

Abstract Submitted
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Current Status of the NPDGamma Experiment MARK MC-CREA, University of Manitoba, THE NPDGAMMA COLLABORATION — The NPDGamma experiment aims to measure the parity violating asymmetry in the direction of gamma ray emission from polarized cold neutrons capturing on an unpolarized proton target. The goal is to measure this asymmetry with an accuracy of 10^{-8} to allow comparison to theoretical predictions of the strength of the hadronic weak interaction between nucleons. A liquid para-hydrogen proton target is used to capture the polarized neutron beam. The gamma ray emission direction is measured using an array of 48 CsI(Th) detectors with a 3π acceptance angle. The neutron spin direction is reversed in a repeating eight step sequence chosen to control for time dependent systematic effects during data taking. NPDGamma has completed commissioning and is currently taking hydrogen data in the Fundamental Neutron Physics Beamline at the Spallation Neutron Source.

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