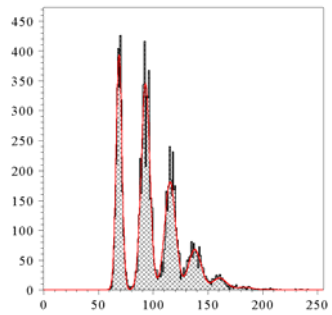
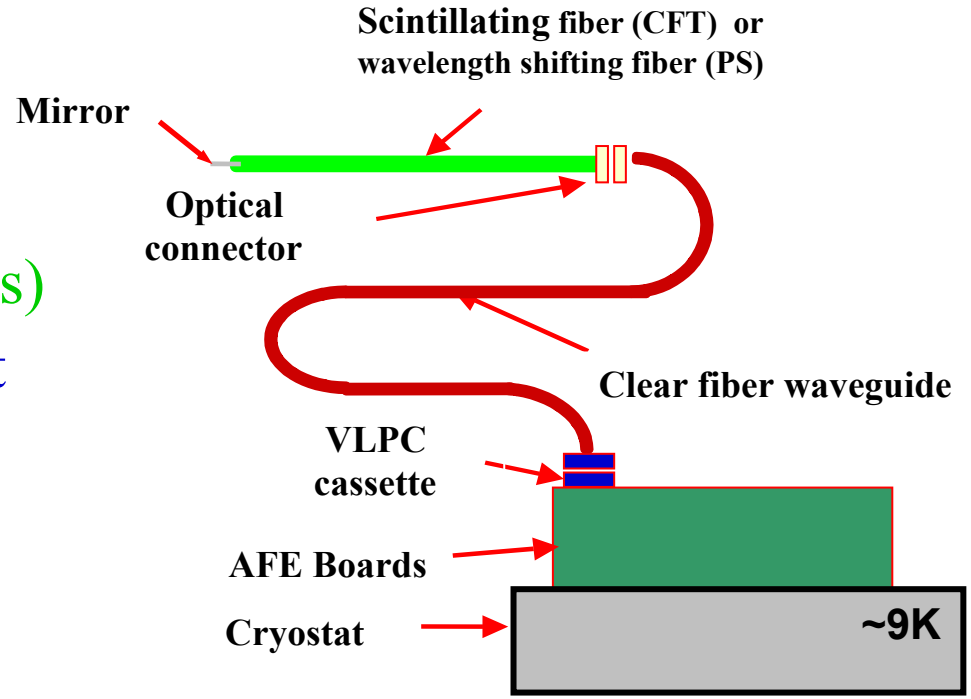
Light Yield Study for CFT

Shabnam Jabeen, Oana Boeriou



Fiber Tracker



Scintillating fibers (or strips)

Light detector (visible light photon counters VLPC)

- Necessitate Cryogenics

Readout electronics

Trigger

We are using:

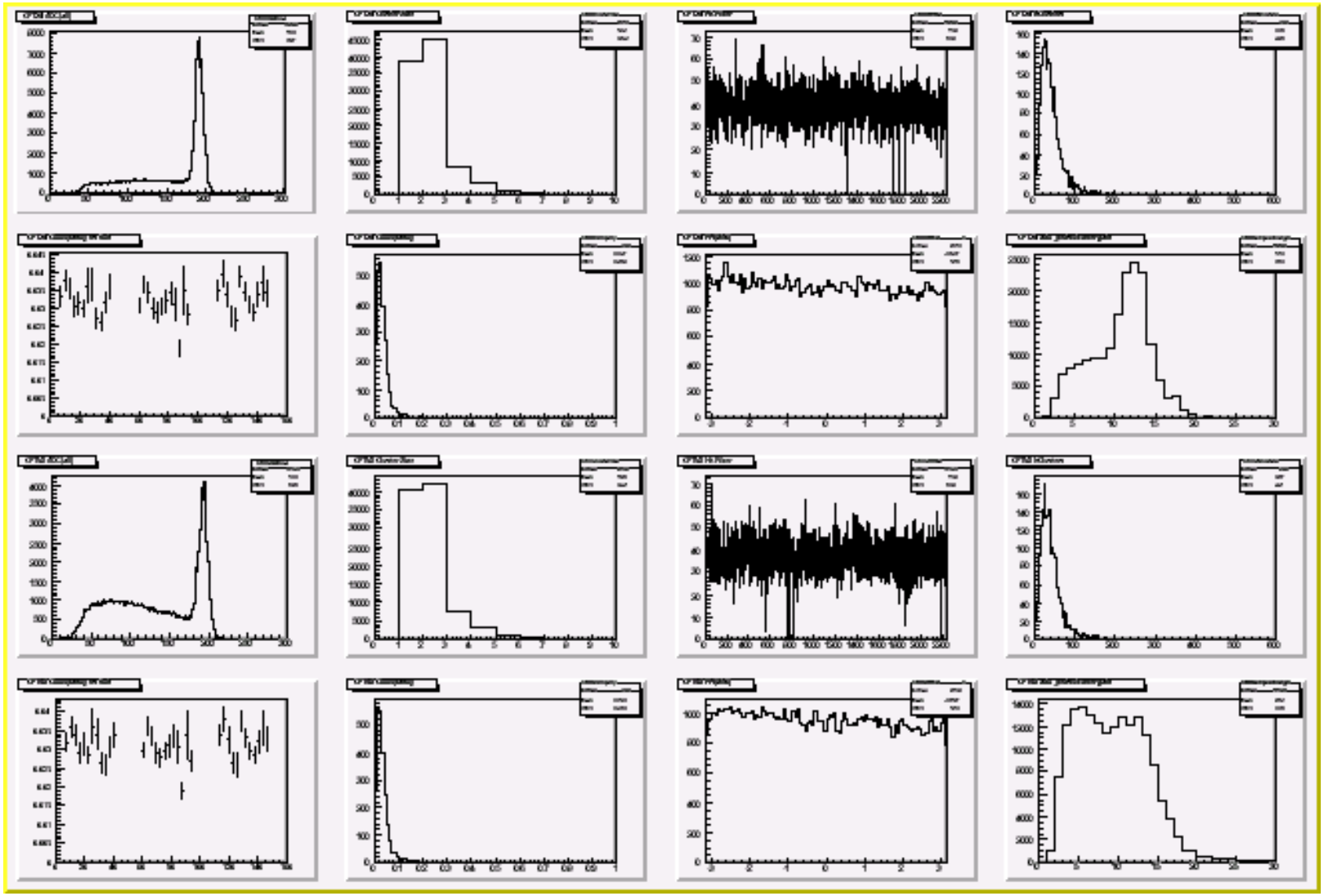
Physics Run 178423:

