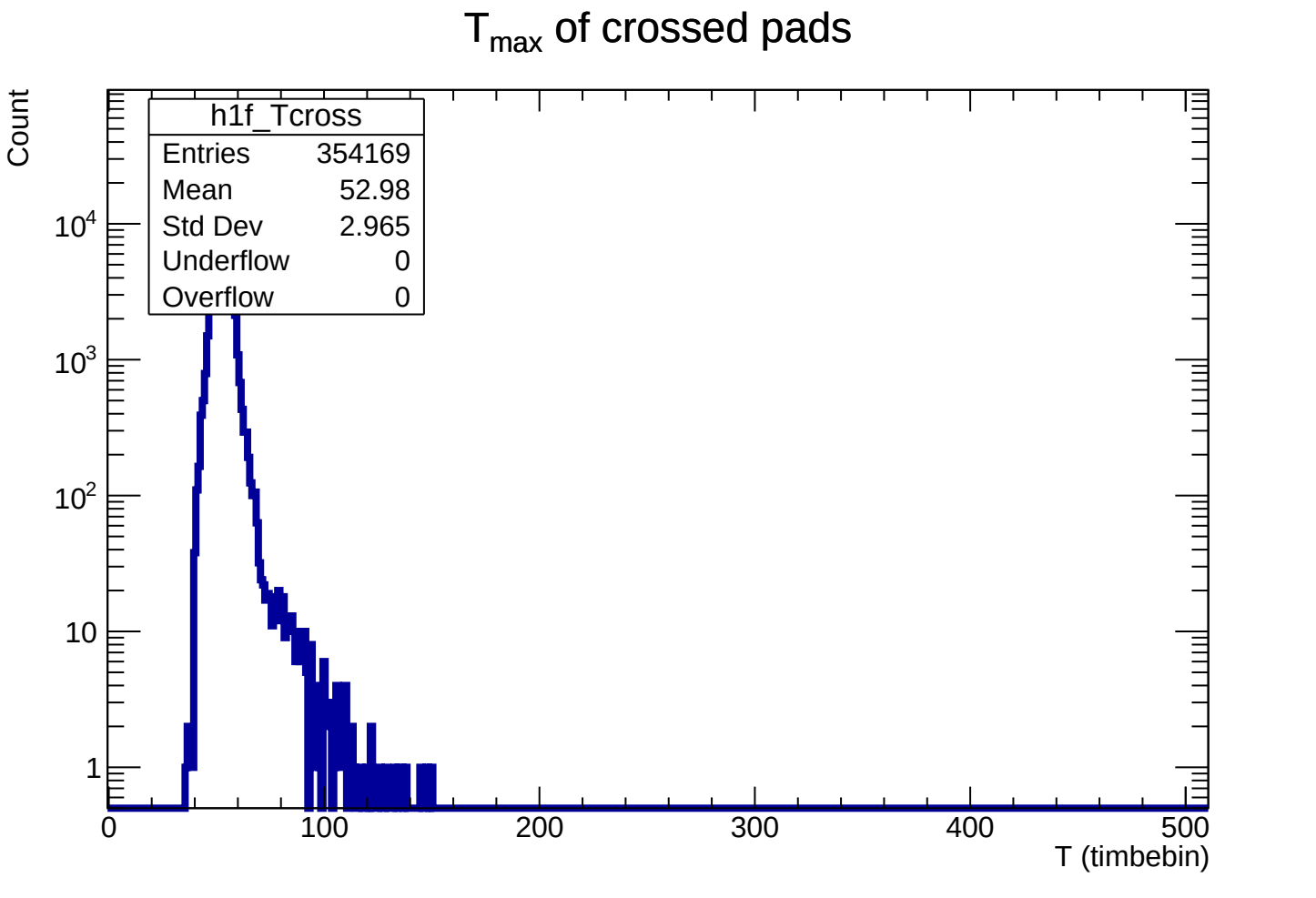
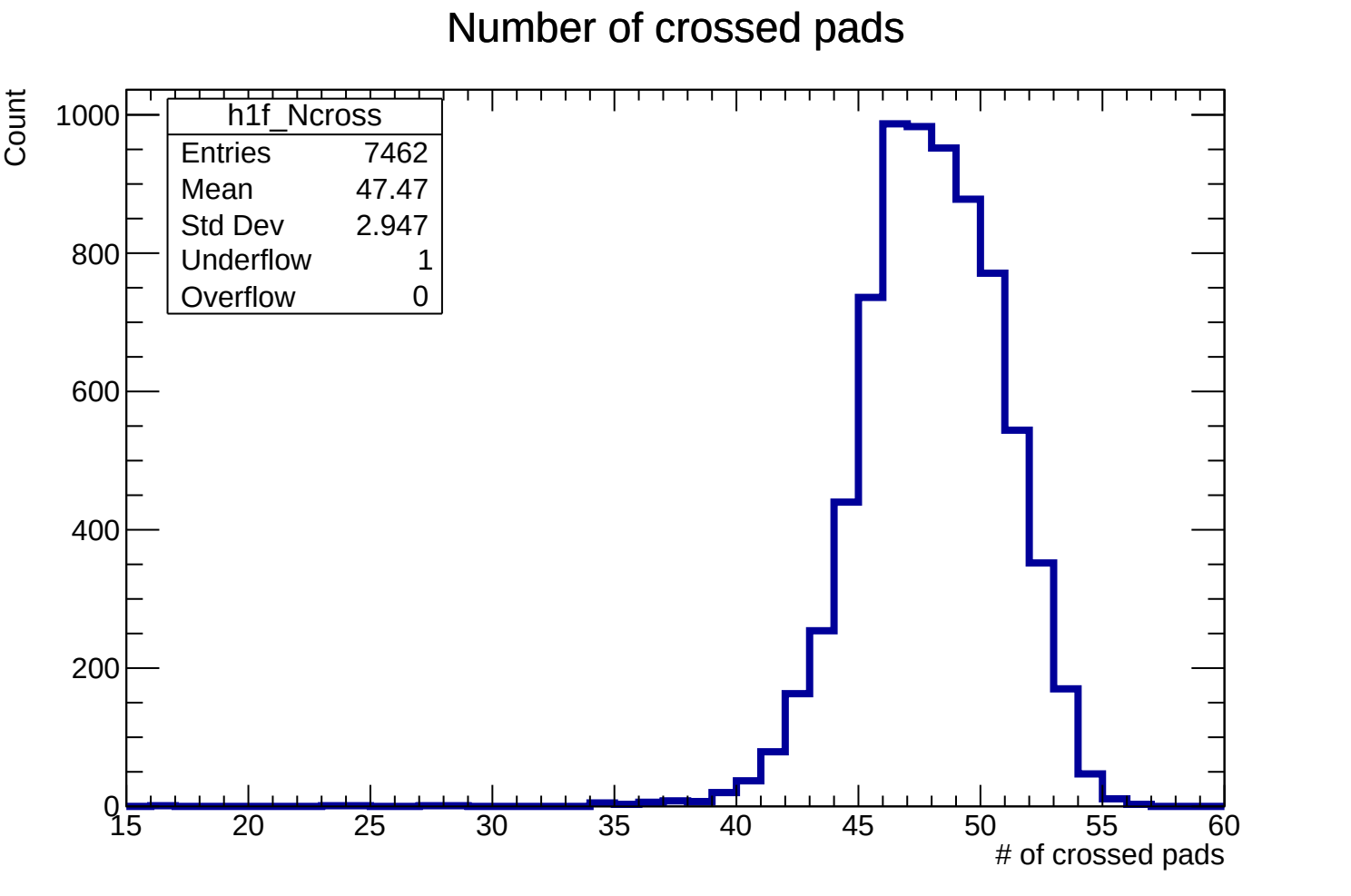
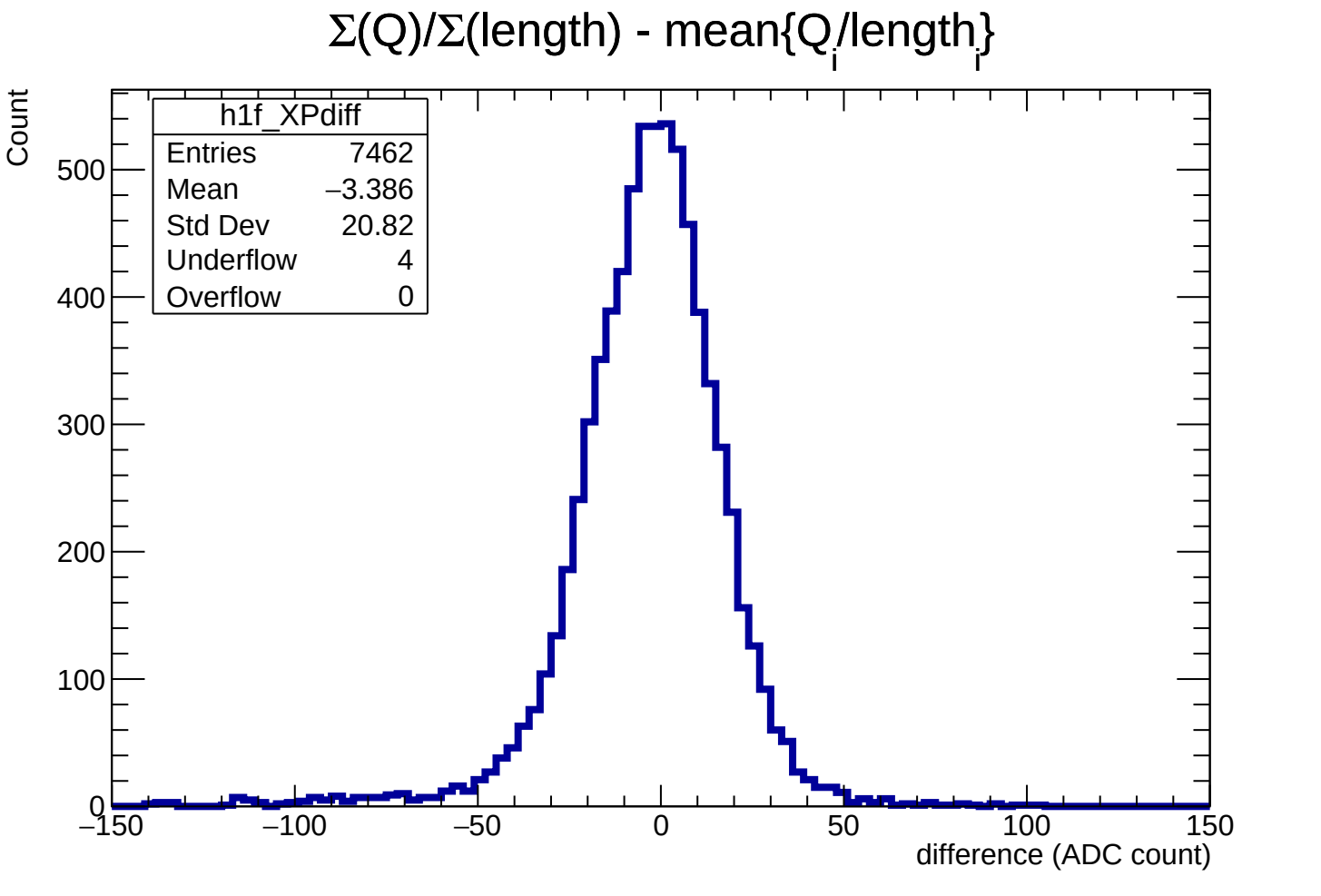
