

Abstract Submitted
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Nuclear Dipole Response of Bound States in N=82 Nuclei Below Particle Threshold¹ A. TONCHEV, A. HUTCHESON, E. KWAN, G. RUSEV, W. TORNOW, Duke and TUNL, C. ANGELL, S. HAMMOND, H. KARWOWSKI, UNC and TUNL, J. KELLEY, NCSU and TUNL — Nuclear resonance fluorescence measurements have been performed on N=82 nuclei using 100% linearly polarized γ -ray beams at the High-Intensity γ -ray Source (HI γ S) at energies below the particle emission threshold. The low-lying dipole excitations have been related to the so-called “pygmy” dipole resonance. The electric dipole character of this low-energy mode of excitation was experimentally verified from $E_\gamma=4.5$ -8.5 MeV. Missing dipole strength is revealed in inelastic scattering measurements using the monoenergetic HI γ S beams. The dipole-strength distribution will be compared with microscopic calculations within the framework of the quasiparticle-phonon model.

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