Abstract Submitted
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**Nuclear Resonance Fluorescence States in $^{239}$Pu**[1] MICAH JOHNSON, D.P. MCNABB, E.B. NORMAN, LLNL — Nuclear Resonance Fluorescence (NRF) has been used to probe collective excitations in many deformed rare-earth and actinide nuclei. Two collective modes have been established below 3 MeV, magnetic dipole excitations and Octupole-Quadrupole excitations. We will present measurements of newly discovered NRF states in $^{239}$Pu. The measurements were performed at the HVRL at MIT using a bremsstrahlung source with an endpoint energy up to 3 MeV. Plans for future measurements of NRF states in $^{239}$Pu at higher energies will be presented. We will also briefly discuss current research at LLNL to use NRF as a method to isotopically map containers.

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