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Centrality and pseudorapidity dependence of $dE_T/d\eta$ in pPb collisions at $\sqrt{s_{NN}} = 5.02$ TeV with CMS

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High energy proton lead collisions provide a unique tool to study the parton distribution function of nuclei at very low Bjorken x . The production of transverse energy at a given η is sensitive to the gluon density in the nucleus, and by scanning over a very wide rapidity and centrality range, it is possible to glean information on the spatial and x dependence of the gluon density. The ratio of $dE_T/d\eta$ at a given centrality range to the most central range for pPb collisions at center of mass energy per nucleon pair = 5.02 TeV is presented. The centrality dependence of this ratio depends strongly upon η and also on the η range used to define centrality. These results are compared to lower energy data and two Monte Carlo simulators, EPOS and AMPT, in order to provide insight into the nuclear wavefunction at low x .

On behalf of collaboration:

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