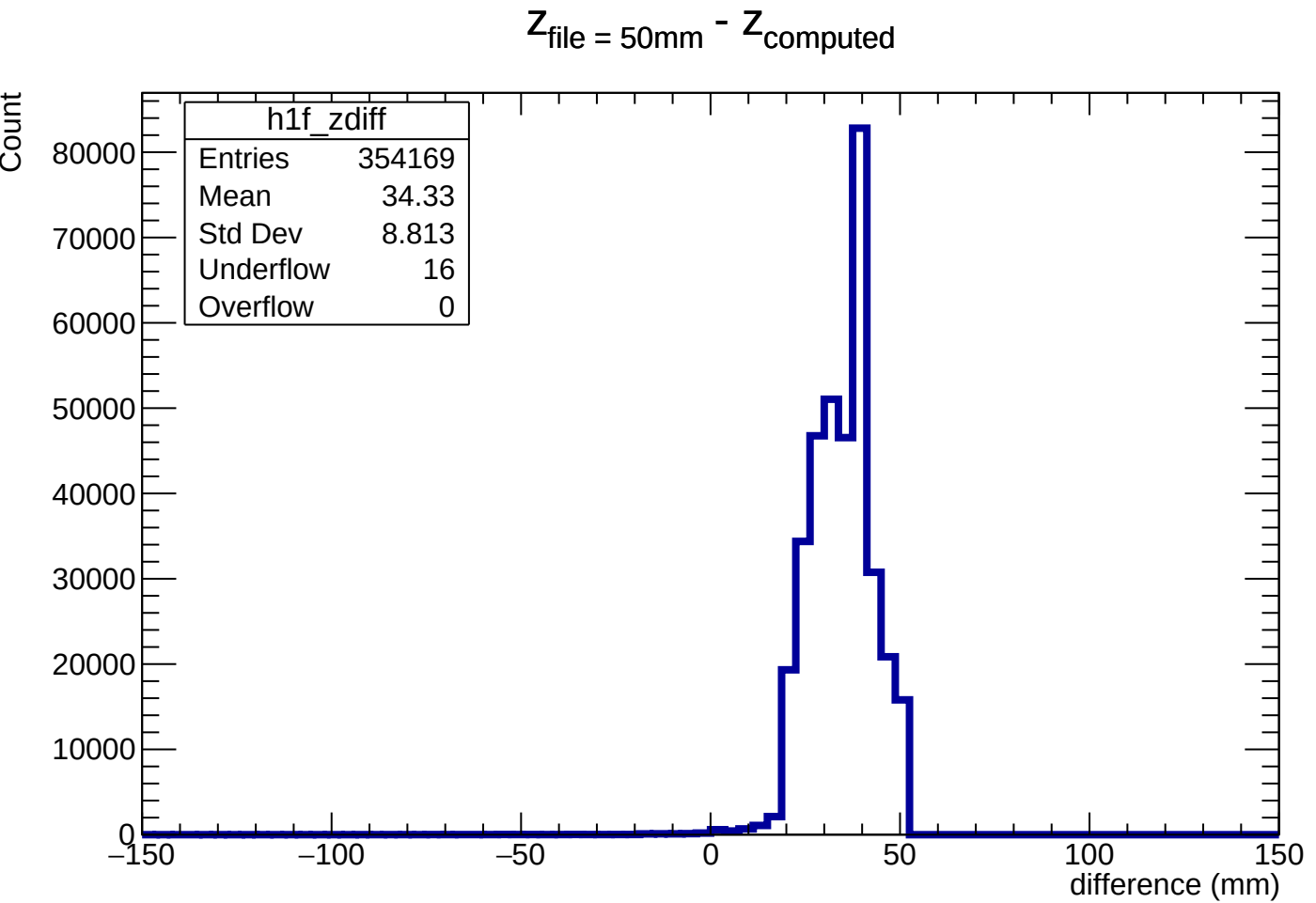
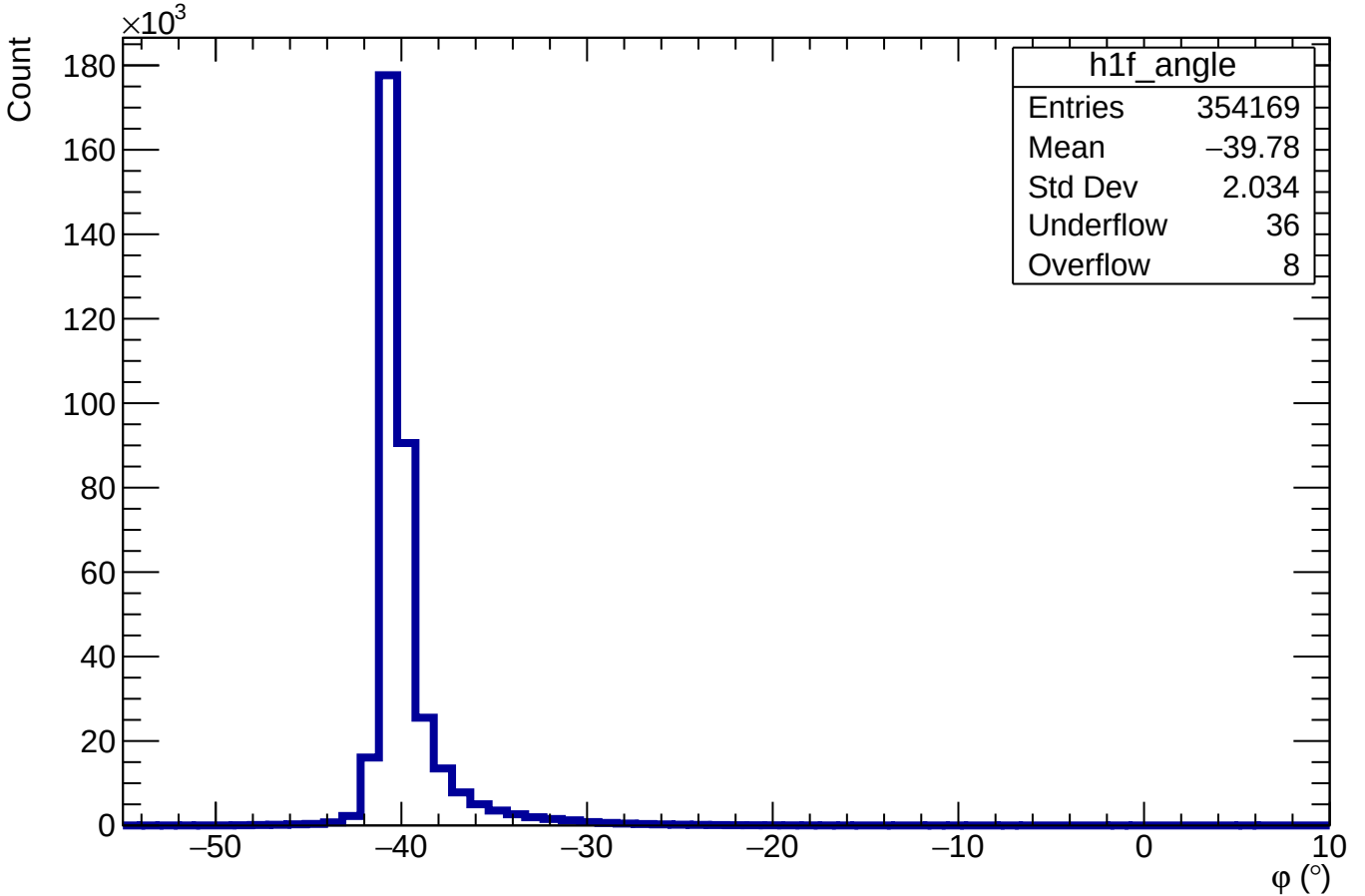
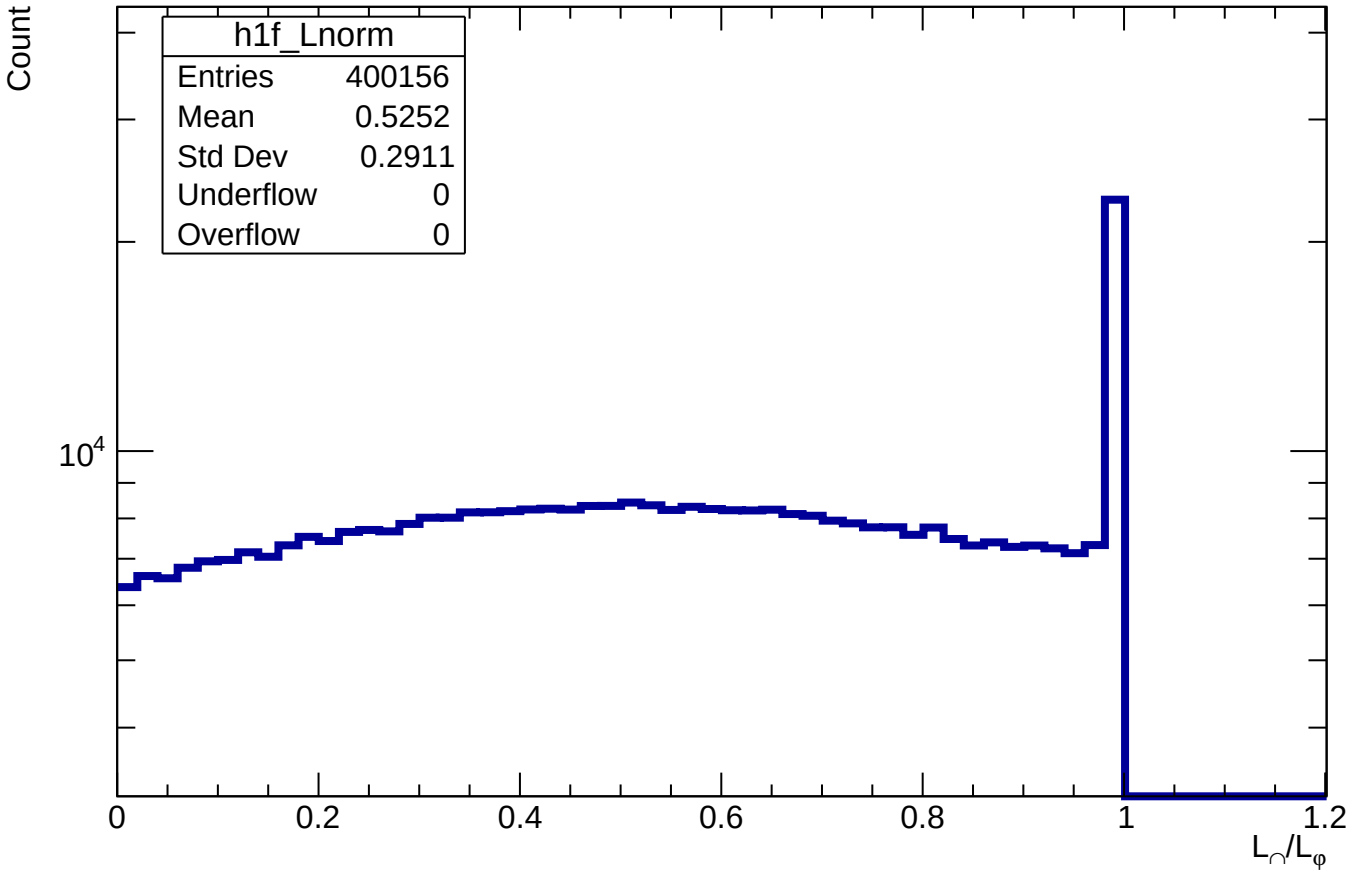

