

Abstract Submitted
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Status of the SBS Neutron Form Factor Experiment Via Recoil Polarization¹ THIR NARAYAN GAUTAM, MALINGA RATHNAYAKE, MICHAEL KOHL, Hampton University, SBS 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. A large set of Gas Electron Multiplier (GEM) detectors is being commissioned based on elastic and charge-exchange recoil proton detection. A detailed Geant4 simulation of the experiment combined with a digitization package to generate the detector level pseudo data similar to what is expected in the actual experiments is being developed. This talk will report on the GEM commissioning activities as well as the status of simulation digitization.

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