

Recent upgrades of the standard electromagnetic physics package in Geant4

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The current status and the recent developments of Geant4 “Standard” electromagnetic package are presented. The design iteration of the package carried out for the last two years is completed. It provides model versus process structure of the code. The internal database of elements and materials based on the NIST databases is introduced inside the Geant4 toolkit as well. The focus of recent activities is on upgrade of physics models and on validation of simulation results. The significant revisions were done for ionisation models, for models for transition radiation, and multiple scattering models, which are presented in this work. The acceptance suite evolution is also discussed.

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