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A High-Statistics Measurement of the Beta Decay of 46K with the GRIFFIN Spectrometer JENNIFER PORE, Simon Fraser University, J.K. SMITH, TRIUMF, C. ANDREOIU, Simon Fraser University, P.C. BENDER, Michigan State University, R. BRAID, Colorado School of Mines, G.C. BALL, TRIUMF, D.S. CROSS, Simon Fraser University, R. DUNLOP, University of Guelph, A.B. GARNSWORTHY, G. HACKMAN, TRIUMF, K. KUHN, Colorado School of Mines, P. KUNZ, TRIUMF, A.T. LAFFOLEY, University of Guelph, W. MOORE, Colorado School of Mines, M. MOUKADDAM, TRIUMF, E.E. PETERS, University of Kentucky, C.E. SVENSSON, University of Guelph, S. WILLIAMS, Michigan State University, S.W. YATES, University of Kentucky, GRIFFIN COLLABORATION — The neutron-rich calcium isotopes are currently a frontier for modern ab-initio calculations based on NN and 3N forces. Detailed experimental data from these nuclei is necessary for a comprehensive understanding of the region. Many excited states in ^{46}Ca have been identified by various reaction mechanisms, most notably from (p, p') and (p, t) reactions, but many spins are only tentatively assigned or not measured. A high-statistics data set of the ^{46}K decay into low-lying levels of ^{46}Ca was taken with the new GRIFFIN spectrometer located at TRIUMF-ISAC. The level scheme of ^{46}Ca has been greatly expanded to include 160 new gamma-ray transitions and 12 new excited states. Angular correlations between cascading gamma rays have been investigated to obtain information about the spins of the excited states. An overview of the experiment and a discussion of the results will be presented.

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