

Abstract Submitted
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The Nab Spectrometer, Precision Field Mapping, and Associated Systematic Effects JASON FRY, University of Virginia, NAB COLLABORATION — The Nab experiment will make precision measurements of a , the e - ν correlation parameter, and b , the Fierz interference term, in neutron beta decay, aiming to deliver an independent determination of the ratio $\lambda = G_A/G_V$ to sensitively test CKM unitarity. Nab utilizes a novel, long asymmetric spectrometer to measure the proton TOF and electron energy. We extract a from the slope of the measured TOF distribution for different electron energies. A reliable relation of the measured proton TOF to a requires detailed knowledge of the effective proton pathlength, which in turn imposes further requirements on the precision of the magnetic fields in the Nab spectrometer. The Nab spectrometer, magnetometry, and associated systematics will be discussed.

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