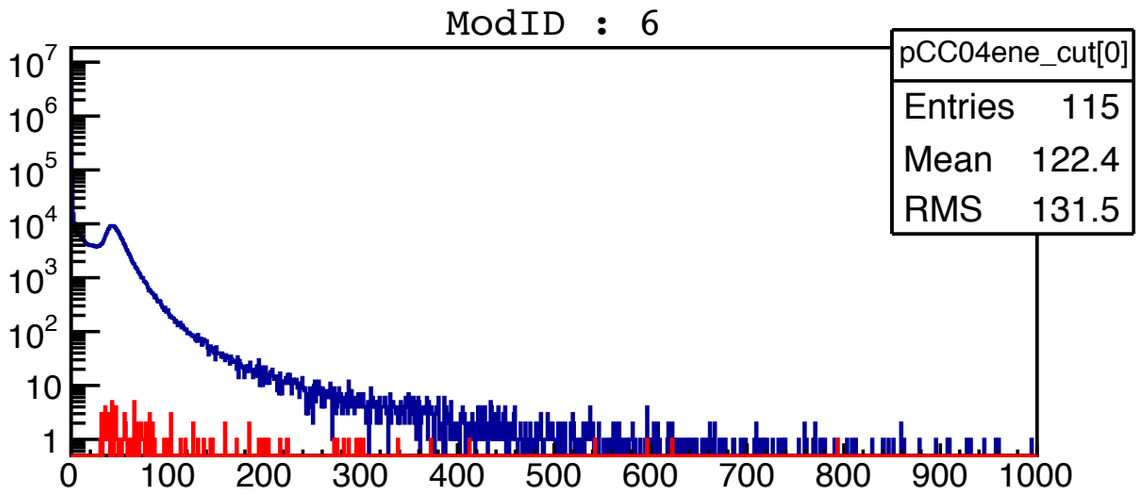
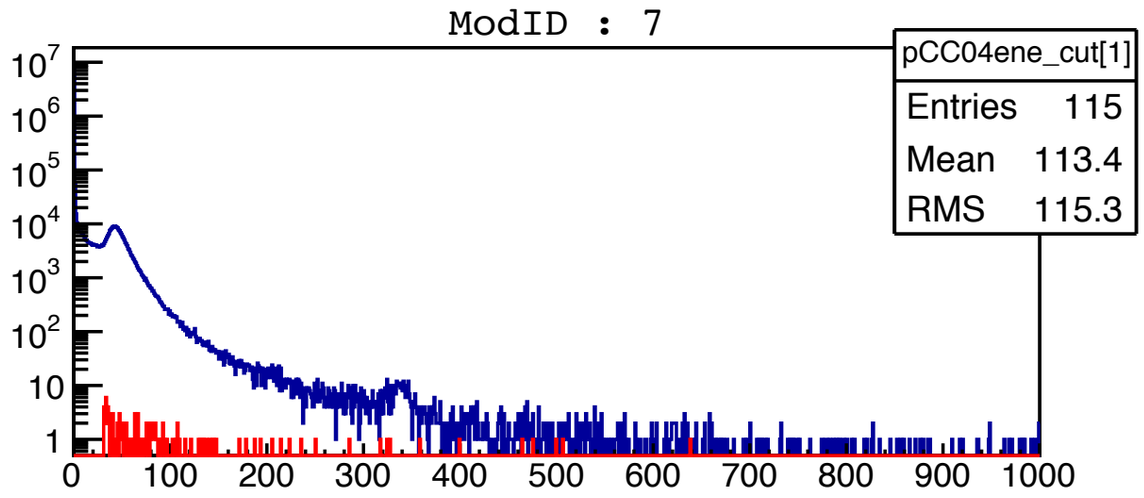
Daily report

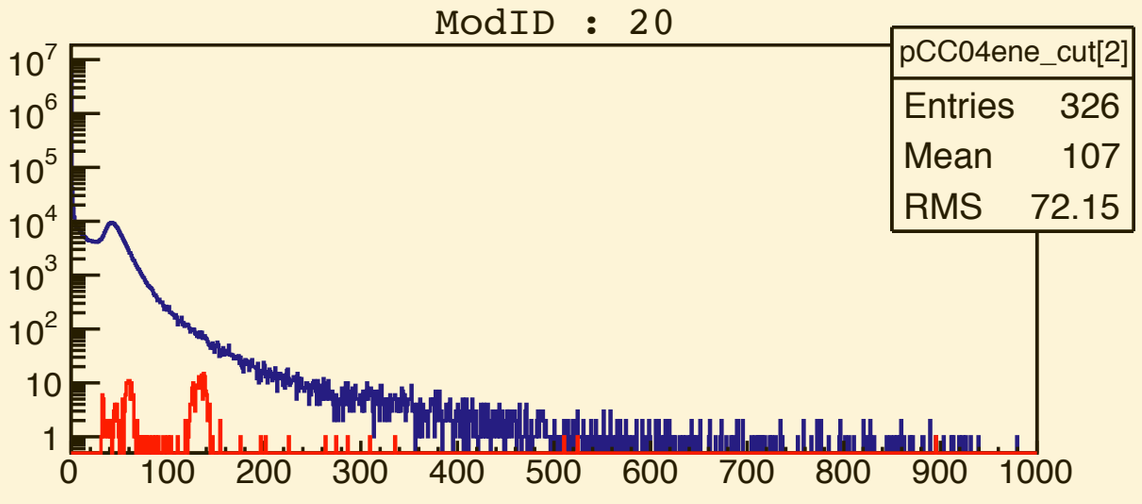
27 March, 2019

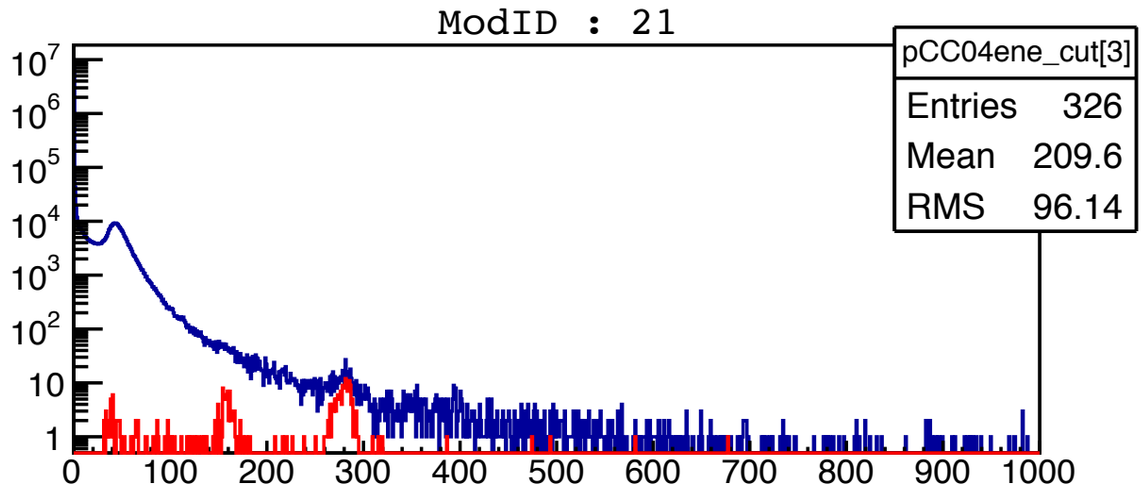
Event selection

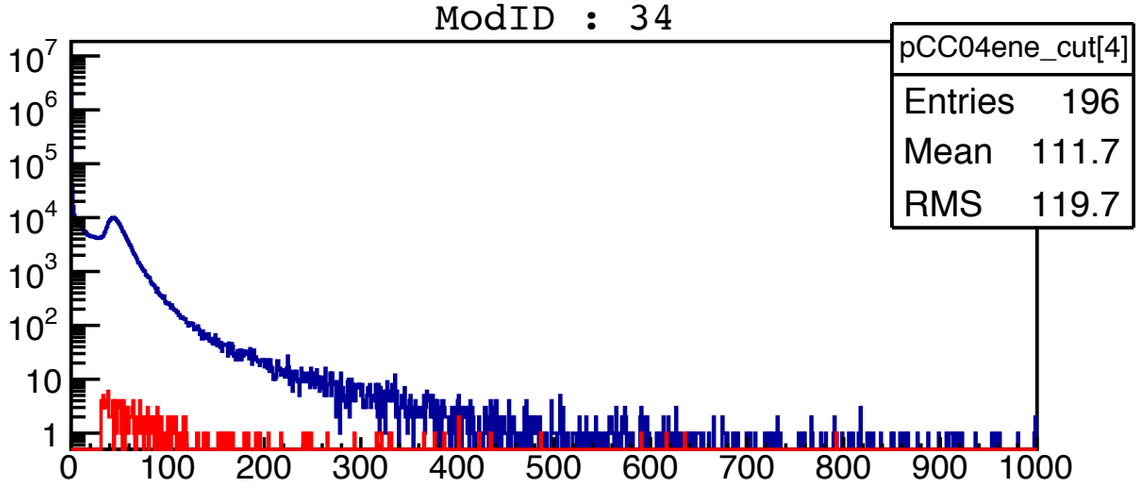
Center

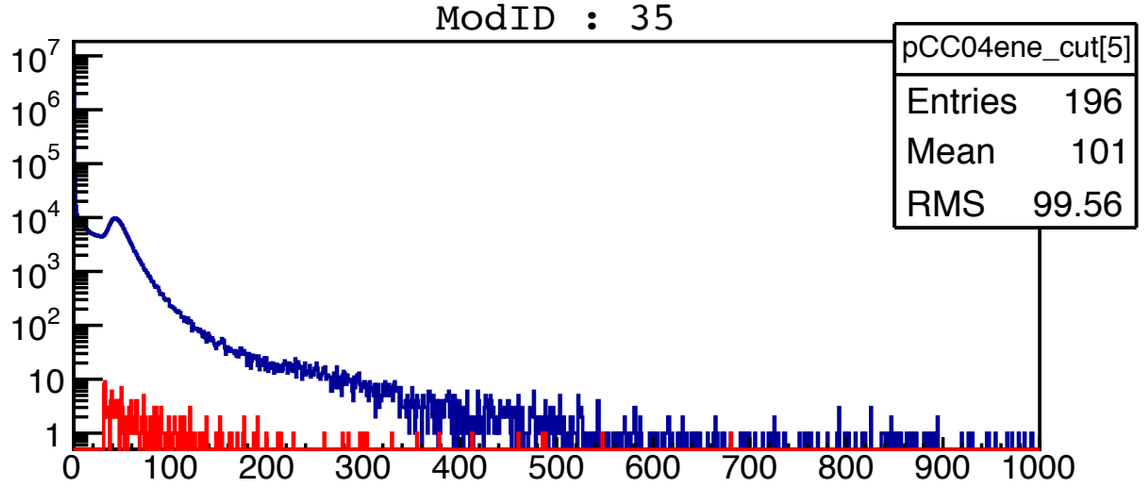


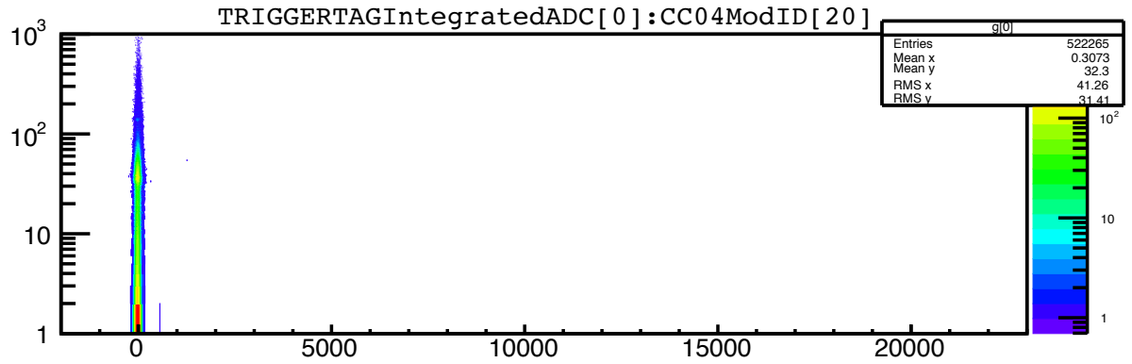


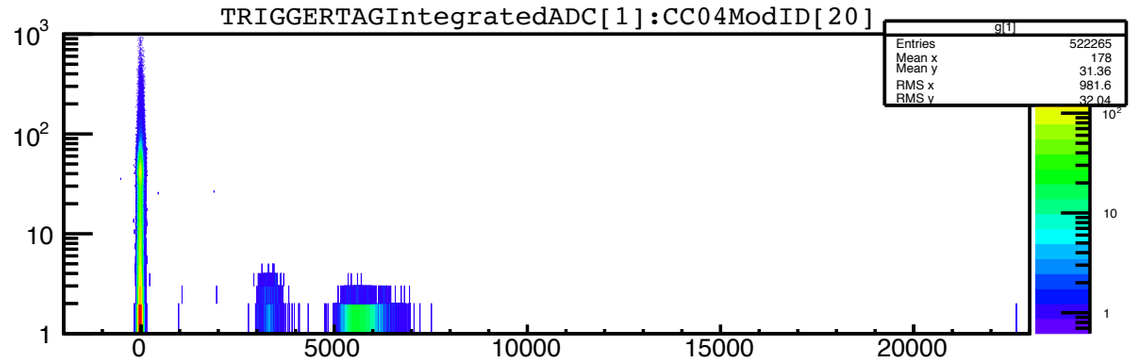


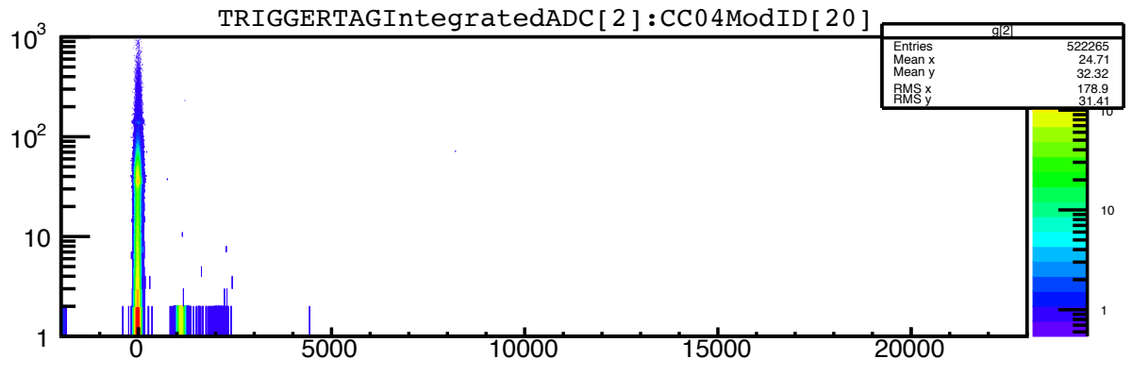


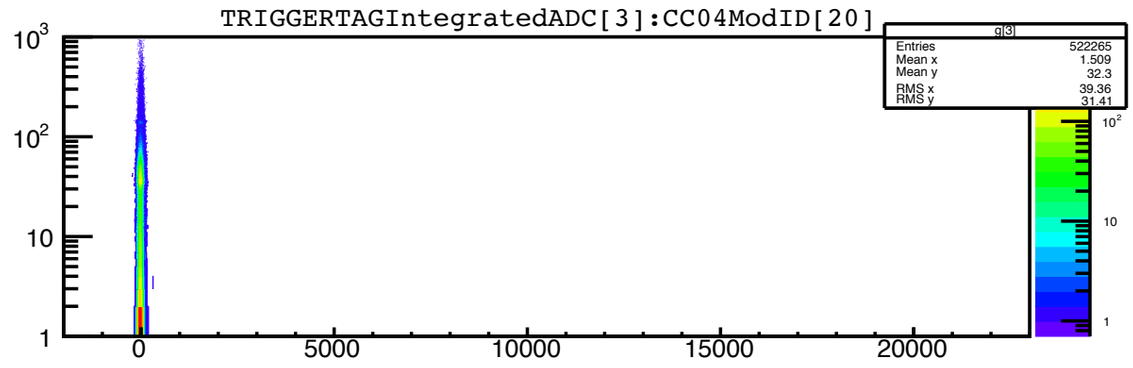


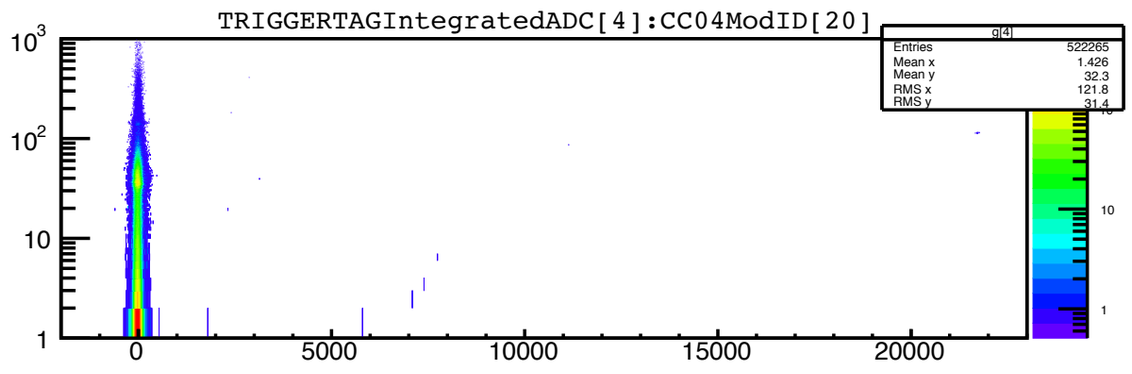


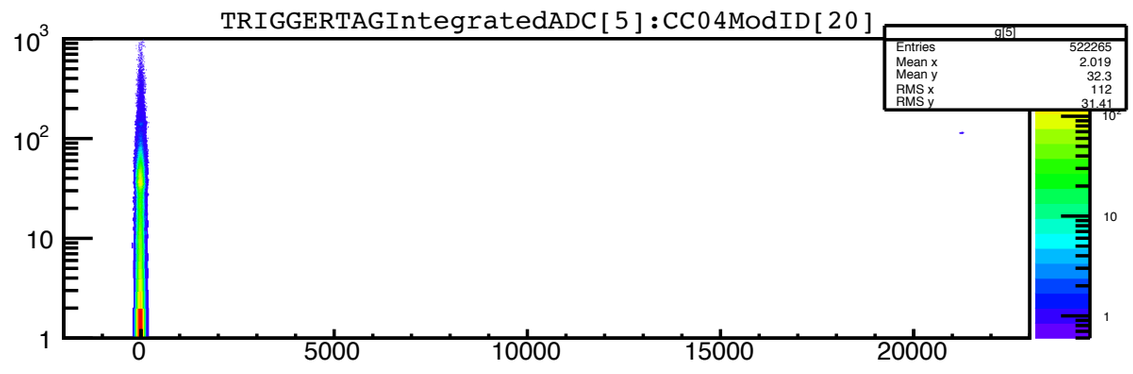

TRIGGERTAGIntegratedADC[0]:CC04ModID[20]
g[0]
Entries 522265
Mean x 0.3073
Mean y 32.3
RMS x 41.26
RMS y 31.41

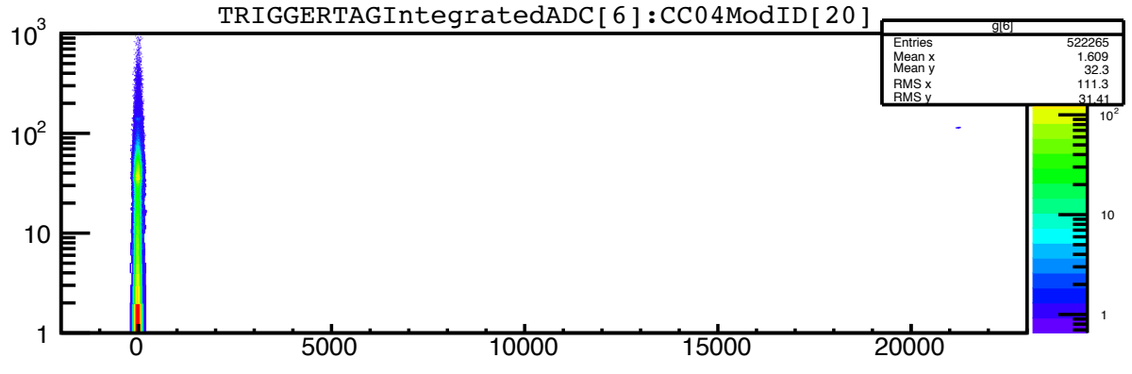

TRIGGERTAGIntegratedADC[1]:CC04ModID[20]
g[1]
Entries 522265
Mean x 178
Mean y 31.36
RMS x 981.6
RMS y 32.04

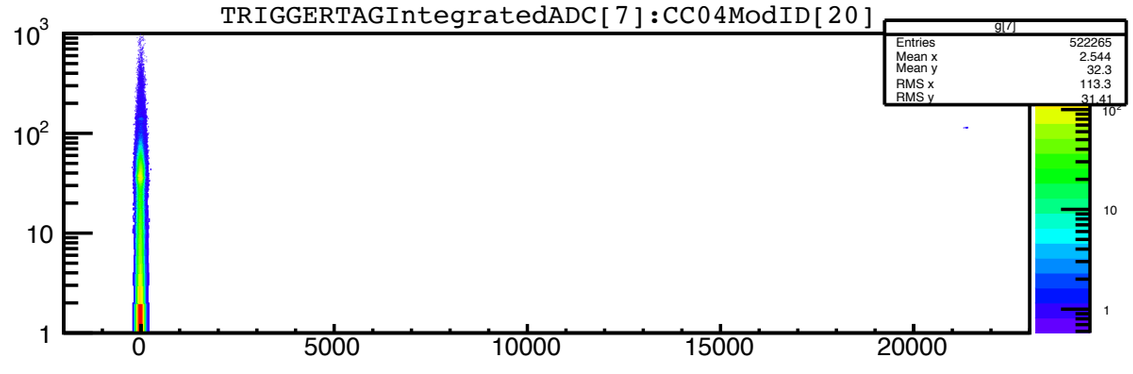

TRIGGERTAGIntegratedADC[2]:CC04ModID[20]
g[2]
Entries 522265
Mean x 24.71
Mean y 32.32
RMS x 178.9
RMS y 31.41

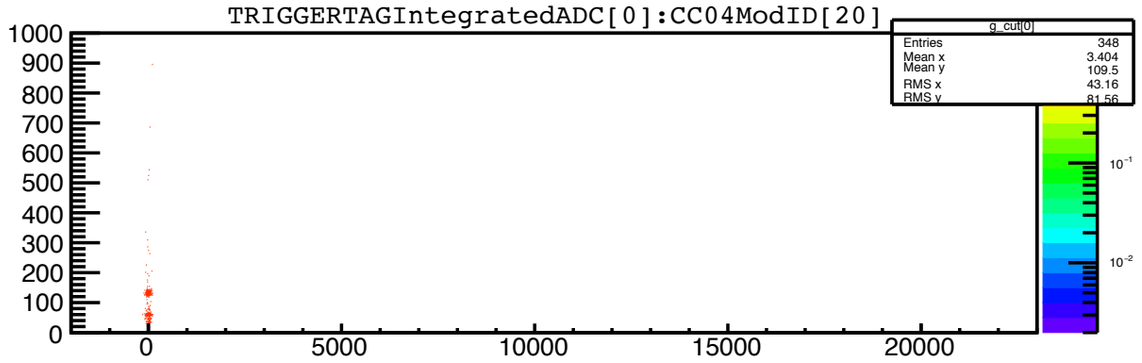

TRIGGERTAGIntegratedADC[3]:CC04ModID[20]
g[3]
Entries 522265
Mean x 1.509
Mean y 32.3
RMS x 39.36
RMS y 31.41

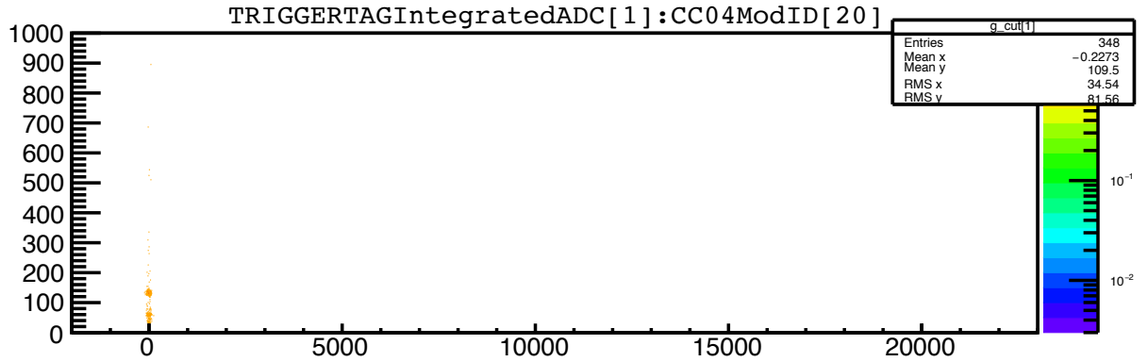

TRIGGERTAGIntegratedADC[4]:CC04ModID[20]
g[4]
Entries 522265
Mean x 1.426
Mean y 32.3
RMS x 121.8
RMS y 31.4

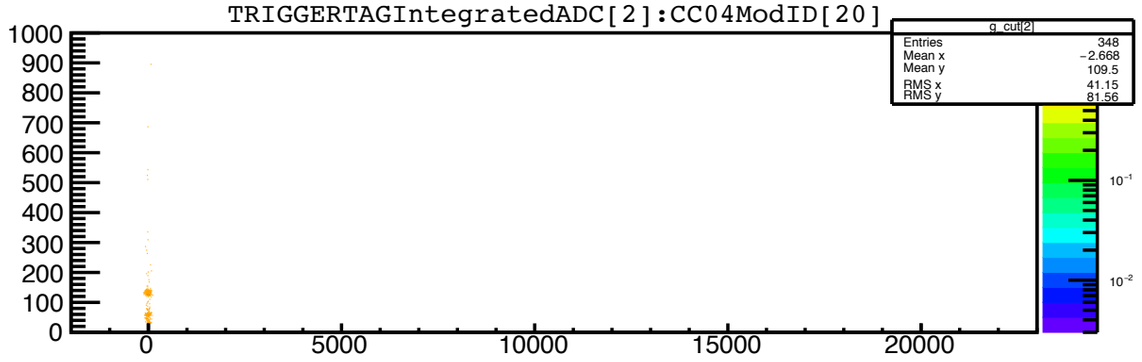

TRIGGERTAGIntegratedADC[5]:CC04ModID[20]
g[5]
Entries 522265
Mean x 2.019
Mean y 32.3
RMS x 112
RMS y 31.41

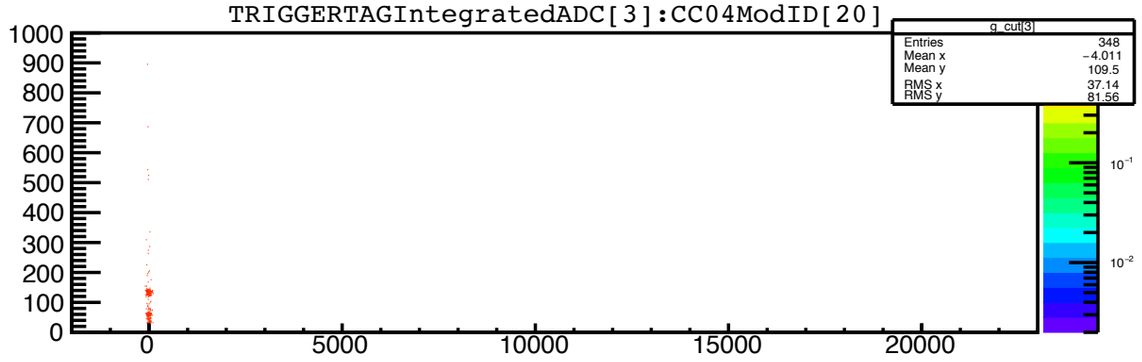

TRIGGERTAGIntegratedADC[6]:CC04ModID[20]
g[6]
Entries 522265
Mean x 1.609
Mean y 32.3
RMS x 111.3
RMS y 31.41

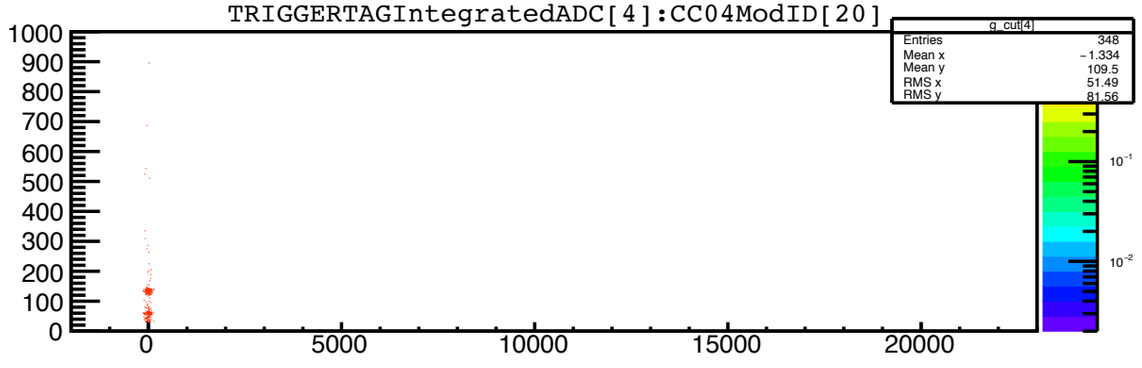

TRIGGERTAGIntegratedADC[7]:CC04ModID[20]
g[7]
Entries 522265
Mean x 2.544
Mean y 32.3
RMS x 113.3
RMS y 31.41

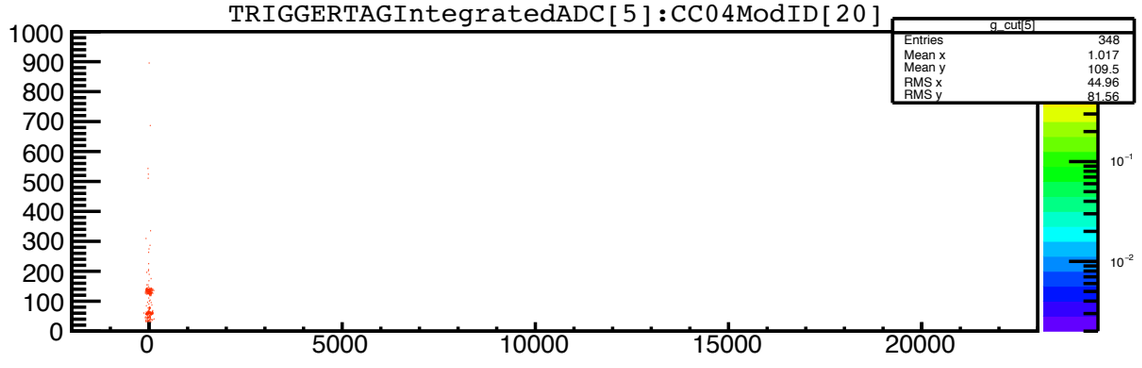

TRIGGERTAGIntegratedADC[0]:CC04ModID[20]
g_cut[0]
Entries 348
Mean x 3.404
Mean y 109.5
RMS x 43.16
RMS y 81.56

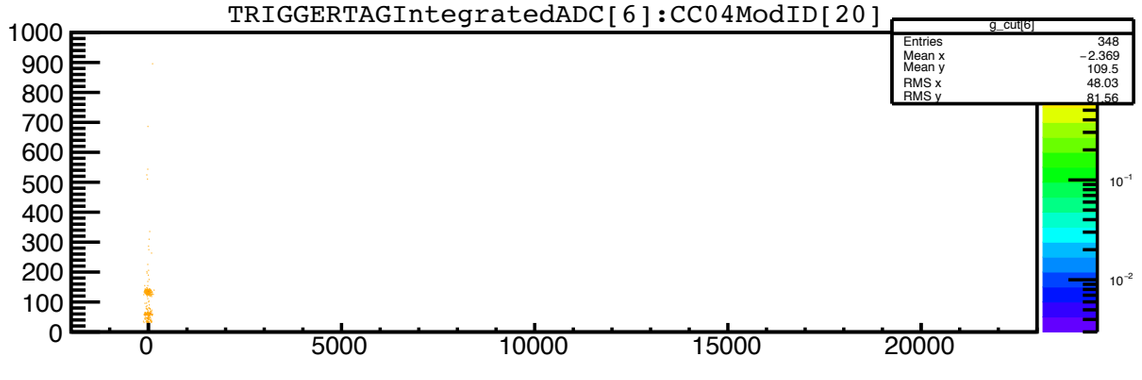

TRIGGERTAGIntegratedADC[1]:CC04ModID[20]
g_cut[1]
Entries 348
Mean x −0.2273
Mean y 109.5
RMS x 34.54
RMS y 81.56

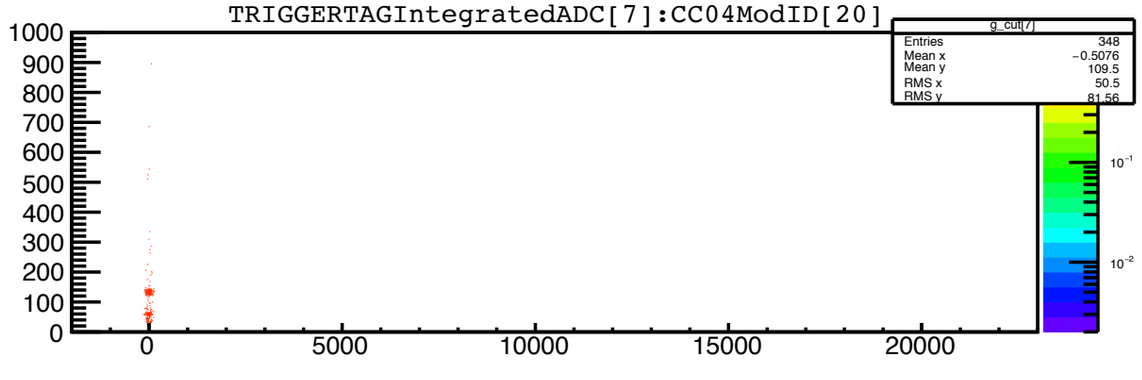

TRIGGERTAGIntegratedADC[2]:CC04ModID[20]
g_cut[2]
Entries 348
Mean x −2.668
Mean y 109.5
RMS x 41.15
RMS y 81.56


TRIGGERTAGIntegratedADC[3]:CC04ModID[20]
g_cut[3]
Entries 348
Mean x −4.011
Mean y 109.5
RMS x 37.14
RMS y 81.56

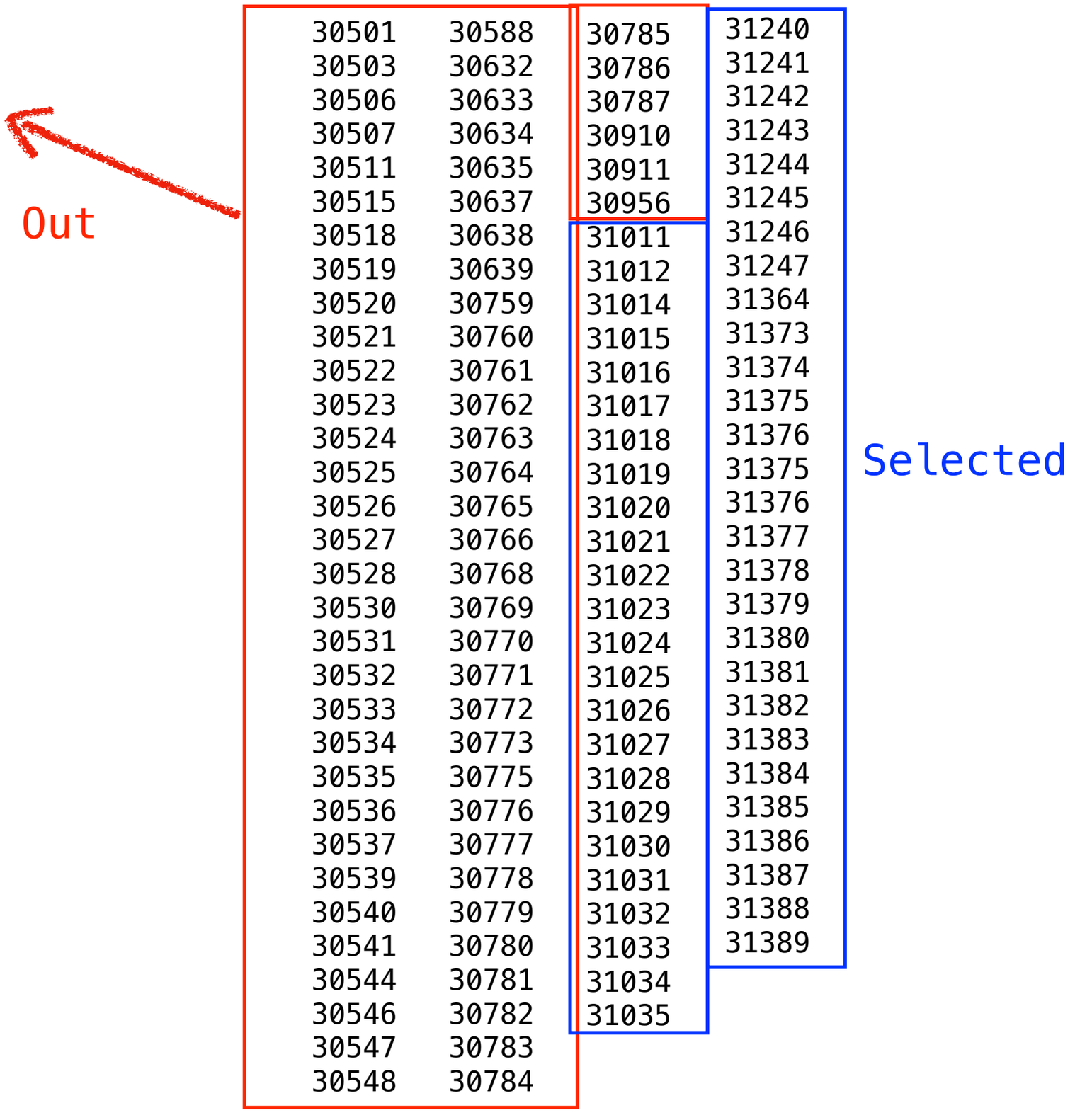

TRIGGERTAGIntegratedADC[4]:CC04ModID[20]
g_cut[4]
Entries 348
Mean x −1.334
Mean y 109.5
RMS x 51.49
RMS y 81.56

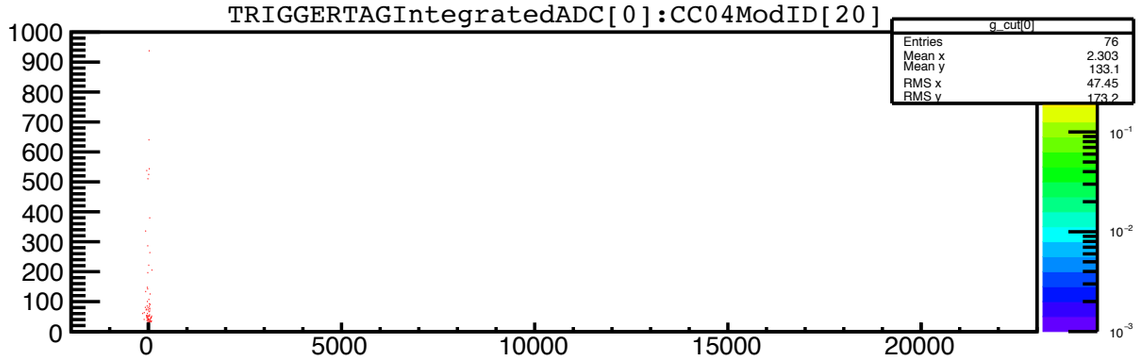

TRIGGERTAGIntegratedADC[5]:CC04ModID[20]
g_cut[5]
Entries 348
Mean x 1.017
Mean y 109.5
RMS x 44.96
RMS y 81.56

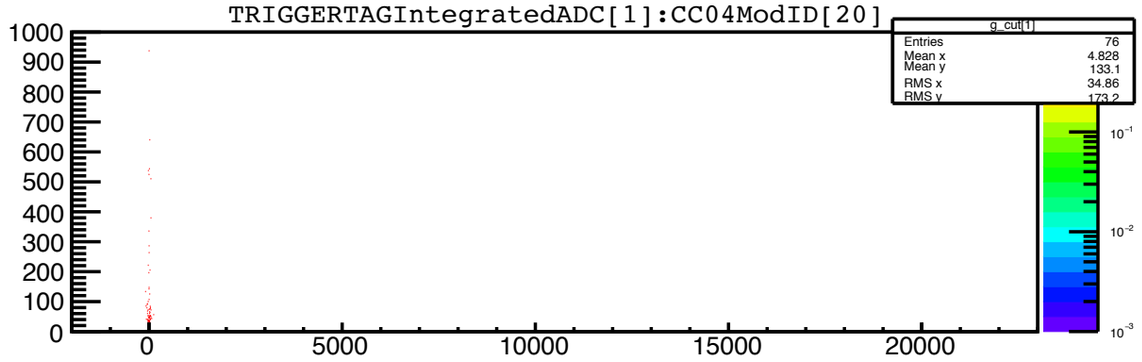

TRIGGERTAGIntegratedADC[6]:CC04ModID[20]
g_cut[6]
Entries 348
Mean x −2.369
Mean y 109.5
RMS x 48.03
RMS y 81.56

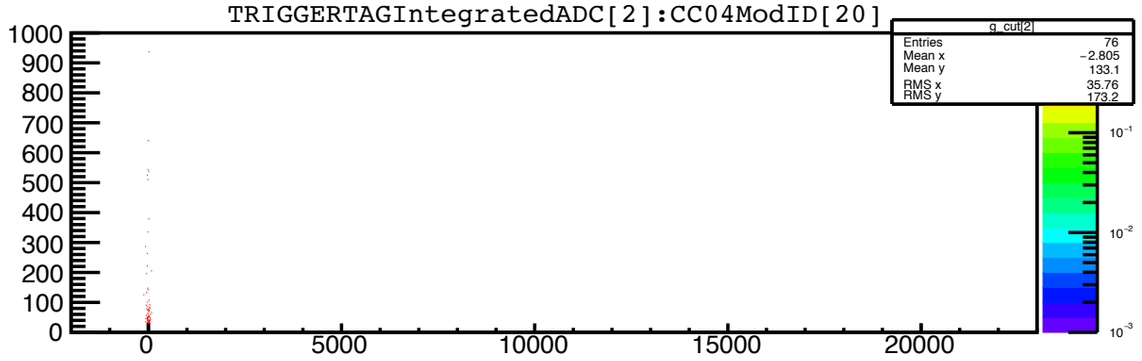

TRIGGERTAGIntegratedADC[7]:CC04ModID[20]
g_cut[7]
Entries 348
Mean x −0.5076
Mean y 109.5
RMS x 50.5
RMS y 81.56

