



Contribution ID: 97

Type: Oral presentation

Electromagnetic response functions and electric dipole polarizability from coupled-cluster theory

Thursday, October 9, 2025 10:15 AM (30 minutes)

Electromagnetic excitations are a unique probe to the internal structure of a nucleus. In this talk, nuclear electromagnetic responses are investigated using the ab initio coupled-cluster theory. We determine dipole response functions and electric dipole polarizabilities in both closed-shell nuclei and open-shell isotopes close to magicity, and discuss their evolution along isotopic chains.

References:

1. S. Bacca et al., Phys. Rev. Lett. 111, 122502 (2013).
2. F. Bonaiti et al., Phys. Rev. C 110, 044306 (2024).
3. F. Marino et al., arXiv:2504.11012.
4. F. Marino et al., EPJ Web Conf. 324, 00021 (2025).

Primary author: Dr MARINO, Francesco (JGU Mainz)

Presenter: Dr MARINO, Francesco (JGU Mainz)

Session Classification: Session I