

dE/dx analysis of kaon spectra at
30 AGeV

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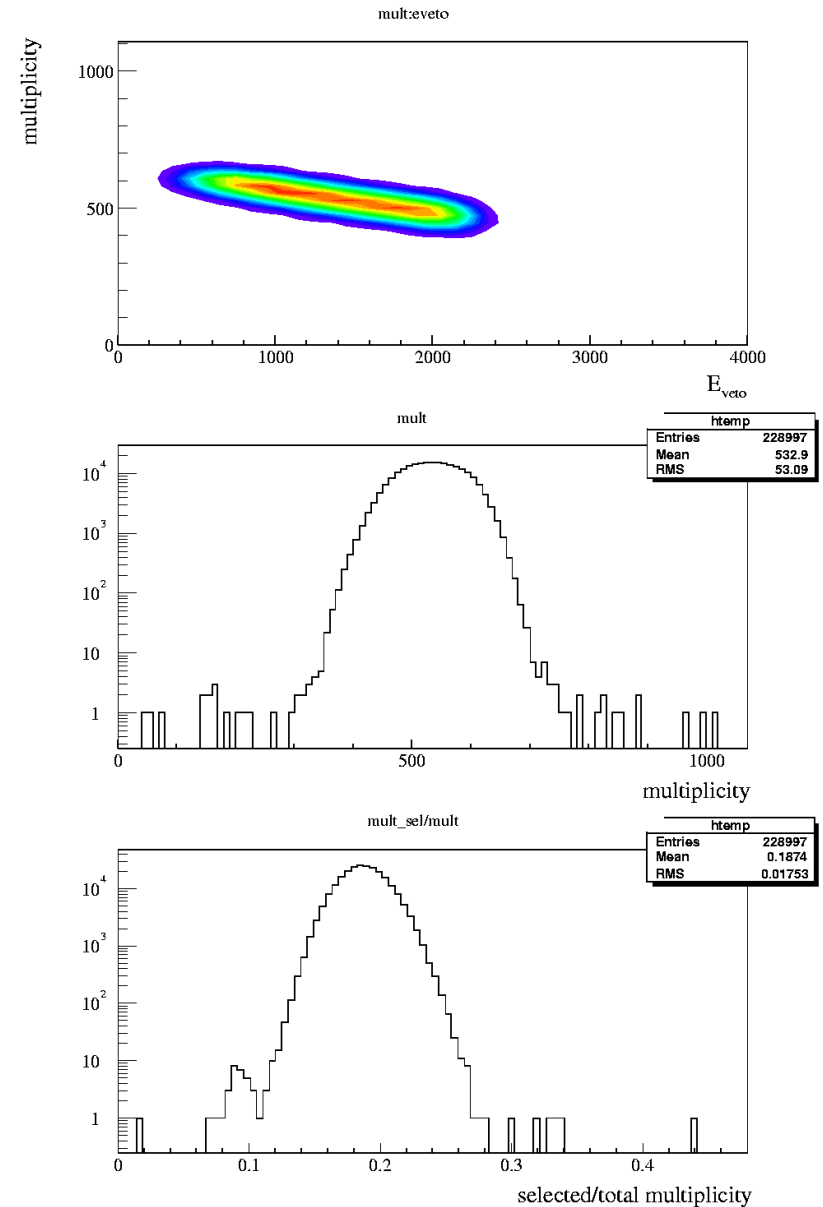
Cuts

Standard event cuts (iflag and on-line E_{veto})

