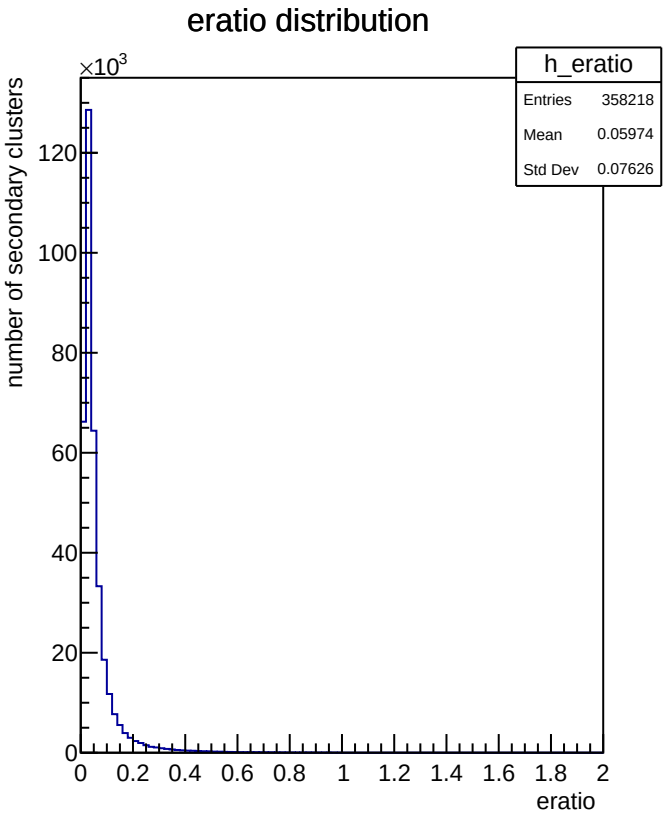
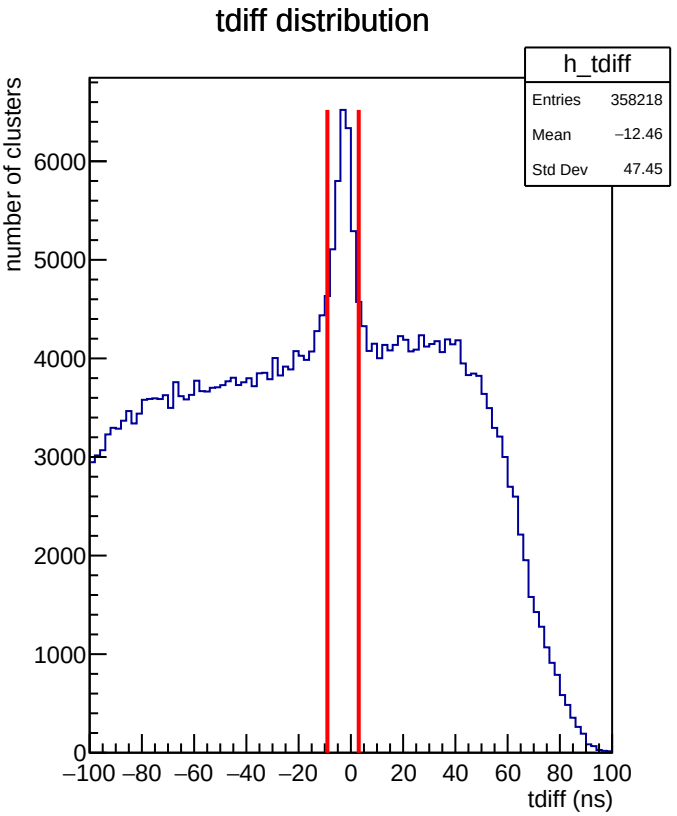
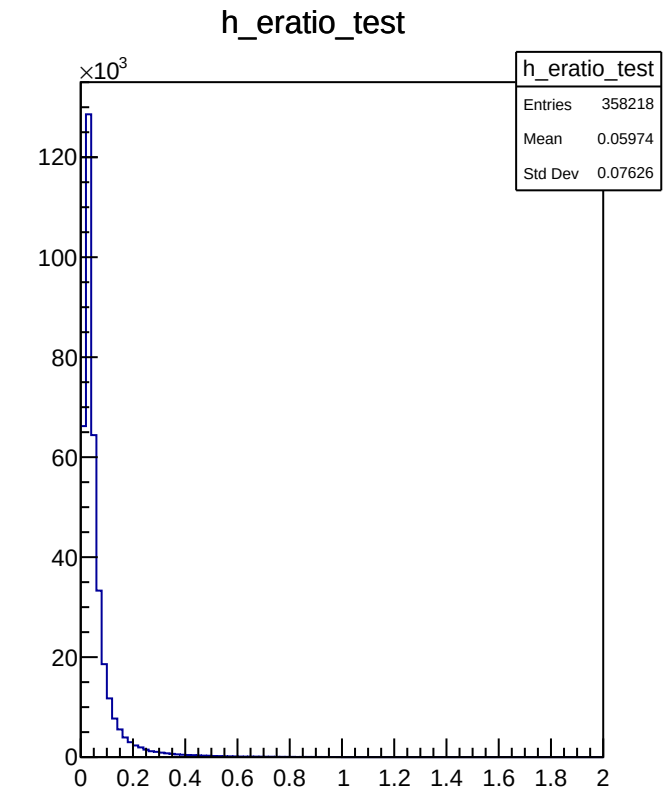
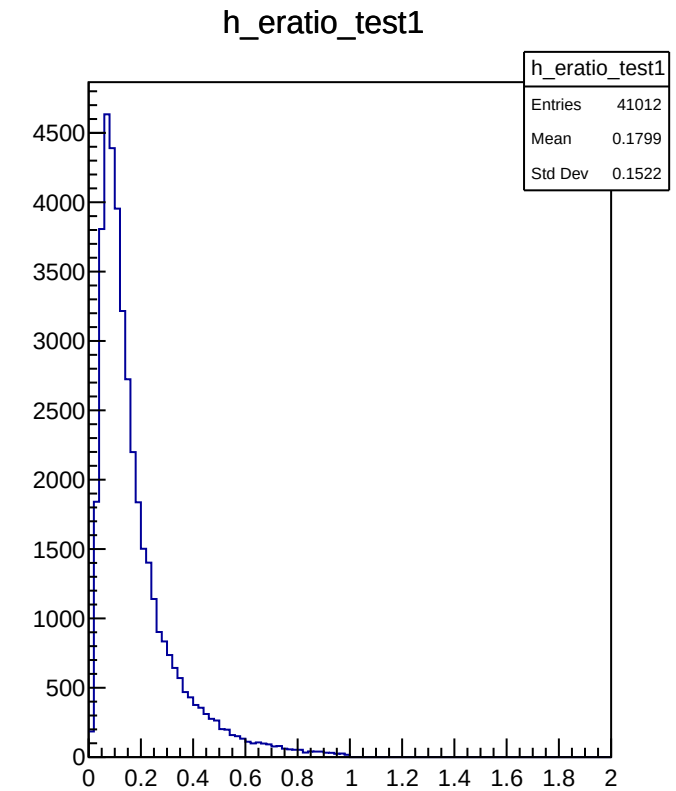
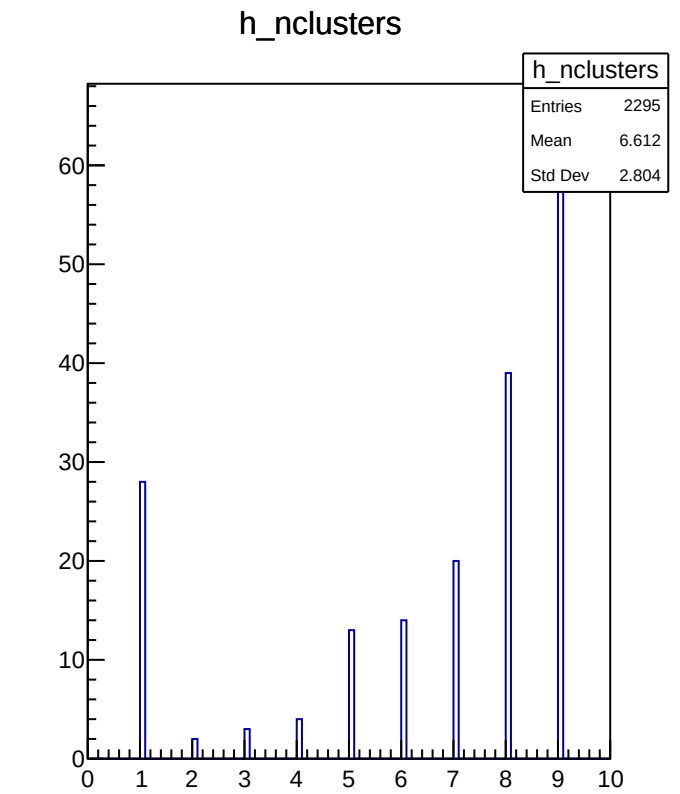
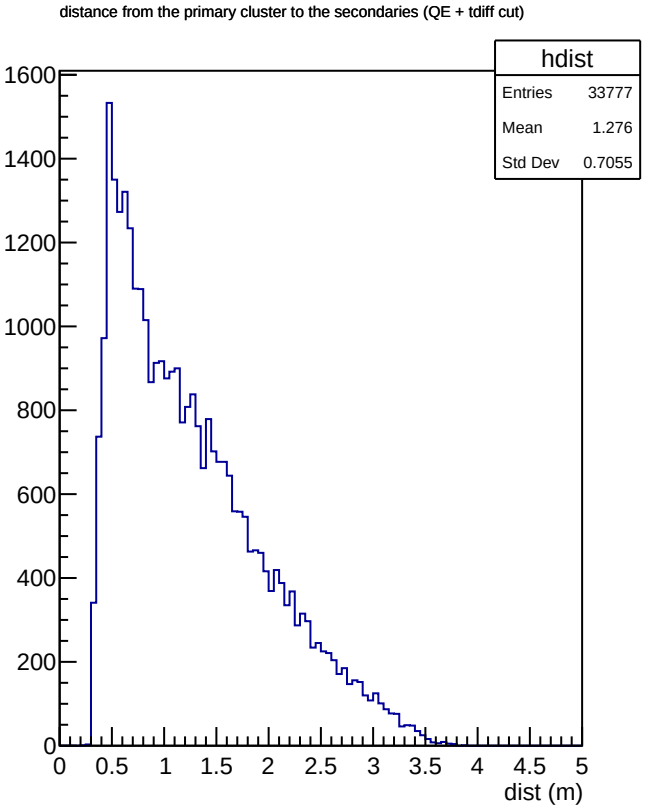

