Abstract Submitted
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Sensitivity of The NOPTREX experiment to Axion-like Particles[1] WILLIAM SNOW, Indiana Univ - Bloomington, NOPTREX COLLABORATION — The NOPTREX collaboration proposes to conduct searches for parity-odd and time-reversal-odd neutron-nucleus interactions on certain p-wave resonances in heavy nuclei where symmetry-breaking amplitudes are known to be amplified by several orders of magnitude [1]. A true null test of T is possible for this type of forward transmission polarized neutron optical observable [2]. Axion-like particles (ALPs) appear in several extensions of the Standard Model and can generate a P-odd and T-odd neutron-nucleus interaction. We compare the sensitivity of NOPTREX and electric dipole moment measurements to ALPs, which are not connected to the usual Peccei-Quinn axions. [1] V. P. Gudkov, Phys. Rep. 212, 77 (1992). [2] J. D. Bowman and V. P. Gudkov, Phys. Rev. C 90, 065503 (2014).

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