27 June, 2003
Lum ~ 39E30, CMT 11.04

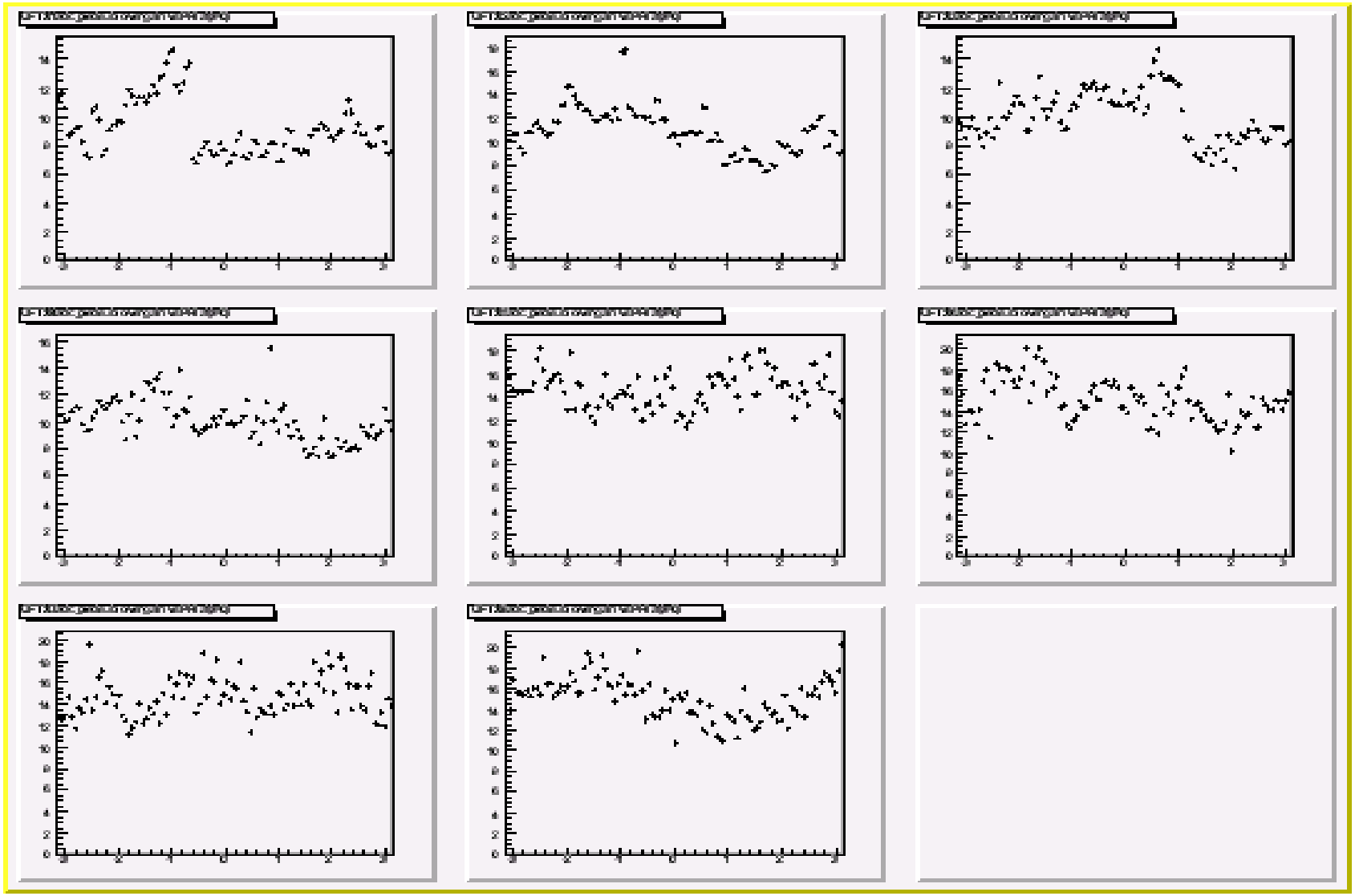
We are looking at:

Data reconstructed with p14.03.00

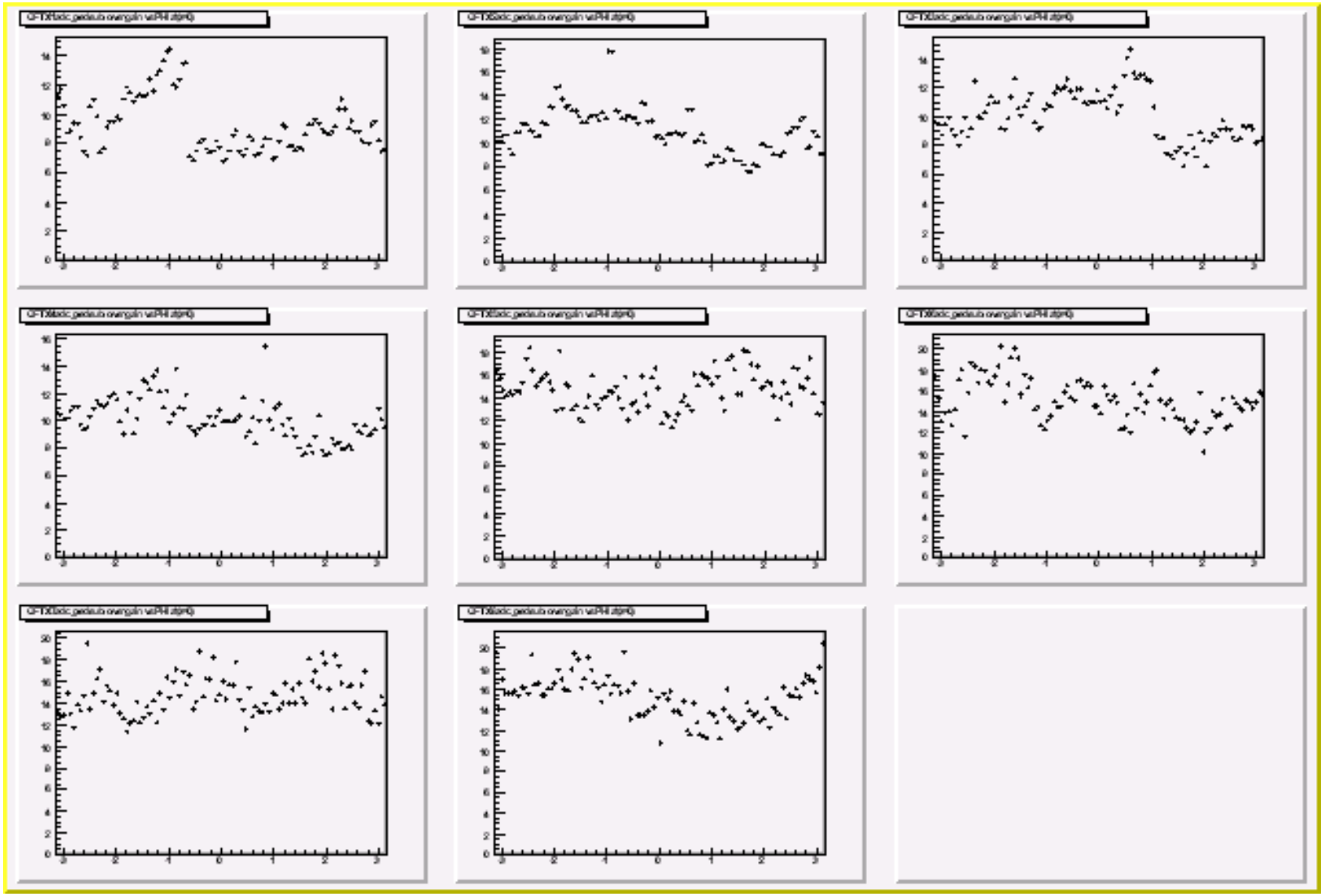
Tracks with only one hit
Tracks with clusters



