

Abstract Submitted
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Nab Experiment RYAN WHITEHEAD, University of Tennessee, Knoxville, NAB COLLABORATION — The Nab experiment proposes to precisely measure the electron-neutrino angular correlation parameter, a , as well as the Fierz interference term, b , within the triple differential equation that describes neutron beta decay. The experiment will be performed using the Fundamental Neutron Physics Beamline at the SNA in ORNL, using a new electromagnetic field spectrometer and detector design. The parameter a , is expected to be measured with an accuracy of 10^{-3} , and will provide a measurement of λ , the ratio of axial-vector to vector coupling constants. The measurement of b is also the first to be done with neutron decay, and will provide an independent limit on the tensor weak coupling. The experimental method will be presented and prototype analysis algorithms discussed.

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