Analysis and Preliminary Results of The NPDGamma Experiment

JASON FRY, Indiana University, NPDGAMMA COLLABORATION — The NPDGamma Experiment measures the parity violating gamma asymmetry from polarized neutrons captured on protons at the Spallation Neutron Source at ORNL. The parity violating asymmetry $A_\gamma$ between the neutron spin and the photon momentum is proportional to the $\Delta I = 1$ long range weak meson coupling $h^1_\rho$ between nucleons in the hadronic weak interaction. Liquid para-hydrogen production data has been taken since May 2012 and will continue in 2014 to measure $A_\gamma$ to a precision of $1 \times 10^{-8}$. Various aspects of the experiment, preliminary results, and plans to complete NPDGamma in 2014 will be discussed.