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**PHENIX Measurement of Charged Kaon Interferometry in Au+Au Collisions at  $\sqrt{s_{NN}} = 200\text{GeV}$**  AKITOMO ENOKIZONO, Lawrence Livermore National Laboratory, PHENIX COLLABORATION — Detailed measurements of the Bose-Einstein correlations (HBT) of charged pions have revealed a fact that at RHIC energies the extents of source size and emission duration of charged pions were unexpectedly small and less changed from AGS energies. One of unresolved problems at RHIC is that such results are hard to be described by hydrodynamics calculations in conjunction with results of the single spectrum and elliptic flow of charged pions. Meanwhile, detailed studies of source sizes and emission durations of different particles are expected to give more insights in the freeze-out dynamics at RHIC. We present a HBT measurement of charged kaons by PHENIX in Au+Au collisions at  $\sqrt{s_{NN}} = 200\text{GeV}$ . A high statistics data set taken during the Year-4 allows us to study the charged kaon source in several pair momentum and centrality regions. Both the recently developed imaging and a traditional HBT analysis schemes are applied to get detailed information of source functions and to compare with those of charged pions. Lastly, we discuss the possibility of measuring the space-time evolution of the source from photon correlations.

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