

Geant 4

Contribution ID: 15

Type: **not specified**

Updates and Perspectives of Geant4 Hadronic Physics for Space Applications

Thursday, 19 August 2010 11:00 (30 minutes)

During the last few years, effort within the Geant4 hadronic working group has focused mainly on the expected needs of the LHC detector simulations. Thus, many improvements in hadronic models in the GeV to TeV range have been made. These will be covered briefly, as they are of interest to the cosmic ray community, but most of this presentation will deal with advances more closely related to the areas of radiation damage and space environment. These are in models which apply to the sub-GeV region, such as the precompound/de-excitation, high precision neutron, cascade and nucleus-nucleus models.

We will also discuss the extensive hadronic validation effort which includes a larger, more user-friendly validation suite, results from the IAEA cross-code comparison project, SATIF10, and some test-beam comparisons.

Finally we discuss plans for model and cross section improvement for the coming year.

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Session Classification: Plenary session VI - Geant4 developer's report -