ART-v-FMWK sanity check after CalData Recon stage

Eric Church, 14-Oct-2010

6GeV/c muons in ArgoNeuT MC

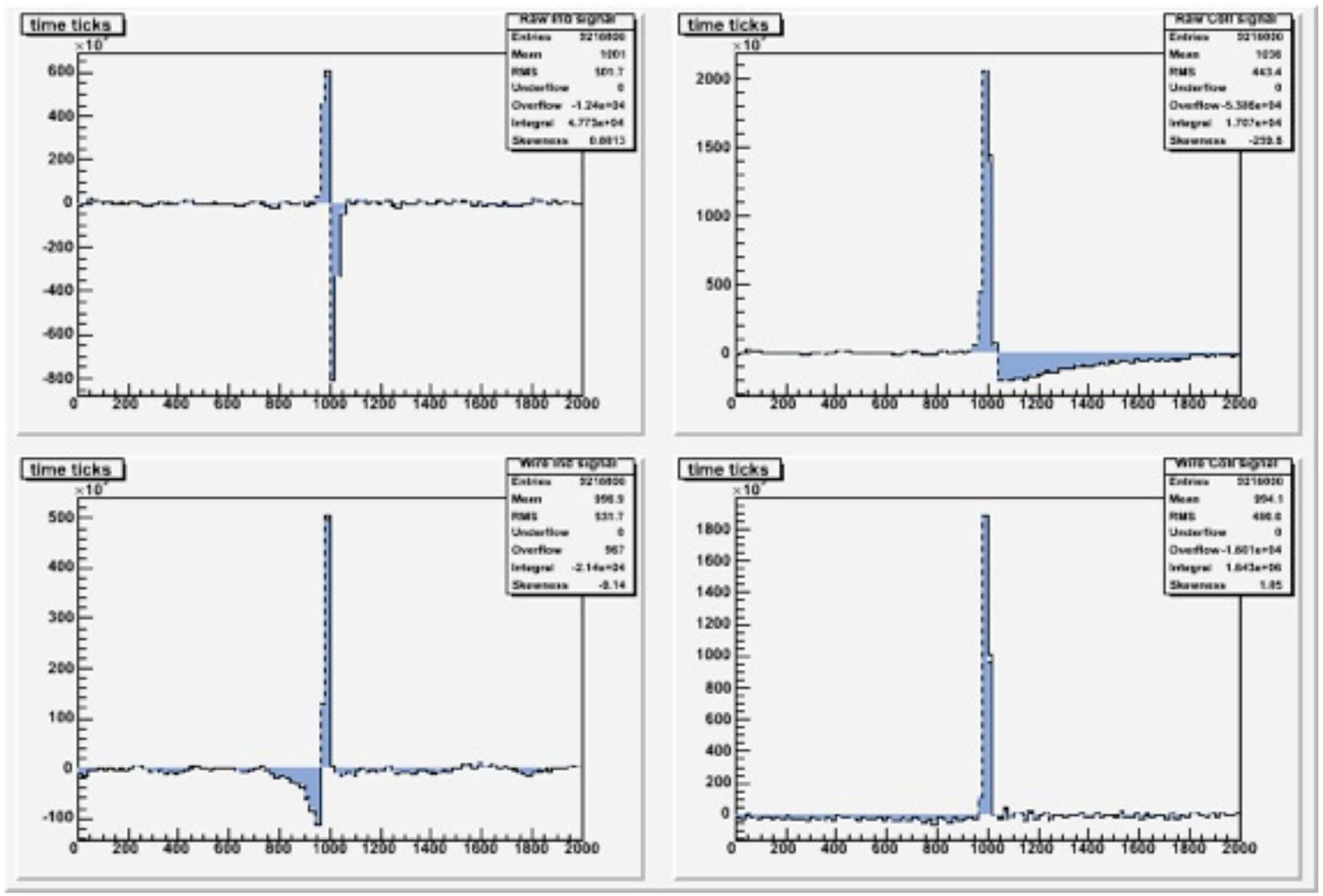
- Get the same SimWire parameters in default (not argoneut!) xml config also into the py file.
- Explicit Write() of histos necessary in FMWK, not ART. But only cuz of a coding choice Brian P made.
- No "/" in histogram names!
- muons started very near center of detector with tiny spread in angle down z-axis of detector. Travel time across detector is sub-nsec.

