

Abstract Submitted
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HBT Measurements for charged pions in Au+Au collisions at $\sqrt{s_{NN}}=39, 62.4$ and 200 GeV¹ ALEX MWAI, Chemistry, Stony Brook University — We present Hanbury Brown-Twiss interferometry (HBT) measurements for charged pion pairs obtained in Au+Au collisions using the PHENIX detector during the RHIC run-10 Beam Energy Scan for $\sqrt{s_{NN}}=39, 62.4$ and 200 GeV beam energies. This program is designed to search for the QCD critical point using a variety of observables. One such observable is the space-time extent of the emitting source, obtained through HBT measurements. The space-time extent, which is influenced by the source lifetime and its expansion dynamics, is expected to be sensitive to the location of the critical point. PHENIX measurements will be presented and discussed, as well as compared to recent results reported by the ALICE collaboration for $\sqrt{s_{NN}}=2.6$ TeV Pb+Pb collisions at the LHC and other results obtained at RHIC.

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