

Ckov Calibration Update

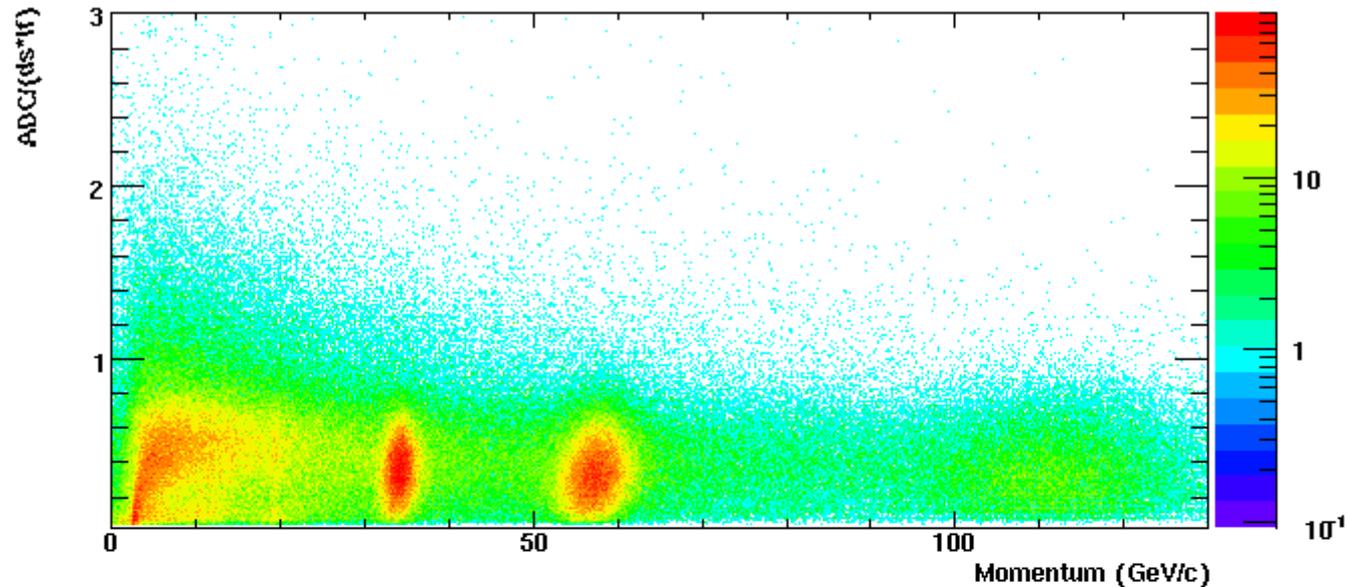
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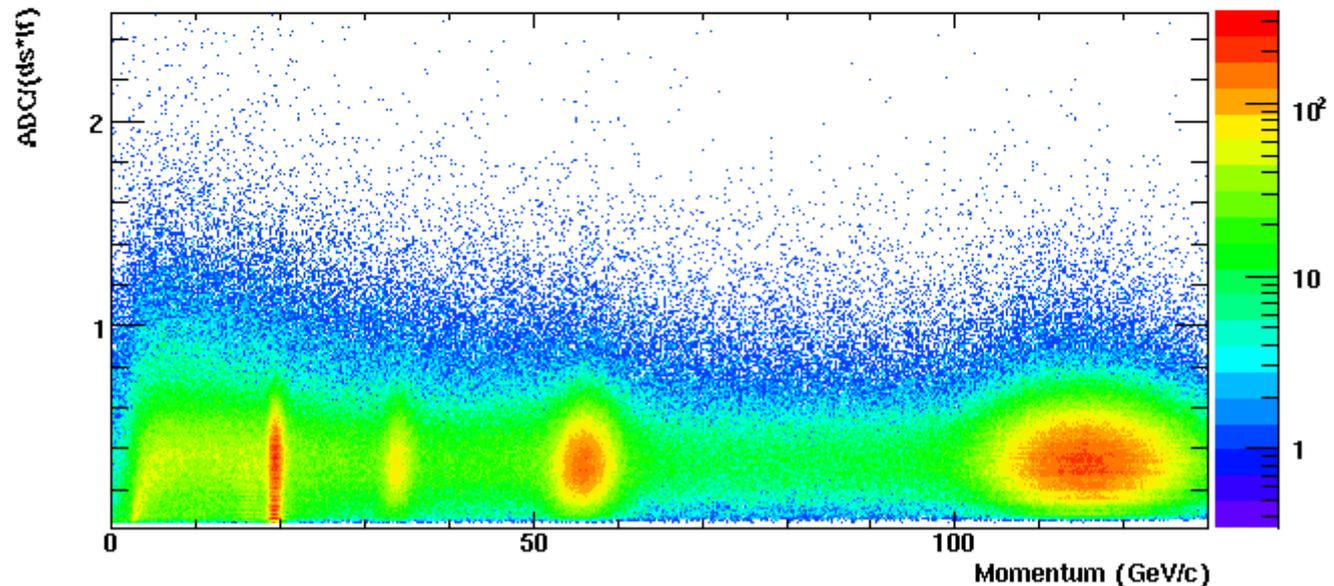
ADC vs. Momentum

