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Analysis of systematic errors in the NOPTREX Experiment. IVAN NOVIKOV, Western Kentucky University, CHRISTOPHER CRAWFORD, HEJER DHAHRI, University of Kentucky, WILLIAM MICHAEL SNOW, University of Indiana — The Neutron Optics Parity and Time Reversal EXperiment (NOPTREX) will search for possible parity (P) and time (T) reversal invariance violating effects in propagation of polarized neutrons through a polarized target. In the proposed experiment polarization of an initially unpolarized neutron beam (P) and the asymmetry of initially polarized neutron beam (A) in propagation through a polarized target are measured. The difference between measured polarization and asymmetry would indicate the presence of PT-violating interaction. In this talk, we present analysis of various systematic uncertainties that can arise from various types of deviations from the idealized conditions. *This material is based upon work supported by the U.S. NSF under award OIA-1355438 and the U.S. Department of Energy, Office of Science, Office of Nuclear Physics, under Award Number DE- SC0014622.

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