELL, FNU KRISHICHAYAN, INNOCENT TSORXE, Duke University/TUNL — There is currently an ongoing effort by the LLNL-LANL-TUNL collaboration to measure high quality fission product yield (FPY) data from neutron-induced fission on $^{235,238}\text{U}$, and ^{239}Pu . The goal is to study the energy dependence of the fission products using monoenergetic and pulsed neutron beams at the TUNL tandem accelerator for incident energies between 0.5 and 15 MeV. Previous data have focused on long-lived cumulative FPYs with half lives of hours to days [1,2]. In order to provide consistent data of the FPY distributions, there is a need to extend the measurements to shorter-lived fission products. Hence, a rapid belt-driven irradiated target transfer system (RABITTS) was developed at TUNL to allow cyclic neutron activation on the actinide targets. This technique permits the measurement of fission products with half lives as short as a fraction of a second. An overview of the experimental procedure and data analysis, as well as preliminary results, using the recent $^{238}\text{U}(\text{n},\text{f})$ measurements at $E_n = 4.6 \text{ MeV}$ with the RABITTS will be presented. [1] M. Gooden et al., Nucl. Data Sheets 131, 319 (2016). [2] A. Tonchev et al., LLNL-CONF-788565-986272.

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