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Bayesian unfolding of charged particle p_T spectra with ALICE at the LHC

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The study of the Quark-Gluon Plasma created in ultrarelativistic heavy-ion collisions at the CERN-LHC is complemented by reference measurements in proton-lead (p-Pb) and proton-proton (pp) collisions, where the effects of multiple-parton interactions and hadronization beyond independent string fragmentation can be investigated.

In this poster, we present a Bayesian unfolding procedure to reconstruct the correlation between transverse momentum (p_T) spectra of charged particles and the corresponding charged particle multiplicities N_{ch} .

The unfolded spectra are presented in single multiplicity ($\Delta N_{ch} = 1$) bins and are used to derive moments of the p_T distributions.

We illustrate the unfolding procedure of the p_T spectra with MC simulations for pp collisions and compare the resulting $\langle p_T \rangle$ of different systems (pp, p-Pb, Pb-Pb) and collision energies.

Collaboration

ALICE

Content type

Experiment

Centralised submission by Collaboration

Presenter name already specified

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