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New results on multiplicity and event shape dependence of particle production in pp collisions

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Event shape observables are important tools to get an insight into the physics behind collective phenomena in high multiplicity pp collisions at LHC energies. They can be used to disentangle the contributions from hard and soft processes to particle production. We report measurements with the ALICE detector at the LHC of the production of inclusive and identified charged particles as a function of charged particle multiplicity and transverse spherocity in pp collisions at $\sqrt{s} = 13$ TeV. The results include the transverse momentum (p_{T}) distributions of pions, kaons and protons as well as the $\langle p_{\mathrm{T}} \rangle$ and particle yield ratios. The results are compared to predictions from QCD inspired event generators such as EPOS-LHC, PYTHIA 6 and PYTHIA 8.

Author: Mr TRIPATHY, Sushanta (Indian Institute of Technology Indore (IN))

Presenter: Mr TRIPATHY, Sushanta (Indian Institute of Technology Indore (IN))

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