



EM VALIDATION RESULTS FOR GEANT4 10.5REF09

V. Ivanchenko
CERN & Tomsk State University
8 October 2019

EM physics in 10.5ref09

■ Utils

- «General process» is disabled by default
- Two new parameters for multiple scattering are given to users:
 - FactorSafety and LambdaLimit
 - G4VMscModel is changed to allow common way for msc parameter definition

■ Standard

- FactorSafety and LambdaLimit parameters are defined by default to values of 10.5
- Urban, GS and WVI model modified according to G4VMscModel modifications
- M.Novak updated G4PairProductionRelModel extending low limit to productin threshold
 - 5D model now inherit of this class having by product LPM effect implementation
 - The old G4BetheHeitlerModel become out of use

Results of EM tests

- <https://test-geant4-tools.web.cern.ch/test-geant4-tools/emtesting/>
- Global gamma process demonstrated, that it is working
 - *Is now again disabled but may be recommended as an option for users*

