

The GRIFFIN Facility for Decay Spectroscopy Experiments at TRIUMF

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GRIFFIN [1], the Gamma-Ray Infrastructure For Fundamental Investigations of Nuclei is the newly commissioned decay spectroscopy array located at TRIUMF, Canada's National Laboratory for Nuclear and Particle Physics, in Vancouver, Canada. GRIFFIN consists of 16 large-volume hyper-pure germanium (HPGe) clover detectors assisted by a custom-built digital data acquisition system. A suite of ancillary detector systems can be coupled to GRIFFIN for comprehensive decay spectroscopy experiments with radioactive beams delivered by the TRIUMF ISAC facility.

In November-December 2014, the early-implementation experiments with radioactive beams were performed with the GRIFFIN array, coupled to SCEPTAR [2], an array of plastic scintillators for beta-tagging, and PACES [2], an array of lithium-drifted silicon detectors for high-resolution internal conversion electron spectroscopy. Additional arrays of lanthanum bromide scintillators for fast gamma-ray timing measurements, called DANTE [2], and neutron detectors for beta-delayed neutron-emitting nuclei, called DESCANT, [3] are also available for future experiments.

Preliminary results obtained with the GRIFFIN spectrometer near and far from stability using beta decay of beams of $^{115}\text{g.mAg}$ [4], $^{46,47}\text{K}$ [5,6] and ^{32}Na [7] will be presented along with a discussion of future opportunities.

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References

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- [5] J.L. Pore et al., to be published.
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- [7] F. Sarazin et al., to be published.

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