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Microscopic analysis of elastic scattering based on chiral g matrix

We investigated the effects of three-nucleon force (3NF) from chiral effective field theory on nucleon-nucleus (NA) and nucleus-nucleus (AA) elastic scattering by using g-matrix folding model. To clarify the 3NF effects accurately, we constructed new g-matrix, so called chiral g matrix, from chiral two-nucleon force and 3NF by using Bruckner-Hartree-Fock method and localized the g matrix in order to apply g-matrix folding model. In this conference, we will show the microscopic analysis with chiral g matrix reproduces the experimental data without introducing any adjustable parameter.

Primary author: Dr TOYOKAWA, Masakazu (Kyushu University)

Co-authors: Prof. YAHIRO, Masanobu (Kyushu University); Dr KOHNO, Michio (RCNP, Osaka University); Dr MATSUMOTO, Takuma (Kyushu University)

Presenter: Dr MATSUMOTO, Takuma (Kyushu University)