

Abstract Submitted  
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**Measurement of the Parity-Violating directional Gamma-ray Asymmetry in Polarized Neutron Capture on  $^{35}\text{Cl}$**  NADIA FOMIN, Los Alamos National Laboratory, NPDGAMMA COLLABORATION COLLABORATION — The NPDGamma experiment aims to measure the parity-odd correlation between the neutron spin and the direction of the emitted photon in neutron-proton capture. A parity violating asymmetry (to be measured to  $10^{-8}$ ) from this process can be directly related to the strength of the hadronic weak interaction between nucleons. As part of the commissioning runs on the Fundamental Neutron Physics beamline at the Spallation Neutron Source at ORNL, the gamma-ray asymmetry from the parity-violating capture of cold neutrons on  $^{35}\text{Cl}$  was measured, primarily to check for systematic effects and false asymmetries. The current precision from existing world measurements on this asymmetry is at the level of  $10^{-6}$  and we believe we can improve it. The analysis methodology as well as preliminary results will be presented.

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