

Abstract Submitted
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Evaluation **of**
Systematic Effects for the NPDGamma Experiment¹ WILLIAM M. SNOW,
Indiana University/IUCF, NPDGAMMA COLLABORATION — The NPDGamma
experiment proposes to search for the parity-odd correlation between the neutron
polarization and the direction of gamma emission in polarized neutron-proton cap-
ture with a sensitivity at the level of 10^{-8} for the amplitude of the asymmetry. An
extensive set of systematic effects could contaminate the asymmetry if not properly
suppressed. In the course of several measurements conducted on FP12 at LANSCE,
the NPDGamma collaboration has placed upper bounds on some systematic effects,
has demonstrated methods of discovering other systematic effects in a time short
compared to the running time required to achieve the statistical accuracy goal, and
has verified that yet other classes of possible systematic effects are adequately sup-
pressed by the design and properties of the apparatus. In this talk we will present
an extensive list of possible systematic effects and show our current upper bounds
on their size.

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