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Parity-Violating Gamma-ray Asymmetry in Polarized Neutron Capture on 35 Cl ELISE MARTIN, University of Kentucky, NPDGAMMA COL-LABORATION — As part of the commissioning of the NPDGamma experiment at the Fundamental Neutron Beamline at the Spallation Neutron Source at Oak Ridge National Lab, we measured the gamma-ray asymmetry from the parity-violating interaction of polarized cold neutron capture on chlorine. Previous measurements result in a chlorine asymmetry on the order of 10^{-5} , with a precision of 10^{-6} . We expect to improve the precision of this value. For the NPDGamma experiment we will measure the gamma-ray asymmetry of hydrogen. Since the asymmetry of chlorine is two orders of magnitude larger than the predicted hydrogen asymmetry, we gain insight into the systematic effects and statistical error introduced by our experimental apparatus. The chlorine measurement, data, and preliminary results will be presented.

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