

Abstract Submitted  
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**Measurement of the proton electric to magnetic form factor ratio with polarized target at high momentum transfer**<sup>1</sup> ANUSHA LIYANAGE, Hampton University, SANE COLLABORATION — Experiment E07-003 (SANE, Spin Asymmetries of the Nucleon Experiment) has been carried out in Hall C at Jefferson Lab to study the proton spin structure functions with a dynamically polarized ammonia target and longitudinally polarized electron beam. Scattered electrons were detected by the Big Electron Telescope Array (BETA). By detecting elastically scattered protons in the High Momentum Spectrometer (HMS) in coincidence with the electrons in BETA, inclusive and elastic measurements were carried out in parallel. The elastic double spin asymmetry allows to extract the proton electric to magnetic form factor ratio at high momentum transfer,  $Q^2 = 5.75 \text{ (GeV/c)}^2$ . The measurement will verify the falling of the proton form factor ratio with increasing momentum transfer observed in previous polarization transfer measurements, with a different measurement technique and systematic uncertainties uncorrelated to those of the recoil polarization measurements. Details and status of the analysis will be presented.

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