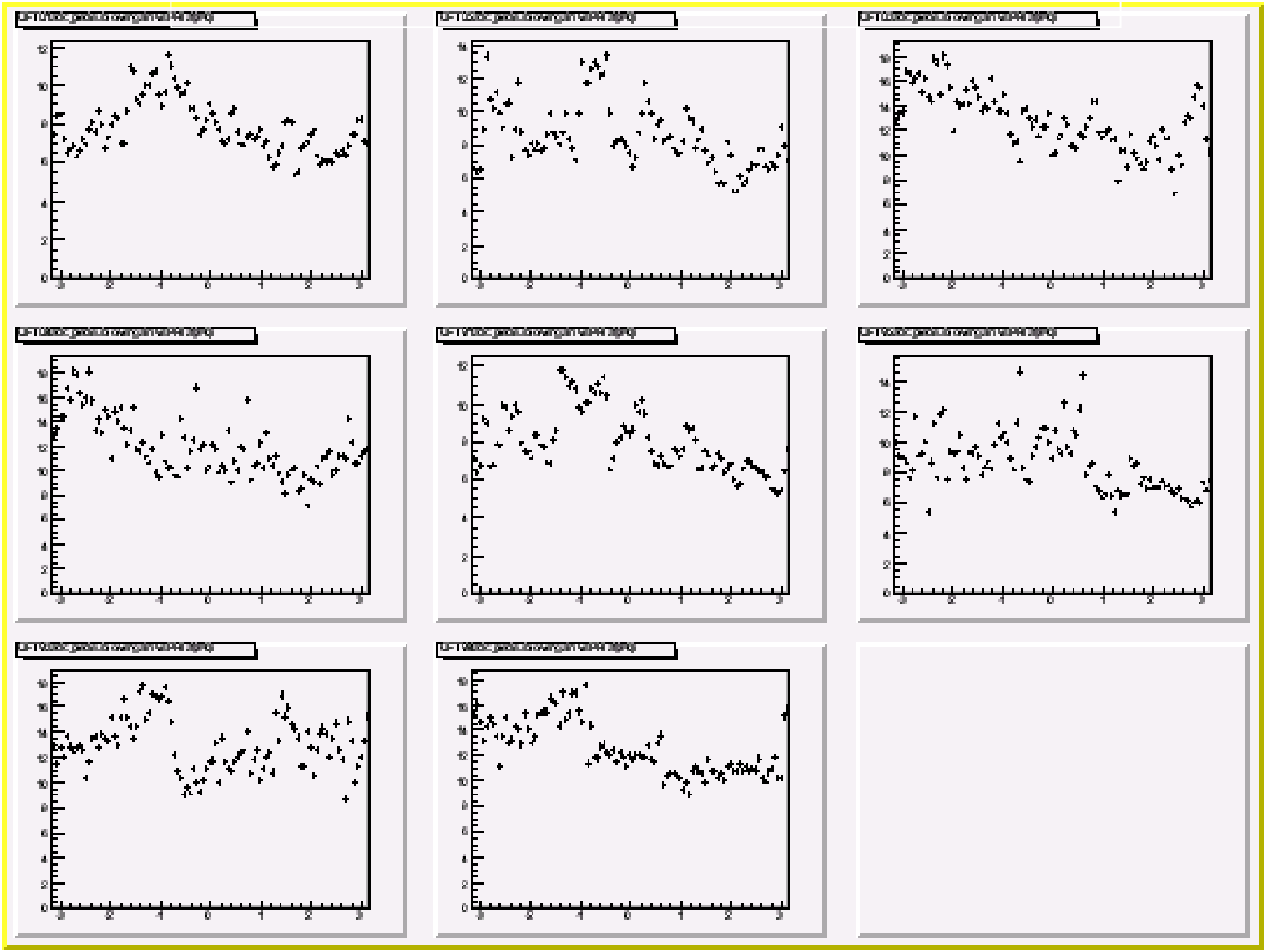
Light yield for Axial Layers (One Hit)



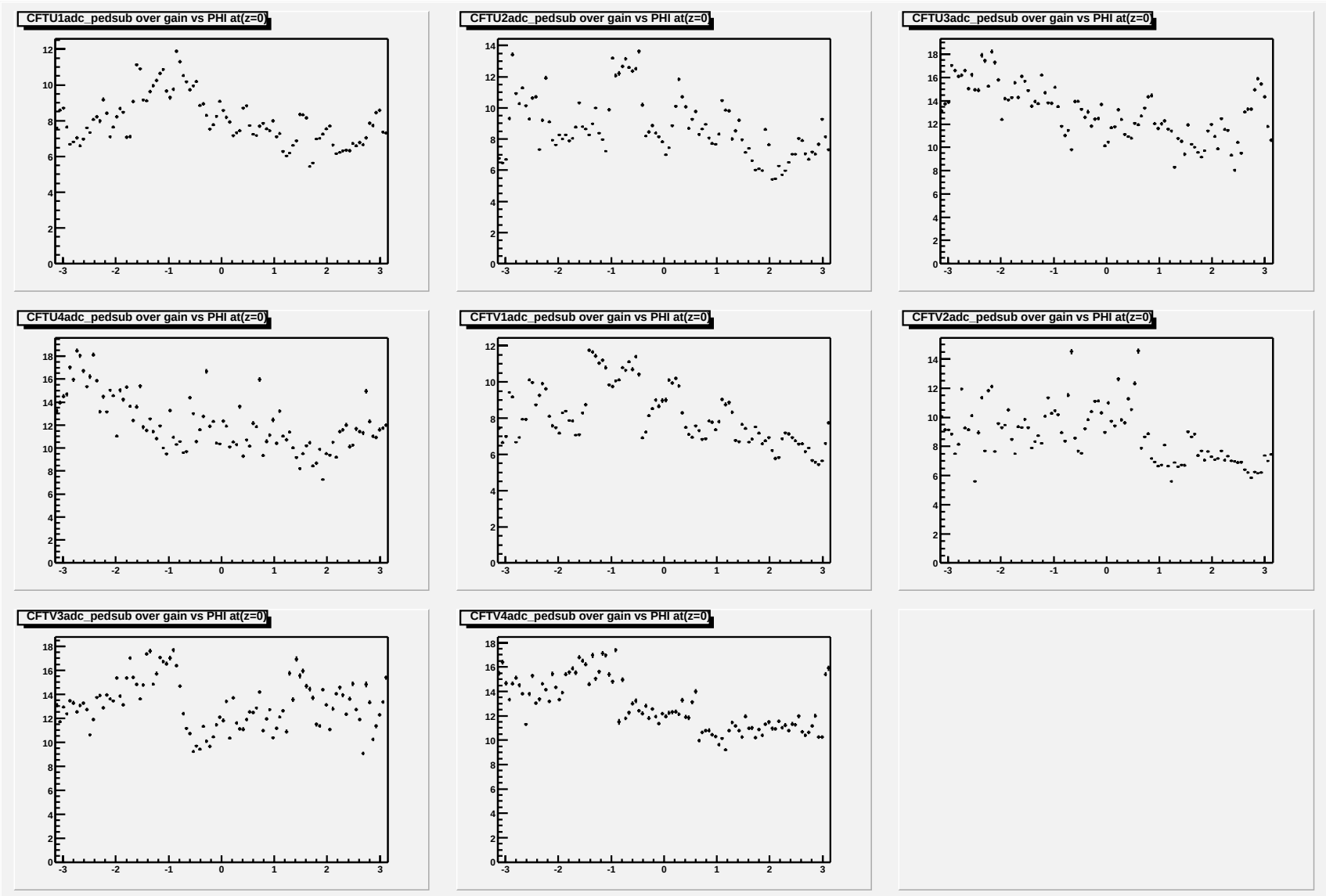
Light yield for Axial Layers (Clusters)

