

Abstract Submitted  
for the APR15 Meeting of  
The American Physical Society

**Analysis of the aCORN NG-6 Dataset**<sup>1</sup> MICHAEL MENDENHALL,  
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The aCORN experiment is designed to measure the angular correlation “ $a$ ” between  
electron and neutrino momenta in free neutron decay. Measurement of the  $a$  correla-  
tion constrains the Standard Model weak interaction coupling constants ratio  $g_A/g_V$ ,  
in a complementary manner to the current best constraints which come from the “ $A$ ”  
polarized neutron beta decay asymmetry. Along with pinning down Standard Model  
parameters, comparison between high-precision measurements of multiple neutron  
decay observables probes Beyond-Standard-Model interactions. aCORN collected  
data over the previous two years on the NG-6 cold neutron beamline at the NIST  
Center for Neutron Research. aCORN has since re-located to the new, higher-flux  
NG-C beamline. This talk describes the present status of analysis of the aCORN  
NG-6 dataset, outlining the main systematics and corrections for the measurement.

<sup>1</sup>Work supported by NSF, NIST, and DOE Office of Science.

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Date submitted: 09 Jan 2015

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