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**Neutron Polarization Measurements with a  $^3\text{He}$  Spin Filter for the NPDGamma Experiment** MATTHEW MUSGRAVE, University of Tennessee, NPDGAMMA COLLABORATION — The Fundamental Neutron Physics Beamline (FNBP) at the Spallation Neutron Source (SNS) provides a pulsed beam of polarized cold neutrons for the NPDGamma experiment which intends to measure the parity violating asymmetry in the emitted gamma rays from the capture of polarized neutrons on protons. The neutrons are polarized by a multi-channel super mirror polarizer, and the polarization can be flipped with an RF spin rotator. The accuracy of the NPDGamma experiment and various commissioning experiments is dependent on the polarization of the neutron beam and the efficiency of the RF spin rotator. These parameters are measured with a polarized  $^3\text{He}$  spin filter at multiple points in the beam cross section and with multiple  $^3\text{He}$  polarizations. The analysis methods, background effects, and preliminary results will be discussed.

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