Sub-PE Strip Cut

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CC Meeting
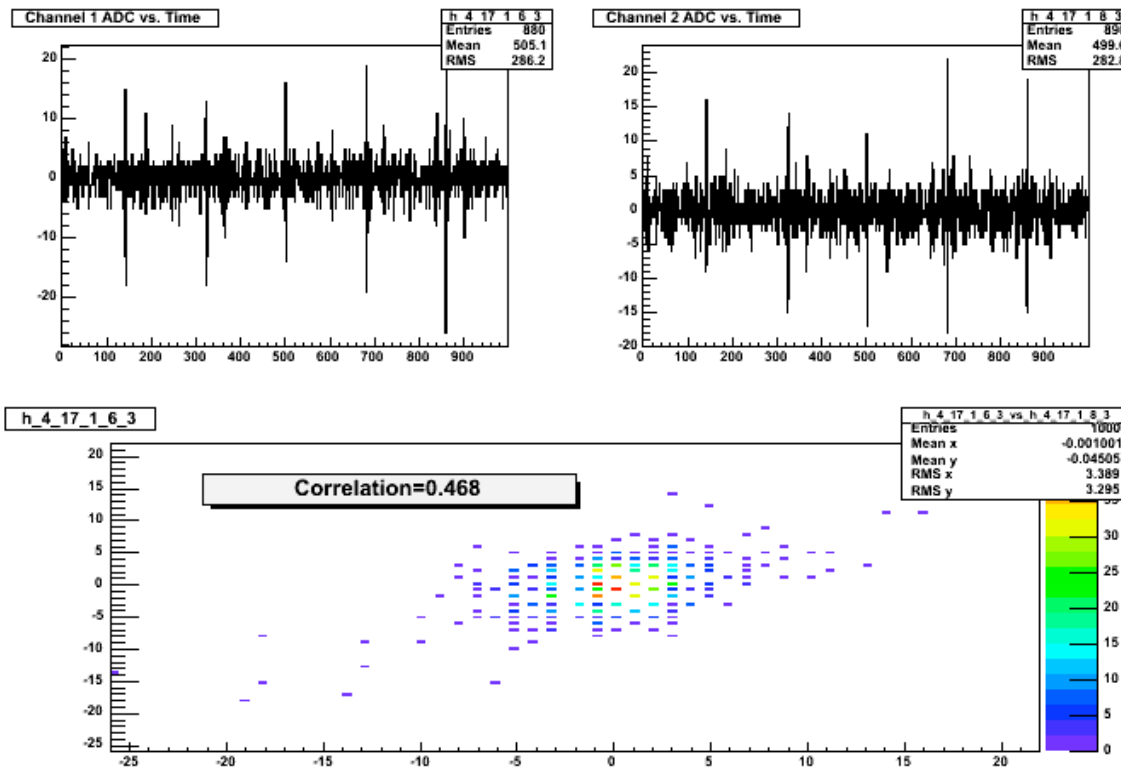Oct 26, 2005

Sub-PE noise

- Strip ADC distribution has many more hits below ~40ADC in Data than in MC

- Not a significant factor in low PulseHEight events

- Does complicate detailed low-level Data/MC comparisons

Coherent Noise

- Example

Strip PH Filter

- Reject a strip if:

  ▸ Comprises only 1 digit

  ▸ That digit is below 40 ADC counts

- Technical validation

  ▸ Keep track of strip loss statistics (default is off)

  ▸ Switch noise filter on or off (default in ON)

  ▸ Settable digit threshold (default is 40 counts above ped

- Default R1.18, and new code with threshold=0 and new code with filter=OFF behave identically

Further Validation (MC)

- ## MC Strip and Event Pulseheights

  - Some higher pulseheight strips are lost

    - Events lost due to rejection of a few sub-PE hits?

