

## Data-driven particle composition correction of tracking efficiency for charged particles with ALICE

The ALICE experiment at the LHC is designed to investigate the properties of the Quark-Gluon Plasma by studying high energy pp, p-Pb and Pb-Pb collisions. The measurement of the charged particles production and their nuclear modification factor at high transverse momentum can help to shed light on the parton energy loss in the medium. In ALICE, the identification of charged particles is performed by using the Time Projection Chamber and the measurement is possible thanks to an accurate estimate of the tracking efficiency.

In this poster, we show how tracking efficiencies are obtained by means of Monte Carlo simulations based on PYTHIA and HIJING event generators for particle production and GEANT to simulate the detector response. In particular, we focus on the data-driven procedure being performed to re-weight the tracking efficiencies of identified particle that account for the different abundances of the various particle species in Monte Carlo simulations and data.

We present results on the tracking efficiency obtained from this data-driven procedure for the measurement of charged particles, especially in pp, p-Pb and Pb-Pb collisions at  $\sqrt{s_{NN}} = 5.02$  TeV.

### Summary

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**Session Classification:** Poster Session