A Project to compare GEANT to Data

1 Abstract

In this project, a process is taken and it is simulated in the GEANT4. For this purpose, the following reaction is selected. In this reaction the output electrons from a Linear accelerator is focussed onto a tungsten target, the output from the tungsten target is photons. An aluminum shielding is used to filter out the extra electrons. But the filtration can be done in the geant code. Now the photons are targeted onto a heavy water or a 238U target. The output from the uranium target is the neutrons.

In this project, the whole idea is to simulate the above mentioned process. The output from the accelerator is an electron beam of energy ranging from 1 MeV to 20 MeV. In this project the simulation can done to study the relationship between the number of electrons coming out of the accelerator and the neutrons coming out of the target can be calculated. The process can be considered as two parts. In the first part the electrons hits the tungsten target giving out photons. In the second part of the process, the photons hit a U238 target giving out neutrons.
References

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