T_{max} of crossed pads
h1f_Tcross
Entries 354169
Mean 52.98
Std Dev 2.965
Underflow 0
Overflow 0
Count
10^4
10^3
10^2
10
1
0
100
200
300
400
500
T (timbebin)

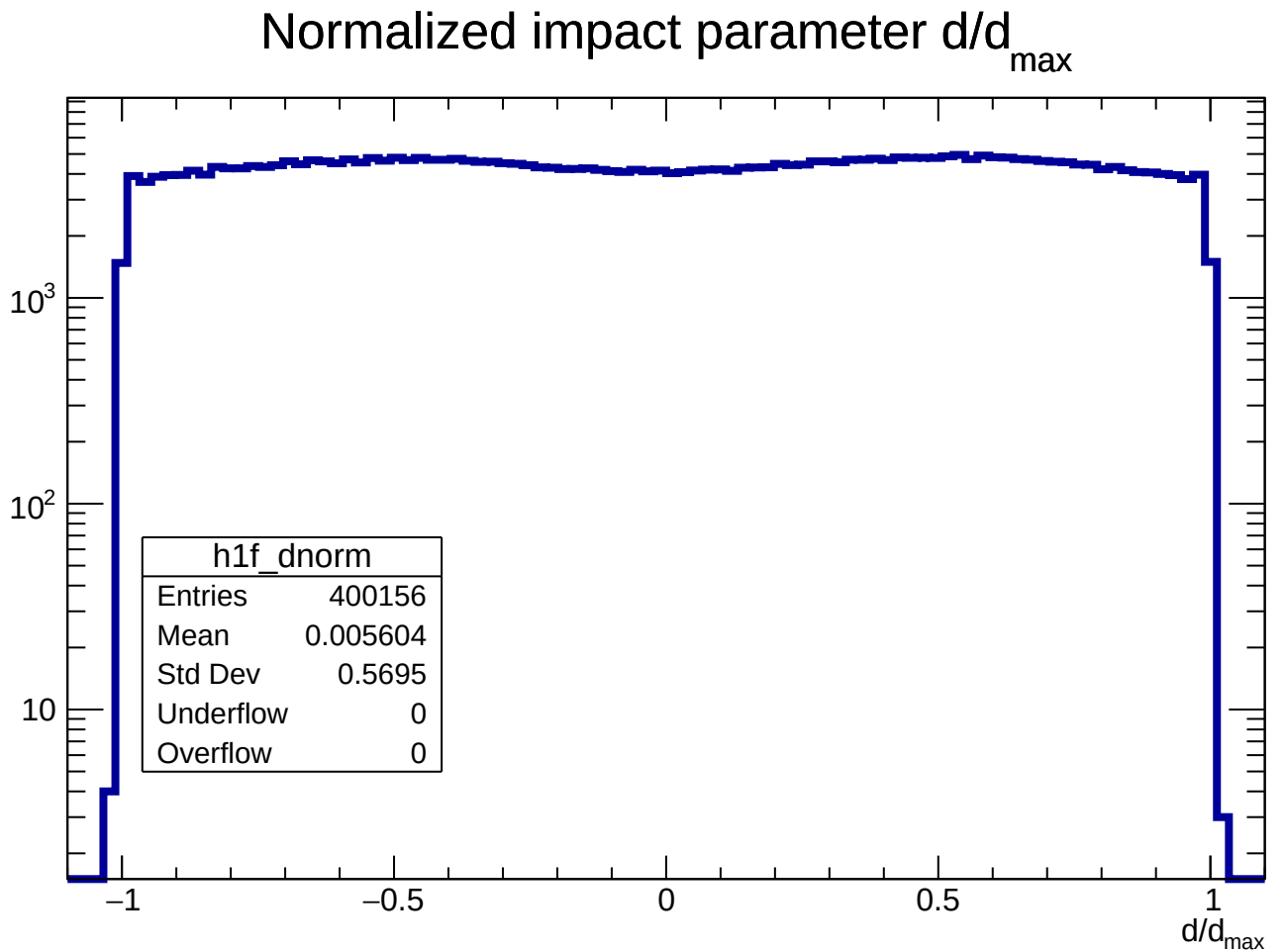

Number of crossed pads
h1f_Ncross
Entries 7462
Mean 47.47
Std Dev 2.947
Underflow 1
Overflow 0
Count
1000
800
600
400
200
0
15
20
25
30
35
40
45
50
55
60
# of crossed pads

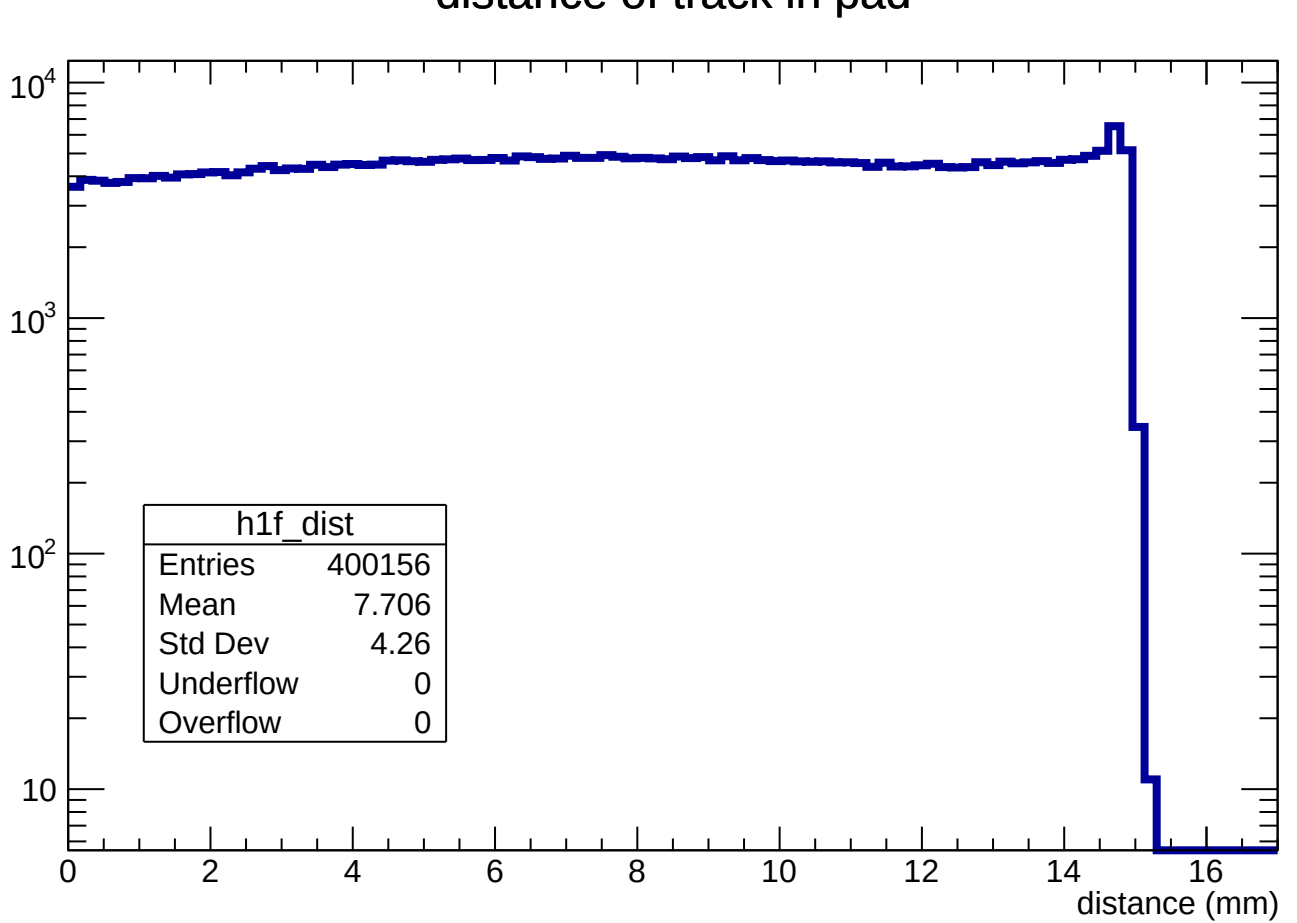

Σ(Q)/Σ(length) - mean{Q_i/length_i}
h1f_XPdiff
Entries 7462
Mean −3.386
Std Dev 20.82
Underflow 4
Overflow 0
Count
0
100
200
300
400
500
−150
−100
−50
0
50
100
150
difference (ADC count)

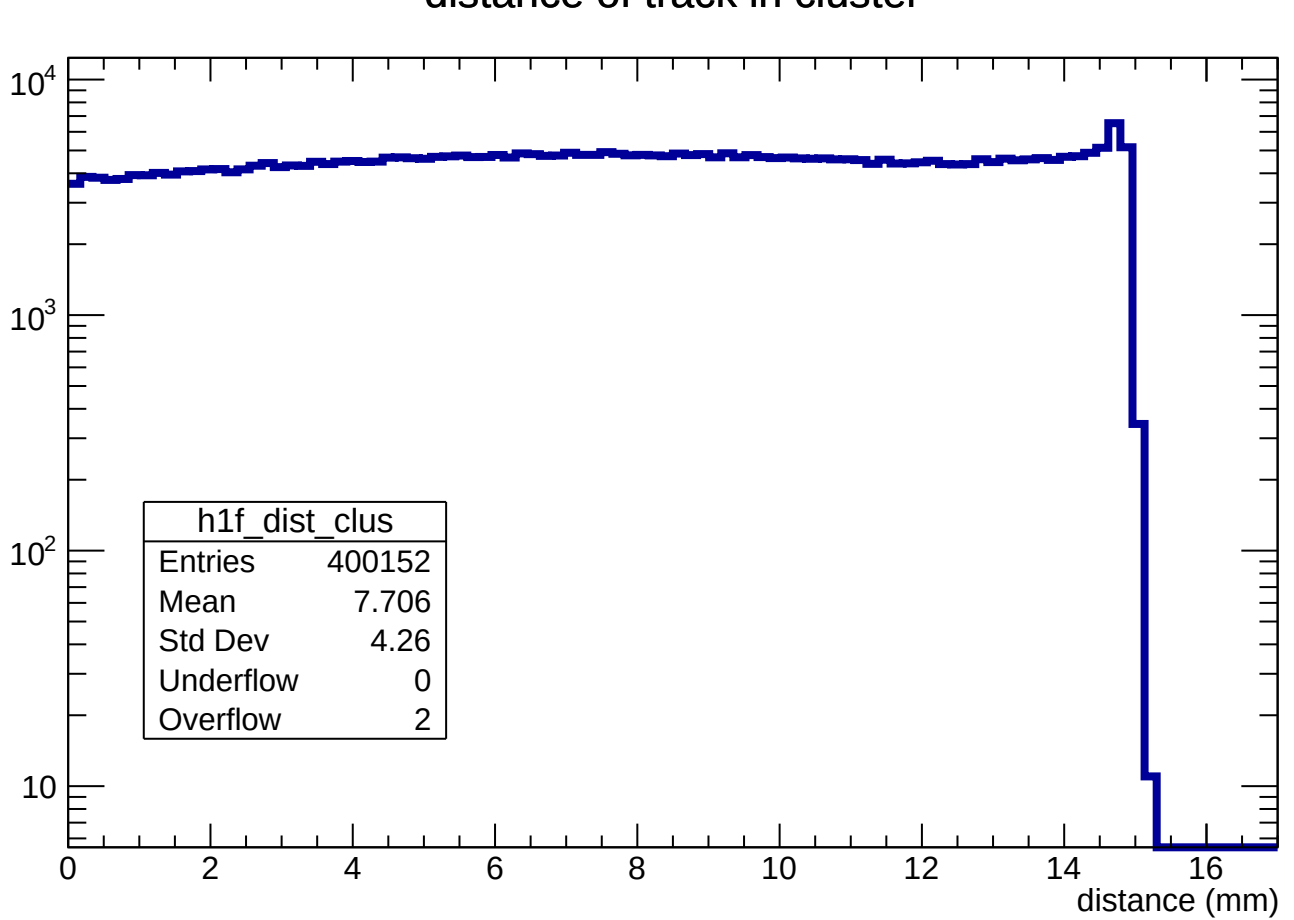

$Z_{file = 50mm} - Z_{computed}$
h1f_zdiff
Entries 354169
Mean 34.33
Std Dev 8.813
Underflow 16
Overflow 0
Count
80000
70000
60000
50000
40000
30000
20000
10000
0
–150
–100
–50
0
50
100
150
difference (mm)