- In this analysis I have used all thin-target data for C, Be, Bi, as well as the NuMI data.
- ADC vs. Momentum spectra are generated for each mirror.
 - All matching tracks
 - All matching tracks with corresponding matching RICH ring

(Raw ADC-Ped)/(ds*lf) vs. Momentum, Mirror 13

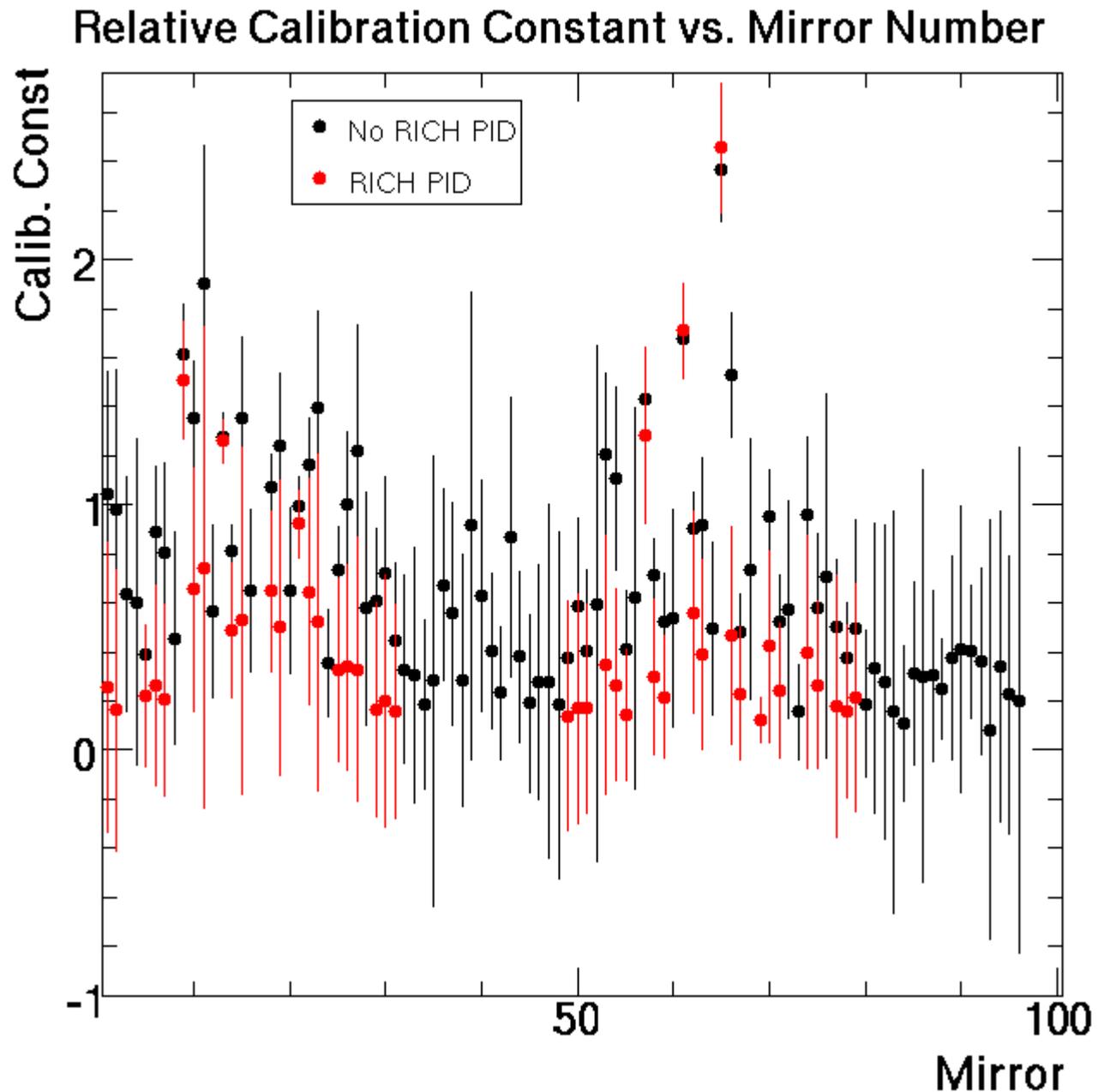


(Raw ADC-Ped)/(ds*lf) vs. Momentum, Mirror 17



Relative Calibration

