

Testing of the DPMJET and VENUS hadronic interaction models with the help of the atmospheric muons

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The more accurate original calculations of the atmospheric vertical energy spectrum at energies $10^2 - 10^5$ GeV have been carried out in terms of DPMJET 2.55 and VENUS 4.12 models. The Gaisser-Honda approximation and results of measurements of energy of primary protons, helium and nitrogen nuclei has been used. The package CORSIKA 7.4 has been used to simulate in the standard atmosphere cascades induced by different primary particles with various fixed energies E_0 . Statistics of simulated cascades for secondary particles with energies $(0.01-1) \cdot E_0$ was increased up to 10^6 . The results of simulations have been compared with data. This fit showed how the used models have been changed.

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