Abstract Submitted
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Photon-induced Fission Product Yield Measurements on ^{235}U, ^{238}U, and ^{239}Pu[1] FNU KRISHICHAYAN, M. BHIKE, TUNL and Duke University, A.P. TONCHEV, LLNL, W. TORNOW, TUNL and Duke University — During the past three years, a TUNL-LANL-LLNL collaboration has provided data on the fission product yields (FPYs) from quasi-monoenergetic neutron-induced fission of ^{235}U, ^{238}U, and ^{239}Pu at TUNL in the 0.5 to 15 MeV energy range. Recently, we have extended these experiments to photo-fission. We measured the yields of fission fragments ranging from ^{85}Kr to ^{147}Nd from the photo-fission of ^{235}U, ^{238}U, and ^{239}Pu using 13-MeV mono-energetic photon beams at the HIGS facility at TUNL. First of its kind, this measurement will provide a unique platform to explore the effect of the incoming probe on the FPYs, i.e., photons vs. neutrons. A dual-fission ionization chamber was used to determine the number of fissions in the targets and these samples (along with Au monitor foils) were gamma-ray counted in the low-background counting facility at TUNL. Details of the experimental set-up and results will be presented and compared to the FPYs obtained from neutron-induced fission at the same excitation energy of the compound nucleus.

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