I and C signals

RawDigit->Wire: Pedestals are subtracted and Collection signals have reflection deconvoluted.

Raw Induction

Raw Collection



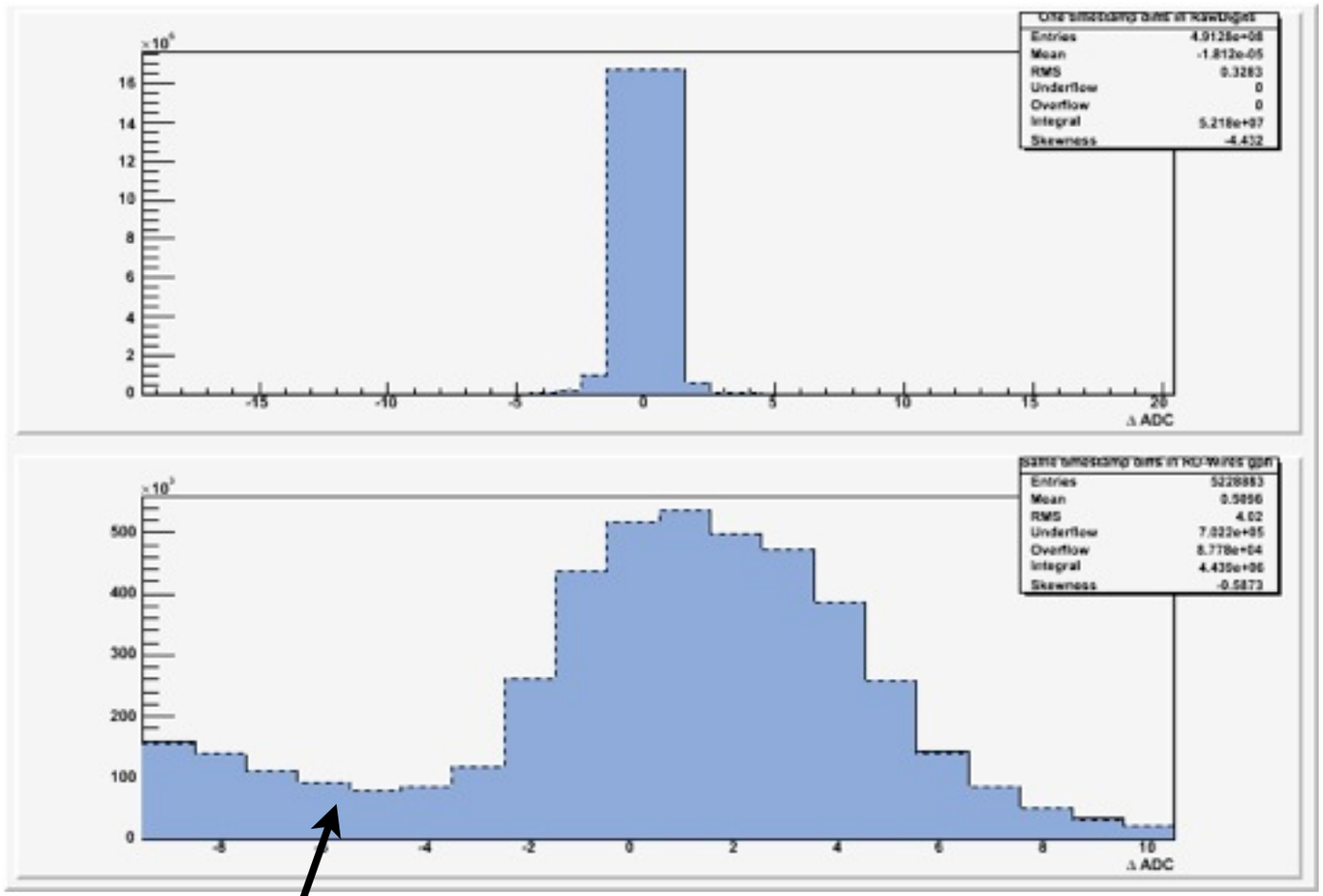
Note that binning here is 20 ticks. +/-8 ticks from max peak defines "good pulse height" -- relevant in coming slides.

