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Study of the transverse momentum distribution of jet constituents in p-Pb collisions at ALICE

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Jet properties are influenced by both perturbative and non-perturbative processes that take place during the jet fragmentation. Transverse momentum distributions in jets provide insight into the gluon radiation patterns in jet fragmentation. At the Tevatron it was found that the distribution of the component of the momentum transverse to the jet axis (j_{T}) of jet constituents agrees well with the Next-to-Modified Leading Log Approximation (NMLLA).

It is also very important to study the j_{T} distribution at the LHC energy range in order to investigate possible modifications induced by cold nuclear matter. The cold nuclear medium produced in the p-Pb collisions could alter the initial state radiation shower evolution and thus the inter- and intra-particle correlations are expected to be broadened.

In this contribution we present the j_{T} spectra of charged jet constituents from the analysis of the fully reconstructed jets in p-Pb collisions at $\sqrt{s_{\mathrm{NN}}} = 5.02$ TeV measured by the ALICE experiment. The jets are reconstructed using anti-k_{T} algorithm from charged particles and clusters in electromagnetic calorimeter. The results of j_{T} distribution will be shown for multiple jet virtuality bins and compared to the existing data from the Tevatron.

On behalf of collaboration:

ALICE

Author: KRAL, Jiri (University of Jyvaskyla (FI))

Presenter: KRAL, Jiri (University of Jyvaskyla (FI))

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