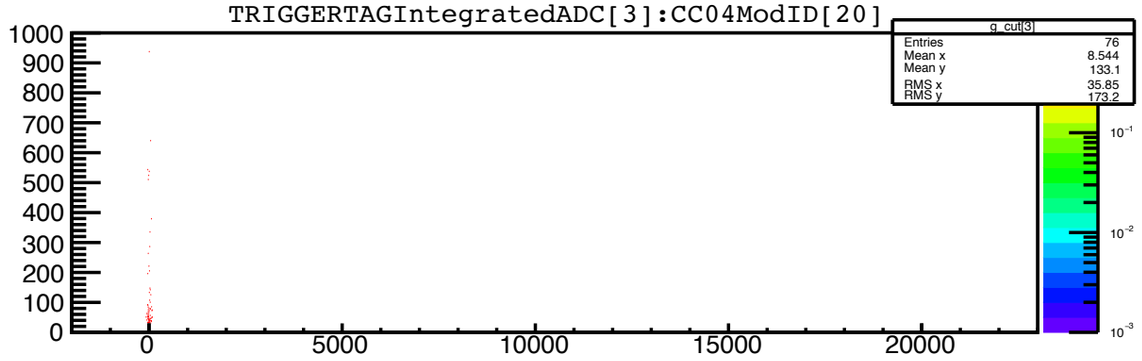
Run selection changed

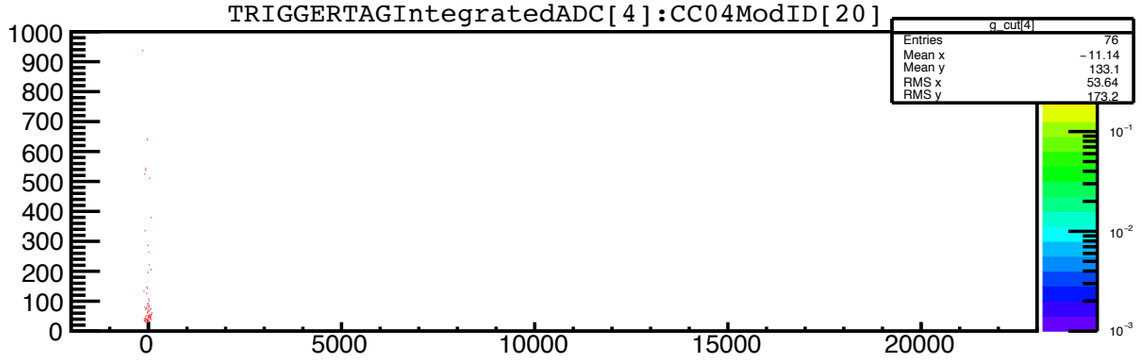


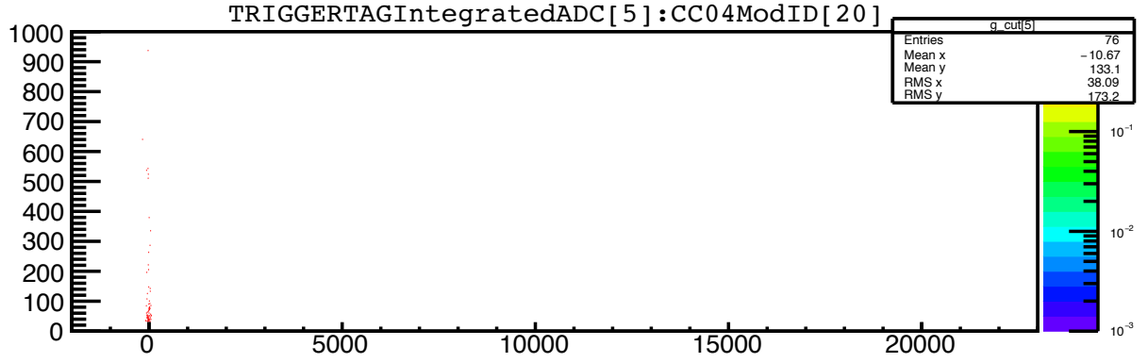

TRIGGERTAGIntegratedADC[0]:CC04ModID[20]
g_cut[0]
Entries 76
Mean x 2.303
Mean y 133.1
RMS x 47.45
RMS y 173.2

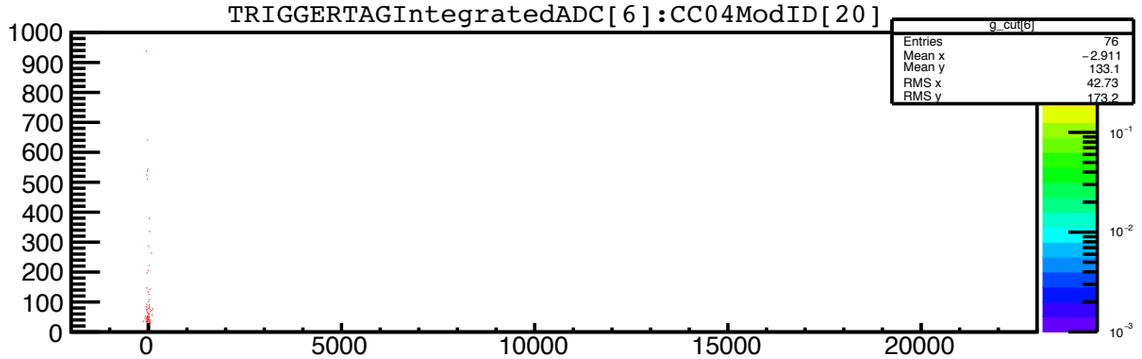

TRIGGERTAGIntegratedADC[1]:CC04ModID[20]
g_cut[1]
Entries 76
Mean x 4.828
Mean y 133.1
RMS x 34.86
RMS y 173.2

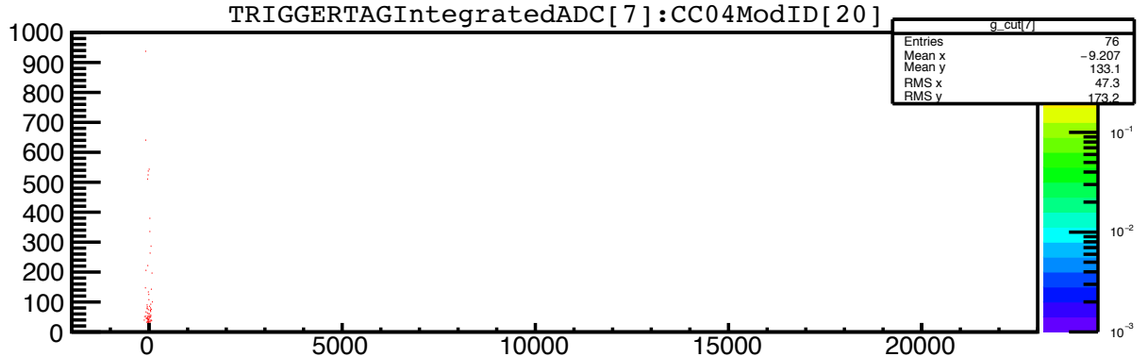

TRIGGERTAGIntegratedADC[2]:CC04ModID[20]
g_cut[2]
Entries 76
Mean x −2.805
Mean y 133.1
RMS x 35.76
RMS y 173.2

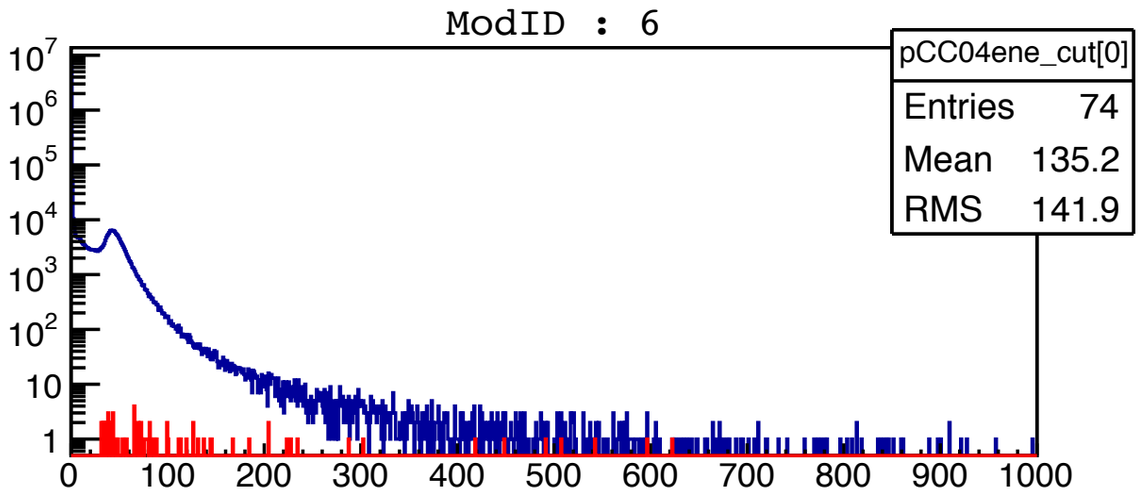

TRIGGERTAGIntegratedADC[3]:CC04ModID[20]
g_cut[3]
Entries 76
Mean x 8.544
Mean y 133.1
RMS x 35.85
RMS y 173.2

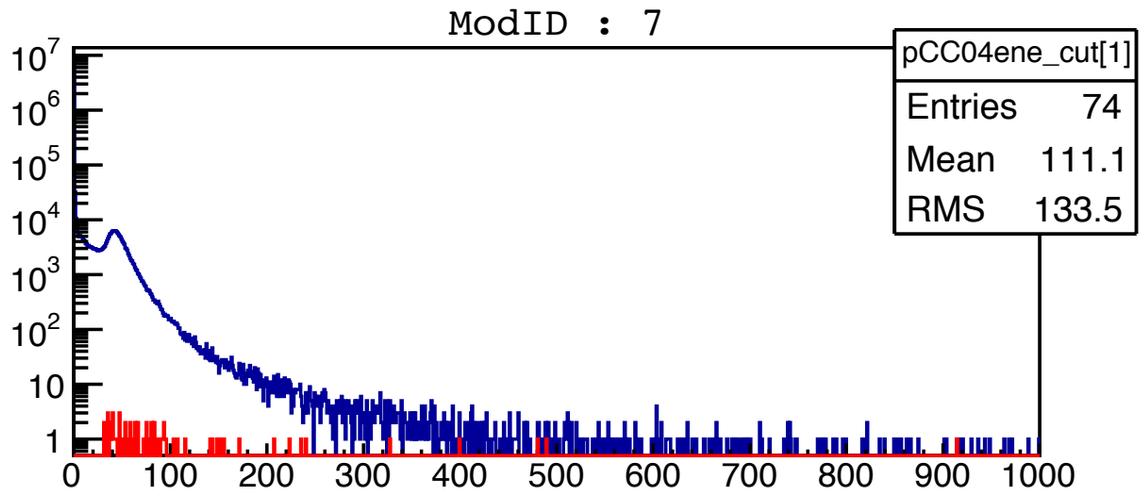

TRIGGERTAGIntegratedADC[4]:CC04ModID[20]
g_cut[4]
Entries 76
Mean x −11.14
Mean y 133.1
RMS x 53.64
RMS y 173.2

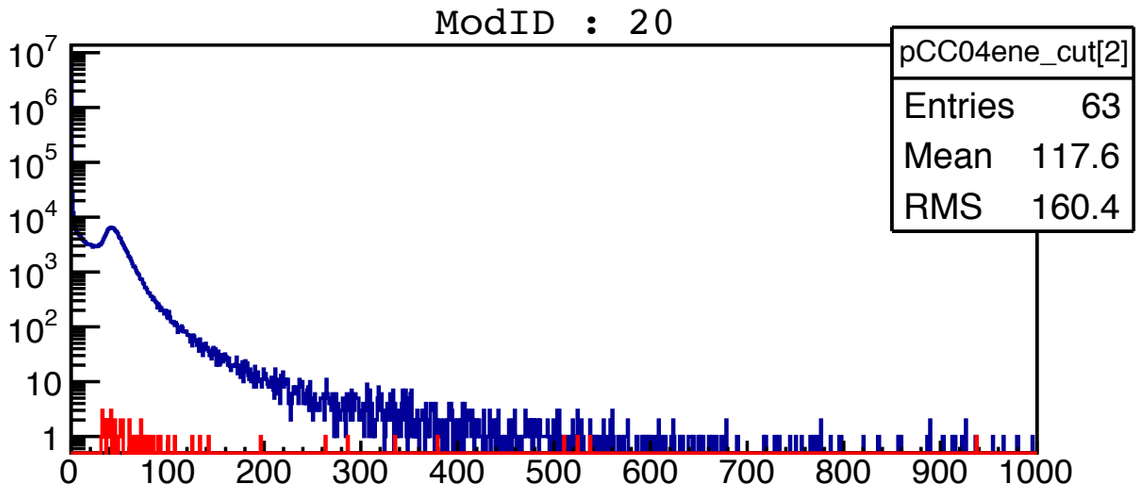

TRIGGERTAGIntegratedADC[5]:CC04ModID[20]
g_cut[5]
Entries 76
Mean x −10.67
Mean y 133.1
RMS x 38.09
RMS y 173.2

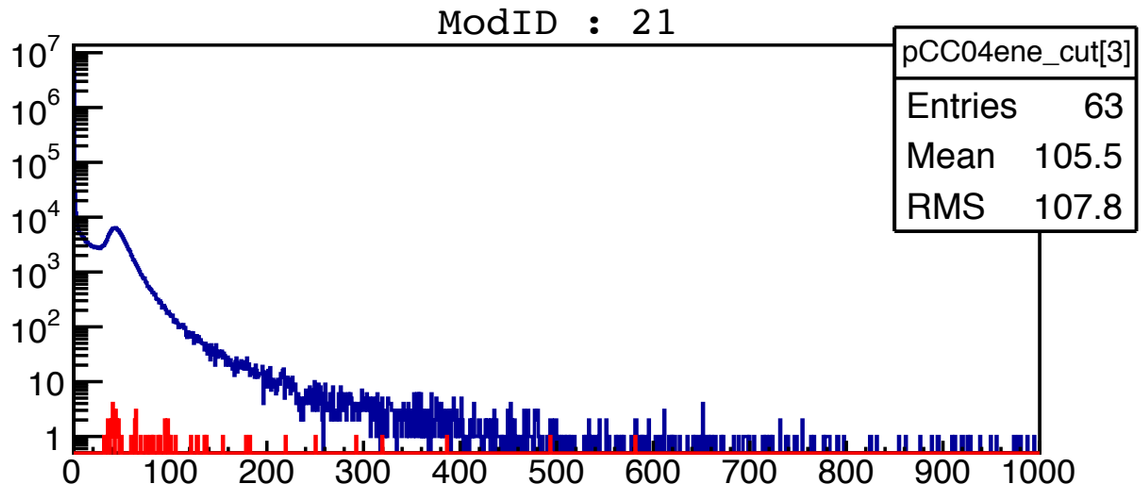

TRIGGERTAGIntegratedADC[6]:CC04ModID[20]
g_cut[6]
Entries 76
Mean x −2.911
Mean y 133.1
RMS x 42.73
RMS y 173.2

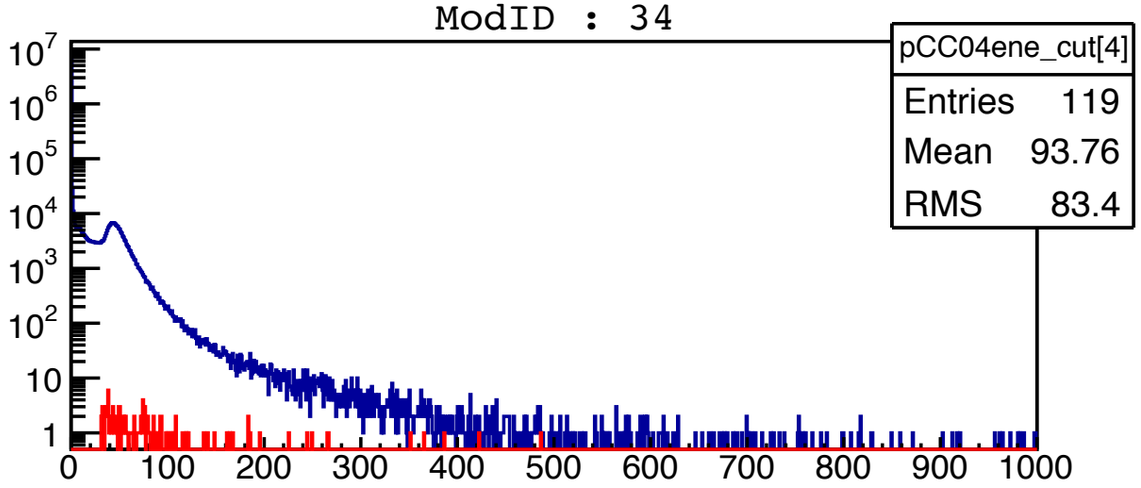

TRIGGERTAGIntegratedADC[7]:CC04ModID[20]
g_cut[7]
Entries 76
Mean x −9.207
Mean y 133.1
RMS x 47.3
RMS y 173.2

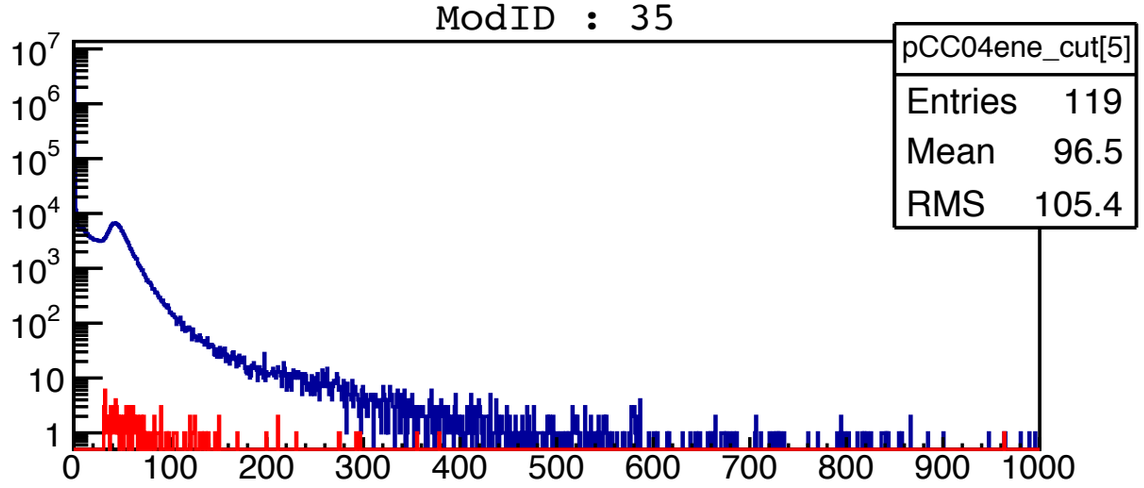

ModID : 6
pCC04ene_cut[0]
Entries 74
Mean 135.2
RMS 141.9


ModID : 7
pCC04ene_cut[1]
Entries 74
Mean 111.1
RMS 133.5

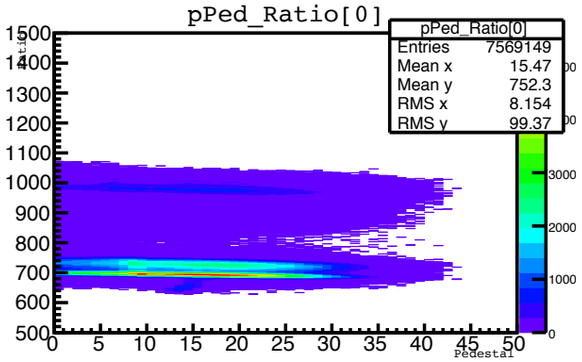

ModID : 20
pCC04ene_cut[2]
Entries 63
Mean 117.6
RMS 160.4

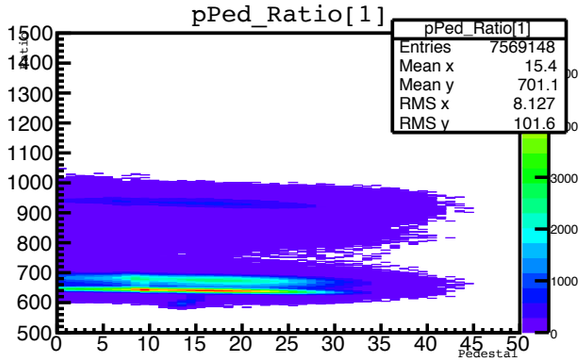

ModID : 21
pCC04ene_cut[3]
Entries 63
Mean 105.5
RMS 107.8

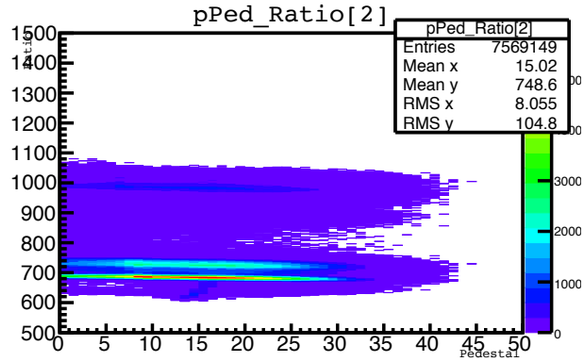

ModID : 34
pCC04ene_cut[4]
Entries 119
Mean 93.76
RMS 83.4

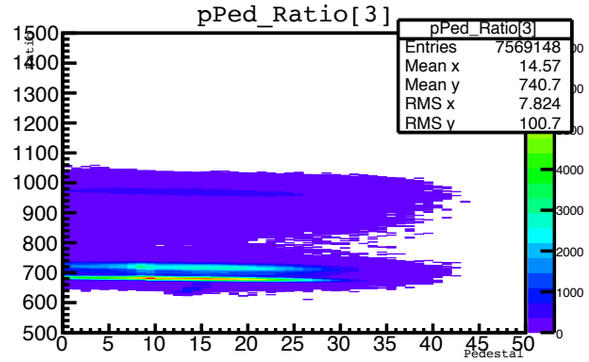

ModID : 35
pCC04ene_cut[5]
Entries 119
Mean 96.5
RMS 105.4

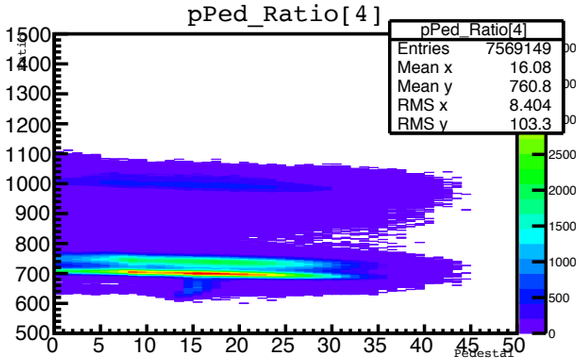
DCV1 (No cut)

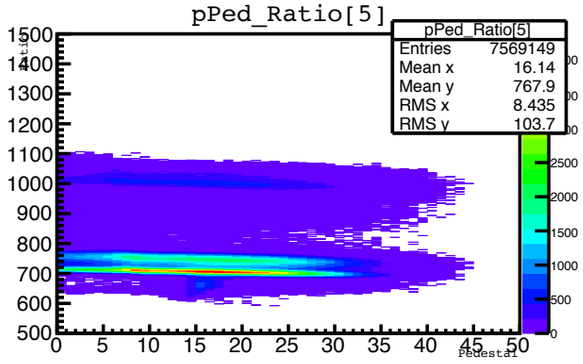

pPed_Ratio[0]
pPed_Ratio[0]
Entries 7569149
Mean x 15.47
Mean y 752.3
RMS x 8.154
RMS y 99.37
Pedestal

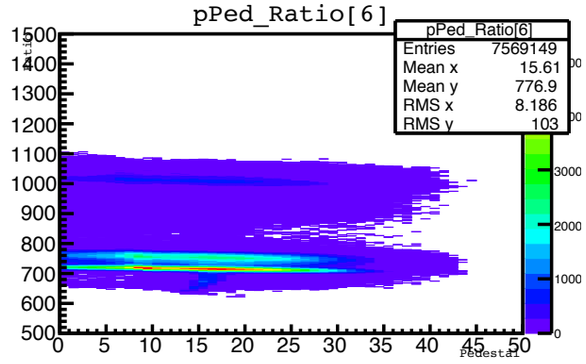

pPed_Ratio[1]
pPed_Ratio[1]
Entries 7569148
Mean x 15.4
Mean y 701.1
RMS x 8.127
RMS y 101.6
Pedestal

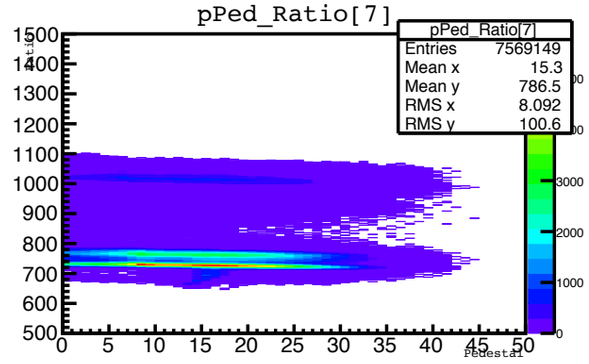

pPed_Ratio[2]
pPed_Ratio[2]
Entries 7569149
Mean x 15.02
Mean y 748.6
RMS x 8.055
RMS y 104.8
Pedestal

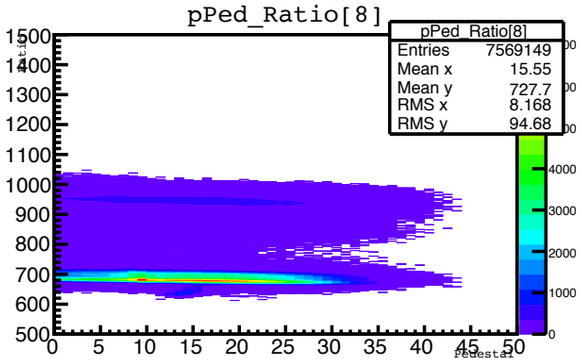

pPed_Ratio[3]
pPed_Ratio[3]
Entries 7569148
Mean x 14.57
Mean y 740.7
RMS x 7.824
RMS y 100.7
Pedestal

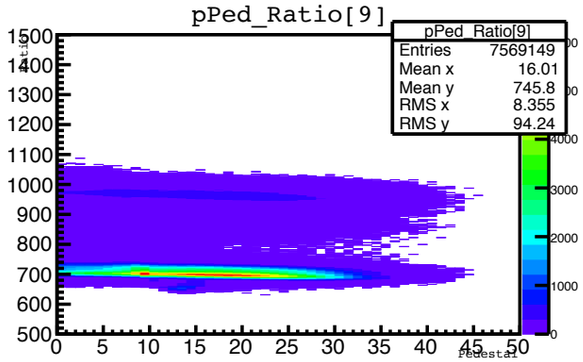

pPed_Ratio[4]
pPed_Ratio[4]
Entries 7569149
Mean x 16.08
Mean y 760.8
RMS x 8.404
RMS y 103.3
Pedestal

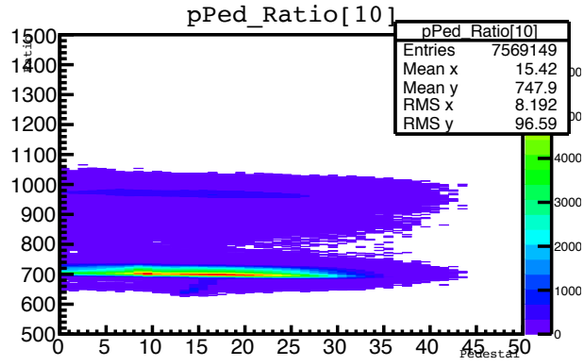

pPed_Ratio[5]
pPed_Ratio[5]
Entries 7569149
Mean x 16.14
Mean y 767.9
RMS x 8.435
RMS y 103.7
Pedestal

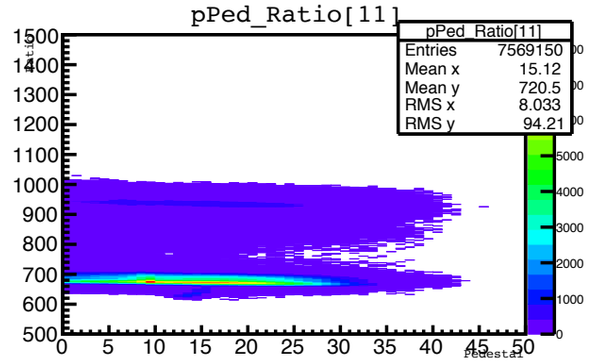

pPed_Ratio[6]
pPed_Ratio[6]
Entries 7569149
Mean x 15.61
Mean y 776.9
RMS x 8.186
RMS y 103
Pedestal

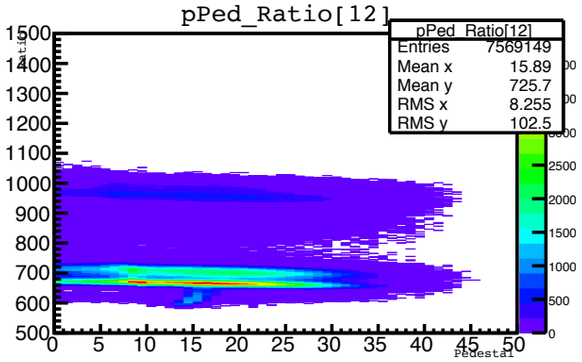

pPed_Ratio[7]
pPed_Ratio[7]
Entries 7569149
Mean x 15.3
Mean y 786.5
RMS x 8.092
RMS y 100.6
Pedestal

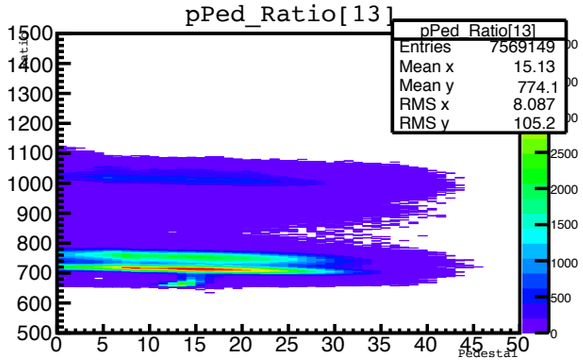

pPed_Ratio[8]
pPed_Ratio[8]
Entries 7569149
Mean x 15.55
Mean y 727.7
RMS x 8.168
RMS y 94.68
Pedestal

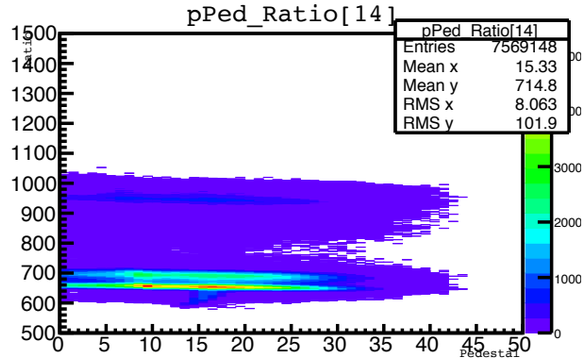

pPed_Ratio[9]
pPed_Ratio[9]
Entries 7569149
Mean x 16.01
Mean y 745.8
RMS x 8.355
RMS y 94.24
Pedestal

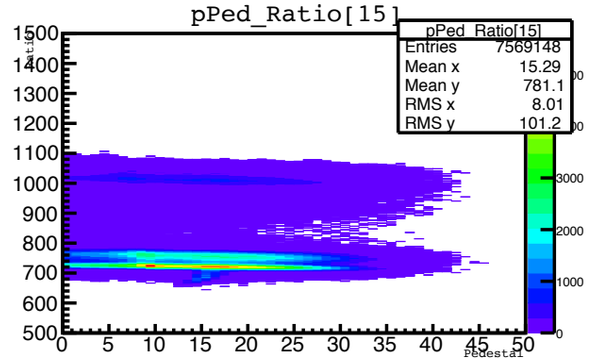

pPed_Ratio[10]
pPed_Ratio[10]
Entries 7569149
Mean x 15.42
Mean y 747.9
RMS x 8.192
RMS y 96.59
Pedestal


pPed_Ratio[11]
pPed_Ratio[11]
Entries 7569150
Mean x 15.12
Mean y 720.5
RMS x 8.033
RMS y 94.21
Pedestal

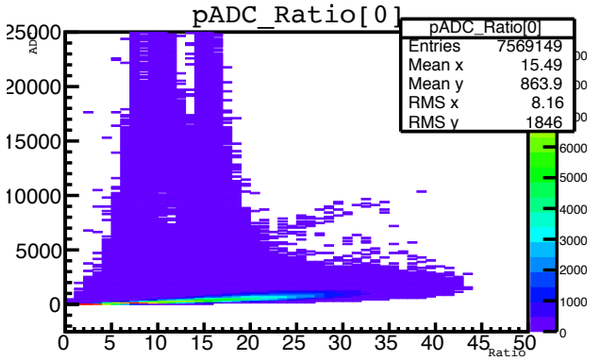

pPed_Ratio[12]
pPed_Ratio[12]
Entries 7569149
Mean x 15.89
Mean y 725.7
RMS x 8.255
RMS y 102.5
Pedestal

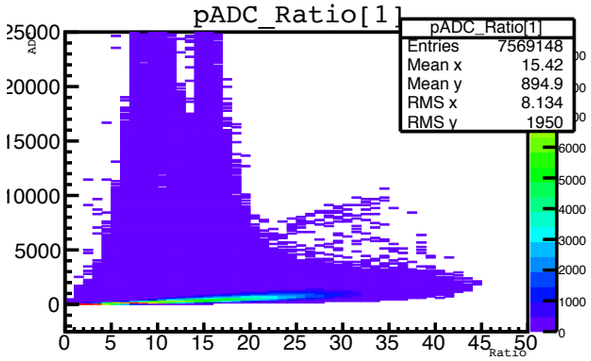

pPed_Ratio[13]
pPed_Ratio[13]
Entries 7569149
Mean x 15.13
Mean y 774.1
RMS x 8.087
RMS y 105.2
Pedestal

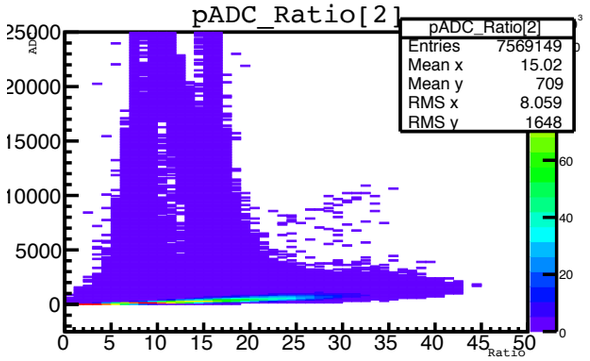

pPed_Ratio[14]
pPed_Ratio[14]
Entries 7569148
Mean x 15.33
Mean y 714.8
RMS x 8.063
RMS y 101.9
Pedestal

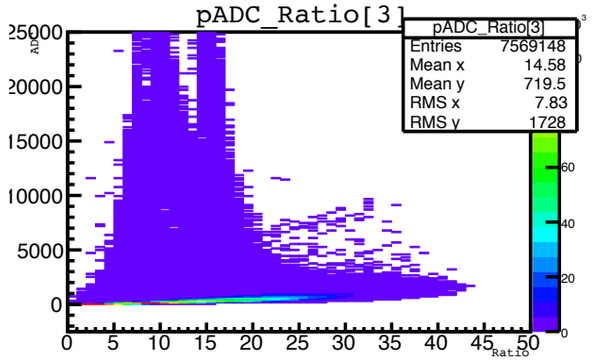

pPed_Ratio[15]
pPed_Ratio[15]
Entries 7569148
Mean x 15.29
Mean y 781.1
RMS x 8.01
RMS y 101.2
Pedestal

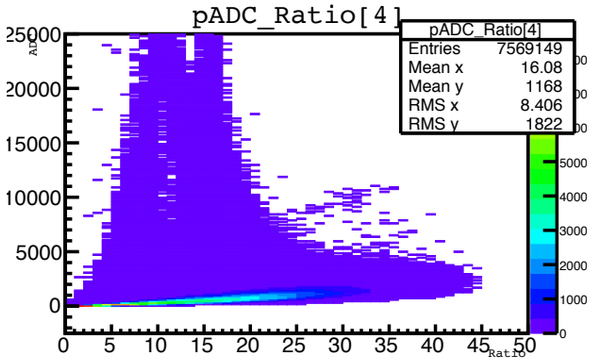
DCV1 (No cut)

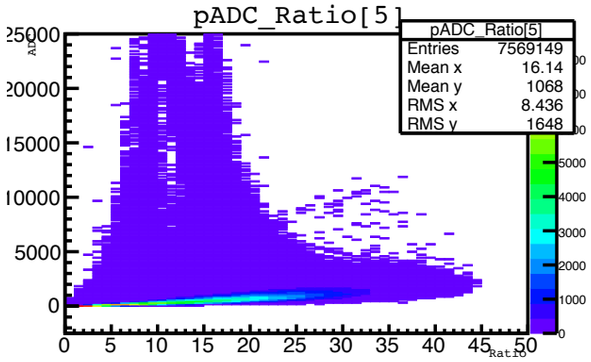

pADC_Ratio[0]
pADC_Ratio[0]
Entries 7569149
Mean x 15.49
Mean y 863.9
RMS x 8.16
RMS y 1846
ADC
Ratio

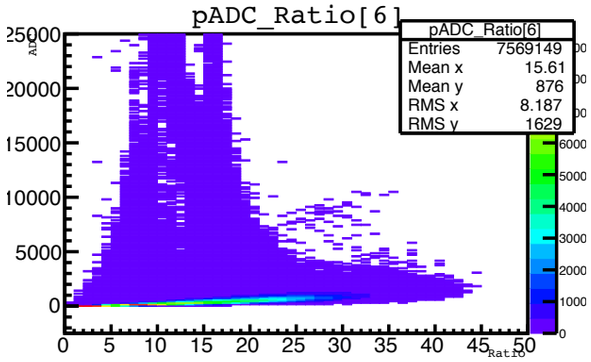

pADC_Ratio[1]
pADC_Ratio[1]
Entries 7569148
Mean x 15.42
Mean y 894.9
RMS x 8.134
RMS y 1950
ADC
Ratio

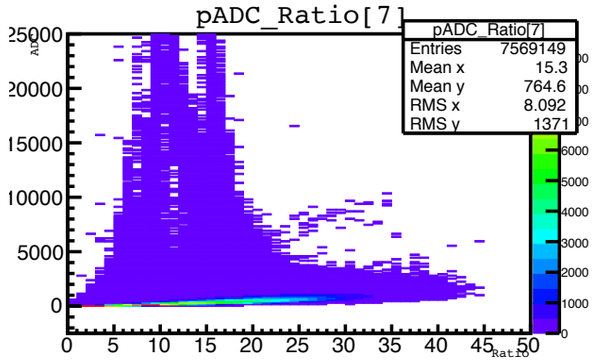

pADC_Ratio[2]
pADC_Ratio[2]
Entries 7569149
Mean x 15.02
Mean y 709
RMS x 8.059
RMS y 1648
ADC
Ratio

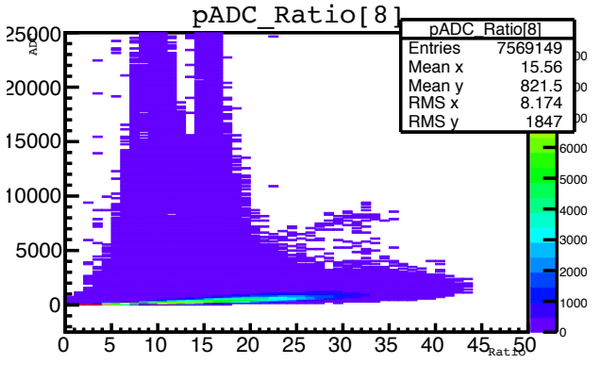

pADC_Ratio[3]
pADC_Ratio[3]
Entries 7569148
Mean x 14.58
Mean y 719.5
RMS x 7.83
RMS y 1728
ADC
Ratio

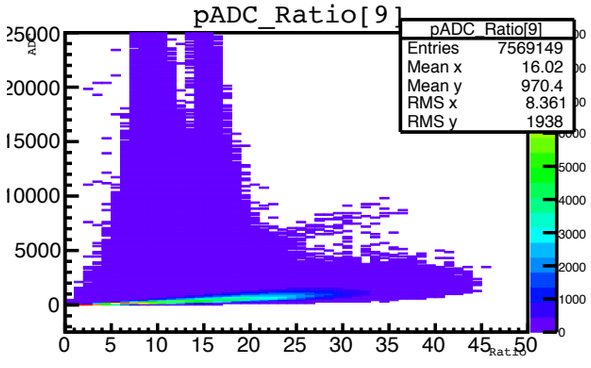

pADC_Ratio[4]
pADC_Ratio[4]
Entries 7569149
Mean x 16.08
Mean y 1168
RMS x 8.406
RMS y 1822
ADC
Ratio

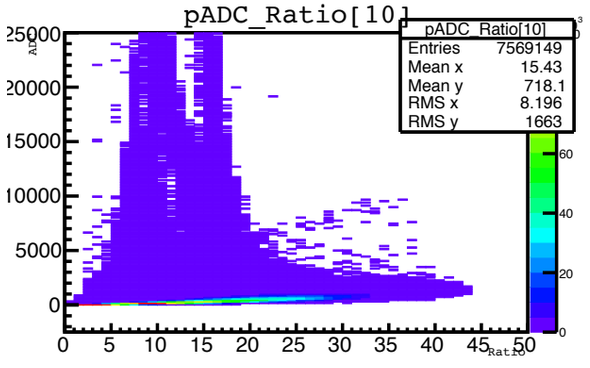

pADC_Ratio[5]
pADC_Ratio[5]
Entries 7569149
Mean x 16.14
Mean y 1068
RMS x 8.436
RMS y 1648
ADC
Ratio

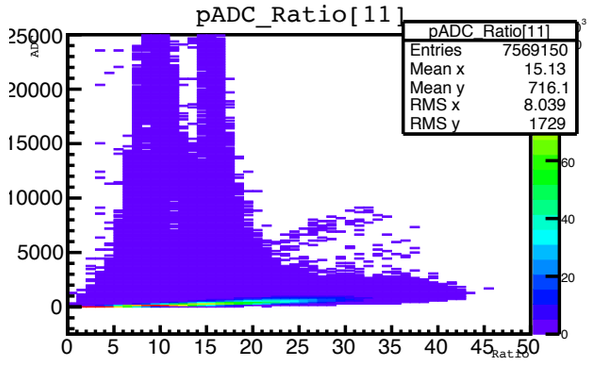

pADC_Ratio[6]
pADC_Ratio[6]
Entries 7569149
Mean x 15.61
Mean y 876
RMS x 8.187
RMS y 1629
ADC
Ratio

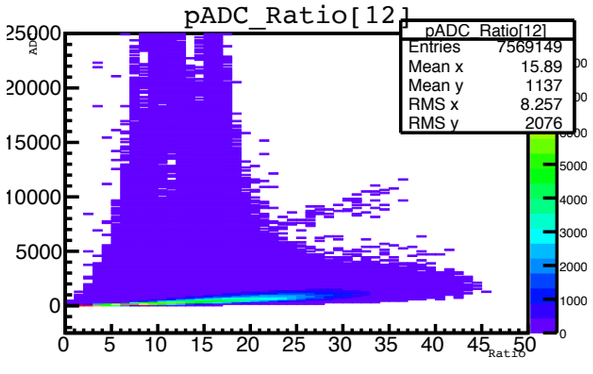

pADC_Ratio[7]
pADC_Ratio[7]
Entries 7569149
Mean x 15.3
Mean y 764.6
RMS x 8.092
RMS y 1371
ADC
Ratio

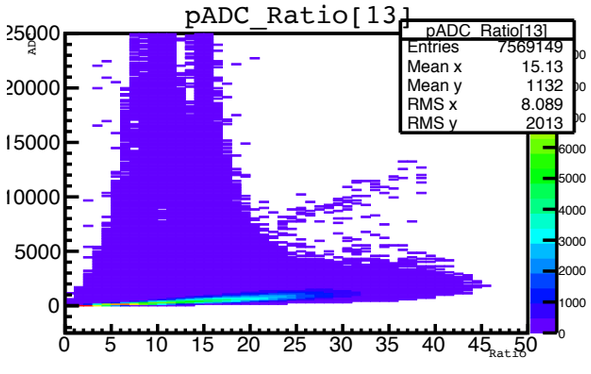

pADC_Ratio[8]
pADC_Ratio[8]
Entries 7569149
Mean x 15.56
Mean y 821.5
RMS x 8.174
RMS y 1847
ADC
Ratio

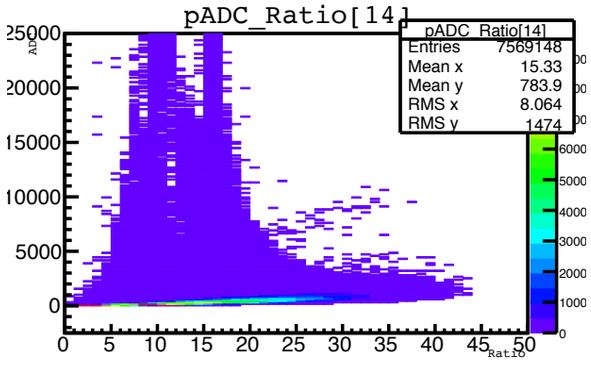

pADC_Ratio[9]
pADC_Ratio[9]
Entries 7569149
Mean x 16.02
Mean y 970.4
RMS x 8.361
RMS y 1938
ADC
Ratio

