Abstract Submitted
for the APR20 Meeting of
The American Physical Society

A Novel Set of Gas Electron Multiplier Detectors[1] SAHARA JESMIN MOHAMMED PREM NAZEER, MICHAEL KOHL, TANVI PATEL, ISHARA FERNANDO, Hampton Univ — A set of Gas Electron Multiplier (GEM) detectors has been constructed using a novel GEM construction technique where all GEM layers are stretched and assembled mechanically within a double frame. The detectors are optimized for low material budget. The readout is based on APVs and MPDs. The key features allow them to be used flexibly in high-rate environments for low-energy charged particle tracking applications with high resolution. The detectors were originally designed for the DarkLight experiment, while using them in MUSE and ULQ2 has been considered, too. The construction and present status of the commissioning of the GEM detectors will be discussed.

[1]This work has been supported by NSF grants PHY-1505934, 1436680, 1812402, HRD-1649909, and a DOE SCGSR Fellowship.

Sahara Jesmin Mohammed Prem Nazeer
Hampton Univ

Date submitted: 10 Jan 2020 Electronic form version 1.4