

SFT Group Meeting

Status Update #7

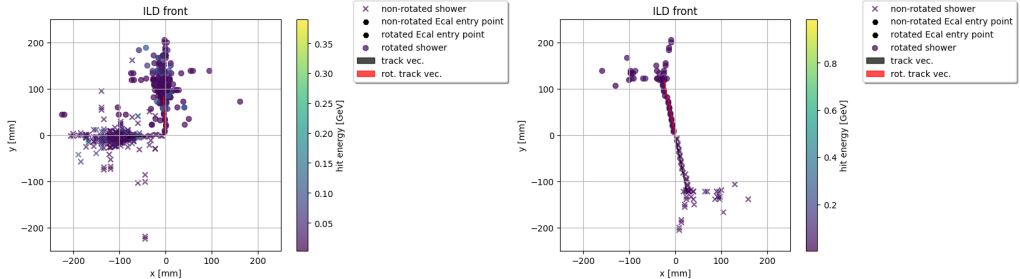
Konrad Helms

6th July 2023

What am I doing?

- Regression: TOF estimation using ML techniques based on ECal hits
- data: 4D point cloud: $(x,y,z,e) \rightarrow N \times 4$ points, $N = \#$ hits
 - + timing info \rightarrow let's see how to implement that, positional encoding?
- remark: N **will** differ for different pfos
- + **extract intrinsic features**

29 June 06 July: Showery Showers!



29 June 06 July: PFO Selection

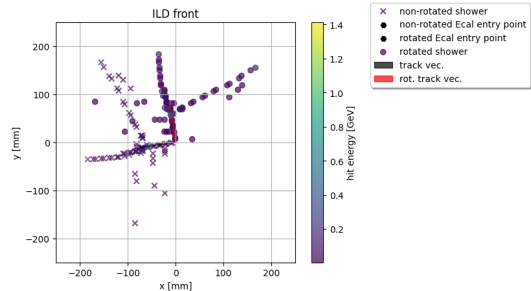
- reworked PFO selection:

previously:

- if the shower had hits from other particles \neq MC truth in it: reject PFO

now:

- if the deposited energy in the shower is $< 90\%$ from MC truth: reject PFO



Further Work + Outlook

Further Work:

- generated a new dataset
- worked on PointNet++ dataloader

Outlook:

- implement the RMS90 quality cut (discussed last meeting)
- work on PointNet++ implementation