2x2 Chicago Meeting

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2x2 Paper Update

Link to Overleaf Draft:

https://www.overleaf.com/6419191385gzxrjygksbcb#1adc5e

- No major updates since last time

Any and all comments welcome in the draft above!

Updates on Access to 2x2

- As far as we know, there is **still no access** to the MINOS underground area
- Multiple avenues of access are being pursued concurrently
    - **Person basket** will only be for Fermilab employees and is only waiting on permission from DOE Site Officer
    - **Elevator** (minus counterweights) will be available again pending inspection by an additional company

ND Prototypes Analysis Workshop

- Reminder of analysis workshop this Wed - Fri at Fermilab

Updates on Single Module Cosmics Simulation

- Can run through full analysis chain
- Currently looking into bugs in detector simulation related to assumptions of beam spill timing structure
- [Presented at Sim/Calib meeting last week](#)
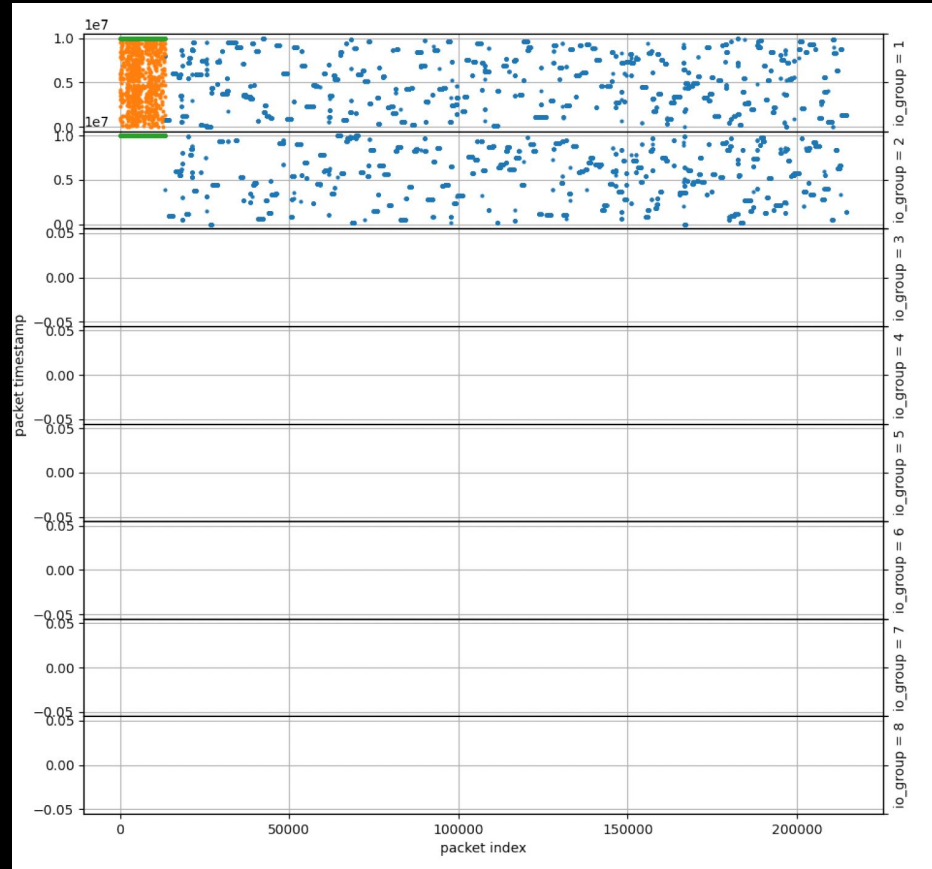
Updates on Single Module Cosmics Simulation

- Major discussion points from Sim/Calib Meeting:
    - Simulation **not currently set up to simulate non-beam triggers** well (i.e. light threshold triggers like those used when taking cosmics data at Bern)
    - Where does simulating cosmics at Bern fall in terms of Sim/Calib priorities?
    - **Is it worth it to try to simulate cosmics in the 2x2 vs. using overlays?**

Updates on ML Reco Benchmarking Studies

- Many updates on plotting comparisons of reco vs. true tracks
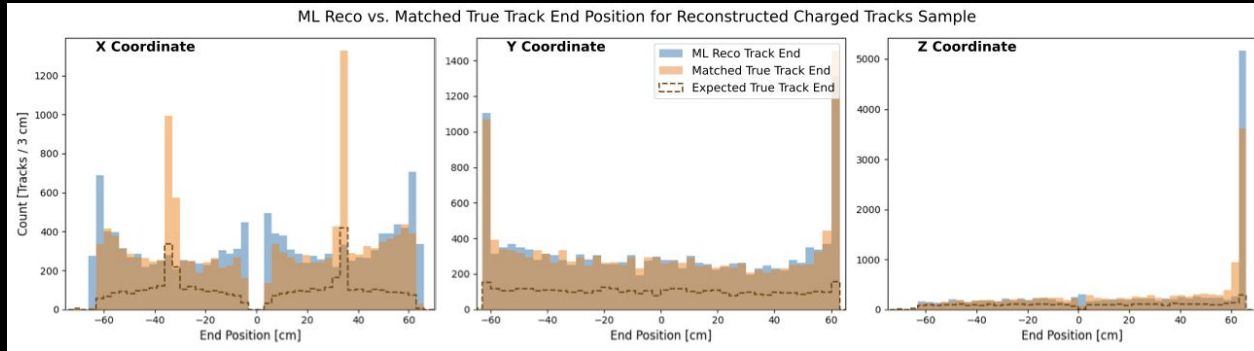
- Tried to plot "expected true" distributions by taking truth level sample of tracks
- Normalization issue led to discovery/re-discovery of NDCAFMaker bugs – **start/end position of true tracks only saved if the true track is matched to a reconstructed track**
- In general, truth info for an event is <u>apparently only saved if the event includes reconstructed information</u>

Updates on ML Reco Benchmarking Studies

- Gained access to ML Reco Event Display
  - Plan to use this capability a lot in presentation to track-level and event-level reconstruction oddities