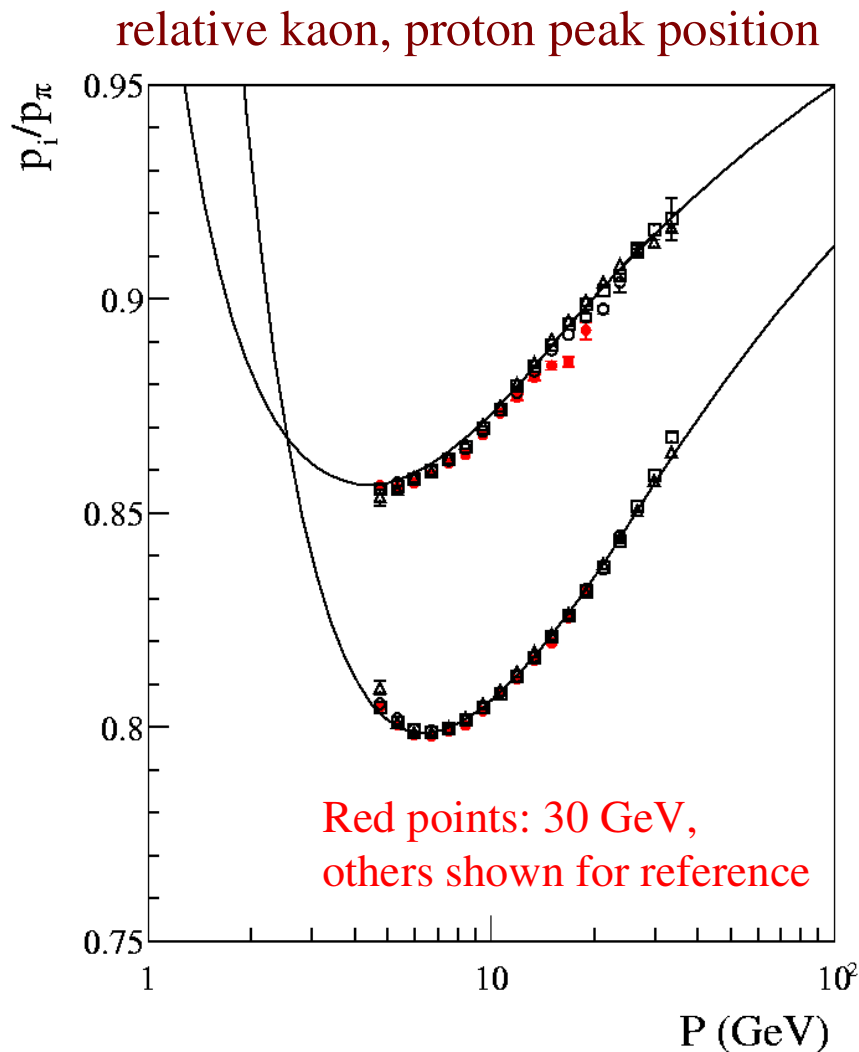
Track cuts (same as at other energies)

- $n_{\text{max_point}}[2] \geq 50$
- right side $|\phi| < 30^\circ$
- $n_{\text{point}}[2]/n_{\text{max_point}}[2] \geq 0.5$
- require points in VTPC if maximum number of points ≥ 10 in one of them

