

Abstract Submitted
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Search for Dipole States in $^{235,238}\text{U}$ ¹ SAMANTHA HAMMOND, CHRIS ANGELL, HUGON J. KARWOWSKI, UNC-Chapel Hill & TUNL, ELAINE KWAN, GENCHO RUSEV, ANTON TONCHEV, WERNER TORNOW, Duke University & TUNL, JOHN KELLEY, NCSU & TUNL — There is considerable interest in isotope-specific material identification. The presence of a particular isotope can be inferred by observing deexcitations of nuclear levels of γ -ray transitions characteristic for the isotope of interest using nuclear resonance fluorescence techniques. These high energy γ -transitions would penetrate protective shielding, thus acting as an identifier of hidden nuclear materials. Nearly monoenergetic, high-intensity and 100% polarized γ -ray beam from the HI γ S facility was used to search for low-spin states in $^{235,238}\text{U}$ at excitation energies between 3 and 5 MeV. The resulting data on the distribution of dipole strength below particle emission threshold will be presented.

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