eratio distribution
h_eratio
Entries 358218
Mean 0.05974
Std Dev 0.07626
×10^3
number of secondary clusters
eratio

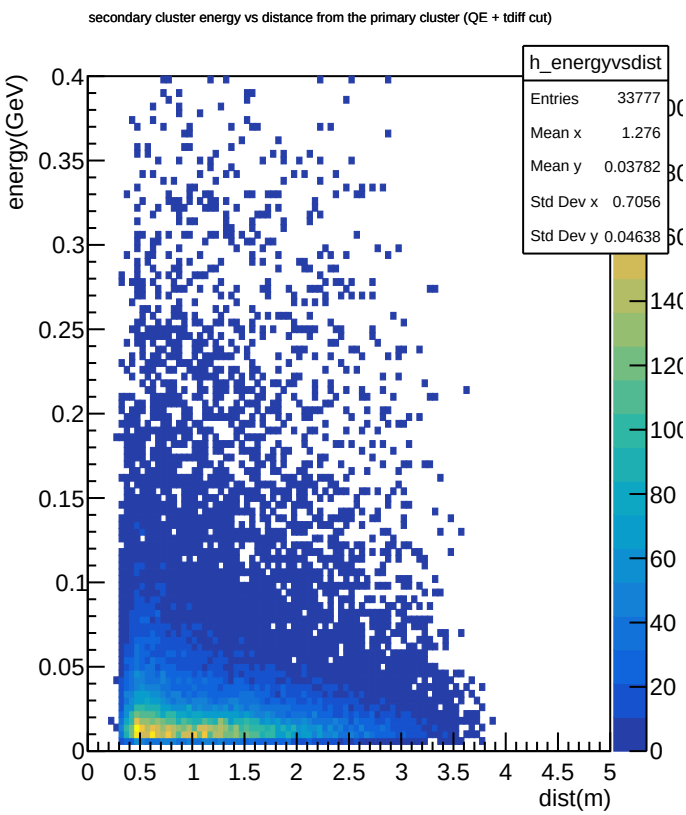

tdiff distribution
h_tdiff
Entries 358218
Mean −12.46
Std Dev 47.45
number of clusters
tdiff (ns)

