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TRANSVERSE MOMENTUM AND MULTIPLICITY CORRELATIONS IN NICA AND SPS ENERGY RANGE

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Correlations between multiplicity of charge particles and mean transverse momentum was observed experimentally in pp collisions from top SPS energy to LHC energy. The change of the correlation

function's shape with collision energy was successfully described by the multi-pomeron exchange model [1,2] as an interplay of string fusion and energy-momentum conservation. The situation at lower collision energies where role of resonance decays would increase can be studied by the NA61/SHINE experiment at SPS and by the forthcoming MPD experiment at NICA. In prior to the experimental analysis the phenomenon was studied using Monte Carlo event generators.
In this contribution Monte-Carlo simulations results will be presented for the pt-n correlation function and correlation coefficient calculated for different electric charge combinations. The role of limited experimental acceptances of NA61/SHINE and MPD facilities will be discussed. Moreover, he dependency of the correlation coefficient on the width of considered rapidity interval is studied.
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