

Invited Talk: The PANDORA project

Monday, 15 April 2024 11:50 (25 minutes)

The electric-dipole (E1) strength plays a crucial role in understanding photoabsorption reactions, offering insights into nuclear structure, excitations, and responses to external fields. While extensively studied in heavy nuclei ($A > 90$), lighter nuclei ($A < 60$) present unique challenges due to factors like clustering effects, deformation, and nucleon pairing. These complexities hinder theoretical interpretations, impacting predictions and, notably, the understanding of ultra-high-energy cosmic rays (UHECRs). The PANDORA project aims to systematically measure photoabsorption cross sections and branching ratios for light elements ($A < 60$), crucial for refining theoretical models used in UHECR propagation studies. This talk provides an overview of the PANDORA project and presents preliminary data from the first experiment performed in October 2023 at RCNP (Japan).

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