dE/dx in the ITS

Current status/experience
General considerations

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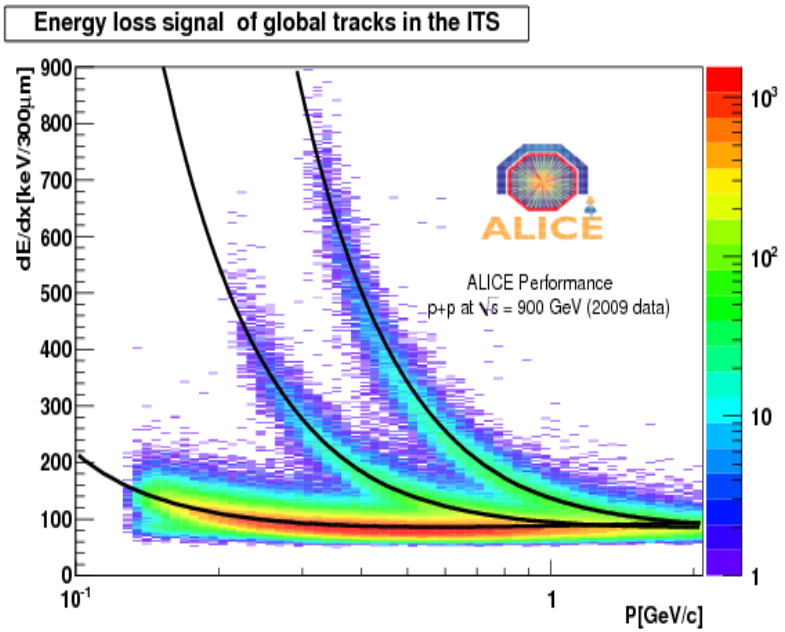
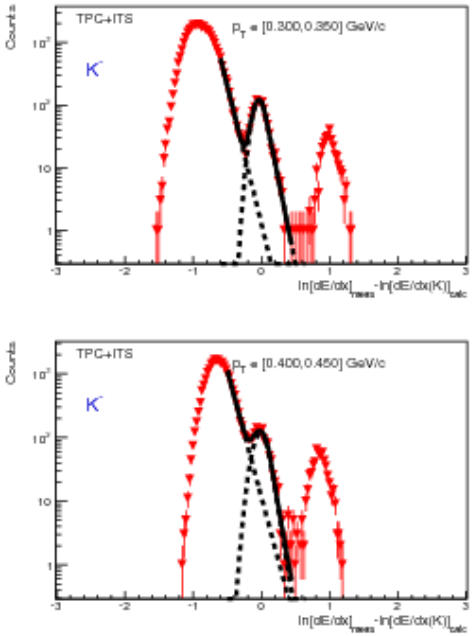
dE/dx performance