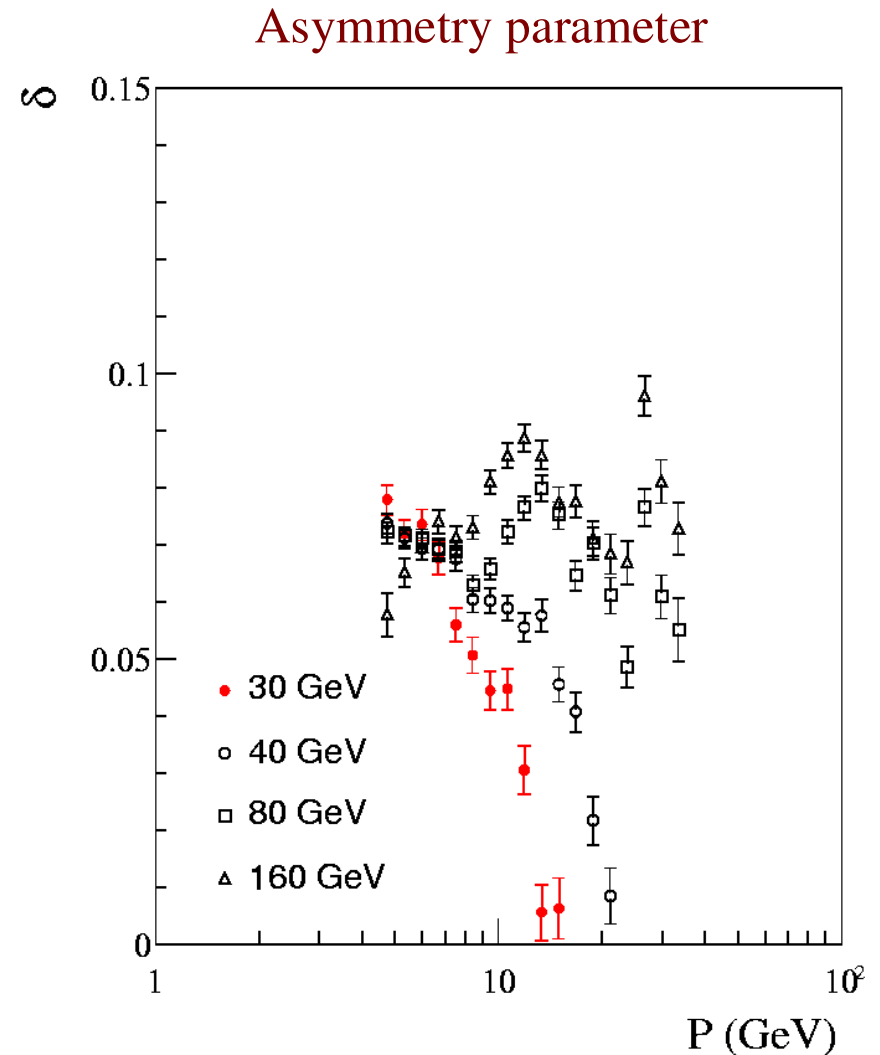
approx. 160k events from miniDST used,
rest soon to be included (?)



