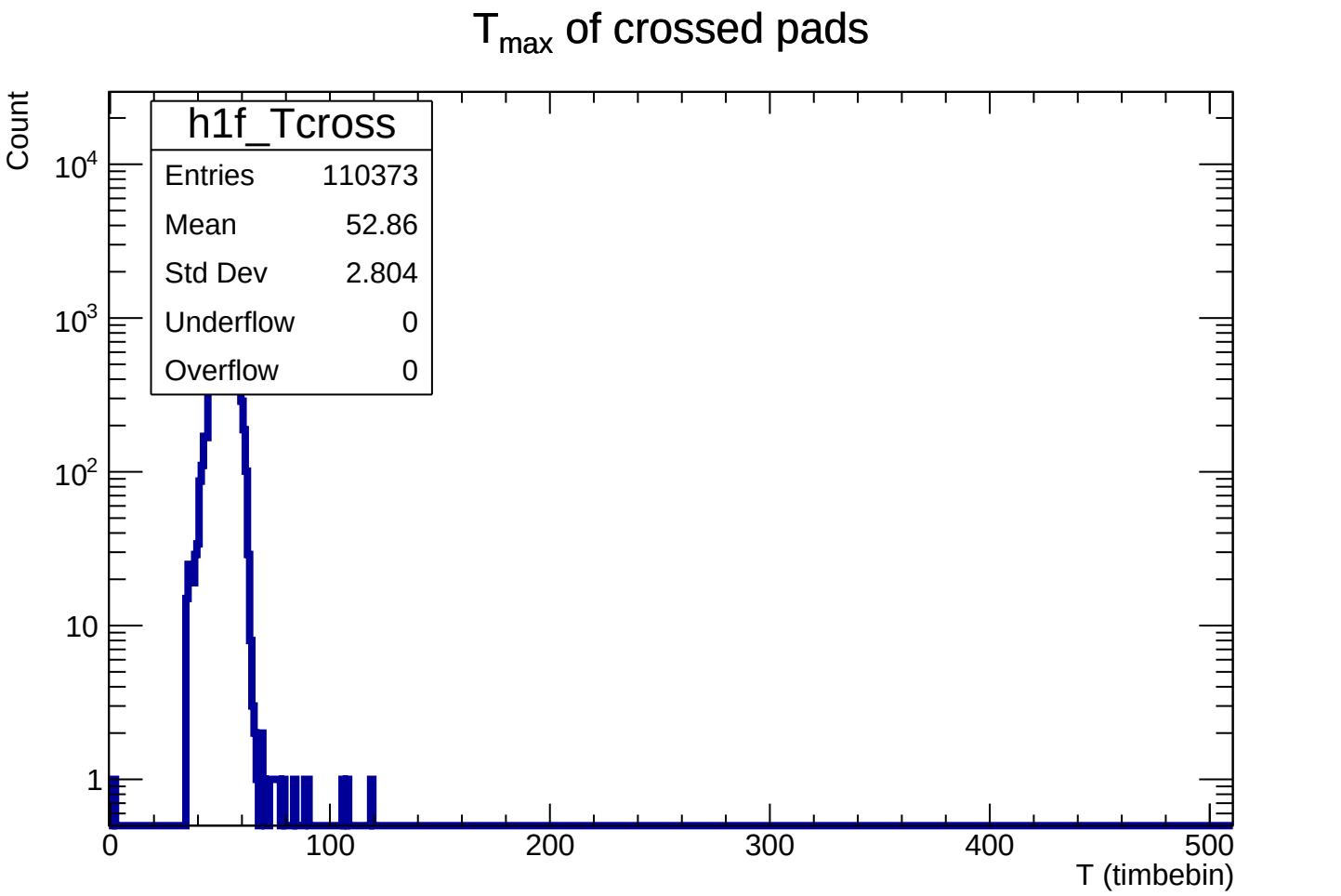
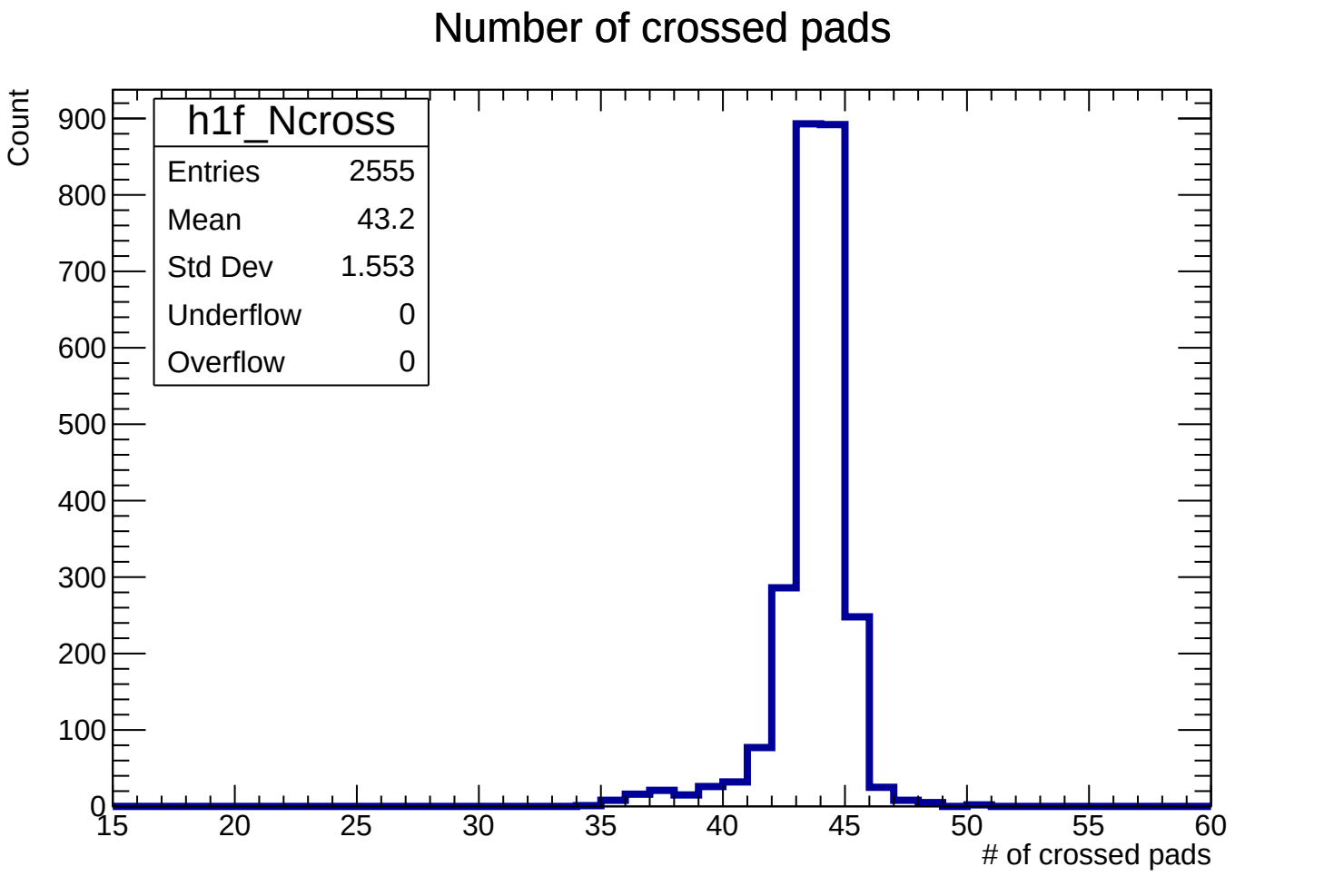
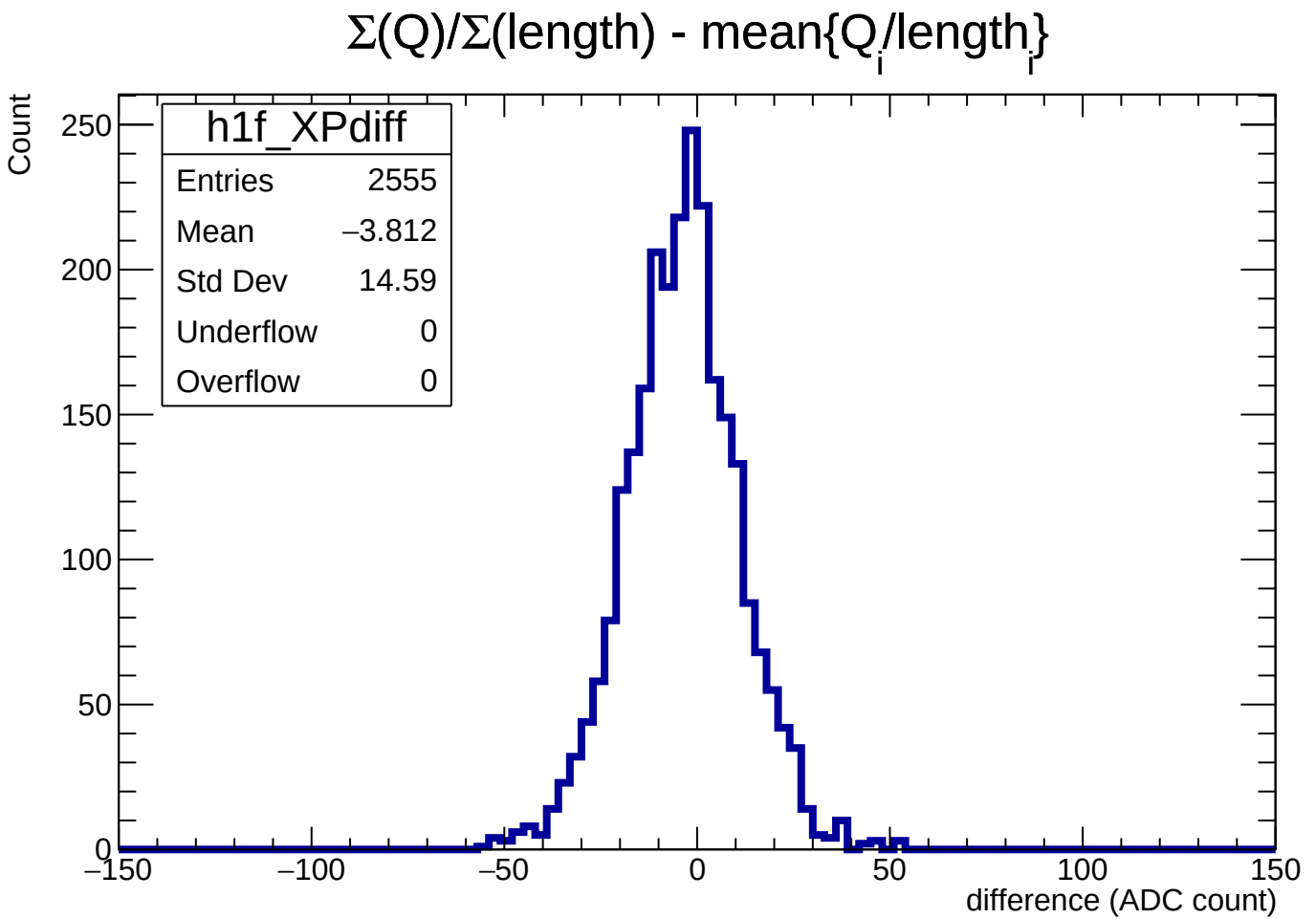
