

Abstract Submitted
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A Novel Neutron Polarimeter for the E12-17-004 Experiment¹

THIR GAUTAM, Hampton University, E12-17-004 (GEN-RECOIL) COLLABORATION — A novel neutron polarimeter design has been conceived for the E12-17-004 experiment prepared for the Super-Bigbite program at JLab to measure the neutron electric-to-magnetic form factor ratio via neutron recoil polarization in quasielastic electron-deuteron scattering. Three analyzing processes are pursued: np elastic scattering with detection of small-angle neutrons and tracking of large-angle protons, as well as charge-exchange np scattering with tracking of forward-angle protons. The concept and layout of the experiment and expected performance of the polarimeter is presented.

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