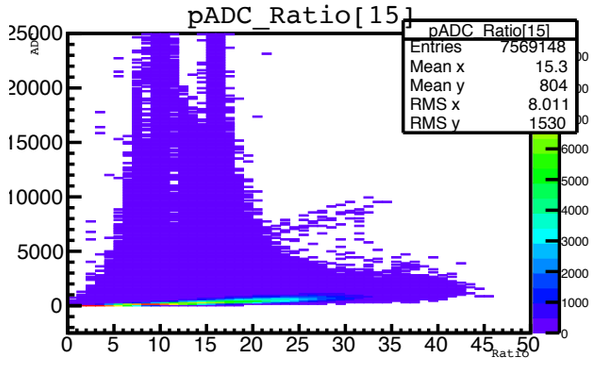

pADC_Ratio[10]
pADC_Ratio[10]
Entries 7569149
Mean x 15.43
Mean y 718.1
RMS x 8.196
RMS y 1663
ADC
Ratio


pADC_Ratio[11]
pADC_Ratio[11]
Entries 7569150
Mean x 15.13
Mean y 716.1
RMS x 8.039
RMS y 1729
ADC
Ratio

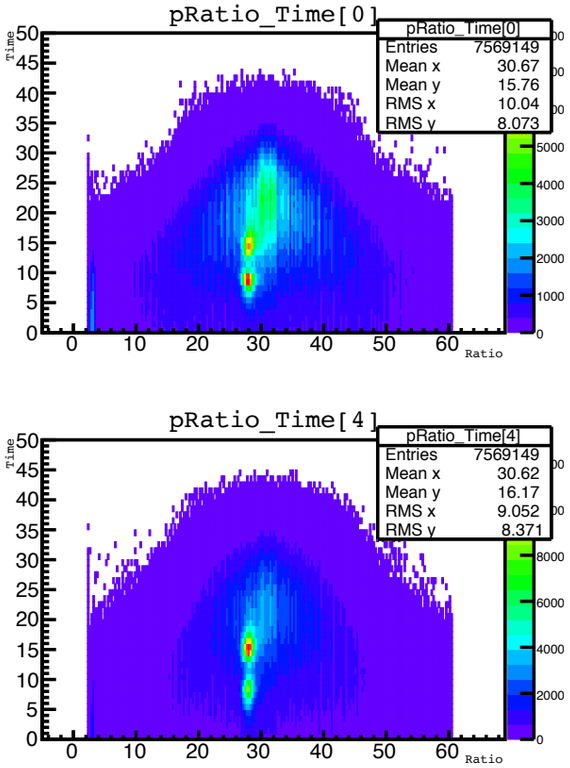

pADC_Ratio[12]
pADC_Ratio[12]
Entries 7569149
Mean x 15.89
Mean y 1137
RMS x 8.257
RMS y 2076
ADC
Ratio

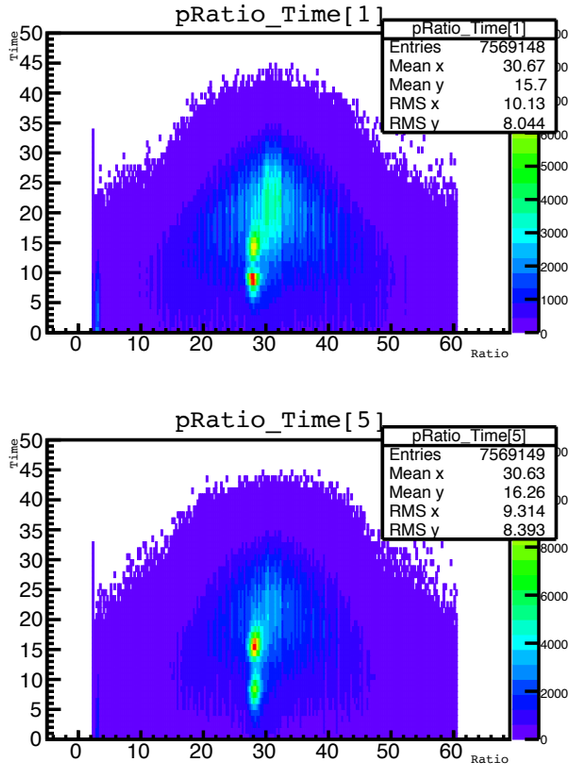

pADC_Ratio[13]
pADC_Ratio[13]
Entries 7569149
Mean x 15.13
Mean y 1132
RMS x 8.089
RMS y 2013
ADC
Ratio

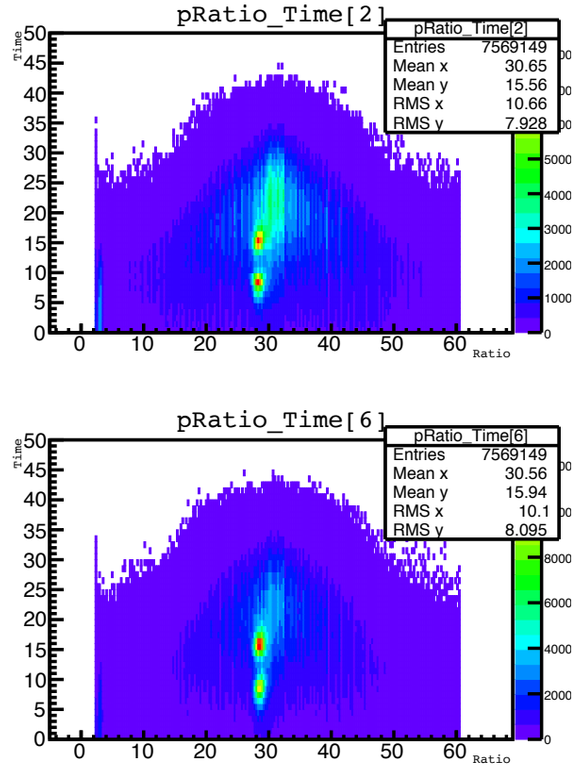

pADC_Ratio[14]
pADC_Ratio[14]
Entries 7569148
Mean x 15.33
Mean y 783.9
RMS x 8.064
RMS y 1474
ADC
Ratio

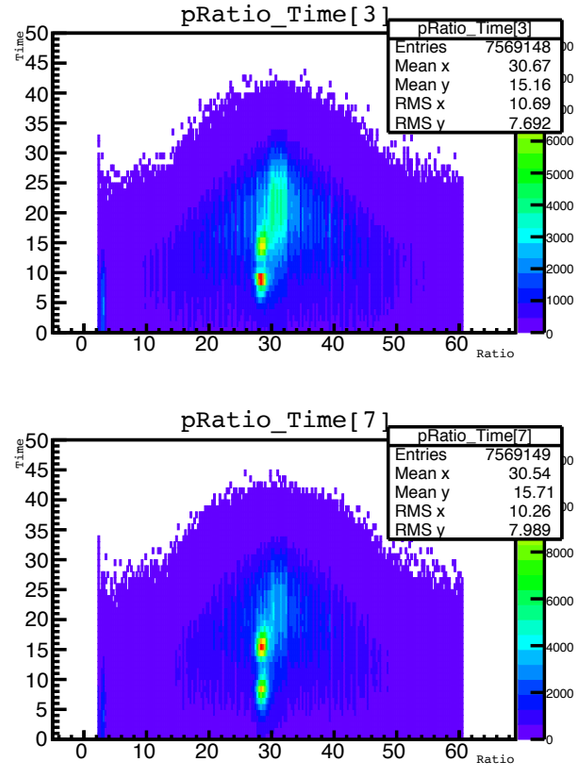

pADC_Ratio[15]
pADC_Ratio[15]
Entries 7569148
Mean x 15.3
Mean y 804
RMS x 8.011
RMS y 1530
ADC
Ratio

DCV1 (No cut)


pRatio_Time[0]
pRatio_Time[0]
Entries 7569149
Mean x 30.67
Mean y 15.76
RMS x 10.04
RMS y 8.073
Time
Ratio


pRatio_Time[1]
pRatio_Time[1]
Entries 7569148
Mean x 30.67
Mean y 15.7
RMS x 10.13
RMS y 8.044
Time
Ratio


pRatio_Time[2]
pRatio_Time[2]
Entries 7569149
Mean x 30.65
Mean y 15.56
RMS x 10.66
RMS y 7.928
Time
Ratio

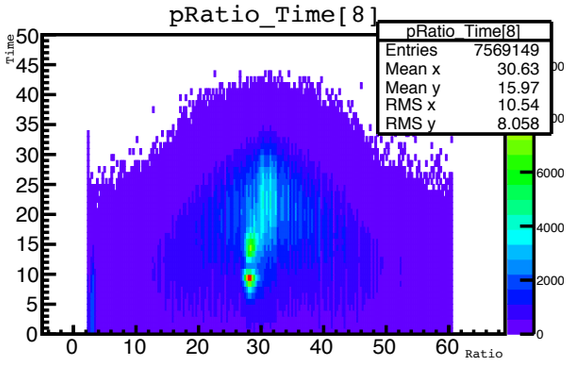

pRatio_Time[3]
pRatio_Time[3]
Entries 7569148
Mean x 30.67
Mean y 15.16
RMS x 10.69
RMS y 7.692
Time
Ratio

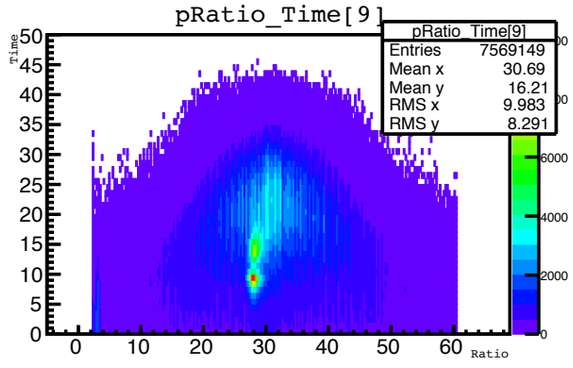
pRatio_Time[4]
pRatio_Time[4]
Entries 7569149
Mean x 30.62
Mean y 16.17
RMS x 9.052
RMS y 8.371
Time
Ratio

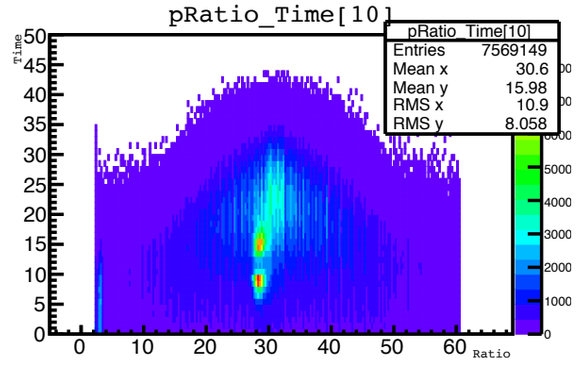
pRatio_Time[5]
pRatio_Time[5]
Entries 7569149
Mean x 30.63
Mean y 16.26
RMS x 9.314
RMS y 8.393
Time
Ratio

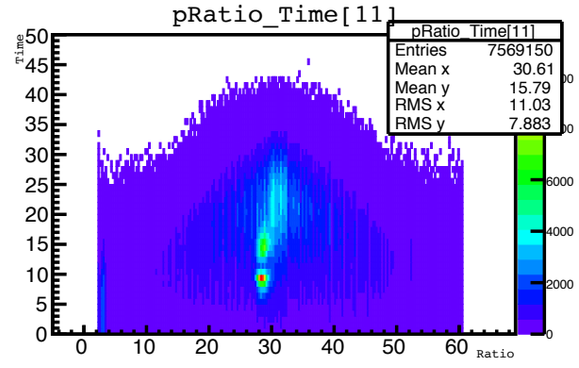
pRatio_Time[6]
pRatio_Time[6]
Entries 7569149
Mean x 30.56
Mean y 15.94
RMS x 10.1
RMS y 8.095
Time
Ratio

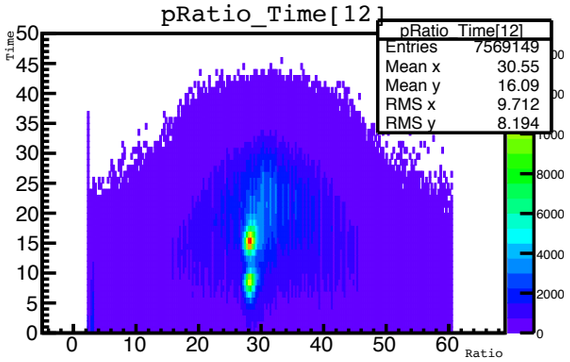
pRatio_Time[7]
pRatio_Time[7]
Entries 7569149
Mean x 30.54
Mean y 15.71
RMS x 10.26
RMS y 7.989
Time
Ratio

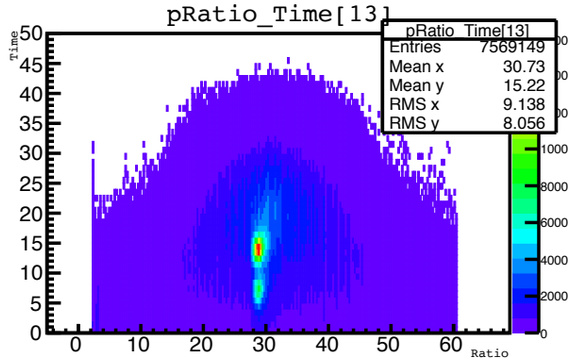

pRatio_Time[8]
pRatio_Time[8]
Entries 7569149
Mean x 30.63
Mean y 15.97
RMS x 10.54
RMS y 8.058
Time
Ratio

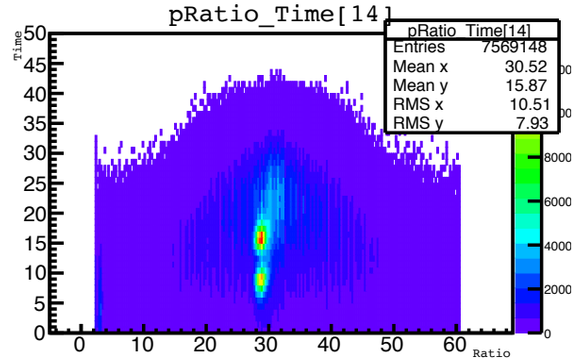

pRatio_Time[9]
pRatio_Time[9]
Entries 7569149
Mean x 30.69
Mean y 16.21
RMS x 9.983
RMS y 8.291
Time
Ratio

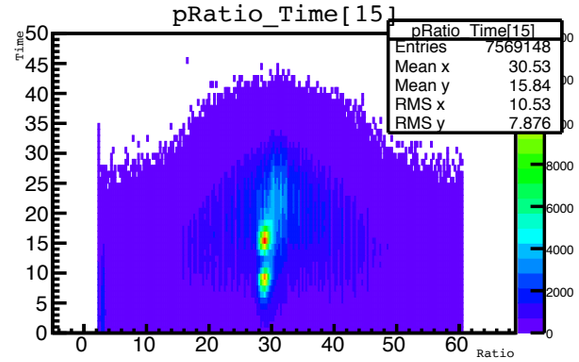

pRatio_Time[10]
pRatio_Time[10]
Entries 7569149
Mean x 30.6
Mean y 15.98
RMS x 10.9
RMS y 8.058
Time
Ratio


pRatio_Time[11]
pRatio_Time[11]
Entries 7569150
Mean x 30.61
Mean y 15.79
RMS x 11.03
RMS y 7.883
Time
Ratio

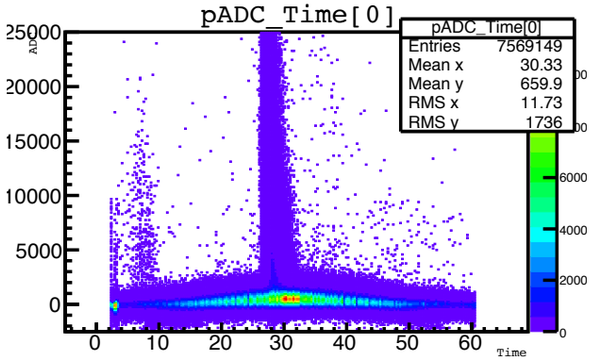

pRatio_Time[12]
pRatio_Time[12]
Entries 7569149
Mean x 30.55
Mean y 16.09
RMS x 9.712
RMS y 8.194
Time
Ratio

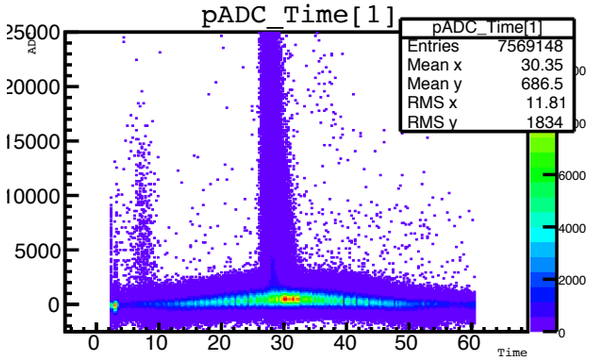

pRatio_Time[13]
pRatio_Time[13]
Entries 7569149
Mean x 30.73
Mean y 15.22
RMS x 9.138
RMS y 8.056
Time
Ratio

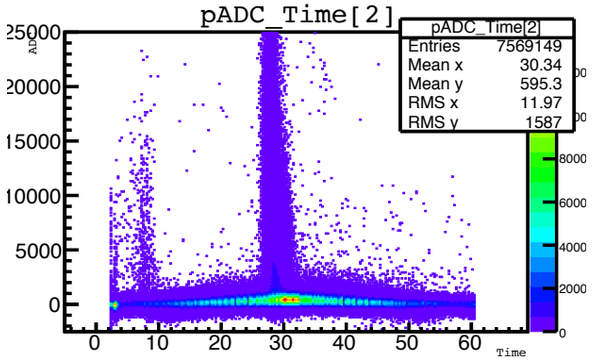

pRatio_Time[14]
pRatio_Time[14]
Entries 7569148
Mean x 30.52
Mean y 15.87
RMS x 10.51
RMS y 7.93
Time
Ratio

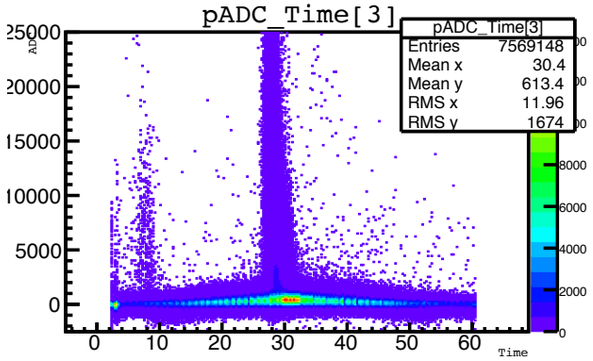

pRatio_Time[15]
pRatio_Time[15]
Entries 7569148
Mean x 30.53
Mean y 15.84
RMS x 10.53
RMS y 7.876
Time
Ratio

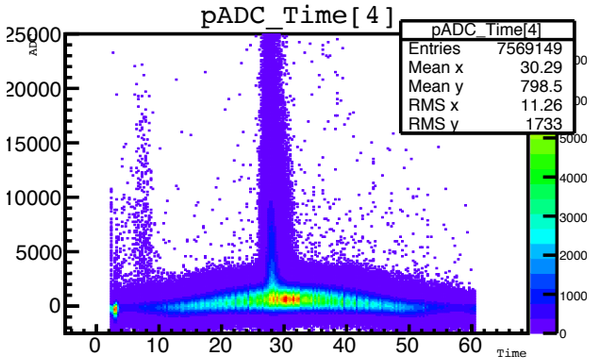
DCV1 (No cut)

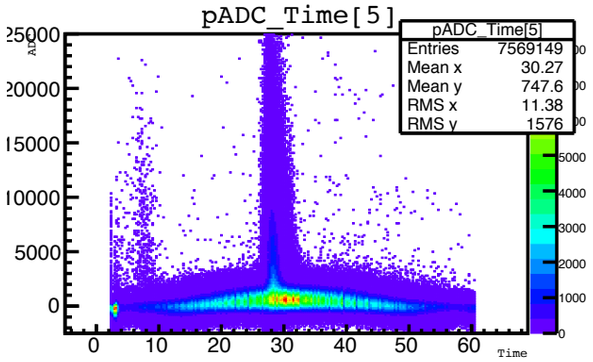

pADC_Time[0]
pADC_Time[0]
Entries 7569149
Mean x 30.33
Mean y 659.9
RMS x 11.73
RMS y 1736
ADC
Time

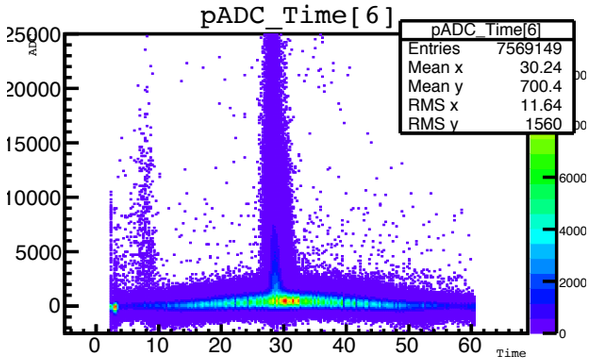

pADC_Time[1]
pADC_Time[1]
Entries 7569148
Mean x 30.35
Mean y 686.5
RMS x 11.81
RMS y 1834
ADC
Time

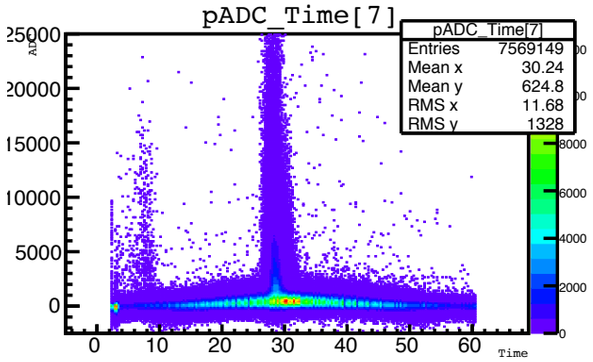

pADC_Time[2]
pADC_Time[2]
Entries 7569149
Mean x 30.34
Mean y 595.3
RMS x 11.97
RMS y 1587
ADC
Time

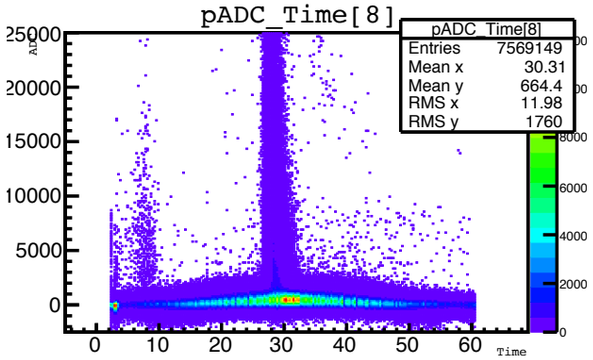

pADC_Time[3]
pADC_Time[3]
Entries 7569148
Mean x 30.4
Mean y 613.4
RMS x 11.96
RMS y 1674
ADC
Time

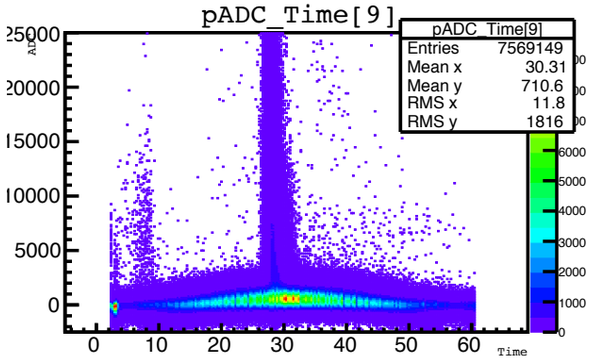

pADC_Time[4]
pADC_Time[4]
Entries 7569149
Mean x 30.29
Mean y 798.5
RMS x 11.26
RMS y 1733
ADC
Time

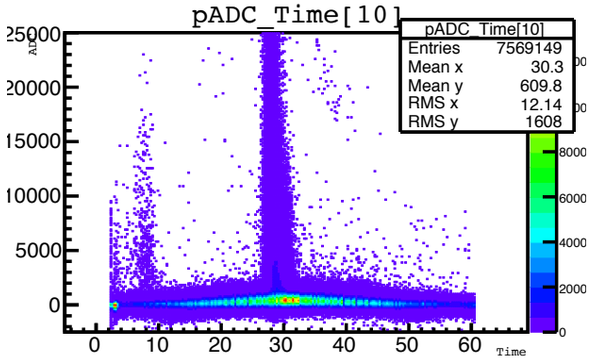

pADC_Time[5]
pADC_Time[5]
Entries 7569149
Mean x 30.27
Mean y 747.6
RMS x 11.38
RMS y 1576
ADC
Time

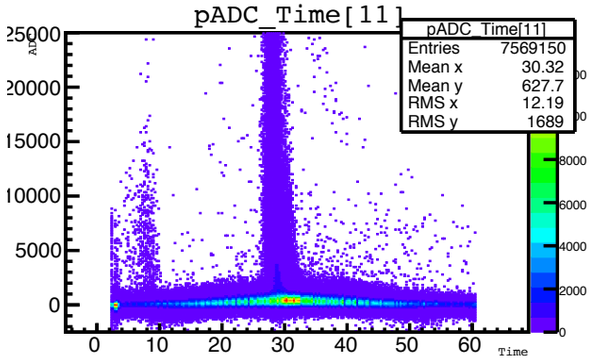

pADC_Time[6]
pADC_Time[6]
Entries 7569149
Mean x 30.24
Mean y 700.4
RMS x 11.64
RMS y 1560
ADC
Time

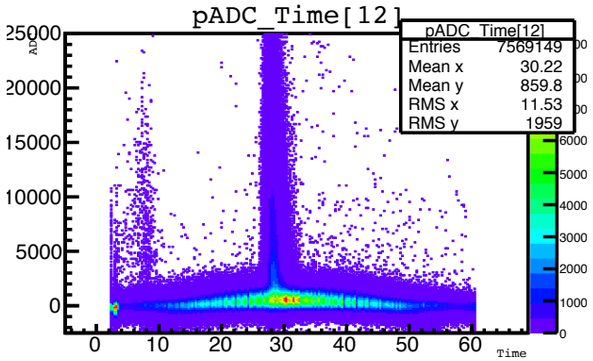

pADC_Time[7]
pADC_Time[7]
Entries 7569149
Mean x 30.24
Mean y 624.8
RMS x 11.68
RMS y 1328
ADC
Time

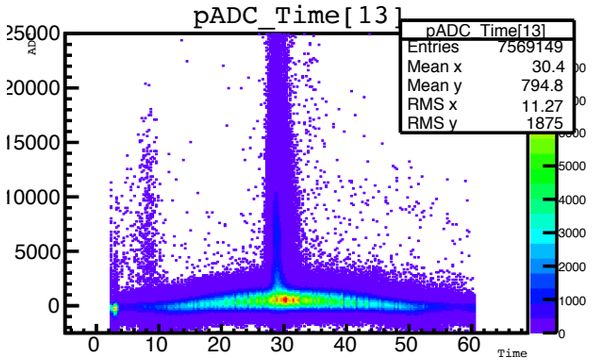

pADC_Time[8]
pADC_Time[8]
Entries 7569149
Mean x 30.31
Mean y 664.4
RMS x 11.98
RMS y 1760
ADC
Time

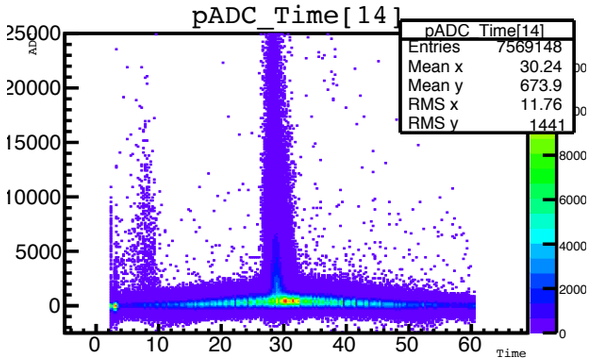

pADC_Time[9]
pADC_Time[9]
Entries 7569149
Mean x 30.31
Mean y 710.6
RMS x 11.8
RMS y 1816
ADC
Time

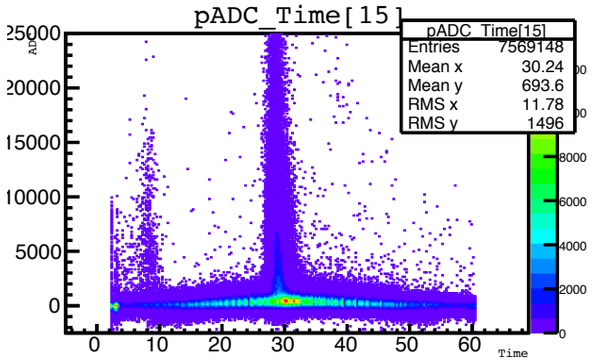

pADC_Time[10]
pADC_Time[10]
Entries 7569149
Mean x 30.3
Mean y 609.8
RMS x 12.14
RMS y 1608
ADC
Time


pADC_Time[11]
pADC_Time[11]
Entries 7569150
Mean x 30.32
Mean y 627.7
RMS x 12.19
RMS y 1689
ADC
Time


pADC_Time[12]
pADC_Time[12]
Entries 7569149
Mean x 30.22
Mean y 859.8
RMS x 11.53
RMS y 1959
ADC
Time


pADC_Time[13]
pADC_Time[13]
Entries 7569149
Mean x 30.4
Mean y 794.8
RMS x 11.27
RMS y 1875
ADC
Time

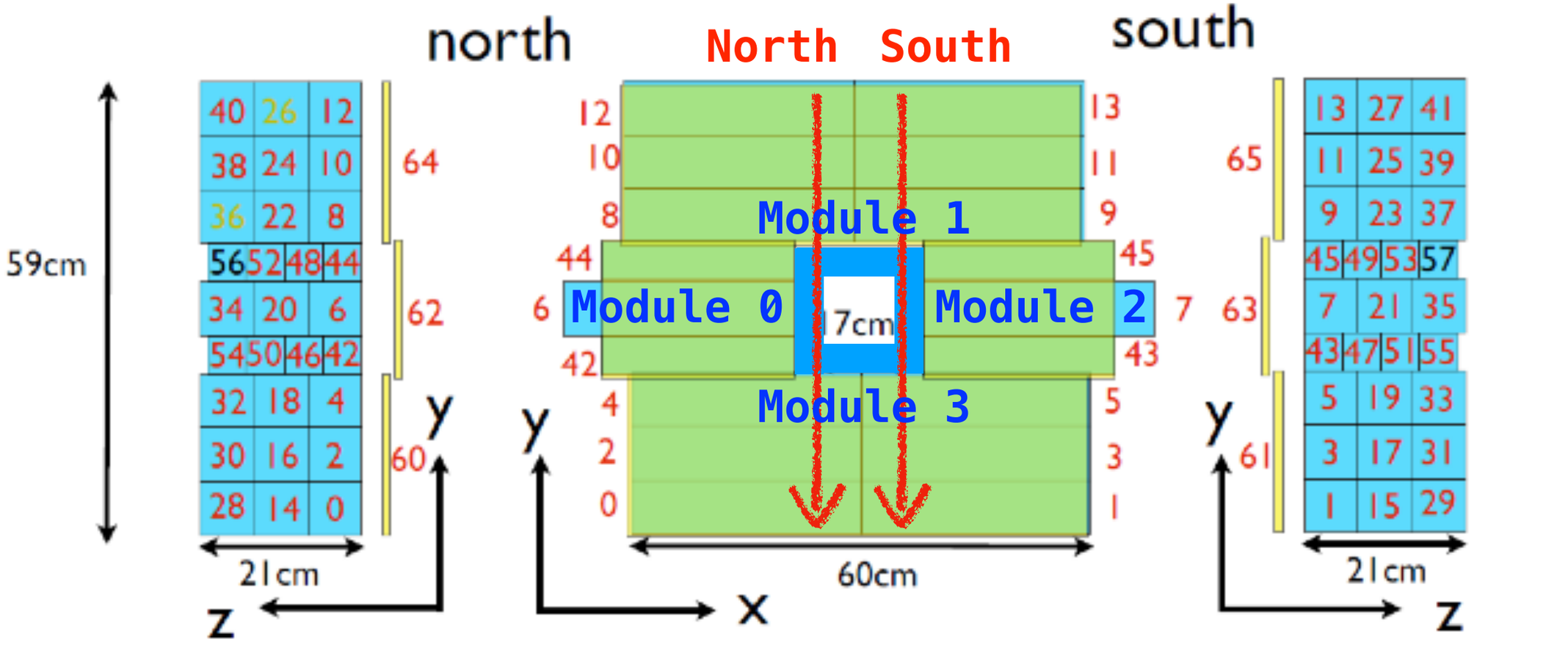

pADC_Time[14]
pADC_Time[14]
Entries 7569148
Mean x 30.24
Mean y 673.9
RMS x 11.76
RMS y 1441
ADC
Time


pADC_Time[15]
pADC_Time[15]
Entries 7569148
Mean x 30.24
Mean y 693.6
RMS x 11.78
RMS y 1496
ADC
Time

CC04

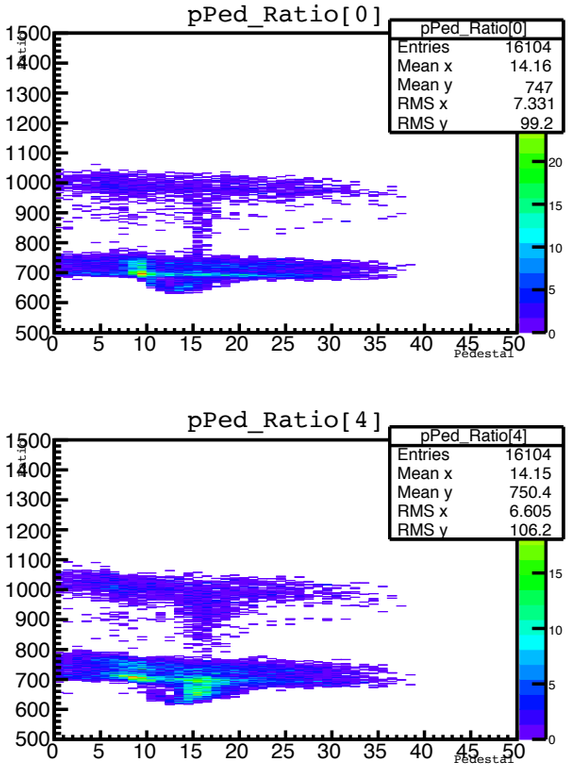
- 42 CsI crystals of 70×70×300mm,
  16 CsI crystals of 50×50×250mm,
  4 scintillator of thickness 10mm

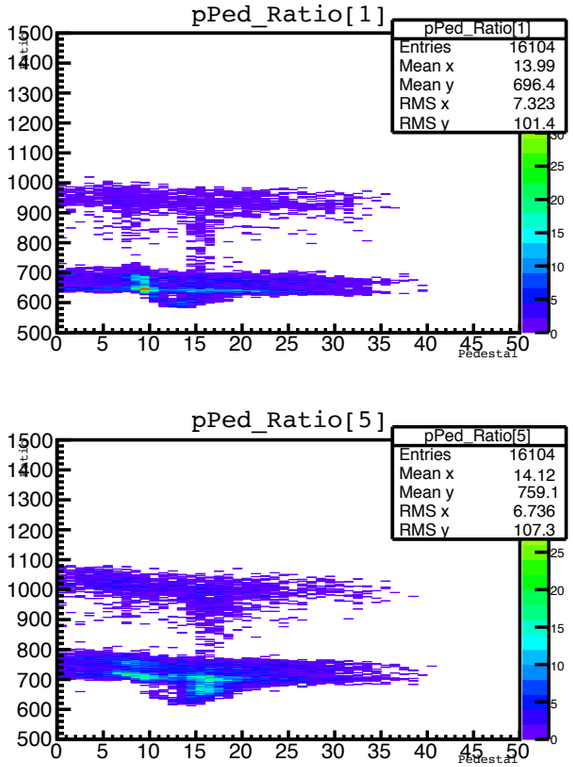
number=CC04ModID
(with amp channel)
(dead channel)

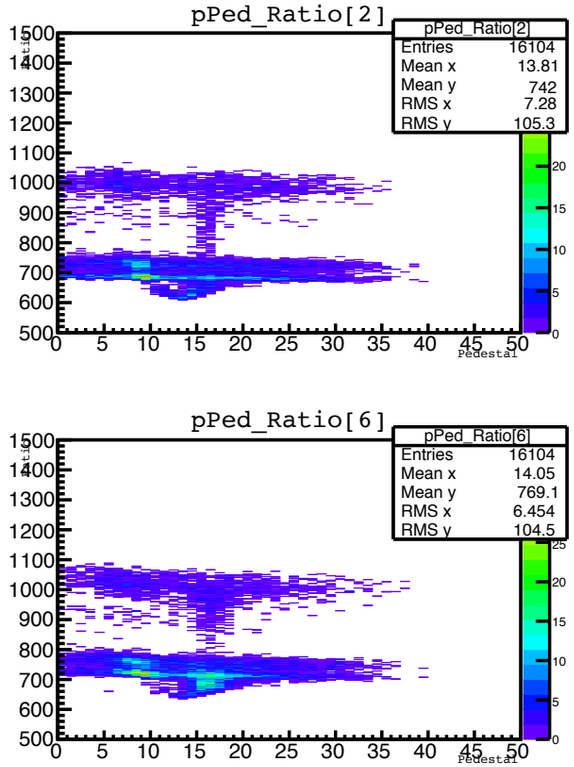


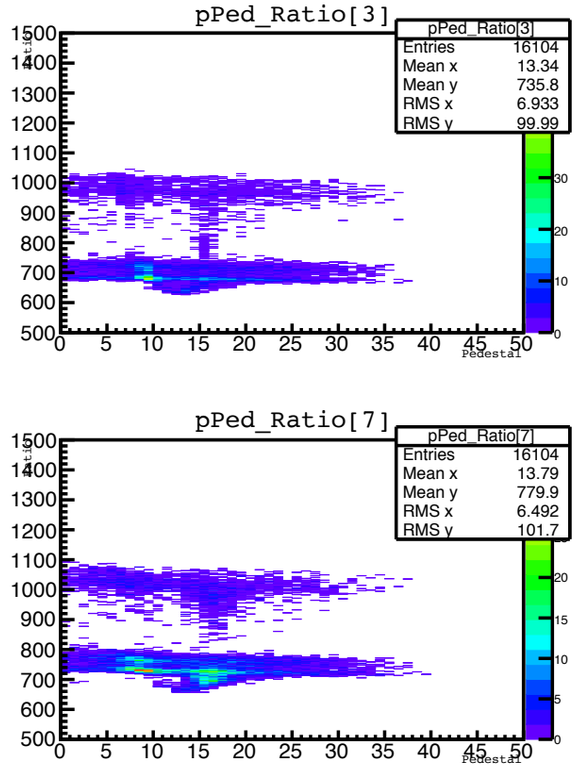
(view from north) (view from upstream) (view from south)

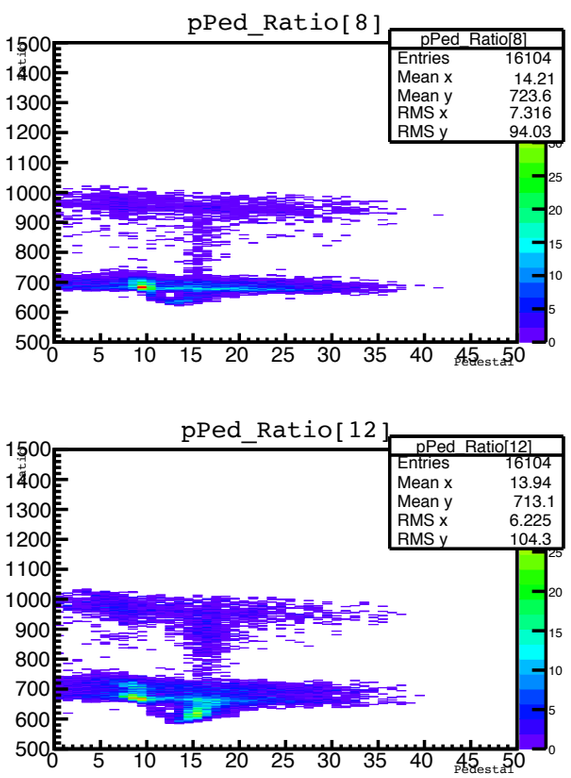
DCV1 (North & South Cut)

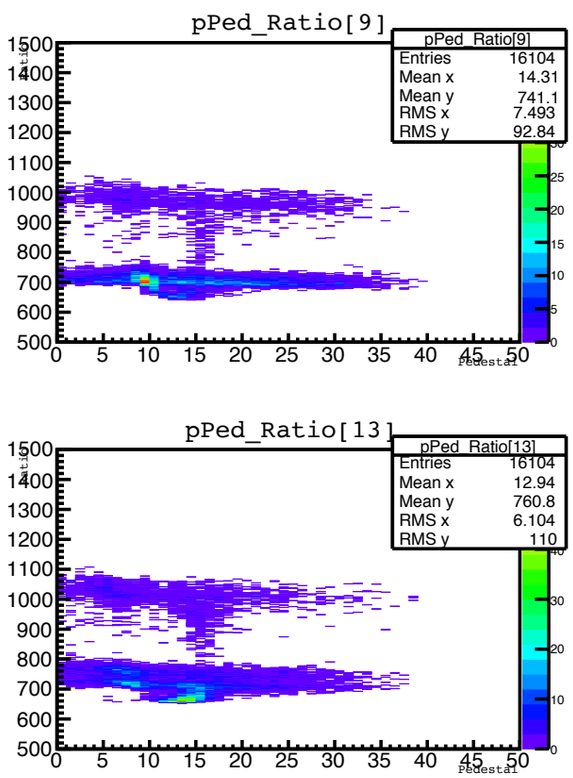


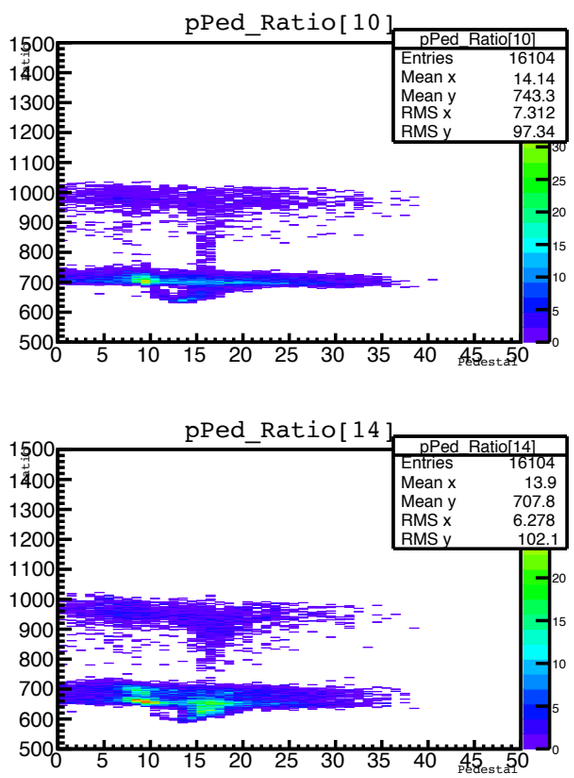


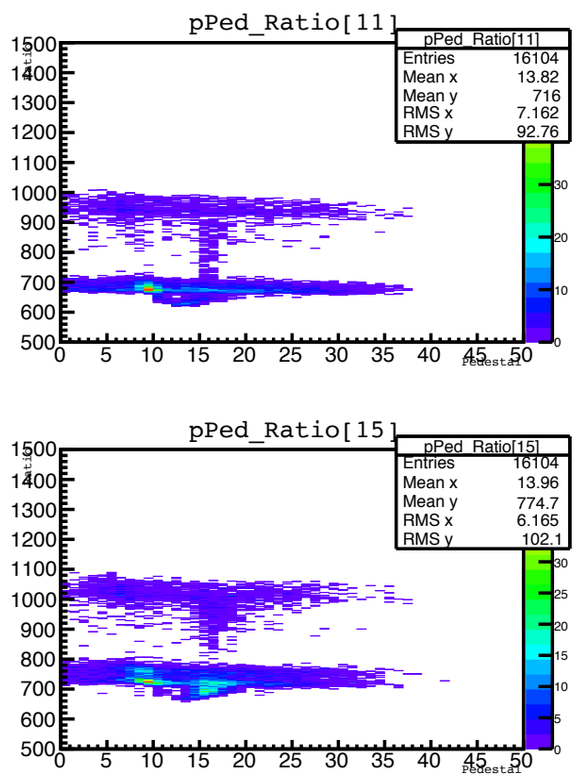




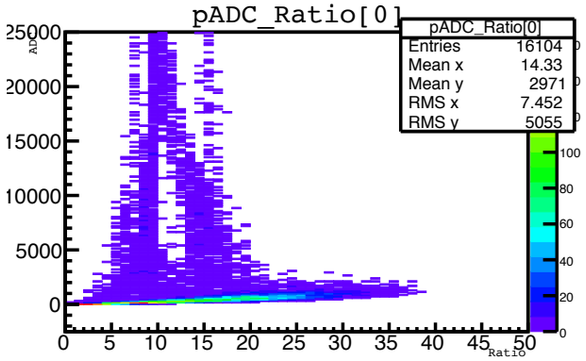


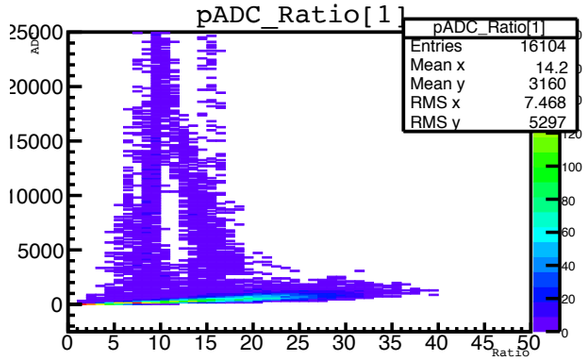


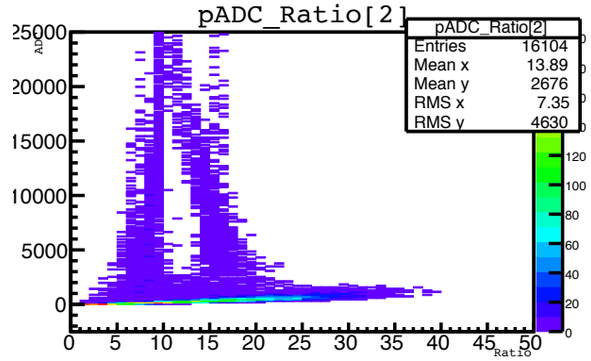


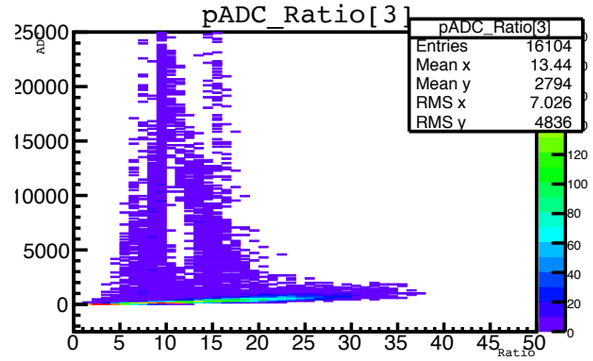


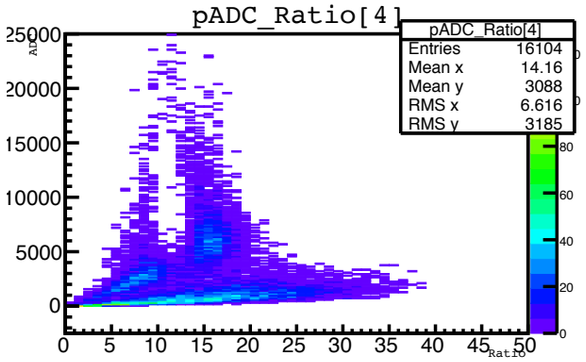
DCV1 (North & South Cut)

