

Abstract Submitted
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The NPDGamma Experiment; Data and Preliminary Results from the LANSCE phase MIKAYEL DABAGHYAN, University of New Hampshire, NPDGAMMA COLLABORATION — The NPDGamma experiment is measuring the directional parity violating asymmetry in the emission of gamma rays from the capture of cold neutrons on protons. The asymmetry can be related in a straightforward way to effective couplings within an appropriate NN weak interaction theory, such as chiral perturbation based effective field theories. Since this is a measurement within a two body system, the observables are calculable without uncertainties from few to many body (large nuclei) effects. The experiment consists of two phases. The first one, at the Los Alamos Neutron Science Center (LANSCE), has just been completed, providing a measurement of the asymmetry to an accuracy at the 10^{-7} level. The second phase of the experiment will commence at the Spallation Neutron Source at Oak Ridge, where it is currently being reassembled, to continue the measurement to an accuracy at the 10^{-8} level. On behalf of the NPDGamma collaboration, I will present a brief overview of the LANSCE phase of the experiment, including the layout and a report on the data analysis and some preliminary results.

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