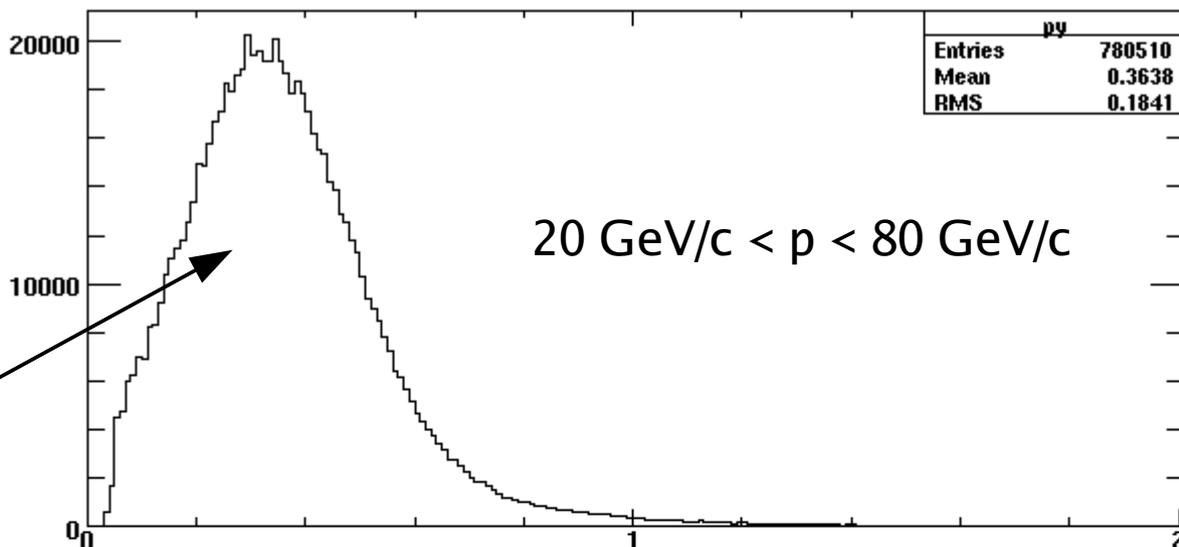
- Relative calibration is done w.r.t. Mirror 17, since that dominates the statistics.
- Shown on the right are the relative calibration constants for each of the 96 mirrors.
 - Black is for all tracks
 - Red is for all RICH PID tracks
- Not much has changed since we did this last, most mirrors respond more poorly than mirror 17.
- Results using RICH agree within statistics



