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Identified-identified two-particle correlations and quantum number conservation in p-p, p-Pb and Pb-Pb collisions at LHC energies

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Unidentified two-particle correlations are widely pursued at RHIC and LHC to investigate particle production and hadronization mechanisms as well as collective effects. Two-particle correlations with identified trigger and identified associated particles give information on quantum number conservation and the flavour balance during parton fragmentation and hadronization, however their detailed measurement at LHC is just started.

We present a systematic study of two-particle correlations with identified trigger and identified associated particles

at LHC energies with the state of art LHC era Monte Carlo generators. The identified-identified two-particle correlation

studies of bulk particles: charged pions, kaons and protons reveal interesting trigger-hadron dependent splitting of the

associated identified hadron spectra in all collision systems. Furthermore, the identified correlation functions show change in the identified trigger-hadron dependent evolution with transverse momenta compared to unidentified

correlation functions. The source of the splitting effect and their evolution from p-p and p-Pb to Pb-Pb collisions will be discussed.

On behalf of collaboration:

None

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