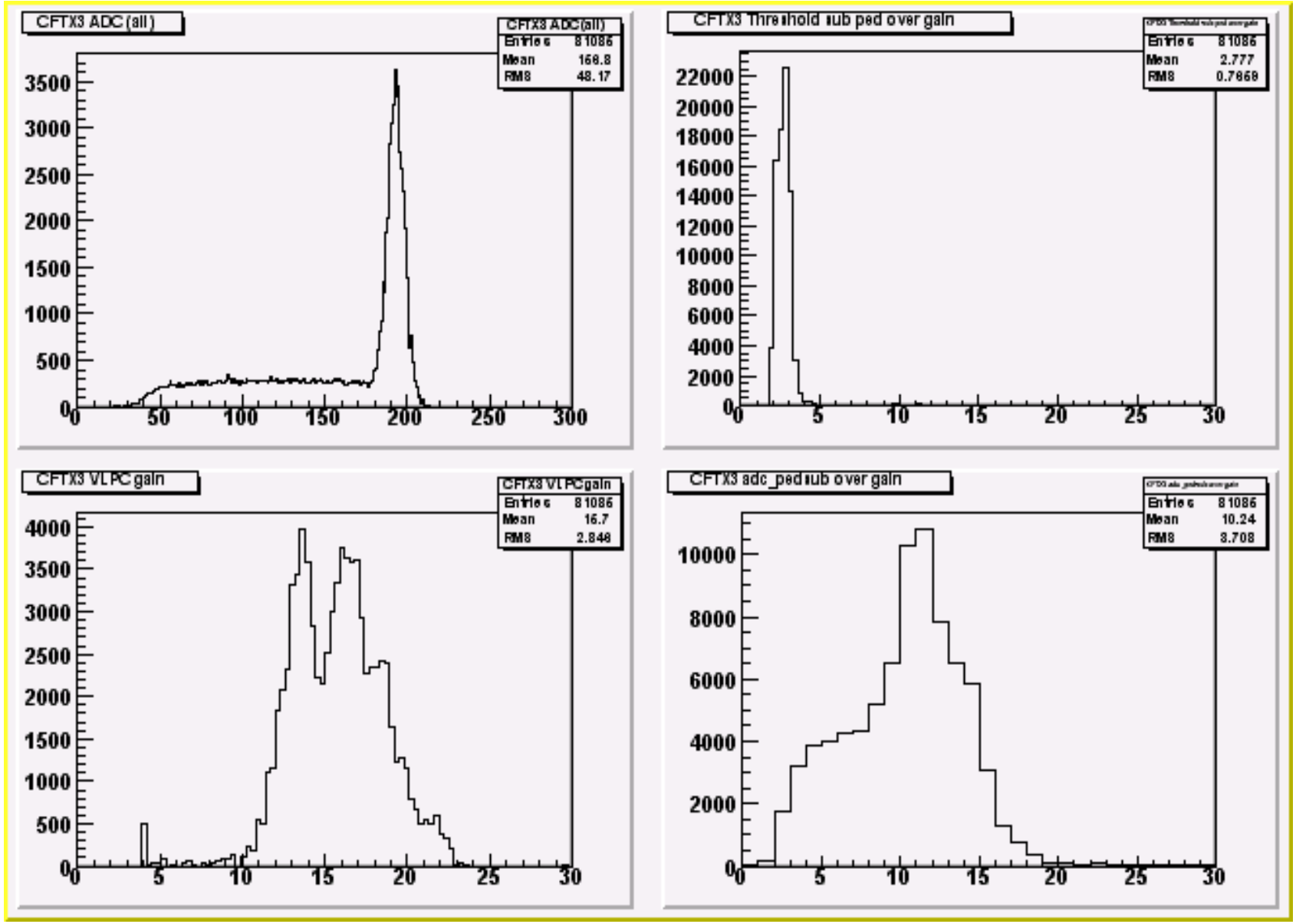


Light yield for Stereo Layers (One Hit)

