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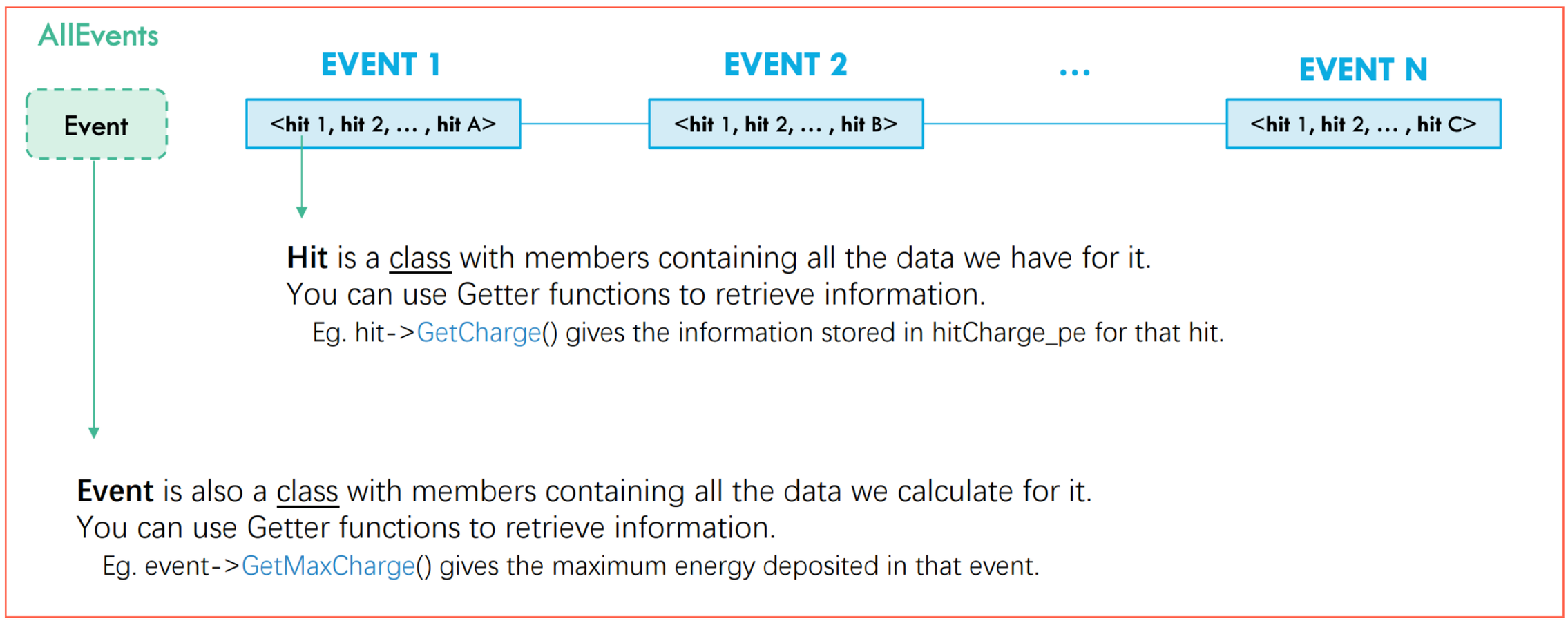
C. Jesús-Valls
cjesus@ifae.es

Group Meeting

First steps towards SFGD reconstruction system

First goal:
Provide software able to deal with SFGD raw data and classify it in tracks.

