

Abstract Submitted
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Nuclear Resonance Fluorescence Response of U-235¹ GLEN WARREN, Pacific Northwest National Laboratory — Nuclear resonance fluorescence (NRF) is a physical process that provides an isotopic-specific signature that could be used for the identification and characterization of materials. The technique involves the detection of prompt discrete-energy photons emitted from a sample, which is exposed to photons in the MeV energy range. Potential applications of the technique range from detection of high explosives to characterization of special nuclear materials. Pacific Northwest National Laboratory and Passport Systems have collaboratively conducted a set of measurements to search for an NRF response of U-235 in the 1.5 to 9 MeV energy range. Results from these measurements will be presented.

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