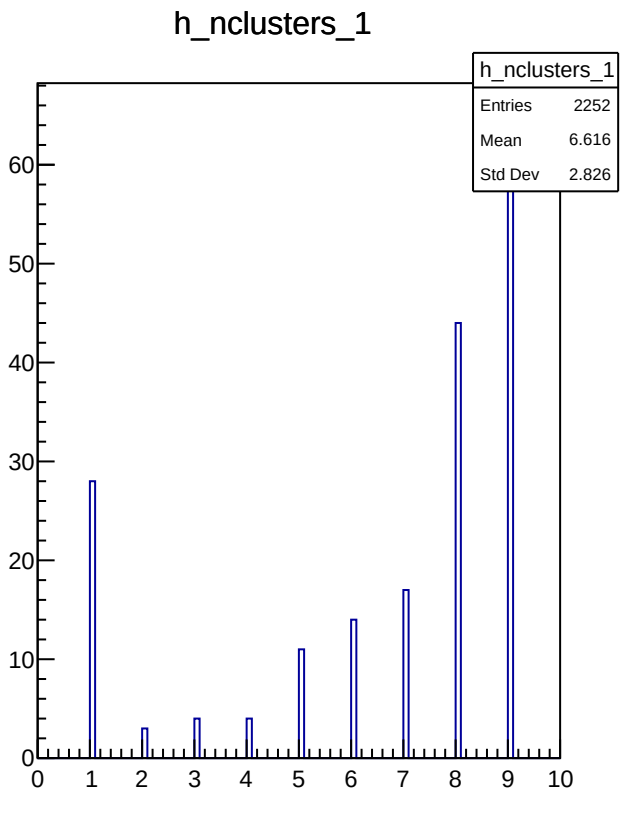

h_eratio_test
h_eratio_test
Entries 358218
Mean 0.05974
Std Dev 0.07626
×10^3

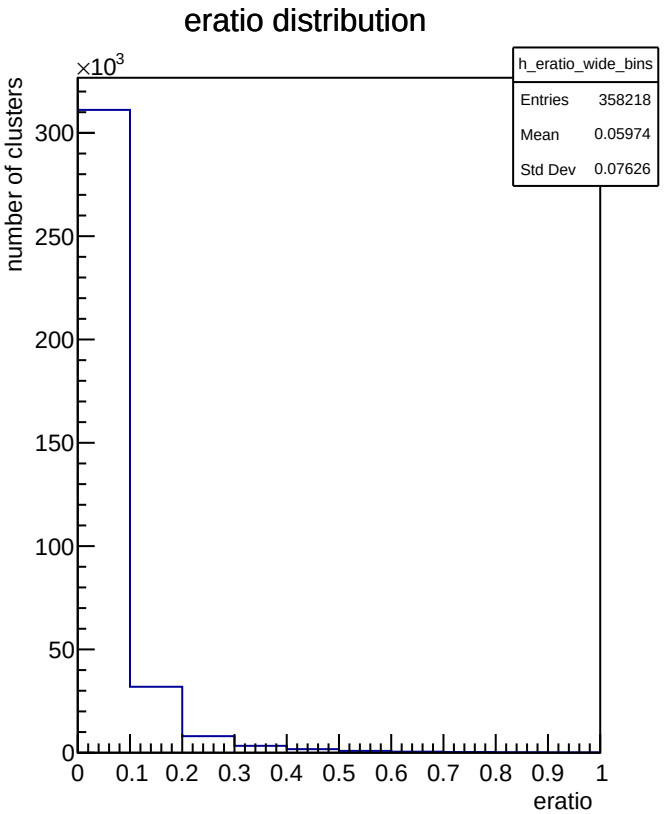

h_eratio_test1
h_eratio_test1
Entries 41012
Mean 0.1799
Std Dev 0.1522

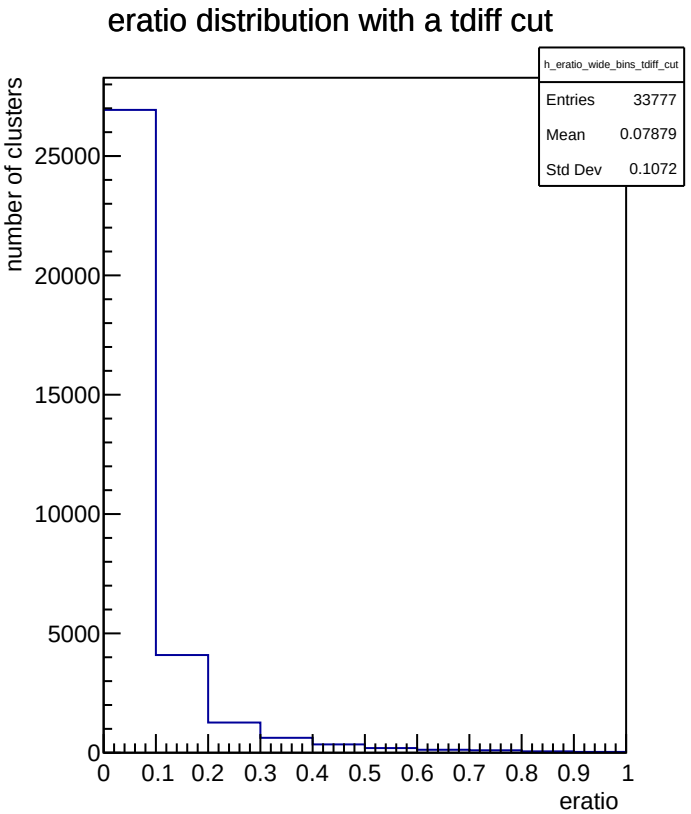

h_nclusters
h_nclusters
Entries 2295
Mean 6.612
Std Dev 2.804

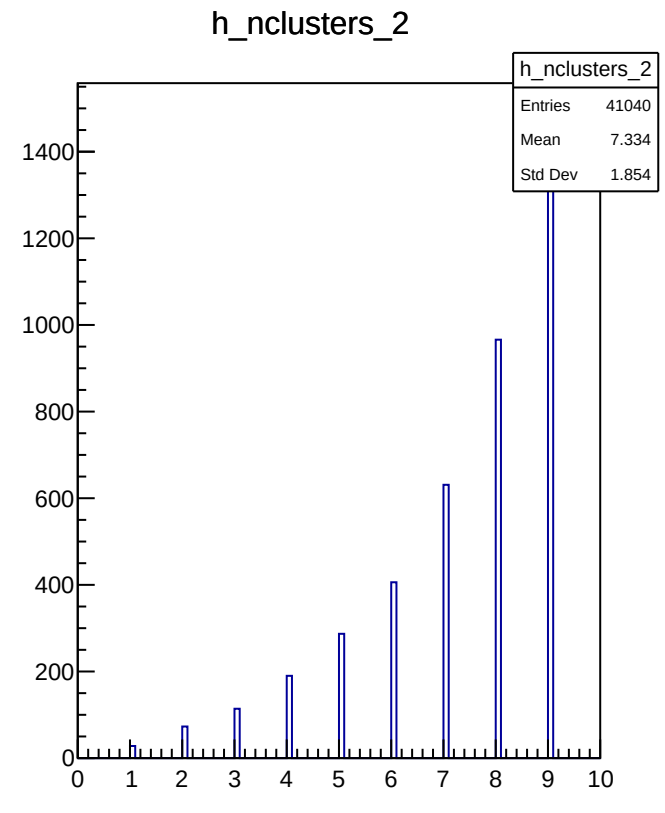

distance from the primary cluster to the secondaries (QE + tdiff cut)
hdist
Entries 33777
Mean 1.276
Std Dev 0.7055
dist (m)

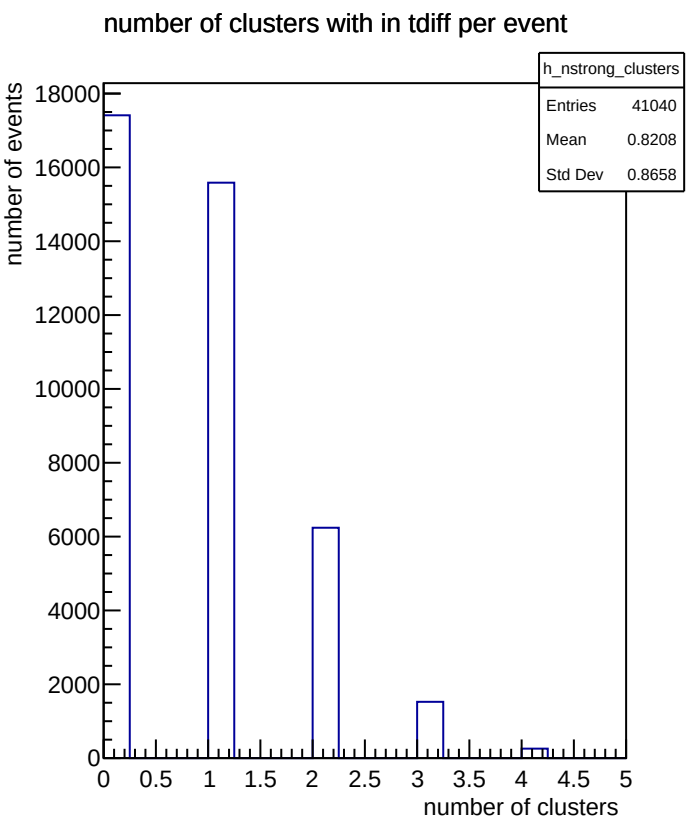

secondary cluster energy vs distance from the primary cluster (QE + tdiff cut)
h_energyvsdist
Entries 33777
Mean x 1.276
Mean y 0.03782
Std Dev x 0.7056
Std Dev y 0.04638
energy(GeV)
dist(m)

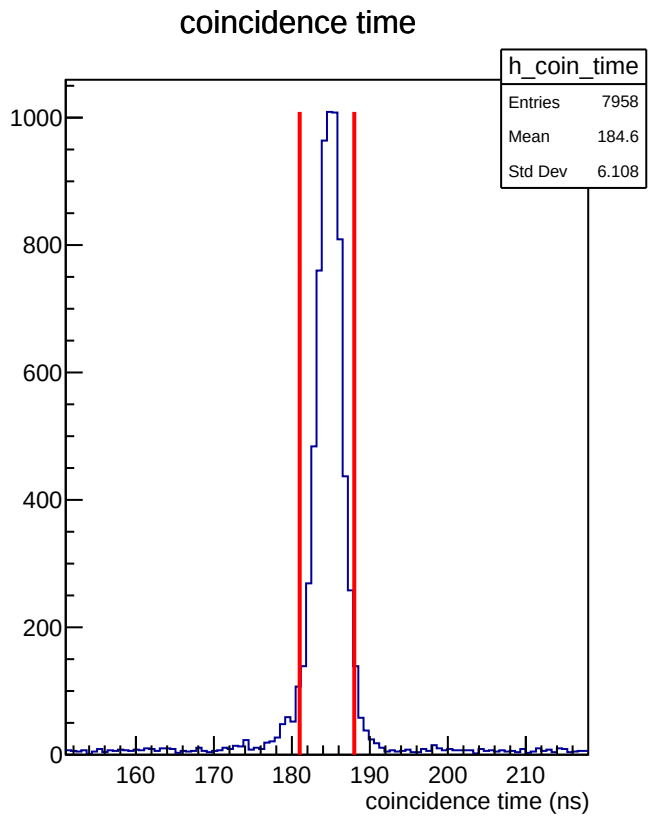

h_nclusters_1
h_nclusters_1
Entries 2252
Mean 6.616
Std Dev 2.826

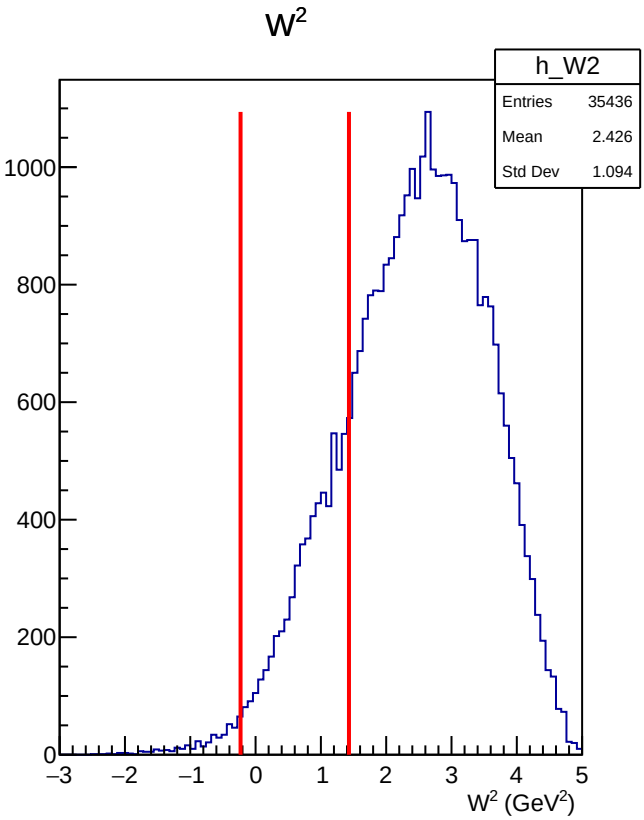

eratio distribution
h_eratio_wide_bins
Entries 358218
Mean 0.05974
Std Dev 0.07626
number of clusters
eratio

