

Abstract Submitted
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Electric dipole response of nuclei studied by proton inelastic scattering: neutron thickness, symmetry energy, and pygmy dipole resonance¹ ATSUSHI TAMII, Research Center for Nuclear Physics, Osaka University, RCNP E282/E316/E326/E350/E376/E377 COLLABORATION — Electric dipole (E1) responses of heavy nuclei have been studied by high-resolution measurement of proton inelastic scattering at forward angles including zero degrees. Here the proton scattering at 300 MeV is used as an electromagnetic probe to extract precisely the distribution of $E1$ reduced transition probability $B(E1)$. The measurement has been done on various stable nuclei such as ^{208}Pb , ^{120}Sn , ^{90}Zr , ^{154}Sm , and ^{96}Mo . The dipole polarizability and pygmy dipole resonance (PDR) strength has been extracted. Those quantities are considered to have strong correlations to the neutron skin thickness and the first order density dependence of the symmetry energy of the nuclear equation of state. We will present the experimental methods and highlights of the results as well as the preliminary ones of recent analyses.

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