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New effects in the Monte Carlo model of pp, pA and AA collisions with string fusion

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A further development of Monte Carlo model of pp, pA and AA collisions with string fusion [1-3] is made for a more detailed description of the multiple hadron production both in small and large transverse momentum areas.
An effective dipole partonic cascade was implemented, taking into account the Lorenz invariance of the observed values. Thus, a single parameter will remain in the model dependent on the energy of the collision. Running coupling constant is taken into account, which allows one to more correctly describe the hard collisions. Short-range correlations of transverse momentum in the string fragmentation is implemented. The model parameters tuning is made and predictions of the model are compared with experimental data.
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References:

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Author: Dr KOVALENKO, Vladimir (St Petersburg State University (RU))

Presenter: Dr KOVALENKO, Vladimir (St Petersburg State University (RU))

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