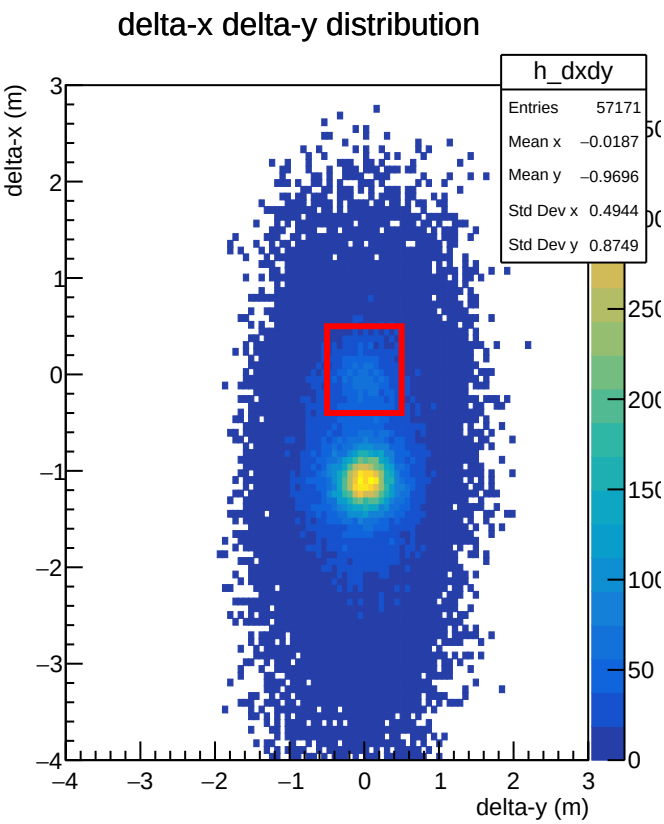

eratio distribution with a tdiff cut
h_eratio_wide_bins_tdiff_cut
Entries 33777
Mean 0.07879
Std Dev 0.1072
number of clusters
eratio


h_nclusters_2
h_nclusters_2
Entries 41040
Mean 7.334
Std Dev 1.854

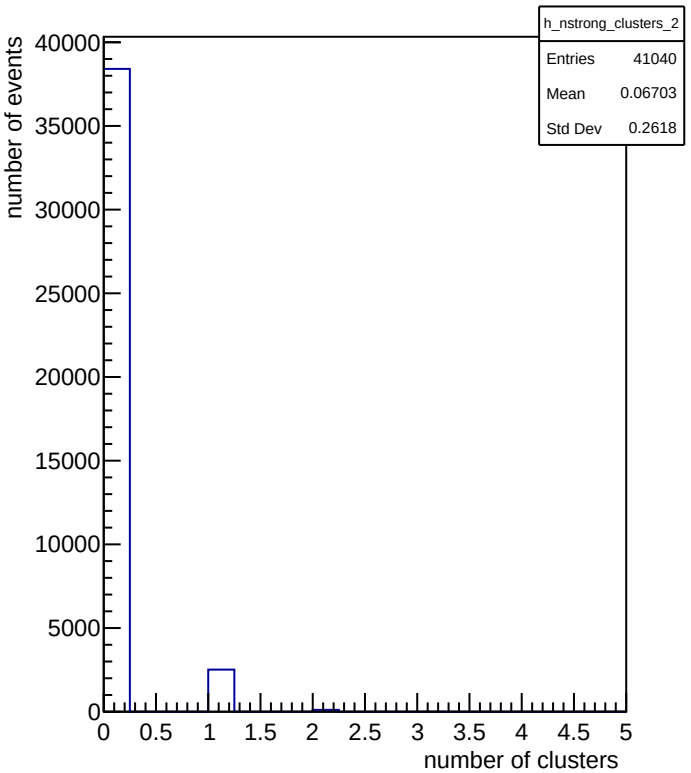

number of clusters with in tdiff per event
h_nstrong_clusters
Entries 41040
Mean 0.8208
Std Dev 0.8658
number of events
number of clusters


coincidence time
h_coin_time
Entries 7958
Mean 184.6
Std Dev 6.108
1000
800
600
400
200
0
160
170
180
190
200
210
coincidence time (ns)

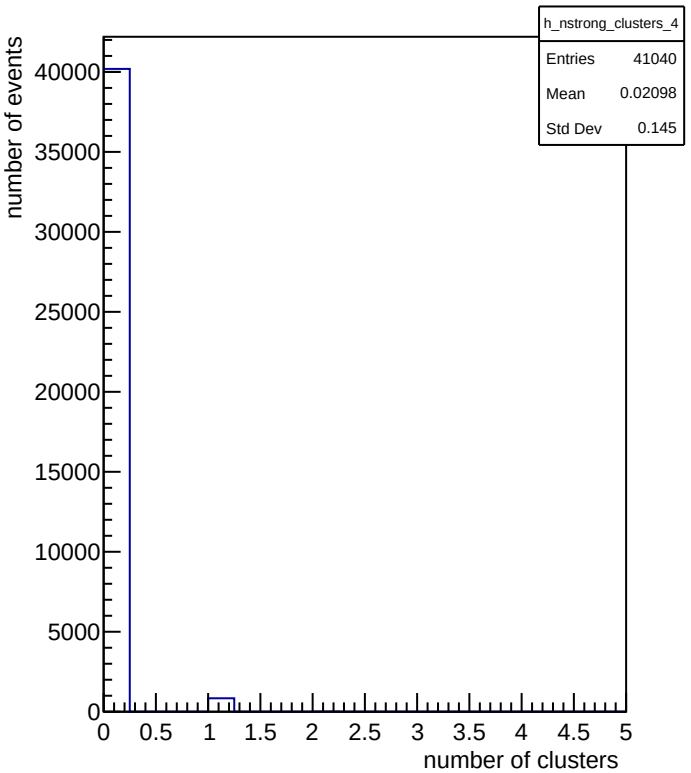

W2
h_W2
Entries 35436
Mean 2.426
Std Dev 1.094
1000
800
600
400
200
0
−3
−2
−1
0
1
2
3
4
5
W2 (GeV2)


delta-x delta-y distribution
h_dxdy
Entries 57171
Mean x −0.0187
Mean y −0.9696
Std Dev x 0.4944
Std Dev y 0.8749
delta-x (m)
delta-y (m)
3
2
1
0
−1
−2
−3
−4
250
200
150
100
50
0