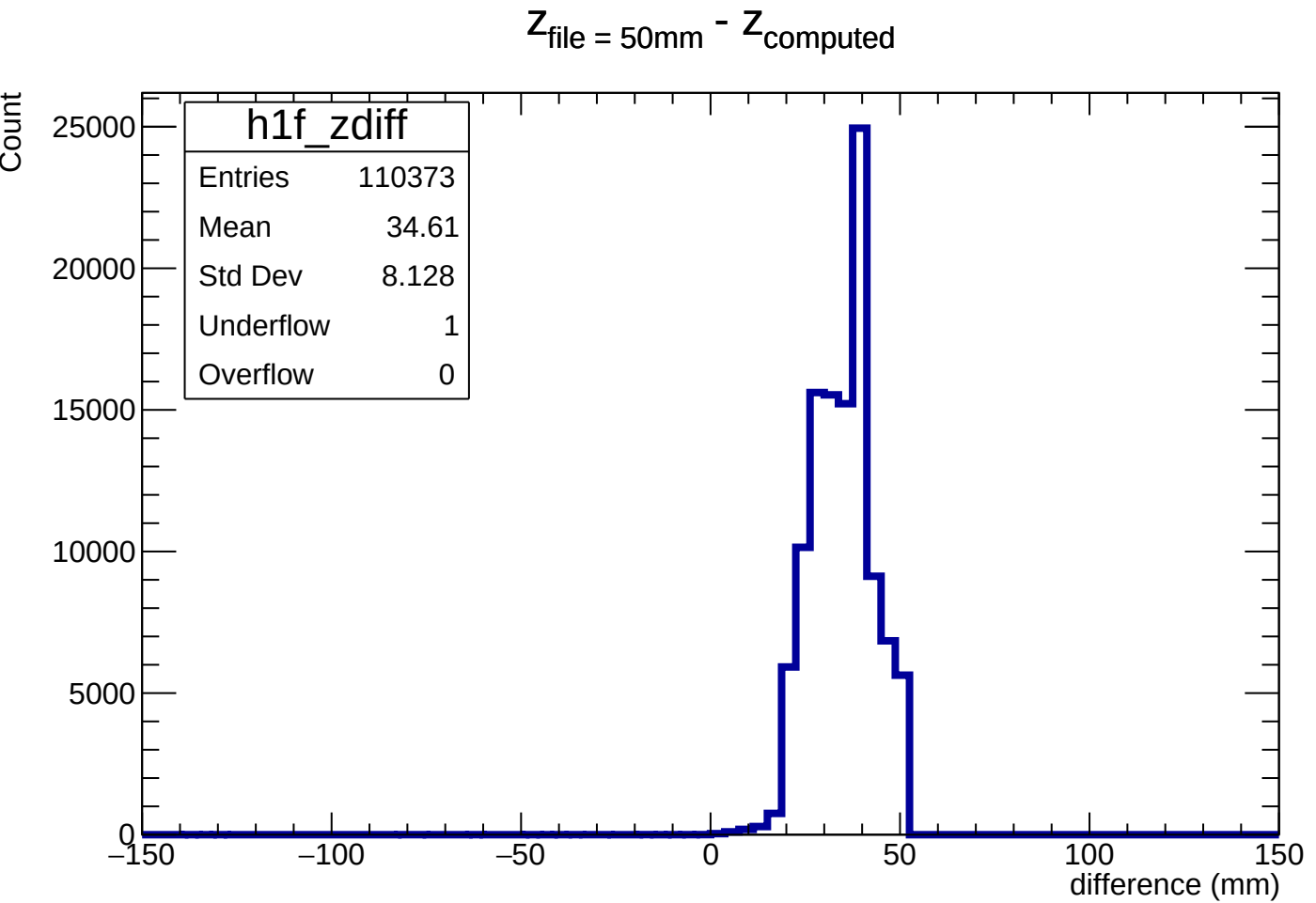
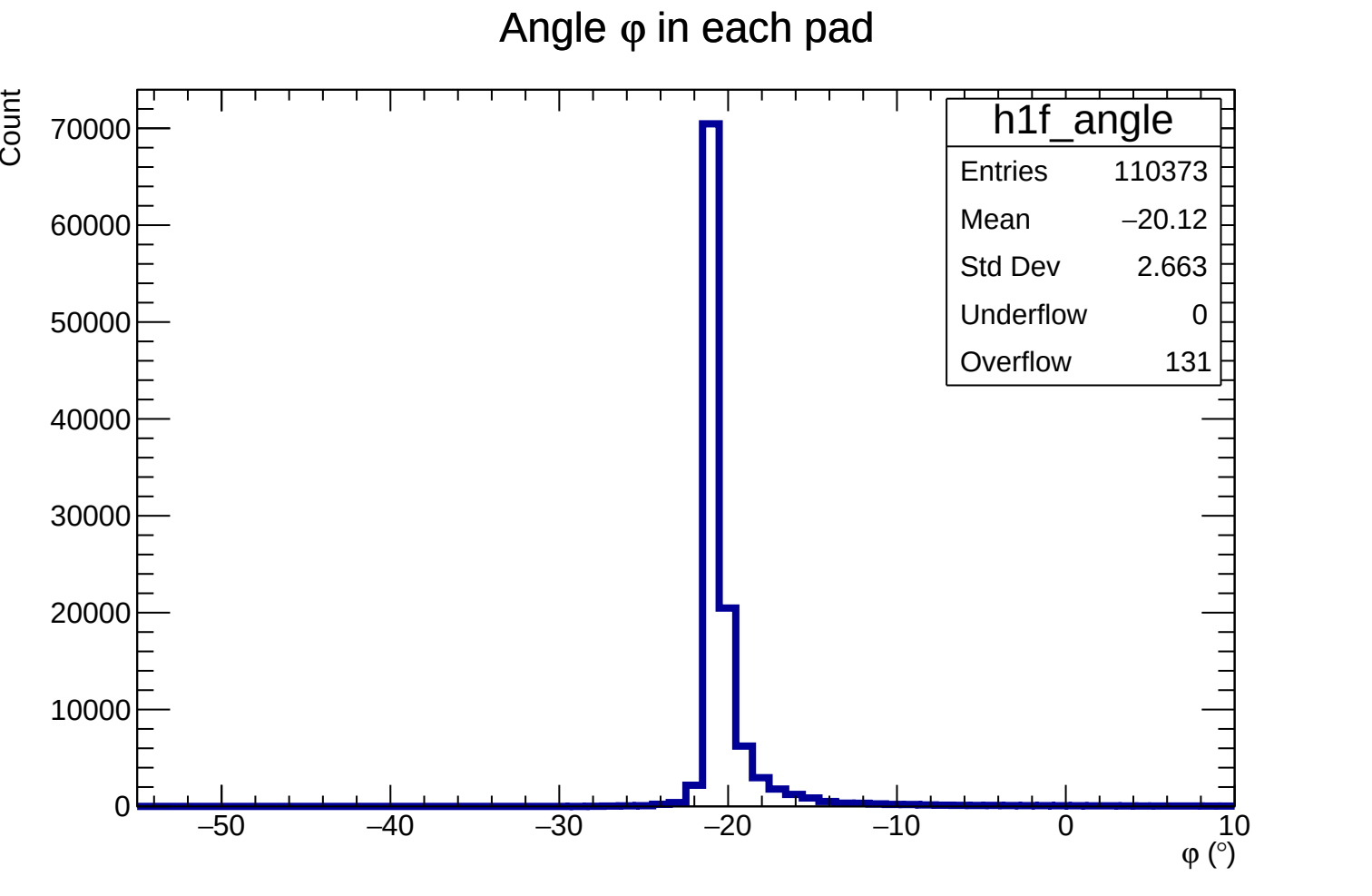
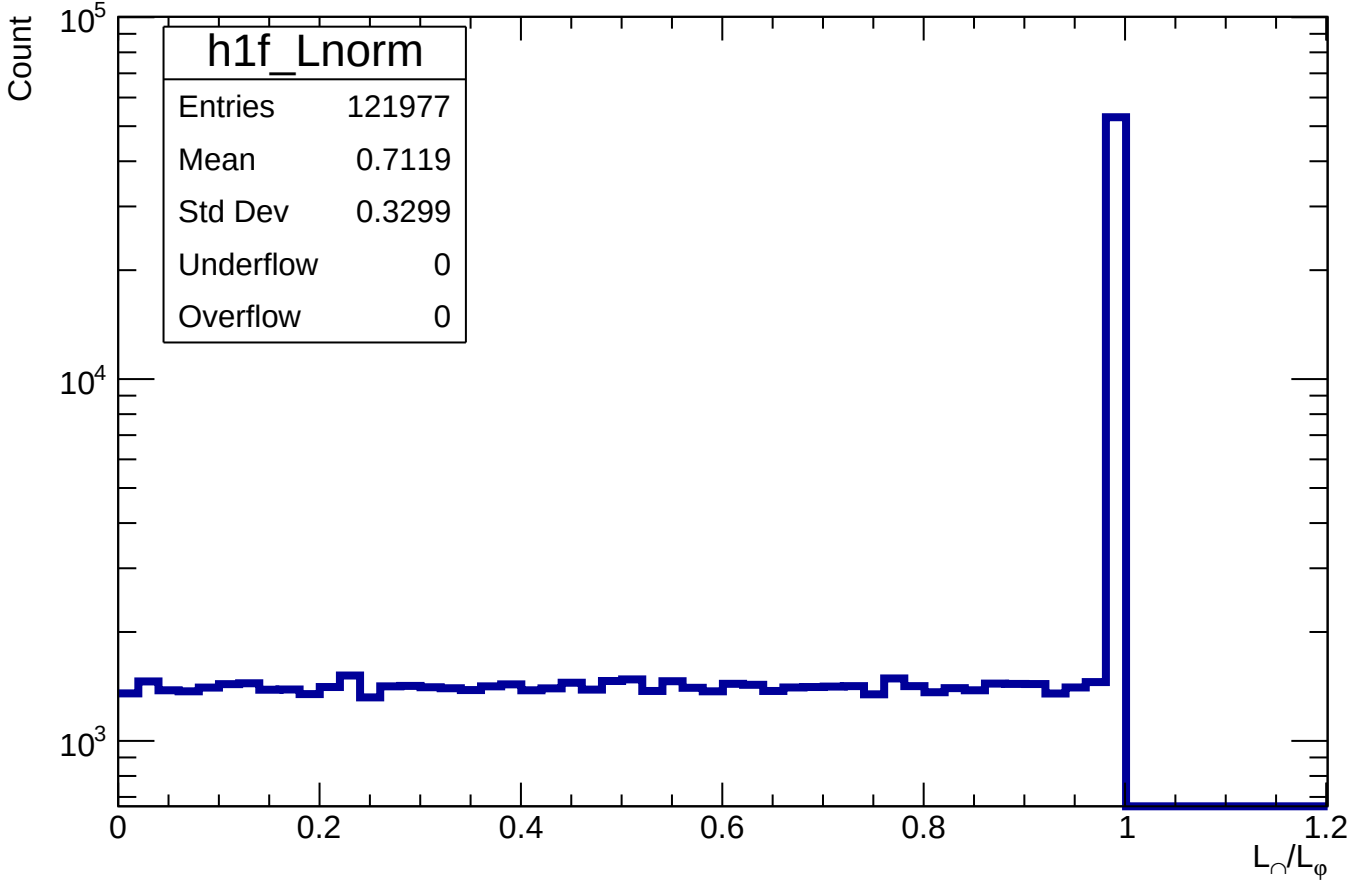