Fit parameters

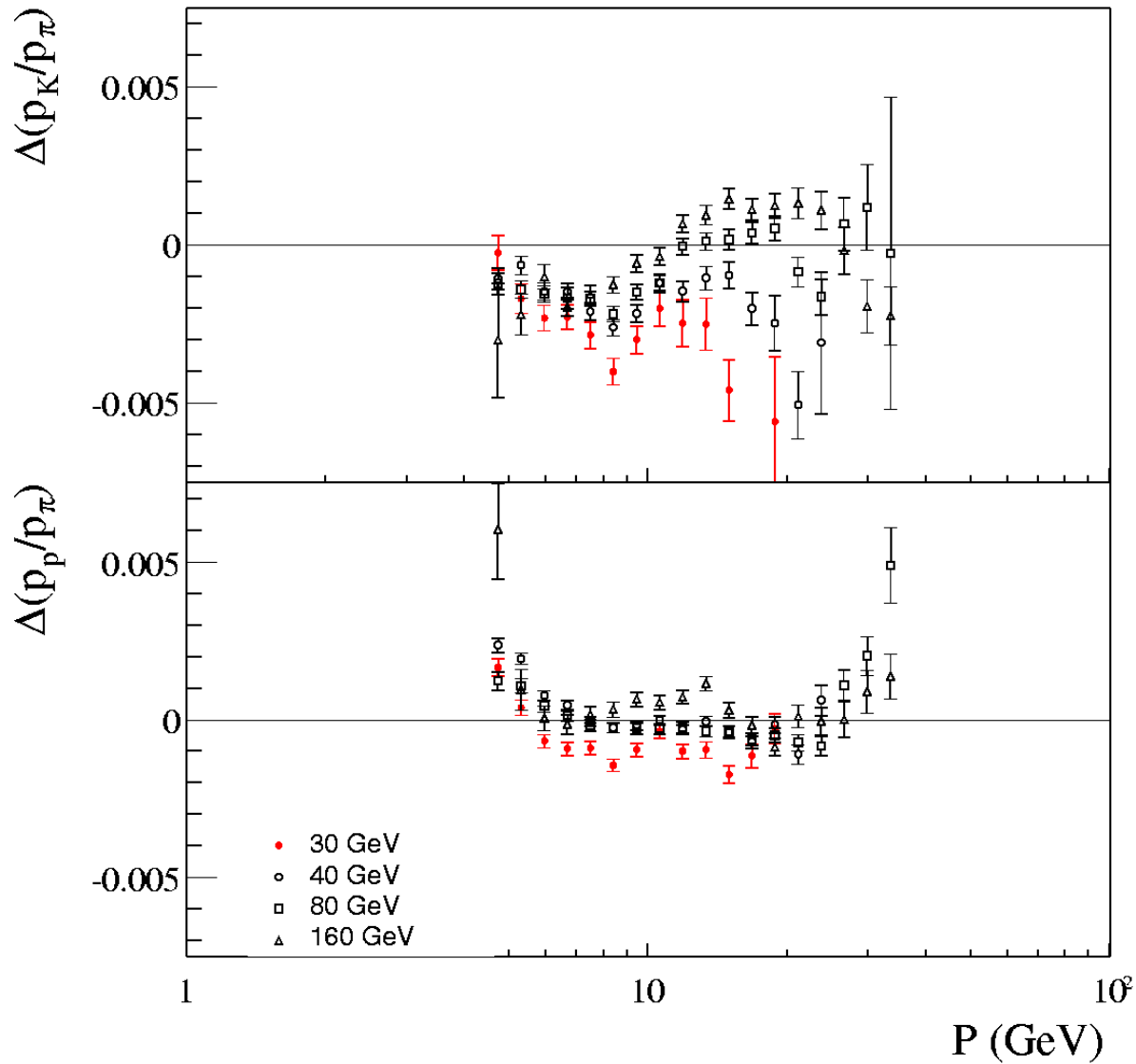


Small difference at highest momentum bins, probably due to limited statistics. These bins are not used for the moment.



