Beitrag ID: **201** Typ: **Talk**

Modification of heavy quark hadronization in high-multiplicity collisions

Dienstag, 28. März 2023 17:10 (20 Minuten)

The total rate of heavy quark production can be calculated with perturbative QCD techniques. However, the fraction of heavy quarks that pair with a light quark (forming mesons) versus the fractions combine with two other quarks (baryons) baryons or 3 or more other quarks (exotic states) is sensitive to the nonperturbative hadronization process. LHCb is uniquely well suited to study such effects in the heavy quark sector, down to very low transverse momentum. Here we will present LHCb results on the production rates of Λ_b^0 baryons and B_s^0 mesons relative to B^0 mesons, and D_s^+ relative to D^+ mesons versus multiplicity in pp and pPb collisions. Potential implications for the hadronization mechanism of heavy quarks and our understanding of the factorization of fragmentation functions will be discussed.

Experiment/Theory

LHCb

Affiliation

On behalf of LHCb

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Sitzung Einordnung: Parallel: Heavy Flavours & Quarkonia

Track Klassifizierung: Heavy flavor and quarkonia