

Abstract Submitted
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Simulating hadronic interactions with SIBYLL FELIX RIEHN, Univ. of Delaware, Karlsruhe Institute of Technology, RALPH ENGEL, Karlsruhe Institute of Technology, THOMAS K. GAISSER, TODOR STANEV, Bartol Research Institute, Univ. of Delaware — Sibyll 2.1 is an event generator for hadron interactions at the highest energies that is commonly used to analyze and interpret data on extensive air showers. In order to have a reliable extrapolation of the hadronic interaction to a few hundred TeV it is necessary to accurately and consistently describe as much of the experimental data obtained at laboratory energy as possible. With the onset of experiments at the LHC the set of experimental data has increased significantly, thereby requiring an update of the event generators. The influence the newly measured total cross section, the particle production yields and the kinematic distributions have on the event generator will be presented as well as the effect these observables have on the simulation of extensive air showers. In particular the role of baryons and vector mesons in the development of extensive air showers are discussed.

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