ECAL projects
Day 3

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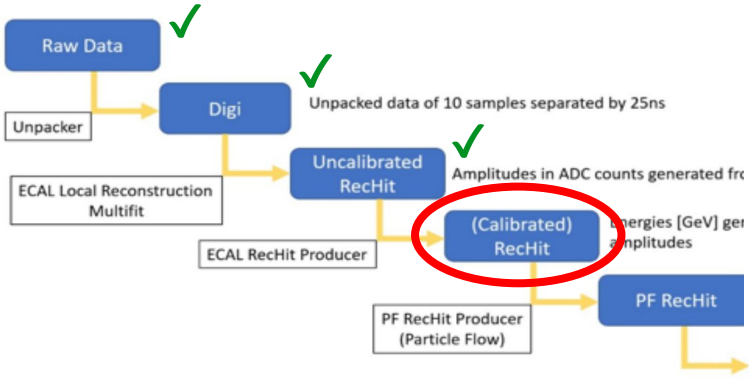
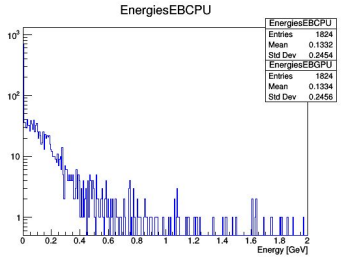
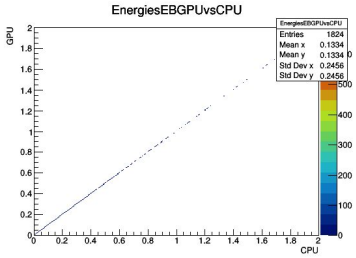
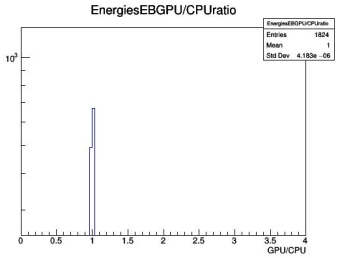
ECAL on GPU

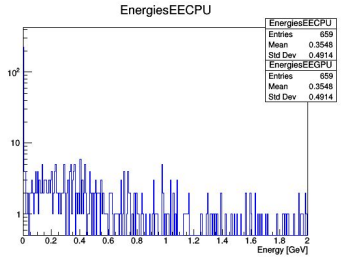
- **Rechit @GPU**
  - Integration of summer student (Eissa Alnasrallah) validation code for rechit ✓
  - Steps forward to make rechit @gpu compatible with rechit @cpu
    - Energy ✓
    - Flags & more 