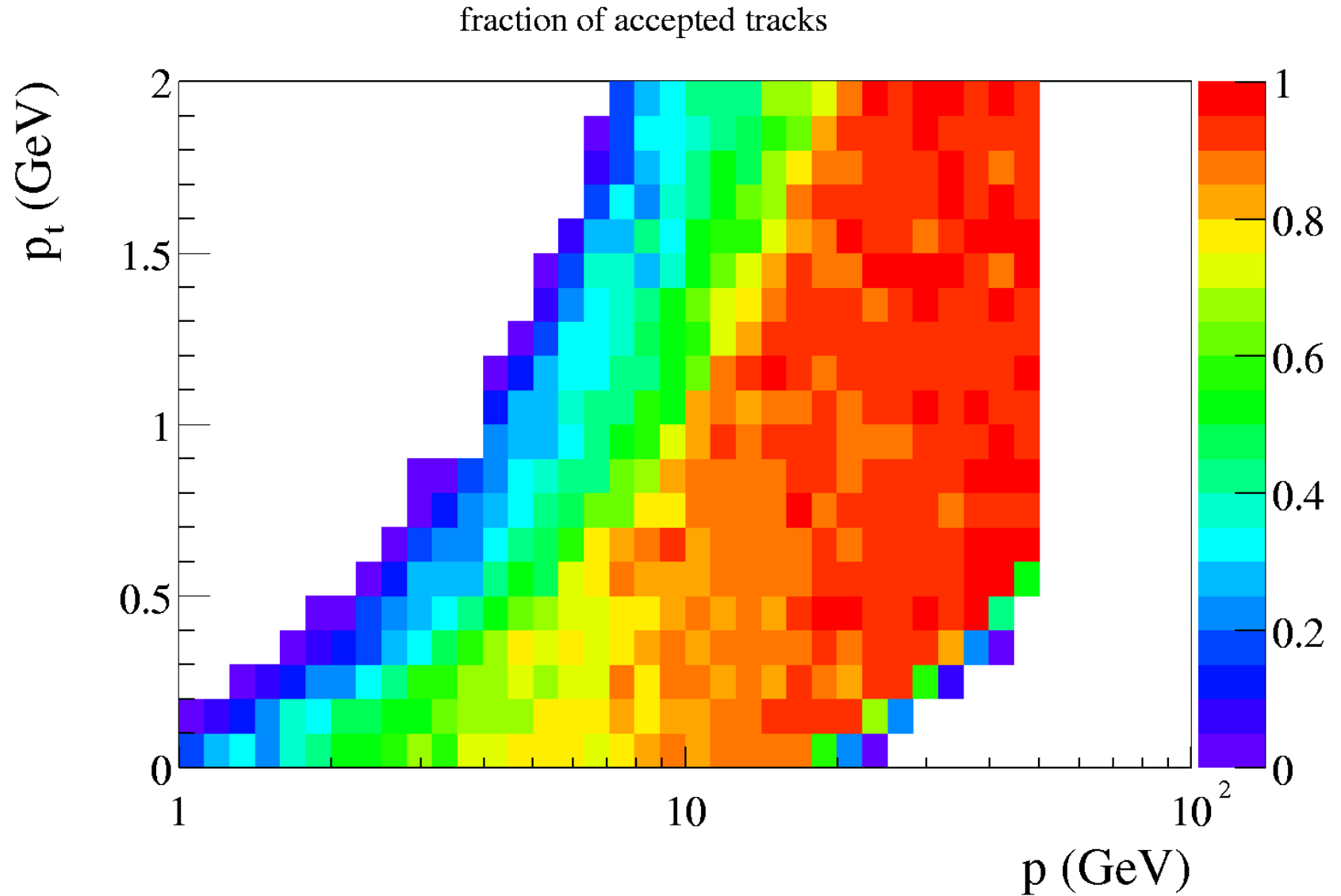
Differences due to different track topologies ?
... or lack of statistics ?

