KRUGER2012 International Workshop on Discovery Physics at the LHC

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Flow with ALICE

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The expansion of the spatially asymmetric dense and hot medium created in heavy-ion collisions causes, through multiple constituent interactions, correlations between the produced particles. Anisotropic flow, apparent in the azimuthal correlations with respect to the collision symmetry planes is a unique observable associated with the thermodynamic properties and the evolution of the created medium. Elliptic flow, together with the higher order flow coefficients and mixed harmonic correlations, can provide insights into the effects of the event-by-event fluctuations of the initial shape of the produced system. In this talk a range of azimuthal correlation measurements in Pb-Pb collisions at \sqrt{s}=2.76 TeV per nucleon pair measured with the ALICE detector at the LHC will be presented as a function of transverse momentum and collision centrality over a wide (pseudo-) rapidity range for various species of identified hadrons. The results will be compared to hydrodynamic model calculations and to measurements at lower energies.

Presentation Type

oral

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Session Classification: Parallel Session II: Heavy Ion Collisions