2nd International Workshop on QCD Challenges from pp to AA



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Identified hadron production as a function of multiplicity and spherocity in pp collisions at \sqrt{s} = 13 TeV

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To understand the origins of collective-like phenomena observed in pp collisions at LHC energies, underlying mechanisms have to be identified. In this context, event shape observables provide a possible tool to disentangle soft and hard contributions to particle production. We report on a study of the production of pions, kaons and protons as a function of transverse spherocity in high multiplicity pp collisions at $\sqrt{s}=13\text{TeV}$ measured with the ALICE detector. The p_{T} -differential K/ π and p/ π ratios in different spherocity classes are presented. The results are compared to the predictions from PYTHIA 8 event generator. Finally, the evolution of charged particle mean transverse momentum with multiplicity and transverse spherocity is discussed in the context of radial flow or flow-like effects.

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