T_{max} of crossed pads
h1f_Tcross
Entries 110373
Mean 52.86
Std Dev 2.804
Underflow 0
Overflow 0
Count
10^4
10^3
10^2
10
1
0
100
200
300
400
500
T (timbebin)

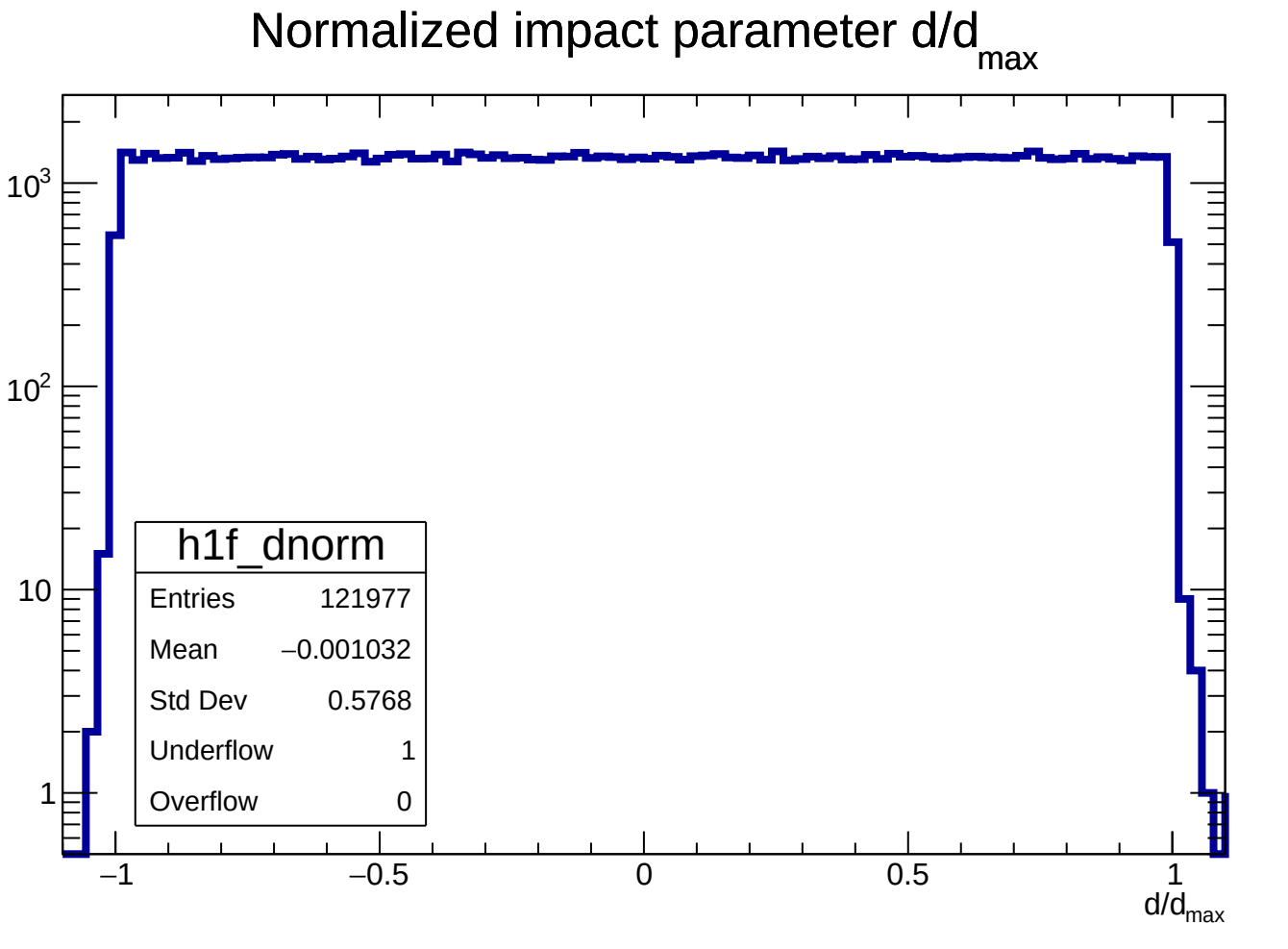

Number of crossed pads
h1f_Ncross
Entries 2555
Mean 43.2
Std Dev 1.553
Underflow 0
Overflow 0
Count
0
100
200
300
400
500
600
700
800
900
15
20
25
30
35
40
45
50
55
60
# of crossed pads

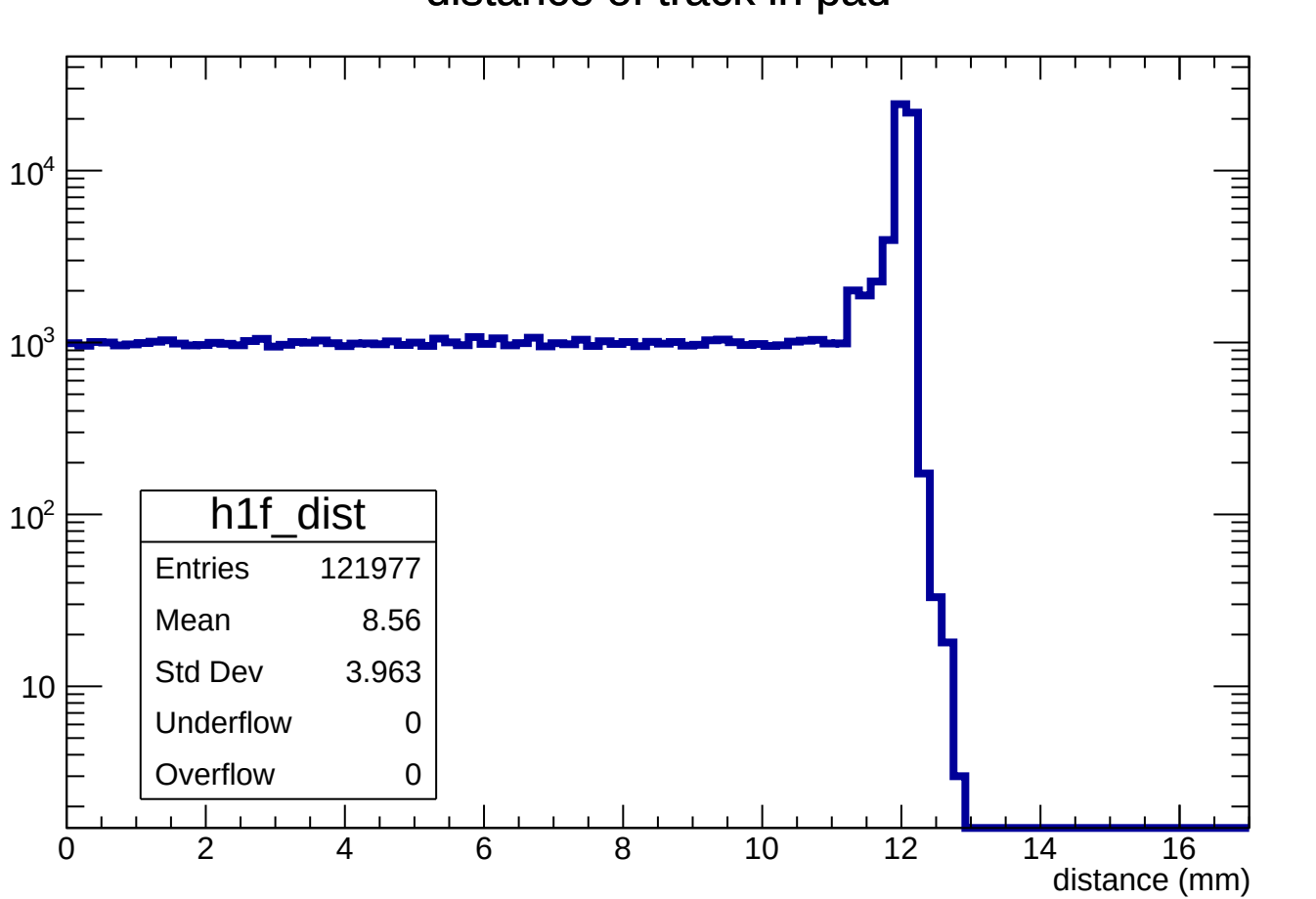

Σ(Q)/Σ(length) - mean{Q_i/length_i}
Count
h1f_XPdiff
Entries 2555
Mean −3.812
Std Dev 14.59
Underflow 0
Overflow 0
250
200
150
100
50
0
−150
−100
−50
0
50
100
150
difference (ADC count)

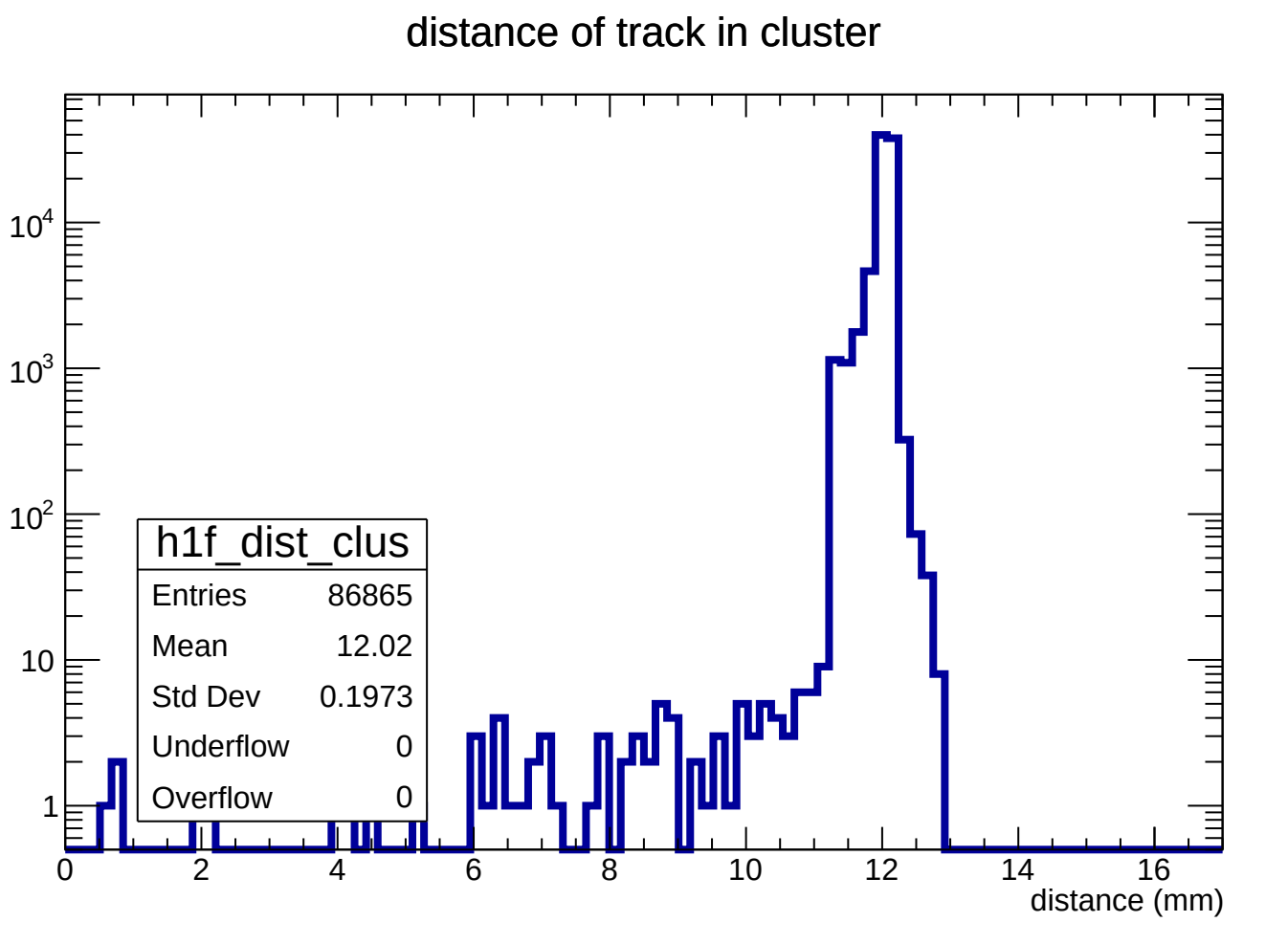

$z_{file = 50mm} - z_{computed}$
h1f_zdiff
Entries 110373
Mean 34.61
Std Dev 8.128
Underflow 1
Overflow 0
Count
25000
20000
15000
10000
5000
0
–150
–100
–50
0
50
100
150
difference (mm)

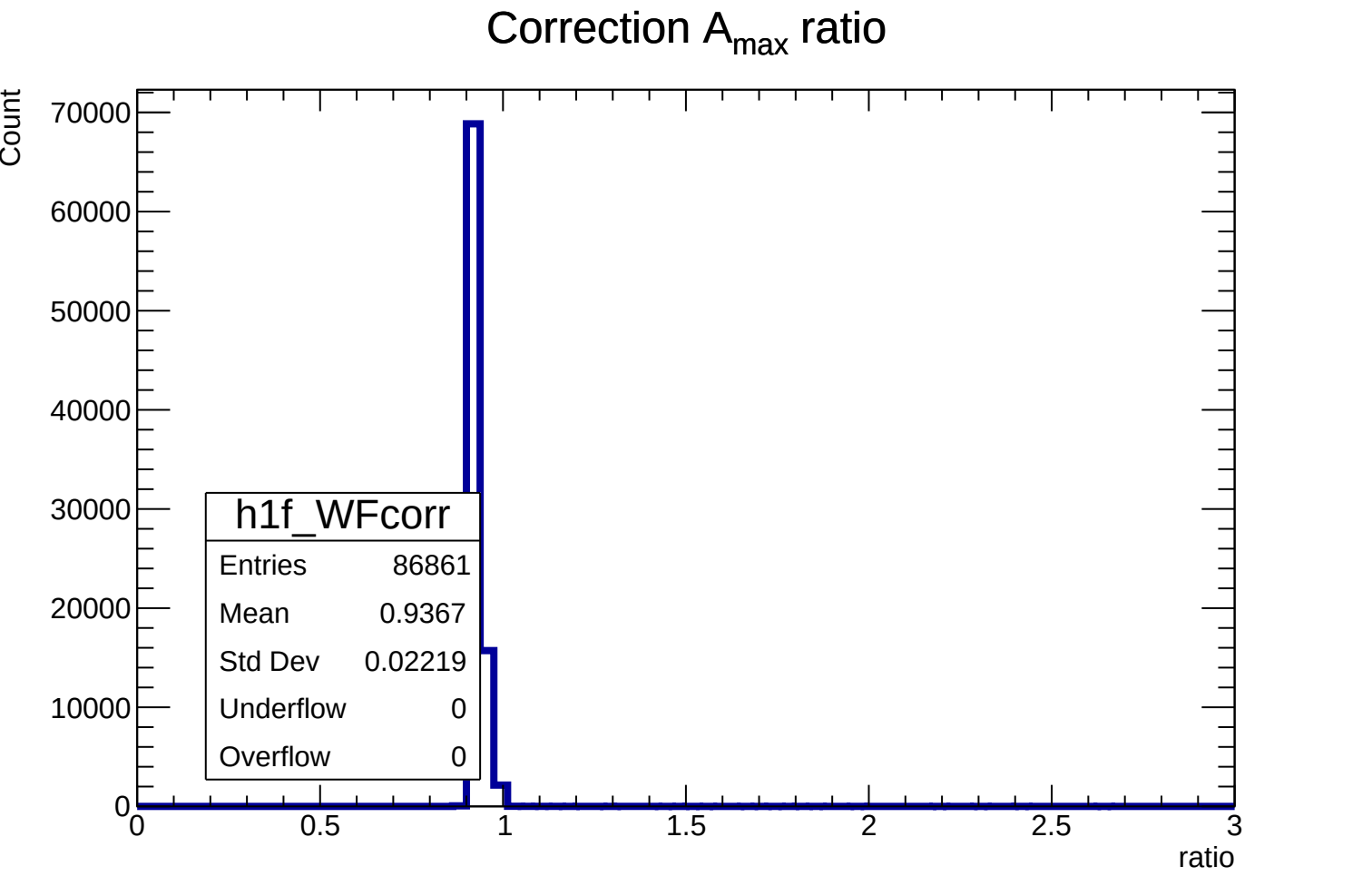

Angle φ in each pad
Count
70000
60000
50000
40000
30000
20000
10000
0
−50
−40
−30
−20
−10
0
10
φ (°)
h1f_angle
Entries 110373
Mean −20.12
Std Dev 2.663
Underflow 0
Overflow 131

