

Abstract Submitted
for the DNP16 Meeting of
The American Physical Society

Rapidity Density Distributions of Identified Protons from the RHIC Beam Energy Scan at STAR¹ CHRISTOPHER FLORES, University of California, Davis, STAR COLLABORATION — A principle goal of the Beam Energy Scan (BES) at the Relativistic Heavy-Ion Collider is to explore the properties of nuclear matter in temperature and baryon chemical potential (μ_B) phase space. The baryon chemical potential is sensitive to the degree of stopping that occurs during the interaction of two heavy ions. Previous measurements of the transverse mass spectra of protons at mid-rapidity have provided insights into how the μ_B evolves as a function of collision energy. In this analysis we propose to study baryon stopping by investigating the yield of protons in the longitudinal dimension. The transverse mass spectra of protons will be extracted for a broad range of rapidities and for multiple BES collision energies. These spectra will then be used to construct the rapidity density distributions of protons. Finally observed trends as function of collision energy will be discussed.

¹This material is based upon work supported by the National Science Foundation under Grant No. 1404281.

Christopher Flores
University of California, Davis

Date submitted: 01 Jul 2016

Electronic form version 1.4