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$A \geq 62$ Superallowed Fermi β-decays and Future Prospects with GRIFFIN RYAN DUNLOP, Univ of Guelph, THE GRIFFIN COLLABORATION — Superallowed Fermi β decays of $A \geq 62$ nuclei involve relatively large nucleus dependent isospin-symmetry-breaking corrections. The magnitudes of these corrections are of great interest, and the $A \geq 62$ decays provide a demanding test of theoretical models. Branching ratio measurements for these decays involve a unique challenge as they have large Q_{EC}, and hence a high density of available states in the daughter nucleus, resulting in the Pandemonium effect in which weak feeding is distributed over a large number of states and is difficult to observe. Therefore, high-efficiency detectors are of paramount importance in determining the branching ratio for these decays. The 8π spectrometer at TRIUMF's Isotope Separator and Accelerator (ISAC), has been used to establish high-precision branching ratios for ^{62}Ga and ^{74}Rb. The newly commissioned GRIFFIN spectrometer at ISAC provides an efficiency 17 times higher than the 8π for 1 MeV γ-rays, and larger gains at higher energies which are of particular importance in resolving the Pandemonium effect. The recent branching ratio measurement for the superallowed Fermi β-decay of ^{74}Rb will be discussed, as well as the importance of GRIFFIN for future superallowed β decay studies at ISAC.

Ryan Dunlop
Univ of Guelph

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