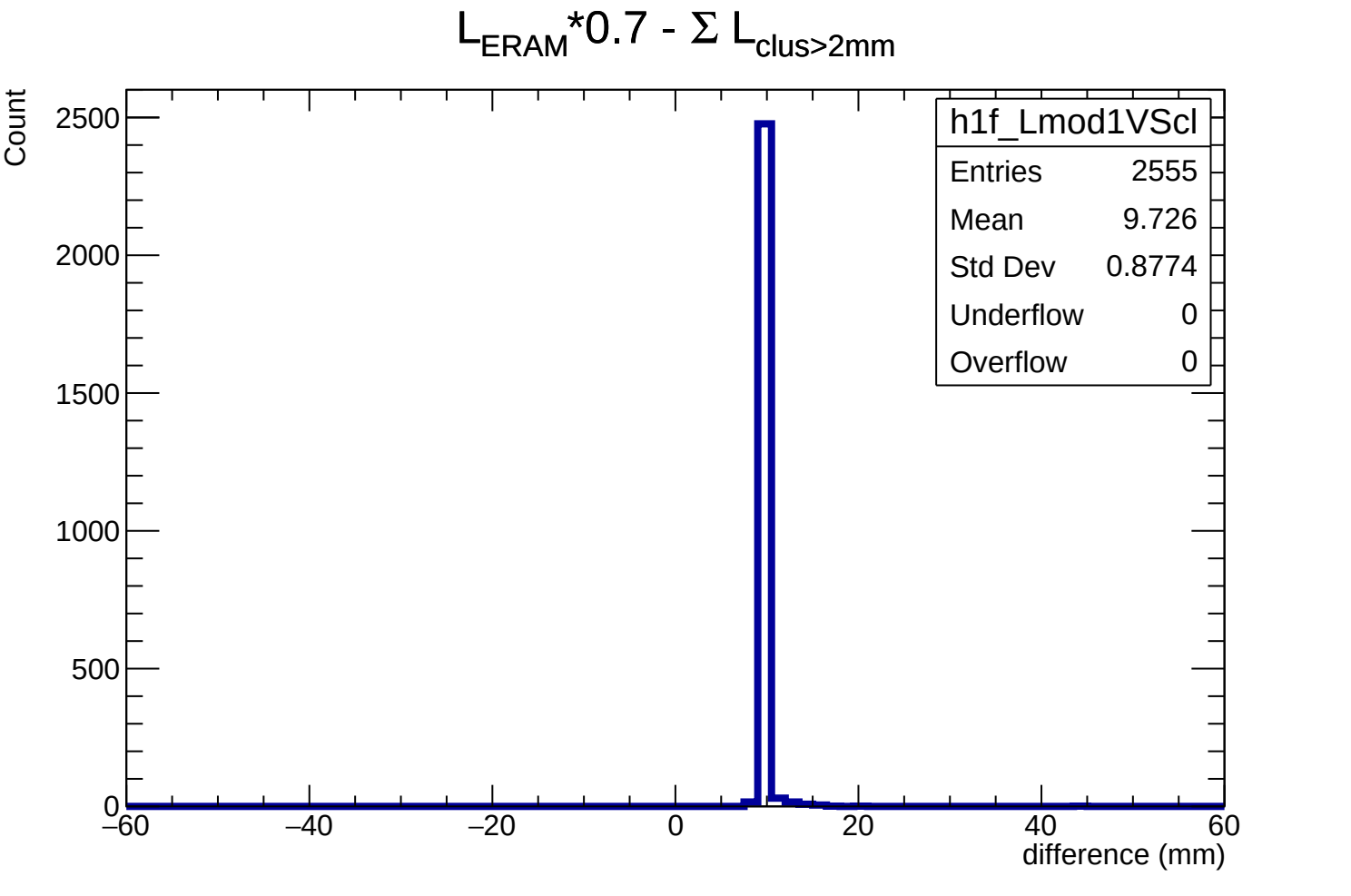

Length in pad normalized to maximum length in pad for a given φ
Count
h1f_Lnorm
Entries 121977
Mean 0.7119
Std Dev 0.3299
Underflow 0
Overflow 0
10^5
10^4
10^3
0
0.2
0.4
0.6
0.8
1
1.2
L_⌒/L_φ

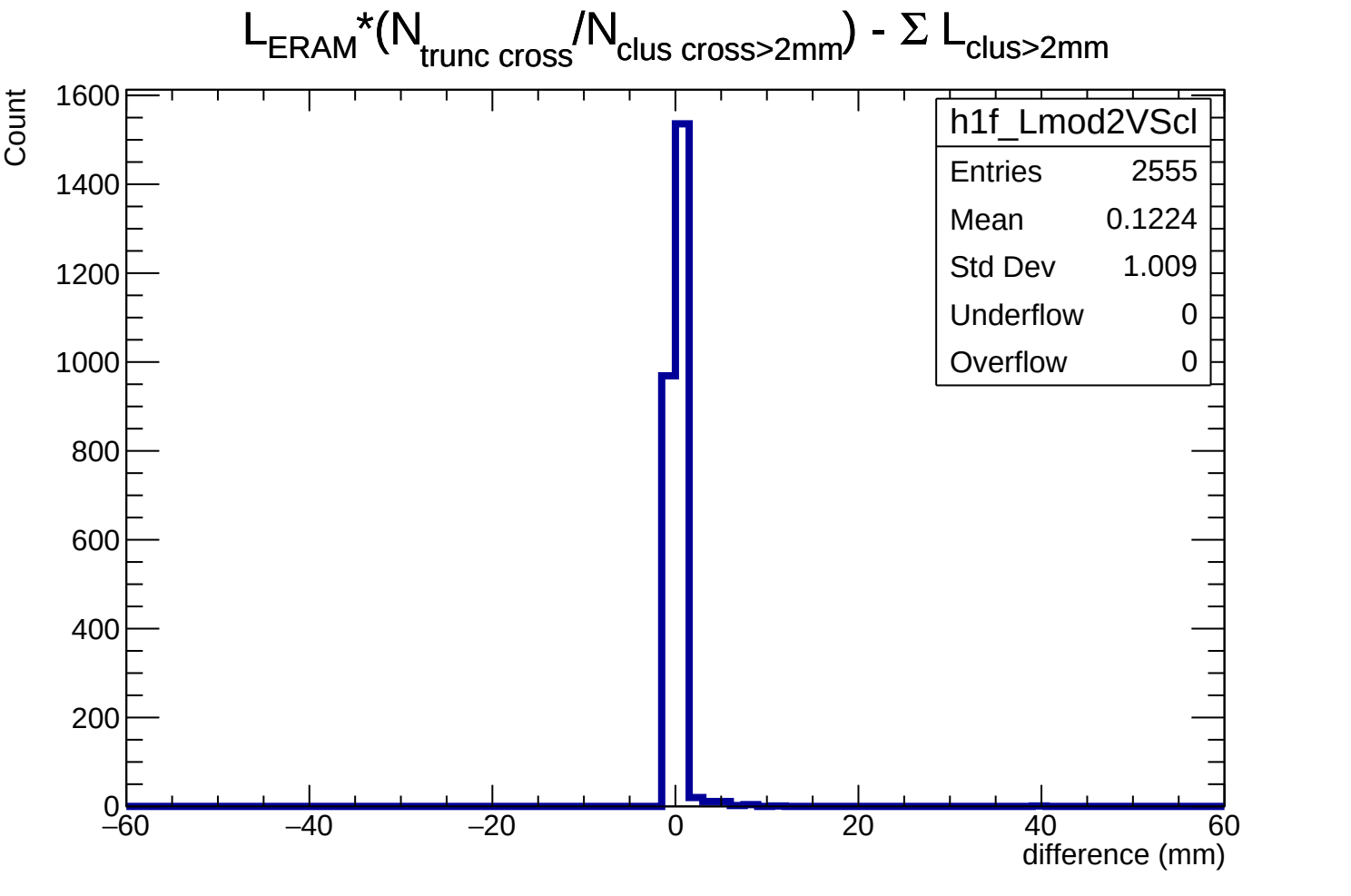

Normalized impact parameter d/d_max
10^3
10^2
10
1
h1f_dnorm
Entries 121977
Mean −0.001032
Std Dev 0.5768
Underflow 1
Overflow 0
−1
−0.5
0
0.5
1
d/d_max

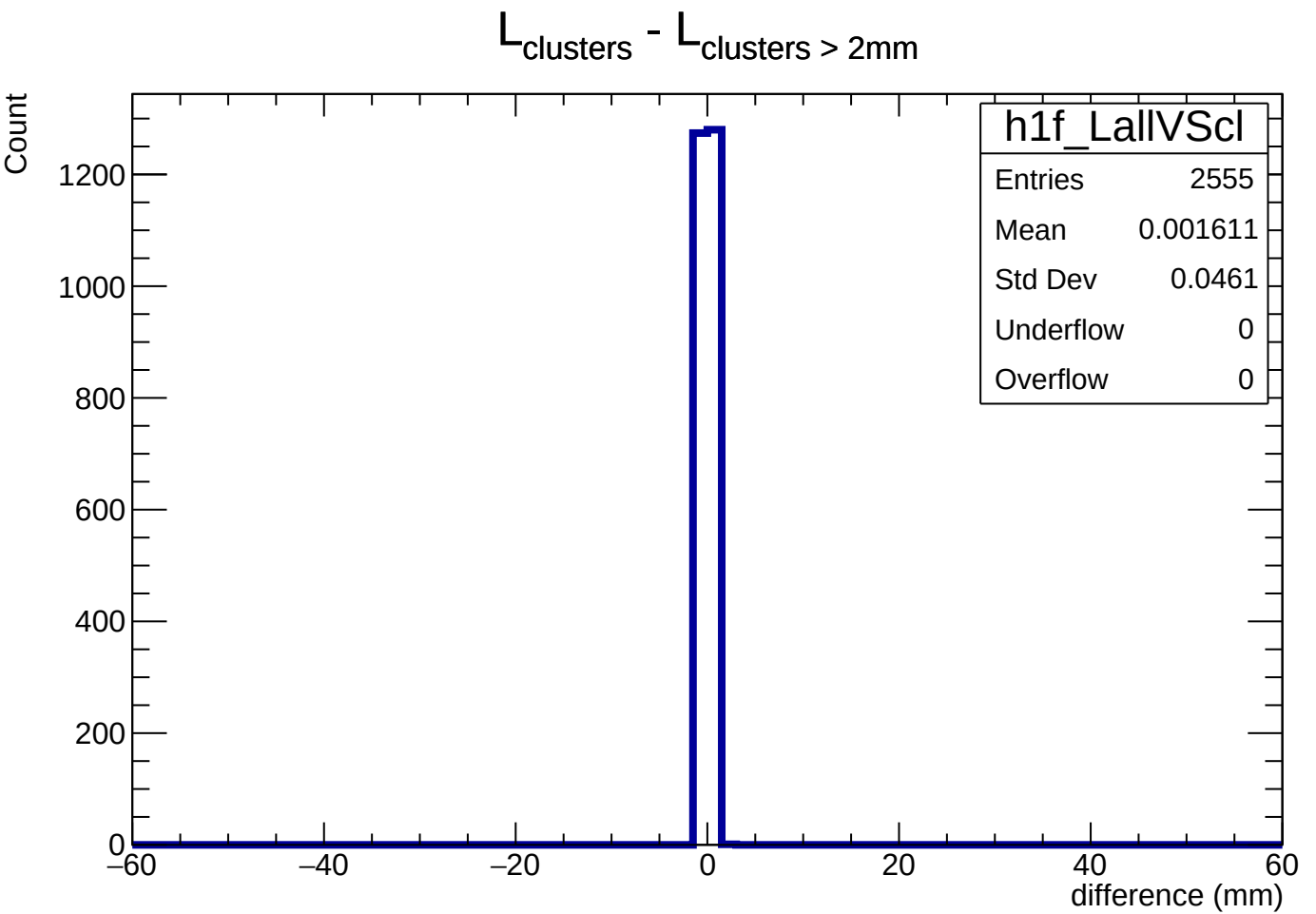

distance of track in pad
10^4
10^3
10^2
10
h1f_dist
Entries 121977
Mean 8.56
Std Dev 3.963
Underflow 0
Overflow 0
0
2
4
6
8
10
12
14
16
distance (mm)

