

Characterizing the particle-emitting source using femtoscopy in pp collisions at ALICE

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The precise knowledge of the size of the source producing primary hadrons and resonances in pp collisions at the LHC can be employed to study the onset of collective phenomena in such systems. Indeed, the multiplicity and transverse momentum dependence of the pion and kaon source sizes, extracted by the femtoscopy analysis, was often interpreted as due to collective effects in heavy-ion collisions. Since in pp collisions at the LHC typical source sizes are about 1 fm, the contribution of strong resonances decays has to be corrected for to determine the characteristics of the particle-emitting source. In this talk we discuss the results obtained in studying baryon-baryon and pion-pion correlations in high multiplicity pp collisions at 13 TeV measured by ALICE. A differential analysis as a function of multiplicity and transverse momentum, combined with a detailed modelling of strong resonances, allows for the extraction of the primaries source size. The results are discussed in the context of the search of a universal source for all species of primary particles produced in pp collisions.

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