TPOL commissioning

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BLTWG meeting

DAQ Settings

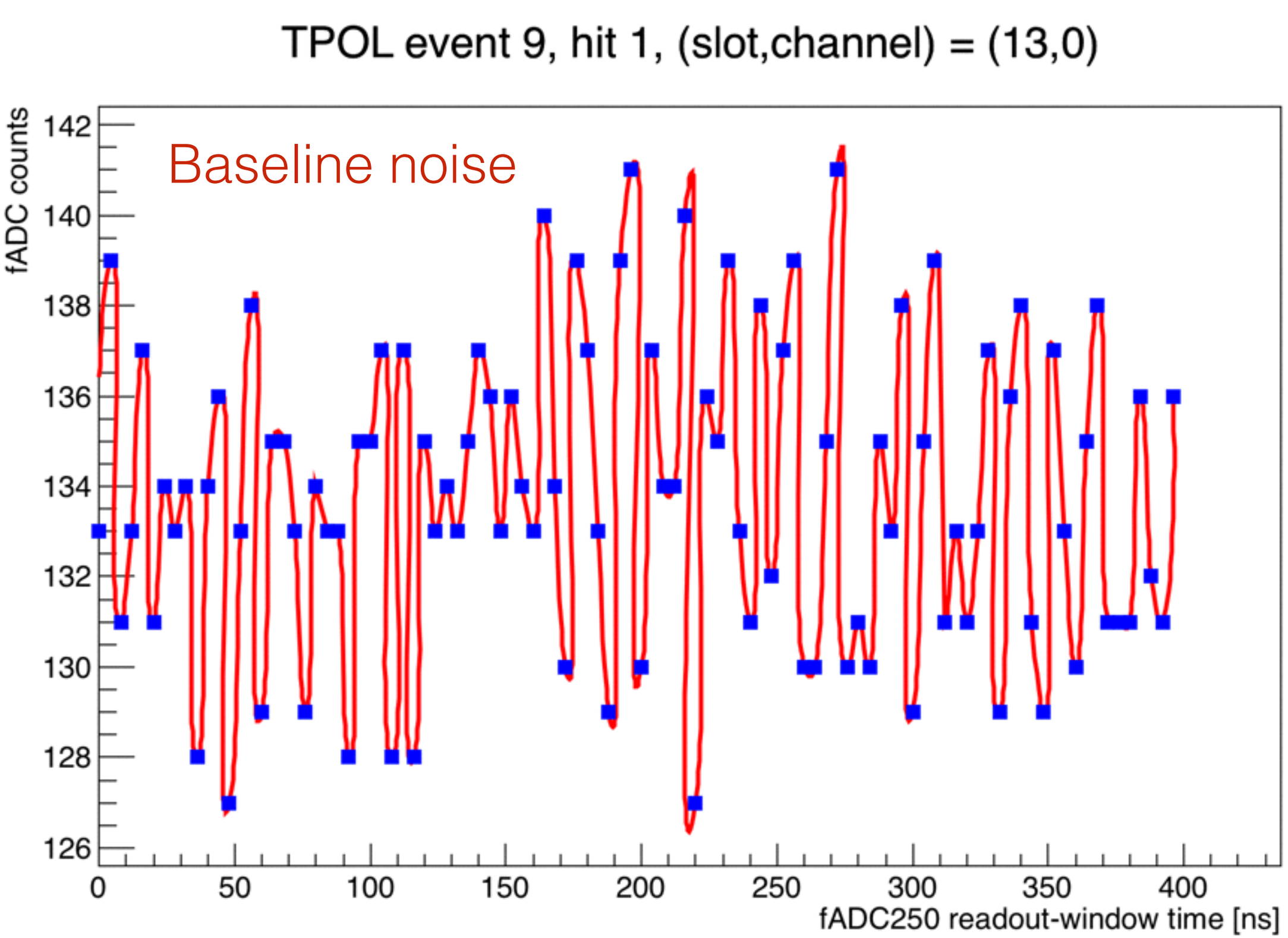
- 2/19/16: TPOL/PS integrated in run 10389
- Started with 100 readout samples (150 desired)
- mode 8 data: runs 10389 to 10392
- mode 7 data: runs 10394 to 10465
- mode 1 data: runs 10487 to present