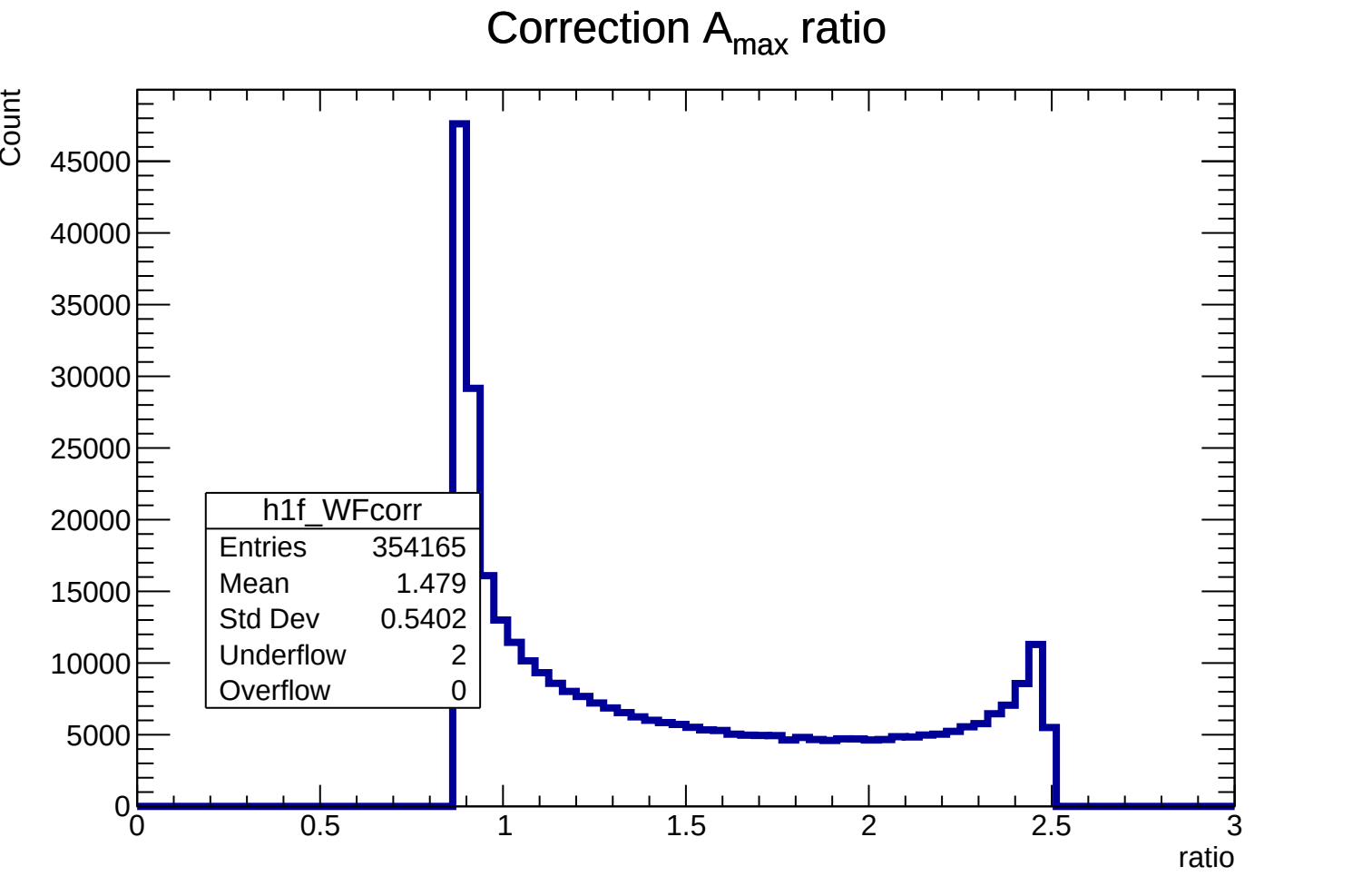

Angle φ in each pad
×10^3
Count
180
160
140
120
100
80
60
40
20
0
h1f_angle
Entries 354169
Mean −39.78
Std Dev 2.034
Underflow 36
Overflow 8
−50
−40
−30
−20
−10
0
10
φ (°)

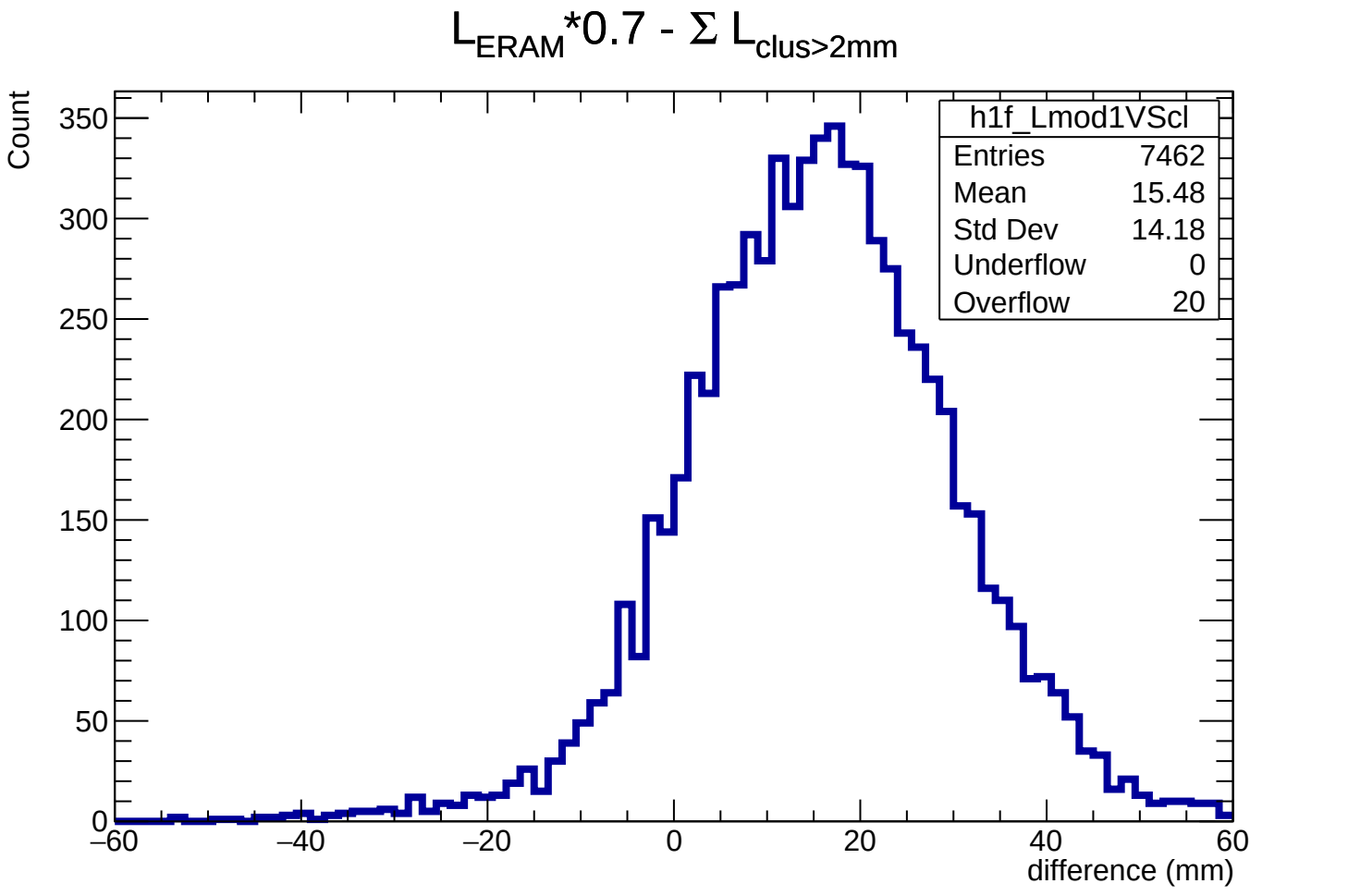

Length in pad normalized to maximum length in pad for a given φ
h1f_Lnorm
Entries 400156
Mean 0.5252
Std Dev 0.2911
Underflow 0
Overflow 0
Count
10^4
0
0.2
0.4
0.6
0.8
1
1.2
L_⌒/L_φ

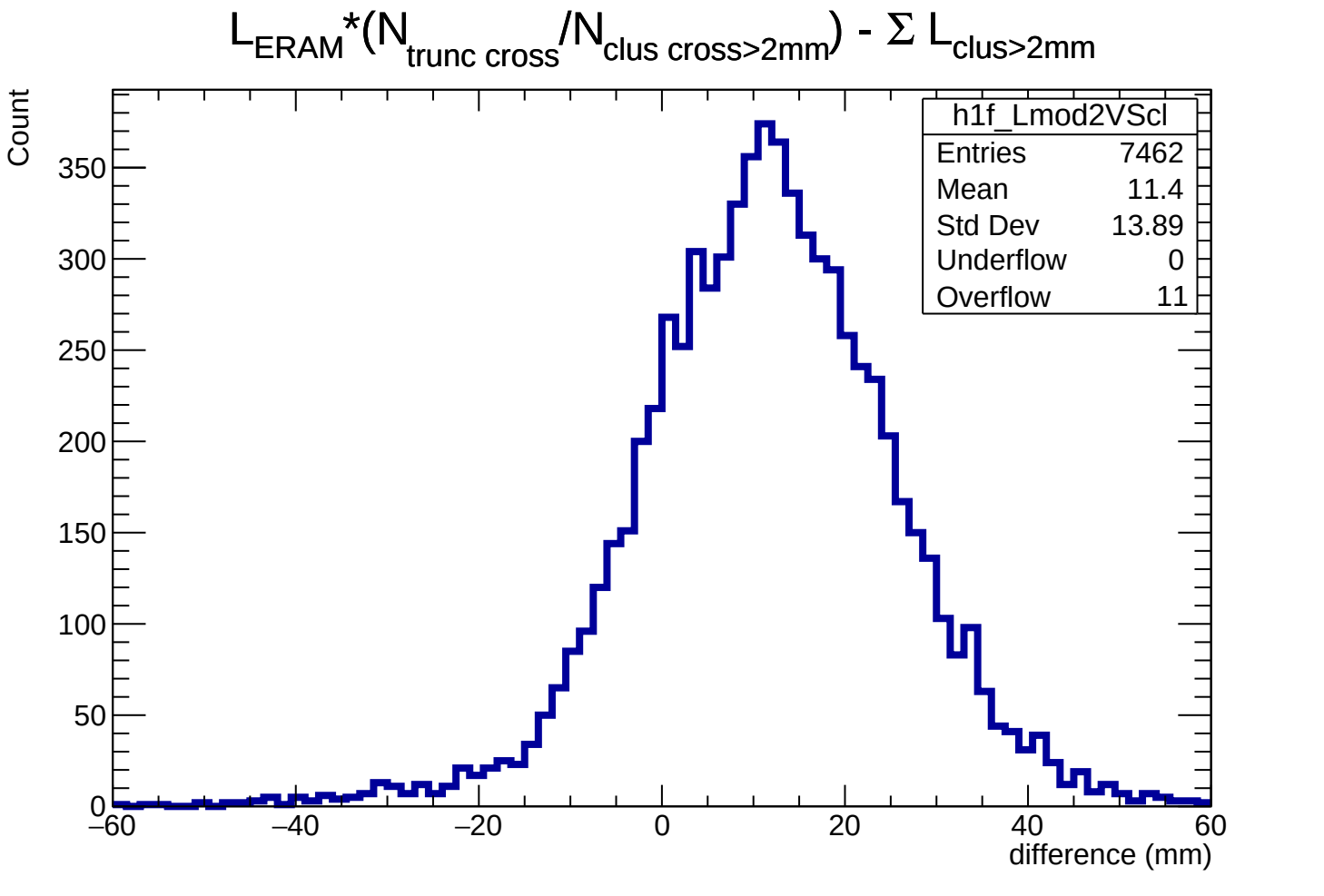

Normalized impact parameter d/d max
10^3
10^2
10
h1f_dnorm
Entries 400156
Mean 0.005604
Std Dev 0.5695
Underflow 0
Overflow 0
−1
−0.5
0
0.5
1
d/d max

