

## Comparison of models of nucleus-nucleus interactions implemented in CORSIKA

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Program CORSIKA is the unique and the most common tool for Monte-Carlo simulation of the formation and development of extensive air showers. CORSIKA offers the user a set of hadronic interactions models for both high and low energies, leaving the choice of the model to the user. Thus the comparison of these models is of particular interest.

In the work, four CORSIKA models for high energy hadronic interactions are considered: EPOS-LHC, QGSJET-II, SIBYLL and DPMJET. These models are used to describe the interactions of protons and nuclei of helium, nitrogen and iron of primary cosmic rays with nuclei of atmospheric nitrogen. Checking for laws of energy, momentum and electric charge conservation is of primary importance. The comparison of distributions of the number of secondary particles and the fraction of the collision energy they are carrying, as well as mean values of these quantities has been performed

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