

Abstract Submitted
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The NPDGamma Motion System for Detector Array Alignment

CHRISTOPHER CRAWFORD, University of Tennessee, NPDGAMMA COLLABORATION — One of the major systematic uncertainties of the NPDGamma experiment is the Mott-Schwinger effect (the electromagnetic spin-orbit interaction between the neutron magnetic moment and the nuclear charge). It is a parity conserving asymmetry of the same order of magnitude as the parity violating asymmetry being measured. The two asymmetries can be separated since they are 90 degrees out of phase in the azimuthal angle with respect to the neutron beam. A method of measuring the effective detector alignment to the required precision for this separation will be discussed along with preliminary results.

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