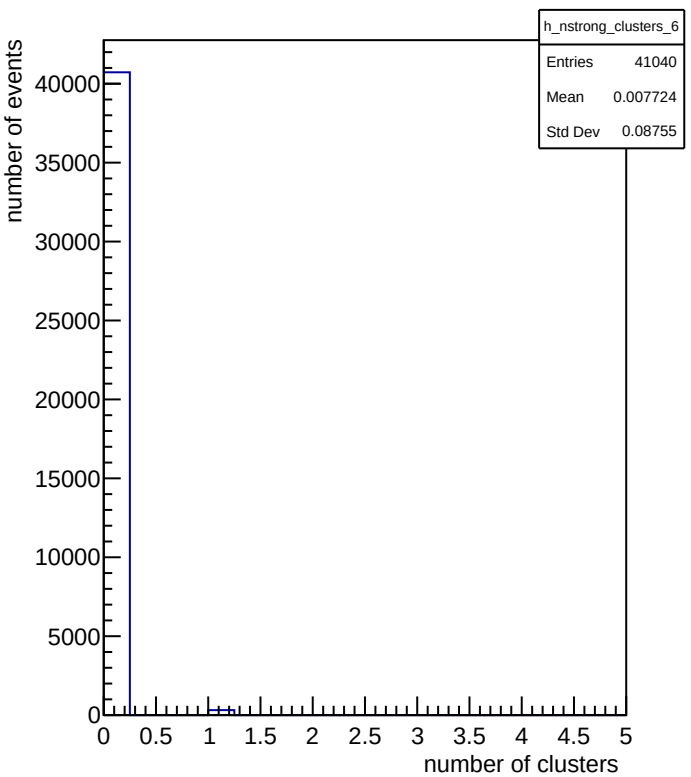
number of clusters with in tdiff with eratio>0.2 per event



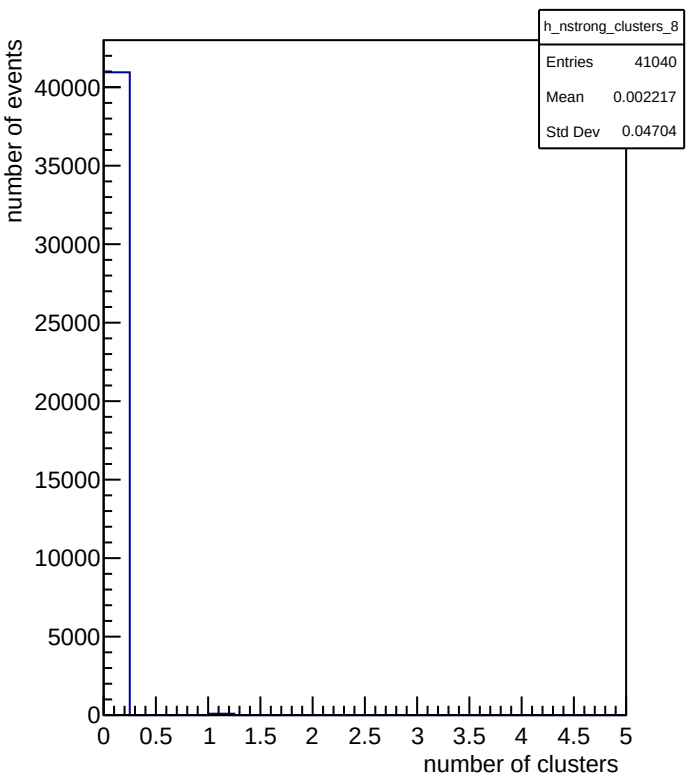
number of clusters with in tdiff with eratio>0.4 per event

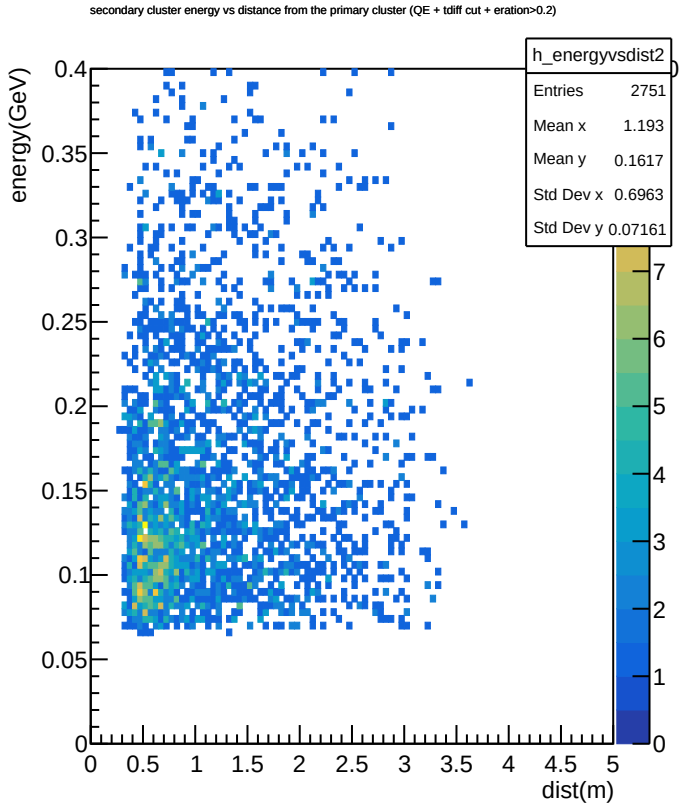


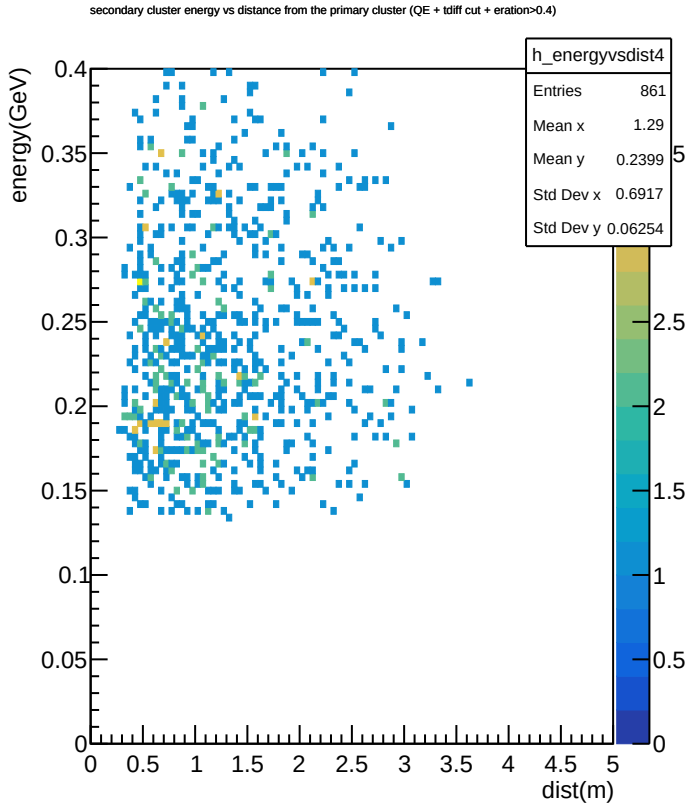
number of clusters with in tdiff with eratio>0.6 per event

