

Abstract Submitted
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A Method to Normalize the NPDGamma Data FORREST SIMMONS, University of Kentucky, NPDGAMMA COLLABORATION — The NPDGamma Experiment measures the parity-violating asymmetry in the $\vec{n} + p \rightarrow d + \gamma$ reaction. In the measurement, polarized cold neutrons interact with liquid parahydrogen target and the spatial asymmetry of the gamma-rays is measured. The neutrons are produced in pulses by the Spallation Neutron Source, where 1 GeV proton pulses are interacting with circulating liquid mercury target producing neutrons that then are moderated and guided to experiments. The delivered proton beam intensity per pulse varies producing varying neutron fluxes in the experiment. The signal from the NPDGamma detector needs to be normalized to remove the beam intensity fluctuations in the measurement. There are two ways to do this, either by measuring the neutron flux out from the neutron guide or by measuring the flux of protons delivered to the mercury spallation target. I will present a method of reading the proton current for each proton pulse into a data file, which can then be used for the normalization.

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