

Abstract Submitted  
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**UCNB and Nab Detector Development**<sup>1</sup> BRYAN ZECK, Los Alamos Natl Lab, UCNB COLLABORATION, NAB COLLABORATION — The UCNB and Nab experiments are designed to measure angular correlations in neutron beta decay via the detection of the decay beta and recoil protons in coincidence. UCNB uses polarized ultracold neutrons (UCN) stored in a material trap to measure angular correlations between the neutron spin and the electron and proton momenta, characterized by the parameter  $B$ , as well as other angular correlations in polarized neutron decay. Nab is designed to measure the correlation of electron momentum to neutrino momentum, characterized by the parameter  $a$ , and the Fierz interference term, characterized by the parameter  $b$ , using a beam of unpolarized cold neutrons. These experiments require a very thin dead layer and a strong electrical field to detect protons, and a thick detector with fast timing to determine the electron energy. Both experiments will employ a large area pixelated thick silicon detector developed at the UCN facility at the Los Alamos Neutron Science Center (LANSCE) as part of a combined effort to completely characterize the detector and develop the electronic amplification system. We will present preliminary results from the 2013-2014 UCNB data run, as well as the results of development of pogo-pin style connectors to be used in the Nab apparatus.

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