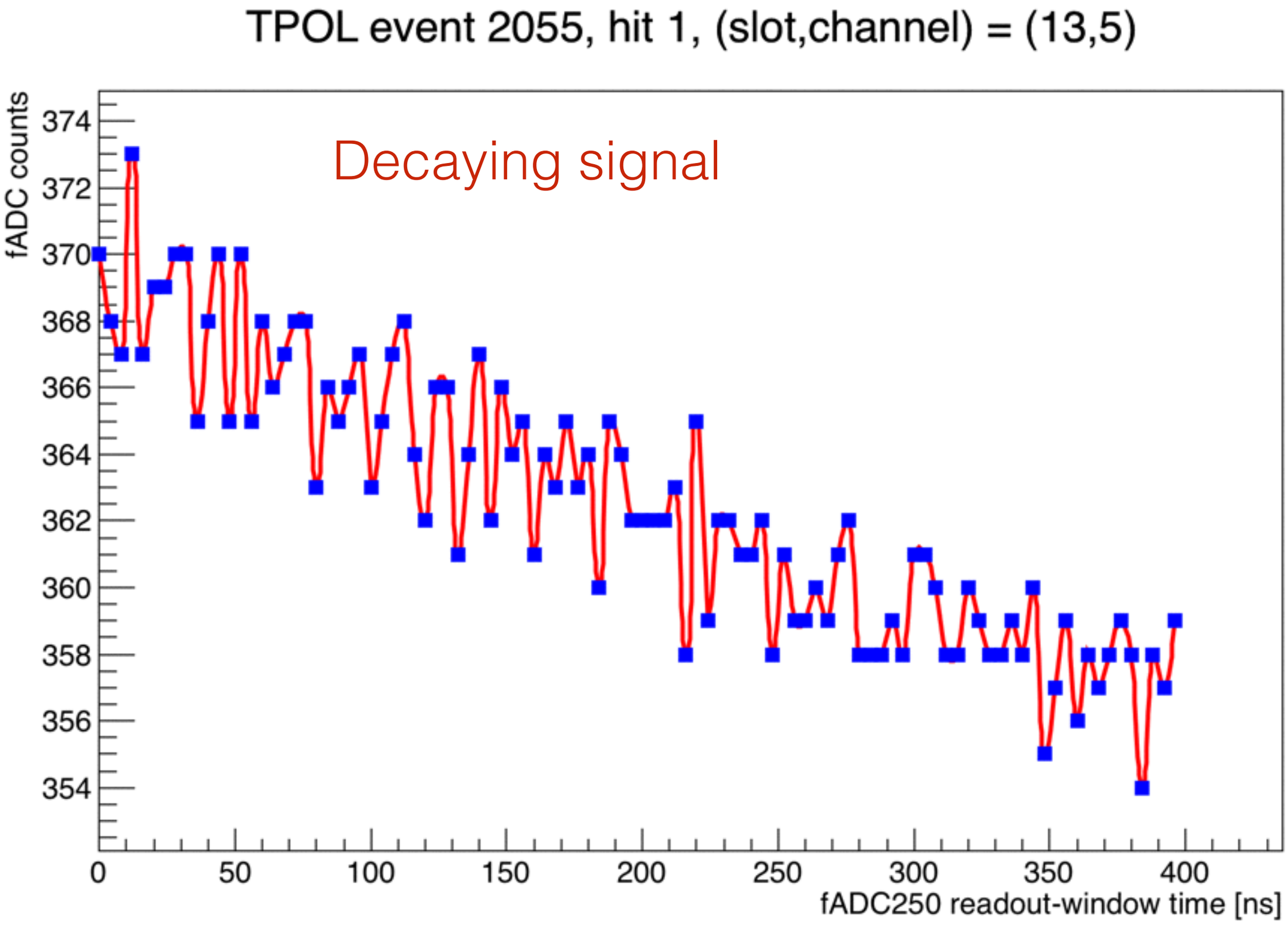
ADC-readout modes

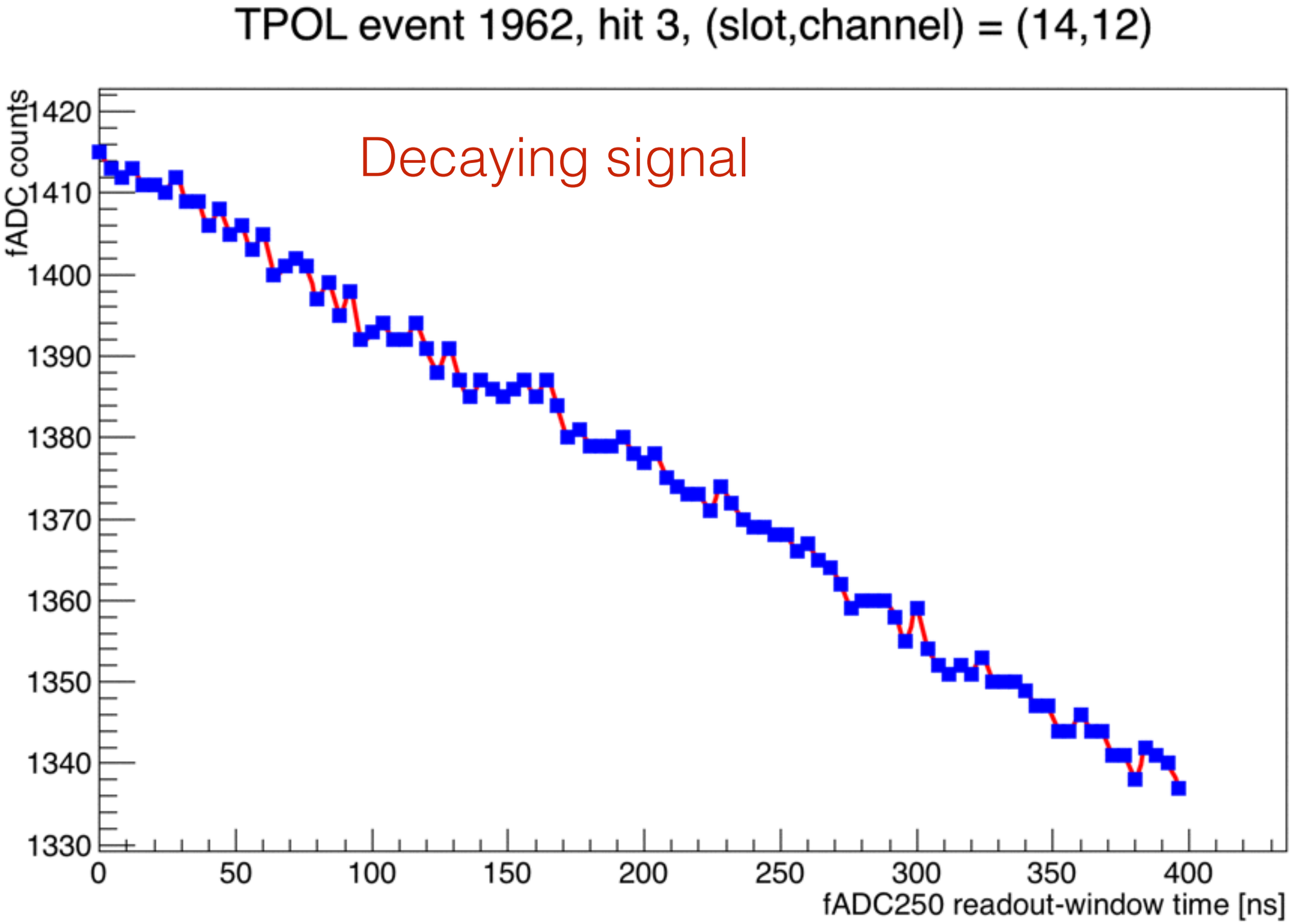
- mode 1: raw samples only
- mode 7: pulse integral, pulse time, pulse param's
- mode 8: raw samples, pulse time, pulse param's