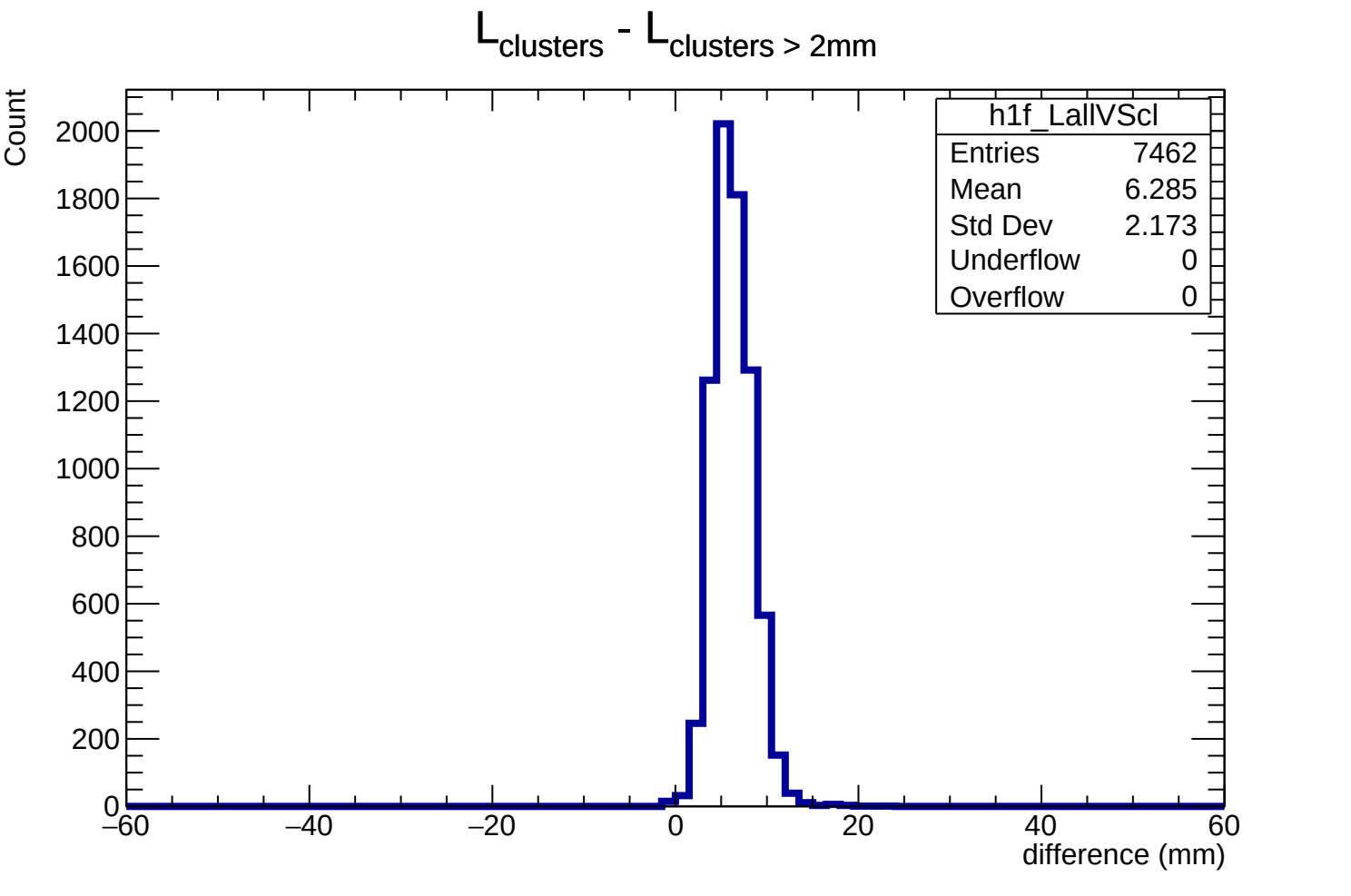

distance of track in pad
10^4
10^3
10^2
10
h1f_dist
Entries 400156
Mean 7.706
Std Dev 4.26
Underflow 0
Overflow 0
0
2
4
6
8
10
12
14
16
distance (mm)

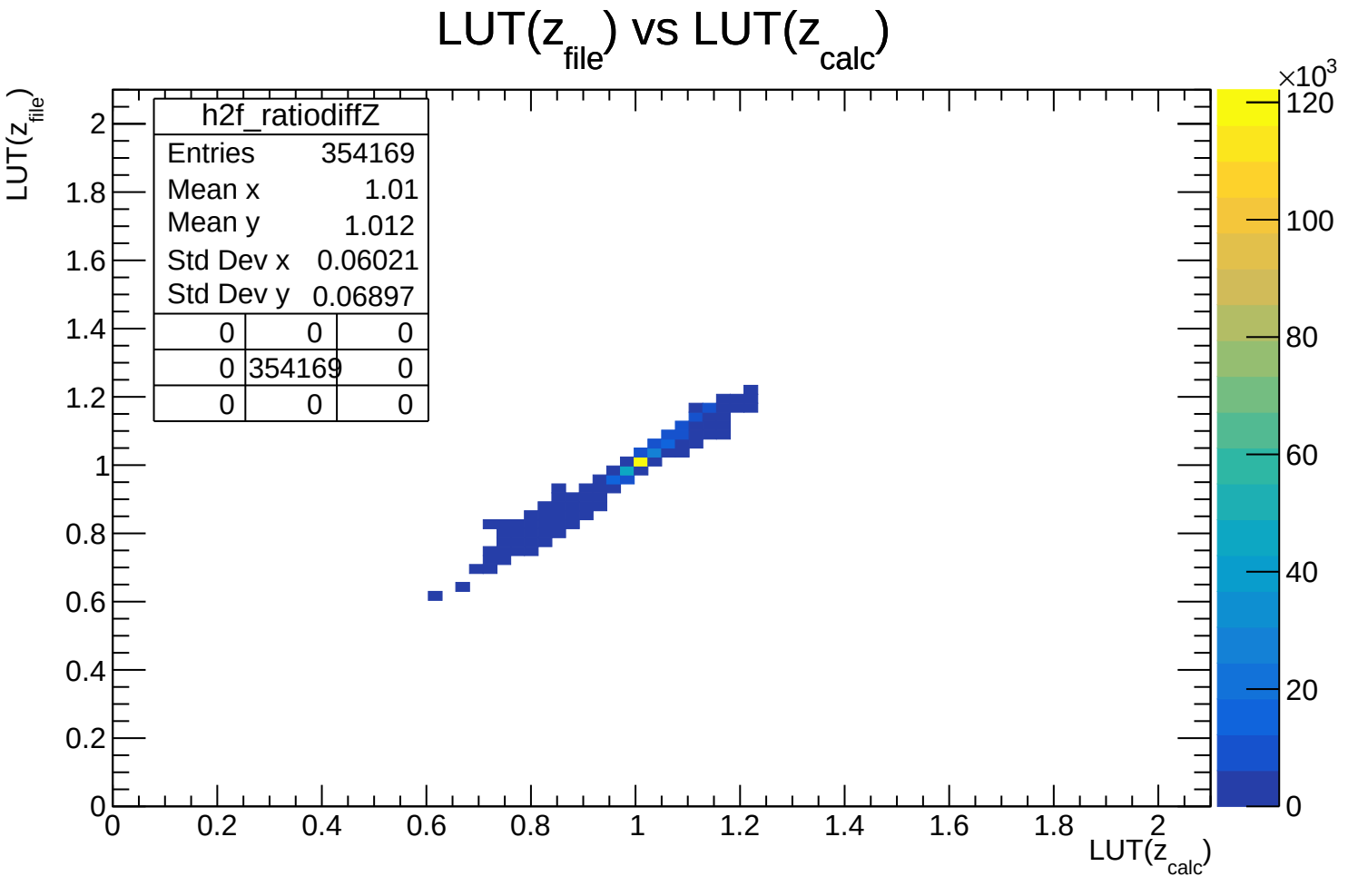

distance of track in cluster
10^4
10^3
10^2
10
h1f_dist_clus
Entries 400152
Mean 7.706
Std Dev 4.26
Underflow 0
Overflow 2
0
2
4
6
8
10
12
14
16
distance (mm)

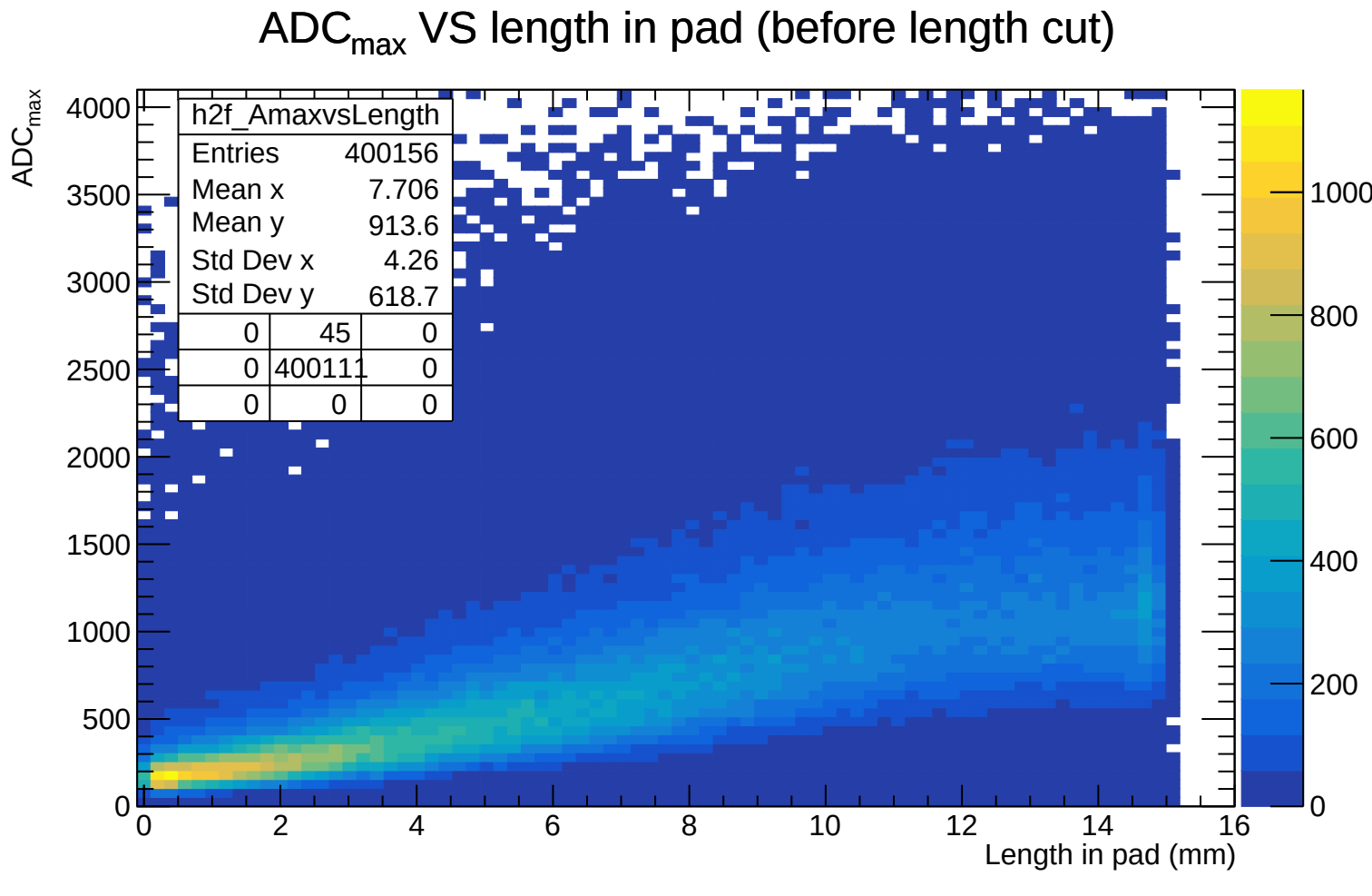

Correction A_{max} ratio
Count
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
0
0.5
1
1.5
2
2.5
3
ratio
h1f_WFcorr
Entries 354165
Mean 1.479
Std Dev 0.5402
Underflow 2
Overflow 0

