

Progress towards Ckov Reconstruction

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DSTs?

- CKOV information in DST is not usable
 - ADC information incorrectly pedestal subtracted (bug in CkovMatchTrk)
 - Mirror planes still need to be moved around according to the data (feature, requires SPFit-ted data)
- Developing on pass3 output (limited by tape access and memory leaks)

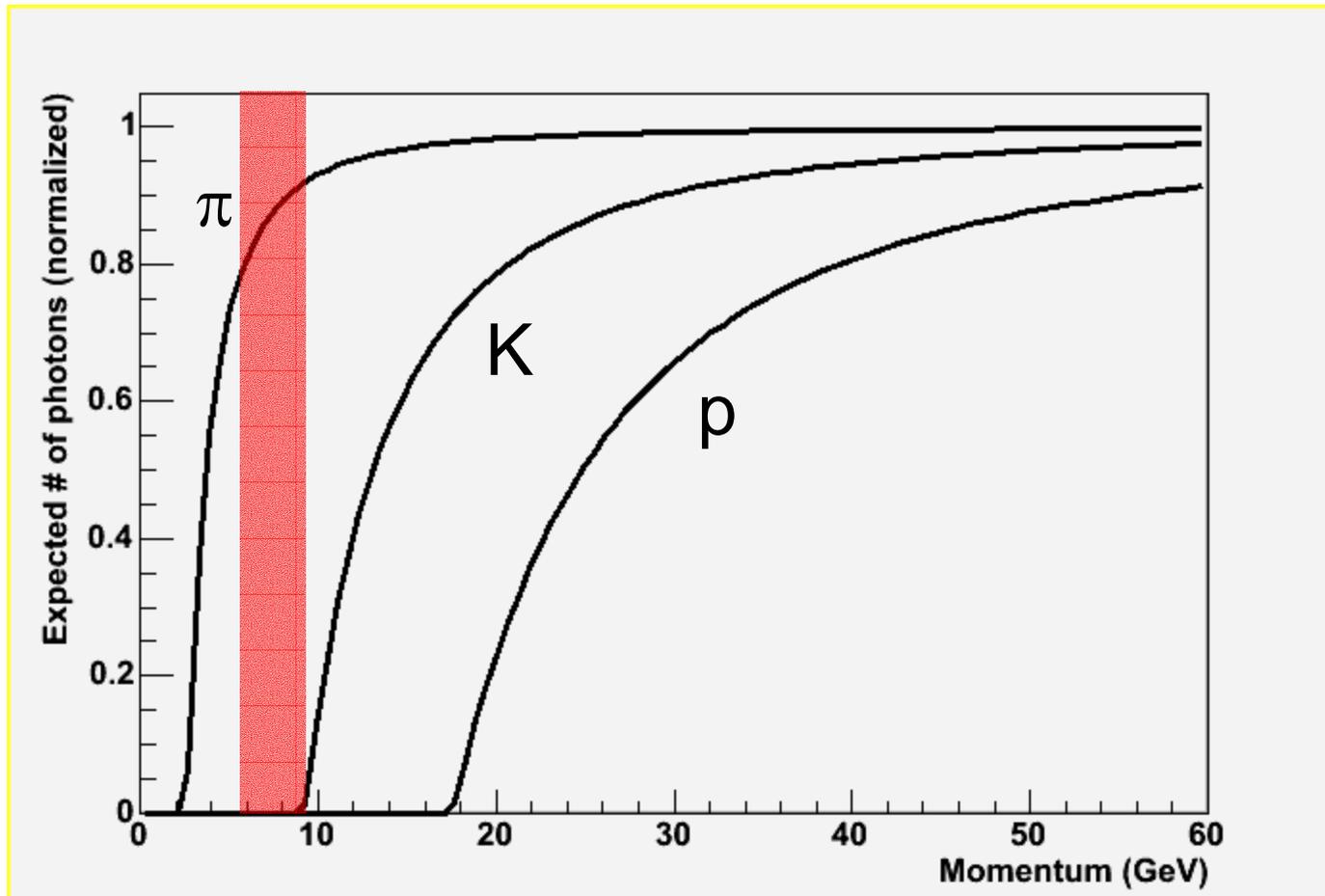
However..

- Tracking appears to me to be **much** better than when last I tried to match Ckov hits to tracks (IU workshop).
 - I'm sure you already knew this..
 - My life is much easier now.
- My data sample
 - All pass3 data between 14000-16000 processed at LLNL (~800 subruns)

