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Detailed Spectroscopy of 46Ca with the GRIFFIN Spectrometer JENNIFER PORE, Simon Fraser University, GRIFFIN COLLABORATION COL-LABORATION — The neutron-rich calcium isotopes are currently a new 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 ⁴⁶Ca have been previously identified by various reaction mechanisms, most notably from (p, p') and (p, t) reactions, but many spins are only tentatively assigned or not measured and very few gamma-ray transitions have been placed in the level scheme. A high-statistics data set of the ⁴⁶K decay into low-lying levels of ⁴⁶Ca was taken with the new GRIFFIN spectrometer located at TRIUMF-ISAC. The level scheme of ⁴⁶Ca 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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