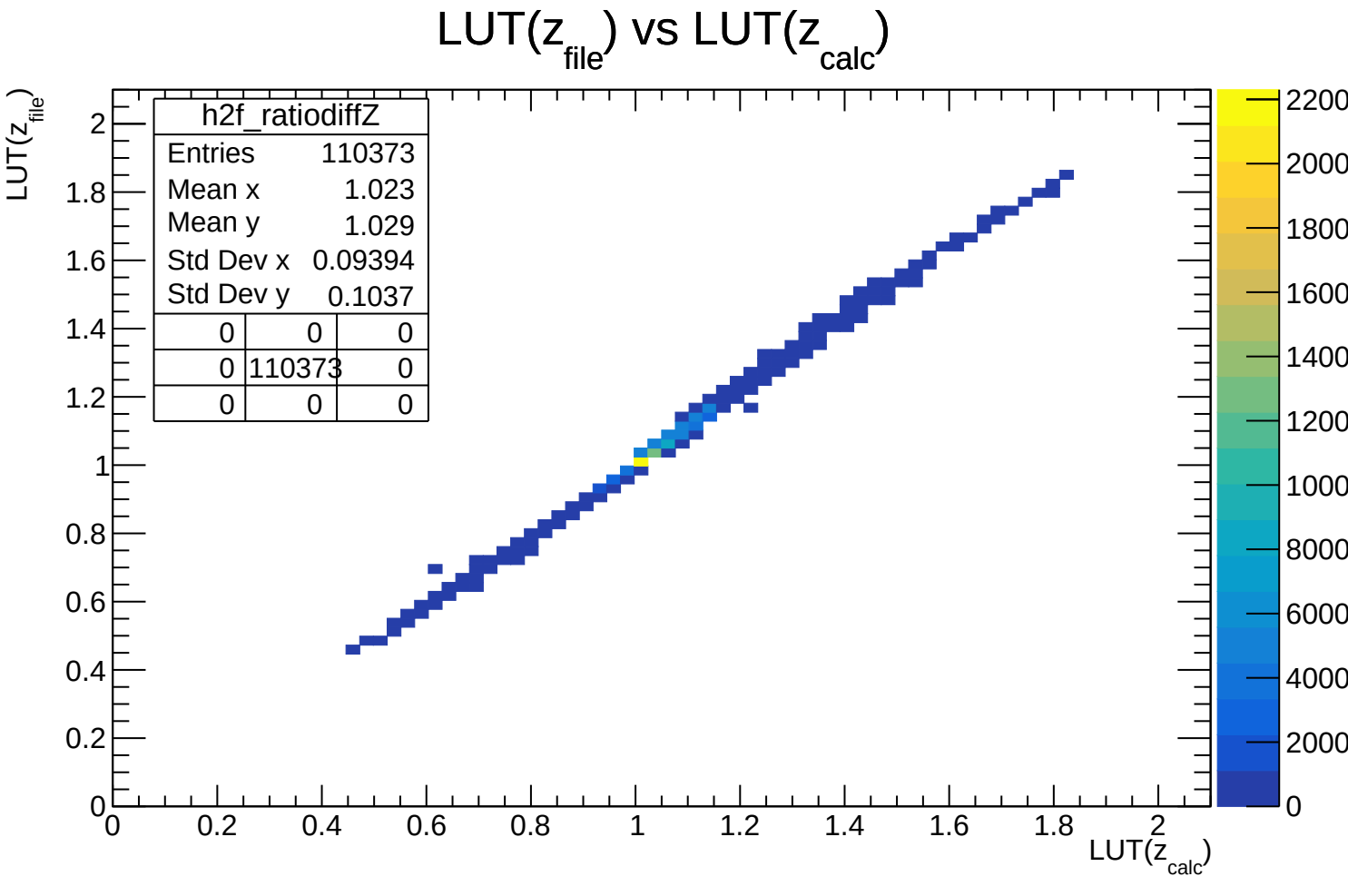

distance of track in cluster
h1f_dist_clus
Entries 86865
Mean 12.02
Std Dev 0.1973
Underflow 0
Overflow 0
10^4
10^3
10^2
10
1
0
2
4
6
8
10
12
14
16
distance (mm)

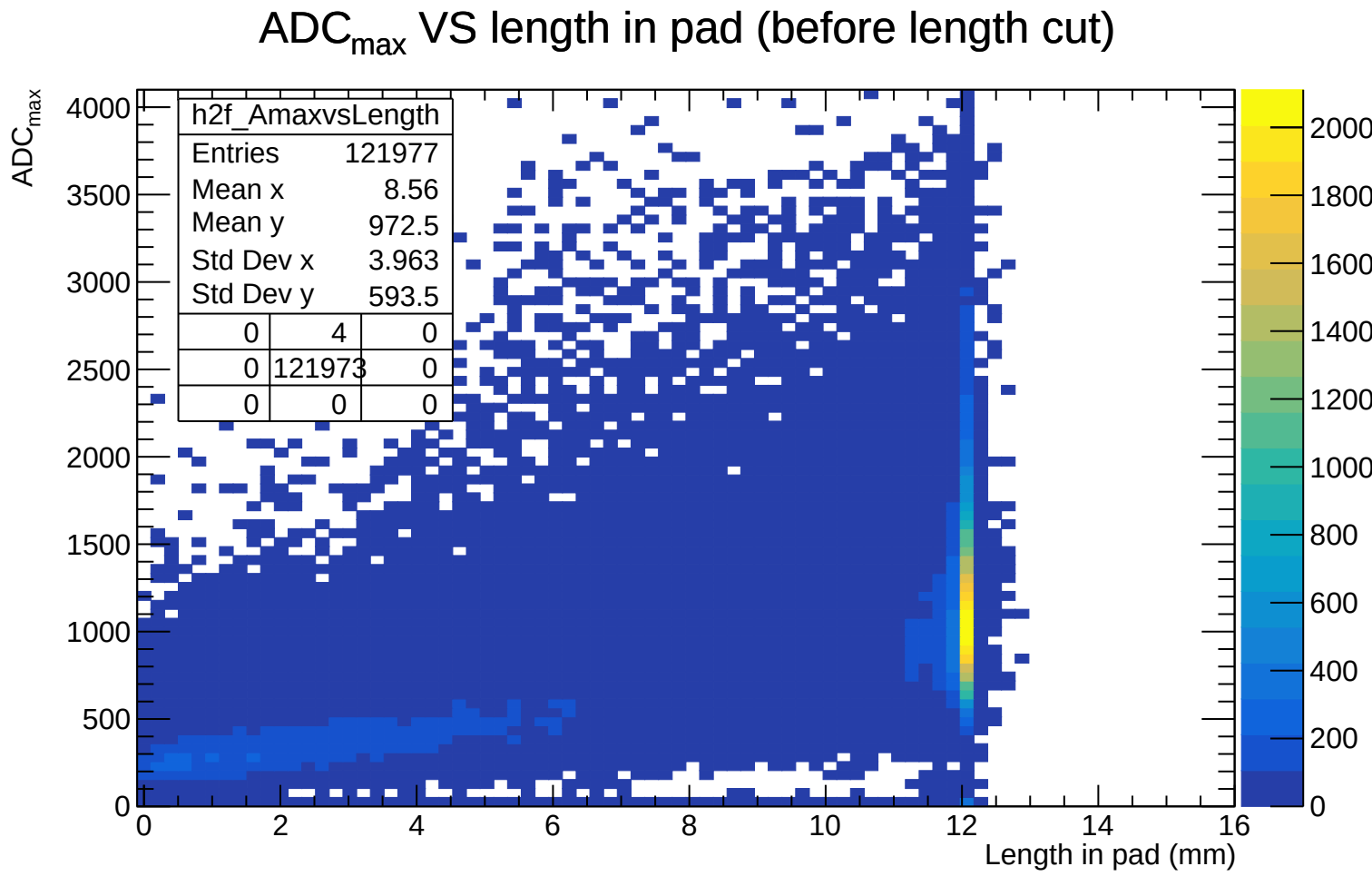

Correction A_{max} ratio
Count
70000
60000
50000
40000
30000
20000
10000
0
0
0.5
1
1.5
2
2.5
3
ratio
h1f_WFcorr
Entries 86861
Mean 0.9367
Std Dev 0.02219
Underflow 0
Overflow 0

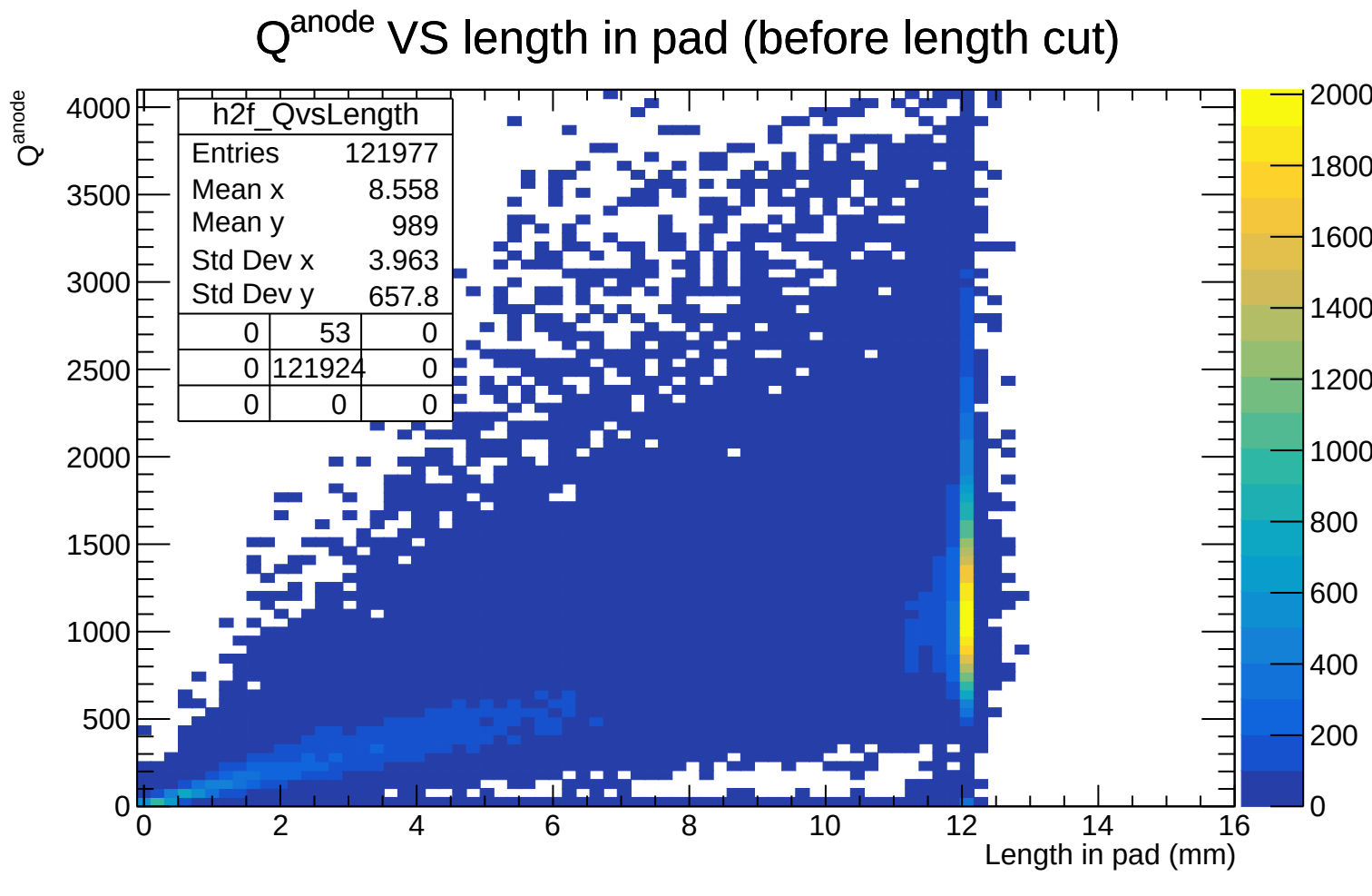

L_{ERAM}*0.7 - Σ $L_{clus>2mm}$
Count
2500
2000
1500
1000
500
0
–60
–40
–20
0
20
40
60
difference (mm)
h1f_Lmod1VScl
Entries 2555
Mean 9.726
Std Dev 0.8774
Underflow 0
Overflow 0