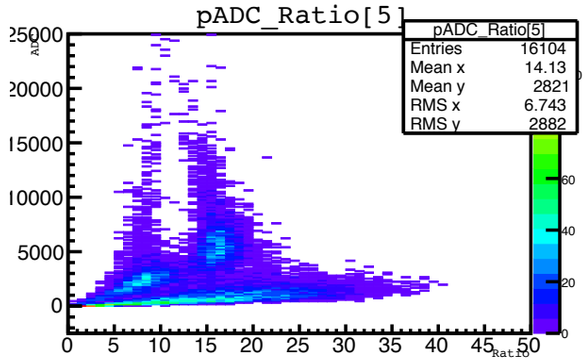


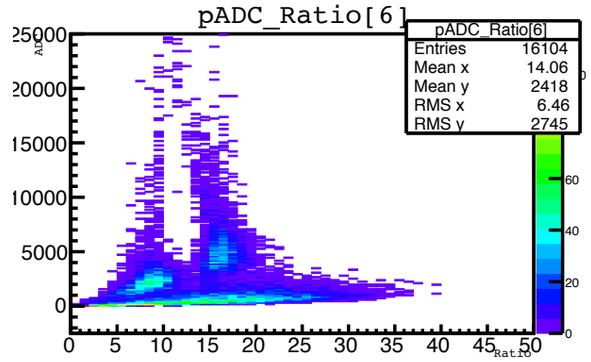


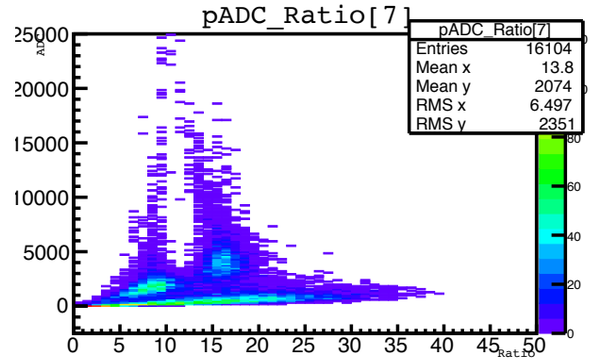


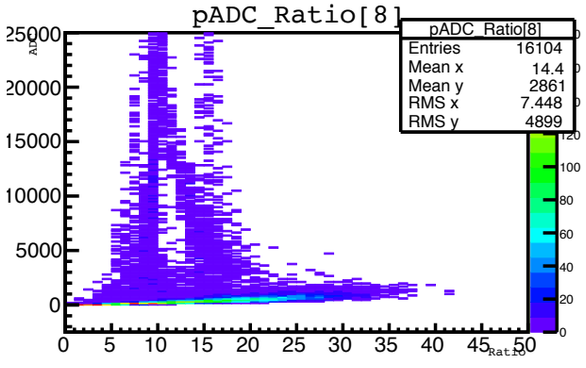


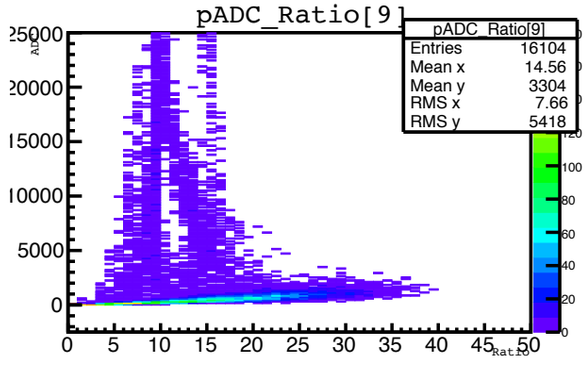


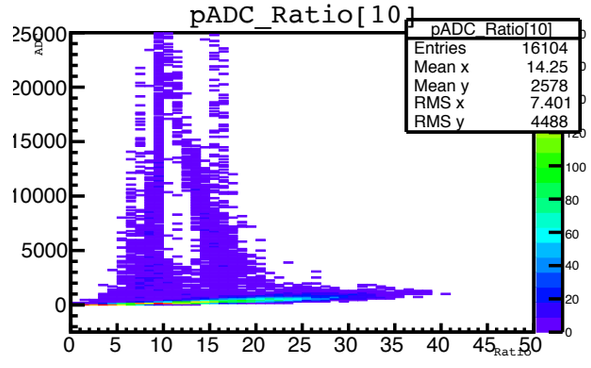


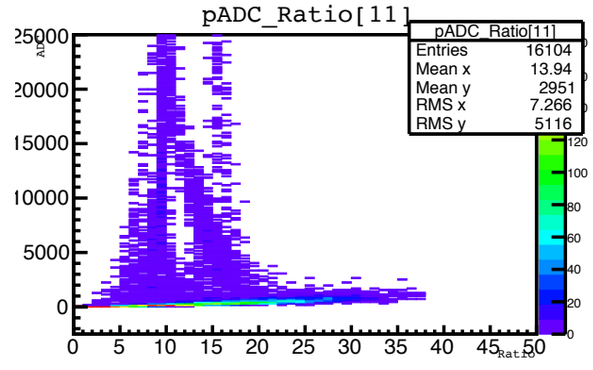


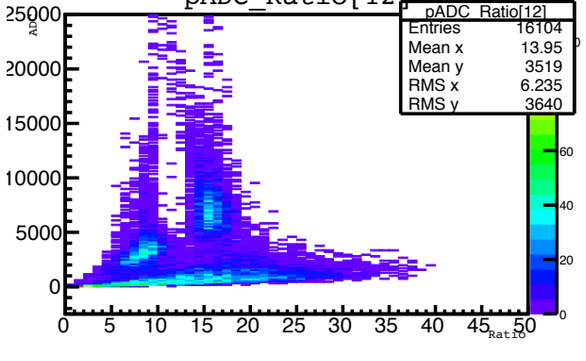


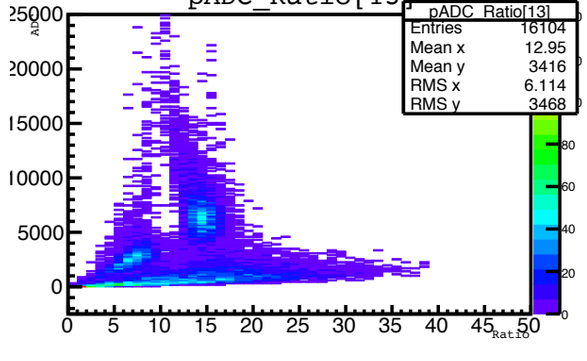


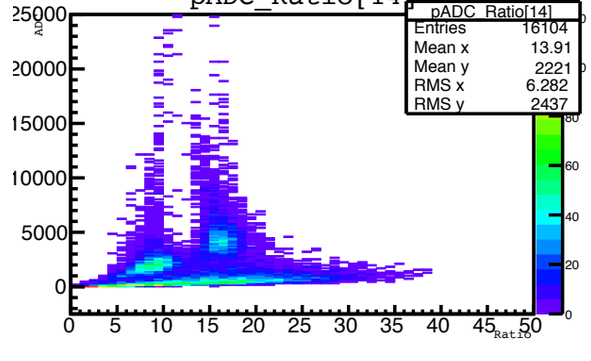


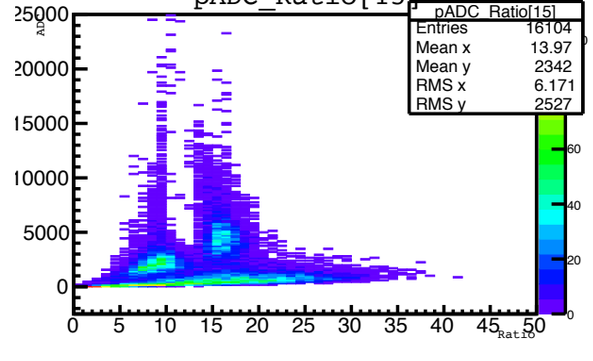




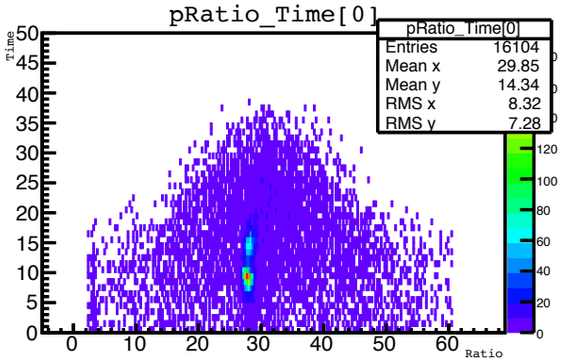


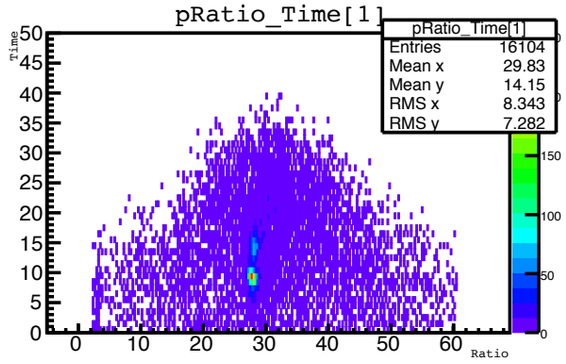


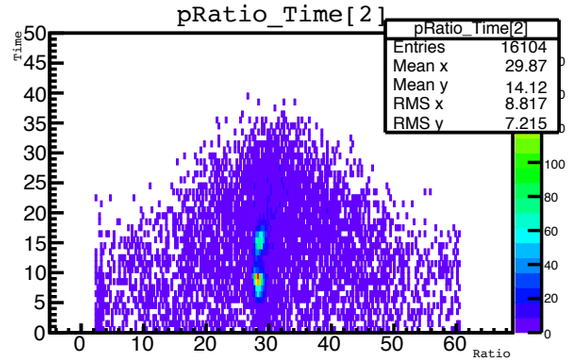


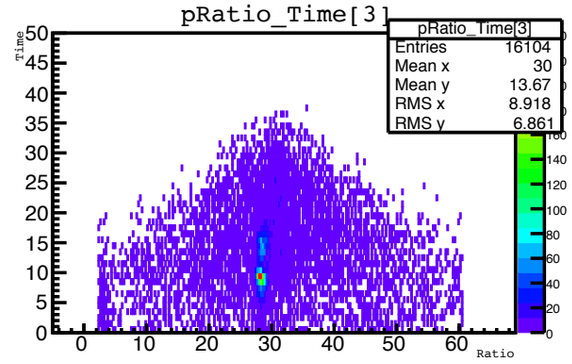


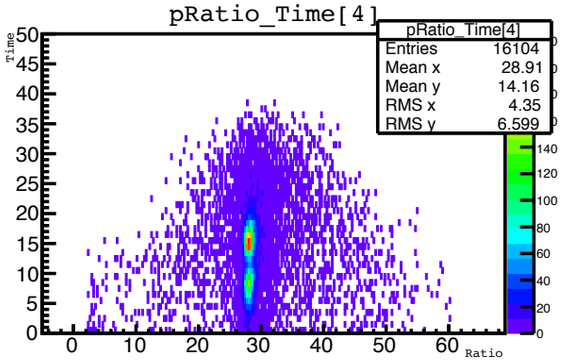
DCV1 (North & South Cut)

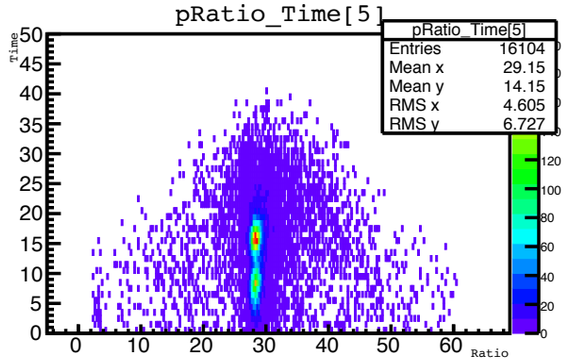


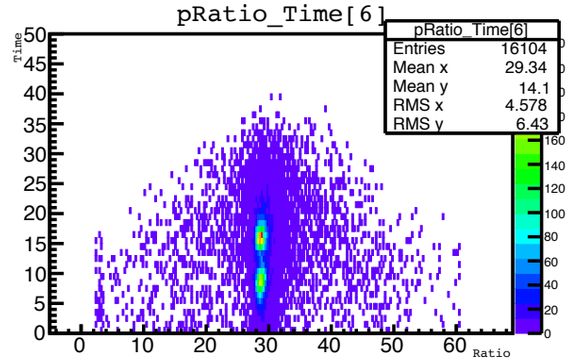


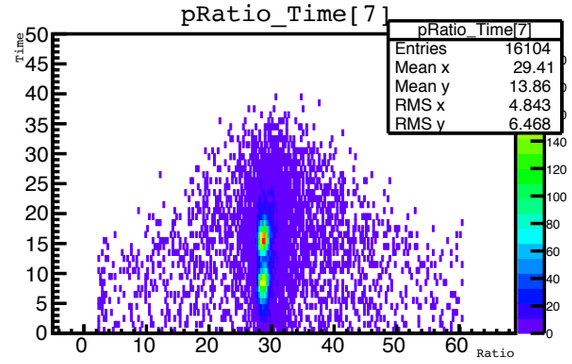


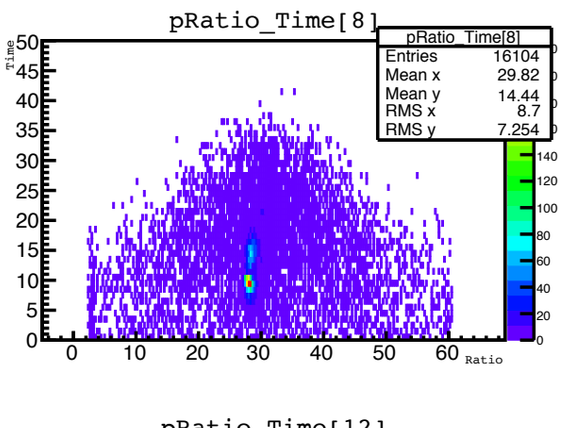


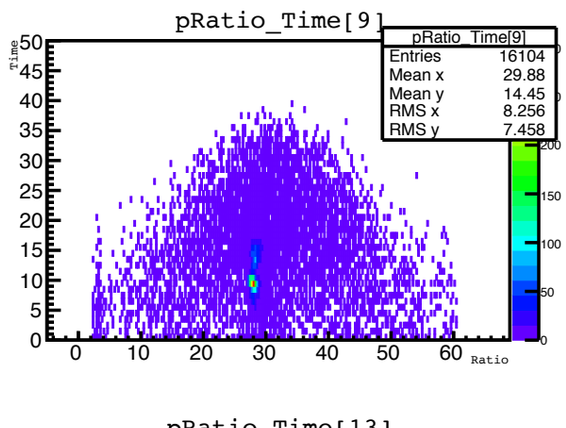


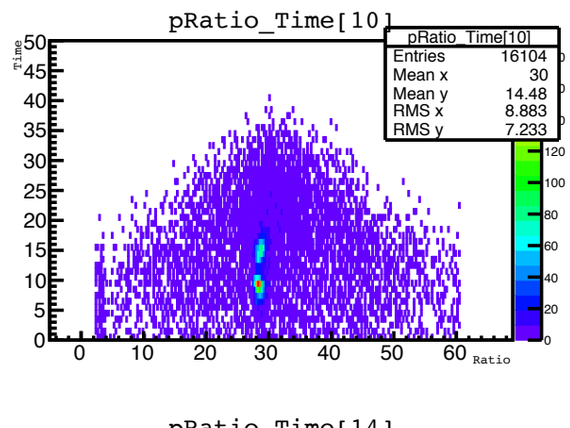


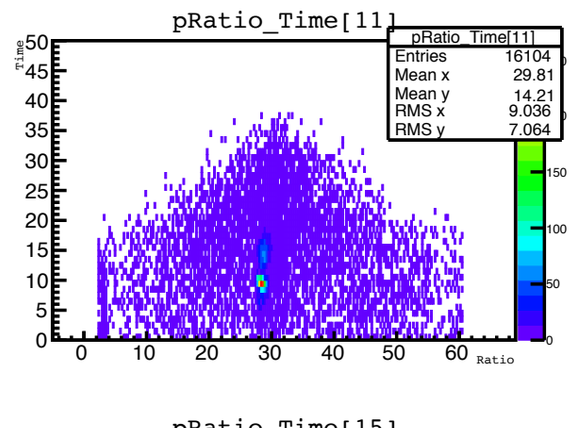


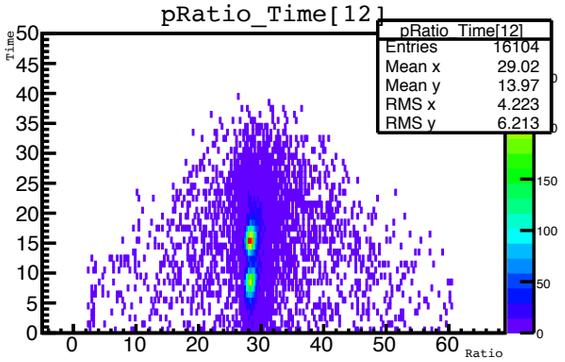


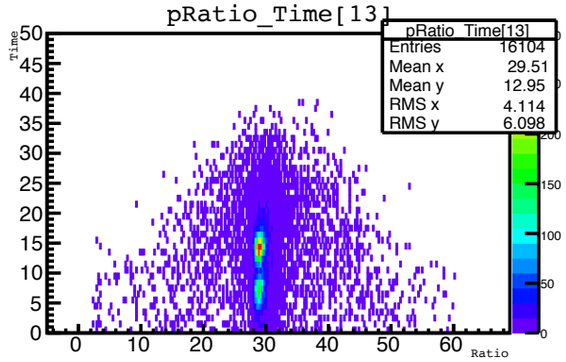


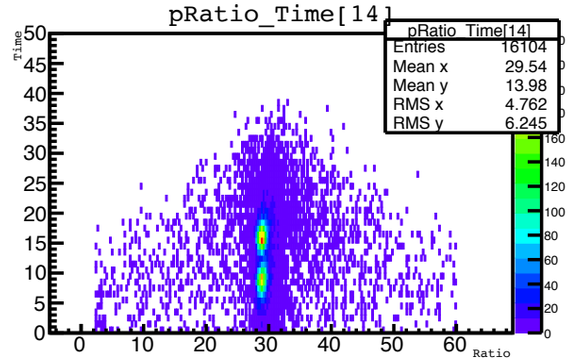


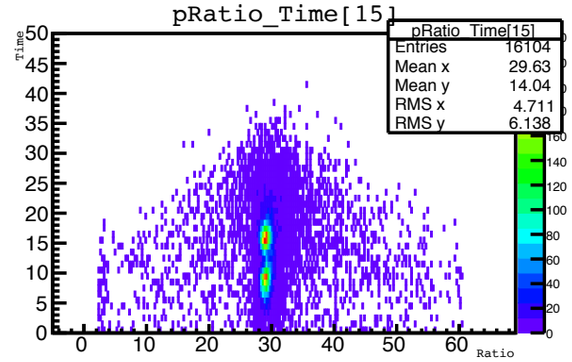




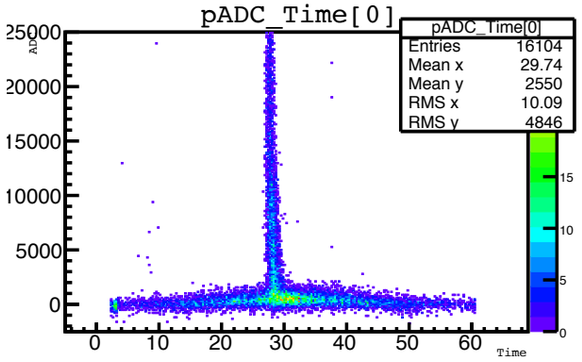


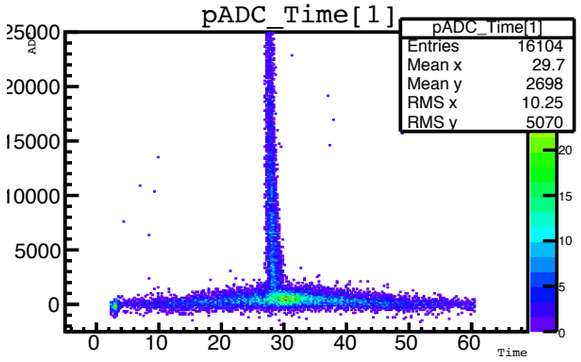


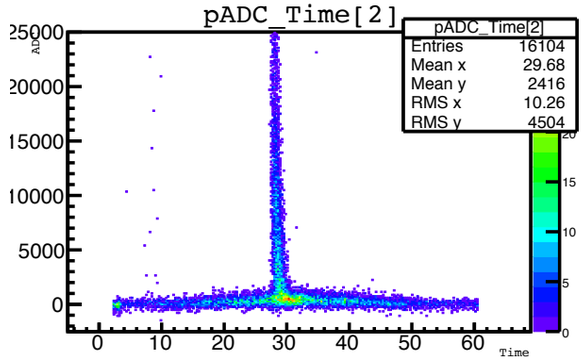


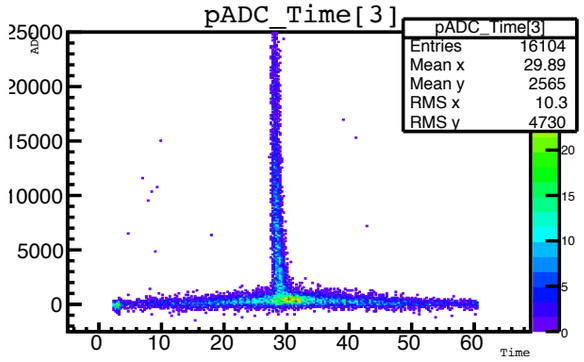


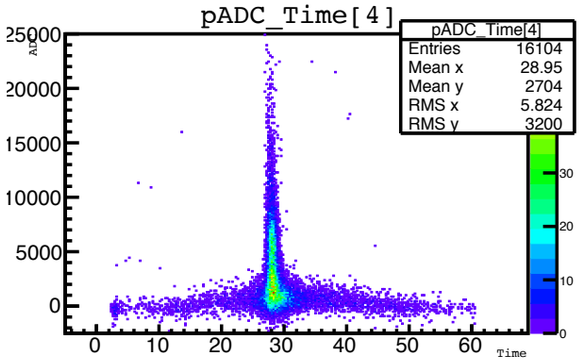
DCV1 (North & South Cut)

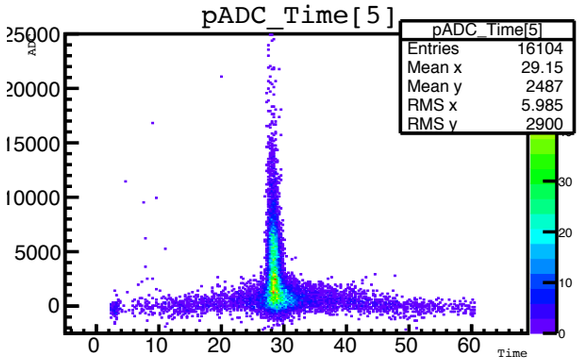


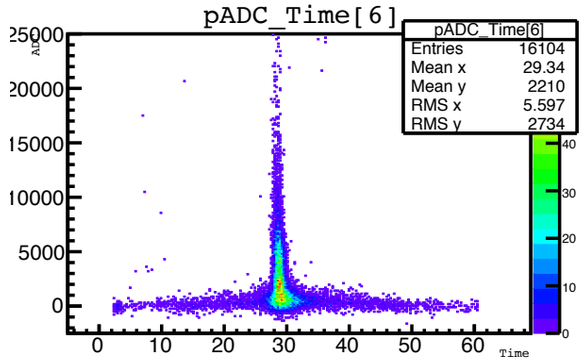


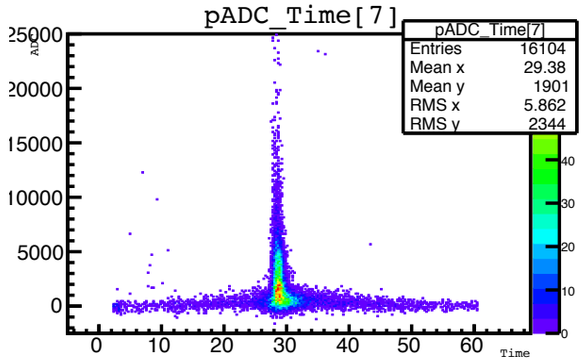


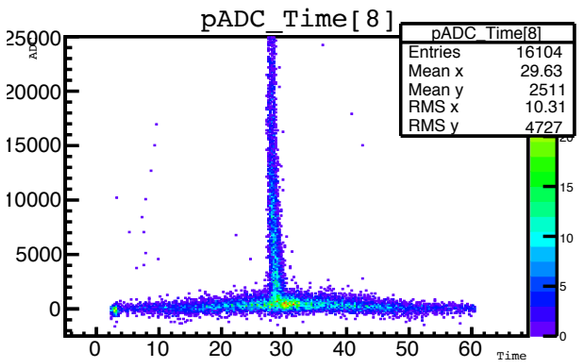


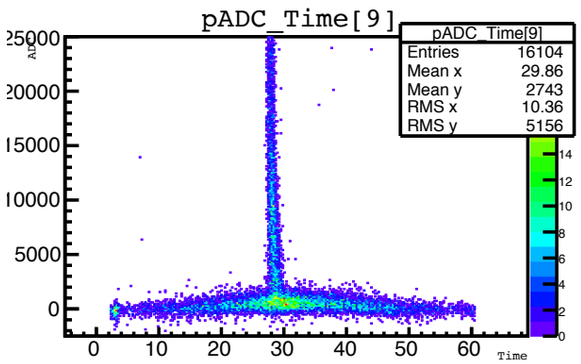


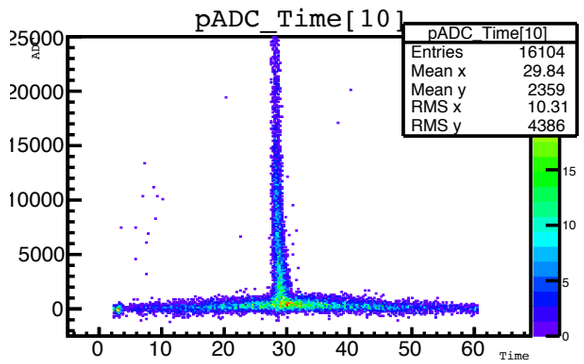


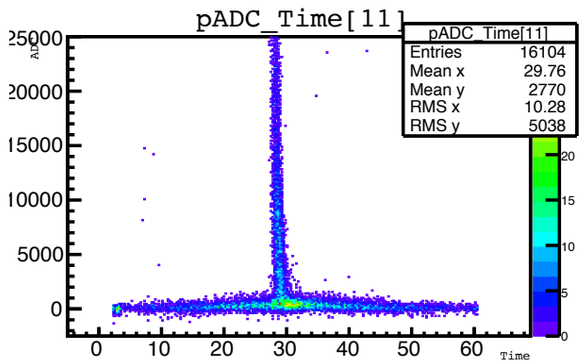


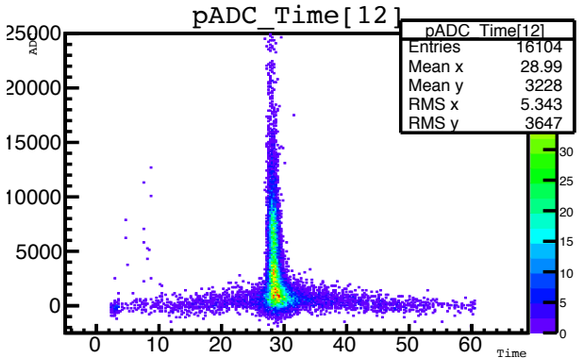


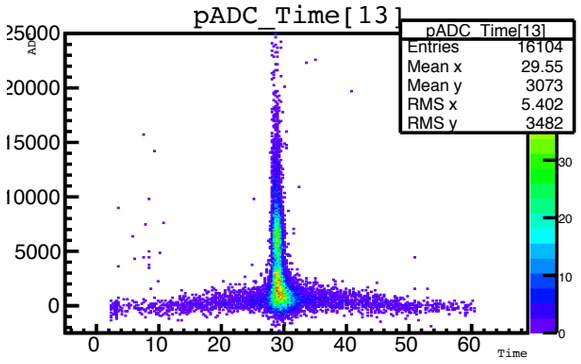


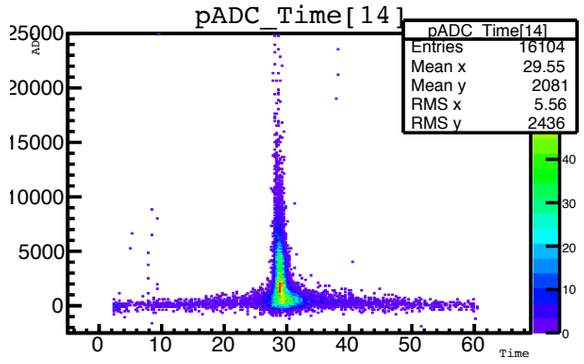


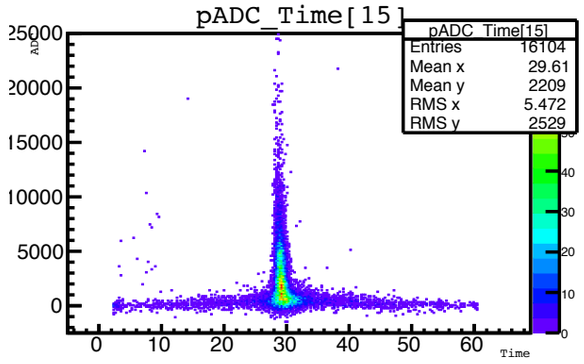




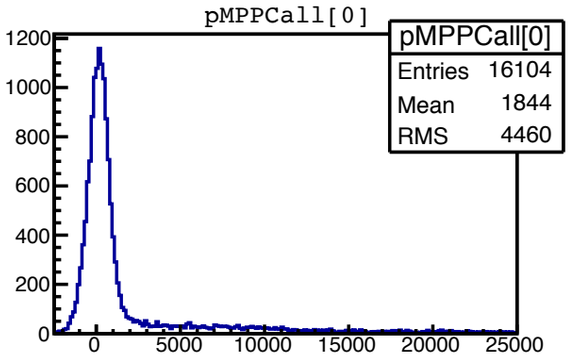


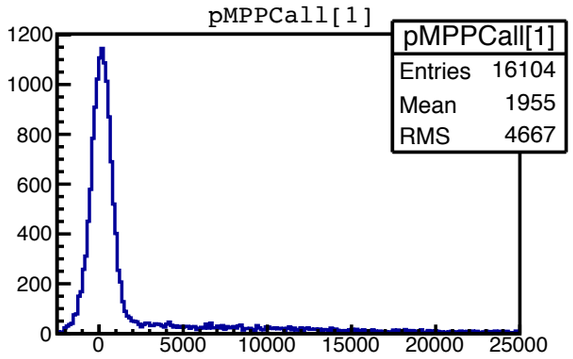


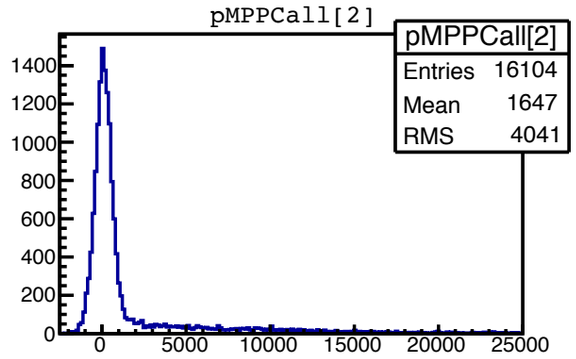


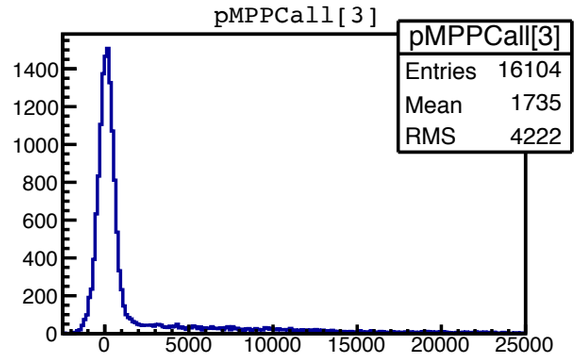


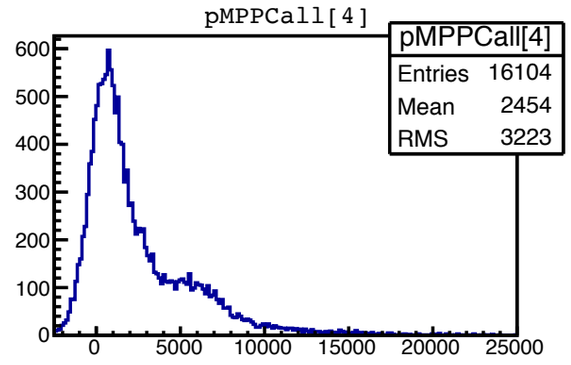
DCV1 (North & South Cut)

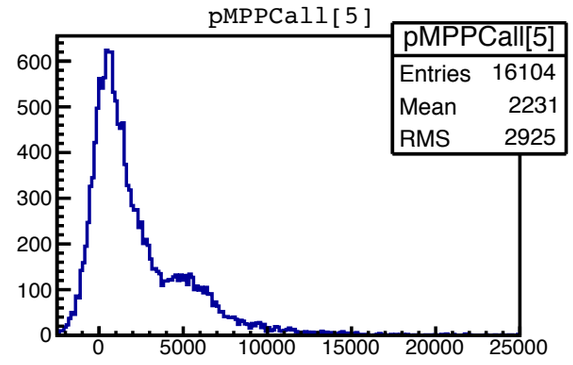


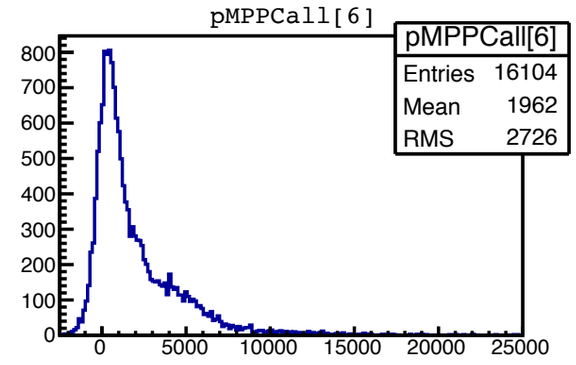


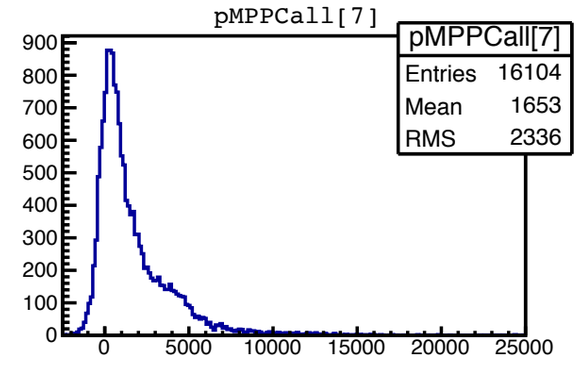


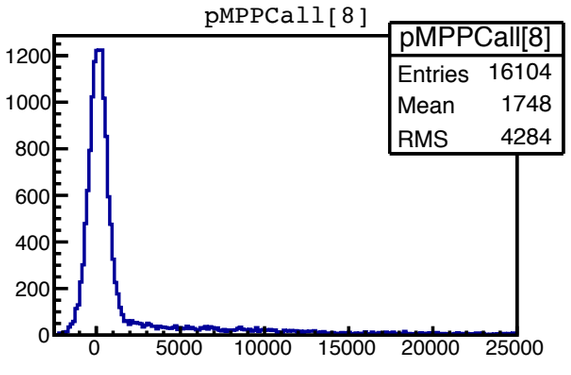


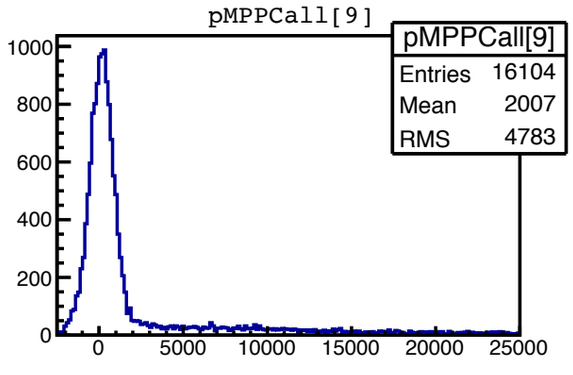


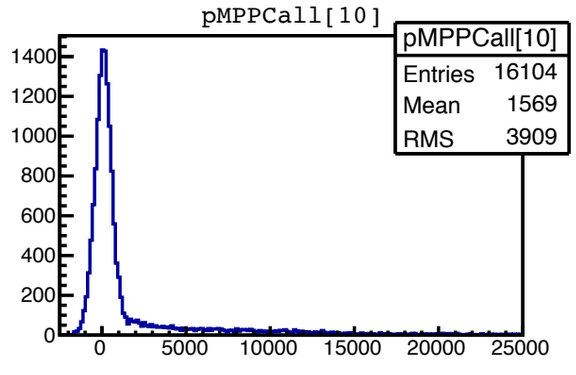


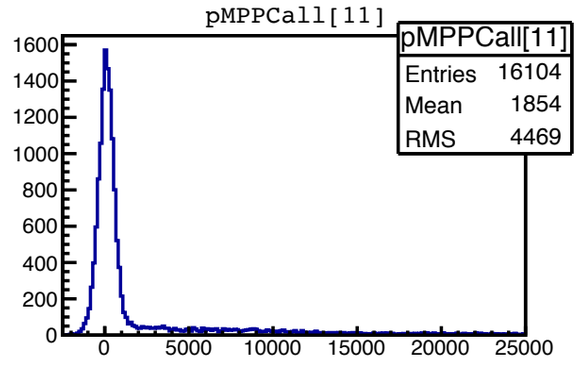


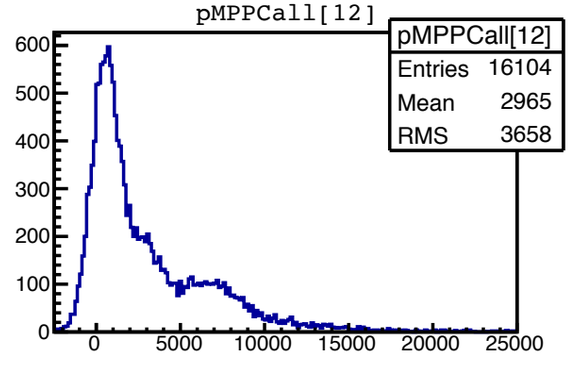


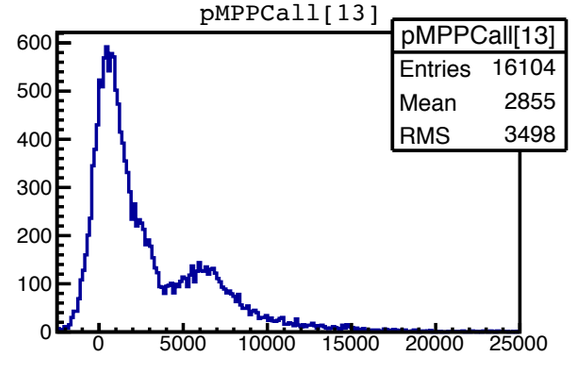


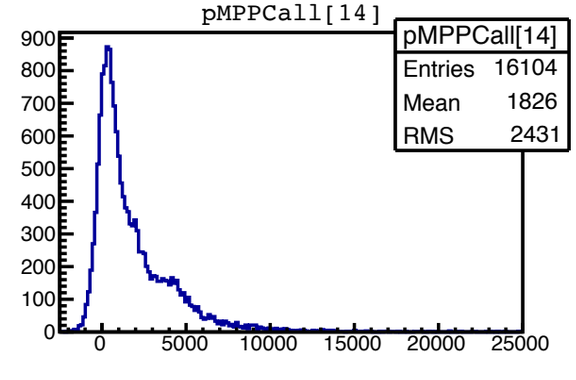


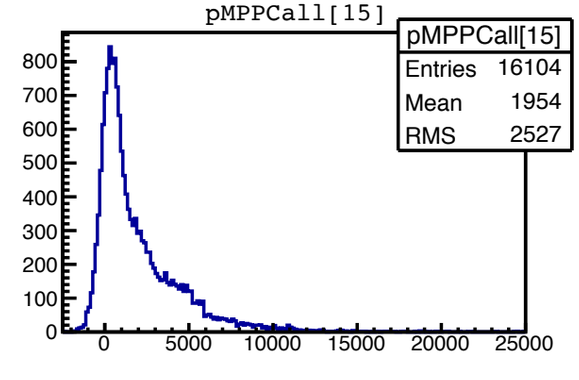












Final Run Selection

Cosmic_PS_CSI_PartOfVetos

30782
30783
30784
30785
30786
30787
30910
30911
30956
31011
31012
31014
31015
31016
31017
31018
31019
31020
31021
31022
31023
31024
31025
31026
31027
31028
31029
31030
31031
31032
31033
31034
31035
(33)