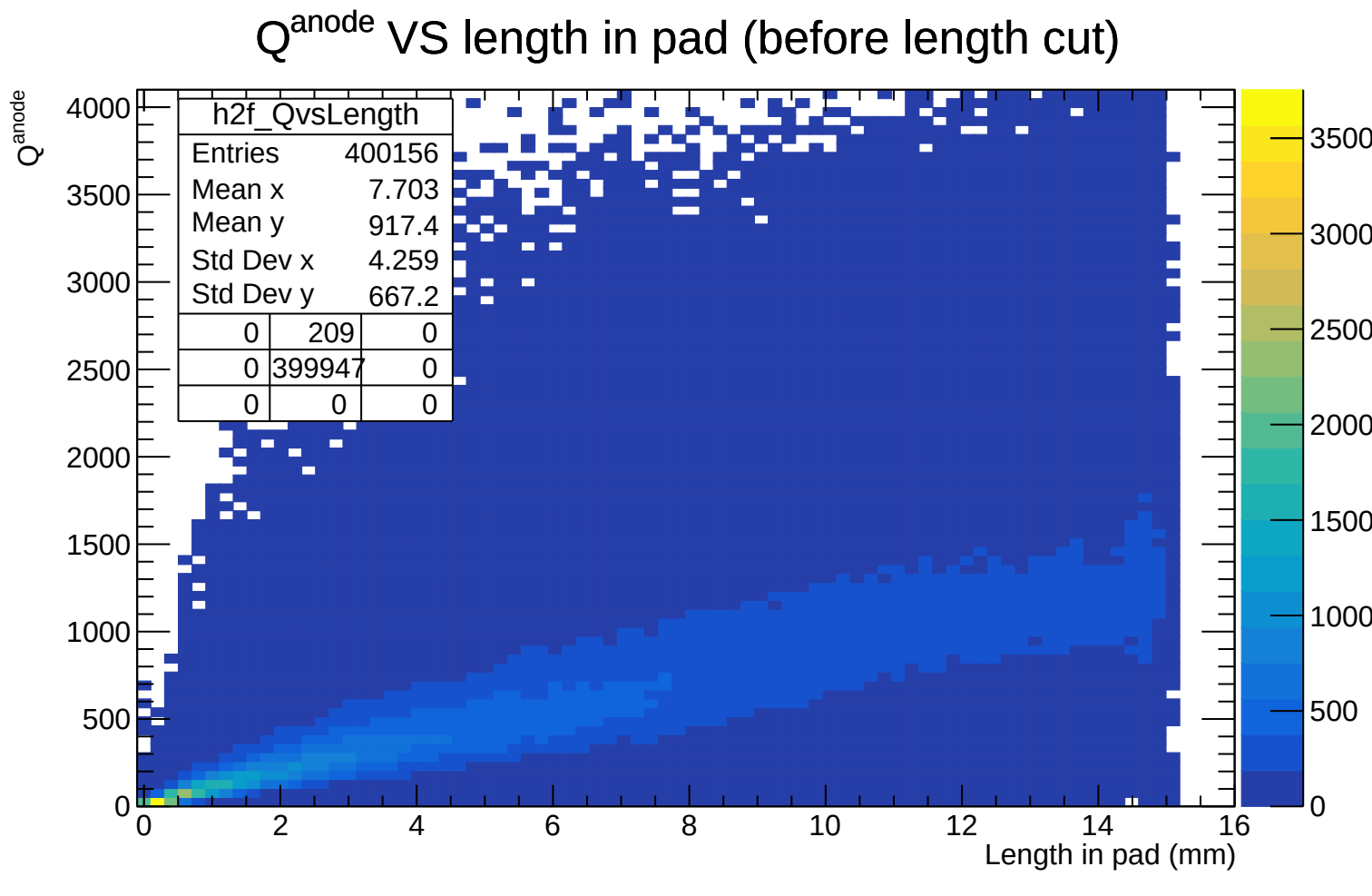

L_{ERAM}*0.7 - Σ $L_{clus>2mm}$
Count
350
300
250
200
150
100
50
0
–60
–40
–20
0
20
40
60
difference (mm)
h1f_Lmod1VScl
Entries 7462
Mean 15.48
Std Dev 14.18
Underflow 0
Overflow 20

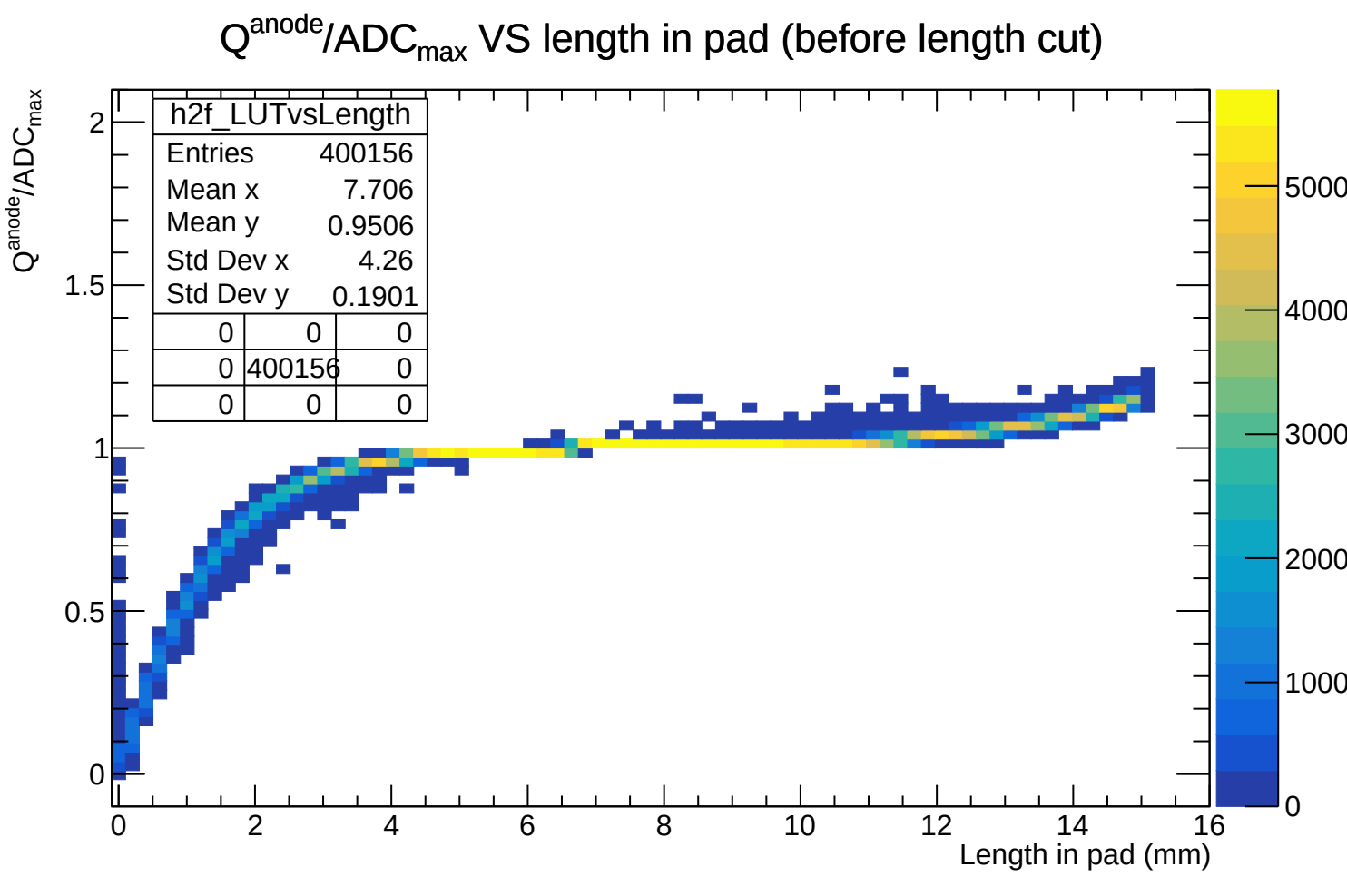

$L_{ERAM}*(N_{trunc\ cross}/N_{clus\ cross>2mm}) - \Sigma\ L_{clus>2mm}$
Count
350
300
250
200
150
100
50
0
–60
–40
–20
0
20
40
60
difference (mm)
h1f_Lmod2VScl
Entries 7462
Mean 11.4
Std Dev 13.89
Underflow 0
Overflow 11

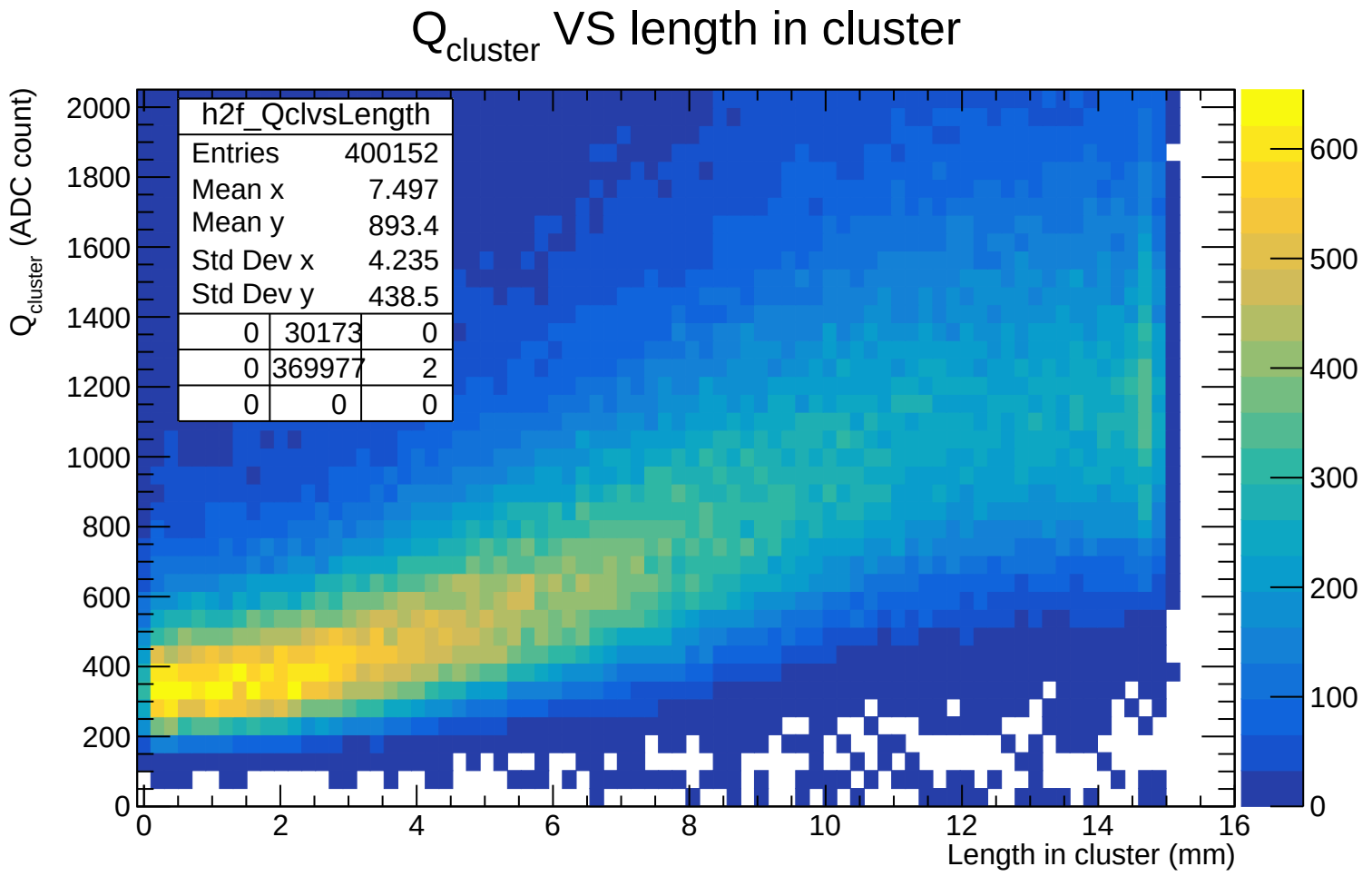

L clusters - L clusters > 2mm
Count
2000
1800
1600
1400
1200
1000
800
600
400
200
0
–60
–40
–20
0
20
40
60
difference (mm)
h1f_LallVScl
Entries 7462
Mean 6.285
Std Dev 2.173
Underflow 0
Overflow 0