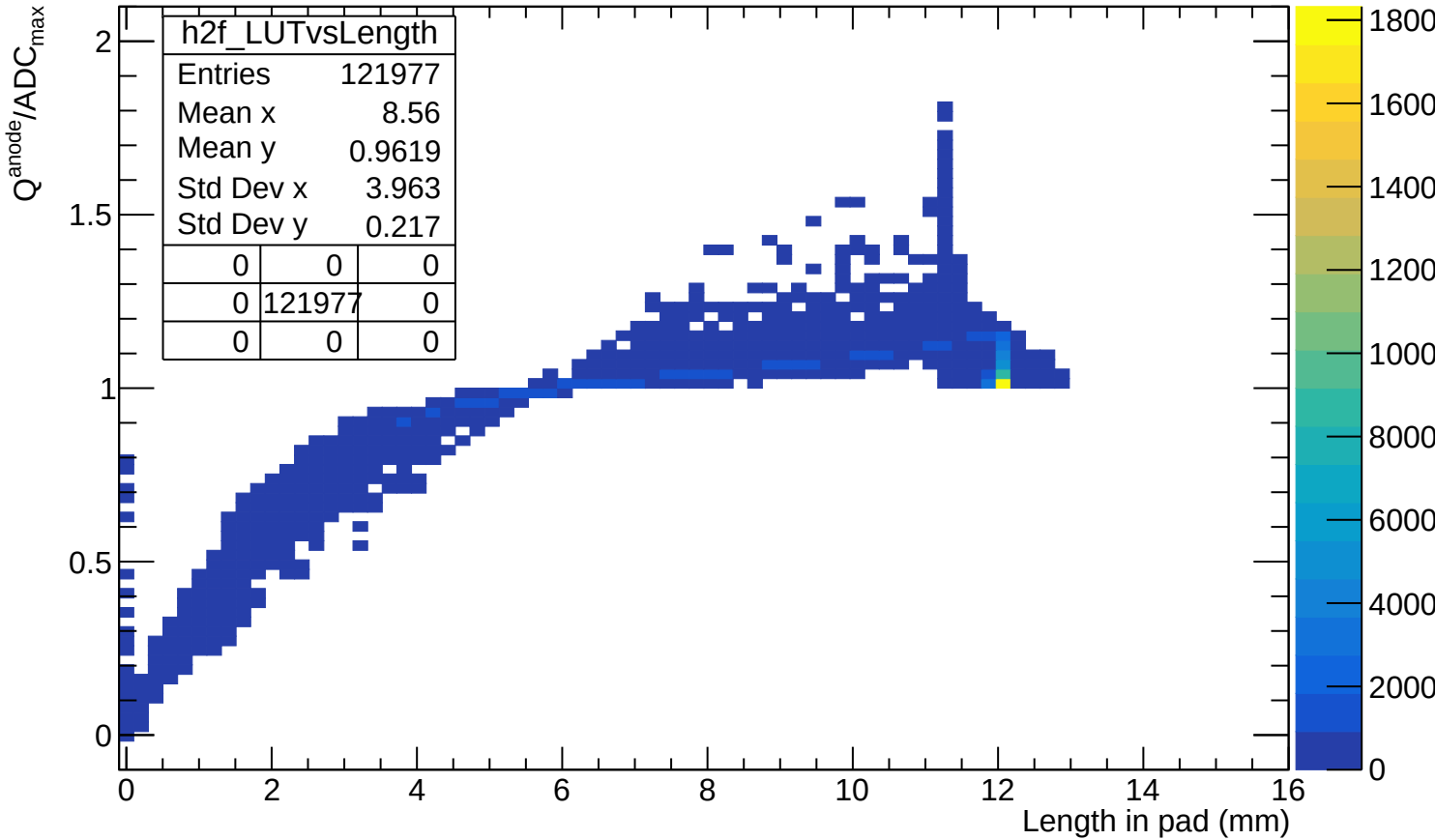

$L_{ERAM}*(N_{trunc\ cross}/N_{clus\ cross>2mm}) - \Sigma\ L_{clus>2mm}$
Count
1600
1400
1200
1000
800
600
400
200
0
–60
–40
–20
0
20
40
60
difference (mm)
h1f_Lmod2VScl
Entries 2555
Mean 0.1224
Std Dev 1.009
Underflow 0
Overflow 0

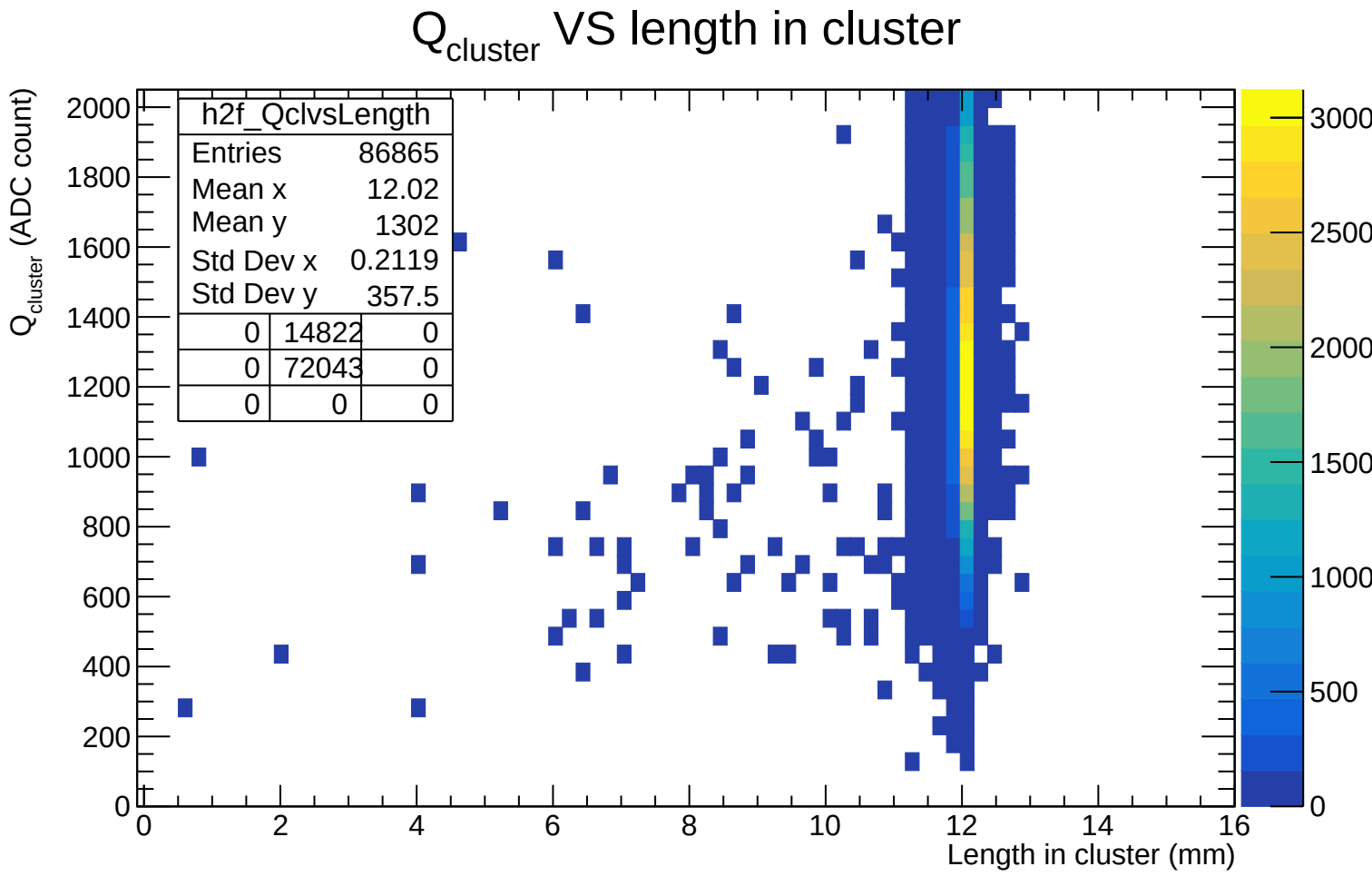

$L_{clusters}$ - $L_{clusters > 2mm}$
Count
1200
1000
800
600
400
200
0
–60
–40
–20
0
20
40
60
difference (mm)
h1f_LallVScl
Entries 2555
Mean 0.001611
Std Dev 0.0461
Underflow 0
Overflow 0

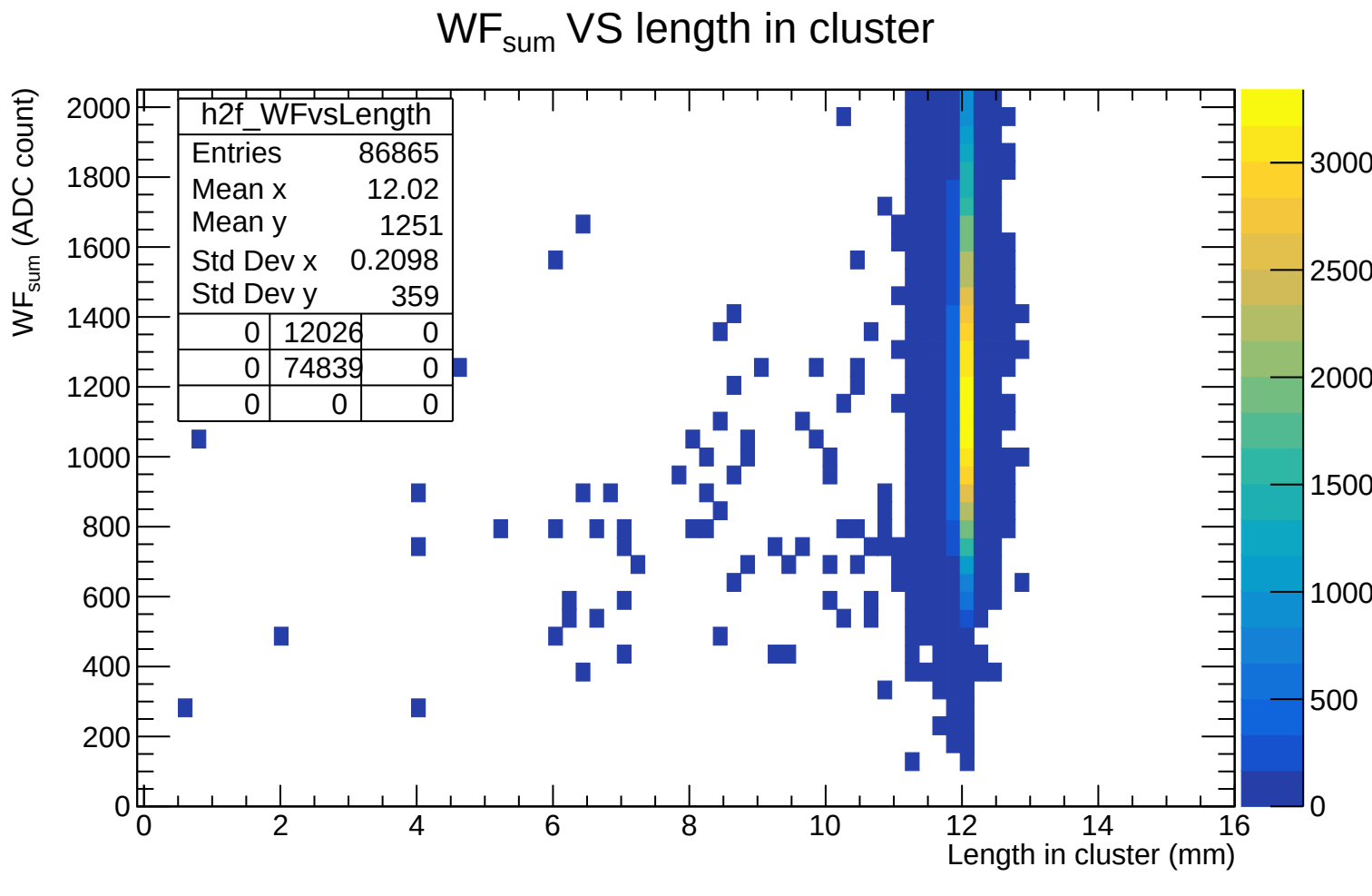

LUT(z_file) vs LUT(z_calc)
h2f_ratiodiffZ
Entries 110373
Mean x 1.023
Mean y 1.029
Std Dev x 0.09394
Std Dev y 0.1037
0 0 0
0 110373 0
0 0 0
LUT(z_file)
LUT(z_calc)
0 0.2 0.4 0.6 0.8 1 1.2 1.4 1.6 1.8 2
2200 2000 1800 1600 1400 1200 1000 8000 6000 4000 2000 0

