

Abstract Submitted
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Commissioning and Characterization of the GEM Based Proton Polarimeter Trackers in the Super Bigbite Spectrometer in JLAB¹ ANURUDDHA RATHNAYAKE, Univ of Virginia, SBS COLLABORATION² — The electromagnetic form factors of the nucleon are essential for our understanding of the structure of the nucleon. Precision measurement of nucleon form factors is an important part of the Jefferson Lab experimental program. The 12 *GeV* beam upgrade of the Jefferson lab accelerator and the newly designed Super BigBite Spectrometer make possible a new generation of experiments to measure nucleon form factors with high precision at high Q^2 values to over 10 GeV^2/c^2 . The concept of the Super BigBite Spectrometer, which provides a large solid angle and the capability to operate at high luminosity, relies on Gas Electron Multiplier (GEM) detector based particle trackers. The SBS GEM chambers are expected to provide a good position resolution of $\sim 70 \mu m$, while operating in at high rate conditions up to 1 MHz/cm^2 . A set of 44 GEM detector modules, each with an active area of 60 x 50 cm^2 , has been built in the GEM detector lab at UVa for the proton polarimeter trackers of SBS. This talk will report on the commissioning activities of SBS polarimeter GEM tracker layers at the Jefferson lab and plans for their use in SBS form factor experiments.

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