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Femtoscopy in  $\sqrt{s} = 200 \text{ GeV } p + p$  collisions at RHIC-PHENIX<sup>1</sup> ANDREW GLENN, Lawrence Livermore National Laboratory, PHENIX COLLAB-ORATION — Femtoscopic measurements from two particle interferometry exploit the Hanbury Brown and Twiss effect to provide information about the bulk medium created in heavy-ion collisions. Experiments at the Relativistic Heavy Ion Collider use HBT measurements to study source sizes and emission duration of the strongly interacting Quark Gluon Plasma created in  $\sqrt{s} = 200 \text{ GeV Au} + \text{Au}$  collisions. These HBT measurements show azimuthal sensitivity relative to the reaction plane of noncentral collisions. Future HBT measurements may similarly use a jet axis to define the event-by-event geometry to gain insight into the modification of jets by the QGP, and conversely, the feedback of the jet into the medium. Understanding HBT in systems with significant correlations due to local energy and momentum conservation, such as p+p collisions, will be required to properly perform and interpret such measurements. Comparisons of correlations from minimum bias data to those from a jet region are of particular importance. PHENIX preliminary measurements from the HBT analysis for charged pions from  $\sqrt{s} = 200 \text{ GeV } p + p$  collisions will be presented. The status of 1-D imaging and the analysis of jet selected events will be discussed.

<sup>1</sup>For the PHENIX collaboration

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