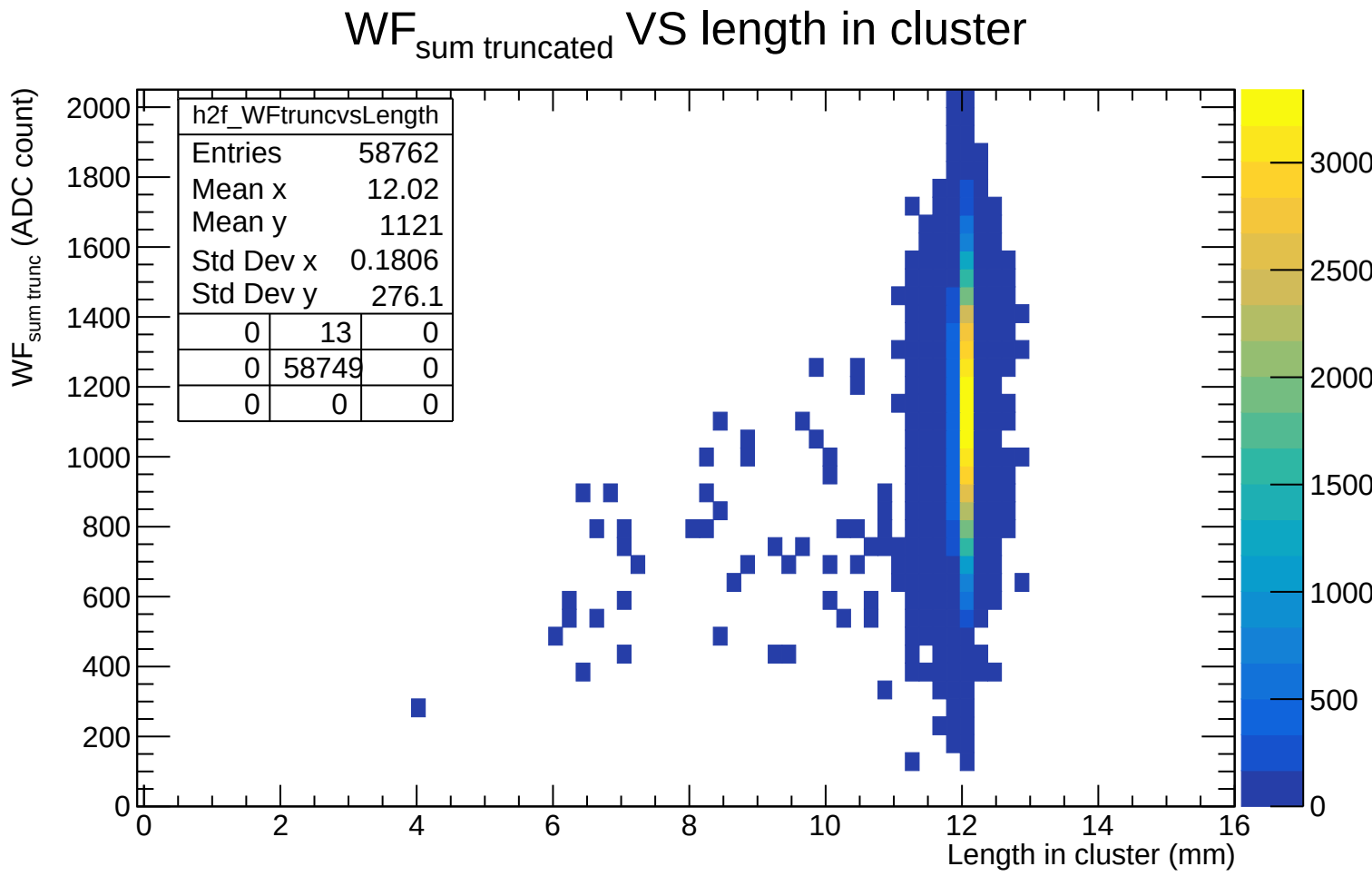

ADC$_{max}$ VS length in pad (before length cut)
h2f_AmaxvsLength
Entries 121977
Mean x 8.56
Mean y 972.5
Std Dev x 3.963
Std Dev y 593.5
0 4 0
0 121973 0
0 0 0
ADC$_{max}$
Length in pad (mm)
0
500
1000
1500
2000
2500
3000
3500
4000
0
2
4
6
8
10
12
14
16
0
200
400
600
800
1000
1200
1400
1600
1800
2000

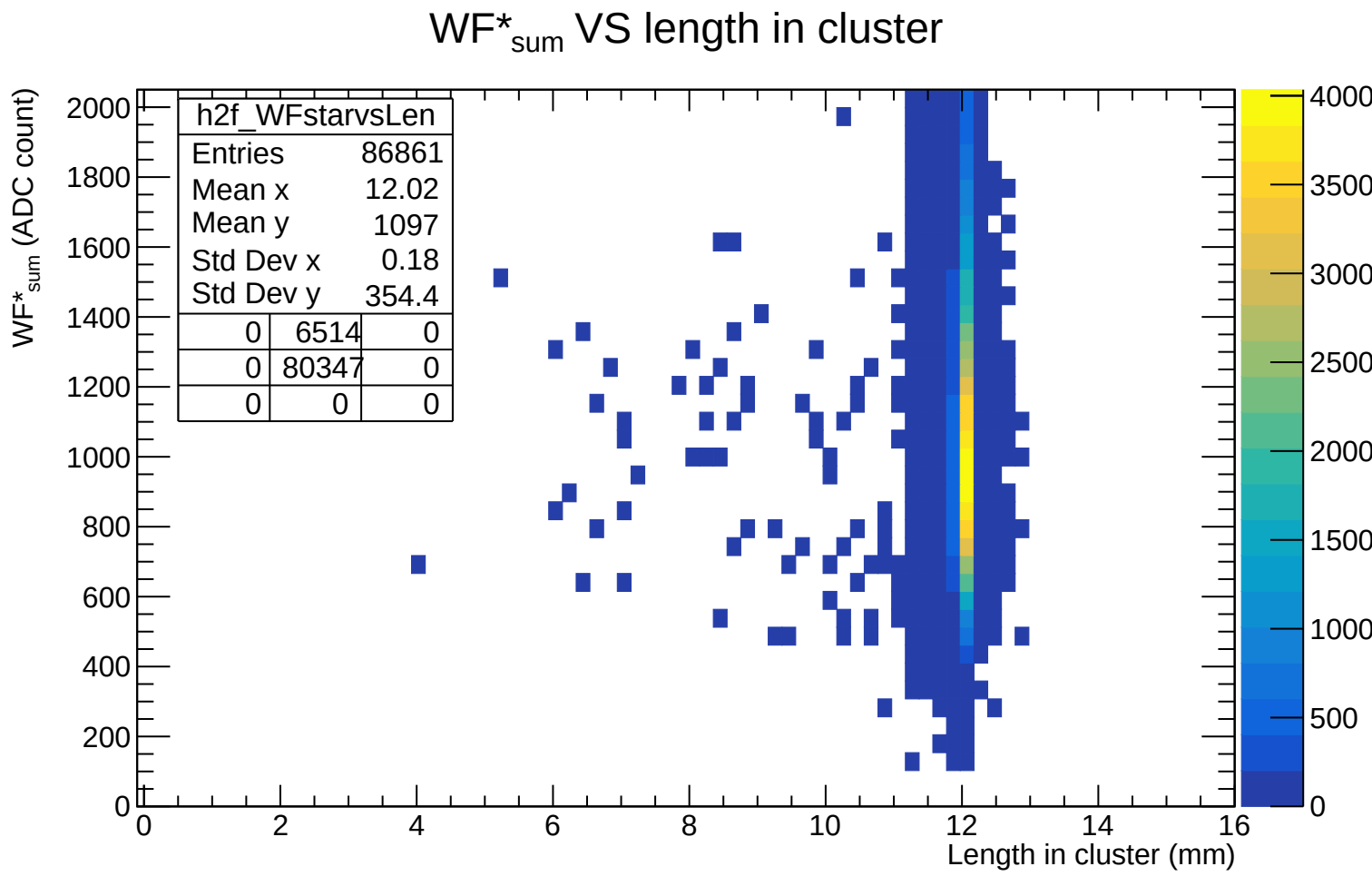

Q^anode VS length in pad (before length cut)
h2f_QvsLength
Entries 121977
Mean x 8.558
Mean y 989
Std Dev x 3.963
Std Dev y 657.8
0 53 0
0 121924 0
0 0 0
Q^anode
Length in pad (mm)
0
500
1000
1500
2000
2500
3000
3500
4000
0
2
4
6
8
10
12
14
16
0
200
400
600
800
1000
1200
1400
1600
1800
2000