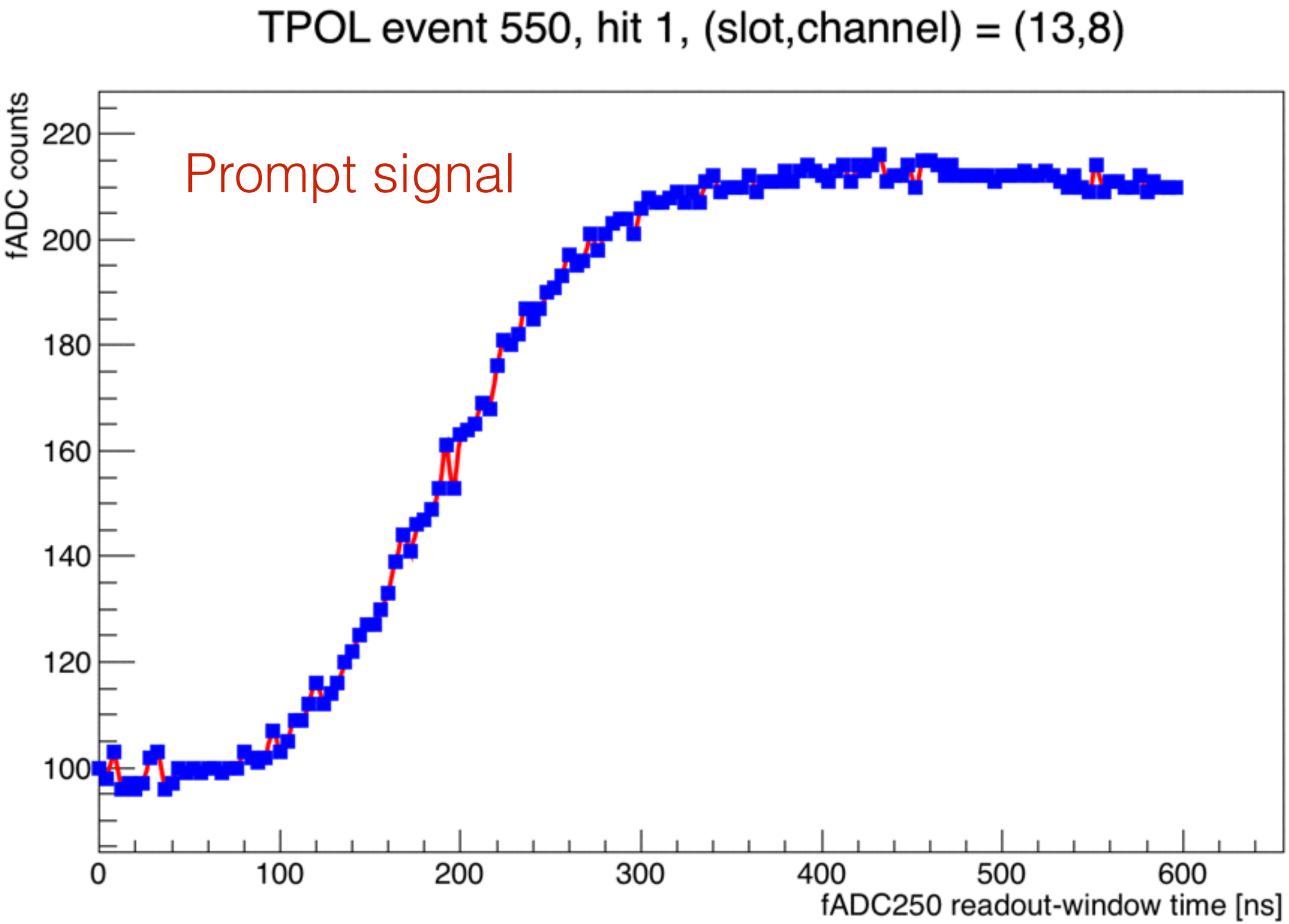
Issues

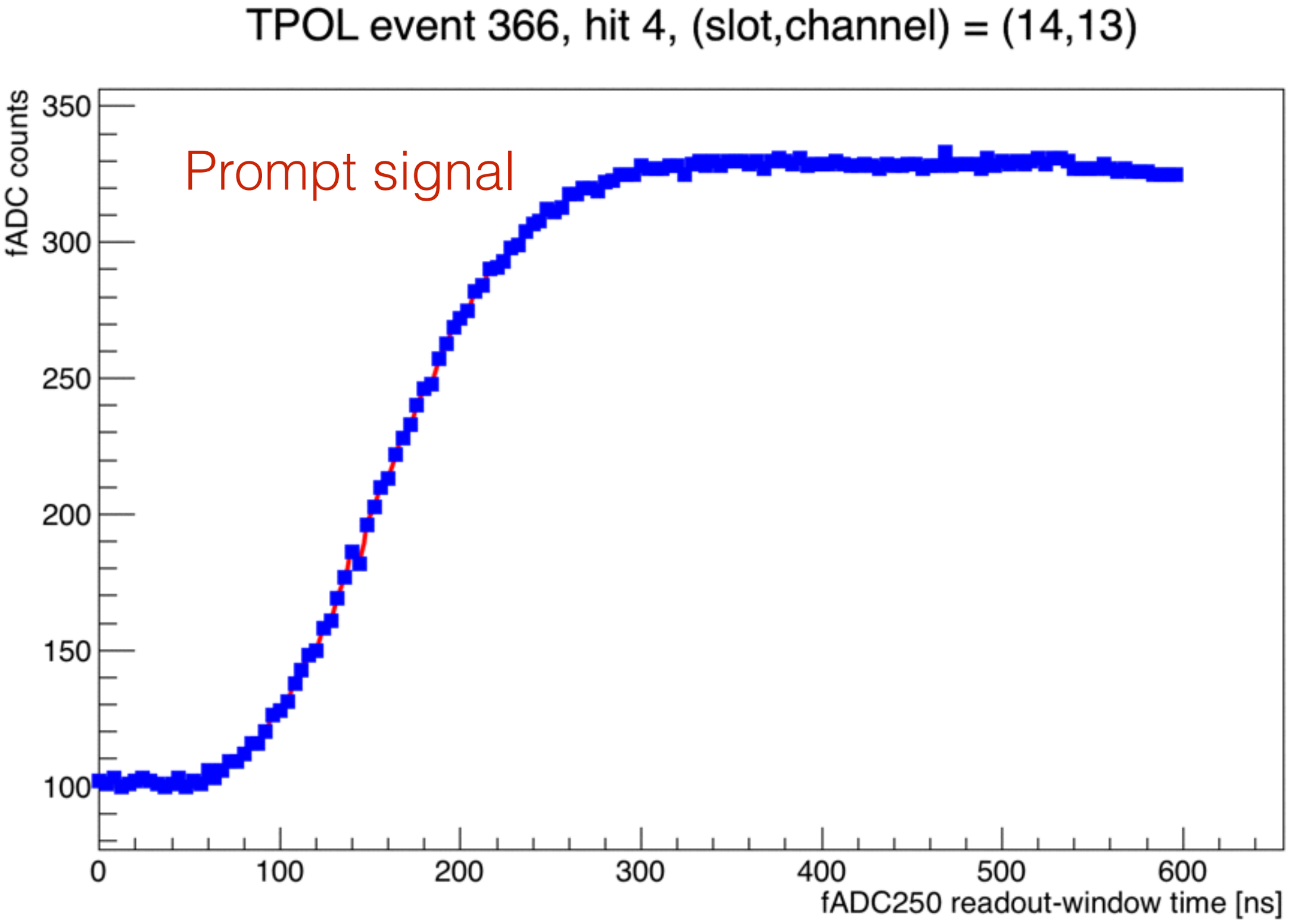
- Starting DAC (baseline) calibration was not good
- TPOL multiplicity was larger than usual due to this
- In mode 8, TPOL seemed to be slowing down DAQ
- TPOL was switched to sparsified mode, mode 7
- Prompt peak w/ PS was too far to the right in window
- Inaccuracy of pulse parameters from mode 7


TPOL event 9, hit 1, (slot,channel) = (13,0)
Baseline noise
fADC counts
142
140
138
136
134
132
130
128
126
0
50
100
150
200
250
300
350
400
fADC250 readout-window time [ns]

