Pre-Training
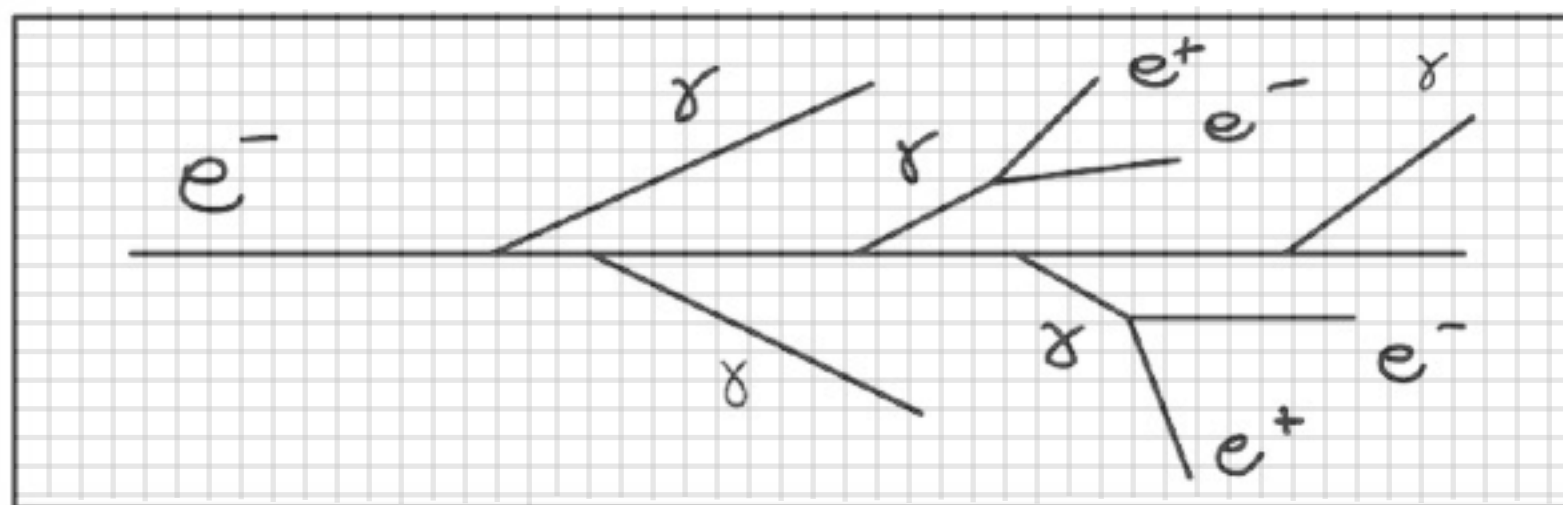
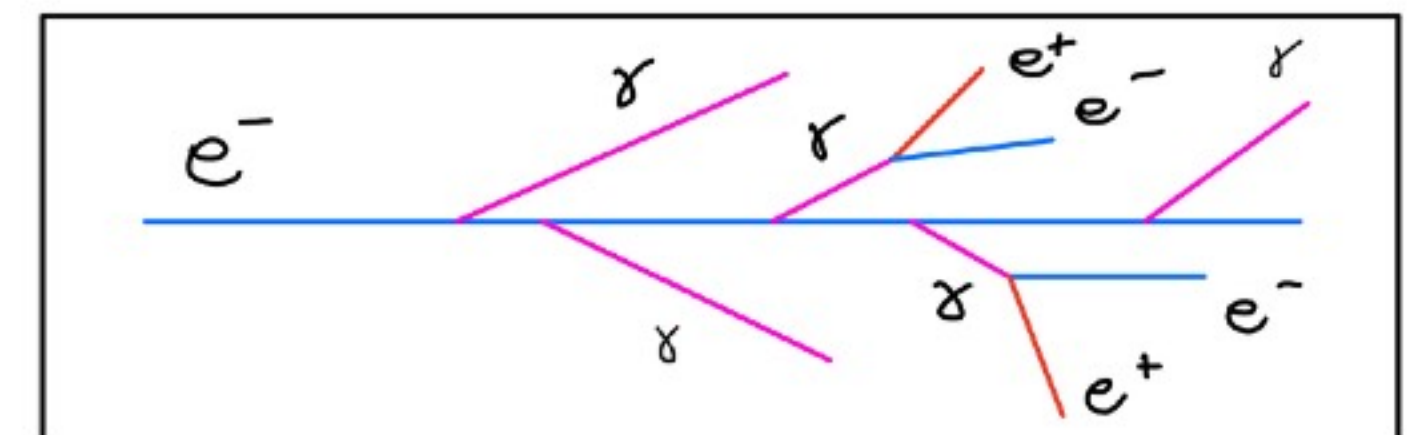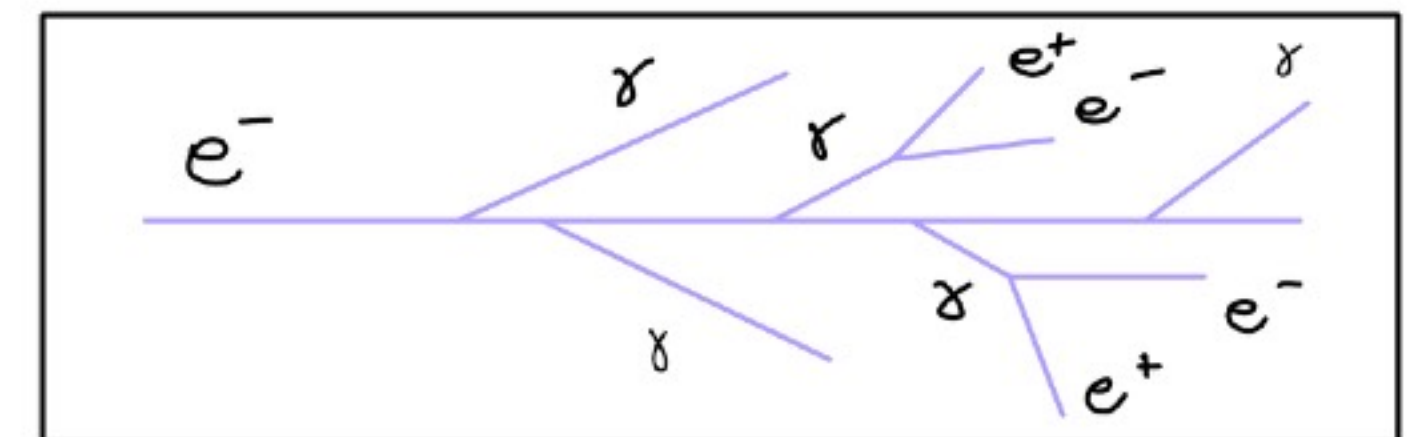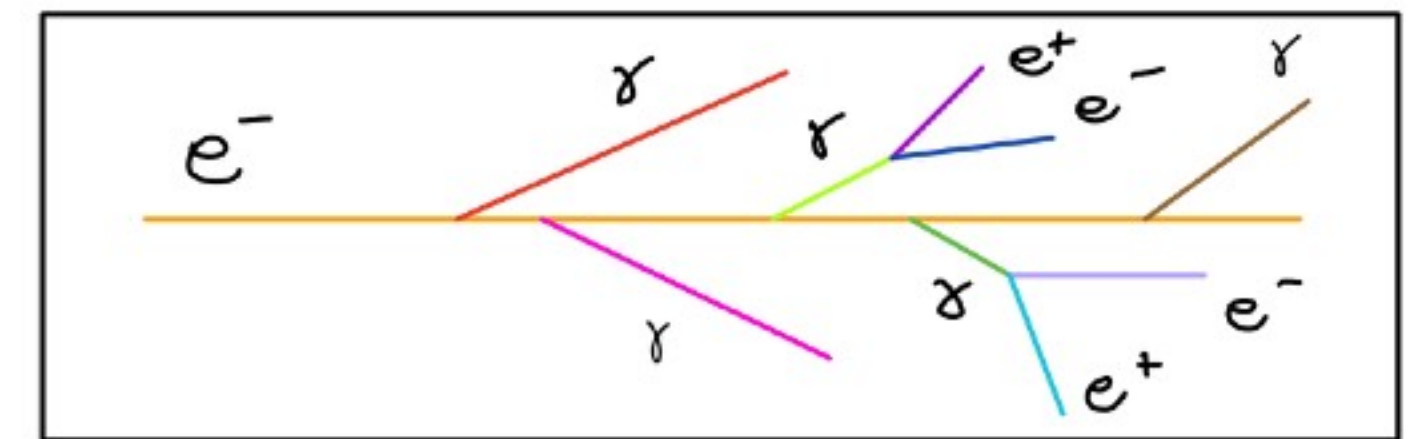## Machine Learning Inputs

- Voxel Energy - Global Event Features **- Voxel ID Labels**

Toy Representation EM Shower

- **hit_track_id**: Groups hits from the *same particle* as it propagates.

- **hit_primary_id**: Groups *all hits* that descend from the *same primary particle.*

- **hit_pdg**: physics-based grouping, groups hits by PDG code.

Pre-Training

The Model