

Abstract Submitted  
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**A New Measurement of the Strength of the Superallowed Fermi Branch in the Beta Decay of  $^{10}\text{C}$  with GAMMASPHERE<sup>1</sup>** B.K. FUJIKAWA, T.I. BANKS, S.J. FREEDMAN, P.A. VETTER, W.T. WINTER, Physics Department, University of California, Berkeley and the Lawrence Berkeley National Laboratory, S.J. ASZTALOS, J.T. BURKE, Lawrence Livermore National Laboratory, J.P. GREENE, N.D. SCIELZO, Argonne National Laboratory — We report a new measurement of the strength of the superallowed  $0^+ \rightarrow 0^+$  transition in the  $\beta$ -decay of  $^{10}\text{C}$ . The experiment was done at the LBNL 88-inch cyclotron using eighty-three GAMMASPHERE germanium detectors. This measurement is similar to an earlier experiment performed at GAMMASPHERE but with a significantly higher statistical precision. Precise knowledge of this branching ratio is necessary to compute the superallowed Fermi  $ft$ -value which in turn gives the weak vector coupling constant and the u to d element of the Cabibbo-Kobayashi-Maskawa quark mixing matrix.

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