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Measurements of the short-lived (minutes $\leq$ $T_{1/2}$ $\leq$ hours) photon-induced fission product yields using monoenergetic photon beams[1] FNU KRISHICHAYAN, S. FINCH, C.R. HOWELL, Duke University, J. SILANO, A.P. TONCHEV, Lawrence Livermore National Laboratory, W. TORNOW, I. TSORXE, Duke University — A program has been initiated at TUNL to bridge the gap between ongoing fission product yield (FPY) measurements of isotopes with half-lives ($T_{1/2}$) close to seconds (fission products pretty close to the initial distribution produced directly by fission) and those with $T_{1/2}$ $\geq$ 1 hour (longest-lived radioactive members of the beta-decay chain). The focus is on fission products with $T_{1/2}$ between these two time regions. The "big three" actinide samples (^{235}U, ^{238}U, and ^{239}Pu) were irradiated for 2 hours with a monoenergetic photon beam of E_γ = 11.2 MeV at the HIGS facility. The samples were gamma-counted for a week post irradiation. In the present talk, details of the experimental setup and data analysis procedures will be discussed. The techniques employed in these measurements do not require absolute determination of the gamma-ray beam flux, thus significantly reducing the systematic uncertainties.

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