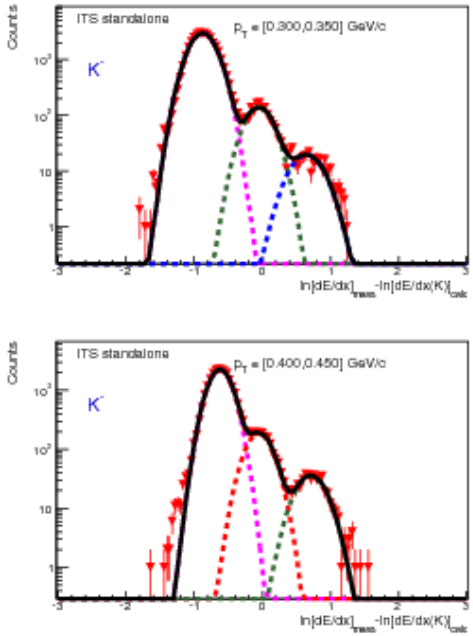
Truncated mean
Lowest 50% of points



Global tracks



Standalone

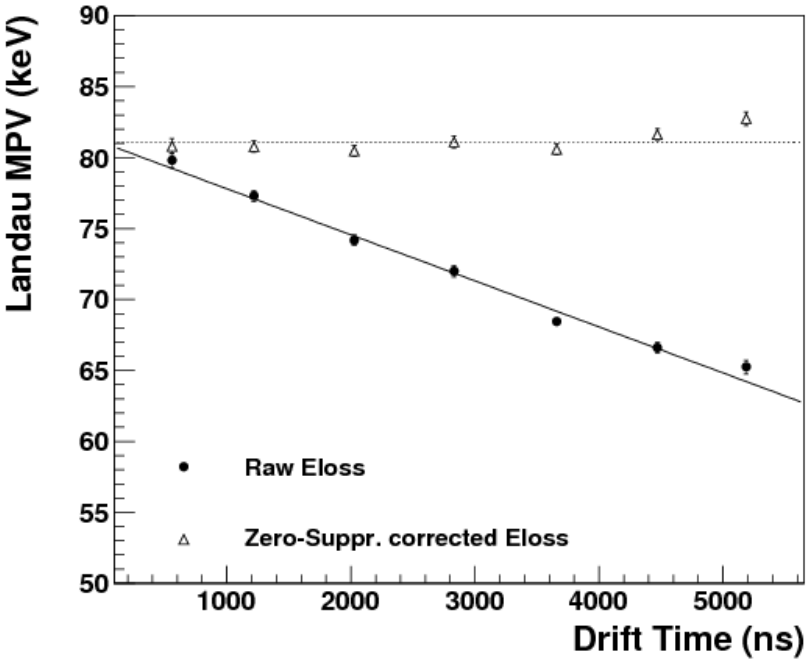


Tracks with 3, 4 points

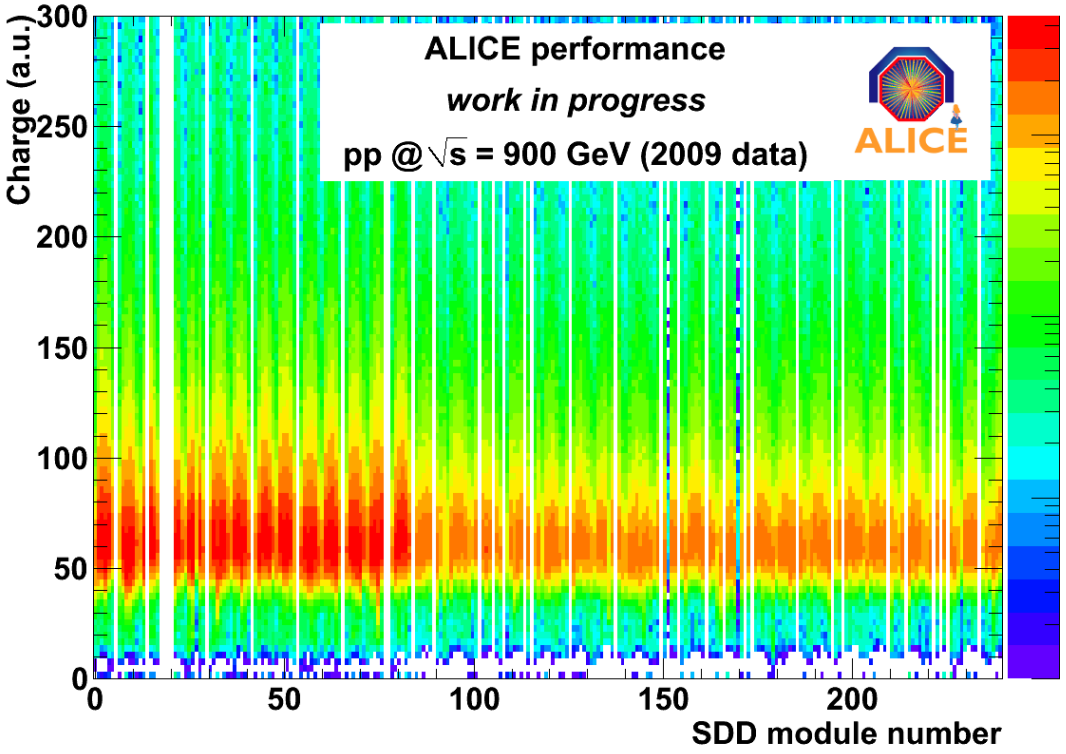
Resolution 10-15%
Worse for standalone tracking
than combined tracking
(effect of mom resolution)