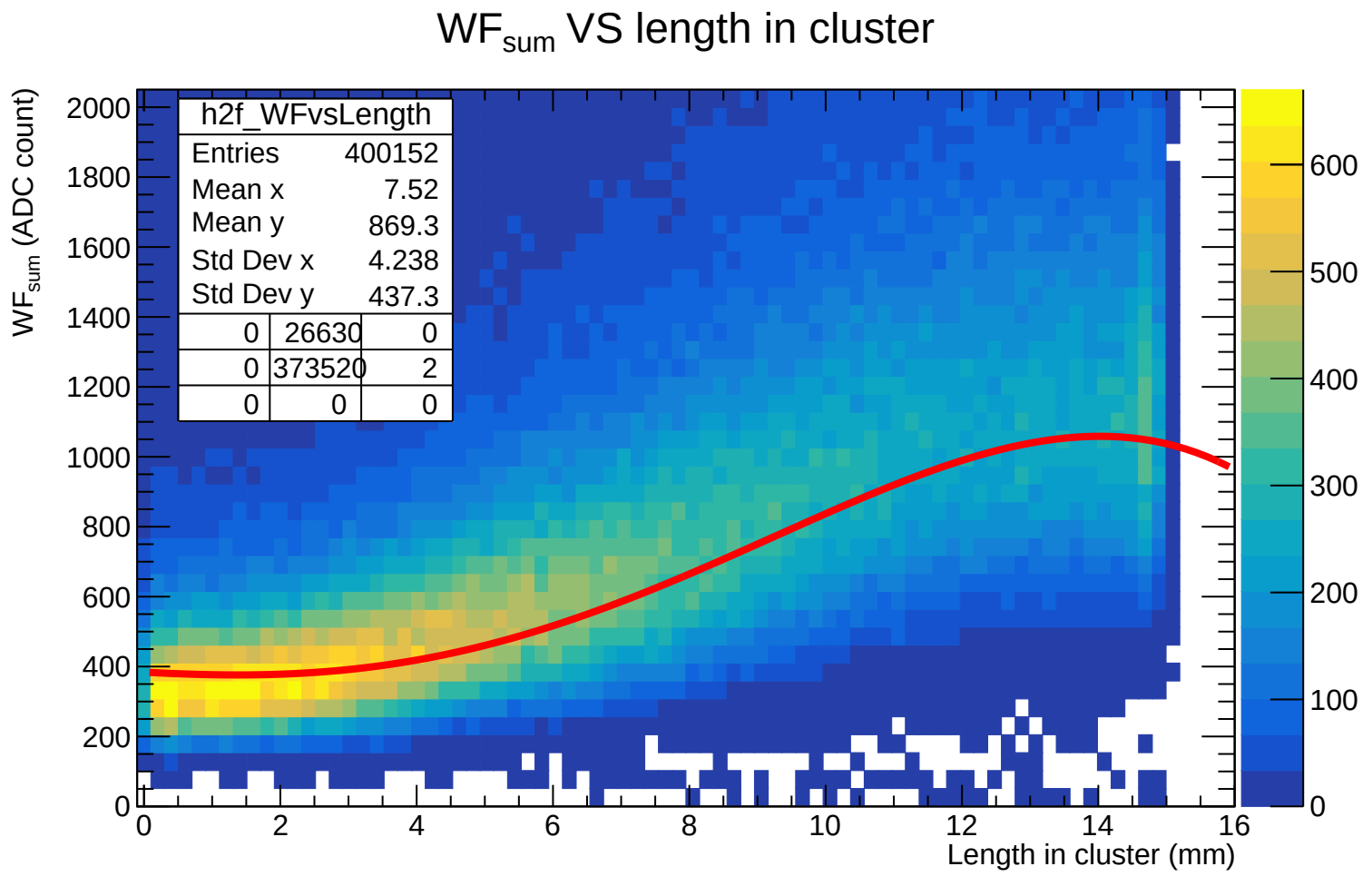

LUT(z_file) vs LUT(z_calc)
h2f_ratiodiffZ
Entries 354169
Mean x 1.01
Mean y 1.012
Std Dev x 0.06021
Std Dev y 0.06897
0 0 0
0 354169 0
0 0 0
LUT(z_file)
LUT(z_calc)
×10^3
120
100
80
60
40
20
0
0 0.2 0.4 0.6 0.8 1 1.2 1.4 1.6 1.8 2

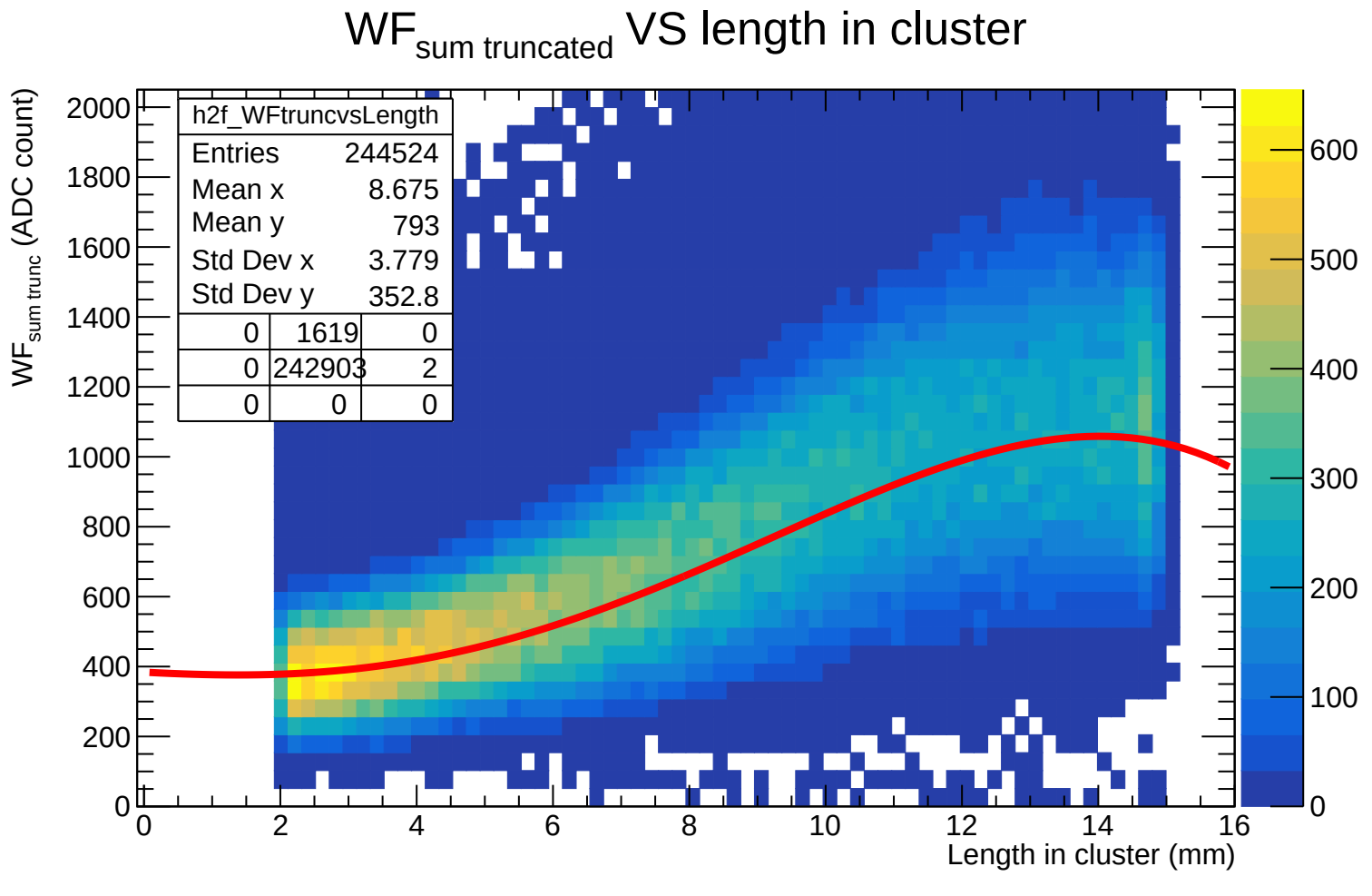

ADC$_{max}$ VS length in pad (before length cut)
h2f_AmaxvsLength
Entries 400156
Mean x 7.706
Mean y 913.6
Std Dev x 4.26
Std Dev y 618.7
0 45 0
0 400111 0
0 0 0
ADC$_{max}$
Length in pad (mm)
0
500
1000
1500
2000
2500
3000
3500
4000
0
2
4
6
8
10
12
14
16
0
200
400
600
800
1000

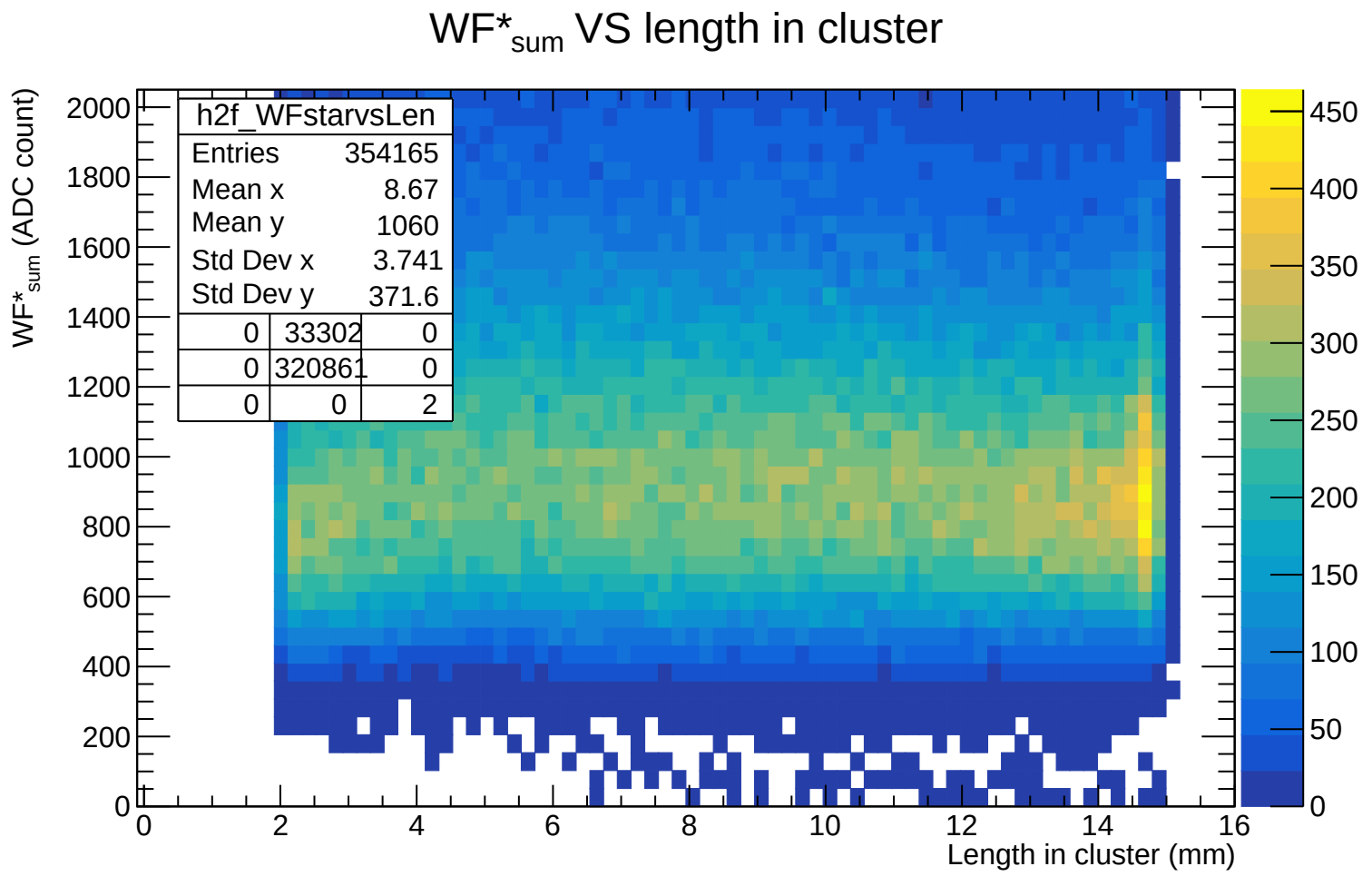

Q^anode VS length in pad (before length cut)
Q^anode
Length in pad (mm)
h2f_QvsLength
Entries 400156
Mean x 7.703
Mean y 917.4
Std Dev x 4.259
Std Dev y 667.2
0 209 0
0 399947 0
0 0 0
0 500 1000 1500 2000 2500 3000 3500 4000
0 2 4 6 8 10 12 14 16
0 500 1000 1500 2000 2500 3000 3500