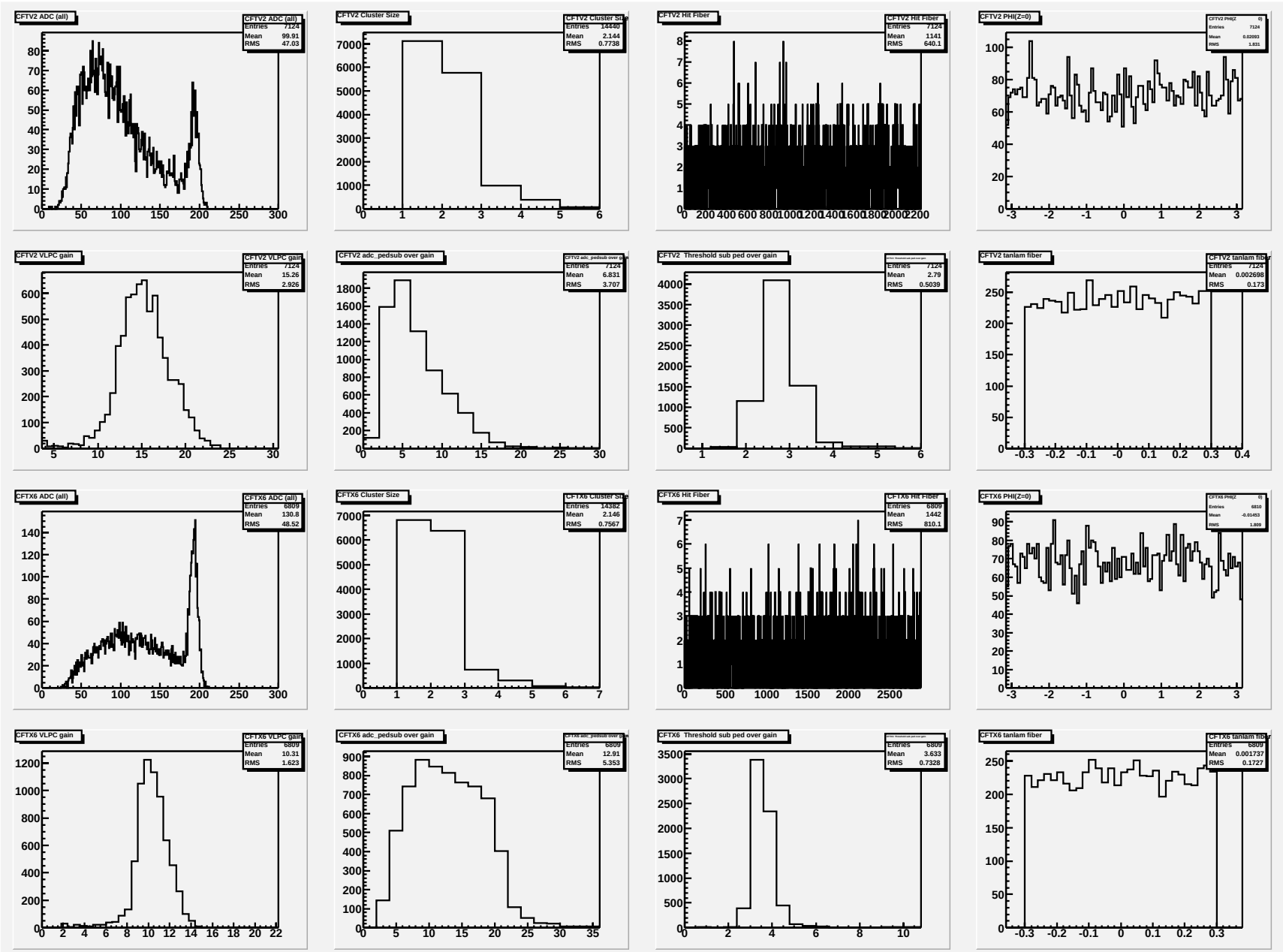


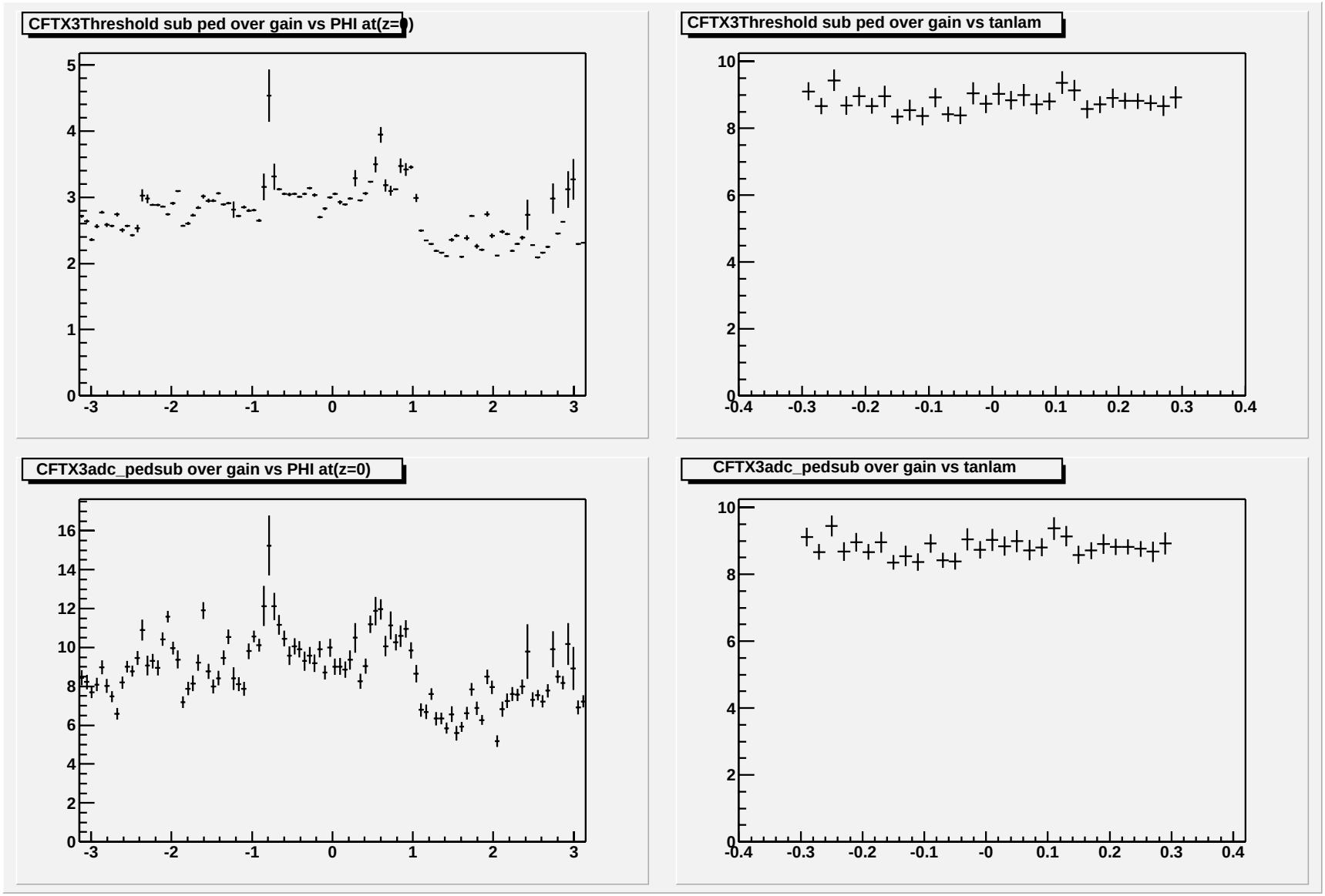
Light yield for Stereo Layers (Clusters)

