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2016 Workplan

This expected workplan for the Low Energy EM WG has been prepared by both electromagnetic working

(1) - June 2016

(2) - December 2016

(*) limited manpower

[STD] - in collaboration with the Standard EM working group

1) Livermore models

- upgrade of Livermore electron ionisation (2)
- implementation of sub-cut processor (2) [STD]
- finalize migration and testing of polarized gamma models to same software design as non-polarized (2)
- implementation of pair production in the electron field (2)

2) Penelope models

- update and management of physics processes (2)
- continue testing and validation (2)

3) Monash U. models

- complete the recalculation of atomic electron momentum PDFs and Compton profiles for elements Z < 10 (2)
- development and implementation of a new low energy photoelectric absorption model (2)

4) Geant4-DNA models

- cross section models for other materials and incident particles [STD] (2)
- new chemistry models (2)
- new related examples (2)
- continue implementation of LEPTS models (2)

5) MicroElec models

- update to more easily implement different materials [STD] (2)

6) Atomic deexcitation

- expansion of M protons and alpha-particle ionization cross-sections approximation up to 1.0 GeV (2)

7) Validation

- validation of photon cross sections (2)
- validation of Geant4-DNA cross sections (2)
- validation of Geant4 for Protontherapy (2)
- validation of Geant4 for Carbon Ion Therapy (2)
- RBE modules for biological damage computation (2)

8) Other

- approximate model for electron stopping for energies below 30 keV (2)

These proposed items may or may not be delivered on time.

This topic: [Geant4 > LoweWorkplan2016](#)

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