Abstract Submitted
for the DNP17 Meeting of
The American Physical Society

Performance of the STAR Event Plane Detector[1] JUSTIN EWIGLEBEN, Lehigh University, JUSTIN EWIGLEBEN COLLABORATION — The Beam Energy Scan (BES) program at the Relativistic Heavy-Ion Collider has shown hints of a critical point and first order phase transition at the BES energies. Key measurements for locating the critical point and determining the first order phase transition are limited by poor event plane resolution, limited statistics and a TPC-only centrality determination. A new event plane and collision centrality detector (EPD) is planned to replace the existing detector, the Beam-Beam Counter (BBC), with higher granularity and acceptance. The design of the EPD consists of two scintillator discs at z= $\pm$ 3.75m from the center of STAR, covering $2.2 < \eta < 5.1$. One quarter of a single disc was installed in STAR for the 2017 run for commissioning. In this talk we will discuss the detector performance during this commissioning run in both proton-proton collisions at $\sqrt{s} = 510$ GeV and Au-Au collisions at $\sqrt{s_{NN}} = 54.4$ GeV.

[1]NSF Grant 1614474

Justin Ewigleben
Lehigh University

Date submitted: 30 Jun 2017 Electronic form version 1.4