**Precision Neutron Polarimetry** MONISHA SHARMA, University of Michigan Ann Arbor, L BARRON-PALOS, Universidad Nacional Autonoma de Mexico, J.D. BOWMAN, ORNL, T.E. CHUPP, University of Michigan Ann Arbor, C. CRAWFORD, University of Kentucky, A. DANAGOULIAN, A. KLEIN, LANL, S.I. PENTTILA, ORNL, A.F SALAS-BACCI, W.S. WILBURN, LANL — Proposed PANDA and abBA experiments aim to measure the correlation coefficients in the polarized neutron beta decay at the SNS. The goal of these experiments is 0.1% measurement which will require neutron polarimetry at 0.1% level. The FnPB neutron beam will be polarized either using a $^3$He spin filter or a supermirror polarizer and the neutron polarization will be measured using a $^3$He spin filter. Experiment to establish the accuracy to which neutron polarization can be determined using $^3$He spin filters was performed at Los Alamos National Laboratory in Summer 2007 and the analysis is in progress. The details of the experiment and the results will be presented.