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Charged particle multiplicity distribution in Pb-Pb collisions at $\sqrt{s_{\mathrm{NN}}}$ = 5.36 TeV with ALICE

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The multiplicity distribution measures the probability of obtaining a certain number of particles in a given collision and is one of the first observables measured in data at each new collision type and center of mass energy. It is relevant since is one of the fundamental observables to describe the global properties of the interactions and is sensitive to non-linear QCD evolution in the initial state. We will present the multiplicity distribution, P(N_\mathrm{ch}), for Pb-Pb collisions at \sqrt{s_\mathrm{NN}} = 5.36 TeV. The analysis relies on tracks reconstructed with ALICE's upgraded Inner Tracking System (ITS) using new LHC data from Run3 pilot Pb-Pb run. A detailed comparison with predictions from the PYTHIA 8 and EPOS LHC event generators is also presented.

Category

Experiment

Collaboration (if applicable)

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