

gate_v6.1.0 **01/03/2011**

About the general set-up:

- × This version is validated for Geant4 9.3 and 9.4
- × The Compilation is validated with gcc4.4 / gcc4.2 / gcc4.1 / gcc4.0 / gcc3.4 / gcc3.3 / gcc3.2
- × This version support lmf_v3.0
- × Recommended CLHEP version : 2.0.4.5 & 2.1.0.1 (according to the Geant4 version)
- × Value for G4VERSION environment variable: 9.3 or 9.4 (according to the Geant4 version)

Important points related to the macro file modifications between Gate V6.1.0 and the previous one 6.0:

- × This version is specially customized to use the new physic approaches which are available in Geant4 since the version 9.3. Users can selected the physical process and the model which is associated. Also, Geant4 9.3 (& 9.4) includes several upgrades regarding the hadronic processes ans model associated. All details are available on the Geant4 web site.
- × For Gate Users, it's seriously recommended to read carefully the Users Guide to modify ans adapt correctly all macro files.

Regarding the new developments & bug reporting:

- × Back To Back gamma emission : bug corrected
- × Fast I124 isotope emission : bug corrected
- × Using CPET system : bug corrected
- × Spatial blurring in the case of SPECT Interfile projections : bug corrected
- × ARF tools : bug corrected
- × For radiotherapy applications : pensil beam and TPS pensil beam source tools are available
- × Phase space concept for radiotherapy : two “How To” sections in the users guide – Create and Use a phase space with Gate
- × New digitizer module : A Compton Adder – See the users guide for details

New radiotherapy benchmark

- × In the following folder : \$GATEHOME/benchmarks/benchRT
Users should launch the script “exeBench.script” to run this simulation and perform the data analysis. Proton and photon beams are modelled in this benchmark and the energy deposited in the water tank is stored in a dose map. The dose profiles are plotted during the analysis and confronted to reference results.