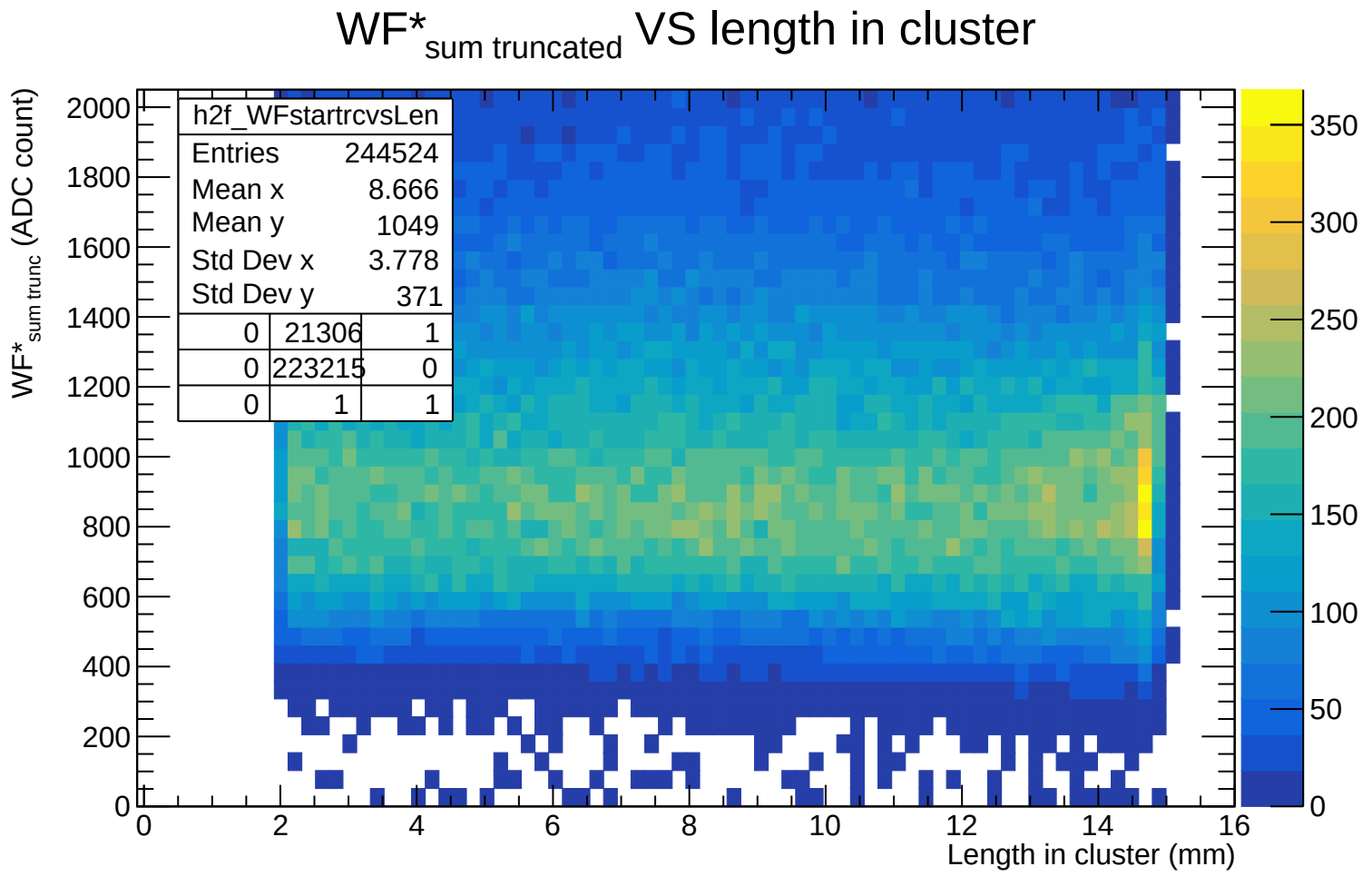

Q^anode/ADC_max VS length in pad (before length cut)
h2f_LUTvsLength
Entries 400156
Mean x 7.706
Mean y 0.9506
Std Dev x 4.26
Std Dev y 0.1901
0 0 0
0 400156 0
0 0 0
Q^anode/ADC_max
Length in pad (mm)
0
0.5
1
1.5
2
0
2
4
6
8
10
12
14
16
0
1000
2000
3000
4000
5000

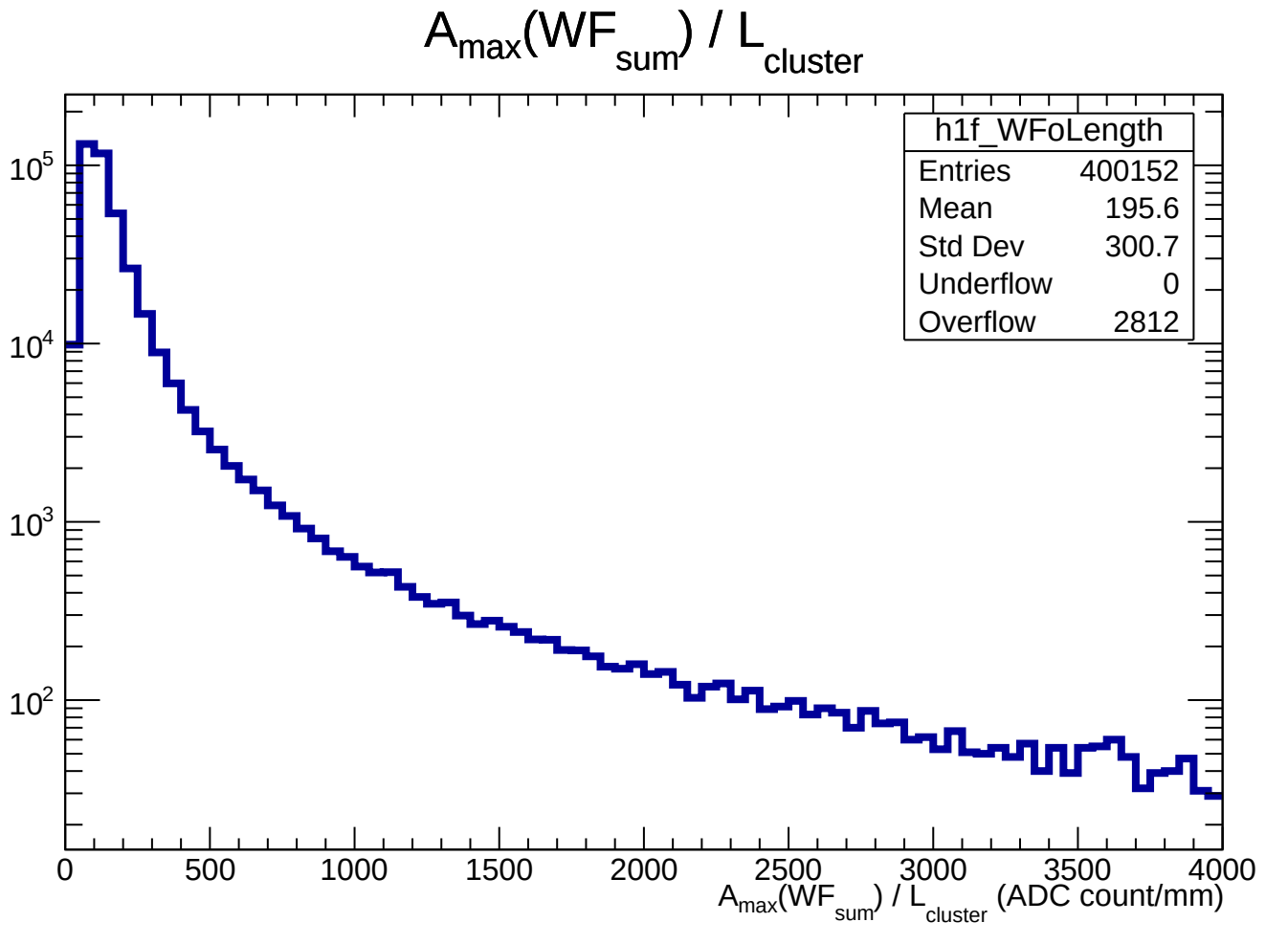

$Q_{cluster}$ VS length in cluster
h2f_QclvsLength
Entries 400152
Mean x 7.497
Mean y 893.4
Std Dev x 4.235
Std Dev y 438.5
0 30173 0
0 369977 2
0 0 0
$Q_{cluster}$ (ADC count)
Length in cluster (mm)
0 200 400 600 800 1000 1200 1400 1600 1800 2000
0 2 4 6 8 10 12 14 16
0 100 200 300 400 500 600

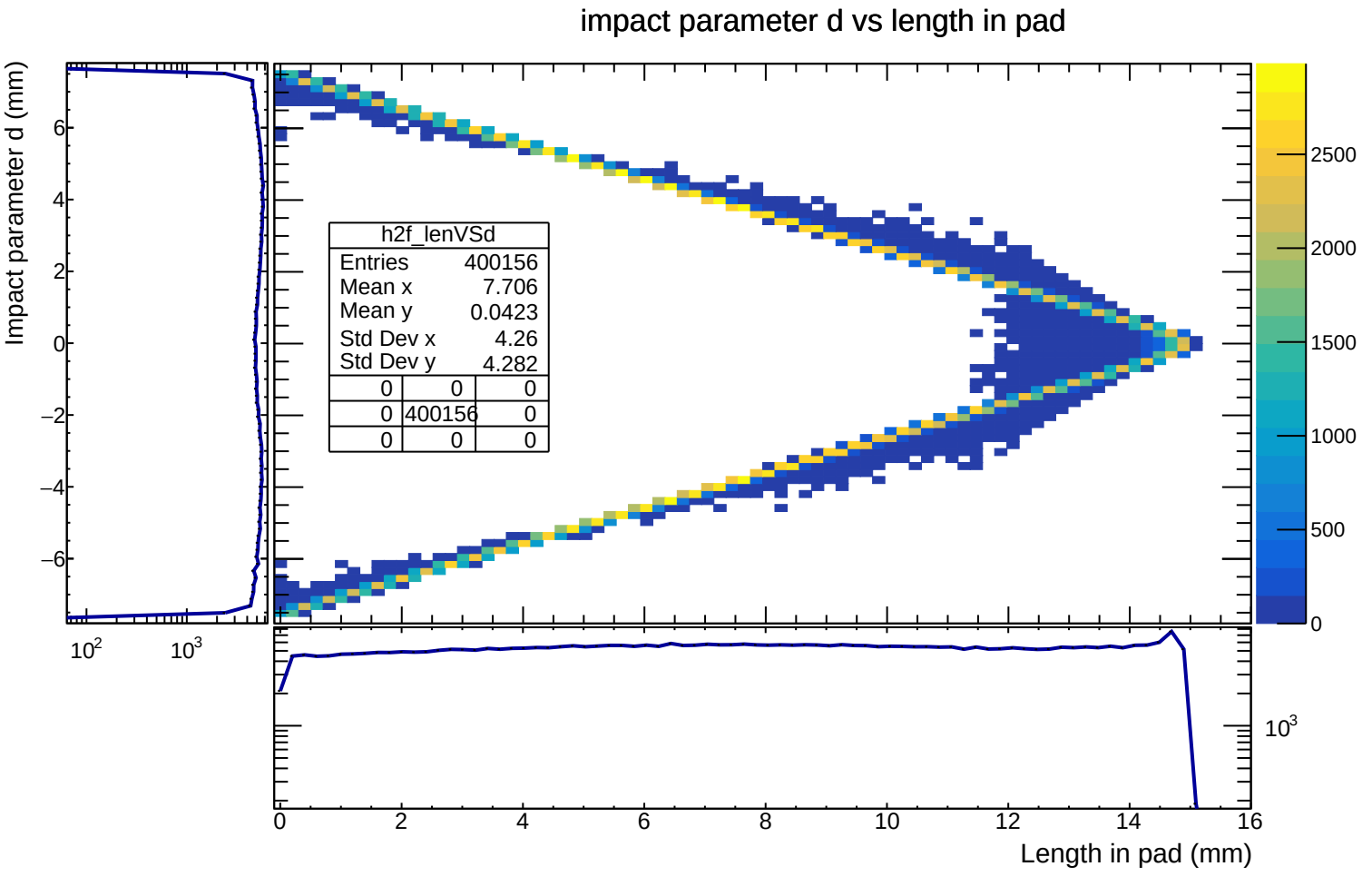

WF$_{sum}$ VS length in cluster
h2f_WFvsLength
Entries 400152
Mean x 7.52
Mean y 869.3
Std Dev x 4.238
Std Dev y 437.3
0 26630 0
0 373520 2
0 0 0
WF$_{sum}$ (ADC count)
Length in cluster (mm)
0
200
400
600
800
1000
1200
1400
1600
1800
2000
0
2
4
6
8
10
12
14
16
0
100
200
300
400
500
600


WF sum truncated VS length in cluster
h2f_WFtruncvsLength
Entries 244524
Mean x 8.675
Mean y 793
Std Dev x 3.779
Std Dev y 352.8
0 1619 0
0 242903 2
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
100
200
300
400
500
600


WF*sum VS length in cluster
h2f_WFstarvsLen
Entries 354165
Mean x 8.67
Mean y 1060
Std Dev x 3.741
Std Dev y 371.6
0 33302 0
0 320861 0
0 0 2
WF*sum (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
50
100
150
200
250
300
350
400
450


WF*sum truncated VS length in cluster
h2f_WFstartrcvsLen
Entries 244524
Mean x 8.666
Mean y 1049
Std Dev x 3.778
Std Dev y 371
0 21306 1
0 223215 0
0 1 1
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
50
100
150
200
250
300
350


$A_{max}(WF_{sum}) / L_{cluster}$
h1f_WFoLength
Entries 400152
Mean 195.6
Std Dev 300.7
Underflow 0
Overflow 2812
10^5
10^4
10^3
10^2
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 400156
Mean x 7.706
Mean y 0.0423
Std Dev x 4.26
Std Dev y 4.282
0 0 0
0 400156 0
0 0 0