Beitrag ID: **75** Typ: **Talk**

First measurements of in-jet fragmentation and correlations of charmed mesons and baryons in pp collisions with ALICE

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Fragmentation functions are one of the key components of the factorisation theorem used to calculate heavy-flavour hadron production cross sections. The non-perturbative nature of fragmentation functions necessitates their constraint through experimental measurements, commonly performed in the clean environments of e^+e^- and ep collisions. However, recent measurements of charm hadron spectra and of the ratios of charmed-hadron abundances in pp collisions have questioned the universality of fragmentation functions between leptonic and hadronic collision systems in the baryon sector. In this talk, we present measurements of differential observables that also consider the surrounding hadronic density in addition to the heavy-flavour hadron itself. These measurements provide additional information to the previously reported baryon-to-meson results and allow to obtain a closer connection to the charm fragmentation functions. We report the fraction of longitudinal momentum carried by D^0 and D_s^+ mesons as well as Λ_c^+ baryons. We also report correlations between heavy-flavour decay electrons and charged particles in pp and p-Pb collisions, as well as azimuthal-angle correlations of Λ_c^+ baryons with charged particles in pp collisions, which provide quantitative access to the angular profile, p_T and multiplicity distributions of the jets produced by the heavy-quark fragmentation.

Experiment/Theory

ALICE

Affiliation

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Sitzung Einordnung: Parallel: Jets and their modification in QCD Matter

Track Klassifizierung: Jets and their modification in QCD matter