

Abstract Submitted  
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**Large acceptance magnetic spectrometer for the 12 GeV<sup>2</sup> GEp experiment** EVARISTO CISBANI, INFN Rome and Italian National Institute of Health, SBS COLLABORATION<sup>1</sup> — GEp5 is the latest of a series of successful JLab experiments that have measured a linear decrease of the electromagnetic proton form factor ratio  $G_E/G_M$  with  $Q^2$ , changing our view of the mechanism of the electron scattering. GEp5 will extend the previous  $G_E/G_M$  measurements to higher  $Q^2$  where a possible deviations from linearity could be expected; data can be compared with expectations from perturbative QCD and can give new hints on the role of quark orbital angular momentum. To compensate for the large drop of the elastic cross section with  $Q^2$ , GEp5 needs to run at the highest beam polarization and luminosity, with large acceptance detectors and a high efficiency proton polarimeter. These requirements are fulfilled by the development of a new liquid hydrogen target and the new Super Bigbite Spectrometer (SBS). SBS use a conventional setup with state of the art detectors: an existing dipole magnet (field integral  $\leq 2$  Tm), properly adapted to reach forward scattering angles; large Gaseous Electron Multiplier (GEM) chambers used as trackers for both the primary proton and the scattered secondary in the polarimeter. A new shashlik calorimeter with high segmentation likely complete the detector setup. Details will be presented at the meeting.

<sup>1</sup>The Super Bigbite Spectrometer Collaboration at JLab

Evaristo Cisbani  
INFN Rome and Italian National Institute of Health

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