Fit parameters compared to BB

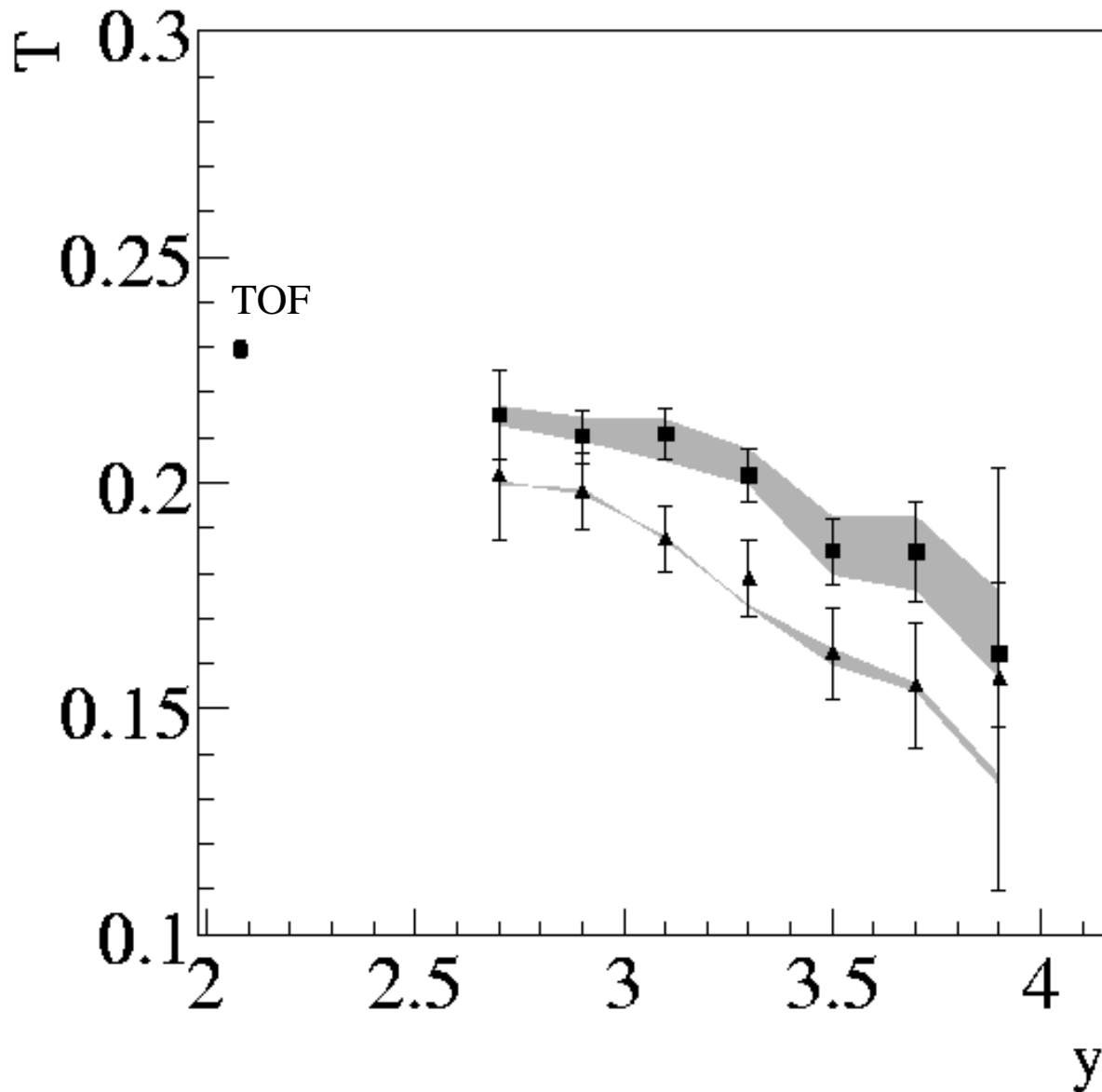


Relative positions at three energies agree to the per mille level.

