



Contribution ID: 954

Type: Oral

New constraints on nPDFs using dijets in pPb collisions at 8.16 TeV with CMS

Tuesday 8 April 2025 16:10 (20 minutes)

Measurements of dijet production in heavy ion collisions can be used to probe the nuclear matter. In proton-lead collisions, the normalized average dijet pseudorapidity distributions can be used as a sensitive tool for constraining the nuclear modifications of parton distribution functions (nPDF) at different Q^2 scales and Bjorken- x . In such studies, it is possible to investigate, with a highest precision, the shadowing, anti-shadowing and EMC effects. In this talk, the first measurement of dijet average pseudorapidity measurements in pPb collisions at 8.16 TeV in the widest dijet transverse momentum ranges will be presented with the data samples collected with CMS at the LHC. The measured distributions are compared to pQCD calculations with state-of-art proton and nuclear PDFs.

Category

Experiment

Collaboration (if applicable)

CMS

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Session Classification: Parallel session 22

Track Classification: Initial state of hadronic and electron-ion collisions & nuclear structure