Cosmic_TightPS

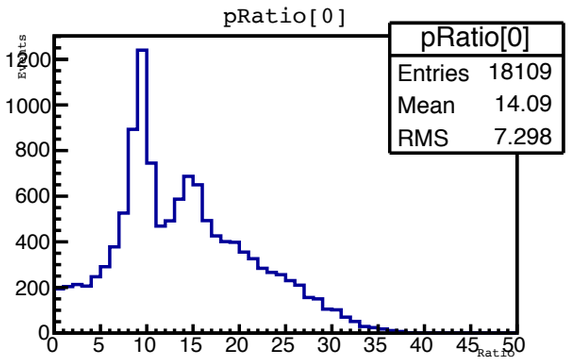
31240
31241
31242
31243
31244
31245
31246
31247
31364
31373
(10)

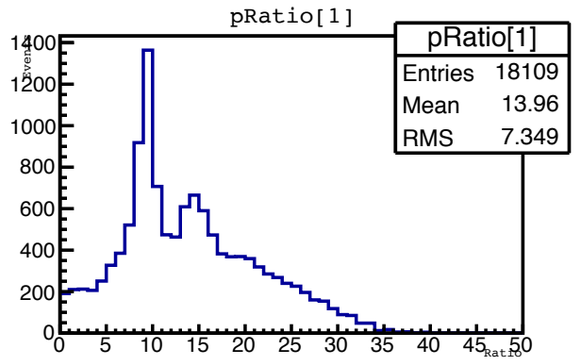
Cosmic_TightPS_IBTrig

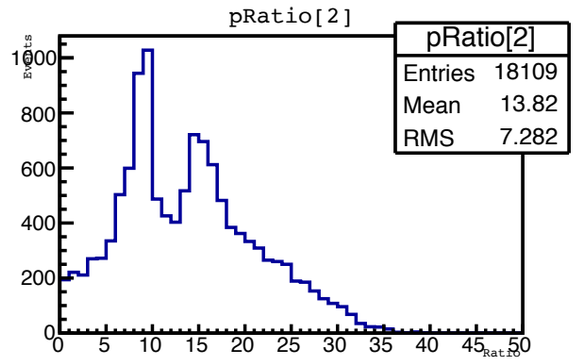
31374
31375
31376
31377
31378
31379
31380
31381
31382
31383
31384
31385
31386
31387
31388
31389(Cosmic_TightPS_MBTrig)
(16)

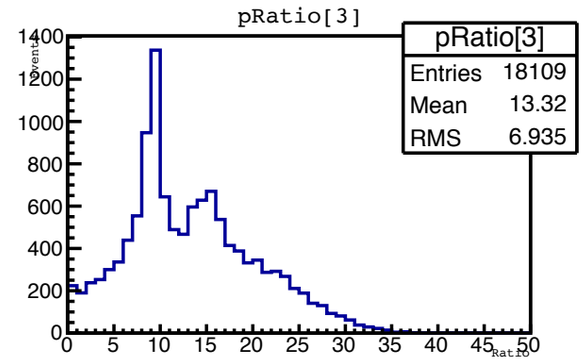
Ratio distribution (North & South Cut)

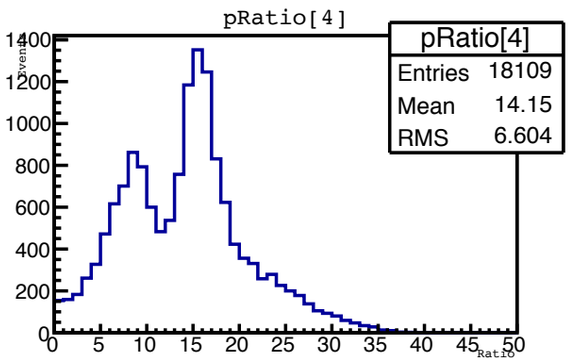
Ratio = DCVIntegratedADC[j] / Peak[j]

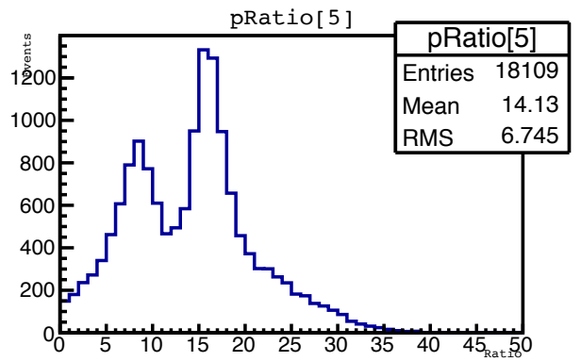


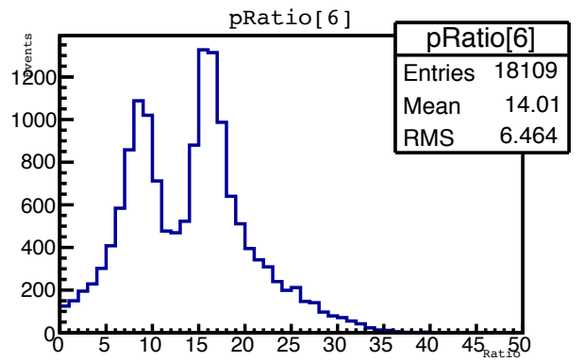


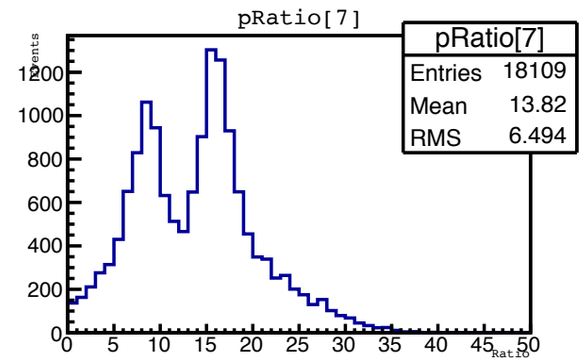


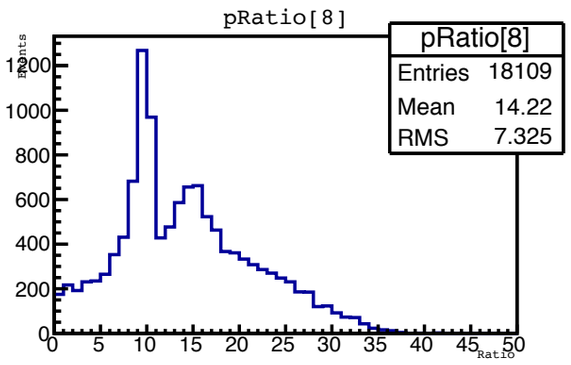


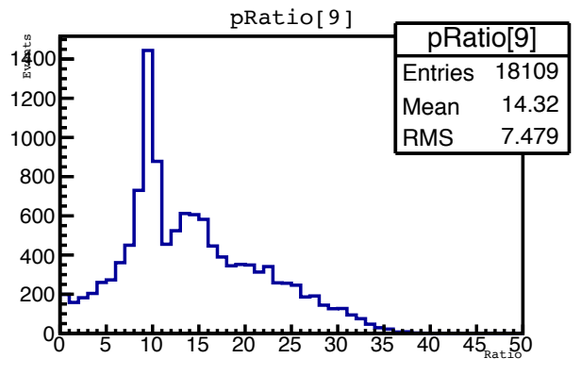


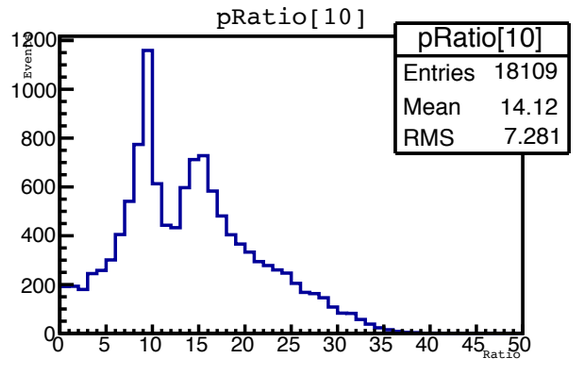


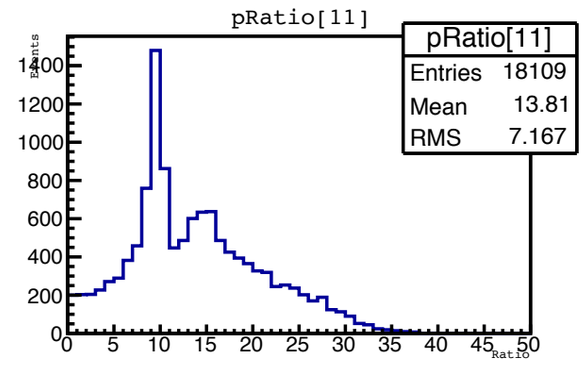


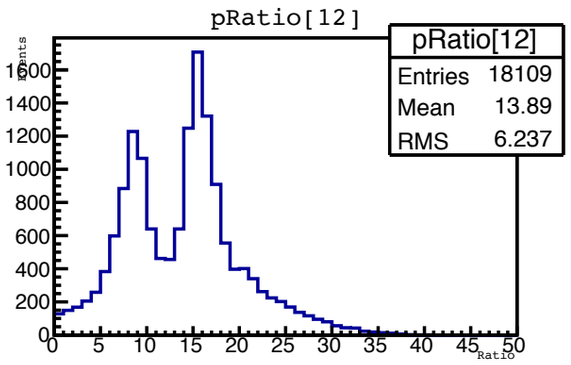


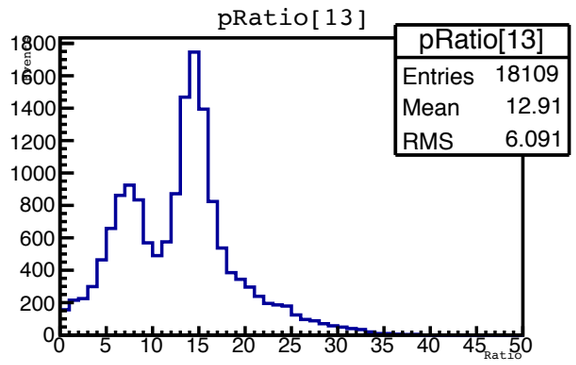


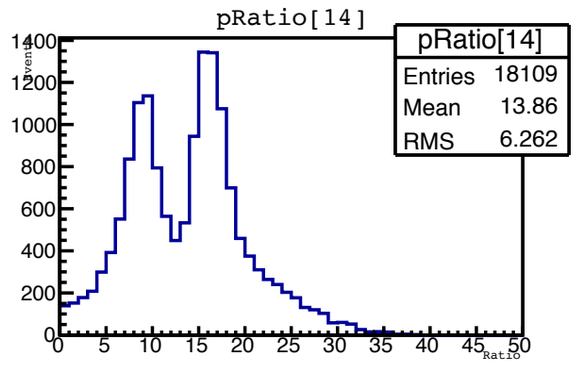


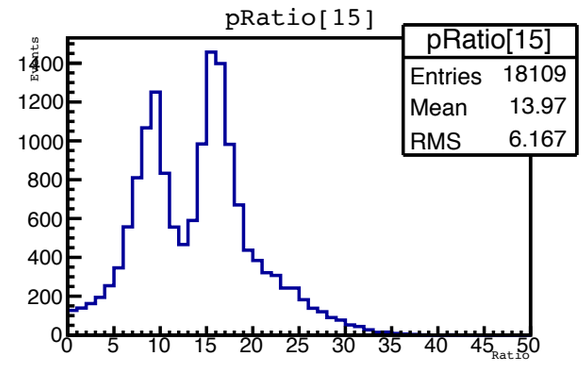




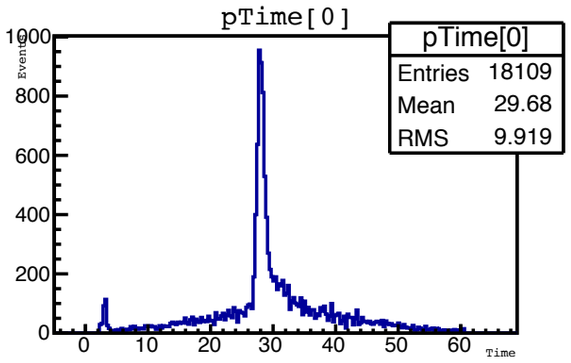


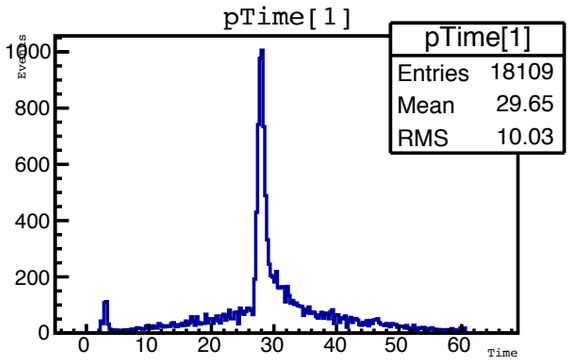


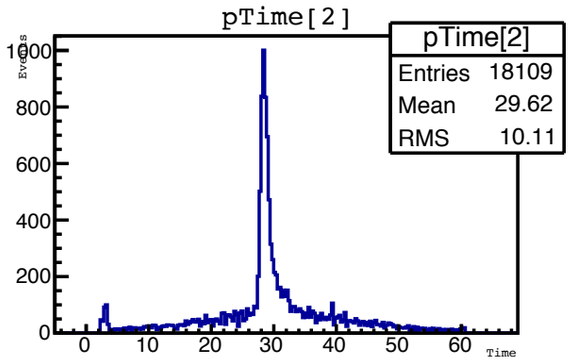


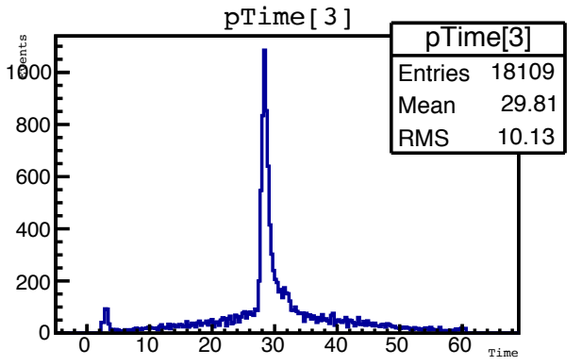


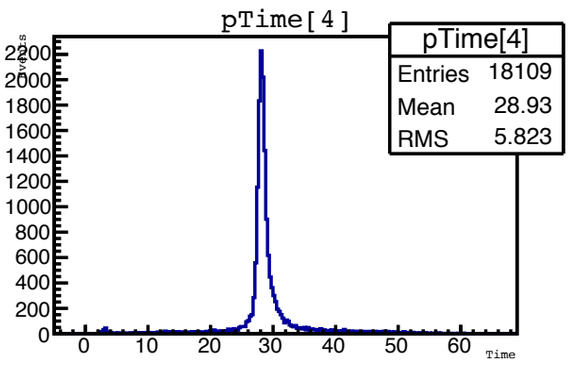
InitialPTime distribution (North & South Cut)

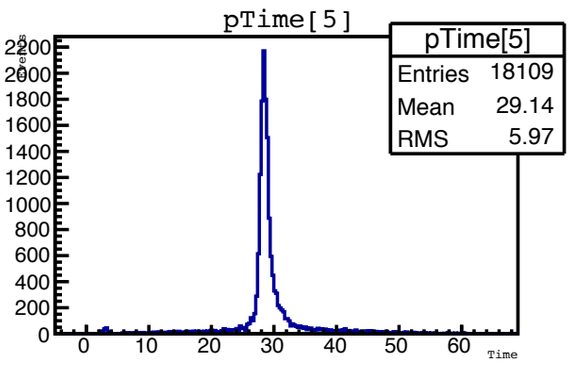


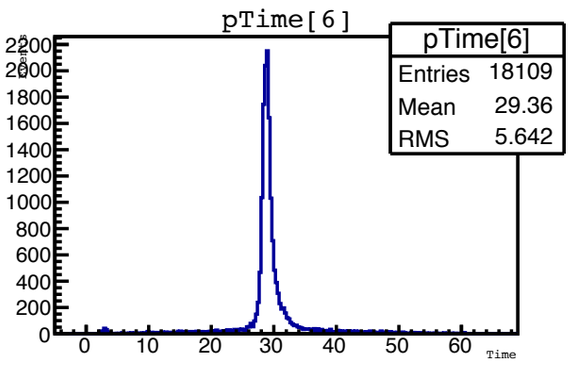


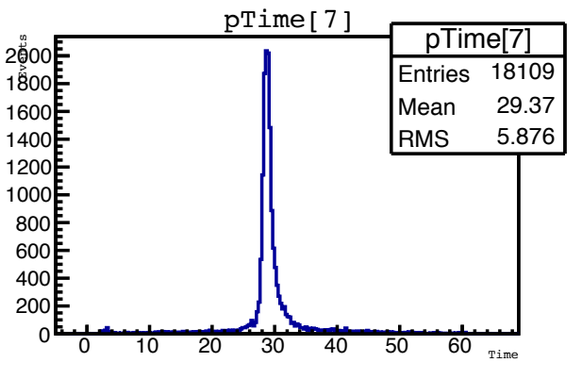


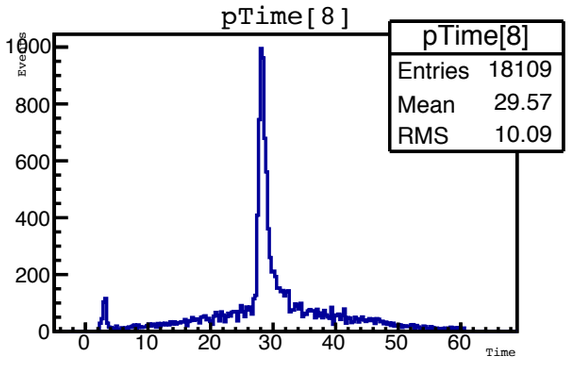


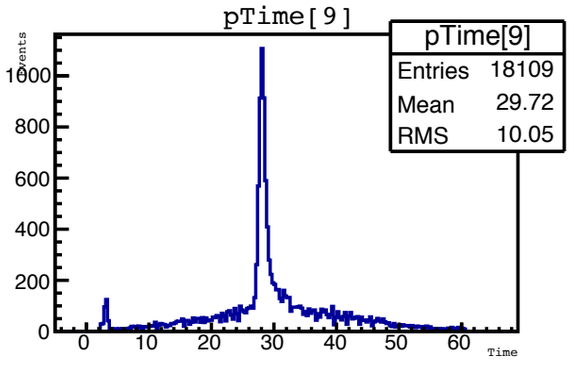


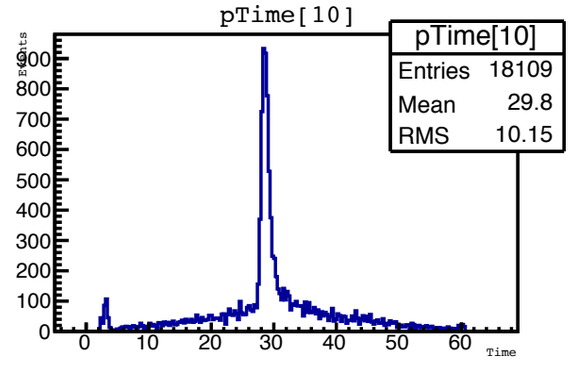


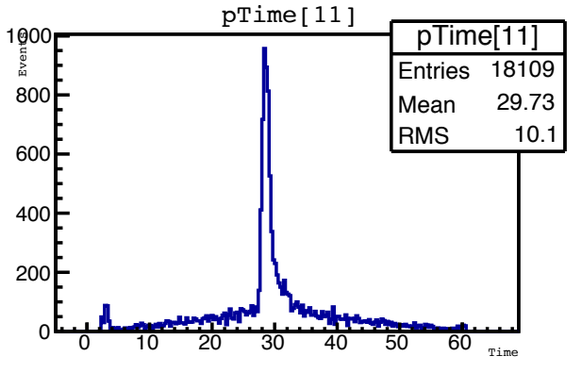


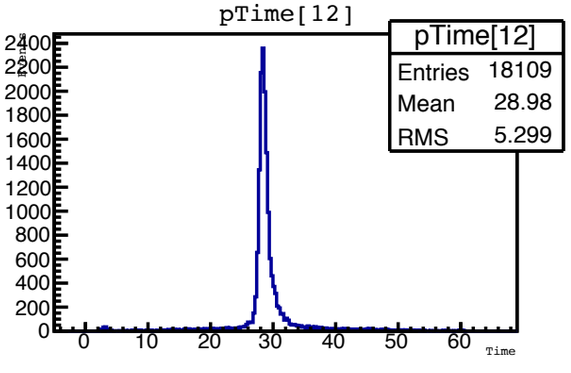


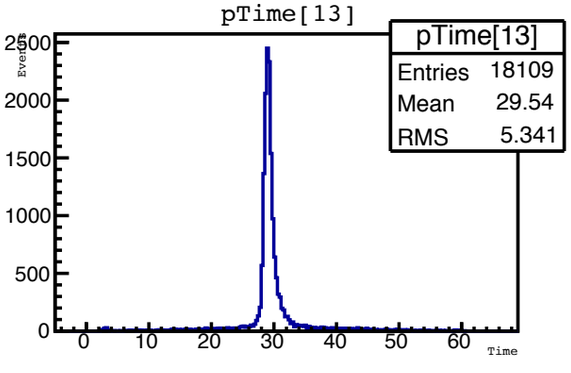


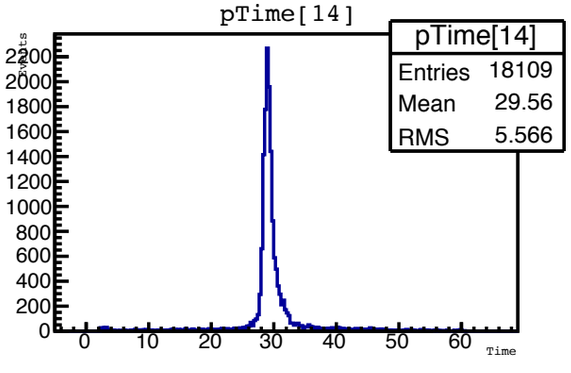


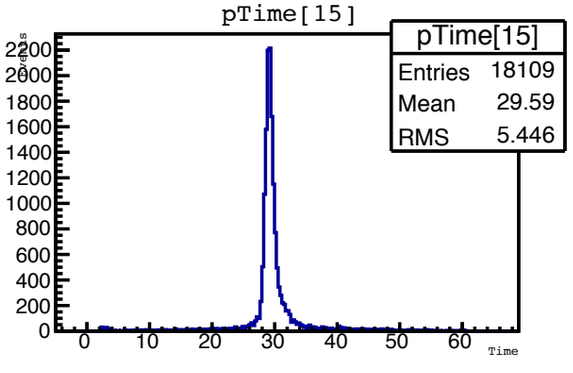




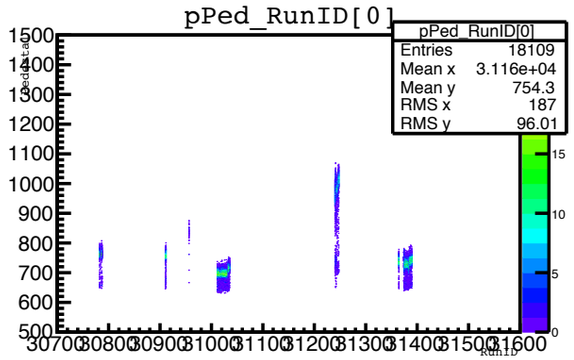


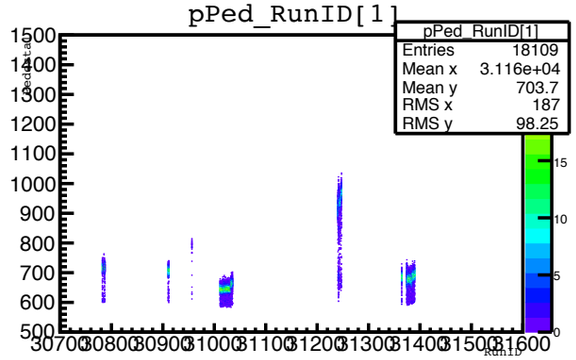


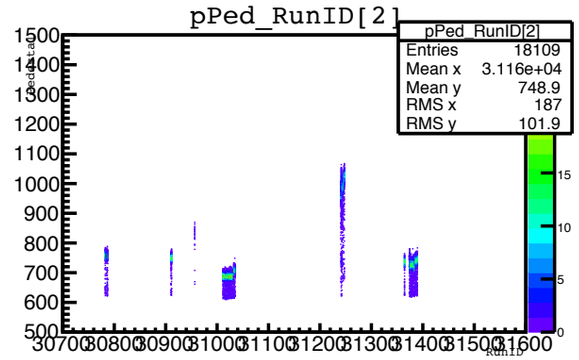


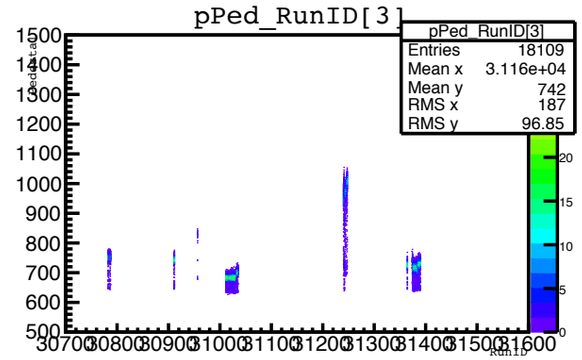


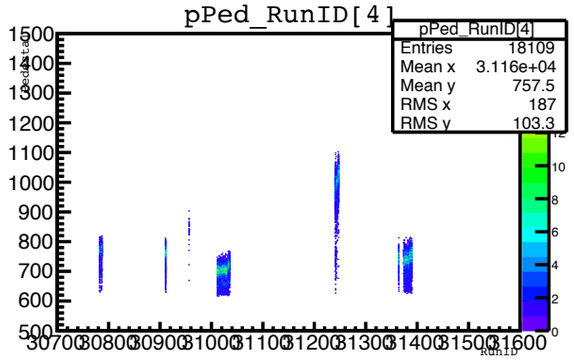
Pedestal_RunID (North & South Cut)

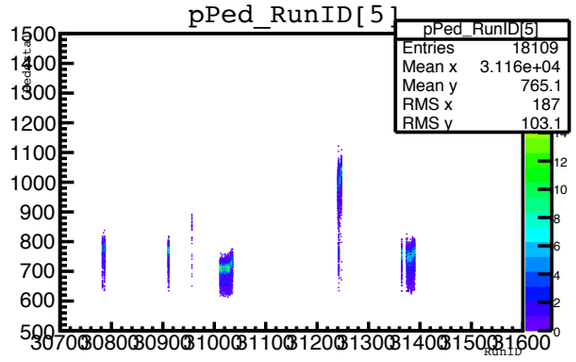


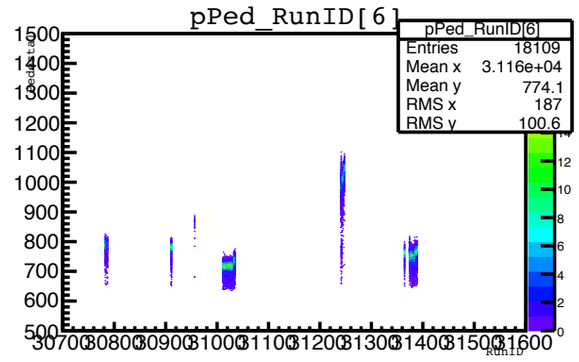


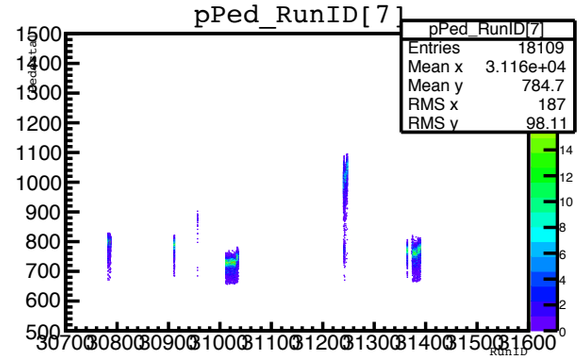


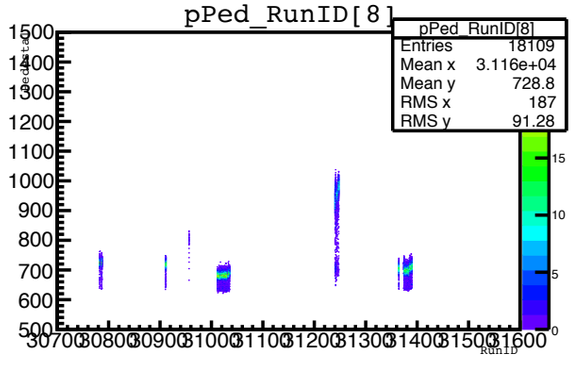


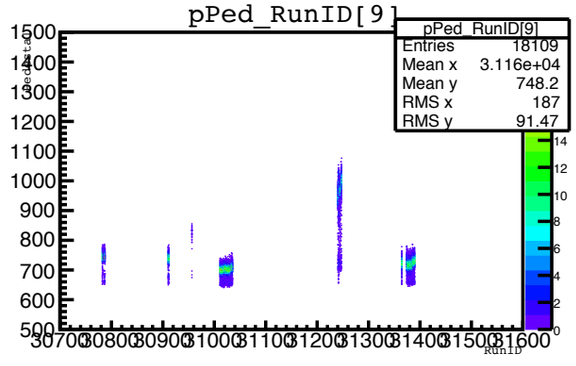


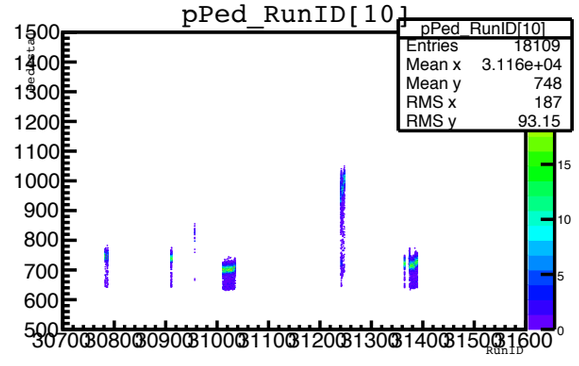


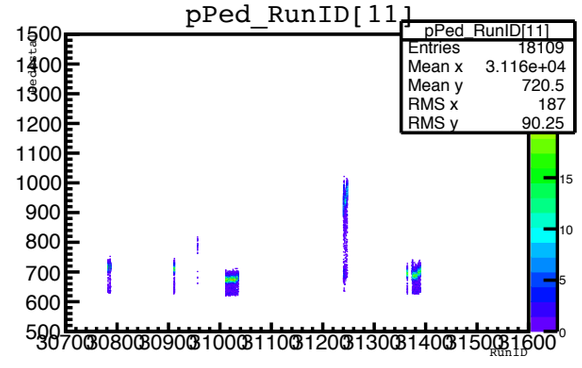


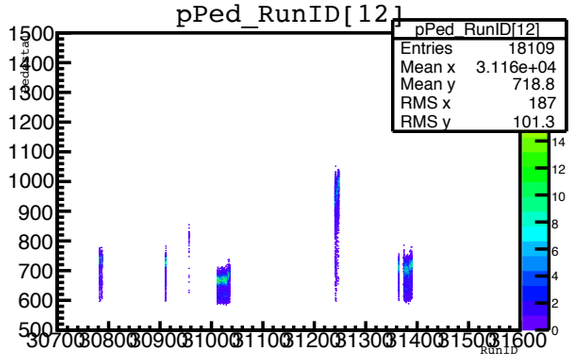


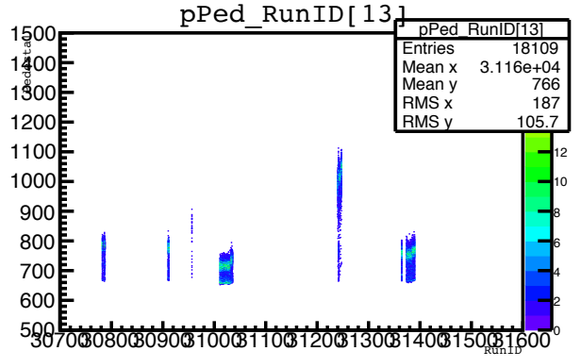


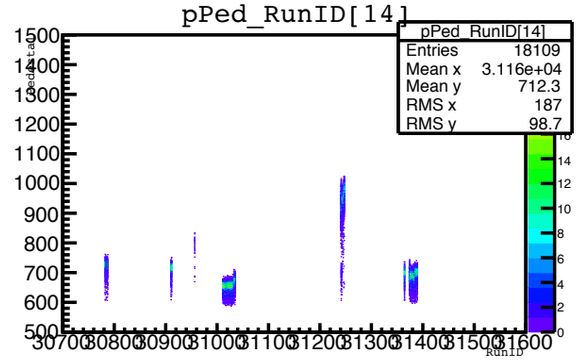


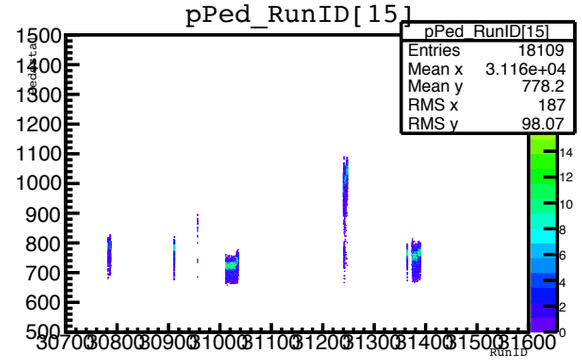












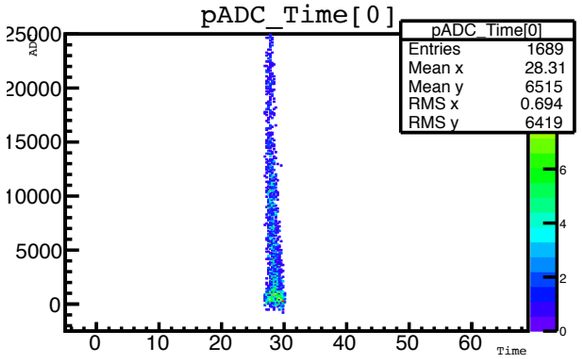
```
if( RunID < 31374 ) continue
```

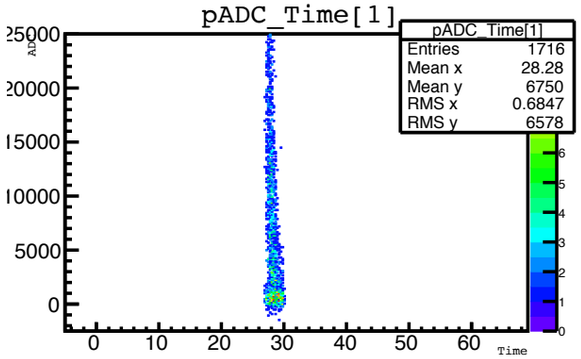
Cosmic_TightPS_IBTrig

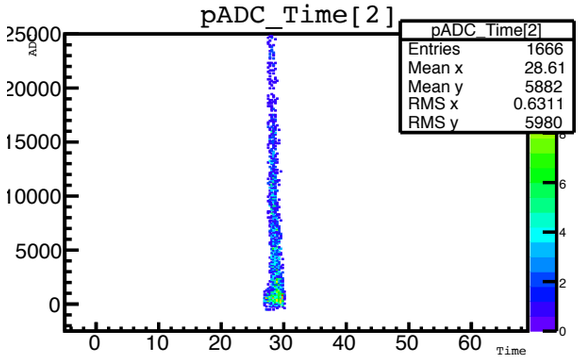
```
31374
31375
31376
31377
31378
31379
31380
31381
31382
31383
31384
31385
31386
31387
31388
31389(Cosmic_TightPS_MBTrig)
(16)
```

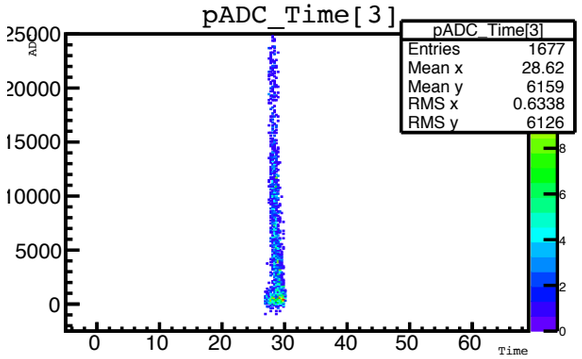
```
if( DCVInitialPTime[j] < 27 || DCVInitialPTime[j] > 30 ) continue;
```

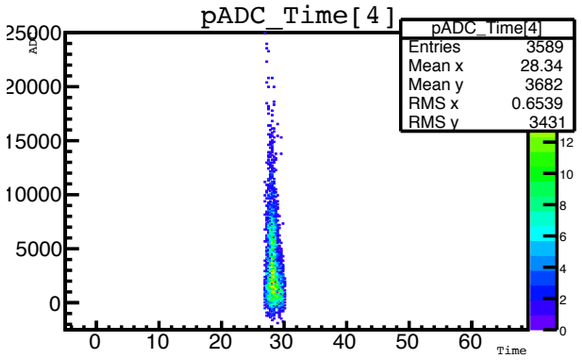
IntegratedADC : Time
(North & South & RunID & Timing Cut)

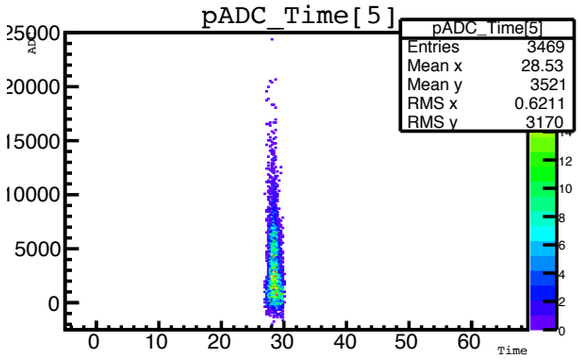


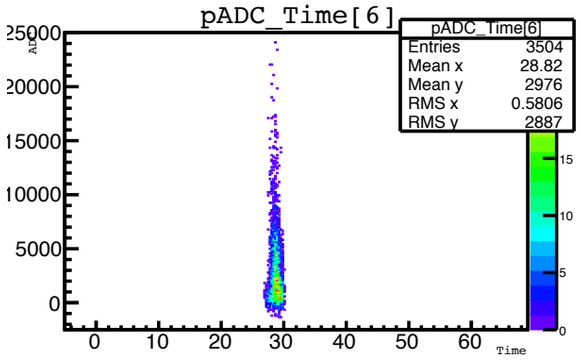


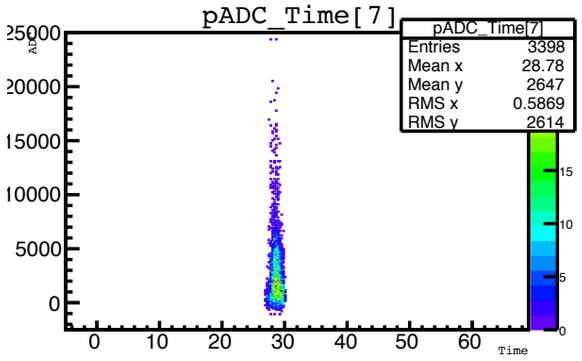


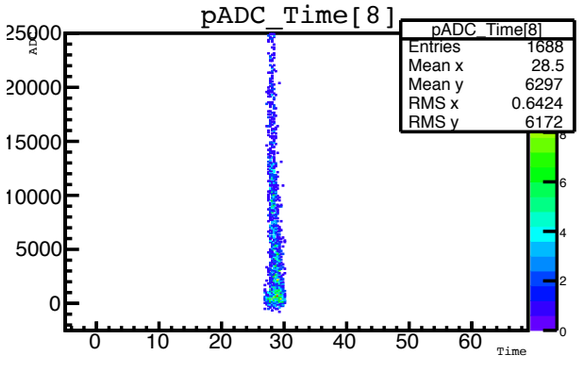


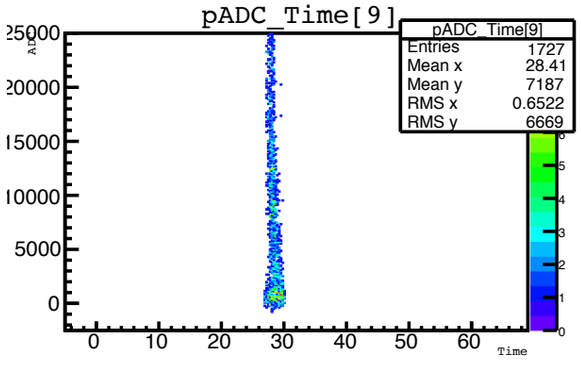


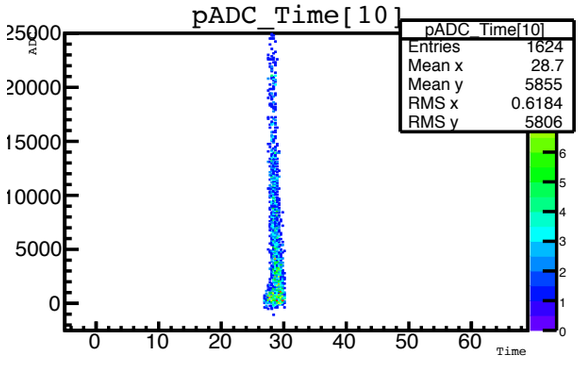


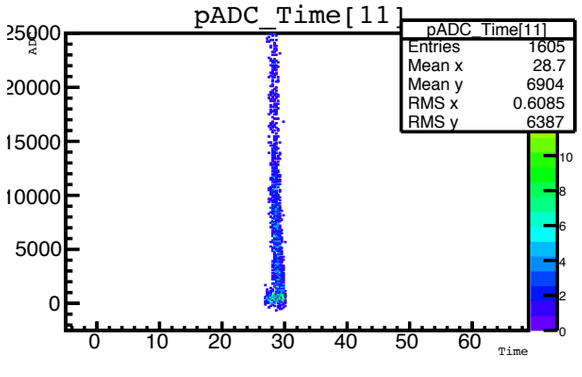


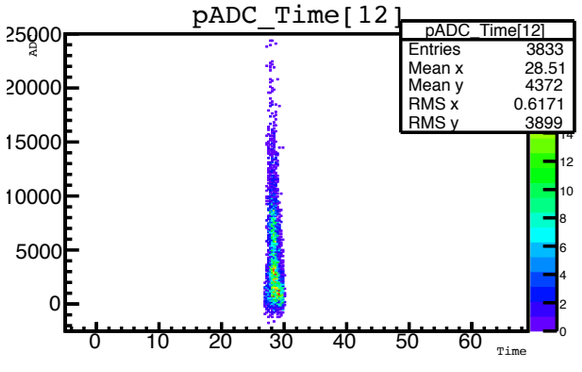


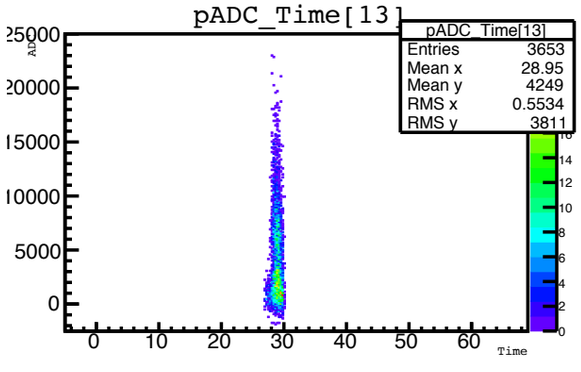


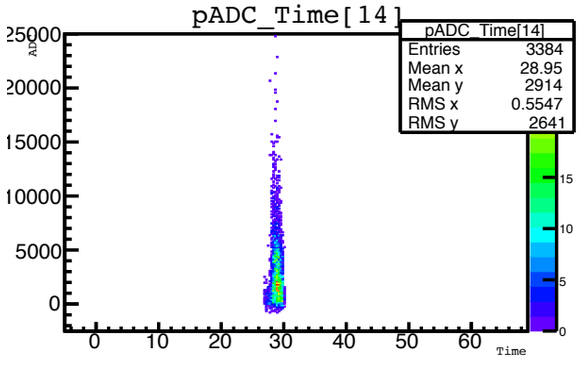


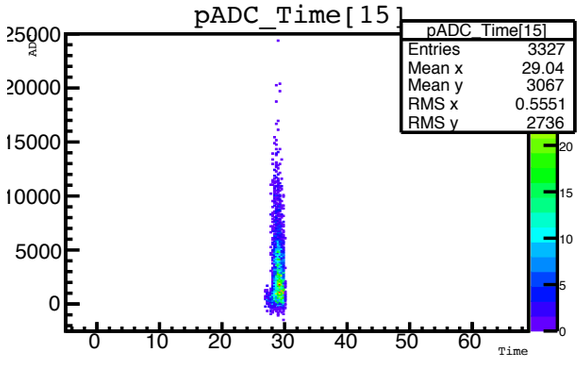




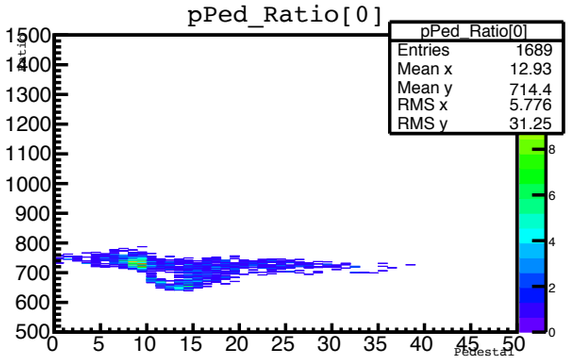


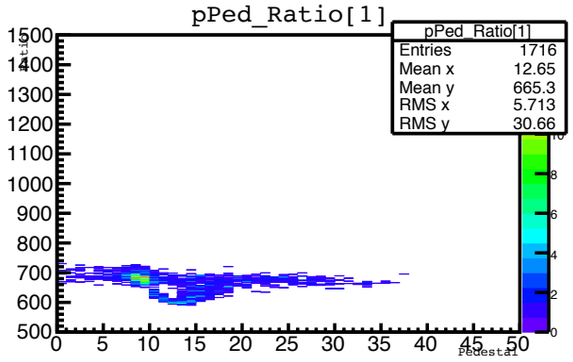


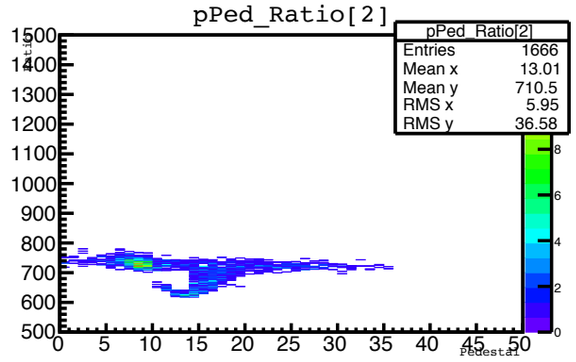


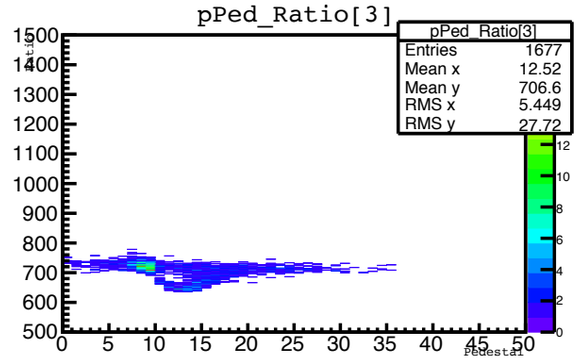


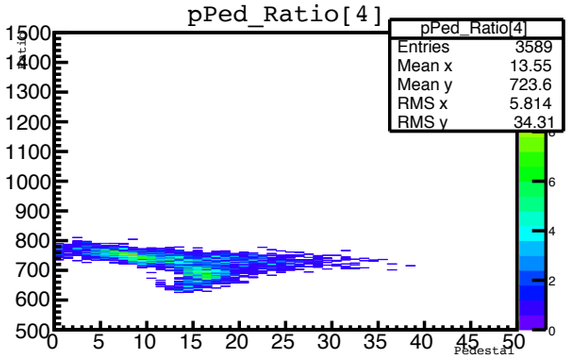
Pedestal : Ratio
(North & South & RunID & Timing Cut)