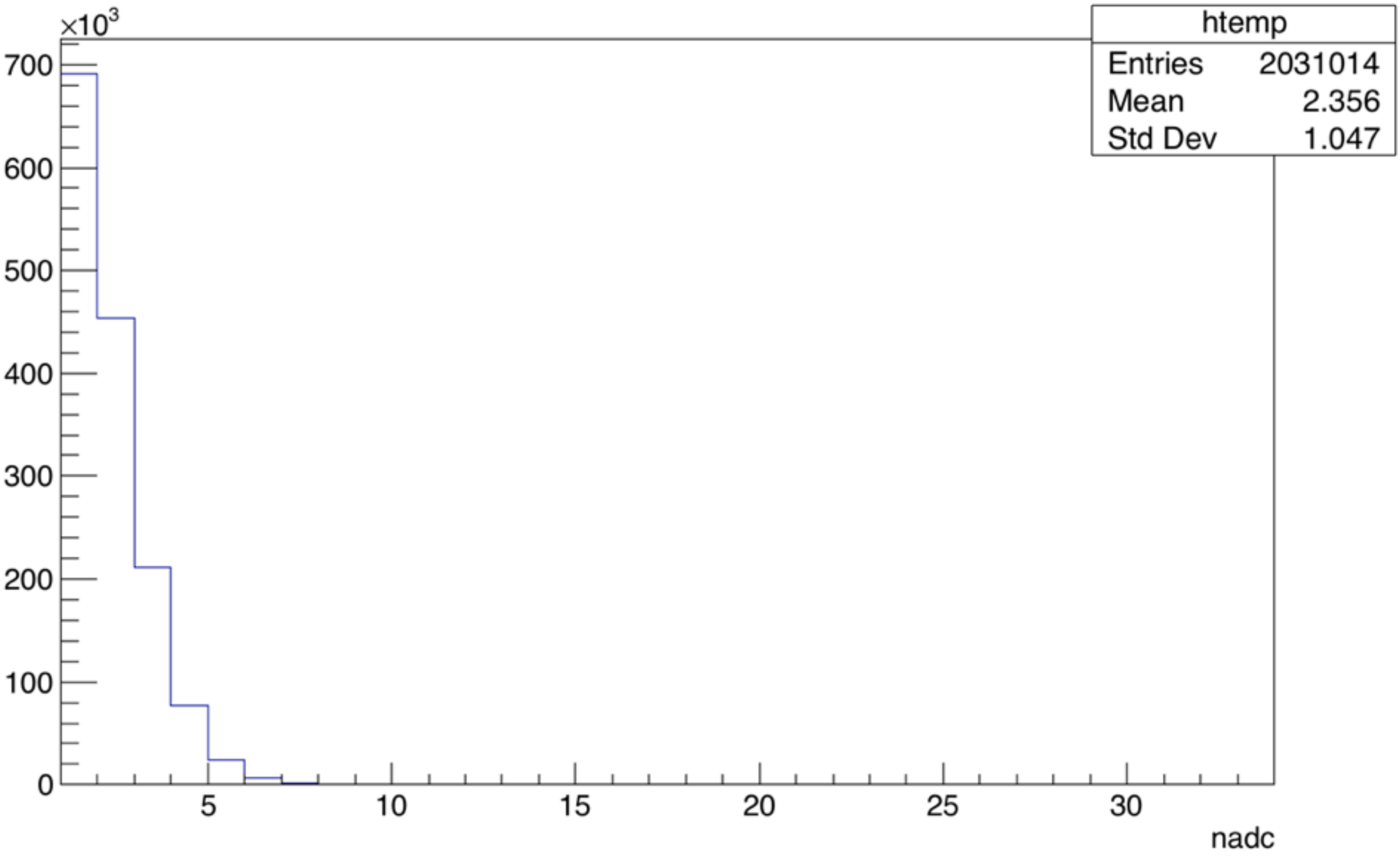

TPOL event 2055, hit 1, (slot,channel) = (13,5)
Decaying signal
fADC counts
374
372
370
368
366
364
362
360
358
356
354
0
50
100
150
200
250
300
350
400
fADC250 readout-window time [ns]


TPOL event 1962, hit 3, (slot,channel) = (14,12)
Decaying signal
fADC counts
1420
1410
1400
1390
1380
1370
1360
1350
1340
1330
0
50
100
150
200
250
300
350
400
fADC250 readout-window time [ns]