  - Event energy migration at all pulseheights
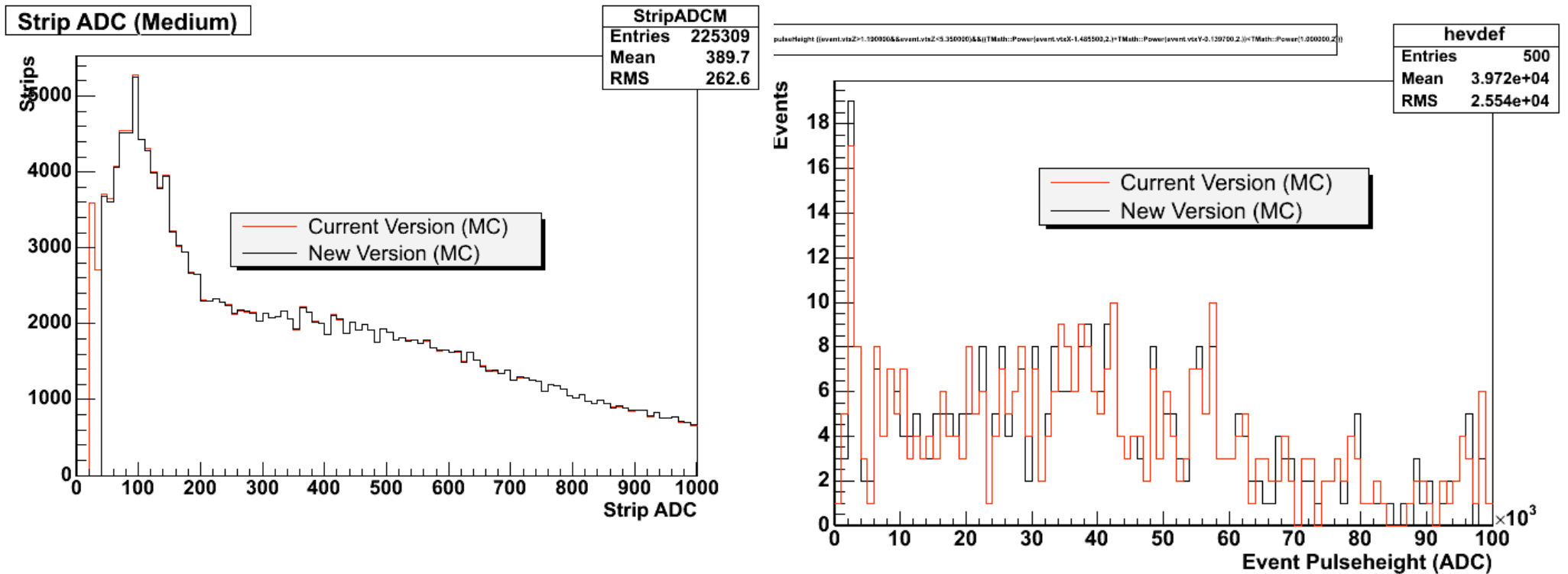
Further Validation (Data)
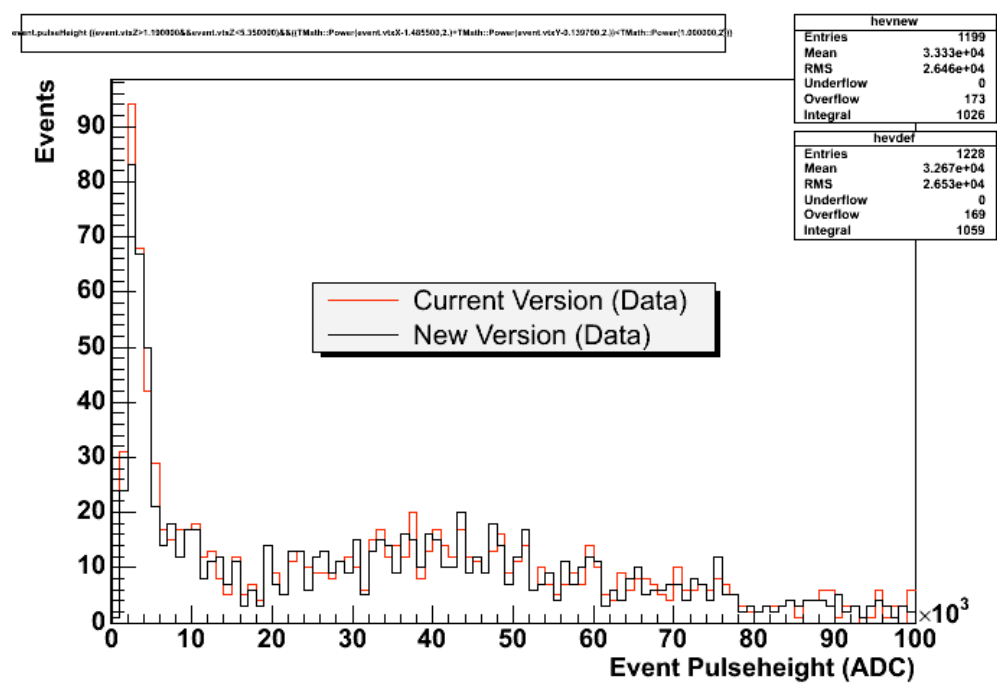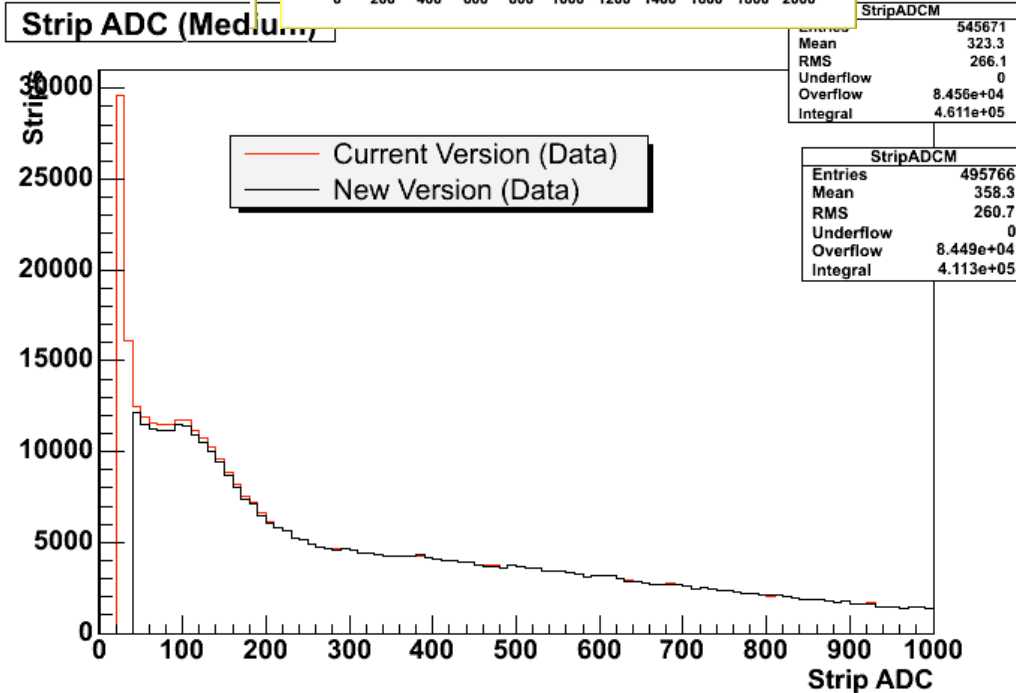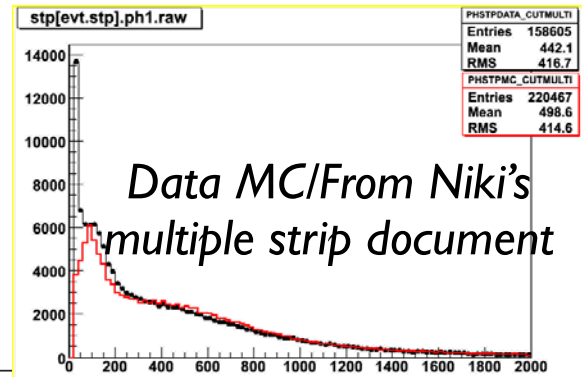
Conclusions

- At a purely technical level, this new version of AlgStripSRList seems to work

  ▸ Want to understand loss of higher PH strips

- Too low stats at the moment for real data/ MC comparison

- Final decision needs input from WGs

- At a minimum, I would like to add this code, if even with default threshold of 0

  ▸ Don't want to repeat code upgrades against future changes