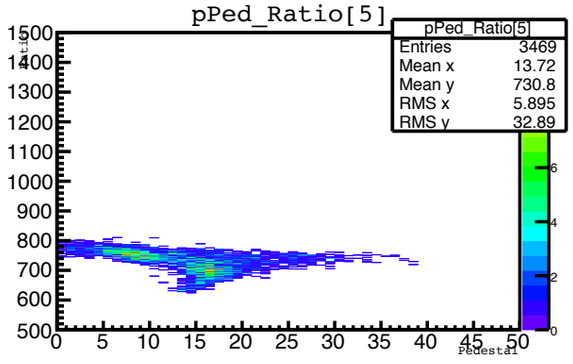


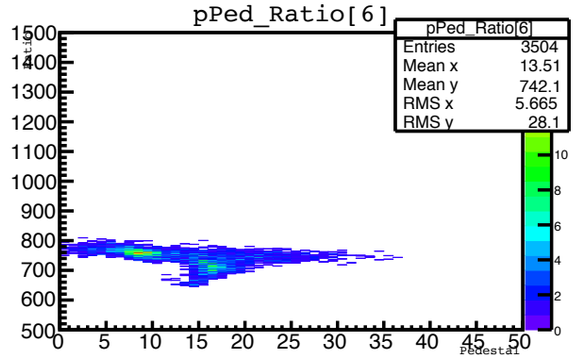


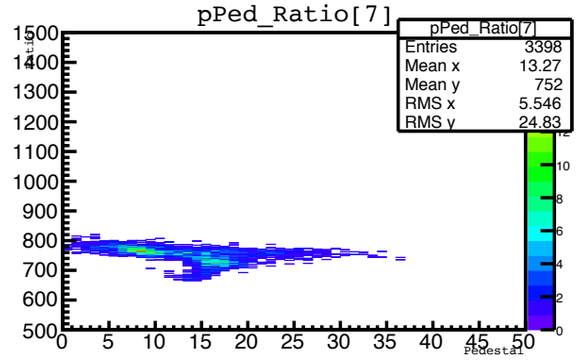


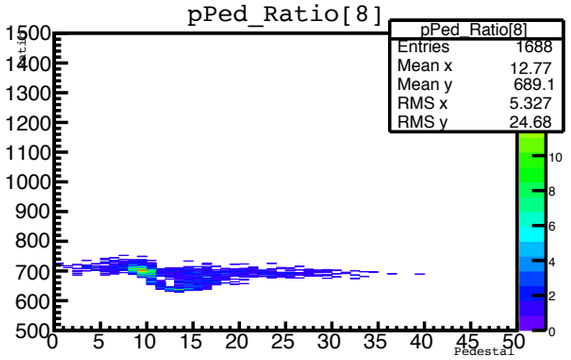


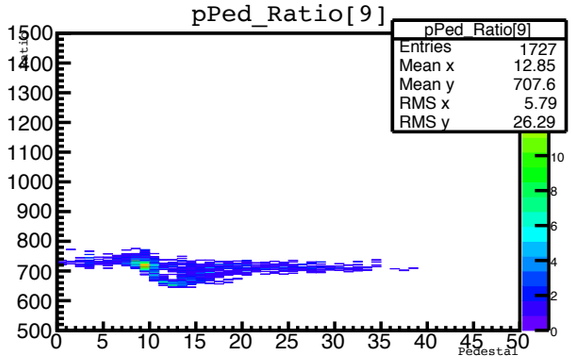


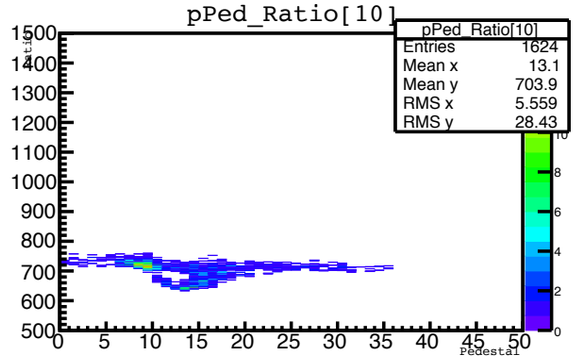


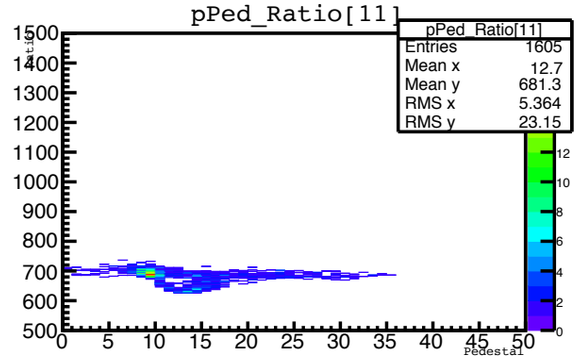


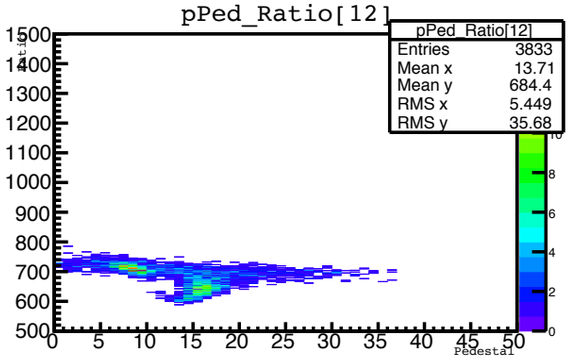


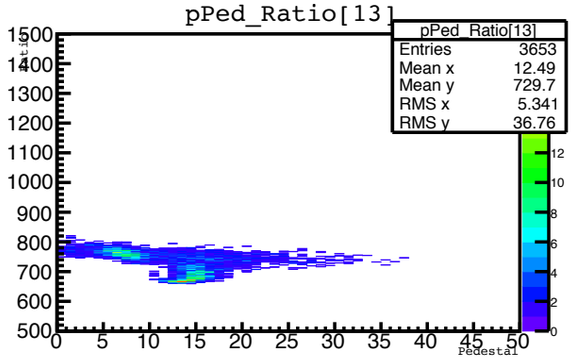


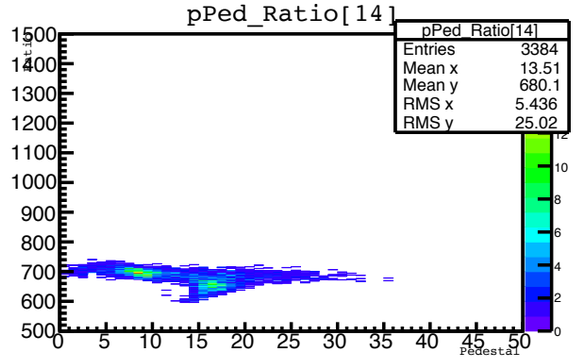


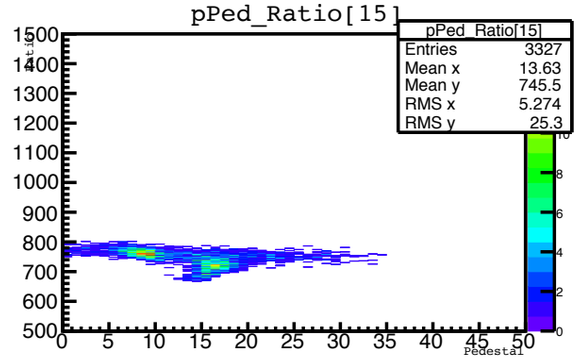




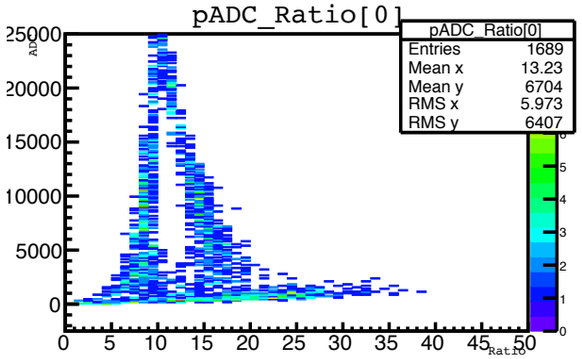


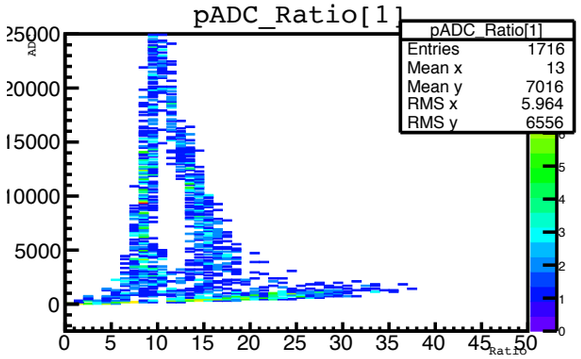


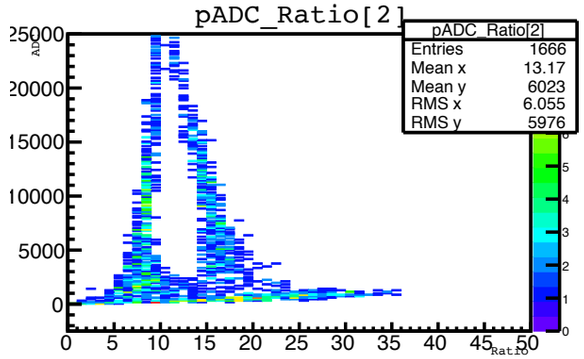


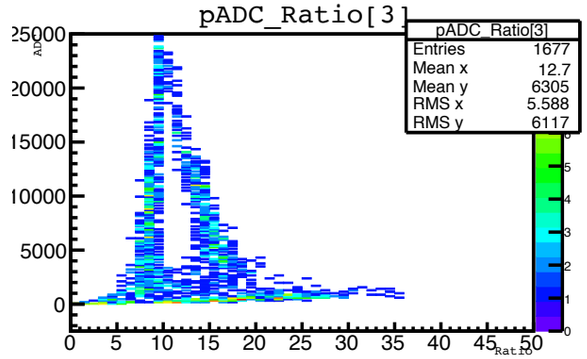


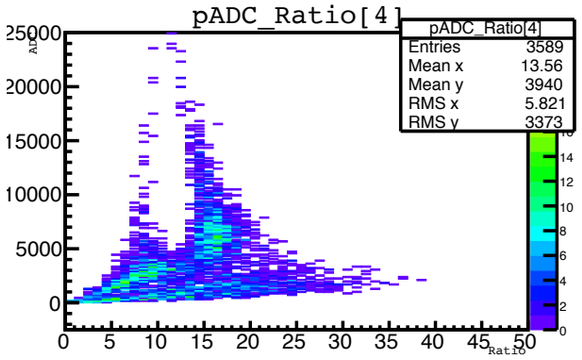
IntegratedADC : Ratio
(North & South & RunID & Timing Cut)

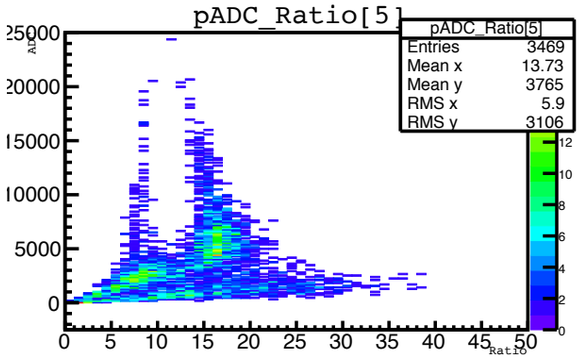


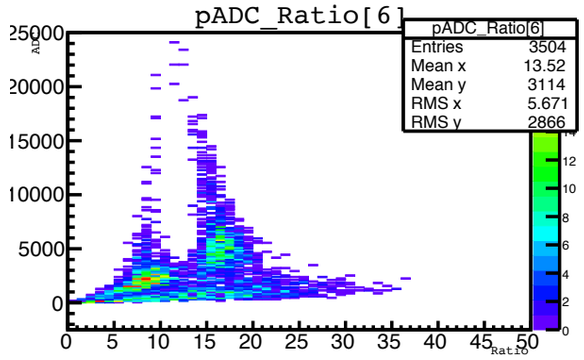


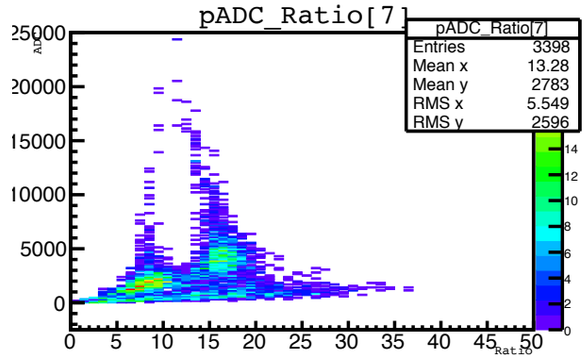


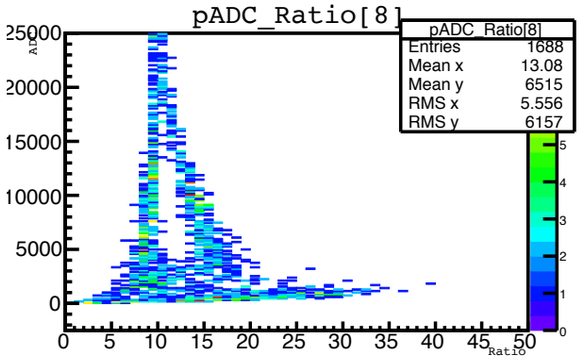


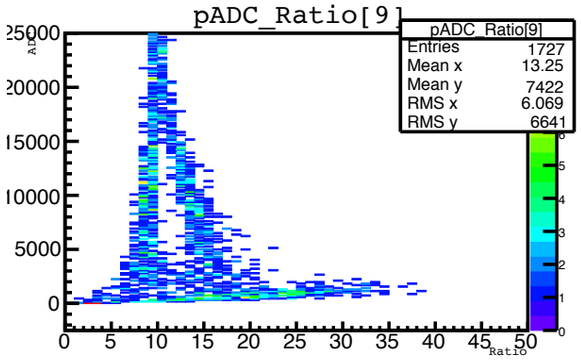


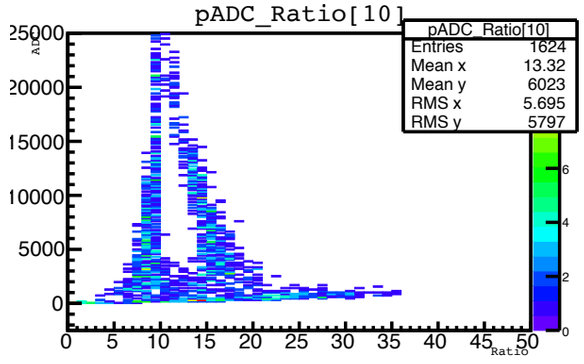


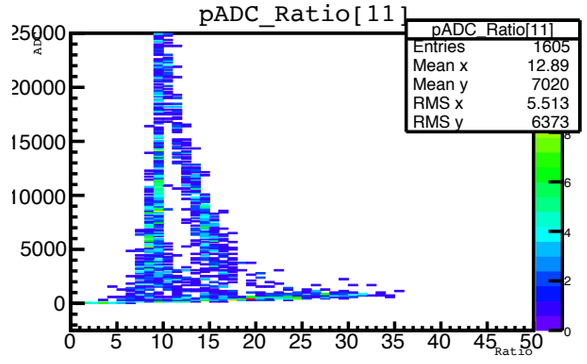


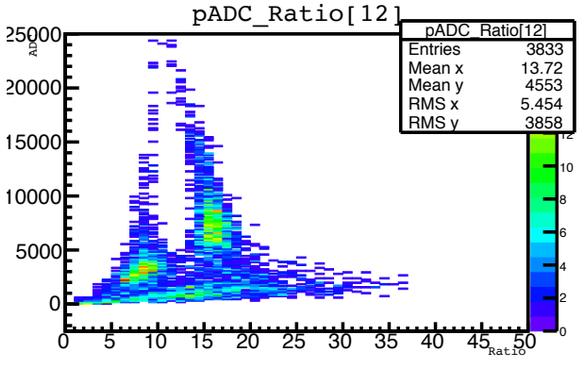


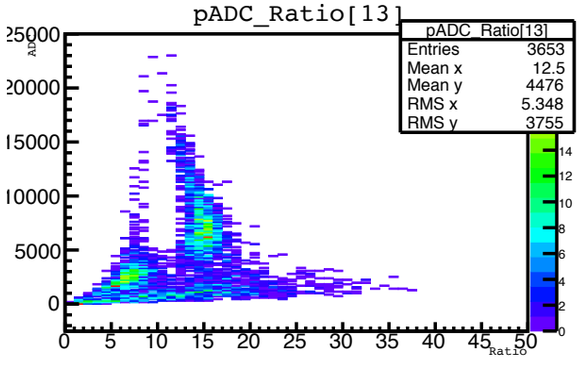


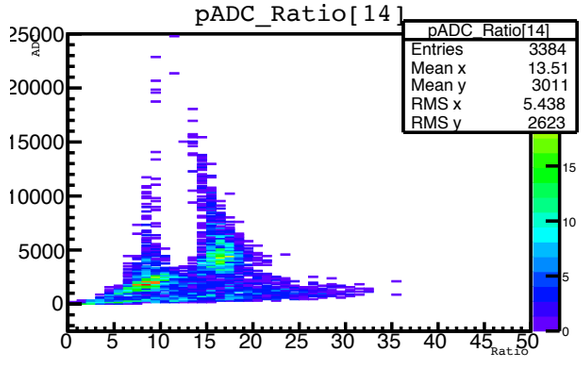


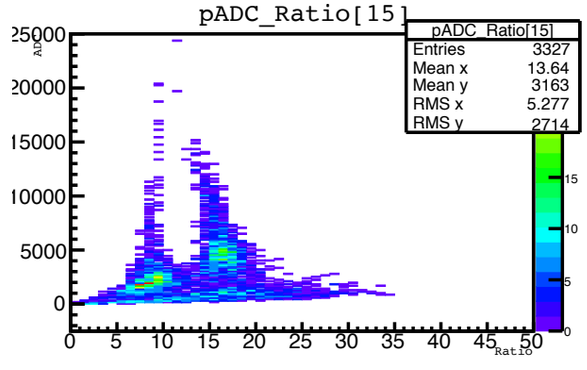




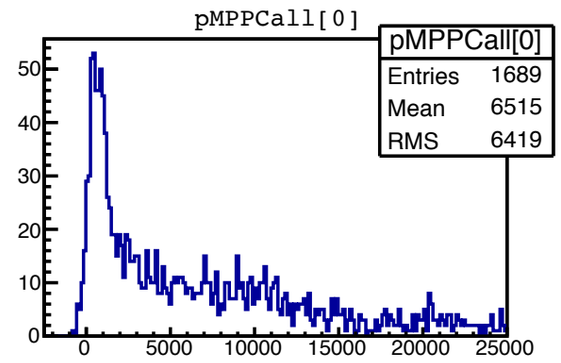


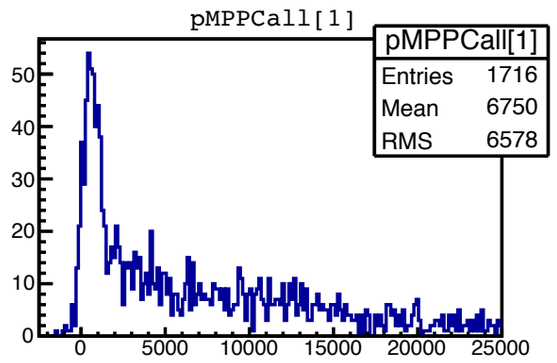


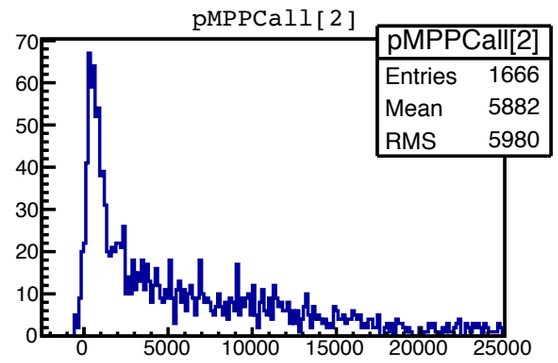


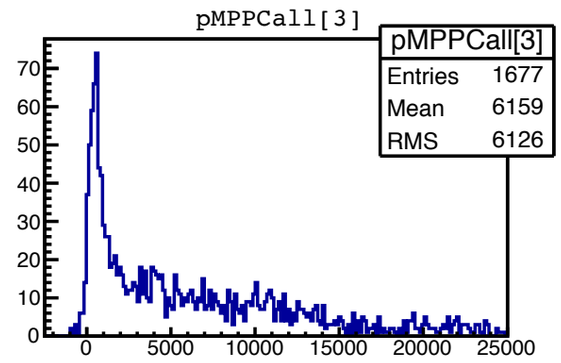


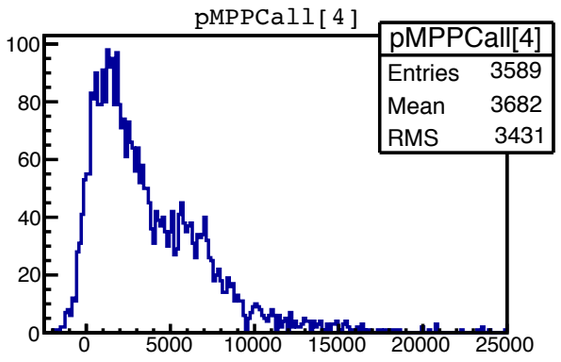
DCV1 IntegratedADC Distribution (North & South & RunID & Timing Cut)

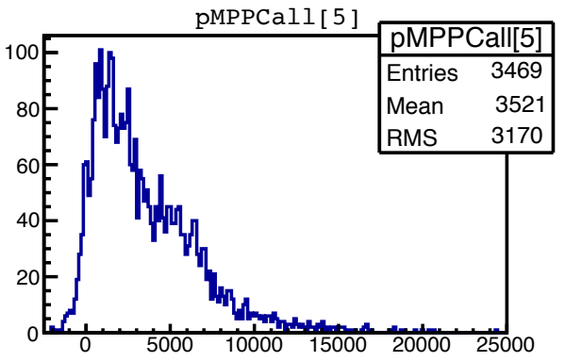


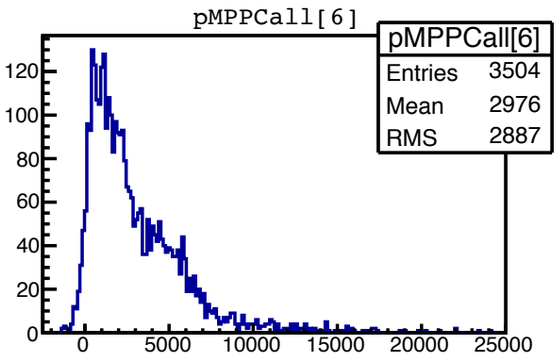


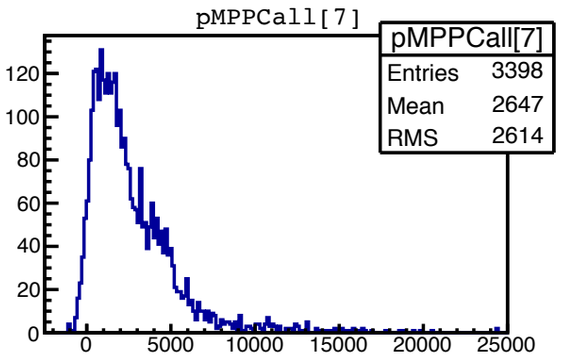


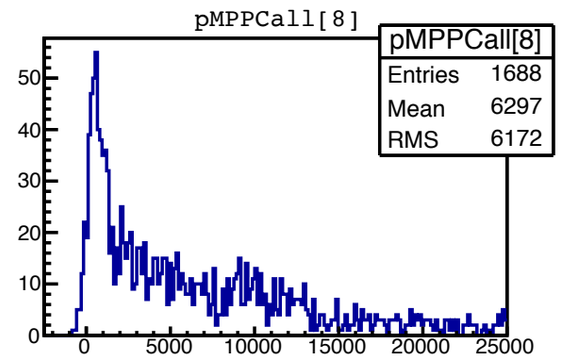


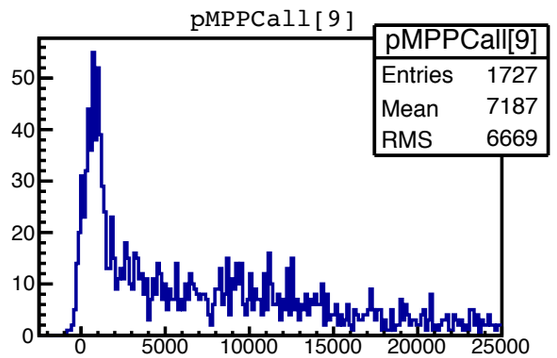


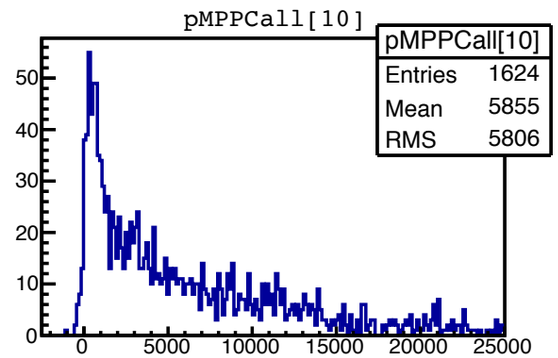


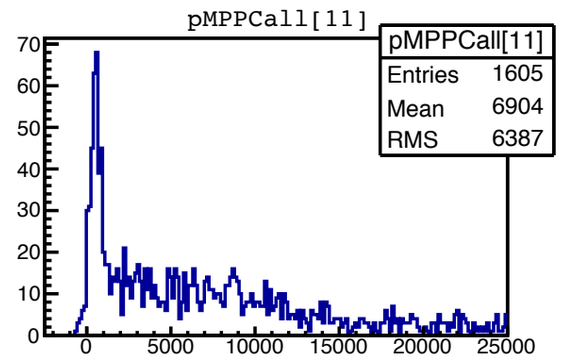


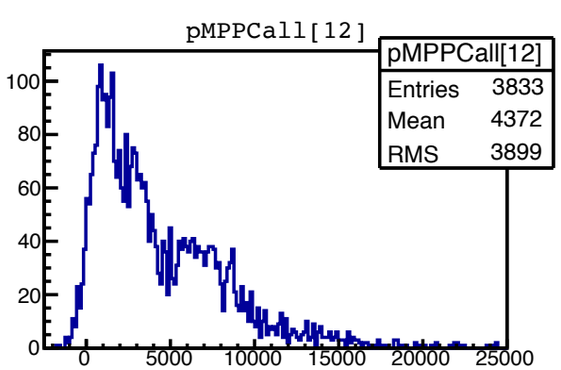


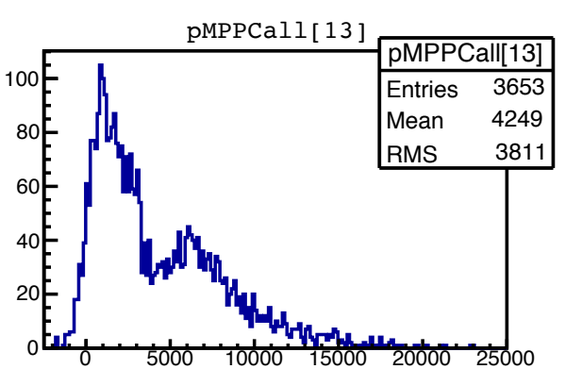


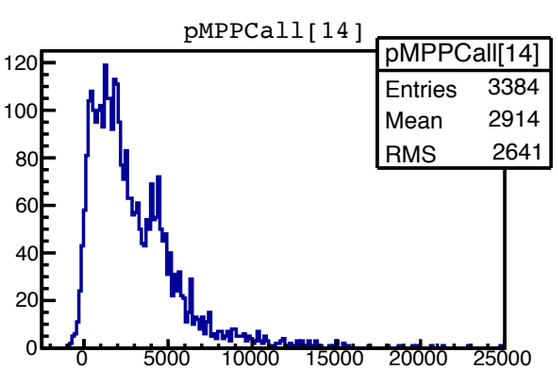


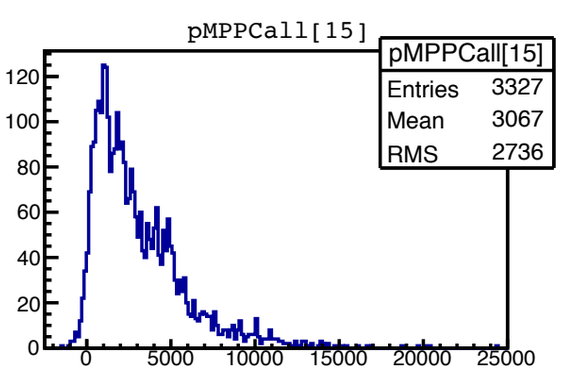




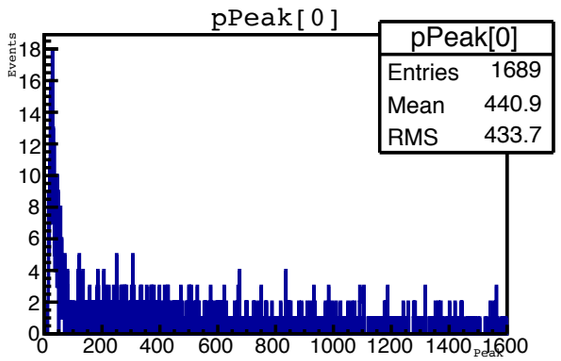


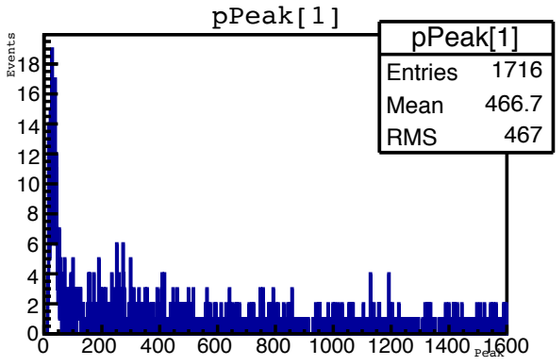


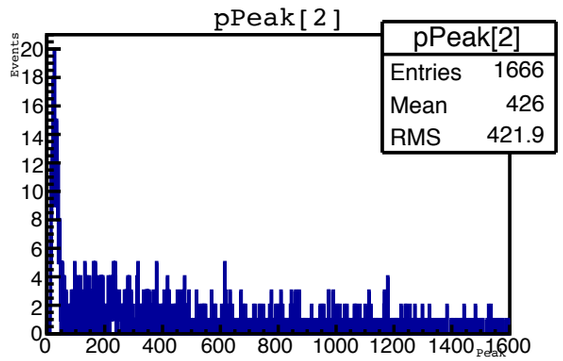


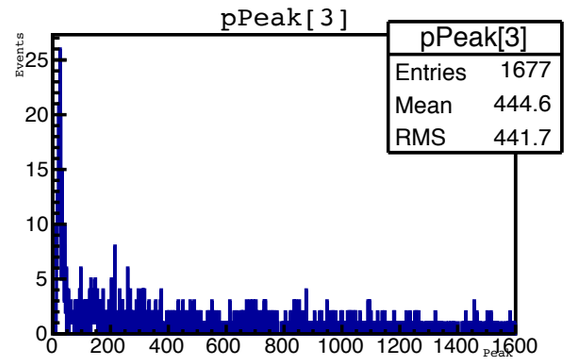


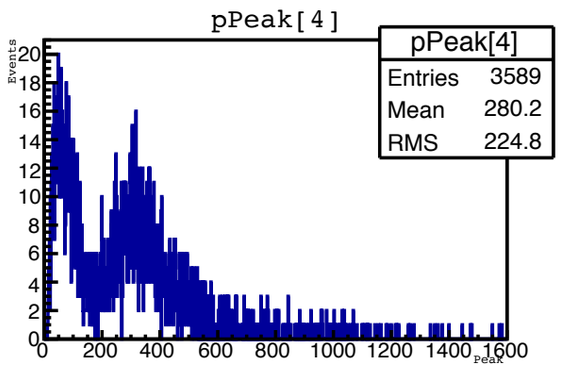
Peak distribution
(North & South & RunID & Timing Cut)

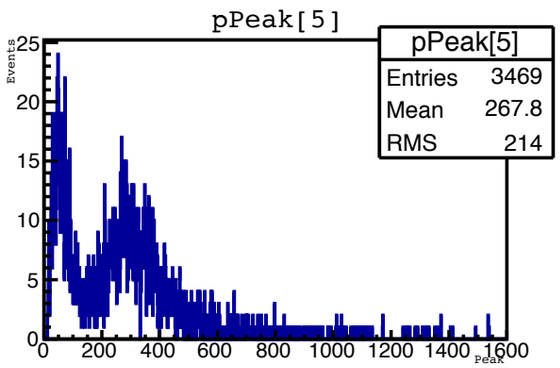


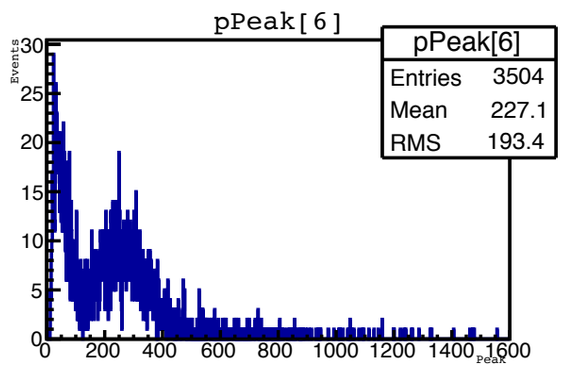


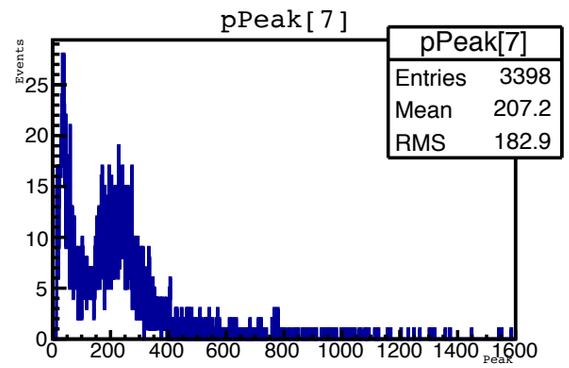


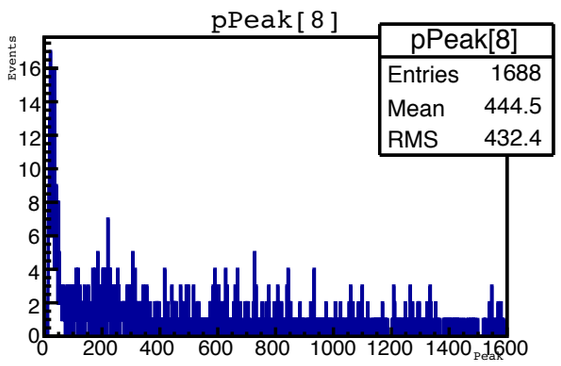


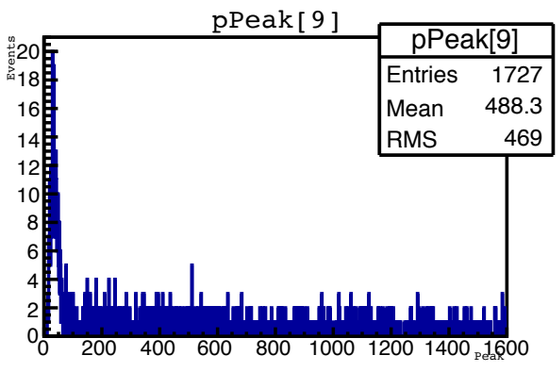


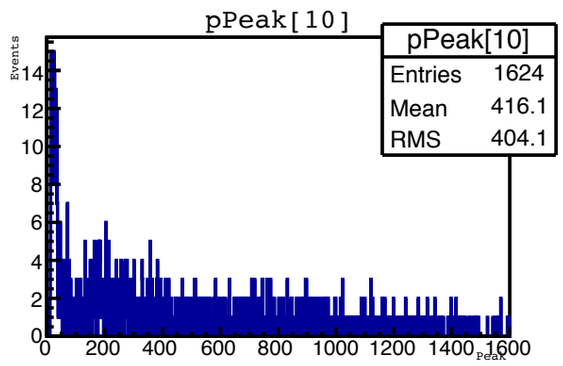


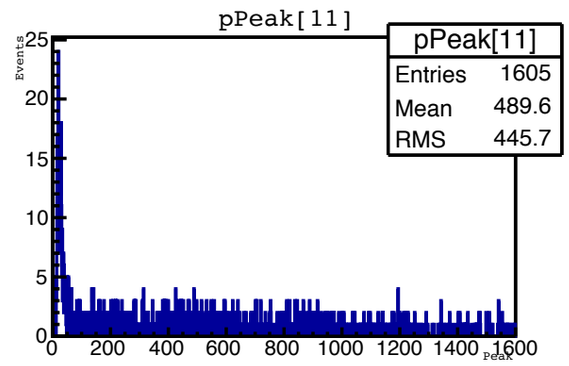


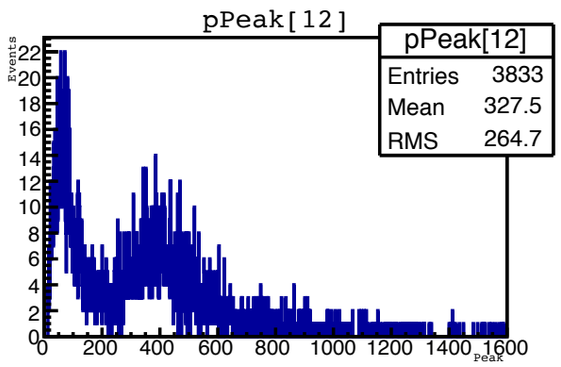


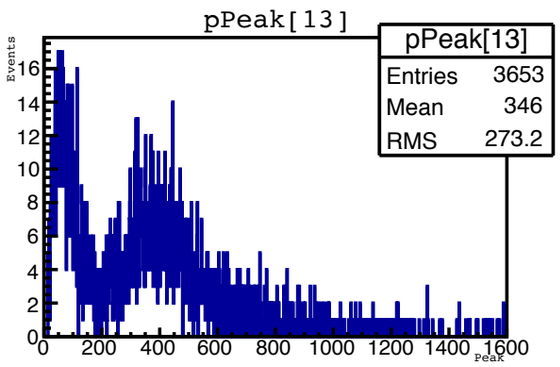


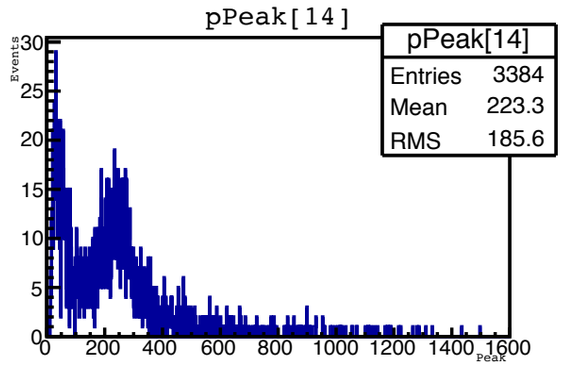


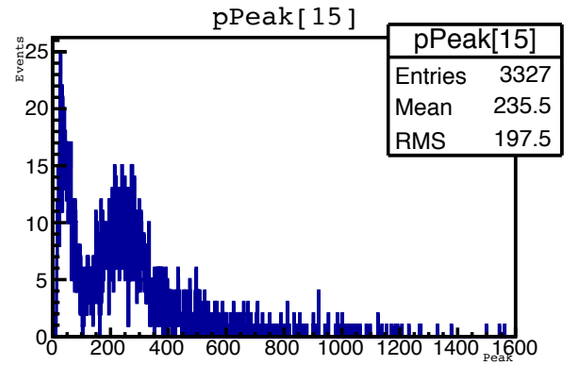




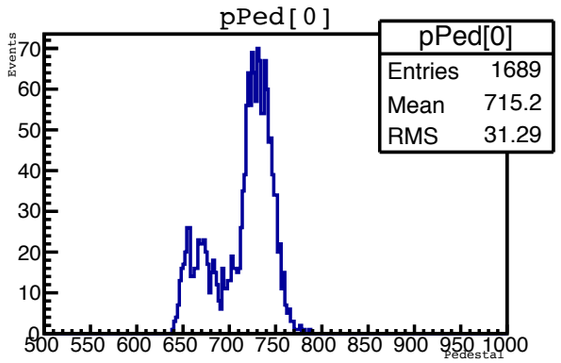


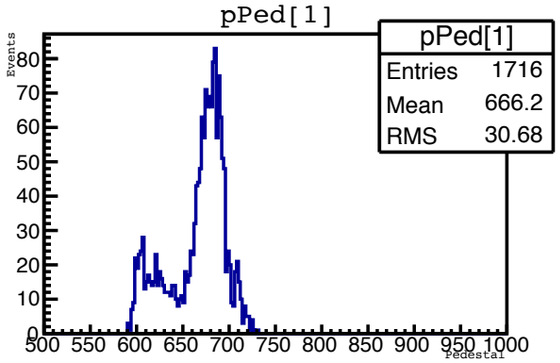


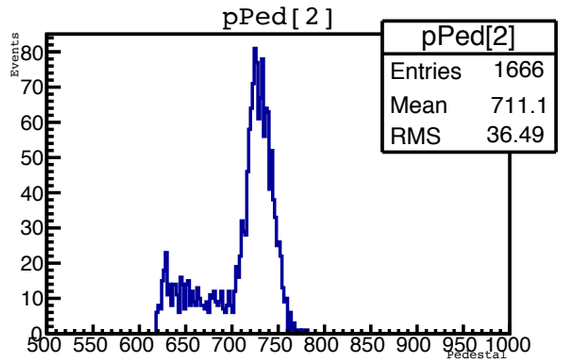


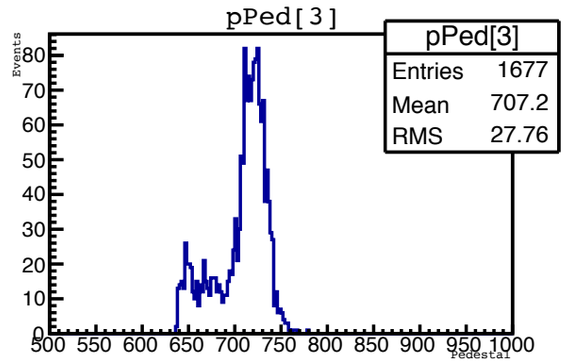


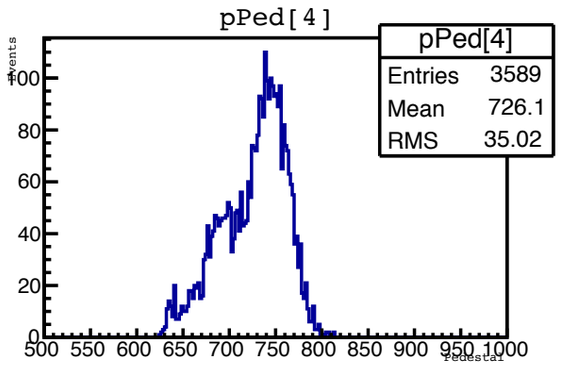
Pedestal distribution (North & South & RunID & Timing Cut)