Track sample

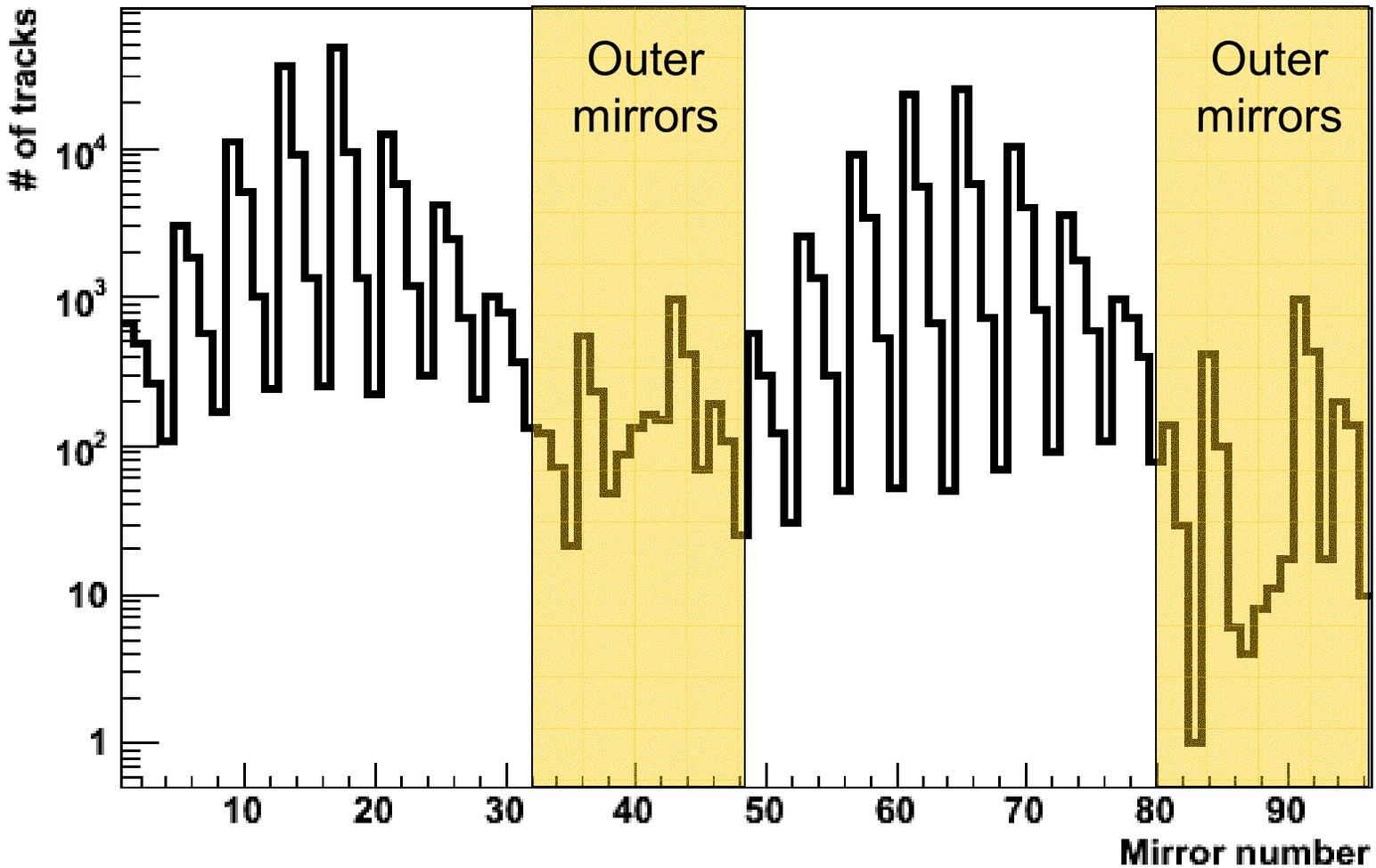
- Momentum cut [next page]
 - $6 < p < 9$
- Tracks that intersect a mirror
 - According to SPFit+ linear extrapolation from Ckov front window
 - $|x| < 5\text{mm}$ and $|y| < 5\text{mm}$ at front of TPC
 - At least 50 TPC
 - (Should I have expected this cut to remove many tracks that pass the above cuts?)

Lacking a control sample, compute gains using sample of fully on (or fully off) threshold tracks



Pions ~fully radiating, K and p are below threshold

Tracks hitting each mirror



Even with large fraction of data, statistics starved in outer mirrors

Mirror quality status..

- Much easier to assess ADC and TDC output
 - Recall that signals come from different base outputs (so may fail independently)