Acceptance at 30 GeV



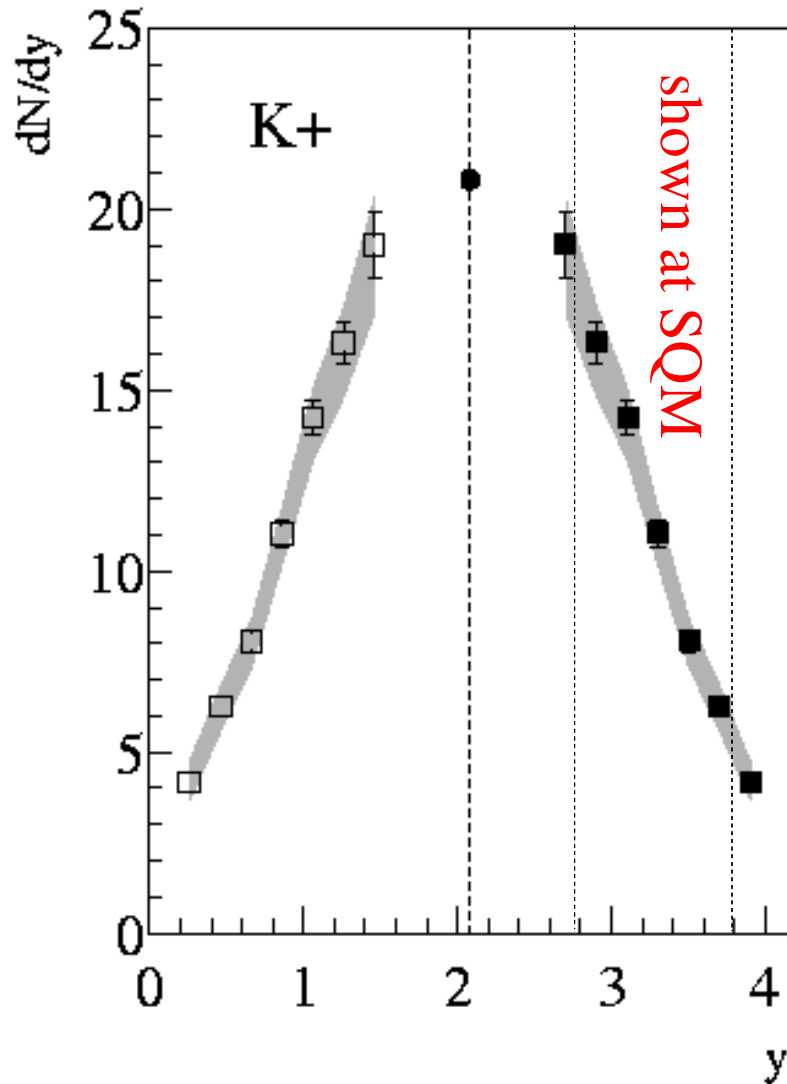
Slope vs rapidity



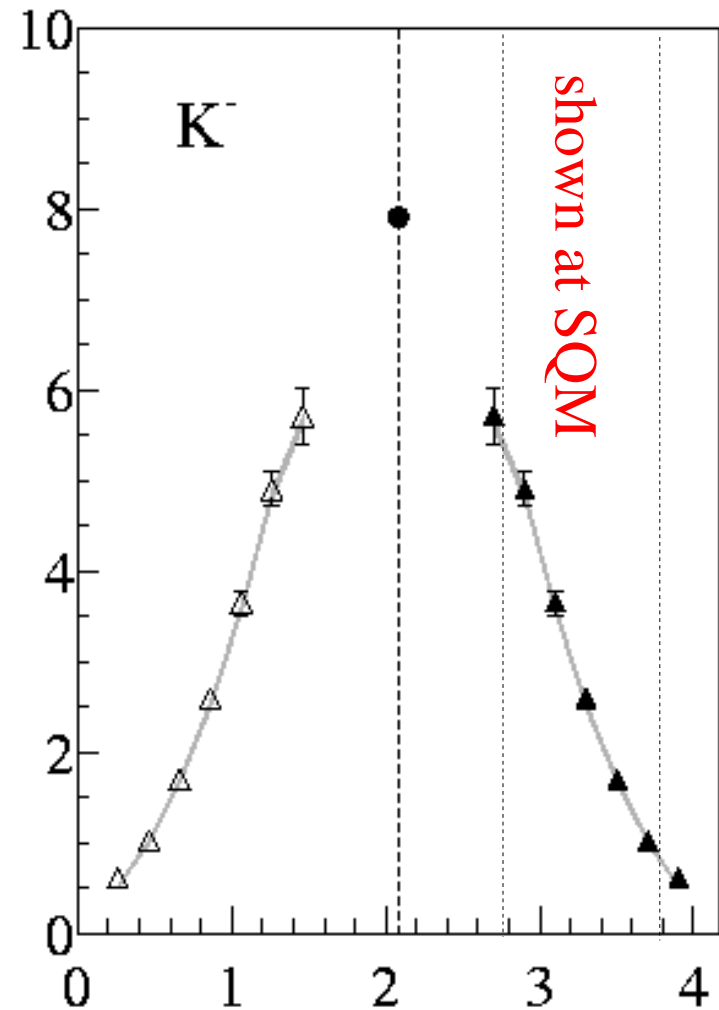
Grey band indicates variation of width scaling parameter α from 0.5 to 0.75

$$(\sigma_i = x_i^\alpha)$$

Rapidity spectra



Mid-rapidity: TOF



First and last point excluded from 'official' result, because of large extrapolation in p_t

To do

- Use all events: approx 1.5 times statistics
- Investigate high-momentum region (small deviations of peak positions)
- Extend to lower momenta ?
- Efficiency corrections (approx. 1)