

Flow, spectra and HBT radii in Heavy-Ion collisions

Thursday 16 July 2009 17:30 (15 minutes)

Recent 3+1D hydrodynamic calculations modeling the expansion of the dense matter created in Heavy-Ion collisions at RHIC energies are presented. Assuming a relatively early start up time of the collective expansion and a hard equation of state, we are able to reproduce particle spectra at different centralities and rapidities, elliptic flow as function pseudorapidity, HBT radii and directed flow as function of pseudorapidity. The quantitative description of all 3 HBT radii caused difficulties for some of the previous calculations. The directed flow at these energies, including its scaling with the size of the colliding system, is described for the first time in a dynamic model.

P. Bozek and I. Wyskiel, Phys. Rev. C 79, 044916 (2009)

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Session Classification: IV. Heavy Ions

Track Classification: Heavy Ions