

Abstract Submitted  
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**A Search for Exotic Spin-Dependent Interactions of the Neutron using Neutron Spin Rotation** CHRIS HADDOCK, Indiana University, NSR COLLABORATION<sup>1</sup> — Many theories beyond the Standard Model lead at low energy to spin-dependent, weakly-coupled interactions of mesoscopic range. Laboratory constraints on such interactions are quite poor. We describe an experiment in progress at the LANSCE spallation neutron source at Los Alamos to search for exotic axial couplings of neutrons to matter from light vector boson exchange. The experiment makes use of a slow neutron polarimeter and a target with an oscillating mass density.

<sup>1</sup>Neutron Spin Rotation

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