## Abstract Submitted for the DNP15 Meeting of The American Physical Society

Energy Dependence of Fission Product Yields from 235U, 238U and 239Pu for Incident Neutron Energies Between 0.5 and 14.8  $MeV^1$ M. GOODEN, C. ARNOLD, T. BREDEWEG, D. VIEIRA, J. WILHELMY, Los Alamos National Laboratory, A. TONCHEV, M. STOYER, Lawrence Livermore National Laboratory, M. BHIKE, F. KRISHICHAYAN, W. TORNOW, Duke University and Triangle Universities Nuclear Lab, M. FOWLER, Los Alamos National Laboratory — Under a joint collaboration between TUNL-LANL-LLNL, a set of absolute fission product yield measurements has been performed. The energy dependence of a number of cumulative fission product yields (FPY) have been measured using quasi-monoenergetic neutron beams for three actinide targets, <sup>235</sup>U, <sup>238</sup>U and  $^{239}$ Pu, between 0.5 and 14.8 MeV. The FPYs were measured by a combination of fission counting using specially designed dual-fission chambers and ?-ray counting. Each dual-fission chamber is a back-to-back ionization chamber encasing an activation target in the center with thin deposits of the same target isotope in each chamber. This method allows for the direct measurement of the total number of fissions in the activation target with no reference to the fission cross-section, thus reducing uncertainties. ?-ray counting of the activation target was performed on well-shielded HPGe detectors over a period of 2 months post irradiation to properly identify fission products. Reported are absolute cumulative fission product yields for incident neutron energies of 0.5, 1.37, 2.4, 3.6, 4.6, 5.5, 7.5, 8.9 and 14.8 MeV. These results are compared to previous measurements and theoretical estimates.

<sup>1</sup>This work was performed under the auspices of the USDoE by Los Alamos National Security, LLC under contract DE-AC52-06NA25396.

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Date submitted: 30 Jun 2015

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