Extracting the Continuum Cross section in Giant Resonance Analysis

KADMIEL BEAUVAIS, Texas A&M Univ — The Giant monopole resonance (GMR) is being studied through the inelastic scattering of 240 MeV α particles on various nuclei to better determine nuclear matter incompressibility (K_{nm}). Since the GMR is above particle decay thresholds, there is a continuum underlying the giant resonances which is at best poorly understood. In order to ascertain the nature of this continuum, a computer program is being developed that allows the input of assumptions about the location, distribution, and strengths of L=0-4 multipole distributions which are then converted to cross sections and subtracted from the experimental data at angles from 0-6°. The resulting continuum for each angle and each target can then be compared to reaction models to better understand the process.

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