

Abstract Submitted
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Determining a Limit on the Nab Timing Systematic¹ AARON SPROW, University of Kentucky, NAB COLLABORATION — Weak decay angular correlations such as that of the electron and neutrino from neutron decay can be used in precise tests of the Standard Model. The Nab experiment at the Spallation Neutron Source will determine the electron-neutrino correlation coefficient, a , to a fractional uncertainty of 1×10^{-3} by considering the proton spectra for a fixed electron energy. Each proton energy will be determined via a time-of-flight measurement relative to the fast arrival of the coincident electron. Parametric studies show that a timing systematic of $\delta t_{pe} = 300$ ps can saturate the Nab error budget. Presented in this talk will be a discussion of the simulation and experimental efforts designed to understand the timing systematic, and their results.

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