

# The STAR iTPC Upgrade

DNP 2019  
BES Mini Symposium

Irakli Chakaberia<sup>1,2</sup>

<sup>1</sup> Kent State University

<sup>2</sup> Brookhaven National Laboratory

ichakaberia@bnl.gov

June 19, 2019

## Abstract

Run-19 of the Relativistic Heavy Ion Collider marked the beginning of the Beam Energy Scan phase II (BES-II). The BES-II program has been inspired by the success of the first phase of the beam energy scan (BES-I). The goal of the BES-II is to accumulate a larger data-set to obtain experimental measurements with higher statistical precision and thus turn trends and features found during the BES-I into definitive conclusions and new understanding. With this goal in mind, STAR has undergone several substantial upgrades in preparation for the BES-II. One of the major upgrades is the installation of the new inner TPC sectors (iTPC). The iTPC brings wider pseudorapidity coverage  $|\eta| < 1.5$  and increased reach to lower  $p_T$  down to 60 MeV/ $c$ . In addition, it provides improved  $dE/dx$  and  $p_T$  resolution, and therefore better particle identification capabilities. In this talk I will report the results of the iTPC upgrade and its successful commissioning with the cosmic ray data-taking ahead of the Run-19. I will conclude by showing its status and performance during the low energy Au+Au collisions in the Run-19.