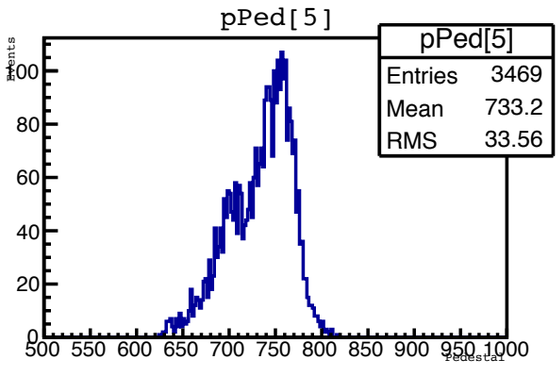


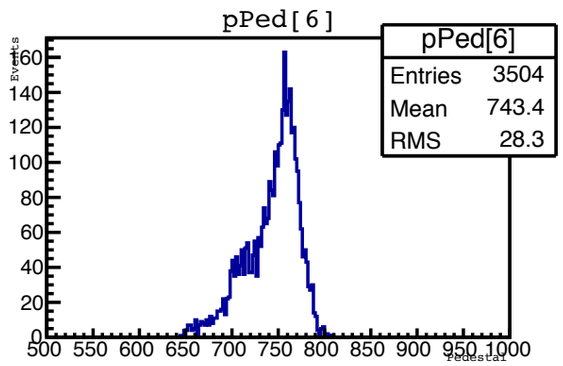


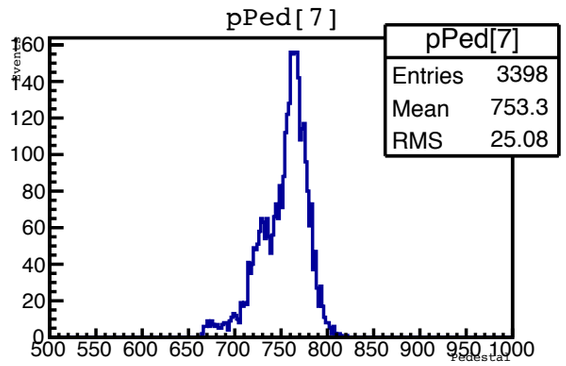


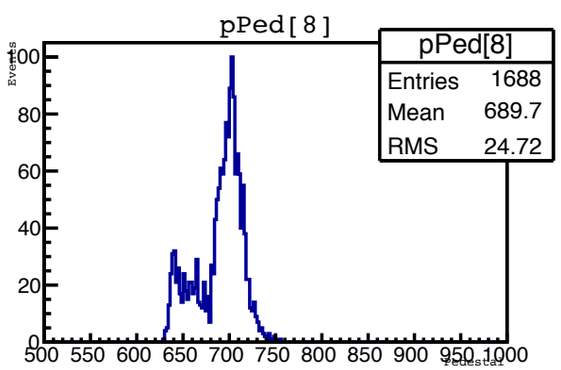


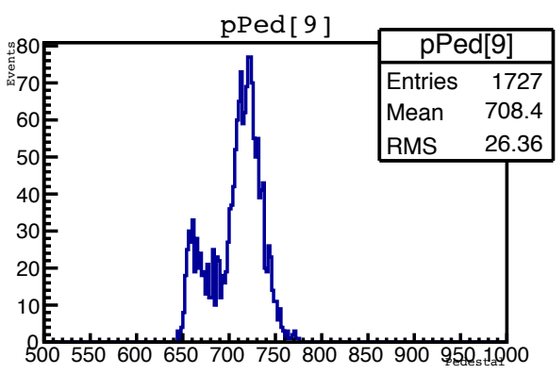


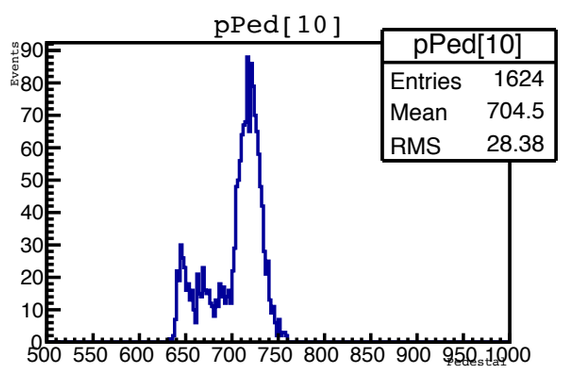


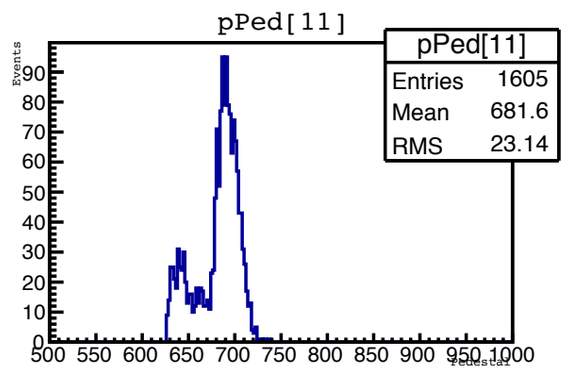


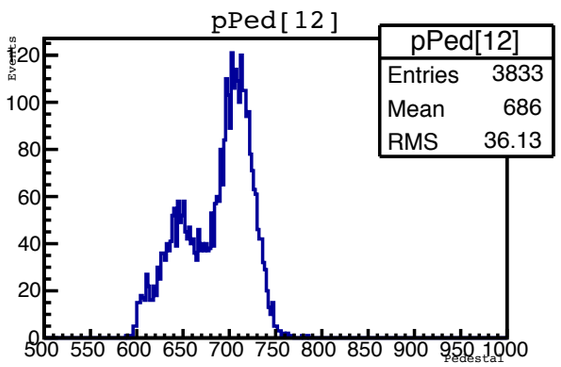


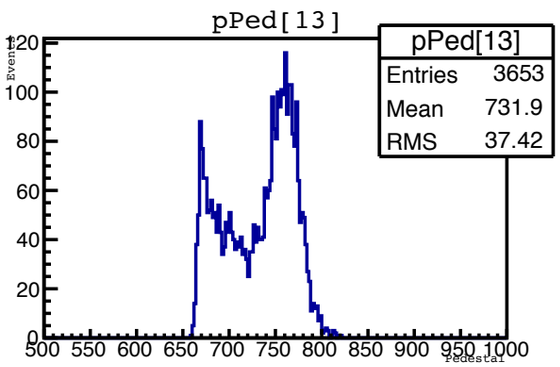


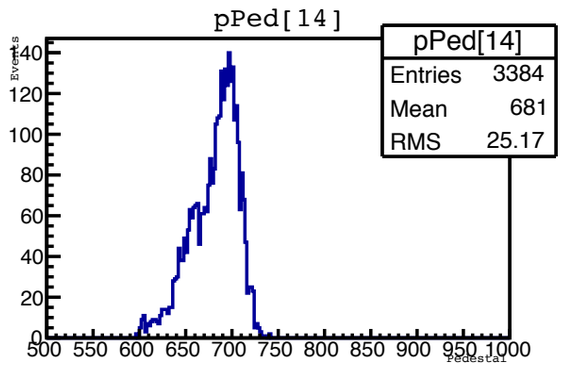


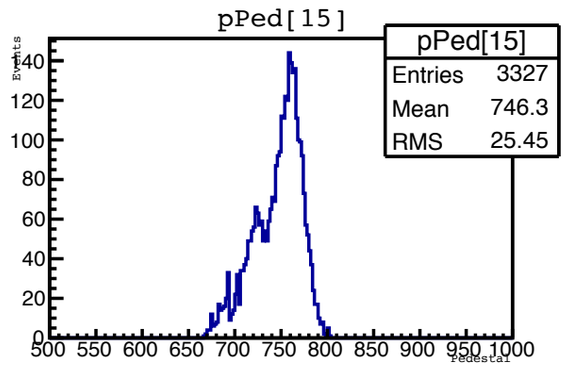




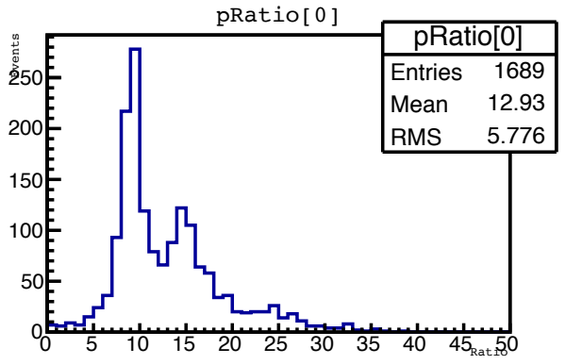


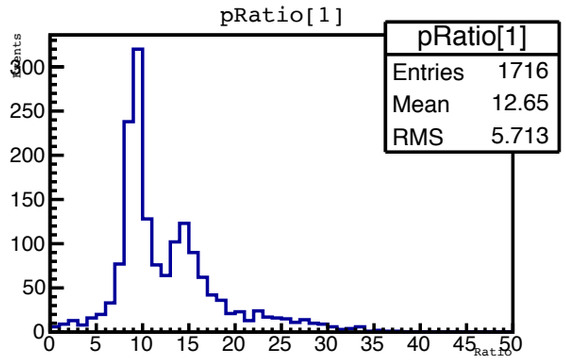


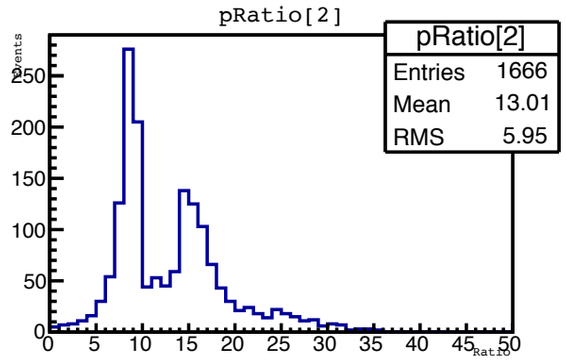


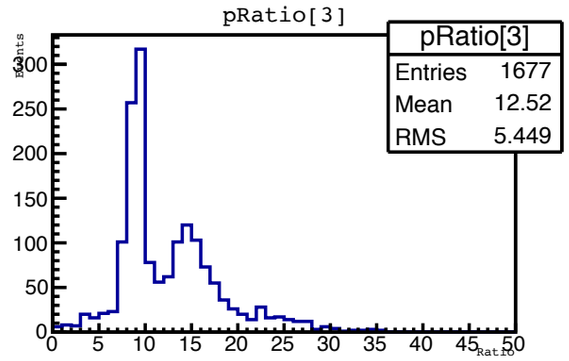


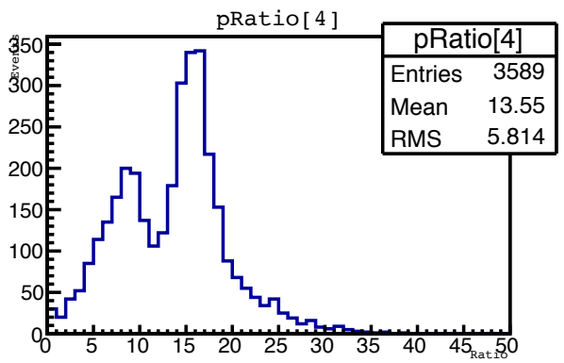
Ratio Distribution
(North & South & RunID & Timing Cut)

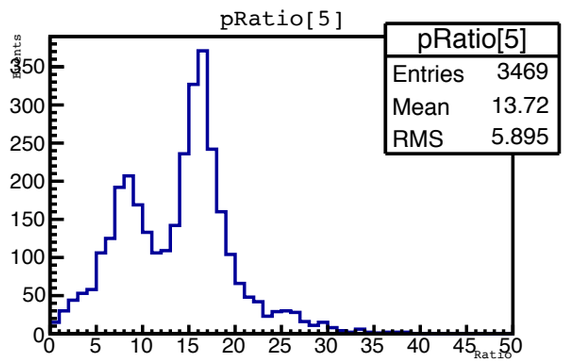


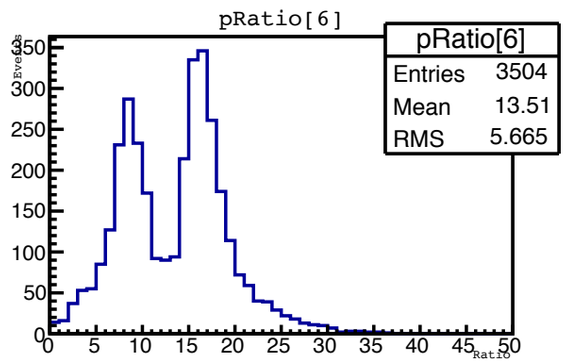


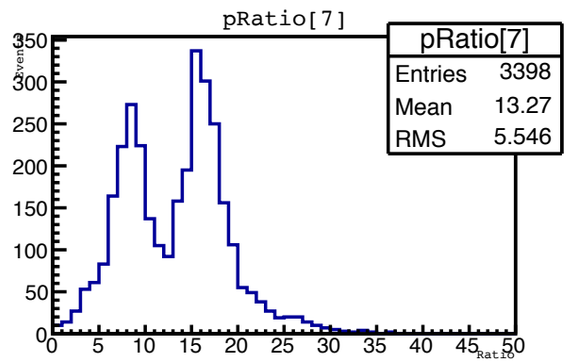


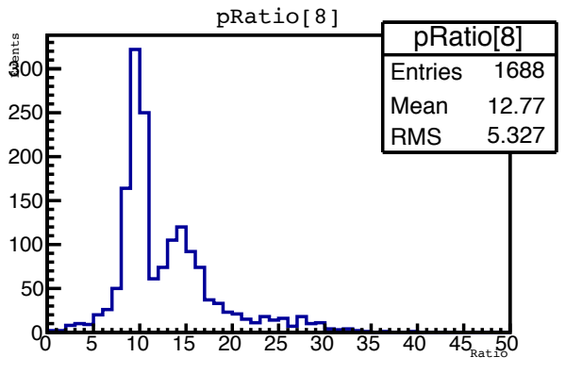


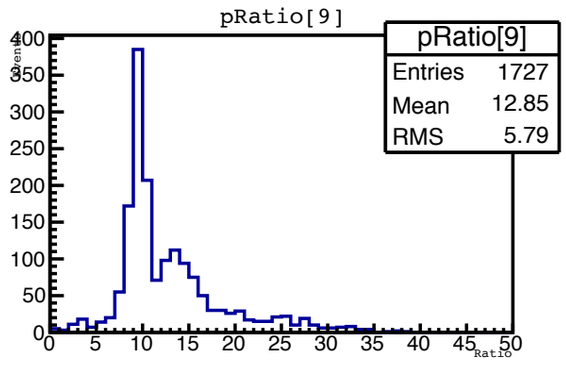


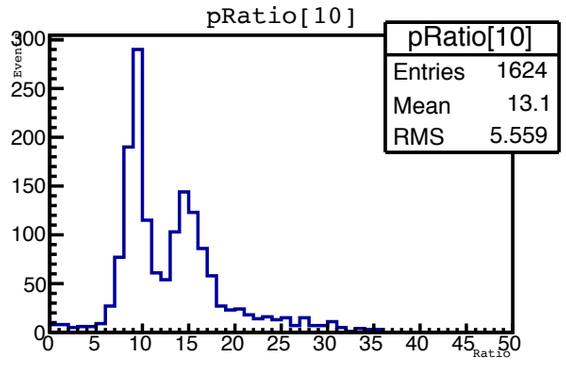


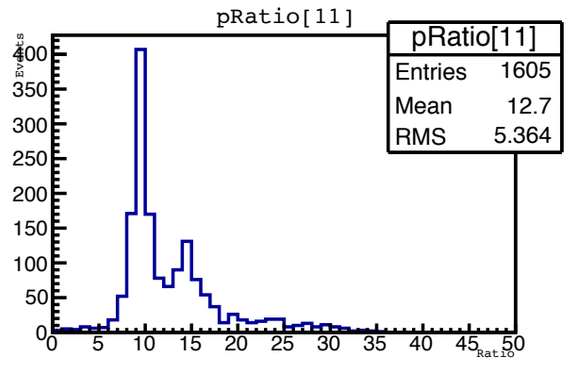


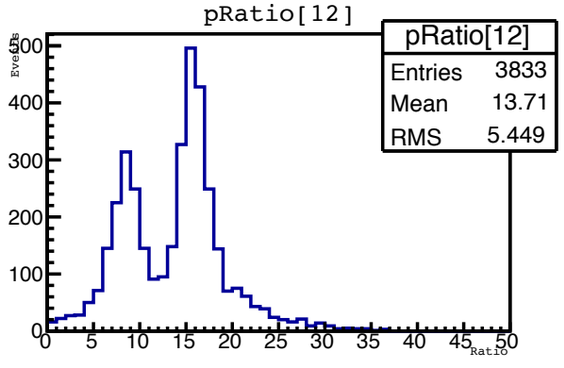


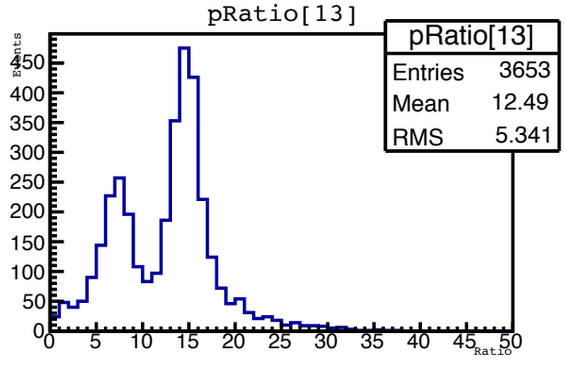


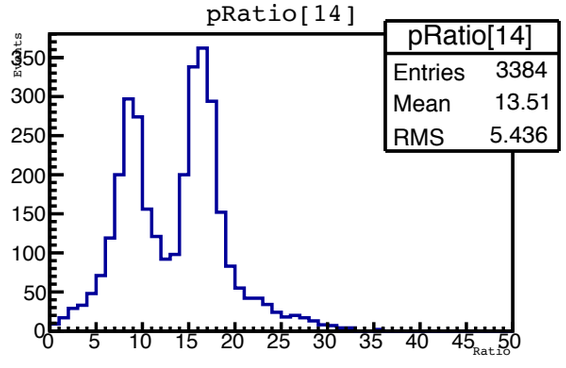


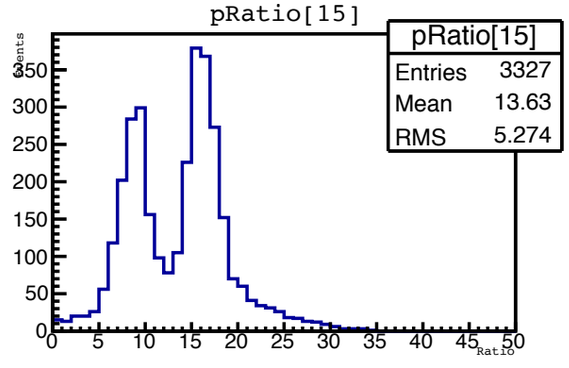






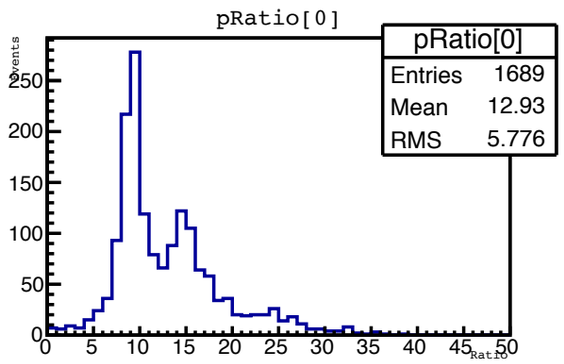


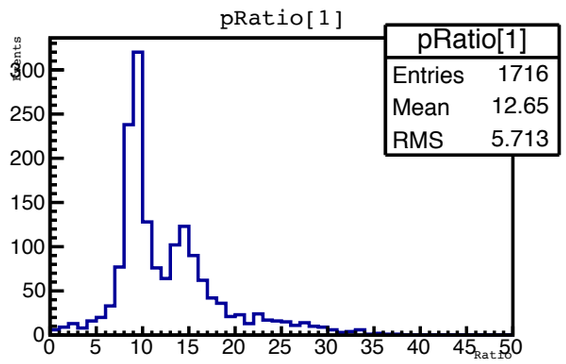


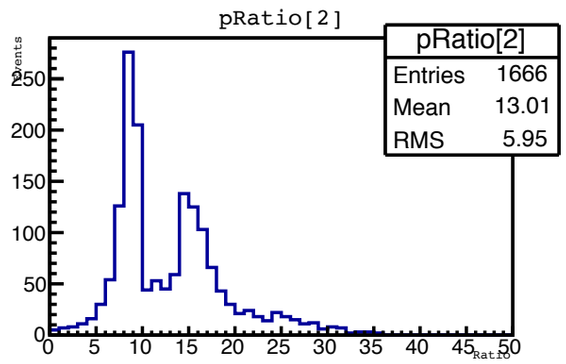


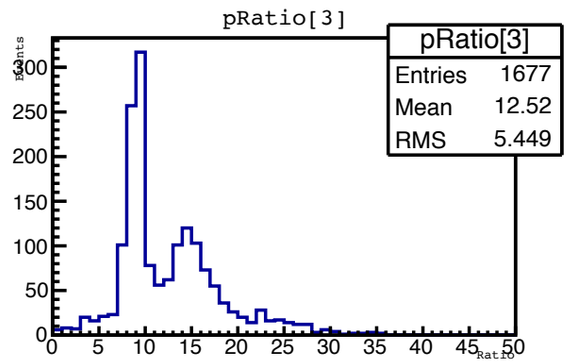
```
if( DCVIntegratedADC[j]/DCVPeak[j] < 8.38-2.46
 || DCVIntegratedADC[j]/DCVPeak[j] > 8.38+2.46 ) continue;
```

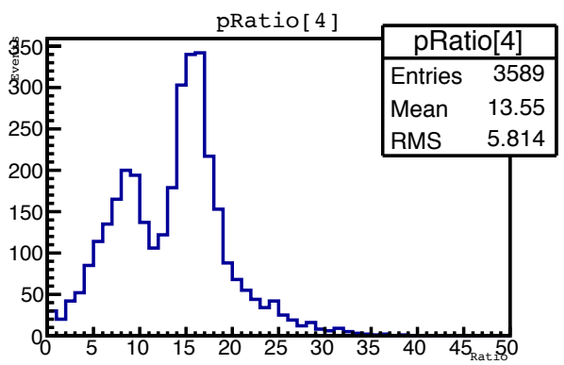
= Ratio 1

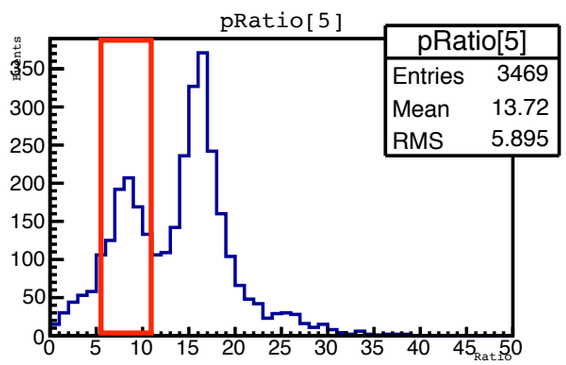


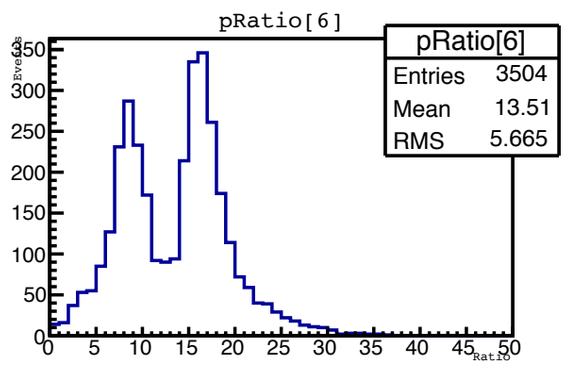


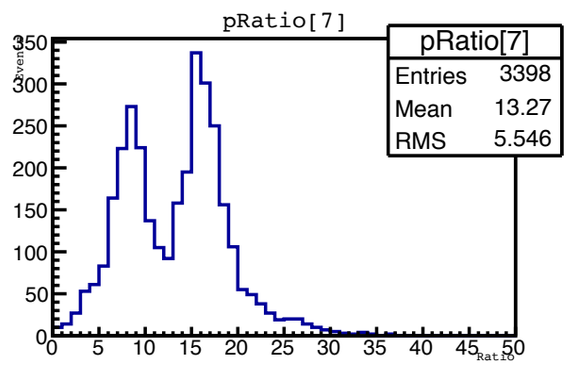


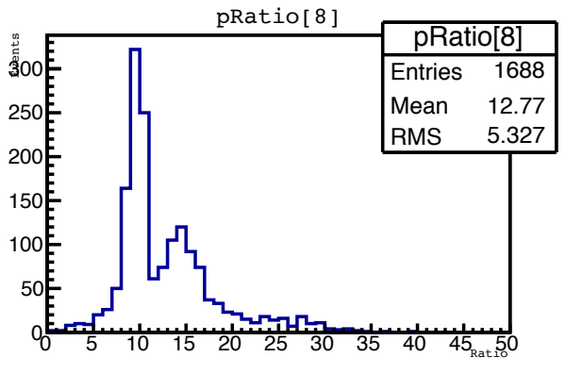


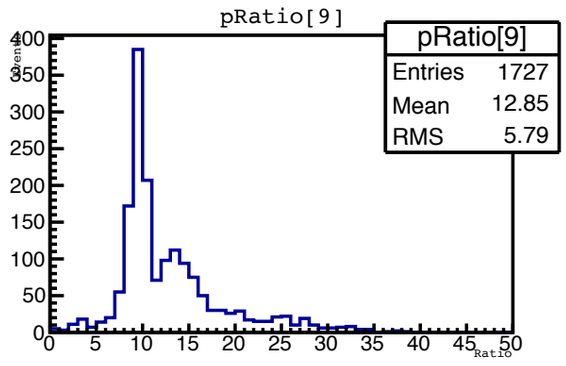


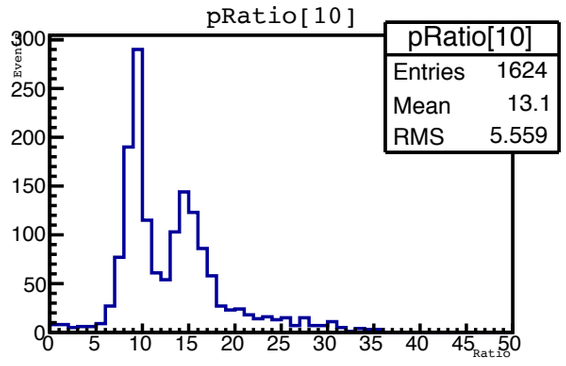


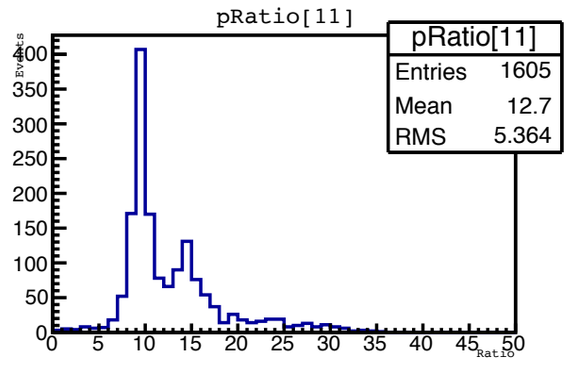


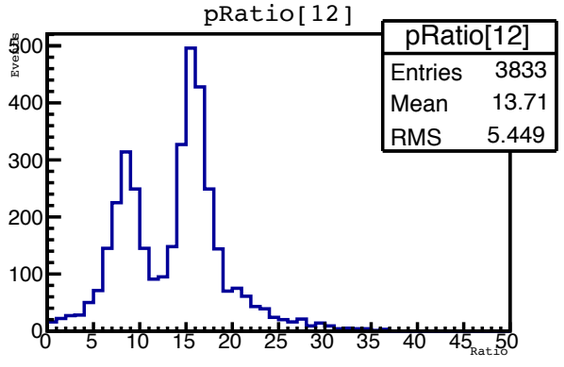


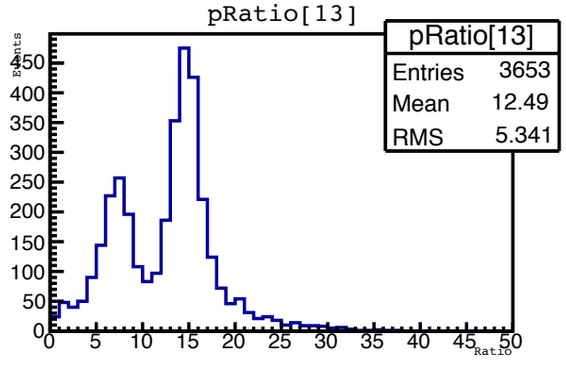


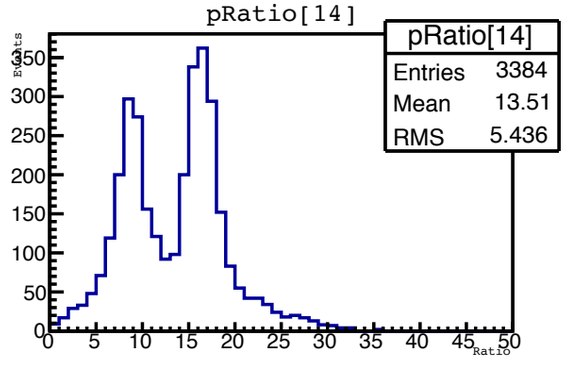


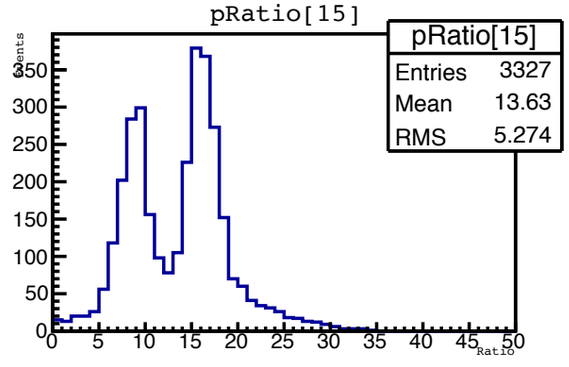




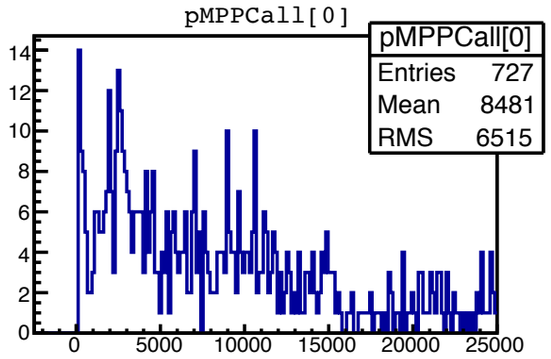


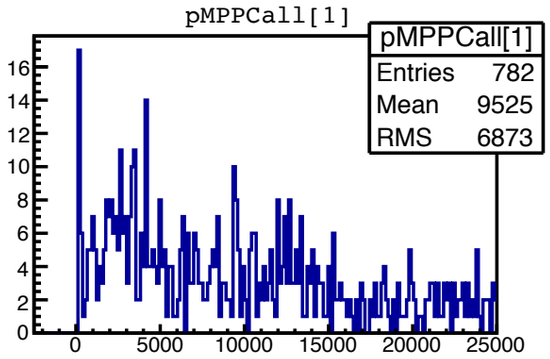


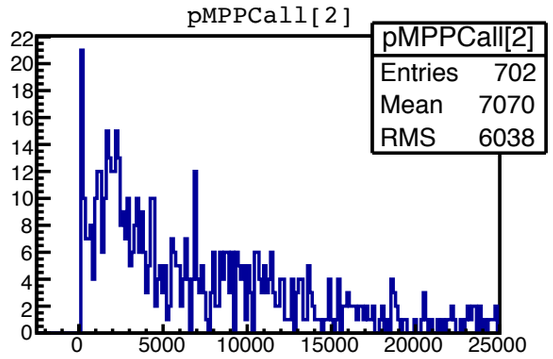


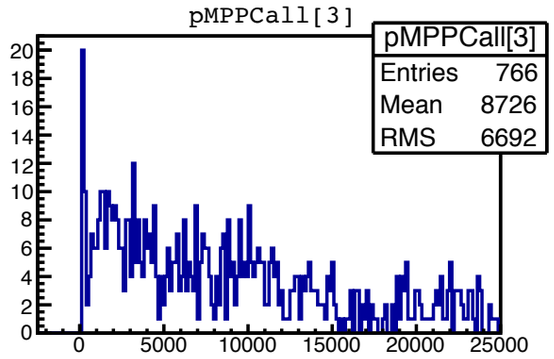


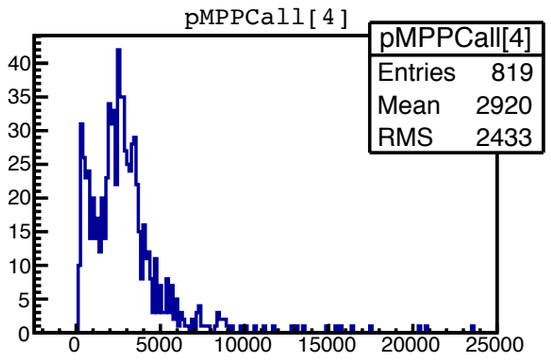
DCV1 IntegratedADC Distribution
(North & South & RunID & Timing & Ratio 1 Cut)

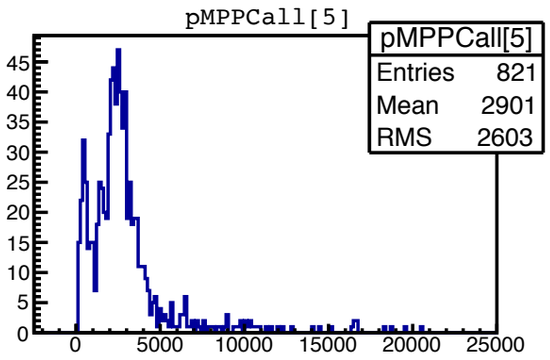


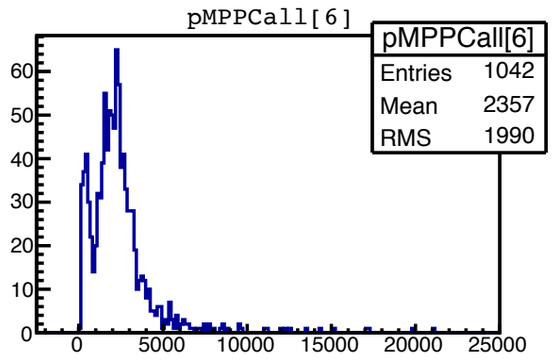


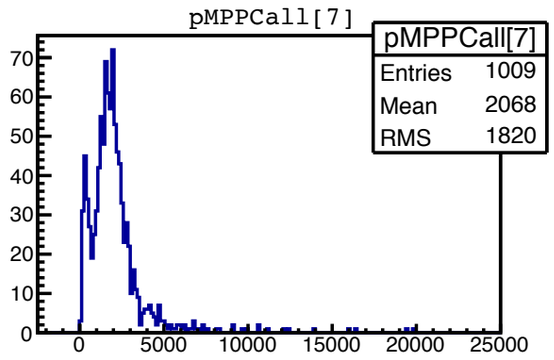


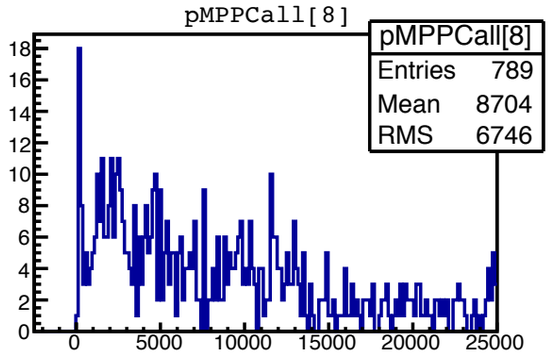


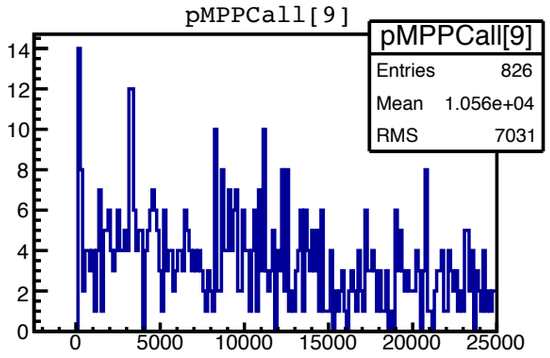


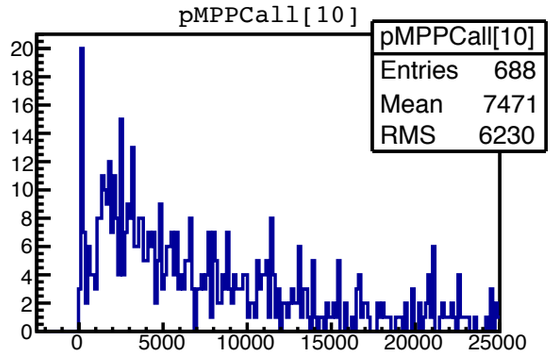


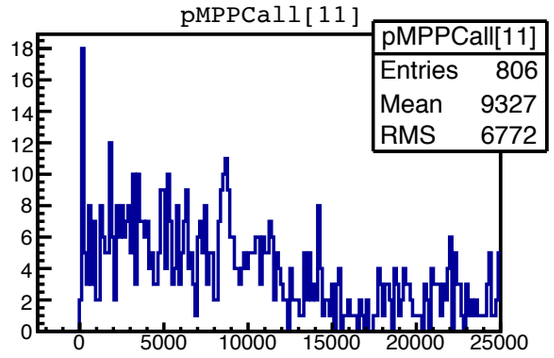


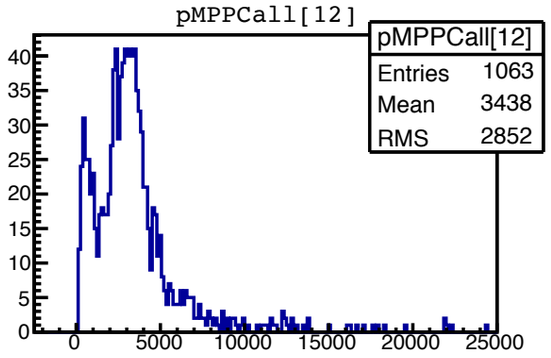


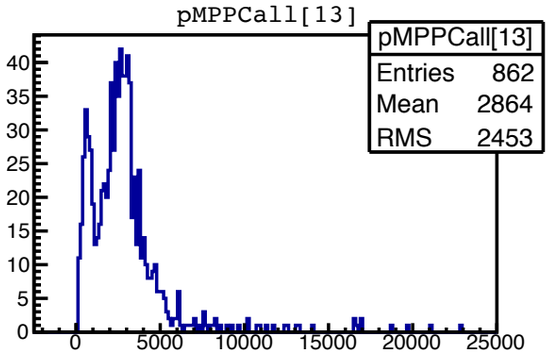


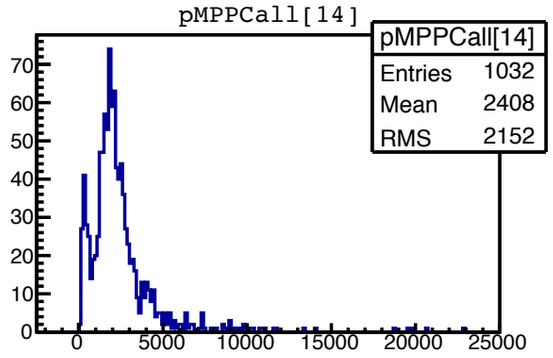


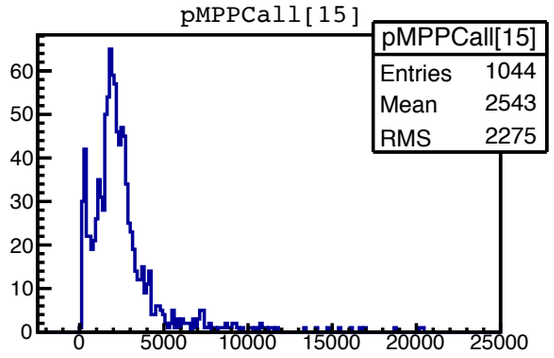




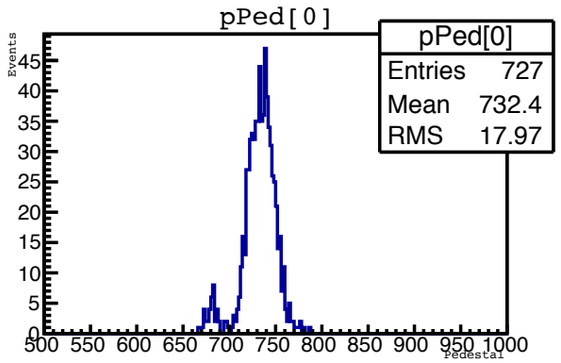


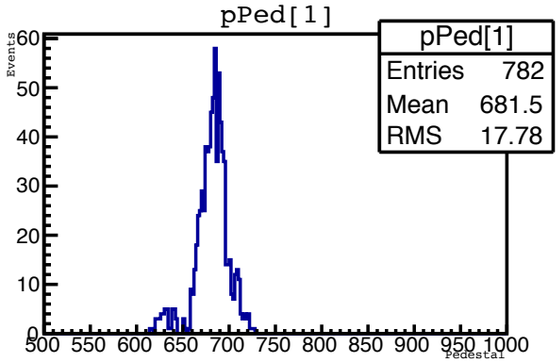


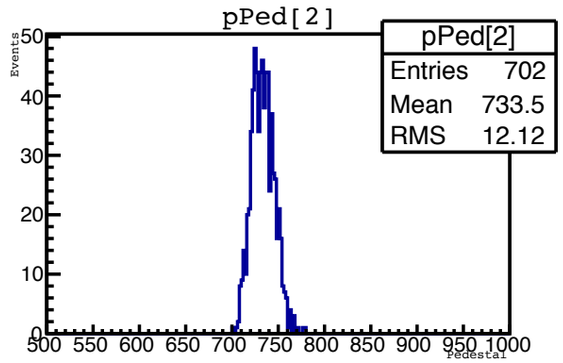


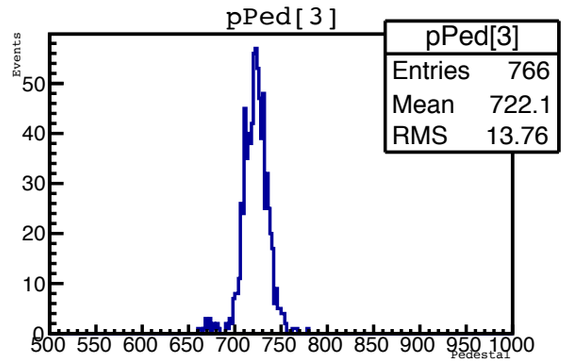


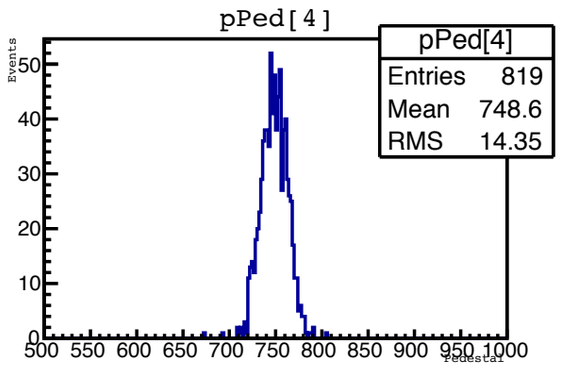
DCV1 Pedestal Distribution
(North & South & RunID & Timing & Ratio 1 Cut)

