

TPC Performance Issues

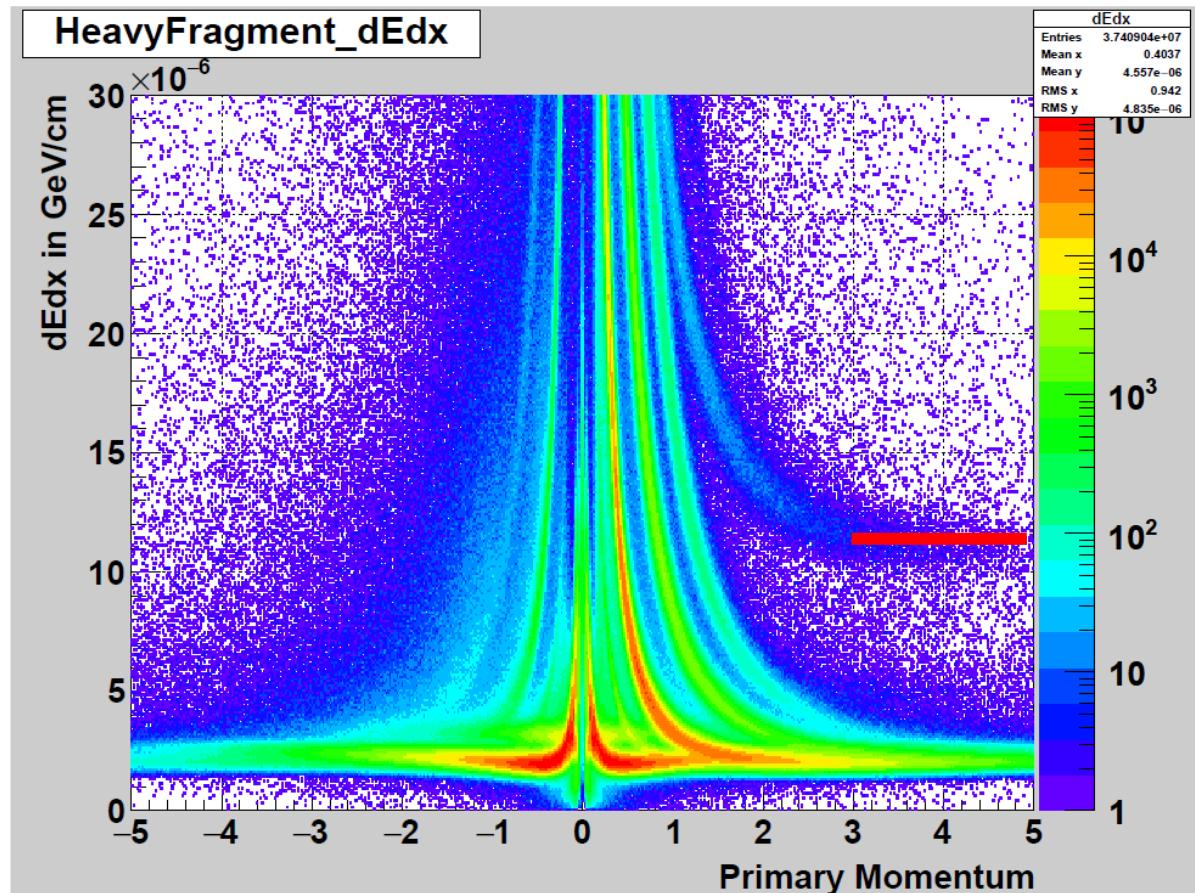
January 2026

Daniel Cebra

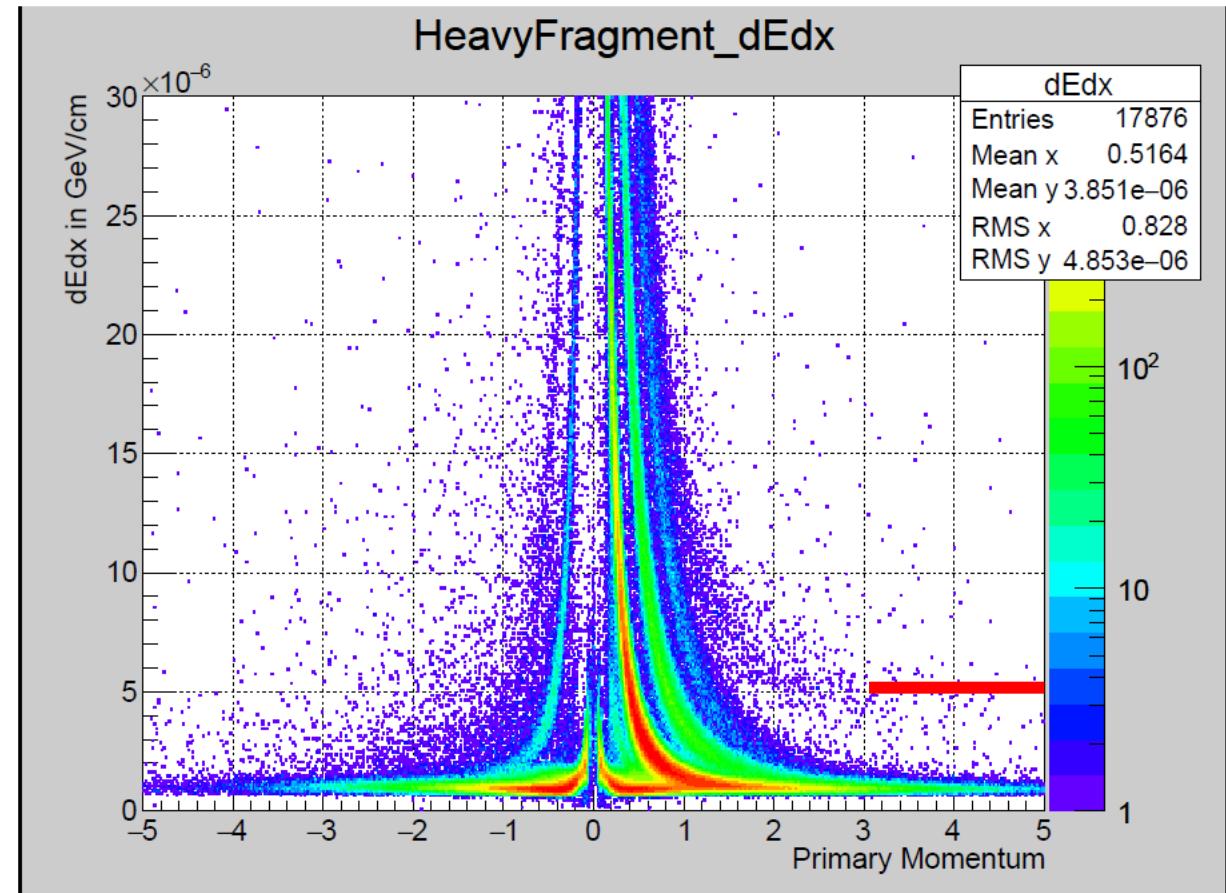
- We started taking 4.5 GeV FXT data at about noon yesterday BNL time. We plan to run FXT systems for a week.
- Overall, TPC has been running very well.
- I have noticed some qualitative changes in the Online QA plots and in the Online L4 plots, and I wanted to touch base with the experts to get a sense of whether these changes are to be expected. We are missing many iTPC RDOs, and this is expected to reduce performance.

1) The dEdx gain is reduced by about a factor of 2 in L4. Is this intentional?

