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Angular correlations of identified particles in pp collisions

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Angular particle correlations are a powerful tool to study numerous properties of the medium (e.g. collective behaviour, jets, quantum statistics or Coulomb effects, conservation laws, decays of resonances). In this talk, we report measurements of di-hadron correlations with respect to the differences in the azimuth ($\Delta \varphi$) and pseudorapidity ($\Delta \eta$) in pp collisions recorded by the ALICE detector. We focus on revealing details of particle production mechanisms.

Analysis of correlations of identified particles in pp collisions reveal big differences in particle production between baryons and mesons. Such effects have usually been connected to conservation laws in e^+e^- collisions and were thought to be under theoretical control; however, results from hadron collisions are no longer reproduced by the contemporary models implementing those mechanisms (PYTHIA, PHOJET).

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