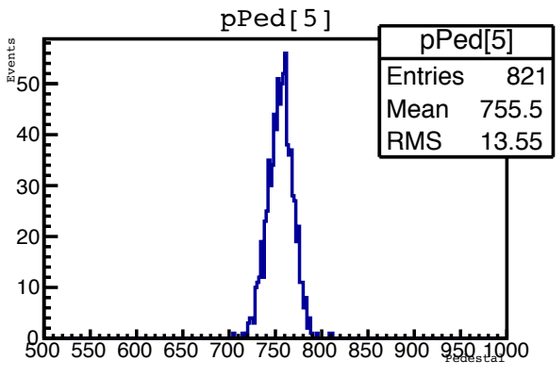


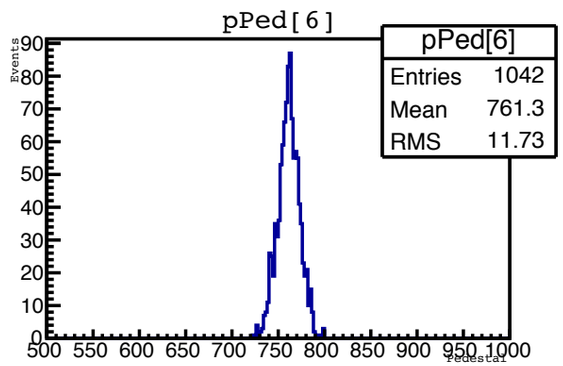


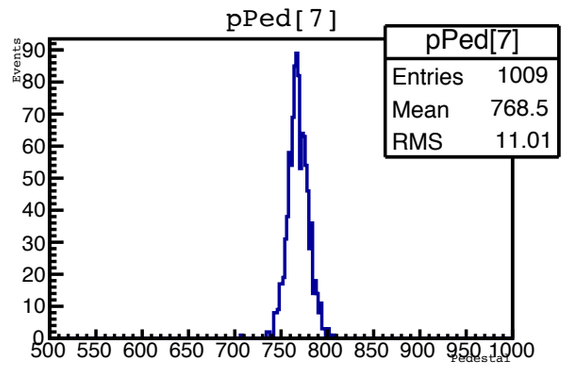


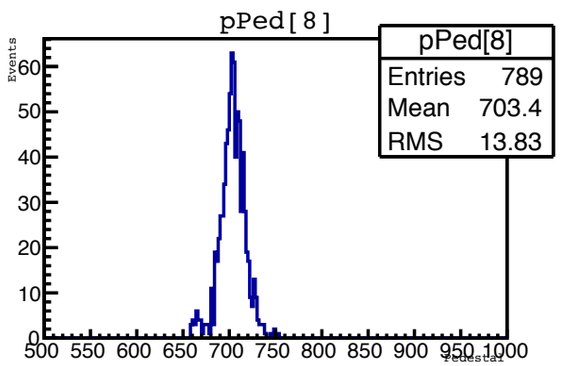


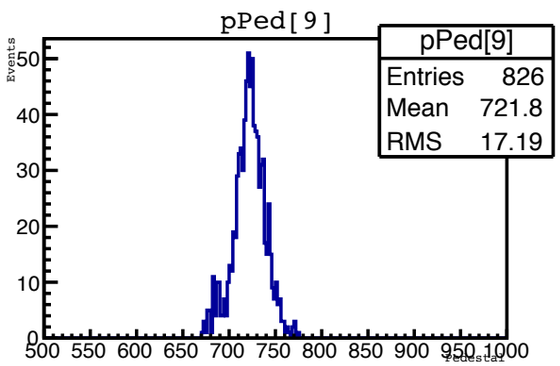


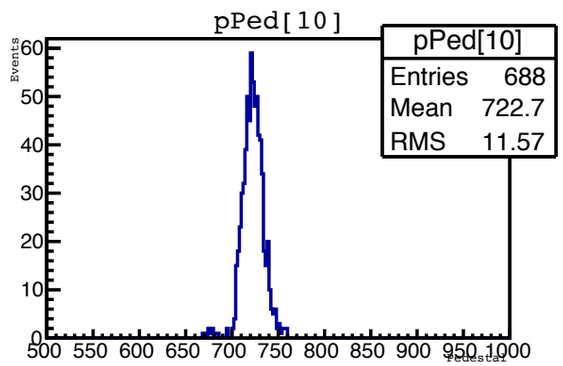


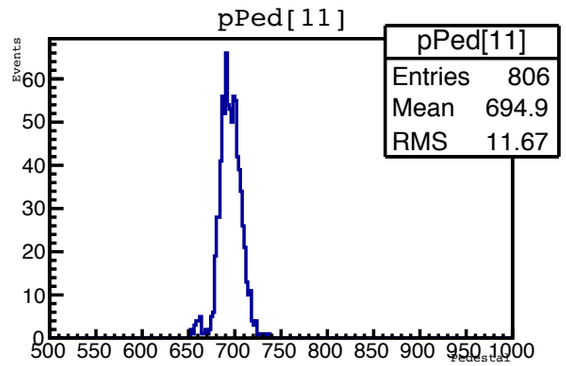


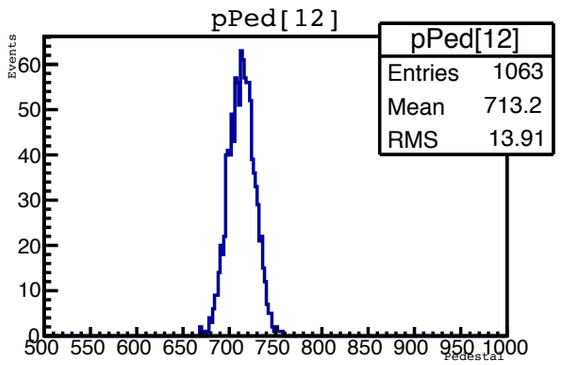


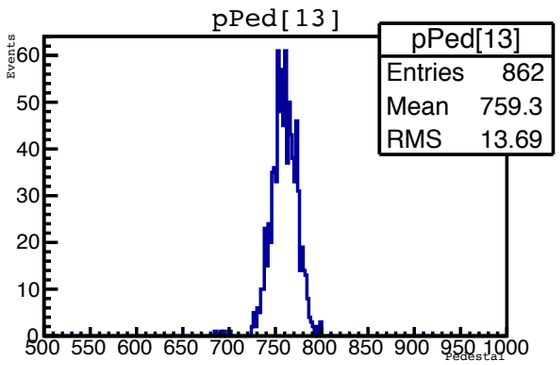


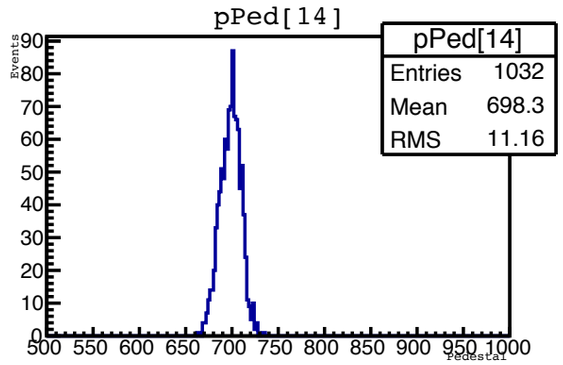


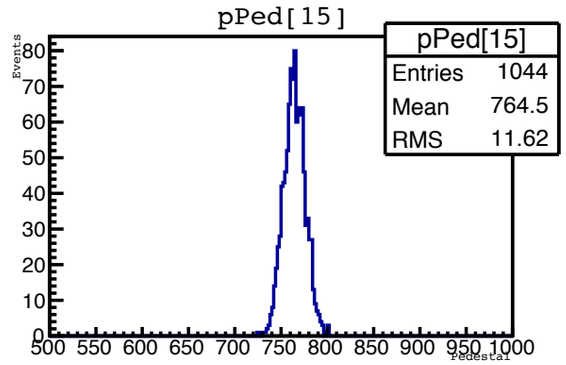






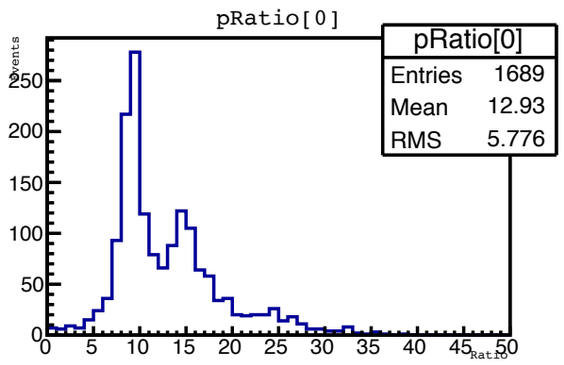


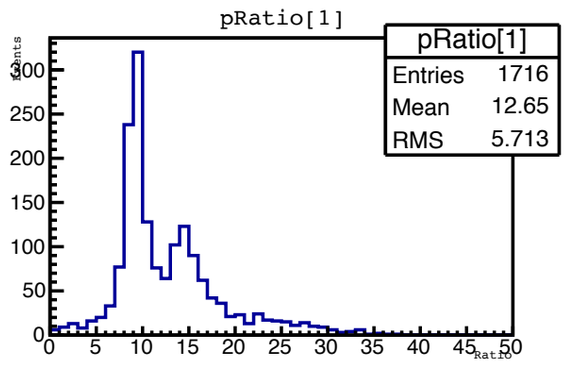


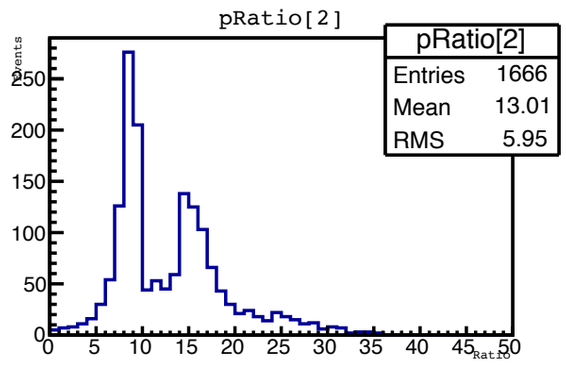


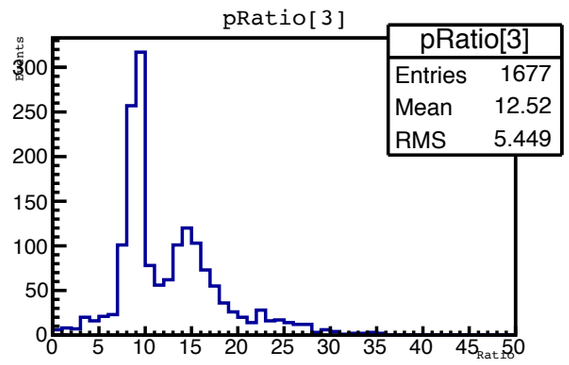
```
if( DCVIntegratedADC[j]/DCVPeak[j] < 16.01-2.10
 || DCVIntegratedADC[j]/DCVPeak[j] > 16.01+2.10 ) continue;
```

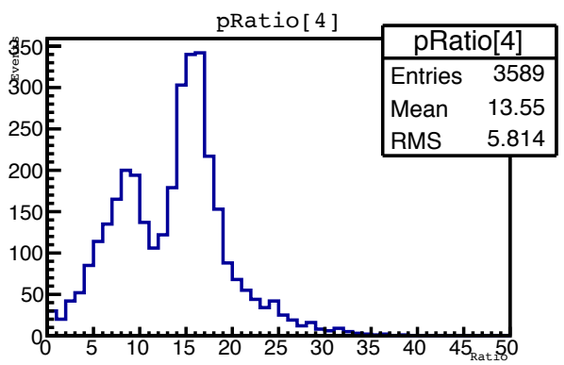
= Ratio 2

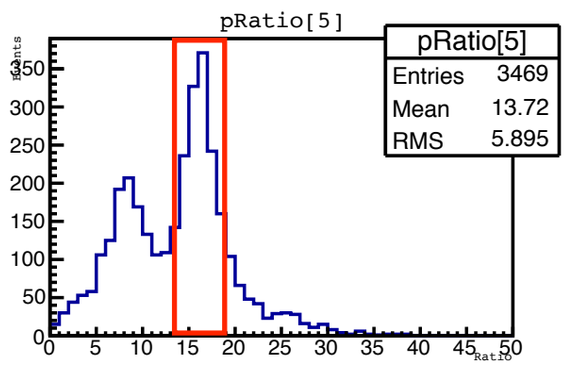


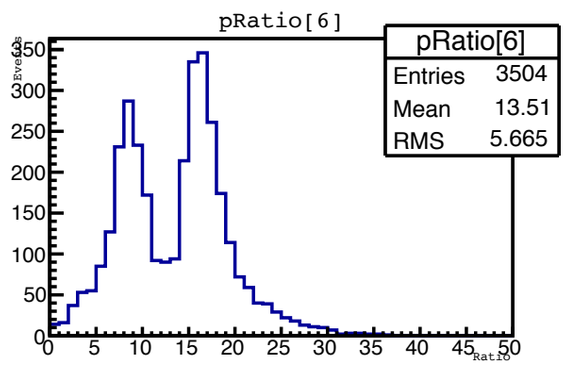


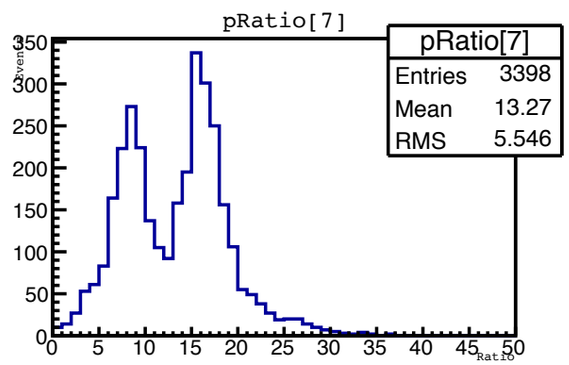


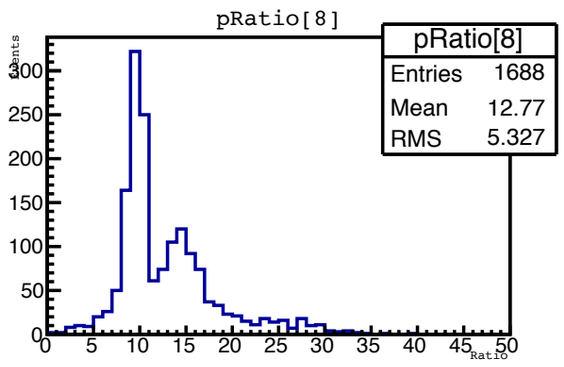


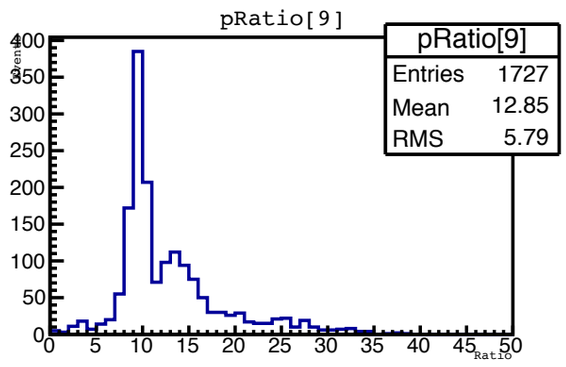


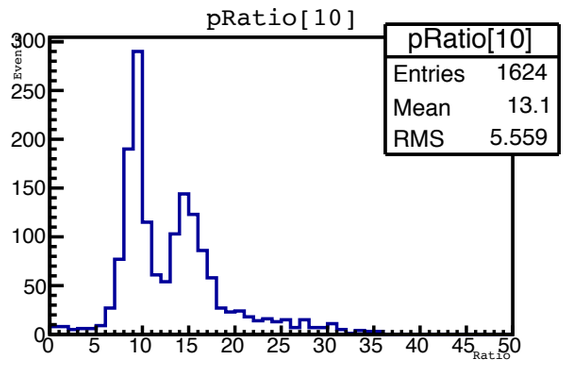


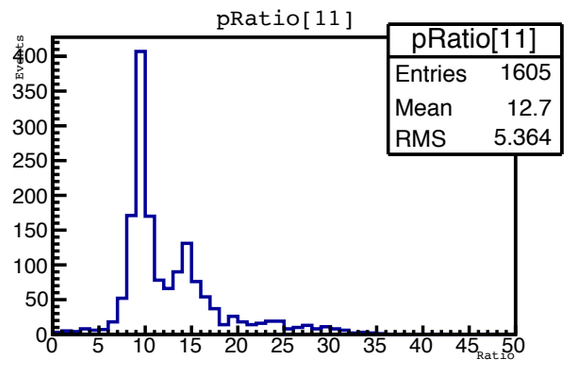


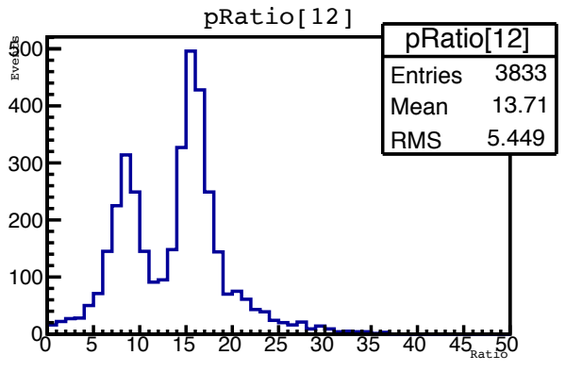


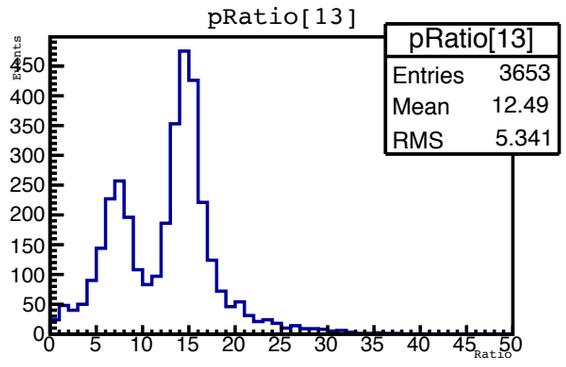


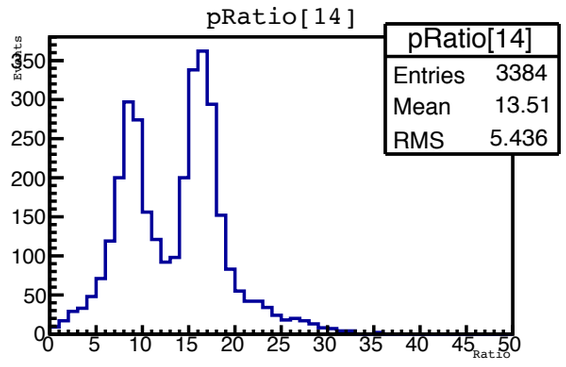


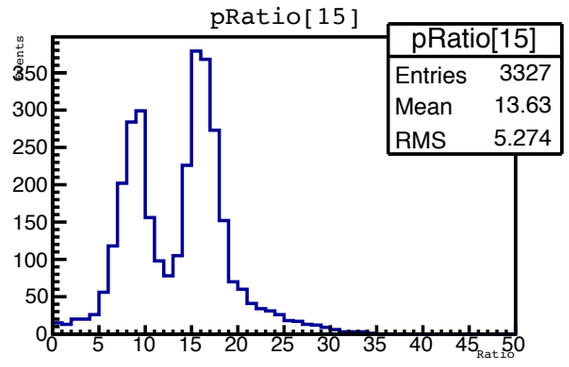




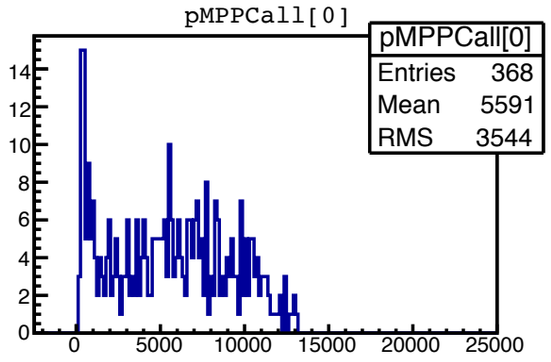


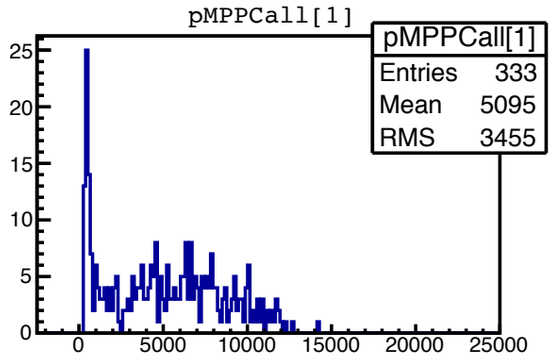


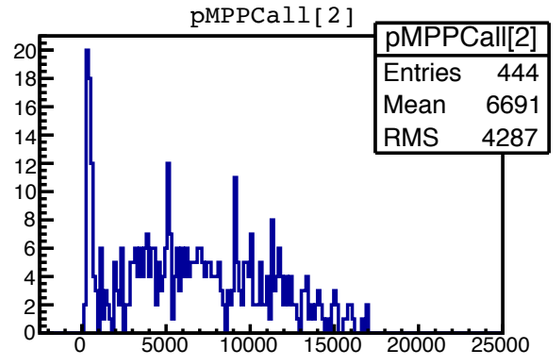


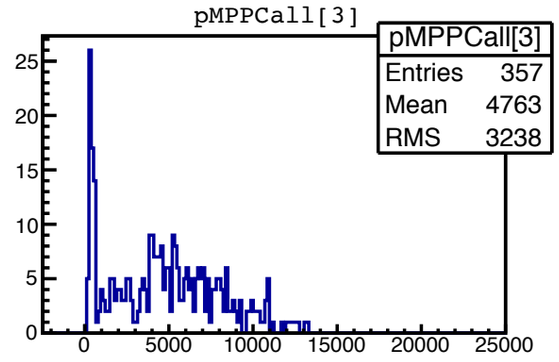


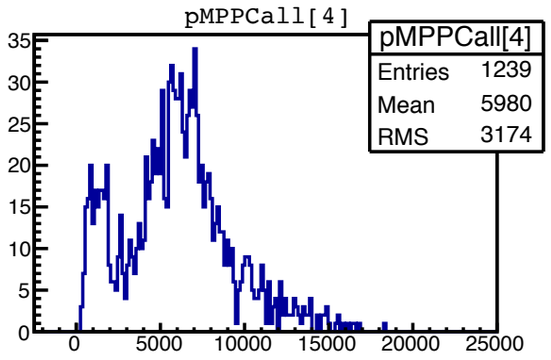
DCV1 IntegratedADC Distribution
(North & South & RunID & Timing & Ratio 2 Cut)

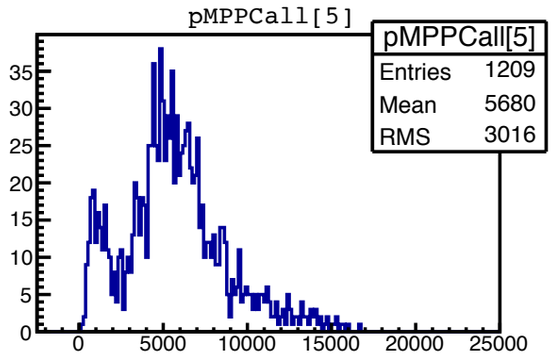


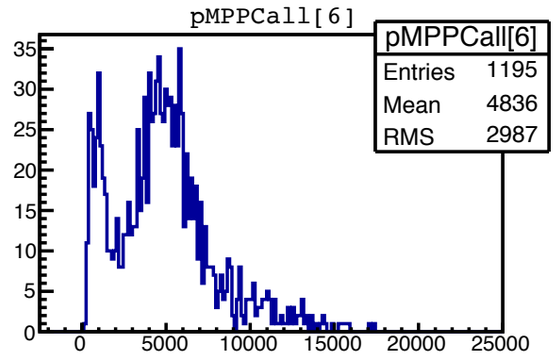


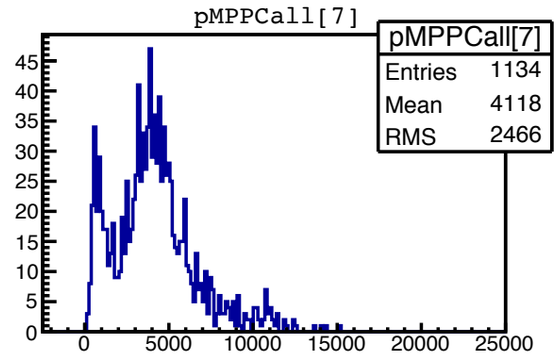


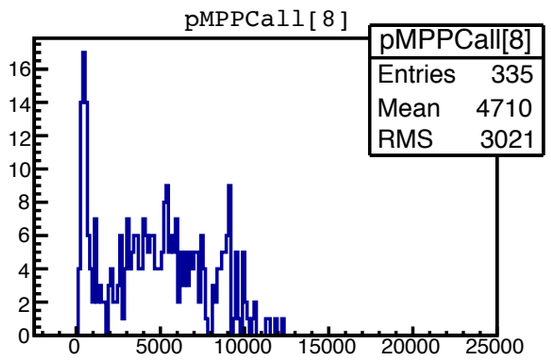


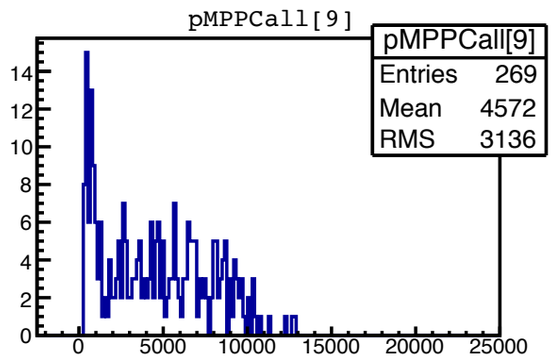


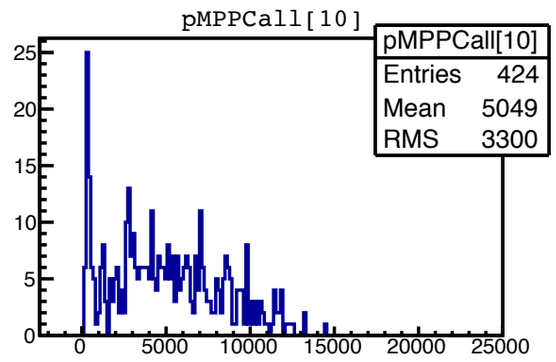


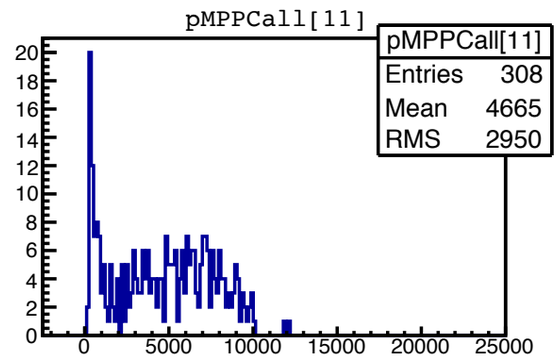


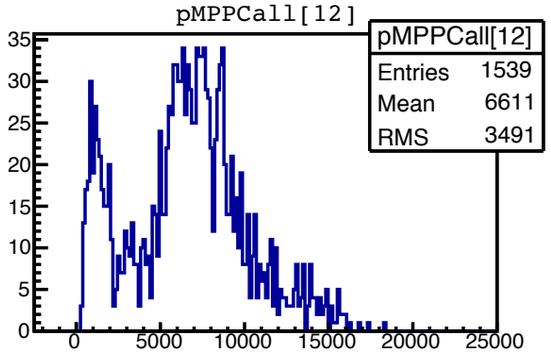


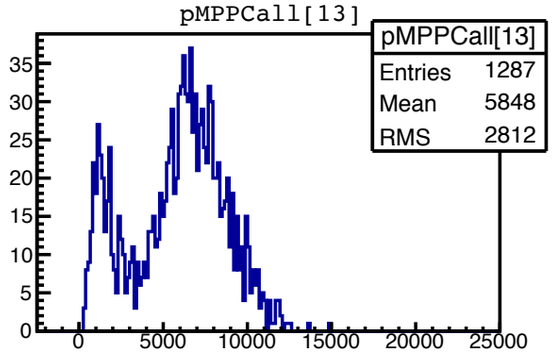


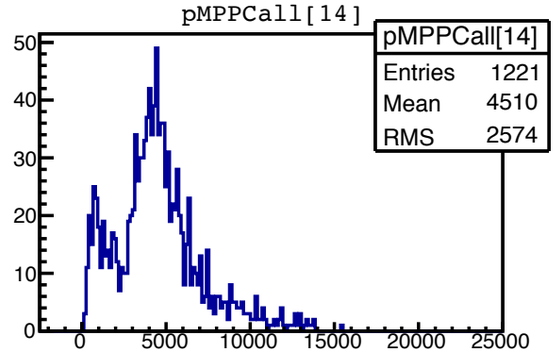


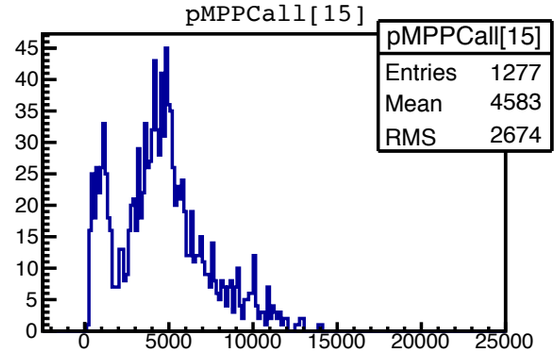




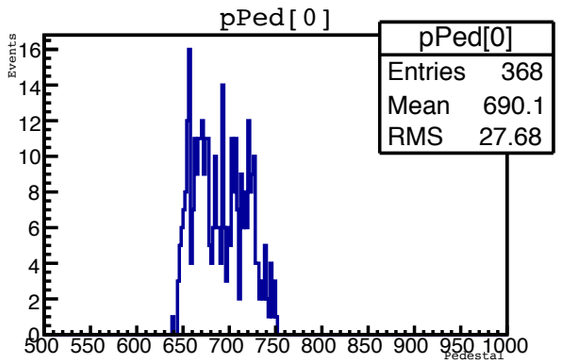


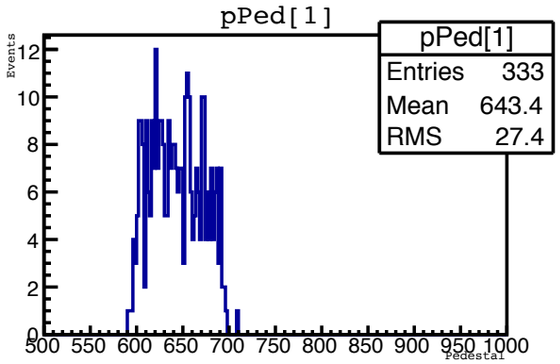


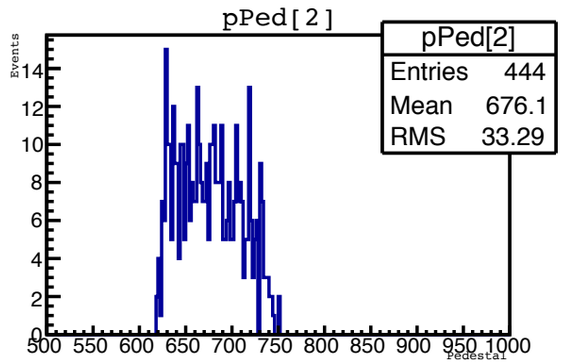


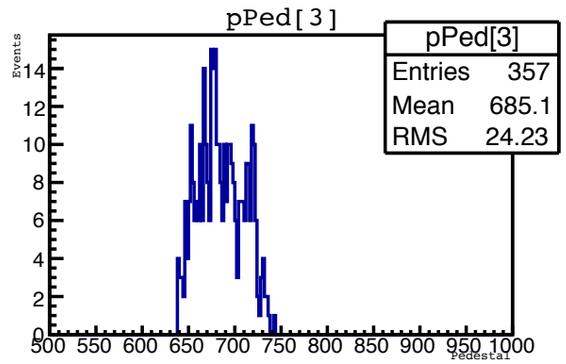


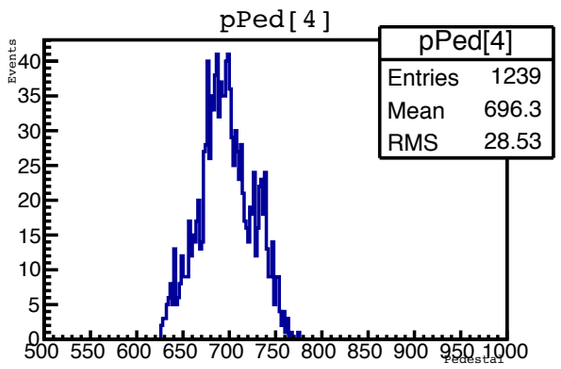
DCV1 Pedestal Distribution
(North & South & RunID & Timing & Ratio 2 Cut)

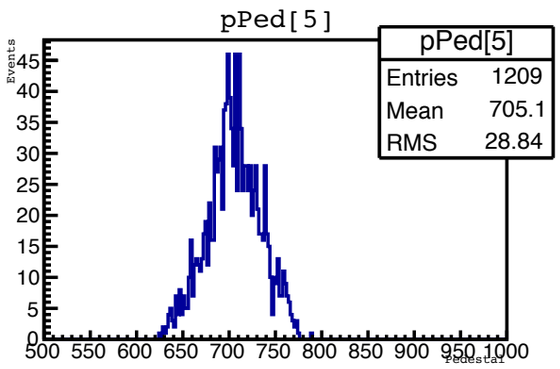


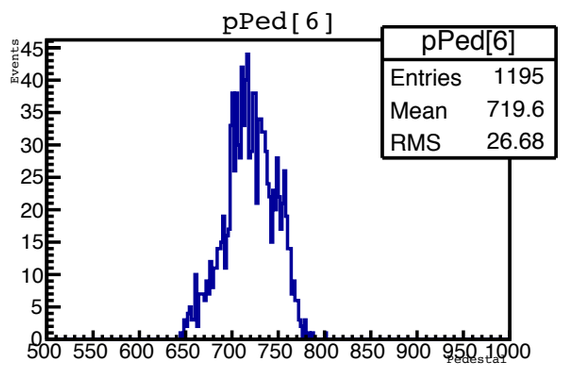


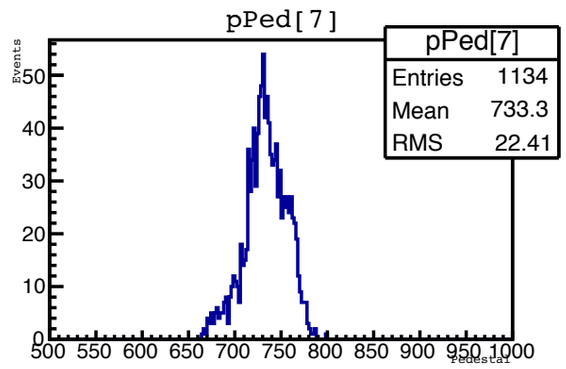


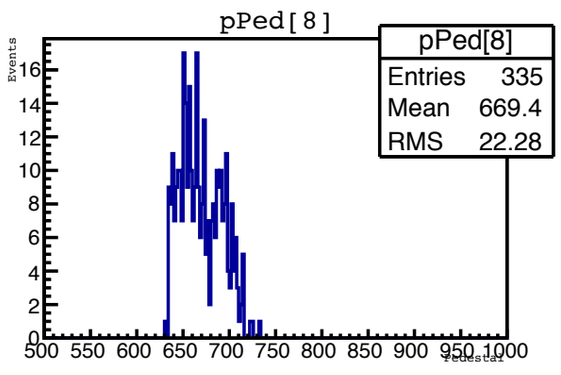


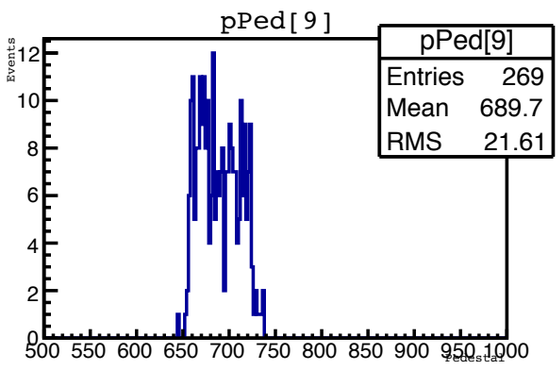


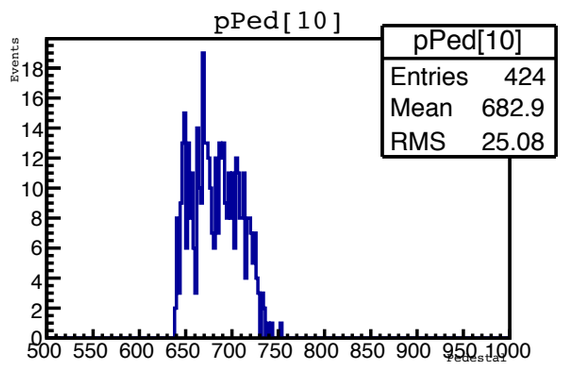


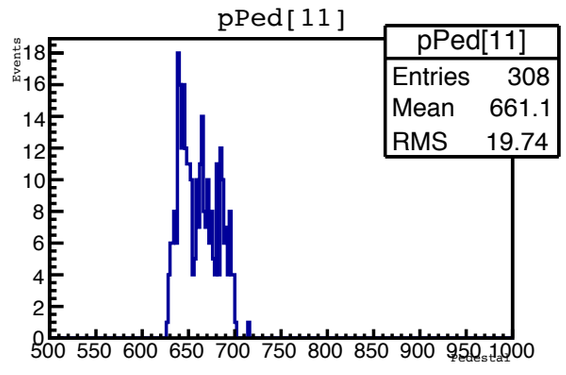


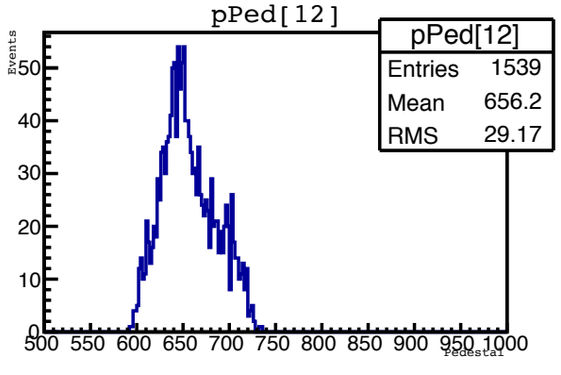


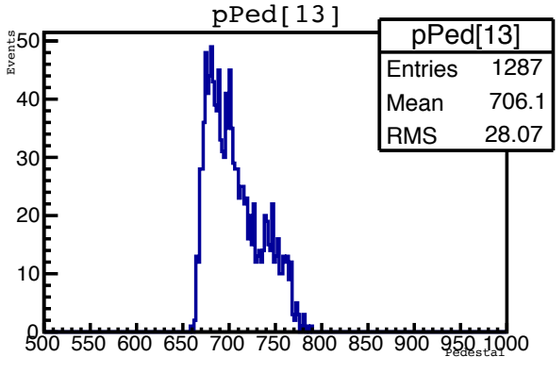


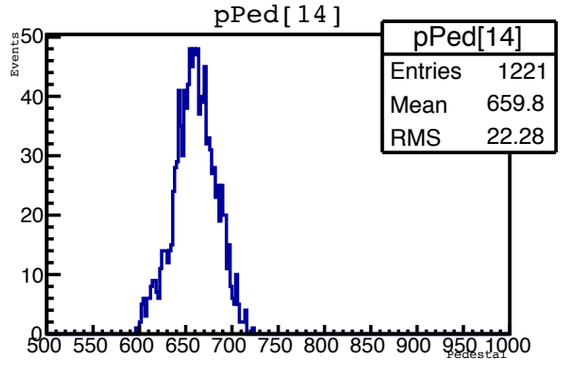


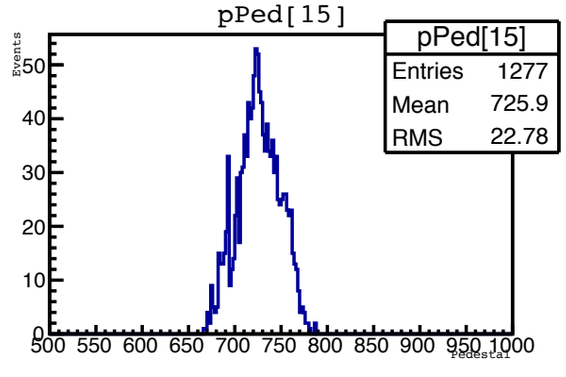












DCV1 Pedestal Distribution
(North & South & RunID & Timing Cut)
Ratio 1, Ratio 2