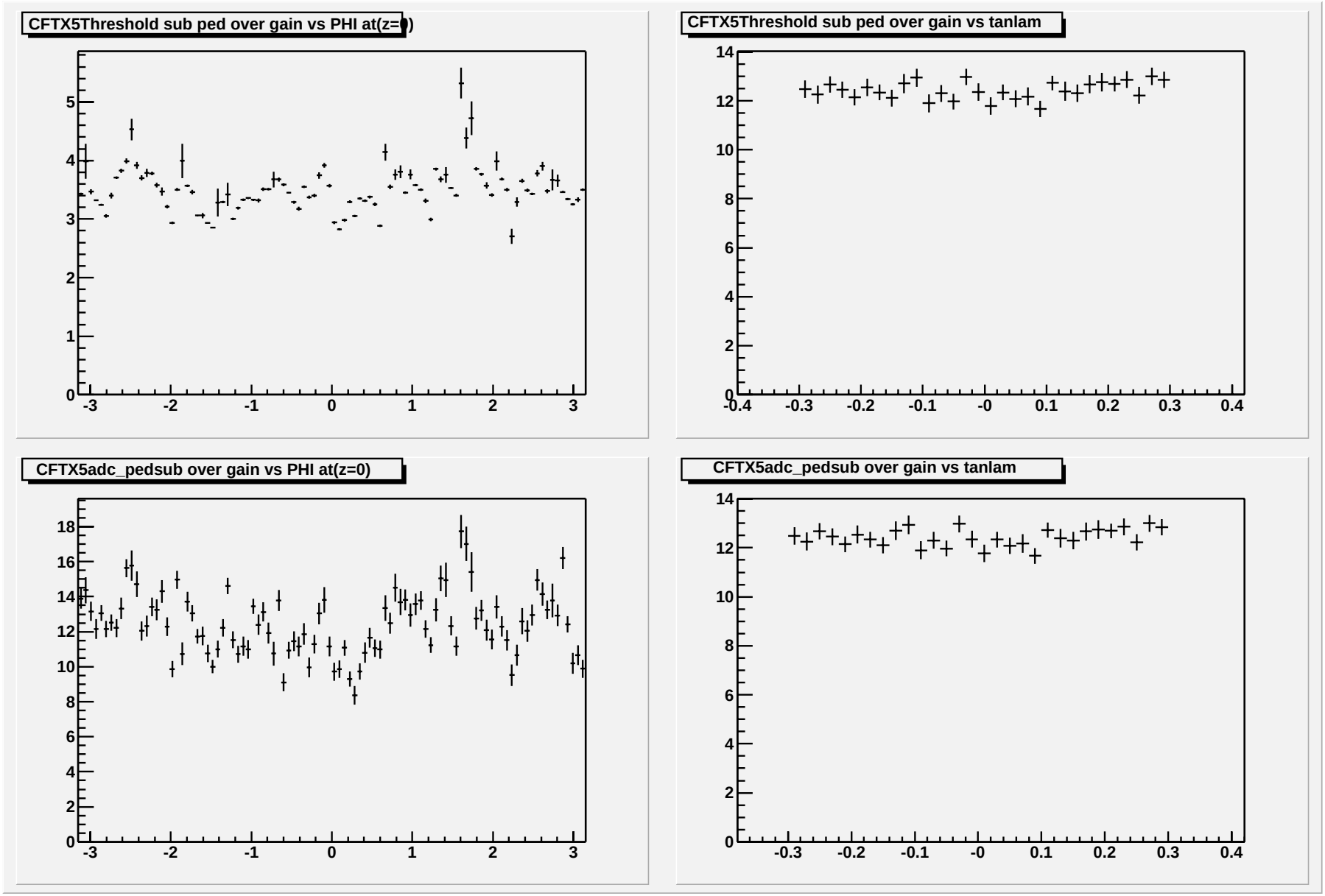


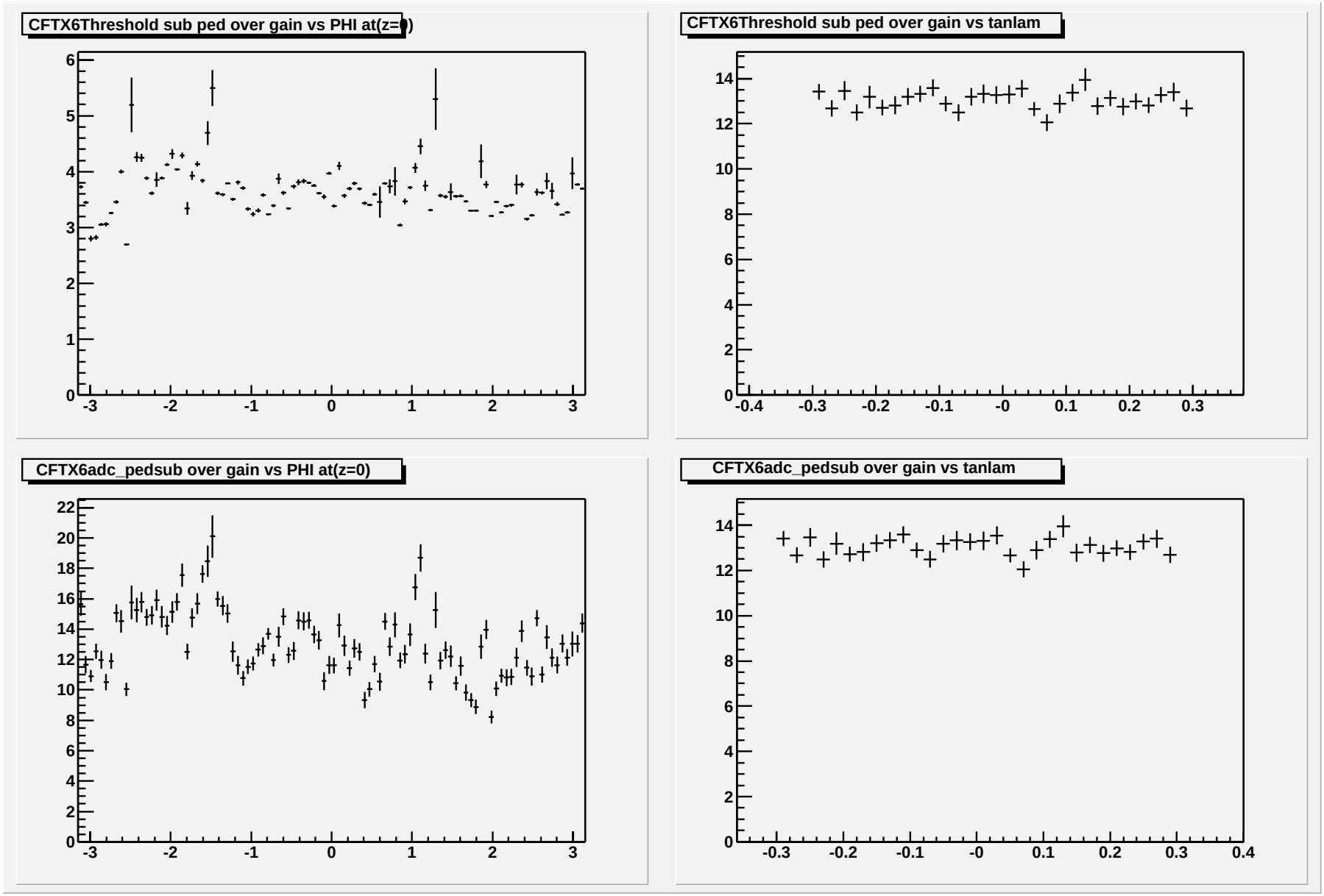

CFTX3 ADC (all)
CFTX3 ADC(all)
Entries 81086
Mean 168.8
RMS 48.17
CFTX3 Threshold sub ped over gain
Entries 81086
Mean 2.777
RMS 0.7669
CFTX3 VLPC gain
CFTX3 VLPC gain
Entries 81086
Mean 16.7
RMS 2.848
CFTX3 adc_ped sub over gain
Entries 81086
Mean 10.24
RMS 3.708