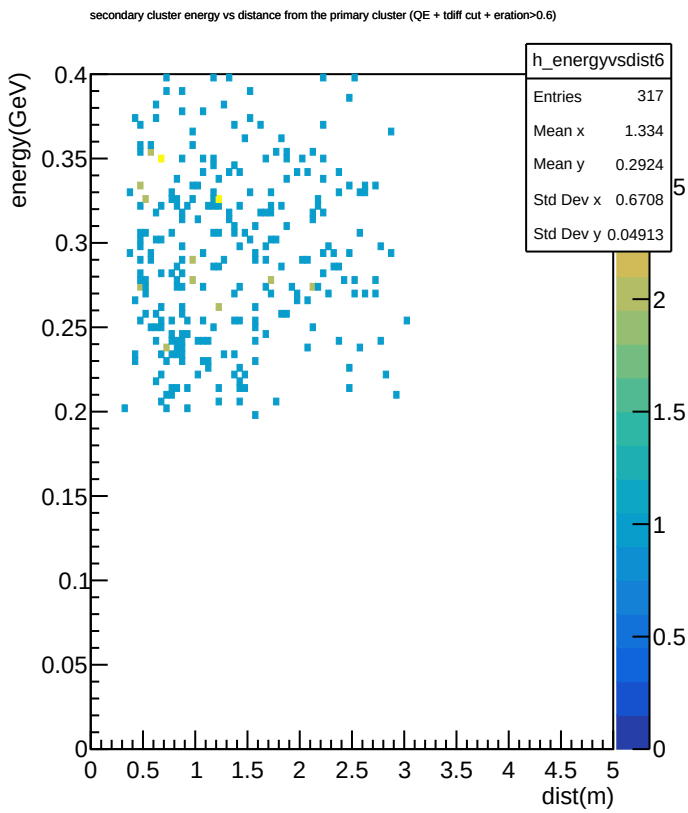


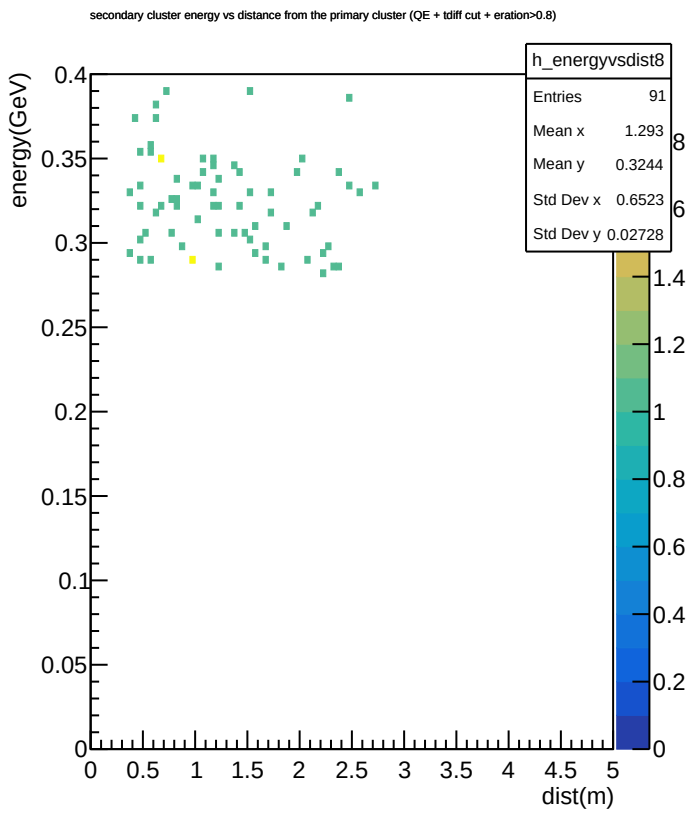
number of clusters with in tdiff with eratio>0.8 per event

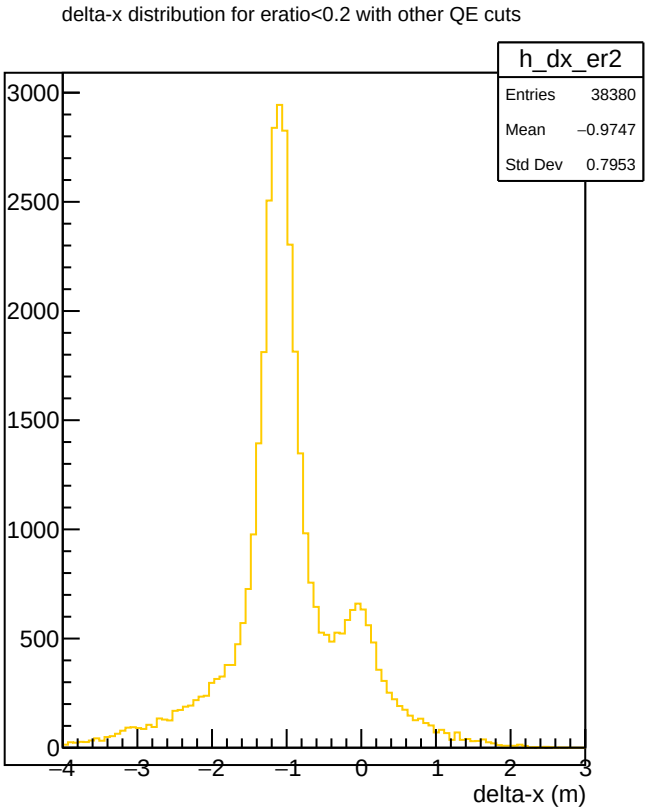


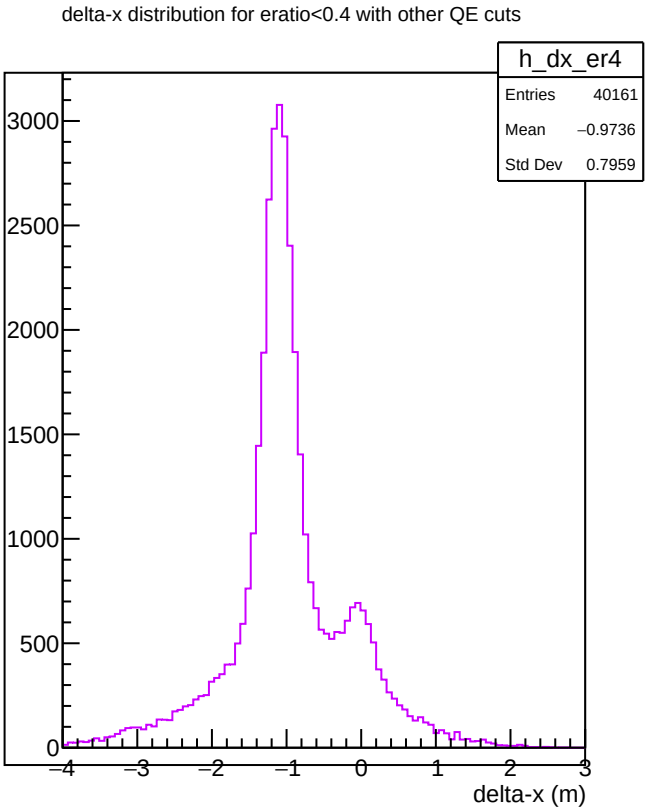

secondary cluster energy vs distance from the primary cluster (QE + tdiff cut + eration>0.2)
h_energyvsdist2
Entries 2751
Mean x 1.193
Mean y 0.1617
Std Dev x 0.6963
Std Dev y 0.07161
energy(GeV)
dist(m)

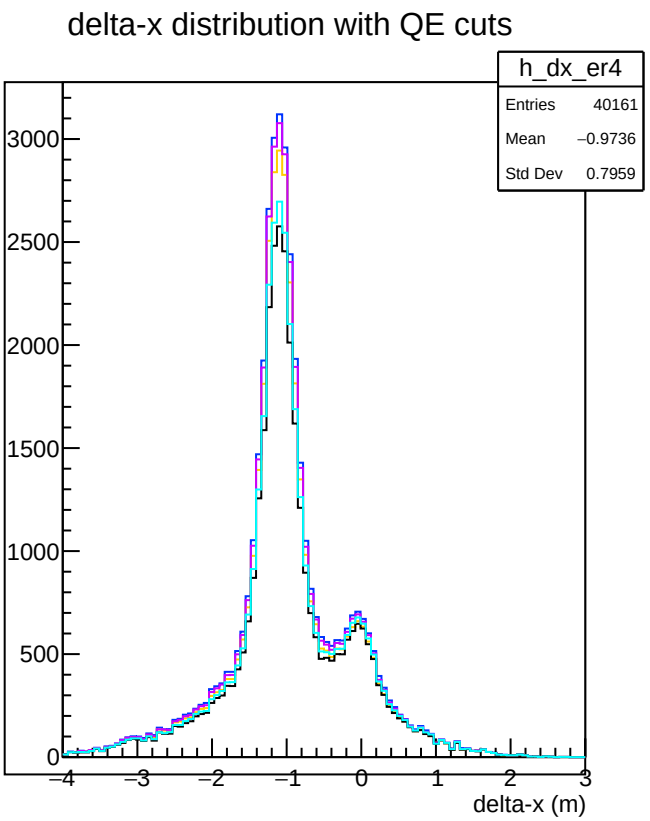

secondary cluster energy vs distance from the primary cluster (QE + tdiff cut + eration>0.4)
h_energyvsdist4
Entries 861
Mean x 1.29
Mean y 0.2399
Std Dev x 0.6917
Std Dev y 0.06254
energy(GeV)
dist(m)

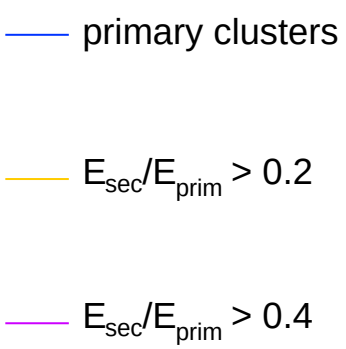

secondary cluster energy vs distance from the primary cluster (QE + tdiff cut + eration>0.6)
h_energyvsdist6
Entries 317
Mean x 1.334
Mean y 0.2924
Std Dev x 0.6708
Std Dev y 0.04913
energy(GeV)
dist(m)


secondary cluster energy vs distance from the primary cluster (QE + tdiff cut + eration>0.8)
h_energyvsdist8
Entries 91
Mean x 1.293
Mean y 0.3244
Std Dev x 0.6523
Std Dev y 0.02728
energy(GeV)
dist(m)

