

DIS2023: XXX International Workshop on Deep-Inelastic Scattering and Related Subjects



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Type: **Parallel talk**

Helix string fragmentation and charged particle measurements with ATLAS

Tuesday, 28 March 2023 18:10 (20 minutes)

Correlations between charged particles provide important insight about the hadronization process. The analysis of the momentum difference between charged hadrons in pp, p-lead, and lead-lead collisions of various energies is performed in order to study the dynamics of hadron formation. The spectra of correlated hadron chains are explored and compared to the predictions based on the quantized fragmentation of a three dimensional QCD helix string. The measurement provides insight into the mismodelling of low transverse momentum production of charged particles observed in ee, pp and heavy ion collisions. If ready, the measurement of charged particle distributions using LHC data collected at 13.6 TeV of centre-of-mass energy will also be shown.

Submitted on behalf of a Collaboration?

Yes

Participate in poster competition?

No

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Session Classification: WG 1

Track Classification: WG1: Structure Functions and Parton Densities