
Subject: Re: Stepsize in TPC Simulation with new external packages
Posted by [Mohammad Al-Turany](#) on Fri, 14 Dec 2007 07:47:18 GMT
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Hallo,

In fact if I understand it well, you register in your process hit the Edep and flength for each step, and you draw this with the tree draw? if this is true then there is two problems with your plots:

1. Edep is the energy deposition in the volume and not the energy loss! Energy loss and energy deposition in a layer are not necessary equal, because of possible energy leak from the volume. Also you use low cuts, then significant part of energy loss is the production of delta-electrons which need to be counted.

2. flength: is the track length and not the step length,

if this is true then one can understand your plot, the change in energy deposition (gas in your case) is much smaller than the track length when you change the step size and so with larger steps the whole distribution goes down.

So maybe you can register the energy loss instead of deposited energy, which means you have to register the initial energy of your particle at entering a step and the final (at exiting). You need also to set the cuts back! We use usually 50 keV for delta electron production. and 1 MeV for all other.

regards

Mohammad