2020

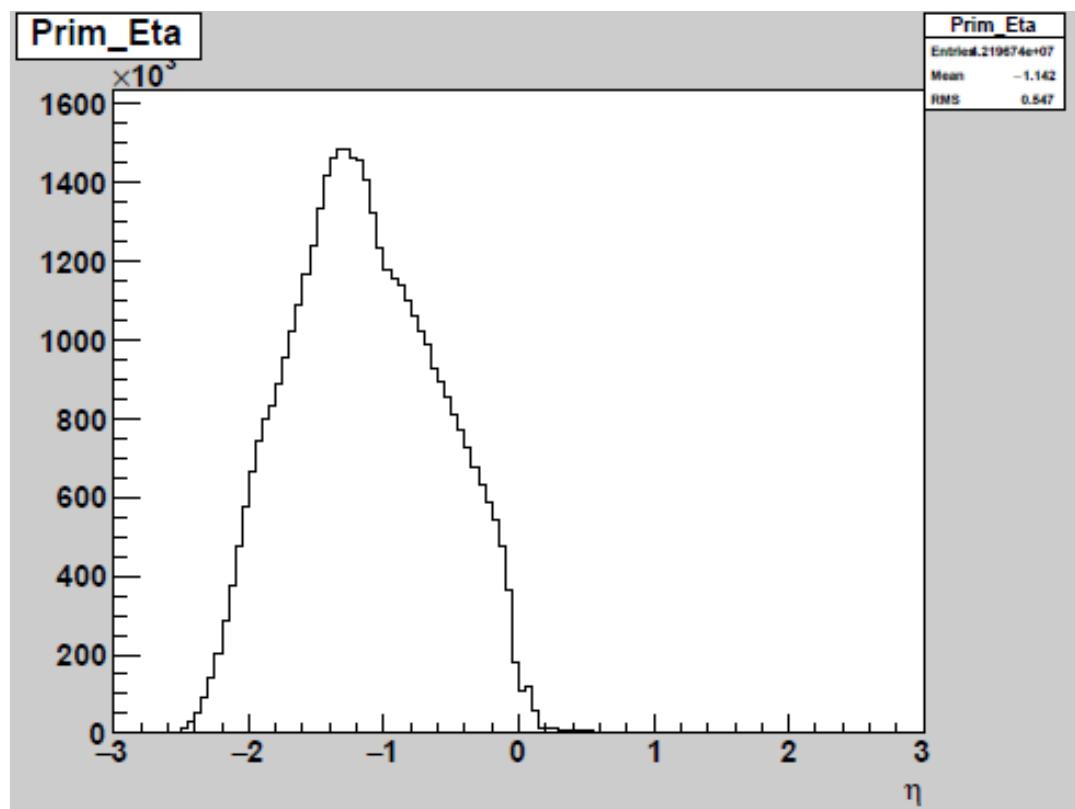


2026

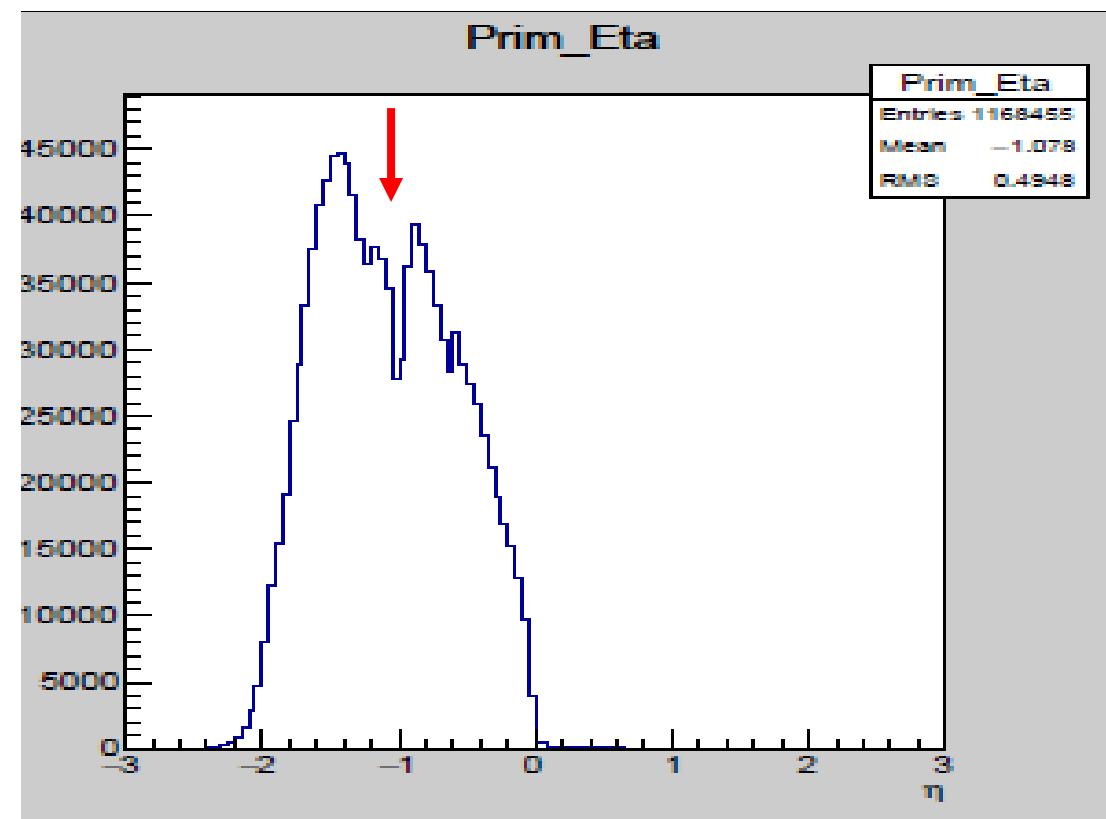


2) The primary track eta distribution in L4 shows a significant drop right where tracks start crossing the central membrane. Could this be a calibration issue breaking tracks across the membrane, or is this coming from the fact that there are many missing iTPC RDOs?

