

# Geant4 Acceptance Suite for Key Observables

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The complexity of the Geant4 code requires careful testing of all of its components, especially before major releases. In this talk, we will concentrate on the recent development of an automatic suite for testing hadronic physics in high energy calorimetry applications. The idea is to use a simplified set of hadronic calorimeters, with different beam particle types, and various beam energies, and comparing relevant observables between a given reference version of Geant4 and the new candidate one. Only those distributions that are statistically incompatible are then printed out and finally inspected by a person to look for possible bugs. The suite is made of Python scripts, and utilizes the “Statistical Toolkit” for the statistical tests between pair of distributions, and runs on the Grid to cope with the large amount of CPU needed in a short period of time.

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