

Abstract Submitted
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Beta Decay of $^{80,82}\text{Ga}$ with GRIFFIN and Shape Coexistence in $^{80,82}\text{Ge}$ AIMEE BELL, CORINA ANDREOIU, ISALIAH DJIANTO, FATIMA GARCIA, MELANIE GASCOINE, KEVIN ORTNER, KURTIS RAYMOND, KENNETH WHITMORE, JONATHAN WILLIAMS, Simon Fraser University, GRIFFIN COLLABORATION — Shape coexistence in atomic nuclei, the existence of structures with different degrees of deformation in a narrow energy range, is an exciting phenomenon present across the chart of nuclides. In our experiment, we searched for evidence of shape coexistence in ^{80}Ge and ^{82}Ge by investigating their respective intruder 0_2^+ states. The experiment was performed at the ISAC-TRIUMF facility where ^{80}Ge and ^{82}Ge isotopes were formed from the β -decay of their parent isotopes, ^{80}Ga and ^{82}Ga , respectively. The two Ga beams were produced by the ISOL technique using a 480 MeV proton beam with a $10\ \mu\text{A}$ current colliding with a UC_x target. A specialized ion source was used to suppress Rb contamination. The β -decay was measured using the GRIFFIN spectrometer which was equipped with 15 HPGe detectors for γ -ray detection, a ZDS plastic scintillator for β -tagging, the PACES array which has 5 Si(Li) detectors for conversion electron spectroscopy and 8 LaBr_3 scintillators for fast timing measurements of nuclear levels. Using this array, correlated γ - γ , γ -electron and electron-electron data have been acquired simultaneously, providing a detailed level scheme for ^{80}Ge . Preliminary results will be presented.

Aimee Bell
Simon Fraser University

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