Abstract Submitted
for the APR18 Meeting of
The American Physical Society

GEM detector as an active sieve for the super high momentum spectrometer in Hall-C at the Jefferson Lab MD LATIFUL KABIR, Mississippi State Univ, HALL-C AT JLAB COLLABORATION — The Super High Momentum Spectrometer (SHMS), designed to perform high resolution and high accuracy nuclear physics experiments, was built as the major Hall-C component of the 12-GeV upgrade project and has already started its operation early this year. In order to reach forward scattering angles of 5.5^0 and to increase the solid angle of the spectrometer, the SHMS has a 3^0 horizontally-bending superconducting dipole magnet as its first magnetic element. Because the SHMS has both horizontal bend and vertical bend, in addition to the passive sieve, an active sieve collimator is required for the optics calibration and understanding the magnets. I will talk about how a Gas Electron Multiplier (GEM) detector and associated readout electronics are used to fulfill this requirement.

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Date submitted: 18 Jan 2018 Electronic form version 1.4