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## UCNA: A High Precision Measurement of the Axial Form Factor of the Nucleon using Ultracold Neutrons

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UCNA: A High Precision Measurement of the Axial Form Factor of the Nucleon using Ultracold Neutrons

The UCNA experiment has produced a 1.4% measurement of the beta-asymmetry in neutron decay using polarized ultracold neutrons, yielding a high precision value for the axial coupling constant,  $g_A/g_V$ , for the charged weak interaction of the nucleon. UCNA is situated at the spallation solid deuterium UCN source at Los Alamos National Lab and is the first experiment to utilize ultracold neutrons for an angular correlation measurement in neutron decay. Ultracold neutrons offer significant advantages for the polarization and neutron-generated background systematic uncertainties in the measurement. We report on the results of our 2008-2009 data acquisition run, the current status of the experiment, and future plans for other experiments using the UCNA spectrometer.

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