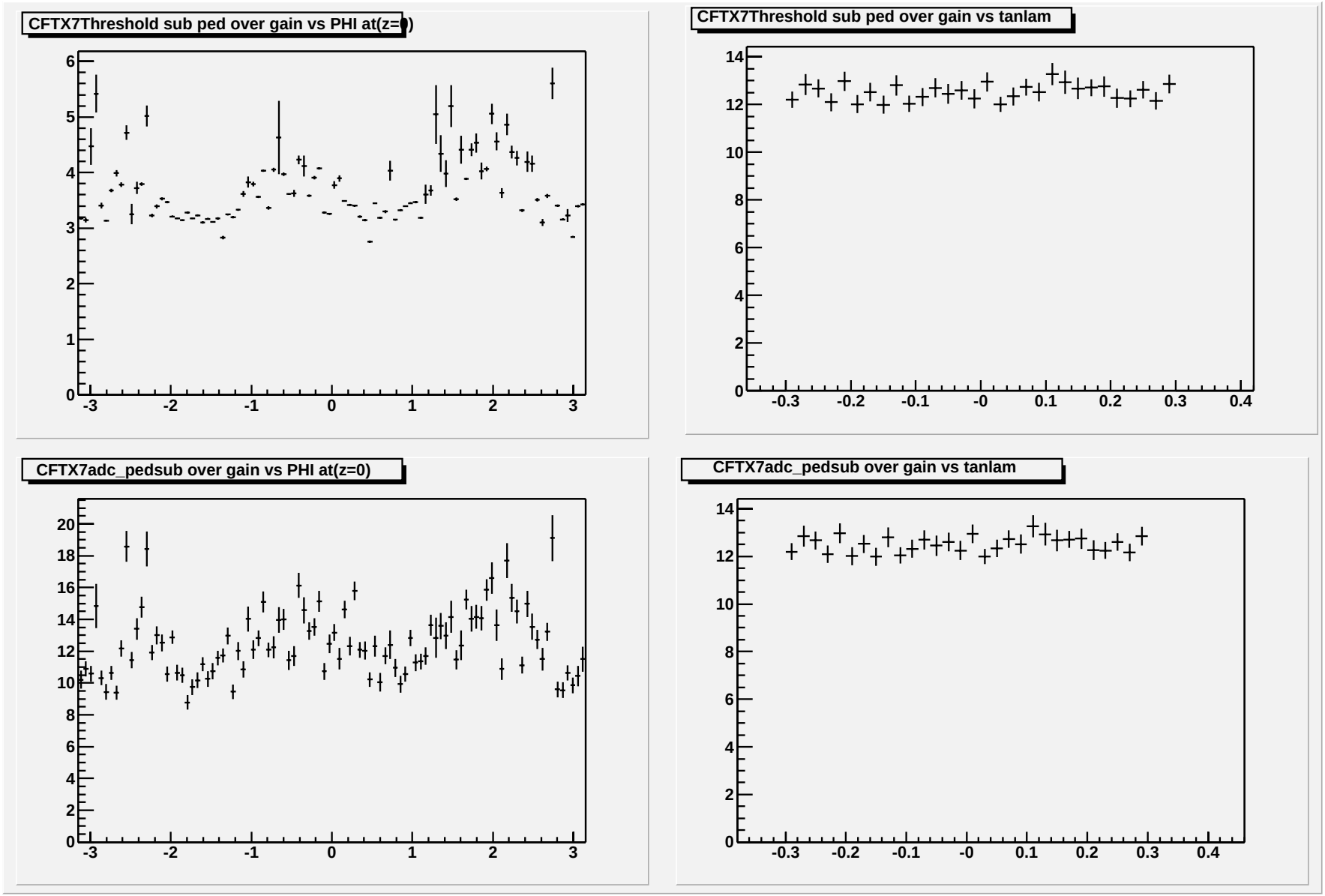
Plans…….??

