

Charged particle and underlying event measurements with the ATLAS detector

Thursday 18 July 2024 08:30 (15 minutes)

In this talk, recent measurements of distributions sensitive to the underlying event, the hadronic activity observed in relationship with the hard scattering in the event, by the ATLAS experiment are presented. Underlying event observables like the average particle multiplicity and the transverse momentum sum are measured for Kaons as Lambda baryons as a function of the leading track-jet and are compared to MC predictions which in general fail to describe the data. In addition, a recent measurement of charged-particle multiplicities in diffractive pp collisions are presented. Events are classified using the ATLAS forward proton tagging. An analysis of the momentum differences between charged hadrons in proton-proton, proton-lead and lead-lead collisions is presented. The difference in the yield of hadron pairs with like-sign and opposite-sign charge is used to extract the spectra of pairs adjacent in colour flow. The measurement is sensitive to the dynamics of hadronization.

Alternate track

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