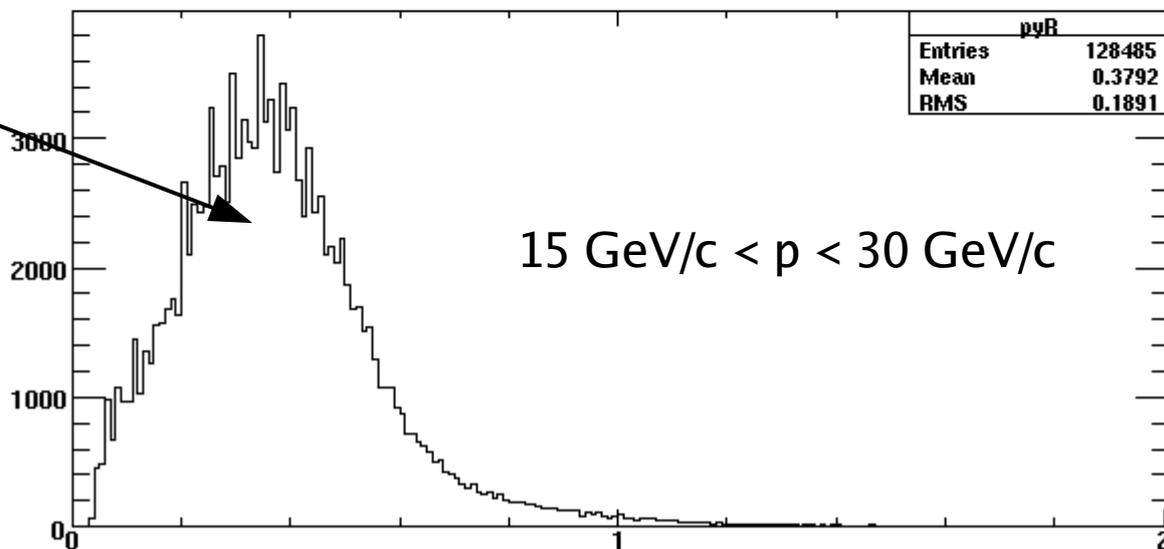
Absolute Calibration

- Absolute calibration for mirror 17 by approximating the number of p.e.'s as $(\text{mean}/\text{sigma})^2$ of the ADC distribution for $\beta \approx 1$ particles.
- Number of p.e.'s (All tracks): 3.904
- Number of p.e.'s (RICH PID tracks): 4.021
- Number of p.e.'s (from Tricia's analysis last year): 5.85

ADC/(ds*lf) Distribution, Mirror 17



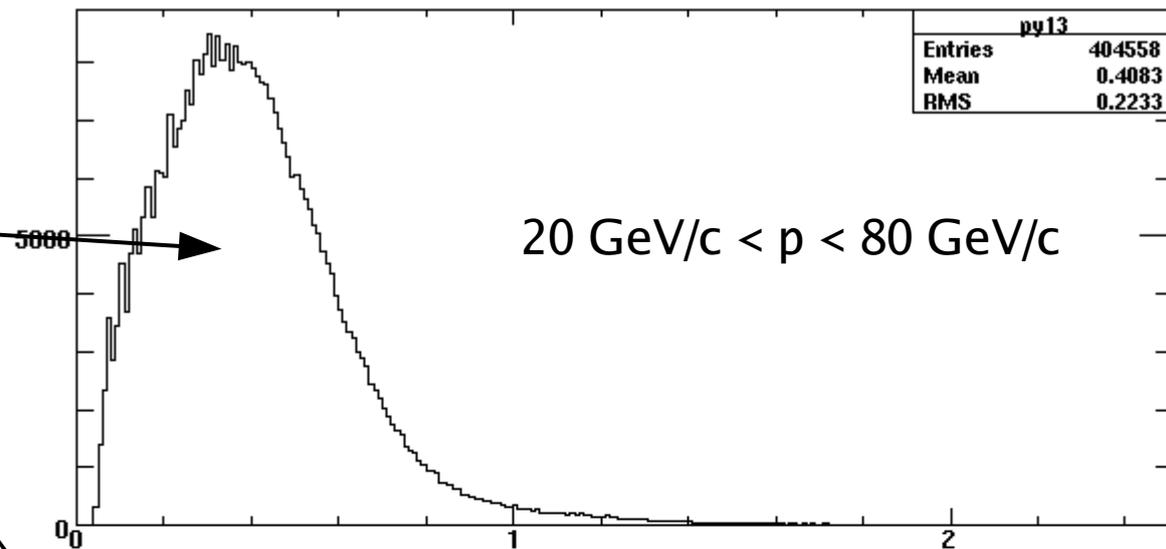
ADC/(ds*lf) Distribution, Mirror 17, RICH PID Tracks



