

Choice of the reference distribution for the Bose-Einstein correlations studies

Monday, 12 June 2017 17:05 (25 minutes)

The choice of the reference sample is a crucial component of the the Bose-Einstein correlations studies, with a great impact on the results obtained. Four reference samples are discussed. The unlike-sign pairs reference sample is affected by decay products of resonances. The momentum vector rotation of one track of the pair by an angle is found not to sufficiently remove correlations present in the signal sample. Reference sample created by the momentum vector inversion of one track of the pair is found to be compatible with one where two tracks of the pair are taken from different events. Possible limitations of these reference samples at high pair transverse momentum are also studied.

List of tracks

Femtoscopy in A+A, p+p , p+A and e+-e- collisions at relativistic, intermediate and low energies

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Session Classification: Femtoscopy and correlation studies in A+A, p+p , p+A and e+-e- collisions at relativistic, intermediate and low energies