

Nuclear Moments Studied with High-Resolution Laser Spectroscopy and Recent Plans at BRIF

mercredi 14 mai 2025 14:10 (25 minutes)

Over the past years, nuclear moments of unstable nuclei across different mass regions of the nuclear chart have been extensively investigated—particularly by high-resolution laser spectroscopy setups at ISOLDE—providing rich information that deepens our understanding of nuclear structure and nuclear forces. To study nuclear moments and other nuclear properties at the ISOL facility BRIF in China, a collinear resonance ionization laser spectroscopy system has been recently developed and successfully demonstrated.

In this talk, nuclear moments of selected nuclei studied with the COLLAPS and CRIS setups at ISOLDE will be presented. In addition, recent developments in high-resolution laser spectroscopy and upcoming plans to measure the moments of unstable nuclei at the BRIF facility will be introduced.

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2)T. J. Zhang et al., Nucl. Instrum. Methods Phys. Res. Sect. B 463 (2020)123–127

3)H.R. Hu et al., arXiv:2503.20637 (2025)

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Classification de Session: Session 9