

Light-flavour hadron production in $\sqrt{s} = 13$ TeV pp collisions as a function of the underlying event activity

Multiple measurements of high-multiplicity pp and p-A collisions at LHC energies have revealed that these small collision systems exhibit some of the quark-gluon plasma features, e.g. collective behaviour and strangeness enhancement, formerly thought to be achievable only in heavy-ion collisions. The dependence on multiplicity is indicative of significant final-state interactions. A proposed method to narrow down the origin of the phenomena is to study the effect of Multi-Parton Interactions (MPIs). Although the MPIs cannot be measured directly, the event observable R_T , quantifying the magnitude of the underlying event, has been suggested as an experimental proxy.

In this presentation, we report on the identified light-flavour hadron transverse momentum spectra as a function of R_T in pp collisions at $\sqrt{s} = 13$ TeV measured with the ALICE detector at the LHC. The results are also compared with MC predictions of theoretical models, for which our measurements have an excellent discriminatory potential.

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