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dnaphysics

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Introduction

The dnaphysics example is a simple application that simulates the track of a **1 keV electrons** particle in **liquid water** using very low energy electromagnetic **Geant4 DNA processes**. These processes are defined (for now) in liquid water only. See details about the **Geant4-DNA** project at: this link

Simulated experimental setup

The electron beam is at the centre of a liquid water box, made of G4_WATER material.

Physics

The **PhysicsList.cc** file explains easily how to use the **G4EmDNAPhysics** physics builder.

How to install and run the example

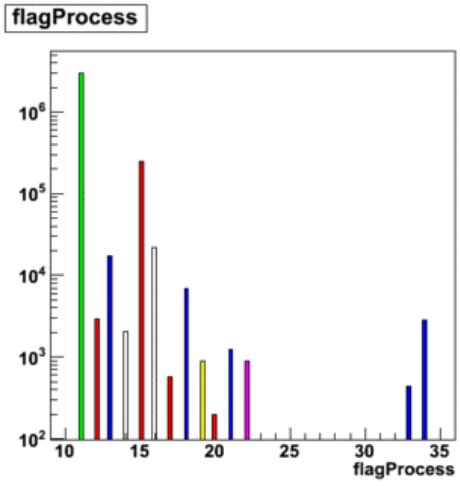
Please, look at the **README** file provided with the example.

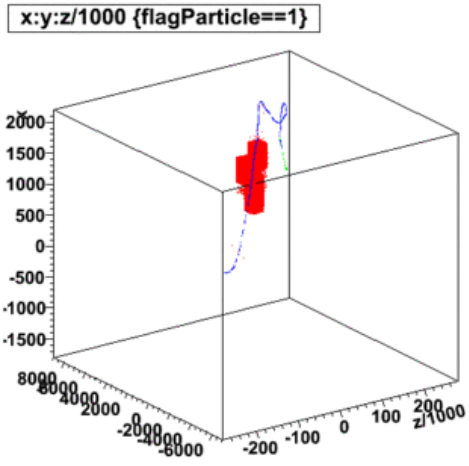
Simulation results

The output results consists in a ROOT file (http://root.cern.ch), containing an ntuple with:

- the type of particle at each simulation step
- the type of process at each step
- the track position at each step (in nanometers)
- the energy deposit at each step (in eV)

This file can be easily analyzed using the provided ROOT macro file plot.C. The macro gives the following graphical output:





The naming scheme of particles and processes used is described in SteppingAction.cc.

Suggested papers

Refer to all Geant4-DNA publications :

Contact

Should you have any enquiry, please do not hesitate to contact the author

-- LucianoPandola - 21 Oct 2014

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