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Subject: Data Structure of GeoTracks/MCTracks  
Posted by [PaulinaM](#) on Mon, 13 Feb 2017 08:46:09 GMT  
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Hello everyone,

I tried around with extracting data out of r3bsim-simulated files. I found that in GeoTracks daughters are always "0" and ParentIDs are always "-1", so I assume those information not get saved. In my MCTracks ParentIDs get saved, but the UniqueID appears to be always "0", too, so I can't find the ParentTrack. Am I using the wrong attributes to reconstruct particle hierachy? What is the way to get hierachy information?

If I collect the last points of every GeoTrack are those the last points of the trajectories (in the cave) of single particles or do I miss something, maybe due to a linked structure, GeoTracks inside of GeoTracks?

Thanks a lot and best regards,  
Paulina

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Subject: Re: Data Structure of GeoTracks/MCTracks  
Posted by [Dmytro Kresan](#) on Tue, 14 Feb 2017 06:25:55 GMT  
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Hello Paulina,

GeoTracks: they are stored in order to draw the trajectories in the event display. This structure does not contain hierarchy information. It is a full trajectory, so end of it is either inside of cave, if particle was stopped (disappeared), or at the edge of the cave if particle leaves it. Normally, we do not use the GeoTracks to analyse simulated data quantitatively.

MCTracks: Contain mother / daughter information and vertex (start) position and momentum. Also PDG code. If you have a track, GetMotherId() method will give you index of the parent track in the same array. So you can access it directly by this index and there is no need for unique id. If mother id is -1 - it is a primary track.

Hope this helps. Best regards,  
Dima

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