

Abstract Submitted
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Photon Scattering from the Stable Even-Mass Mo Isotopes Below the Neutron-Separation Energy¹ G. RUSEV, A. HUTCHESON, E. KWAN, A.P. TONCHEV, W. TORNOW, Duke and TUNL, C. ANGELL, S. HAMMOND, H.J. KARWOWSKI, UNC and TUNL, J.H. KELLEY, NCSU and TUNL, R. SCHWENGNER, F. DÖNAU, A. WAGNER, FZD — We present results from photon-scattering experiments on the stable even-mass molybdenum isotopes below the neutron-separation energy carried out with bremsstrahlung at the superconducting electron accelerator ELBE at the Research Center Dresden-Rossendorf in Germany, and with monoenergetic photon beams at the HI γ S facility at TUNL. We applied statistical methods in order to correct for the branching and cascade transitions and to determine the photoabsorption cross section. The obtained results allowed us to extend the tail of the Giant Dipole Resonance below the (γ, n) threshold down to 4 MeV. The photoabsorption cross sections deduced from the present experiments show that the dipole strength increases with the neutron number of the Mo isotopes. The experimental results are discussed in the frame of Quasiparticle-Random-Phase-Approximation in a deformed basis which describe the increasing strength as a result of the deformation.

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