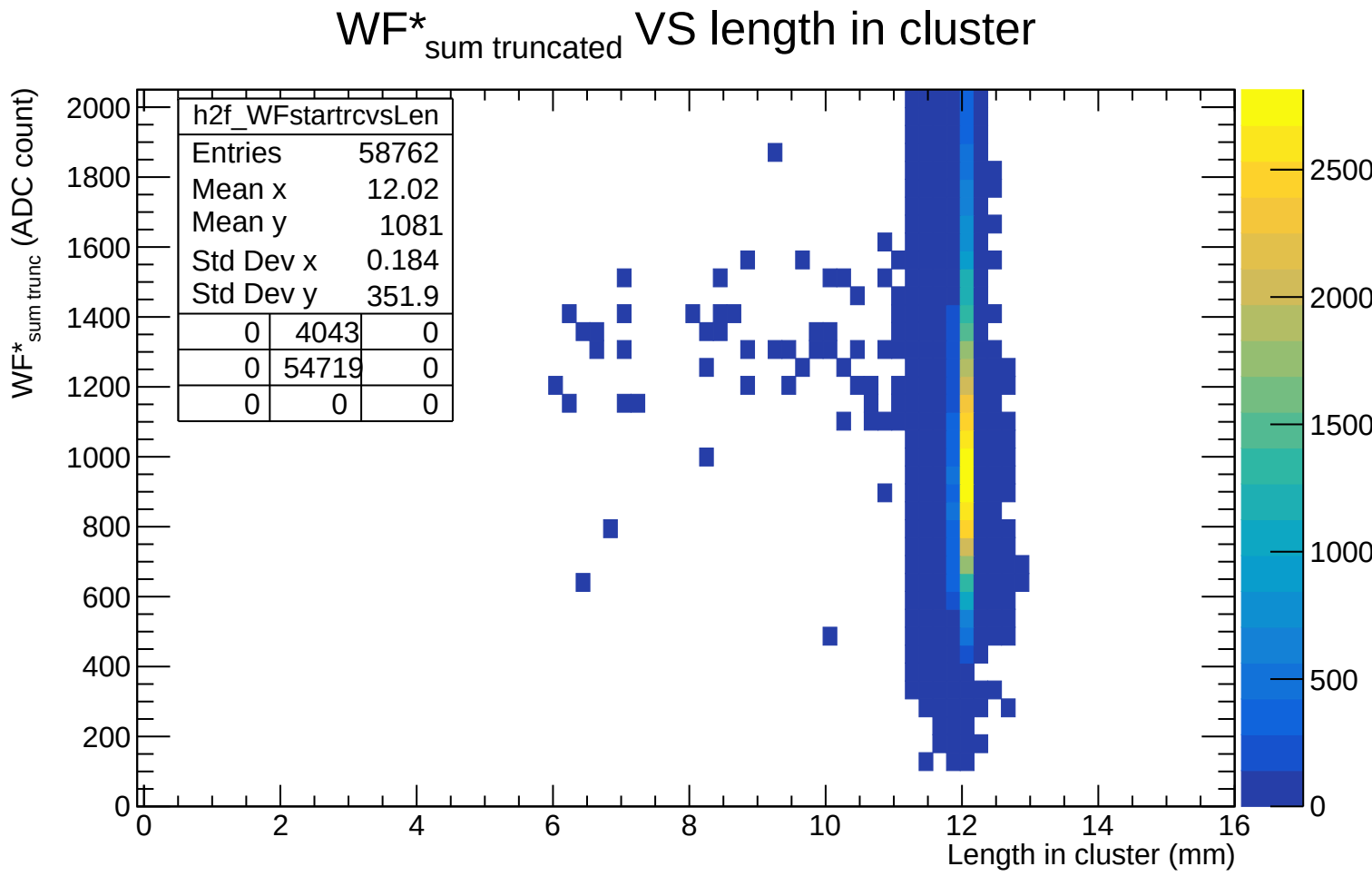

Q^{anode}/ADC_{max} VS length in pad (before length cut)
h2f_LUTvsLength
Entries 121977
Mean x 8.56
Mean y 0.9619
Std Dev x 3.963
Std Dev y 0.217
0 0 0
0 121977 0
0 0 0
Q^{anode}/ADC_{max}
Length in pad (mm)
0
0.5
1
1.5
2
0
2
4
6
8
10
12
14
16
0
2000
4000
6000
8000
1000
1200
1400
1600
1800

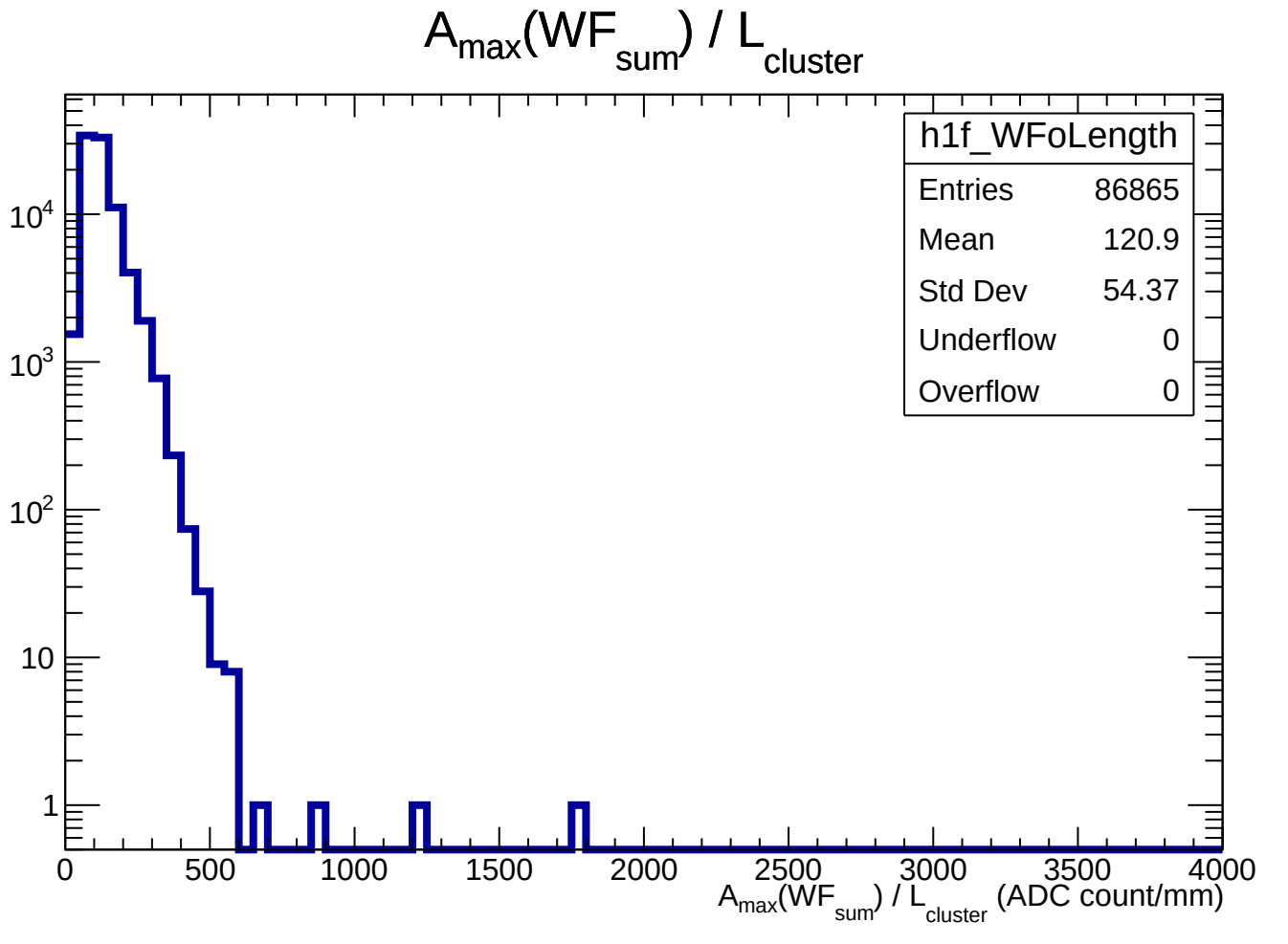

$Q_{cluster}$ VS length in cluster
h2f_QclvsLength
Entries 86865
Mean x 12.02
Mean y 1302
Std Dev x 0.2119
Std Dev y 357.5
0 14822 0
0 72043 0
0 0 0
$Q_{cluster}$ (ADC count)
Length in cluster (mm)
0 200 400 600 800 1000 1200 1400 1600 1800 2000
0 2 4 6 8 10 12 14 16
0 500 1000 1500 2000 2500 3000

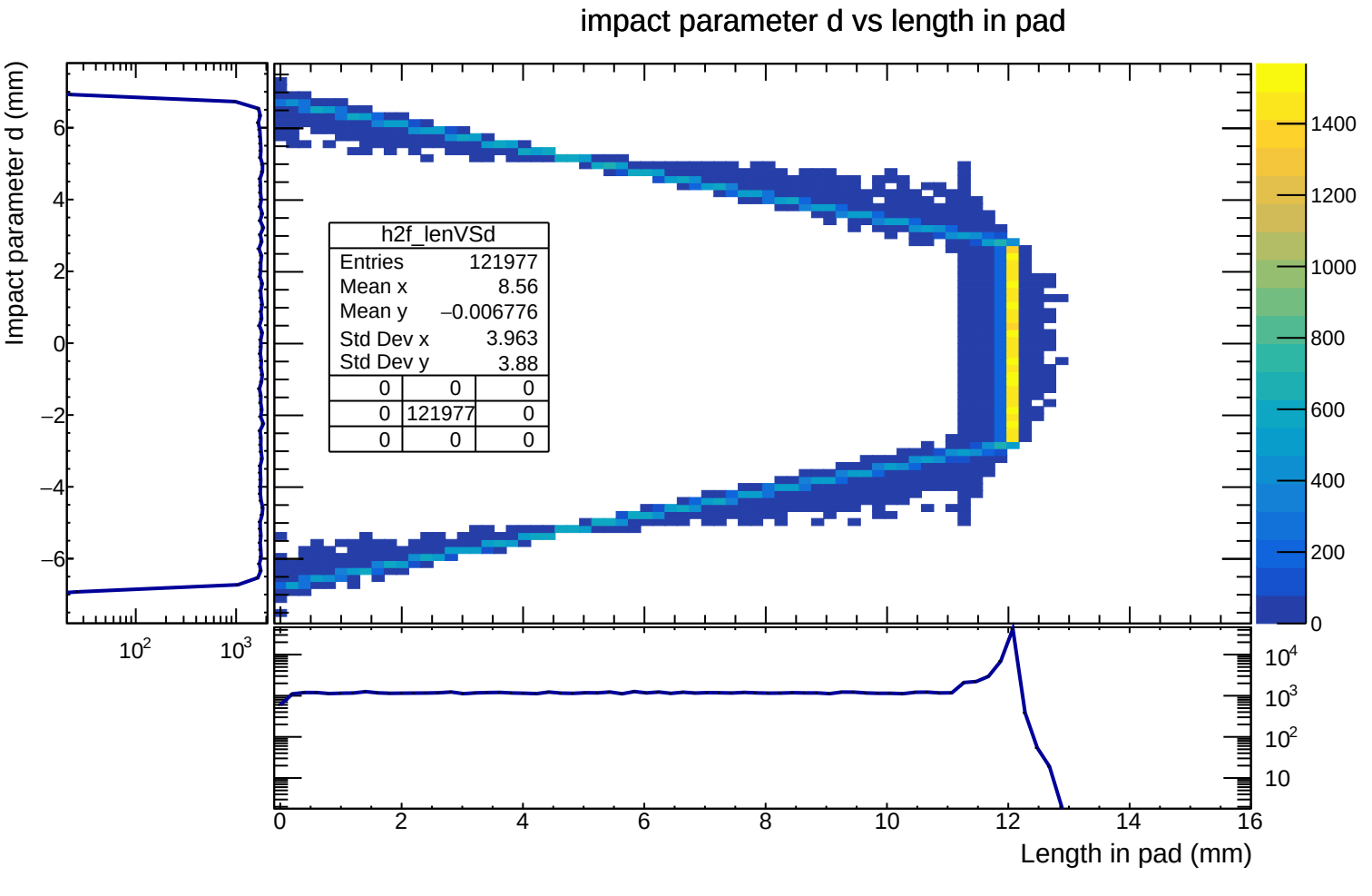

WF_sum VS length in cluster
h2f_WFvsLength
Entries 86865
Mean x 12.02
Mean y 1251
Std Dev x 0.2098
Std Dev y 359
0 12026 0
0 74839 0
0 0 0
WF_sum (ADC count)
Length in cluster (mm)
0
200
400
600
800
1000
1200
1400
1600
1800
2000
0
2
4
6
8
10
12
14
16
0
500
1000
1500
2000
2500
3000


WF sum truncated VS length in cluster
h2f_WFtruncvsLength
Entries 58762
Mean x 12.02
Mean y 1121
Std Dev x 0.1806
Std Dev y 276.1
0 13 0
0 58749 0
0 0 0
WF sum trunc (ADC count)
Length in cluster (mm)
0
200
400
600
800
1000
1200
1400
1600
1800
2000
2
4
6
8
10
12
14
16
500
1000
1500
2000
2500
3000


WF*sum VS length in cluster
h2f_WFstarvsLen
Entries 86861
Mean x 12.02
Mean y 1097
Std Dev x 0.18
Std Dev y 354.4
0 6514 0
0 80347 0
0 0 0
WF*sum (ADC count)
Length in cluster (mm)
0 2 4 6 8 10 12 14 16
0 200 400 600 800 1000 1200 1400 1600 1800 2000
0 500 1000 1500 2000 2500 3000 3500 4000


WF*sum truncated VS length in cluster
h2f_WFstartrcvsLen
Entries 58762
Mean x 12.02
Mean y 1081
Std Dev x 0.184
Std Dev y 351.9
0 4043 0
0 54719 0
0 0 0
WF*sum trunc (ADC count)
Length in cluster (mm)
0
200
400
600
800
1000
1200
1400
1600
1800
2000
0
2
4
6
8
10
12
14
16
0
500
1000
1500
2000
2500


$A_{max}(WF_{sum}) / L_{cluster}$
h1f_WFoLength
Entries 86865
Mean 120.9
Std Dev 54.37
Underflow 0
Overflow 0
10^4
10^3
10^2
10
1
0
500
1000
1500
2000
2500
3000
3500
4000
$A_{max}(WF_{sum}) / L_{cluster}$ (ADC count/mm)


impact parameter d vs length in pad
Impact parameter d (mm)
Length in pad (mm)
h2f_lenVSd
Entries 121977
Mean x 8.56
Mean y −0.006776
Std Dev x 3.963
Std Dev y 3.88
0 0 0
0 121977 0
0 0 0