



Canadian Association
of Physicists

Association canadienne
des physiciens et physiciennes

Contribution ID: 596

Type: **Invited Speaker / Conférencier(ère) invité(e)**

(I) Recent highlights from the GRIFFINspectrometer

Monday 7 June 2021 11:45 (25 minutes)

The Gamma-Ray Infrastructure For Fundamental Investigations of Nuclei (GRIFFIN), is a state-of-the-art spectrometer designed for the β -decay studies of exotic nuclei produced at the TRIUMF-ISAC facility. It provides unique research opportunities in the fields of nuclear structure, nuclear astrophysics, and fundamental interactions.

The spectrometer is composed of an array of 16 Compton suppressed clover-type high-purity germanium (HPGe) detectors as a core, and complemented by a powerful set of ancillary detectors that comprise plastic-scintillators for beta tagging, LN₂-cooled Si(Li) detectors for conversion electron measurements and an array of eight LaBr₃(Ce) scintillators for lifetime measurements [1].

Innovative results using the GRIFFIN spectrometer have been recently published, including the precision measurements of the Fermi super allowed beta emitter ⁶²Ga, the astrophysically-motivated investigations of the ¹³²In, ¹²⁹Cd, ¹²⁹In nuclei and the nuclear structure of ⁸⁰Ge. An overview of the future scientific opportunities together with the recent experiments will be provided.

References

[1] A.B. Garnsworthy *et al.* NIM A:918:9–29, 2019

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Session Classification: M1-6 Spectroscopy II (DNP) / Spectroscopie II (DPN)

Track Classification: Nuclear Physics / Physique nucléaire (DNP-DPN)