SDD calibration

Drift time dependence



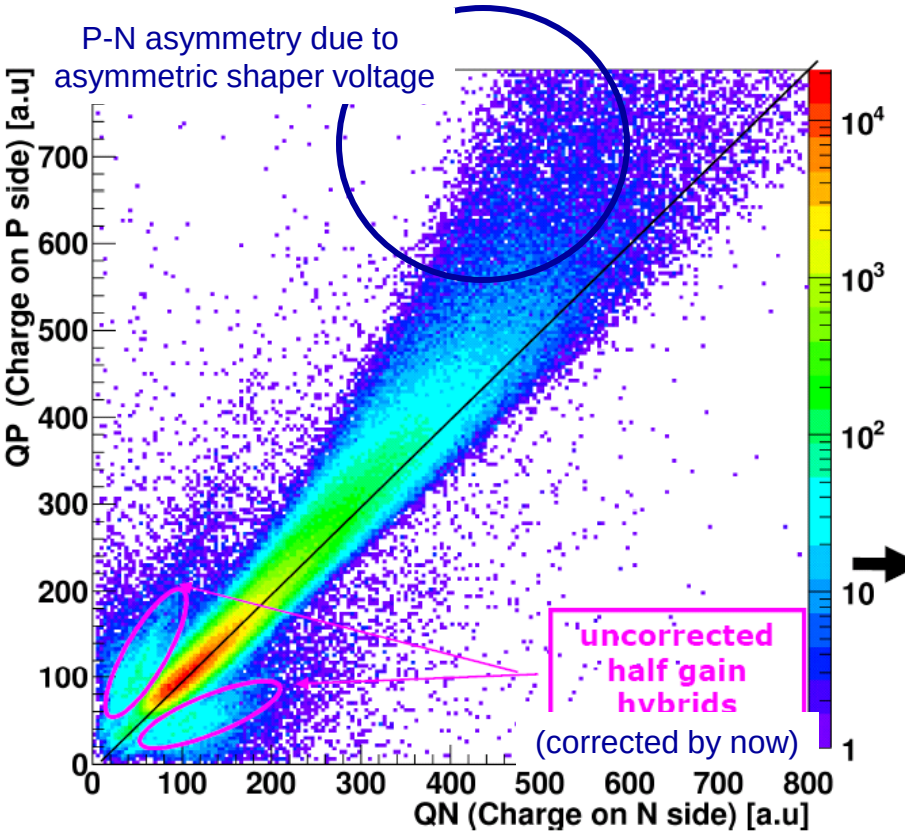
Module by module



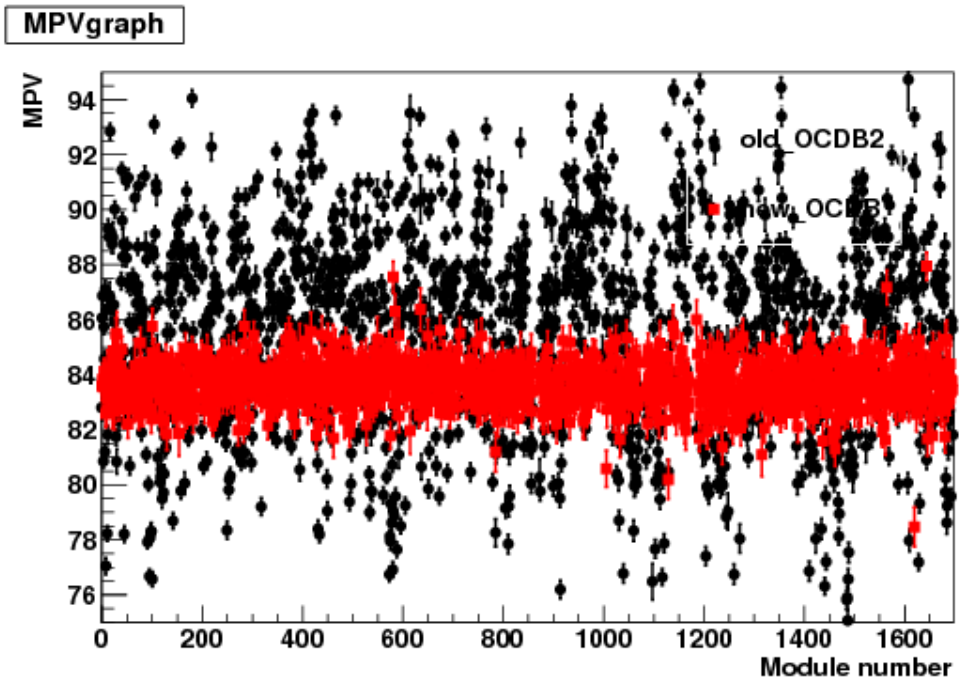
Calibration precision ~1% rather straightforward

