

LHCb results in proton-nucleus collisions at the LHC

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The production of J/ψ and Y -mesons decaying into dimuon final state is studied at the LHCb experiment, with rapidity $1.5 < y < 4.0$ or $-5.0 < y < -2.5$ and transverse momentum $p_T < 15$ GeV/c, in proton-lead collisions at a proton-nucleon centre-of-mass energy of 5 TeV. The analysis is based on a data sample corresponding to an integrated luminosity of 1.6/nb. The forward-backward production ratio and the nuclear modification factor are determined for J/ψ and $Y(1S)$. Indication of forward backward production asymmetry is observed. There is also an indication of J/ψ and $Y(1S)$ production suppression with respect to proton-proton collisions in forward region and anti-shadowing effect in backward region. Results on vector boson production are also presented.

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