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Correlations between multiplicities and transverse momenta in nucleus-nucleus collisions from model with cluster of fused color strings.

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The long-range rapidity correlations between the multiplicities (n-n) and the transverse momentum and the multiplicity (p_T-n) of charge particles are analyzed in the framework of the simple string inspired model with two types of sources. The sources of the first type correspond to the initial strings formed in a hadronic collision. The sources of the second type imitate the appearance of the emitters of a new kind resulting from interaction (fusion) of the initial strings. The model enabled to describe effectively the influence of the string fusion effects on the strength both the n-n and the p_T-n correlations. Modification of the model to the analogue of the "core-corona" mechanism allows to take into account event selection criteria based on centrality and perform a comparison with existing experimental data on correlation measurements in nucleus-nucleus collisions at LHC energies. It is shown that string fusion effects leads to change of a sign of the p_T-n correlation coefficient with decrease of a centrality interval width.

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