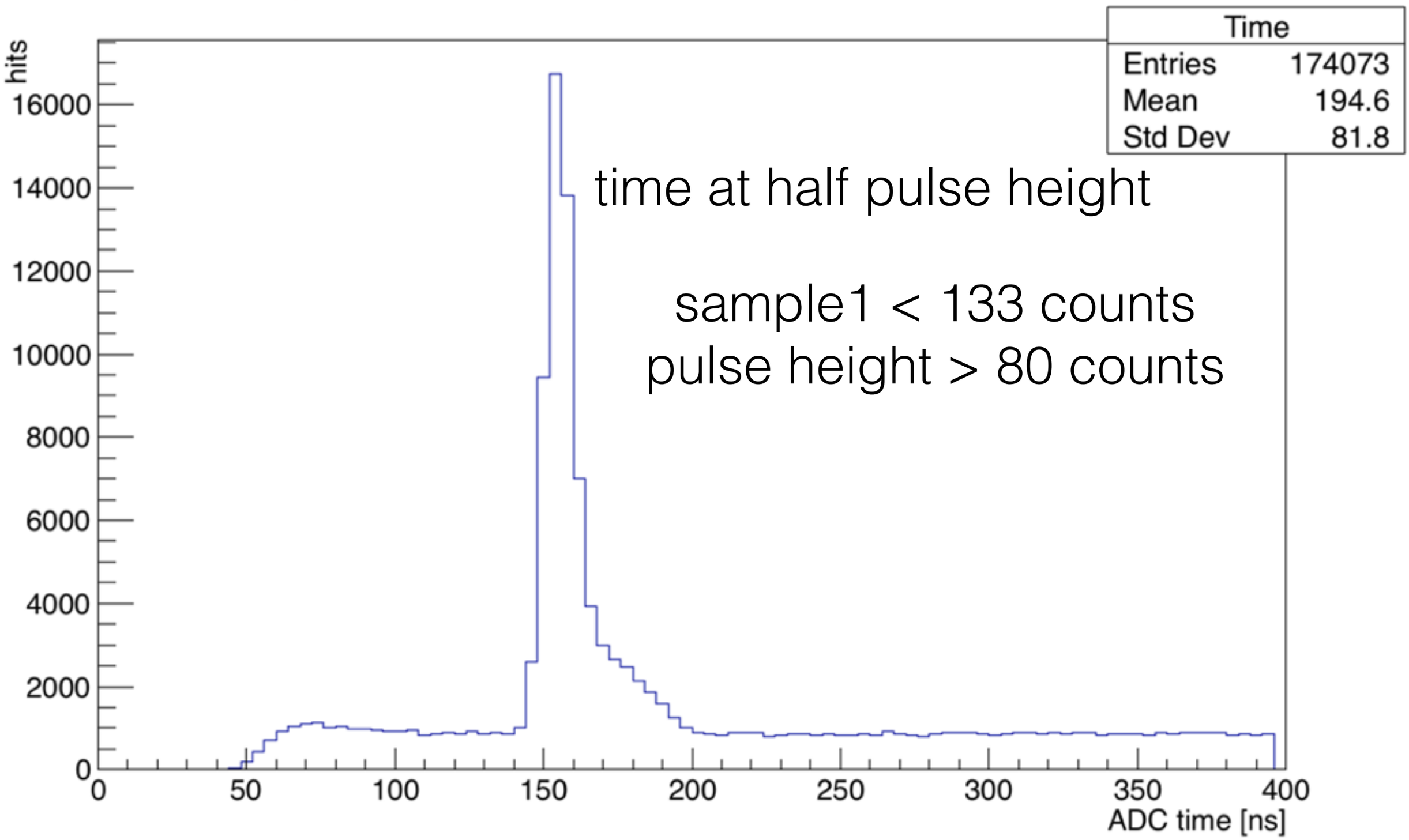

TPOL event 550, hit 1, (slot,channel) = (13,8)
Prompt signal
fADC counts
220
200
180
160
140
120
100
0
100
200
300
400
500
600
fADC250 readout-window time [ns]


TPOL event 366, hit 4, (slot,channel) = (14,13)
Prompt signal
fADC counts
350
300
250
200
150
100
0
100
200
300
400
500
600
fADC250 readout-window time [ns]