Good
Noisy
Problem
Question (unsure)
Dead

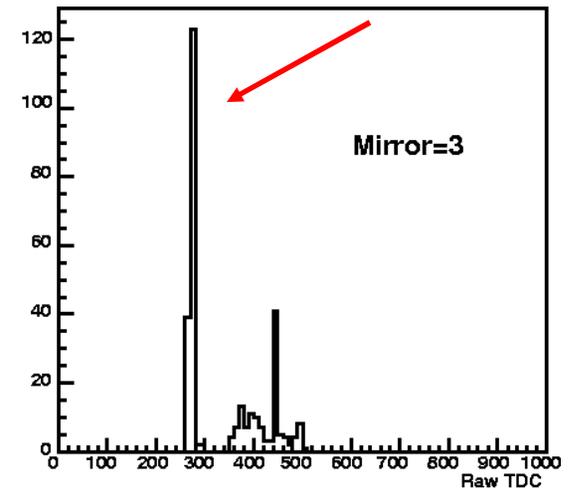
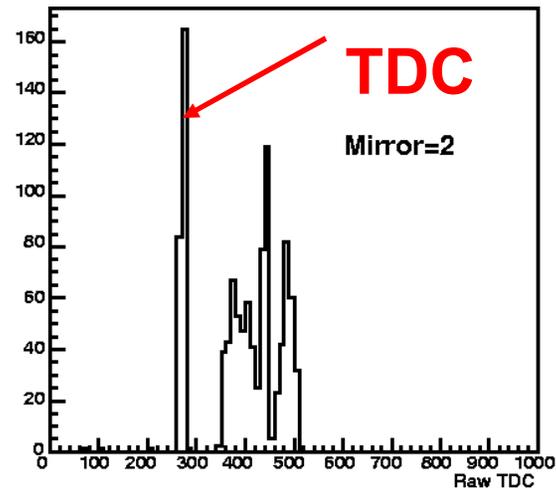
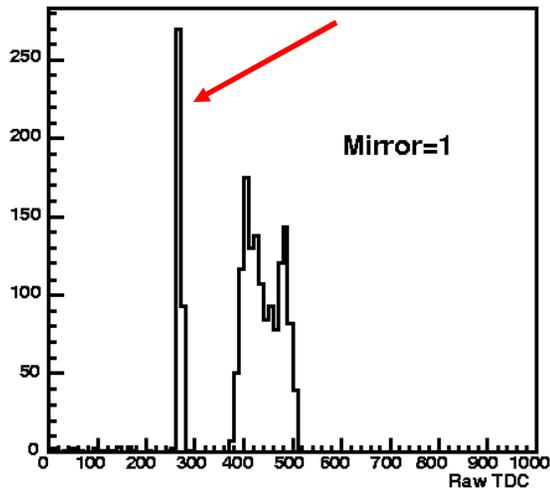
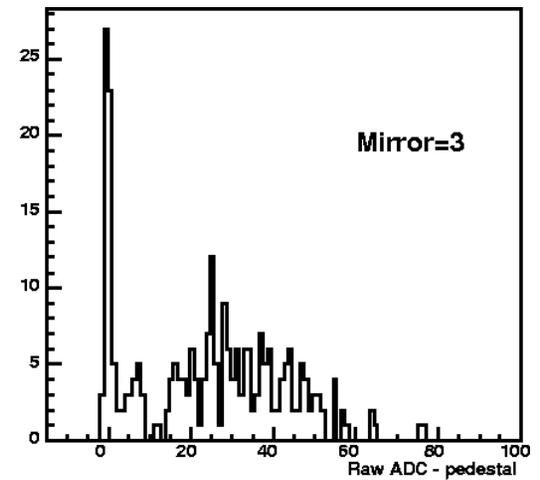
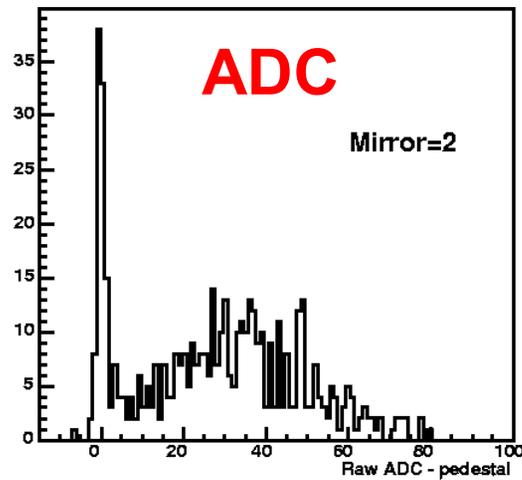
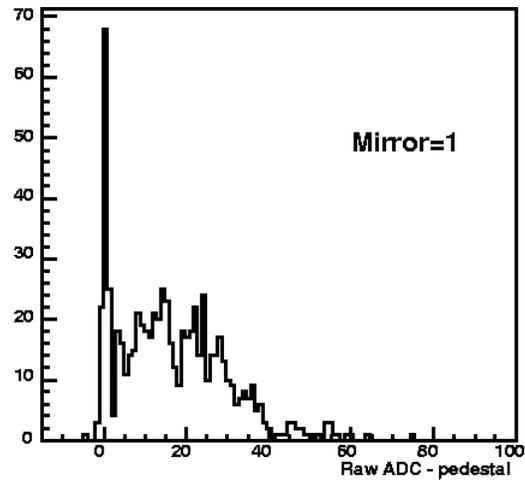
ADC

TDC

	G	N	P	Q	D
G	71	7	4	2	2
P					
Q	1	1		4	
D	1				3

=86

Example distributions



Calibration status

- Pedestals done long ago (now in pass1)
- Gains in progress
 - Using this track sample
 - Correct for path length and N/N_{\max} for π
 - Will study time variation for inner mirrors. Starved for statistics in outer mirrors.
 - Seeing (expected) mirror to mirror variation in gains, so gain calibration is required.
- But no Kaon band to show yet..