Wire Induction

Wire Collection

1 tick and no-tick signal differences

adc(t)-adc(t-1) from RawDigits



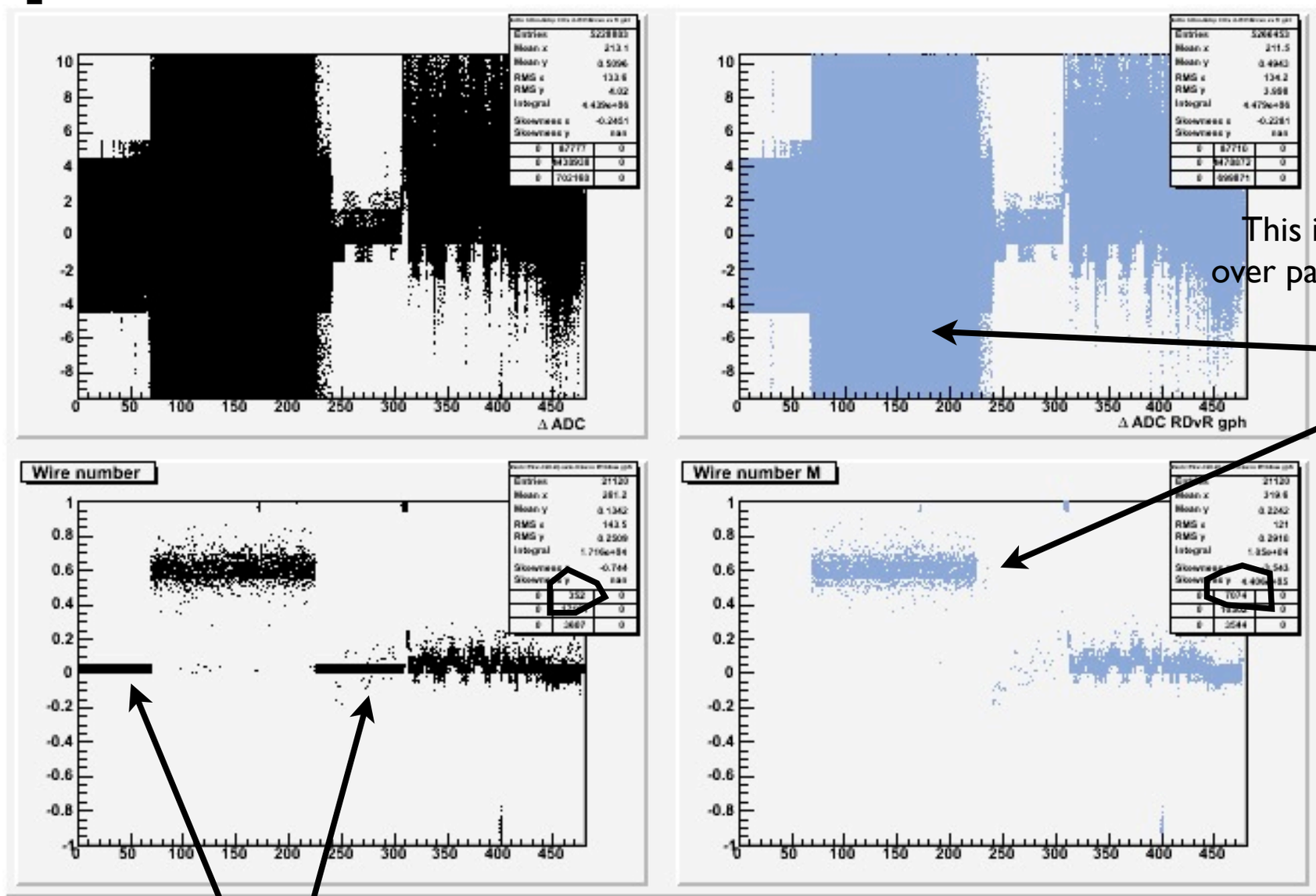
same timestamp RawDigit-Wire inside pulse

artifact of clipped (pedestal subtracted) Induction pulse

blue/dashed is ART, solid line is FMWK

per Wire differences

This is the tick-by-tick raw-wire ADC difference for each wire inside pulse



This is again cuz I'm doing this over part of Induction pulse which is clipped.

This is the Mean relative raw-wire difference inside pulse

no muons in upstream wires

0/0 is 0

0/0 is large #