

Pseudorapidity density and anisotropic flow of charged particles over a wide pseudorapidity range in Pb+Pb collisions with the ALICE experiment at the LHC

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The pseudorapidity density and the anisotropic flow of charged-particles provide fundamental information about global variables and correlations in heavy ion collisions. The pseudorapidity density can be used to characterize the energy density produced in heavy-ion collisions and to test models for particle production. The anisotropic flow provides information about the initial spatial anisotropy of the participant region and can be tied to the internal properties of the hot and dense collision zone, such as the viscosity.

We present measurements over more than 10 units of pseudorapidity allowing for an accurate estimate of the total number of particles produced in these collisions, using a new technique based on displaced vertices at LHC. For both measurements we investigate longitudinal scaling. Under simple but robust transformations we can also derive the rapidity density distribution, and compare to the predictions from the Landau and Bjorken pictures.