

Abstract Submitted  
for the DNP16 Meeting of  
The American Physical Society

**The STAR beam energy scan phase II physics and upgrades.**<sup>1</sup>  
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— The second phase of the Beam Energy Scan at RHIC will occur in 2019-2020 and will explore with precision measurements in the part of the QCD phase diagram where baryon densities are high. The program will examine energy regime of interest and turn the trends observed in phase-I into conclusions. This will be discussed in context of some of the key measurements, kurtosis of net-protons that could pinpoint the position of a critical point, measurements of directed flow of baryons vs. energy that might prove a softening of the EOS, and chiral restoration in the di-lepton channel. The measurements will be possible with an order of magnitude better statistics thanks to the electron cooling upgrade of RHIC, and the addition of the iTPC, Event Plane, and endcap TOF upgrades to STAR.

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Date submitted: 01 Jul 2016

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