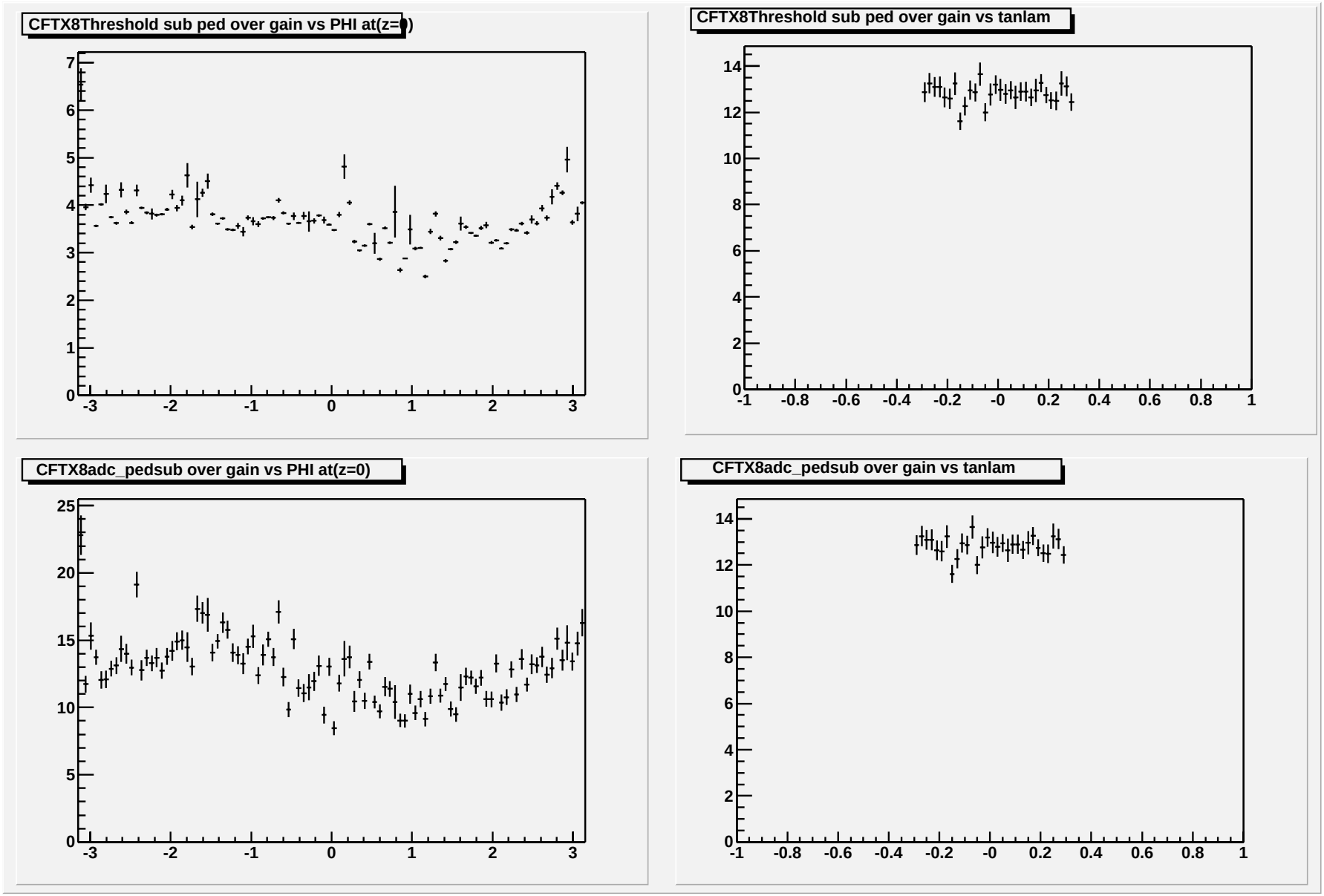

CFTV2 ADC (all)
CFTV2 ADC (all)
Entries 7124
Mean 99.91
RMS 47.03
CFTV2 Cluster Size
CFTV2 Cluster Size
Entries 14440
Mean 2.144
RMS 0.7738
CFTV2 Hit Fiber
CFTV2 Hit Fiber
Entries 7124
Mean 1141
RMS 640.1
CFTV2 PHI(Z=0)
CFTV2 VLPC gain
CFTV2 VLPC gain
Entries 7124
Mean 15.26
RMS 2.926
CFTV2 adc_pedsub over gain
Entries 7124
Mean 6.831
RMS 3.707
CFTV2 Threshold sub ped over gain
Entries 7124
Mean 2.79
RMS 0.5039
CFTV2 tanlam fiber
CFTV2 tanlam fiber
Entries 7124
Mean 0.002698
RMS 0.173
CFTX6 ADC (all)
CFTX6 ADC (all)
Entries 6809
Mean 130.8
RMS 48.52
CFTX6 Cluster Size
CFTX6 Cluster Size
Entries 14382
Mean 2.146
RMS 0.7567
CFTX6 Hit Fiber
CFTX6 Hit Fiber
Entries 6809
Mean 1442
RMS 810.1
CFTX6 PHI(Z=0)
CFTX6 VLPC gain
CFTX6 VLPC gain
Entries 6809
Mean 10.31
RMS 1.623
CFTX6 adc_pedsub over gain
Entries 6809
Mean 12.91
RMS 5.353
CFTX6 Threshold sub ped over gain
Entries 6809
Mean 3.633
RMS 0.7328
CFTX6 tanlam fiber
CFTX6 tanlam fiber
Entries 6809
Mean 0.001737
RMS 0.1727

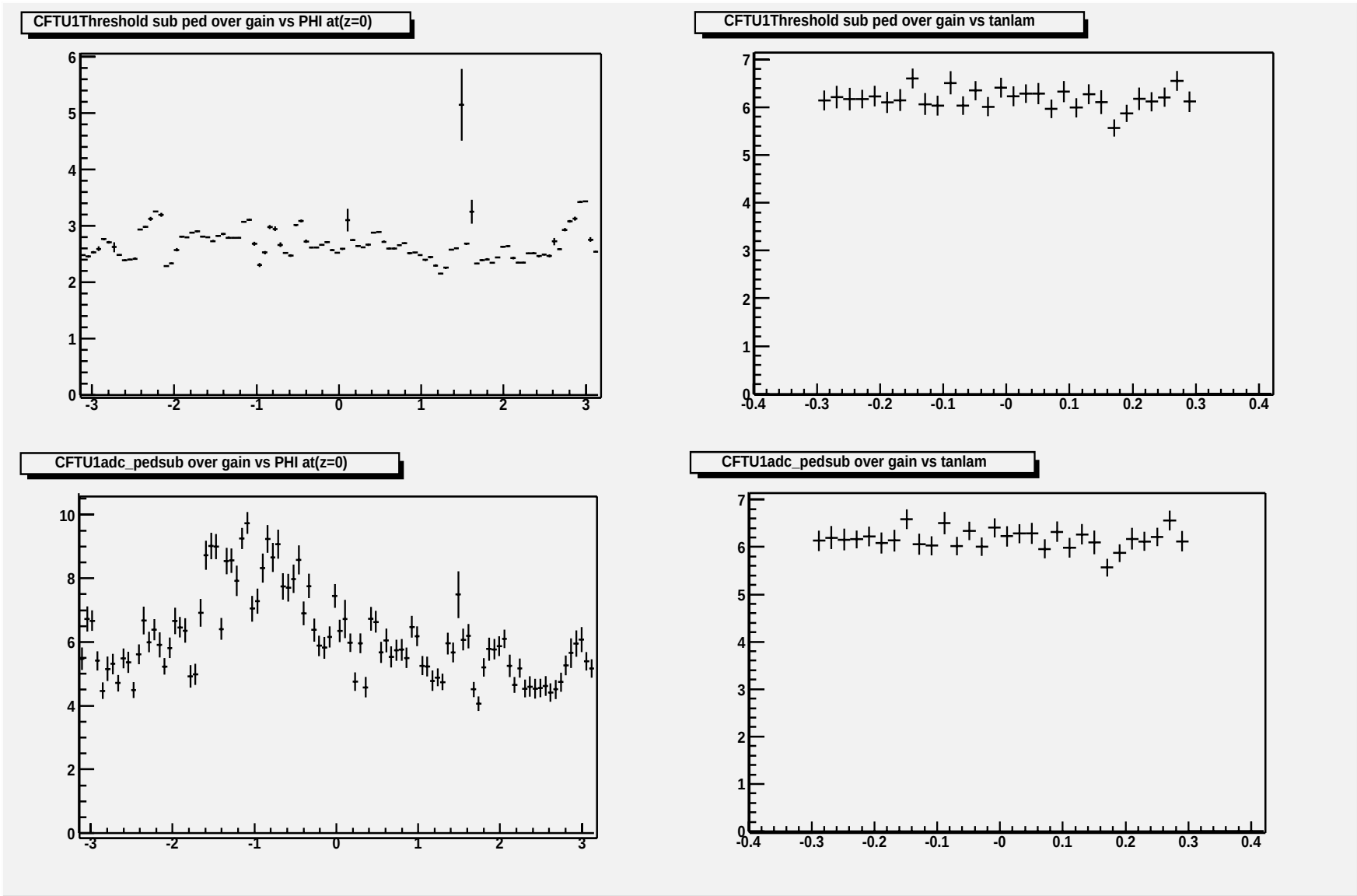

CFTX3Threshold sub ped over gain vs PHI at(z=0)
CFTX3Threshold sub ped over gain vs tanlam
CFTX3adc_pedsub over gain vs PHI at(z=0)
CFTX3adc_pedsub over gain vs tanlam


CFTX5Threshold sub ped over gain vs PHI at(z=0)
CFTX5Threshold sub ped over gain vs tanlam
CFTX5adc_pedsub over gain vs PHI at(z=0)
CFTX5adc_pedsub over gain vs tanlam


CFTX6Threshold sub ped over gain vs PHI at(z=0)
CFTX6Threshold sub ped over gain vs tanlam
CFTX6adc_pedsub over gain vs PHI at(z=0)
CFTX6adc_pedsub over gain vs tanlam


CFTX7Threshold sub ped over gain vs PHI at(z=0)
CFTX7Threshold sub ped over gain vs tanlam
CFTX7adc_pedsub over gain vs PHI at(z=0)
CFTX7adc_pedsub over gain vs tanlam


CFTX8Threshold sub ped over gain vs PHI at(z=0)
CFTX8Threshold sub ped over gain vs tanlam
CFTX8adc_pedsub over gain vs PHI at(z=0)
CFTX8adc_pedsub over gain vs tanlam


CFTU1Threshold sub ped over gain vs PHI at(z=0)
CFTU1Threshold sub ped over gain vs tanlam
CFTU1adc_pedsub over gain vs PHI at(z=0)
CFTU1adc_pedsub over gain vs tanlam