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Transverse momentum distributions of baryons at LHC-energies.

Transverse momentum spectra of protons and anti-protons from RHIC and LHC experiments (PHENIX ,ALICE, CMS) are considered. The data are fitted with the universal formula that includes the energy dependent slope as the main parameter. The estimated slopes are changing with energy. The dependence of average transverse momenta $\langle p_T \rangle$ on \sqrt{s} shows the behavior $s^{0.05}$, which is similar to the growing that was observed previously at the study for Λ -baryons. Available data on Λ_c production from LHCb at $\sqrt{s} = 7$ TeV were also considered. The estimated average $\langle p_T \rangle$ is bigger than this value for protons proportionally to masses. The predictions on the characteristics of baryon production at higher energies (including cosmic rays) are discussed.

Summary

Primary author(s) : Sr. BYLINKIN, Alexander (ITEP); Dr. PISKUNOVA, Olga (The Lebedev Physical Institute of the Russian Academy of Sciences (LPI RAS))

Presenter(s) : Sr. BYLINKIN, Alexander (ITEP)

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