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Dijet probes of the initial state in p+Pb collisions with ATLAS

Dienstag, 28. März 2023 18:15 (2 Stunden)

The measurement of the dijet production cross-section in p+Pb collisions is of great interest to the understanding of initial state effects. The analysis of this channel can provide input to the parameterization of the modification of parton distribution functions (PDFs) in nuclei and to search for the onset of non-linear QCD effects or gluon saturation at low Bjorken-x. In 2016, the ATLAS experiment at the LHC collected 164 nb^{-1} of data from p+Pb collisions at the center-of-mass energy of 8.16 TeV. This poster presents ATLAS preliminary results for the triple-differential inclusive dijet cross-section in p+Pb. The results of this measurement can be used to constrain nuclear PDFs over a broad kinematic range. The events characterized by at least one jet in the forward region are also analyzed as a function of centrality to compare the dijet production in central and peripheral collisions and search for evidence of gluon saturation.

Experiment/Theory

ATLAS

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Track Klassifizierung: Jets and their modification in QCD matter