

Abstract Submitted
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Optical model parameters extracted from elastic deuteron scattering CATHLEEN FRY, Tennessee Technological University — Nuclear incompressibility is an important ingredient of the equation of state of nuclear matter. Isoscalar Giant Monopole Resonance (ISGMR), a compressional mode oscillation of the nucleus, serves as an experimental tool in extracting the nuclear incompressibility. In order to make measurements on the ISGMR strength distributions in the nuclei far from stability, experiments have to be done in the inverse kinematics. This is now made possible with the advent of new radioactive ion beam facilities. ^2H can serve as a target in such reactions. However there are no available Optical Model Parameters (OMP) for this probe at the energies required to study ISGMR. With this in mind an experiment was performed with 100 MeV/A ^2H beam at Research Center for Nuclear Physics (RCNP). Elastic scattering data were obtained for ^{58}Ni , ^{90}Zr , ^{116}Sn , and ^{208}Pb , over a wide range of angles. The OMP extracted from the analysis of these elastic cross-sections would be presented.

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