2020

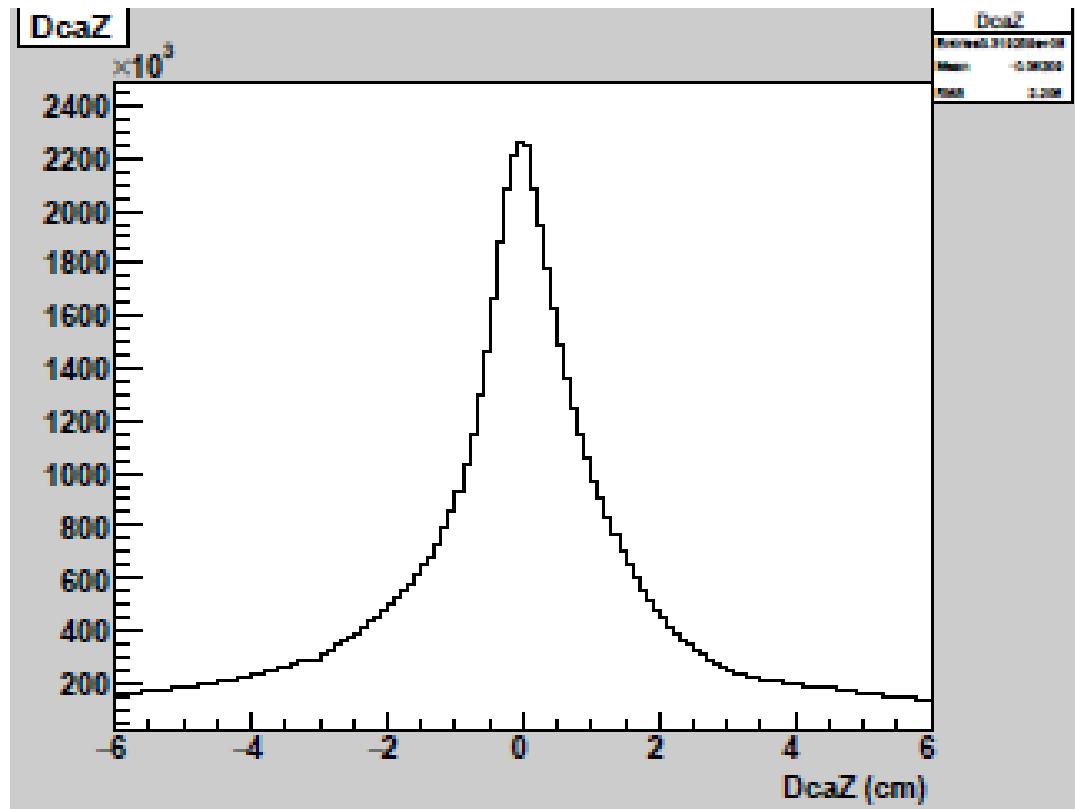


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3) Global DCAz is very wide and very asymmetric in L4, likely coming from offsets between East-only and West-only tracks. Does L4 have the latest spatial calibrations?

2020



2026

