Contribution ID: **50** Type: **Oral presentation**

Neutron-rich nuclei and neutron skins from chiral low-resolution interactions

Monday, 24 June 2024 15:30 (20 minutes)

Neutron-rich nuclei provide important insights to nuclear forces and to the nuclear equation of state. Advances in *ab initio* methods combined with new opportunities with rare isotope beams enable unique explorations of their properties based on nuclear forces applicable over the entire nuclear chart. In this Letter, we develop novel chiral low-resolution interactions that accurately describe bulk properties from ^{16}O to ^{208}Pb. With these, we investigate density distributions and neutron skins of neutron-rich nuclei. Our results show that neutron skins are narrowly predicted over all nuclei with interesting sensitivities for the most extreme, experimentally unexplored cases.

Collaboration

Primary author: Dr ARTHUIS, Pierre (Technische Universität Darmstadt)

Co-authors: HEBELER, Kai (TU Darmstadt); Prof. SCHWENK, Achim (Technische Universität Darmstadt)

Presenter: Dr ARTHUIS, Pierre (Technische Universität Darmstadt)

Session Classification: Monday afternoon 1