Abstract Submitted
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New Short-Lived Fission Product Yield Experiment at Oregon State University[1] AARON S. TAMASHIRO, C.J. PALMER, Oregon State Univ, J.T. HARKE, S. BURCHER, S.W. PADGETT, Lawrence Livermore Natl Lab — A new experimental setup at the Oregon State University (OSU) TRIGA reaction is being designed, with the goal of measuring short-lived fission product yields and investigating discrepancies in fission product γ-ray branching ratios. ^{238}U cumulative fast fission product yields were recently measured using Godiva-IV. The fission product yields were extracted by analyzing fission product γ-rays which rely on γ-ray branching ratios. This method relies on the accuracy of γ-ray branching ratios, some of which may not be reliable. Measurements at Godiva-IV are limited to begin $\sim$1 hour post-irradiation. The OSU rabbit system allows the rapid transport of samples from the core to the counting setup within 3 seconds. The new setup will consist of four Compton-suppressed HPGe clover detectors providing high efficiency for γ-ray detection, and the high segmentation of the array will increase the γ-γ coincidence detection efficiency and enable the investigation of gamma-ray branching ratios. Results from a preliminary proof-of-principle measurement at the OSU TRIGA reactor will be presented along with the current status of preparations for the future campaign.

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Aaron Tamashiro
Oregon State University

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