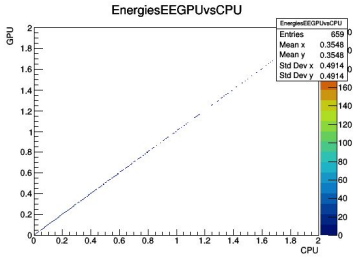


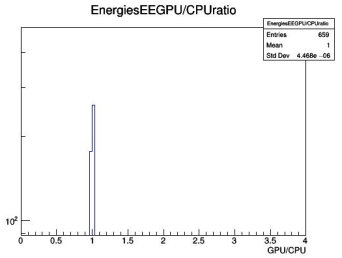




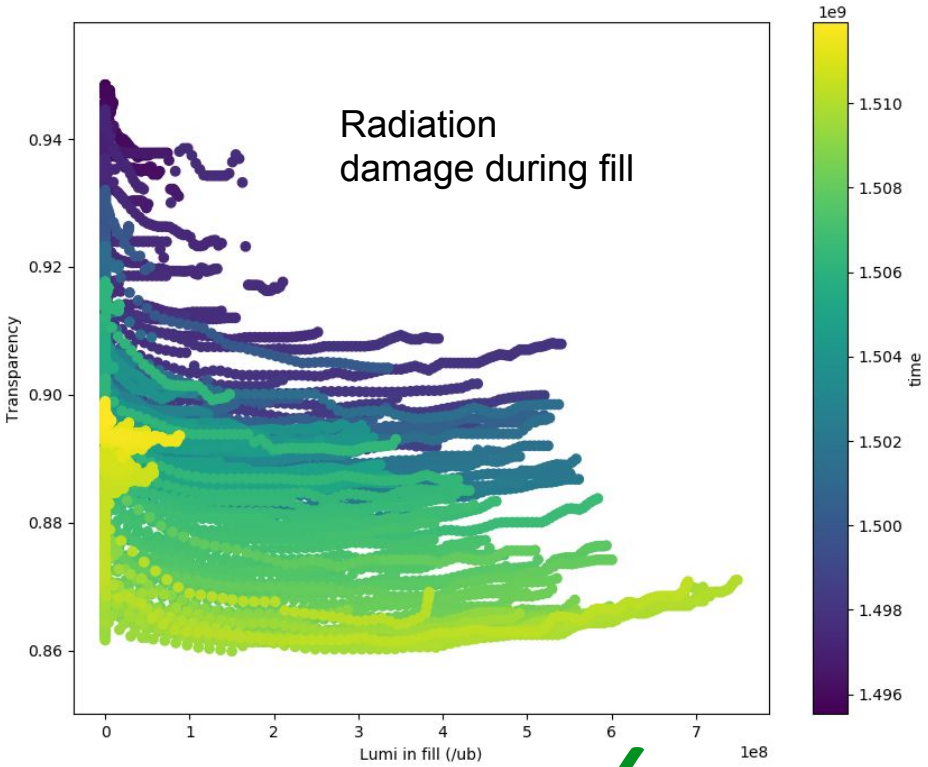


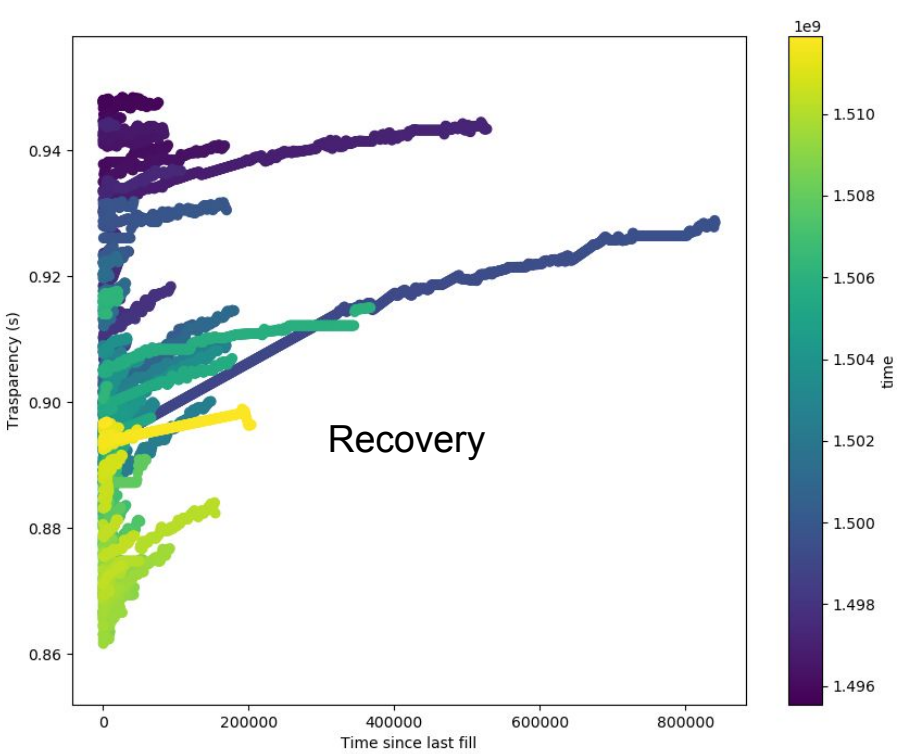






ECAL transparency evolution prediction: *ML4ECAL*

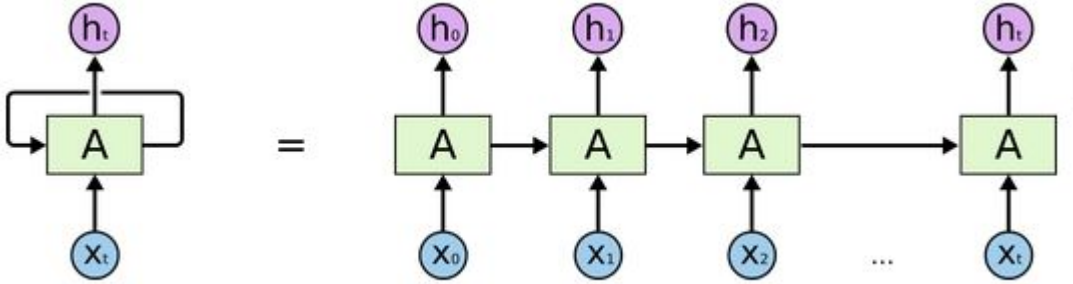




- Data preparation ✓
- Input definition ✓

- Interpolation of transparency measurement → a LOT of training samples ✓

Tomorrow: Model definition



Hyper-parameters:

- LSTM layers and units
- Time step: 5 or 10 mins
- Time window for training: one fill ~8h
- Window position: randomized between fills and dumps
- Grouping of detector channels for training (xtal, ring, region)

IDEA:

Last measured transparency and time from it as input of the network:

Randomize this value during training to make it flexible