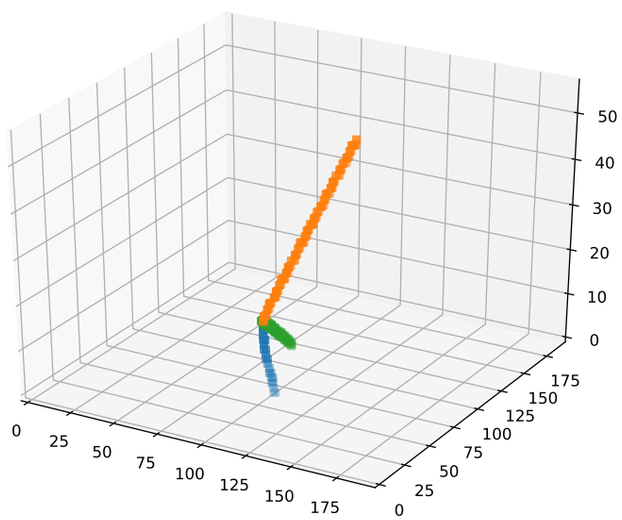
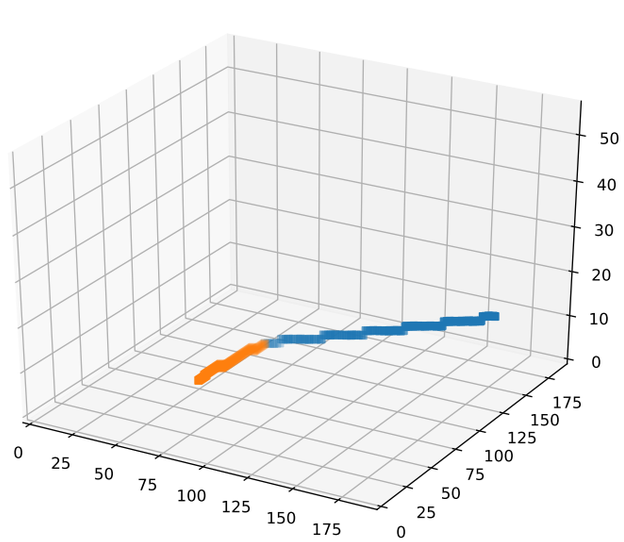
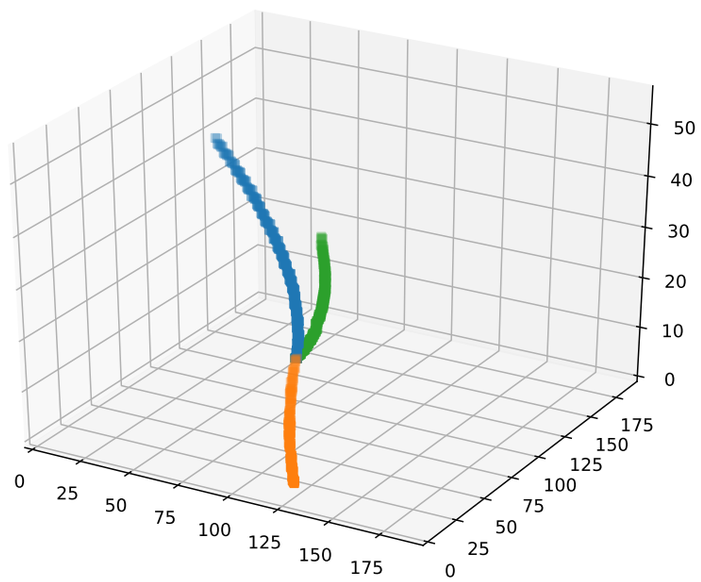
from D.Douqa's presentation:



Hopefully in this afternoon's meeting new Data format is going to be ready!

Training sample

So far I do not have access to real data… -> I built a simple MC to start working in parallel.

MC:

- allows to have tracks coming from save vertex or not,
- random number of tracks
- random noise can be add
- itsimulates random amount of curvature.
- the info is stored in data files as a collection of 3D points

New Reconstruction Software

I started a project from scratch to provide software for SFGD reconstruction. It is on Git from its inception.

So far, the software resembles the structure in TPC's beam test data analysis software.

I started working with a simple macro, and a reconstruction file. In reconstruction 3 classes have been defined: Voxel, Prototrack and Event.

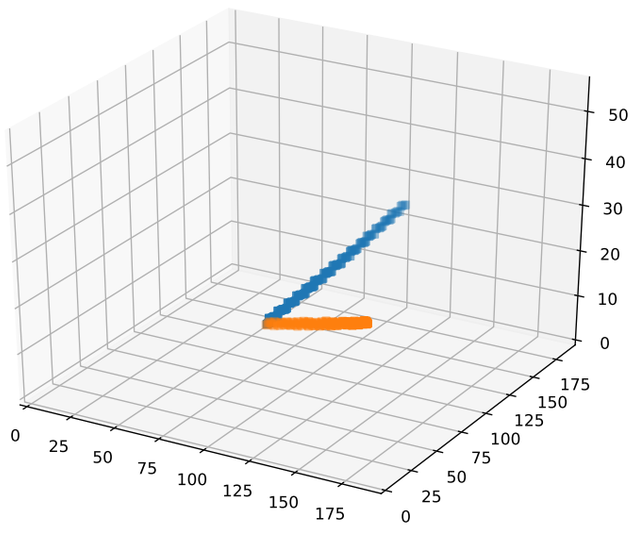
In principle they are coded to easily embed Dana's data structure and use on top of it reconstruction methods.

Each class has Getter and Setter methods (I coded some very useful ones). Additionally it includes some drawing options like: Event->Draw(), ProtoTrack->Draw("same"), etc.

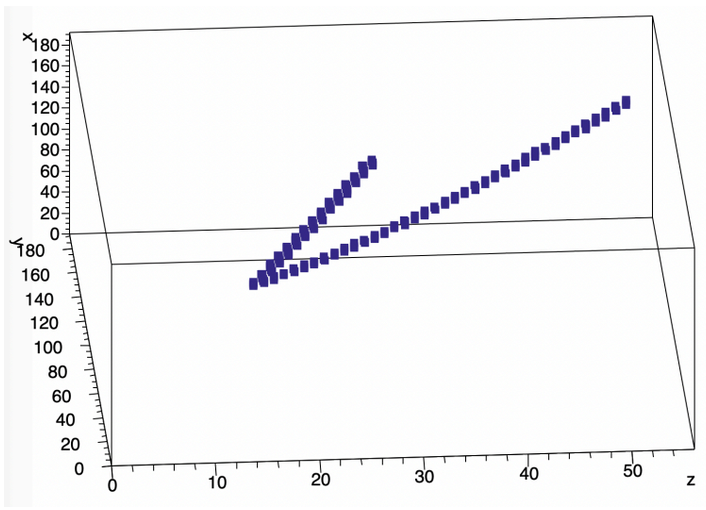
It currently clusters succesfully events into prototracks, and I am working into split them in tracks.

New Reconstruction Software

Original



Raw



After