

# Tuning of Geant4 FTF model using the NA61/SHINE collaboration experimental data

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The FTF model is an implementation of the well-known FRITIOF model of the Lund University. It is used in the Geant4 package for simulations of hadron-nucleon, hadron-nucleus and nucleus-nucleus interactions at high energies. Thus, it is very important for various practical applications to have correct simulation results. This aim can be reached at a fine tuning of model parameters. In the presented paper, probabilities of strange meson production at quark and diquark fragmentations are defined, and a probability of meson emission by diquarks. A good description of the NA61/SHINE data on production of  $\pi^\pm$  mesons in  $pp$ ,  $pC$  and  $AA$  interactions has been achieved. However, the problem of description of yields of strange mesons in nucleus-nucleus collisions is remaining. The model essentially underestimates yields of  $K^+$  and  $K^-$  mesons in  $^{40}\text{Ar} + ^{45}\text{Sc}$  interactions.

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