Multiplicity, run 10564



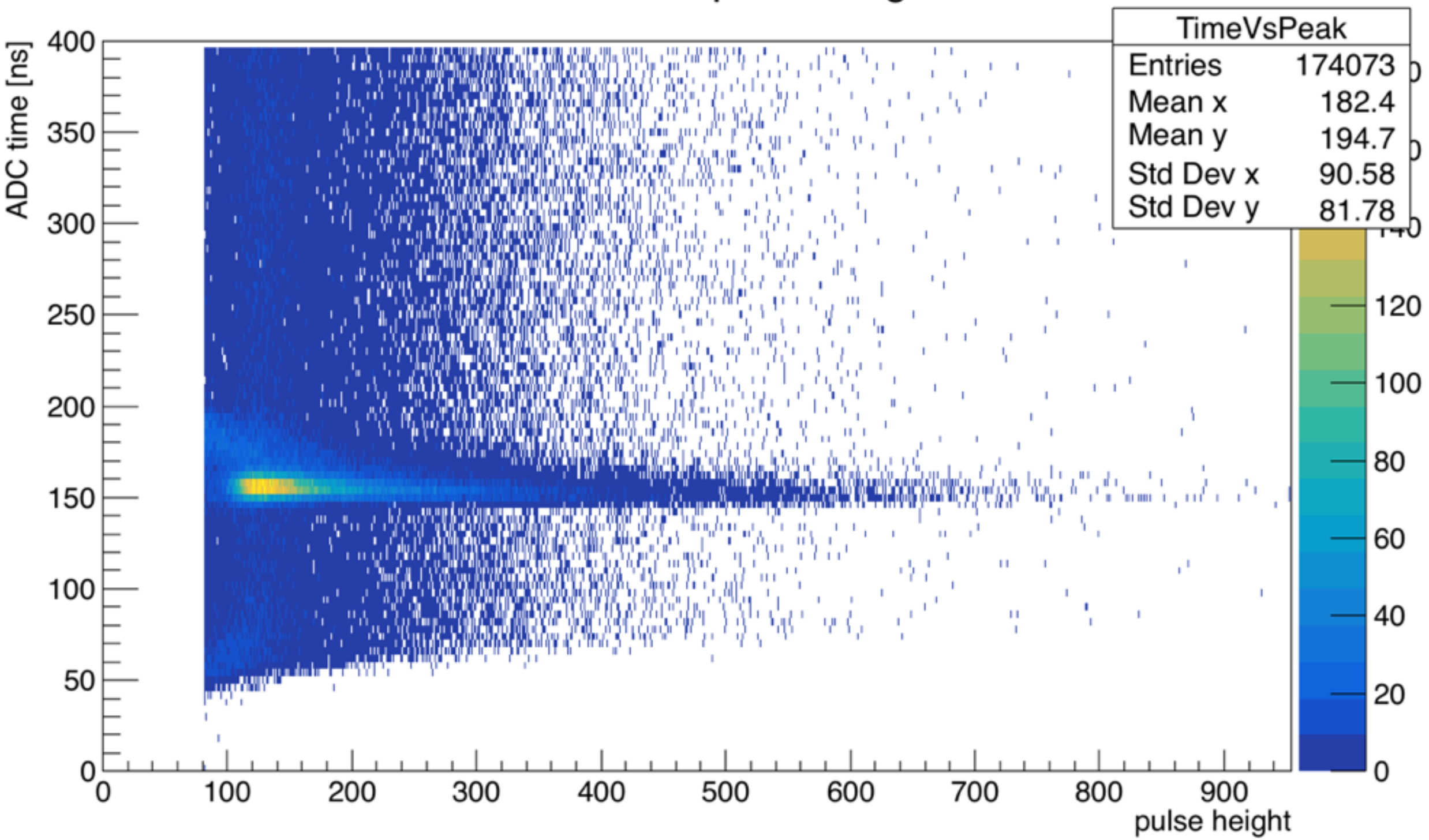
Timing, run 10564



time at half pulse height

sample1 < 133 counts
pulse height > 80 counts

Run 10564


ADC time vs. pulse height
TimeVsPeak
Entries 174073
Mean x 182.4
Mean y 194.7
Std Dev x 90.58
Std Dev y 81.78
ADC time [ns]
pulse height
0
50
100
150
200
250
300
350
400
0
100
200
300
400
500
600
700
800
900
0
20
40
60
80
100
120

Status

- Sergey improved the baseline calibration
- The waveforms compare well with expectations and are fairly well understood
- Sasha increased the readout samples to 150
- The prompt peak w/ PS has been shifted to a pretty good location, may need some fine tuning
- Starting to look at phi distributions to extract polarization