

Production of the heavy flavours (D and B mesons) in the Monte Carlo model with string fusion

Saturday 17 October 2020 13:00 (20 minutes)

The production of heavy flavor mesons in pp and p-Pb collisions at LHC energy is considered in the Monte Carlo model [1,2] with the string fusion. In the model, the elementary partonic collisions are implemented as interactions of color string, and the particle production is implemented using a string mechanism. The particle differentiation is implemented according to the Schwinger mechanism [3,4].

In order to ensure the correct description of p_t -spectra of produced hadrons as well as the $\langle p_t \rangle_{N_{ch}} - N_{ch}$ correlations [5], the hardness of the collision is defined by the size of colliding dipoles [6].

Transverse and rapidity spectra of heavy flavors, as well as nuclear modification factors, are calculated at LHC energy and obtained in a reasonable agreement with the experimental data [7].

New observables are proposed for the ALICE measurements in the LHC Run 3 with new upgraded ITS.

This work was supported by Funds of Ministry of Science and Higher Education of the Russian Federation and by the National Research Center "Kurchatov Institute" (contract No 43-03/19/44/155).

References:

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Session Classification: Section 4. Relativistic nuclear physics, elementary particle physics and high-energy physics

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