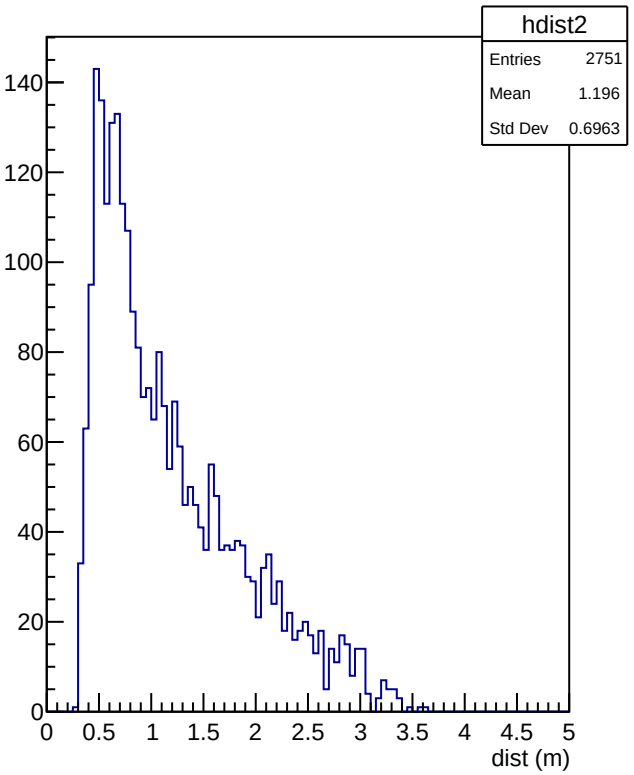

delta-x distribution for eratio<0.2 with other QE cuts
h_dx_er2
Entries 38380
Mean −0.9747
Std Dev 0.7953
3000
2500
2000
1500
1000
500
0
−4 −3 −2 −1 0 1 2 3
delta-x (m)


delta-x distribution for eratio<0.4 with other QE cuts
h_dx_er4
Entries 40161
Mean −0.9736
Std Dev 0.7959
3000
2500
2000
1500
1000
500
0
−4 −3 −2 −1 0 1 2 3
delta-x (m)

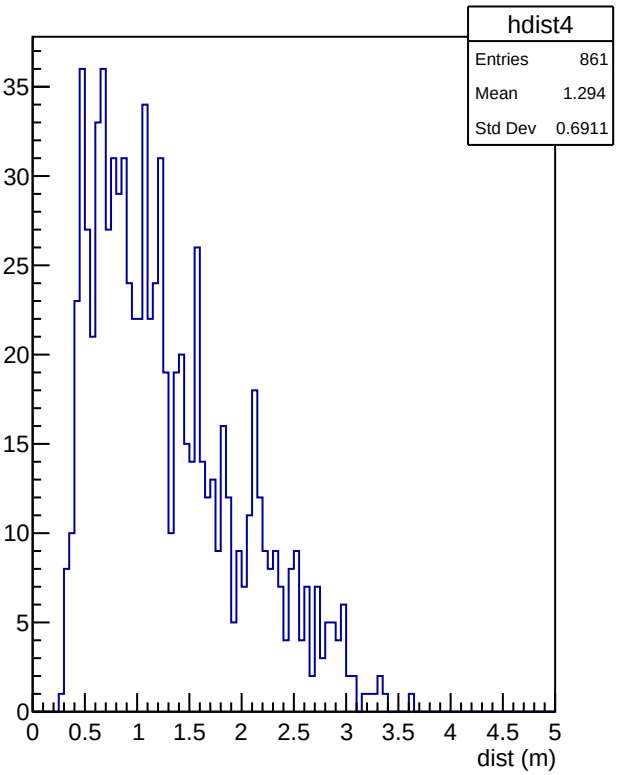

delta-x distribution with QE cuts
h_dx_er4
Entries 40161
Mean −0.9736
Std Dev 0.7959
3000
2500
2000
1500
1000
500
0
−4 −3 −2 −1 0 1 2 3
delta-x (m)


primary clusters
$E_{sec}/E_{prim} > 0.2$
$E_{sec}/E_{prim} > 0.4$

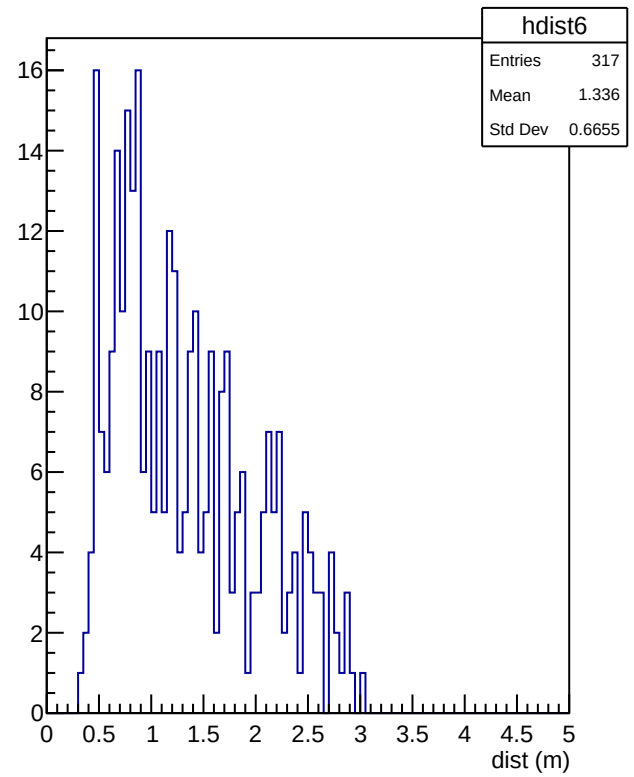
distance from the primary cluster to the secondaries (QE + tdiff cut + eration>0.2)



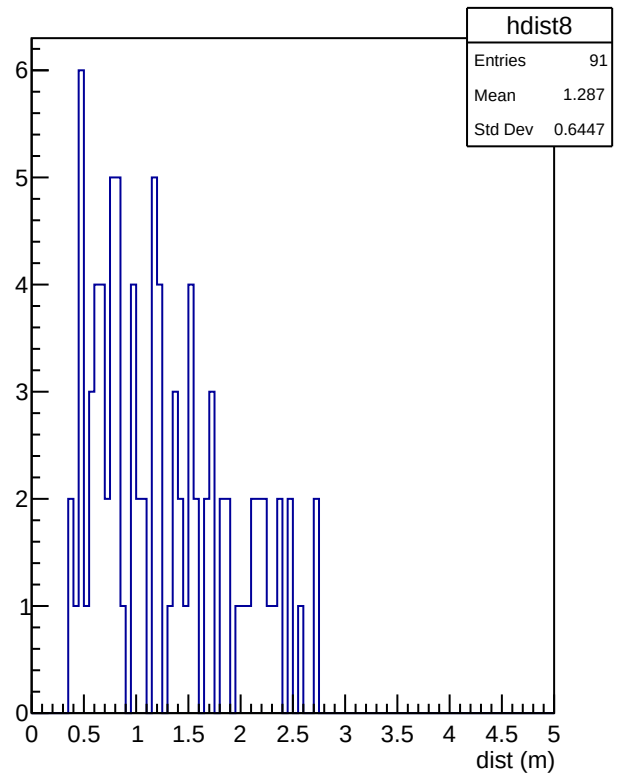
distance from the primary cluster to the secondaries (QE + tdiff cut + eration>0.4)