SSD Calibration

P vs N calibration



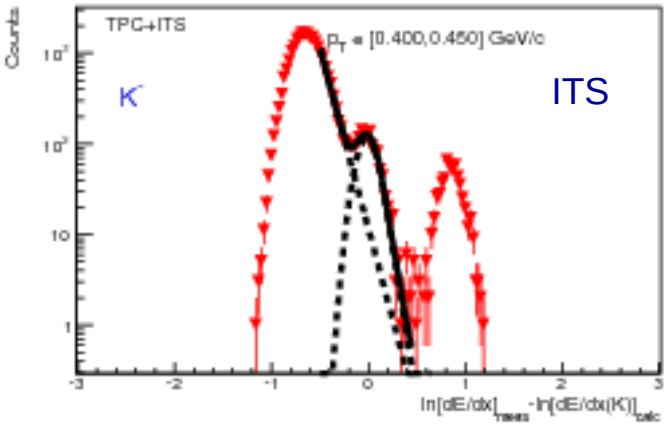
Module by module

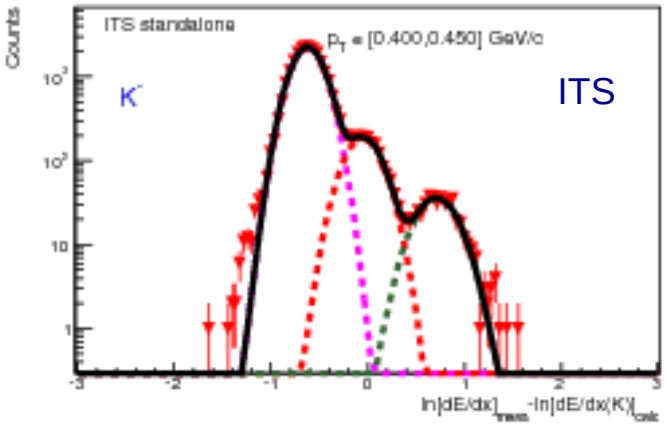


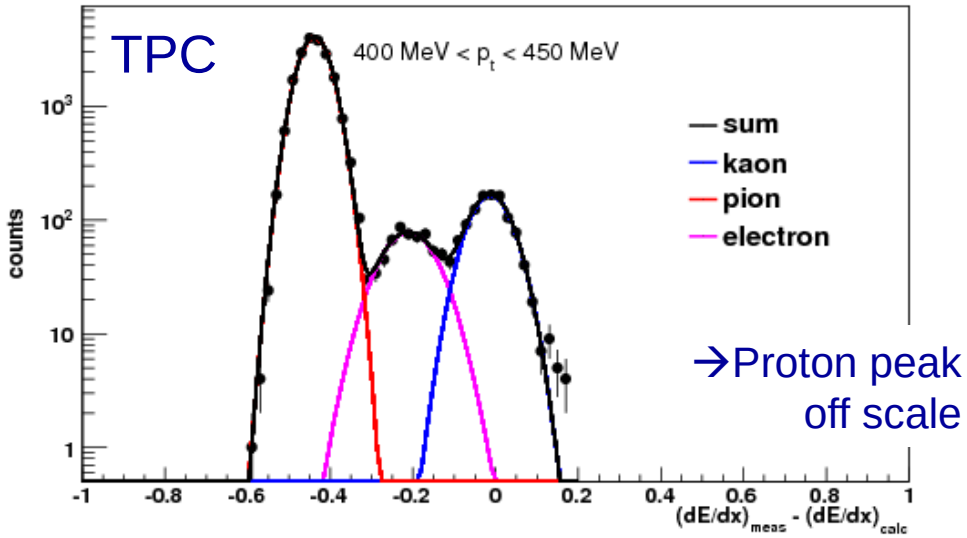
Detector response relatively uniform before calibration

Calibration to ~1% rather straightforward

Comparison to TPC







→Proton peak off scale

TPC resolution ~5% much better than ITS ~12% (more samples)

Final comments

- ITS PID performs well
  - Calibration straightforward, stable
  - Resolution close to MC-expected
- NB: most of p_T-reach overlaps with TPC
  - ITS dE/dx mostly niche application: low p_T, standalone tracking