Update of the NPDGamma Experiment at the Fundamental Neutron Physics Beamline at the Spallation Neutron Source

SERPIL KUCUKER DOGAN, University of Tennessee, NPDGAMMA COLLABORATION —

The NPDGamma experiment, which measures parity-violating directional gamma asymmetry in neutron-proton capture, is running at the FNPB at SNS. In the experiment intense polarized low-energy neutron beam interacts with liquid para-hydrogen target, gamma rays from the capture reaction is detected by 48 CsI(Tl) detectors with the $3\pi$ acceptance angle. The experiment aims to measure the asymmetry with accuracy of $10^{-8}$ which requires total of xyz h of beam. We describe the experiment and talk about the status of the data taking.

Serpil Kucuker Dogan
University of Tennessee

Date submitted: 06 Jan 2012

Electronic form version 1.4