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Azimuthal correlations of D mesons with charged particles in pp collisions at $\sqrt{s} = 13$ TeV with the ALICE experiment at the LHC

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The ALICE experiment at the Large Hadron Collider (LHC) is dedicated to study the properties of the Quark-Gluon Plasma (QGP), a de-confined partonic state of strongly-interacting matter formed in relativistic heavy-ion collisions. Heavy quarks (charm and beauty), produced by parton-parton hard scatterings in the early stages of such collisions, are effective probes to study the QGP, as they are expected to experience the full evolution of the system formed in the collision.

The azimuthal correlations between heavy-flavour particles and charged particles give insight on the modification of charm-jet properties in nucleus-nucleus collisions and the mechanisms through which heavy quarks in-medium energy-loss takes place. Studies in pp collisions, besides constituting the necessary baseline for nucleus-nucleus measurements, are important for testing expectations from pQCD-inspired Monte Carlo generators. This contribution will include the first study of azimuthal correlations of D mesons with charged particles in pp collisions at $\sqrt{s} = 13$ TeV, the highest available energy, at the LHC, performed with the ALICE apparatus. A comparison with pp collisions results at $\sqrt{s} = 7$ TeV allows studying the energy dependence of the correlation function.

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