

Abstract Submitted  
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**Pion-kaon femtoscopy in 200 GeV collisions in STAR at RHIC**

YAN YANG, IOPP/HIT and OSU, STAR COLLABORATION — Correlations between non-identical particles at low relative momentum in the center of mass encode unique information on the space-time structure of the emitting system [1,2], in particular a space-time offset of one particle species (e.g. kaons) with respect to another (e.g. pions). We present new high-statistics measurements of pion-kaon correlations in 200 GeV in the spherical harmonic representation [3,4]. The analysis benefits greatly from the extended particle-identification capabilities of the recently installed STAR Time of Flight detector. In  $\sqrt{s_{NN}} = 200$  GeV  $Au + Au$  collisions, we observe an asymmetry similar to that reported at lower energies with poorer statistics. Finally, we present a first similar analysis of  $\sqrt{s} = 200$  GeV  $p + p$  collisions.

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Yan Yang  
IOPP/HIT and OSU

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