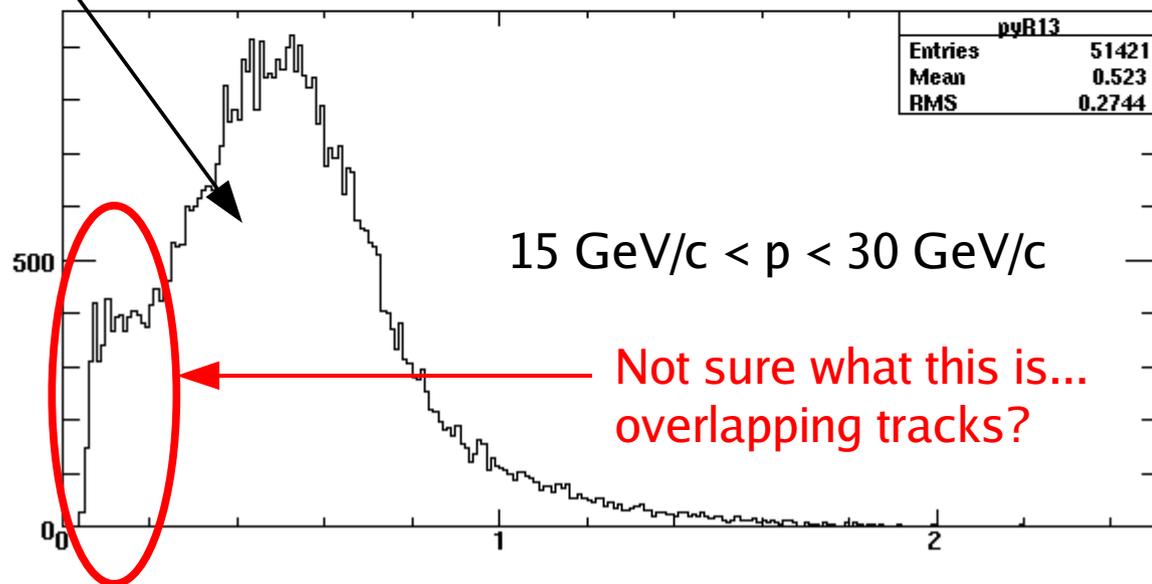
Absolute Calibration – Cross Check

- For Mirror 13, number of p.e.'s:
 - All tracks: 3.343
 - RICH PID tracks: 3.633
- This does not agree very well with the relative calibration of mirror 13 of ~ 1.25 . Was expecting N.p.e. ≈ 5 .

(Raw ADC-Ped)/(ds*lf) vs. Momentum, Mirror 13



RICH-Tagged (Raw ADC-Ped)/(ds*lf) vs. Momentum, Mirror 13



To-do

- Do more cross-checks; are discrepancies consistent across all mirrors?
- Load dB with new constants.
- Finish code for LL calculations.