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Description relativistic nuclear interaction in four velocity space

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The description of relativistic nuclear interactions in the four velocity space allows to enter the self-similarity parameter. This parameter allows us to describe rather well the ratio of the proton to anti-proton yields in A-A collisions as a function of the energy in a wide range from 10-20 GeV to a few TeV. It is shown that the inclusive spectra of the produced hadrons in hadron-hadron and nuclear-nuclear collisions can be presented as the universal function dependent of the self-similarity parameter in analytical form. The experimental data are in good agreement with results our calculations in a wide energy range from a few GeV to a few TeV in central rapidity region.

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