Precision Neutron Decay Studies with the Nab and UCNB Experiments

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AARON SPROW, University of Kentucky, NAB COLLABORATION, UCNB COLLABORATION — Precision neutron decay correlation experiments are a sensitive means to study the standard model and probe for beyond the standard model physics. Nab and UCNB are two such experiments that will measure the neutrino-electron correlation term, a, and the neutrino asymmetry, B, respectively. Thick, highly-segmented silicon detectors will be used to directly measure the proton and electron from each decay event in coincidence, leading to the extraction of these angular correlations. Preliminary work to understand the systematic uncertainties associated with these experiments, as well as the early analysis of data taken from the 2015-2016 beam time at Los Alamos National Laboratory will be presented.