

Abstract Submitted
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Update on NRF Measurements on ^{237}Np for National Security and Safeguards Applications¹ C.T. ANGELL, T. JOSHI, R. YEE, E. SWANBERG, UC Berkeley, E.B. NORMAN, UC Berkeley and LBNL, W.D. KULP, GeorgiaTech, G. WARREN, PNNL, C.L. HICKS JR., S. KORBLY, A. KLIMENKO, C. WILSON, Passport Systems, T.H. BRAY, R. COPPING, D.K. SHUH, LBNL — Nuclear resonance fluorescence (NRF) uses γ rays to excite nuclear levels and measure their properties. This provides a unique isotopic signature, and can be used to identify and assay material. This is particularly important for applications that detect the smuggling of nuclear material or the diversion of fissile material for covert weapon programs, both of which present grave risks to world security. ^{237}Np presents significant safeguard challenges; it is fissile yet currently has fewer safeguard restrictions potentially making it an attractive material for covert weapon programs. This talk will present the final results of two measurements of NRF on ^{237}Np using a bremsstrahlung photon source. 15 NRF states have been identified between 1.5 and 2.5 MeV excitation energy.

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