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**PHENIX Measurement of Azimuthally Sensitive Hanbury Brown-Twiss Interferometry in Au+Au Collisions at  $\sqrt{s_{NN}}=200\text{GeV}$**  JASON NEWBY, Lawrence Livermore National Laboratory, PHENIX COLLABORATION — The initial spatial anisotropy of relativistic heavy-ion collisions with finite impact parameter has proven critical in understanding collision medium properties and system evolution. Nevertheless, our theoretical understanding remains incomplete and present hydrodynamic calculations are unable to simultaneously describe the experimentally observed elliptic flow and HBT radii. The Au+Au collisions recorded by the PHENIX experiment during the RHIC year 4 run provide a high statistics dataset to study observable trends in transverse momentum and collision geometry. We present an azimuthally sensitive measurement of the emitting source using Bose-Einstein correlations of identical charged pions. The excellent PHENIX particle identification provides sensitivity of extracted Bertsch-Pratt parameters across a broad range of pair transverse momentum essential for comprehensive evaluation of hydrodynamic calculations. Finally, we discuss promising experimental measurements of Bose-Einstein correlations with respect to the jet axis now possible at RHIC energies.

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