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K, S⁰ AND Λ HADRONS PRODUCTION IN PROTON-PROTON AND PROTON-LEAD COLLISIONS AT 5.02 TEV STUDIED WITH THE LHCb DETECTOR

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Production of strange mesons (KS) and baryons (Λ) have been studied with the LHCb in p-Pb collisions at $\sqrt{s} = 5$ TeV. Cross sections as well as their ratios (Λ -bar/KS, Λ -bar/ Λ) have been measured differentially in transverse momentum between 0.15 and 7.0 GeV/c and rapidity in the ranges $1.5 < y < 4.0$ and $-5 < y < -2.5$. The nuclear modification factors are measured for given transverse momentum and rapidity regions as well. Cross section spectra are compared with theoretical predictions in frame of Hybrid (Hydrodynamics, Coalescence, jet Fragmentation) and Parton-Hadron-String Dynamics (PHDS) models.

Authors: OKHRIMENKO, Oleksandr ((Institute for Nuclear Research, National Academy of Sciences of Ukraine(KINR)); K, S (KINR); PUGATCH, Valery (Institute for Nuclear Research, National Academy of Sciences of Ukraine(KINR))

Presenter: OKHRIMENKO, Oleksandr ((Institute for Nuclear Research, National Academy of Sciences of Ukraine(KINR))

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