



ID de Contribution: 646

Type: **invited presentation**

Nuclear collectivity studied with the newly refurbished Miniball spectrometer at HIE-ISOLDE

mercredi 7 juin 2023 09:35 (25 minutes)

The Miniball spectrometer has been utilised for the study of collectivity in nuclei for two decades, exploiting post-accelerated radioactive ion beams at the ISOLDE facility. The workhorse technique has been Coulomb excitation, but few-nucleon and multi-nucleon transfer-reactions have also been exploited with the addition of ancillary devices such as the T-REX charged-particle detector.

Miniball came back to life at HIE-ISOLDE in 2022 following the second long shutdown at CERN (2018-2021), during which time it has undergone a total transformation. There has been a refurbishment of the HPGe detectors, including new cryostats, electronics and preamplifiers, as well as a newly developed data acquisition system.

In this talk, I will present some recent physics highlights from Miniball in the HIE-ISOLDE era, focusing on studies of nuclear collectivity and shapes. I will also detail the current status of the spectrometer and show preliminary results from the first experiments of the new era; including the first use of the SPEDE spectrometer for conversion electron spectroscopy in the Coulomb excitation of ^{182}Hg .

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Classification de Session: plenary 09

Classification de thématique: facilities/instruments