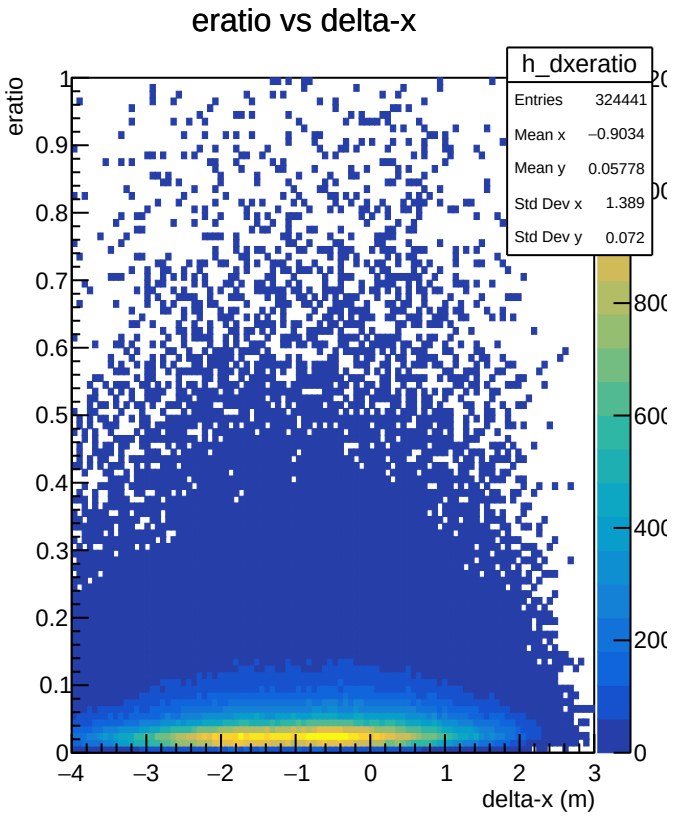


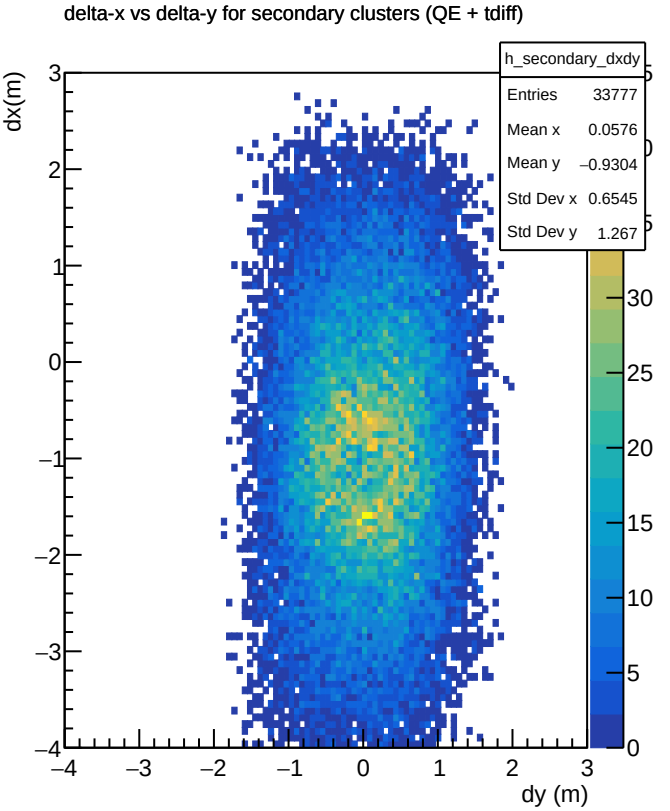
distance from the primary cluster to the secondaries (QE + tdiff cut + eration>0.6)

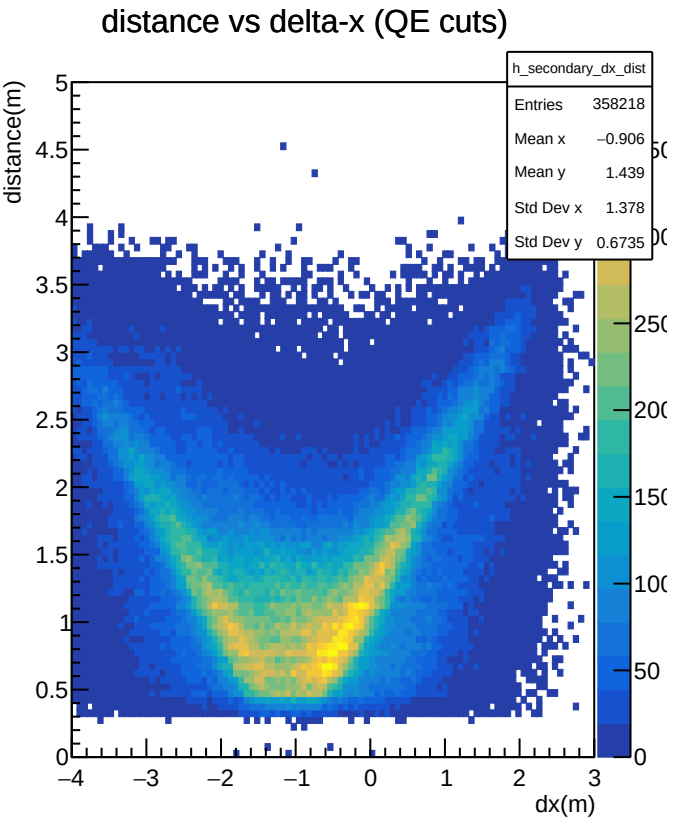


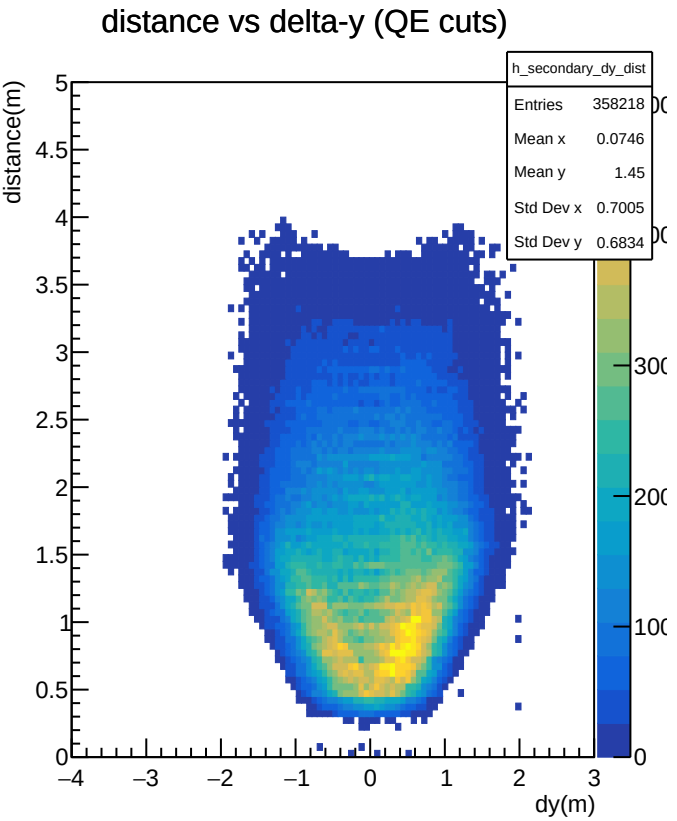
distance from the primary cluster to the secondaries (QE + tdiff cut + eration>0.8)

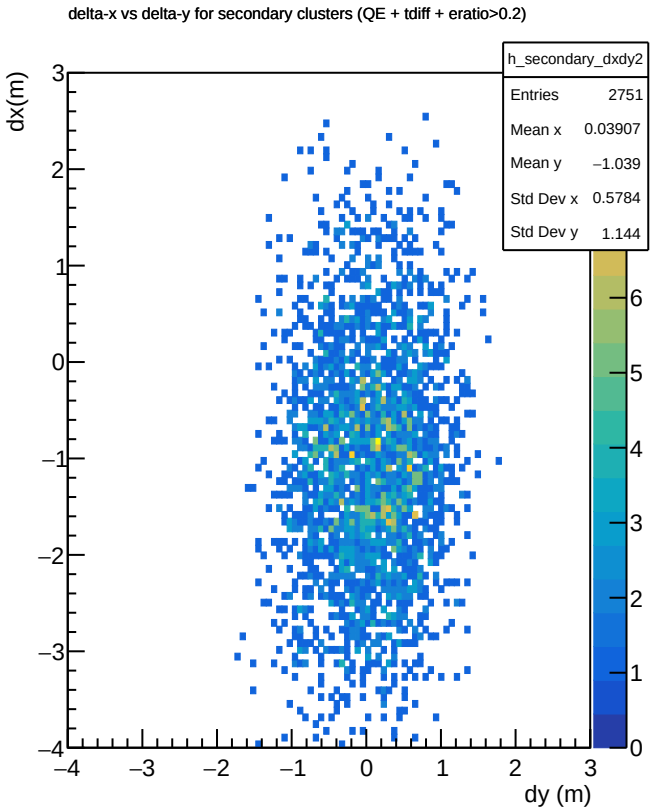


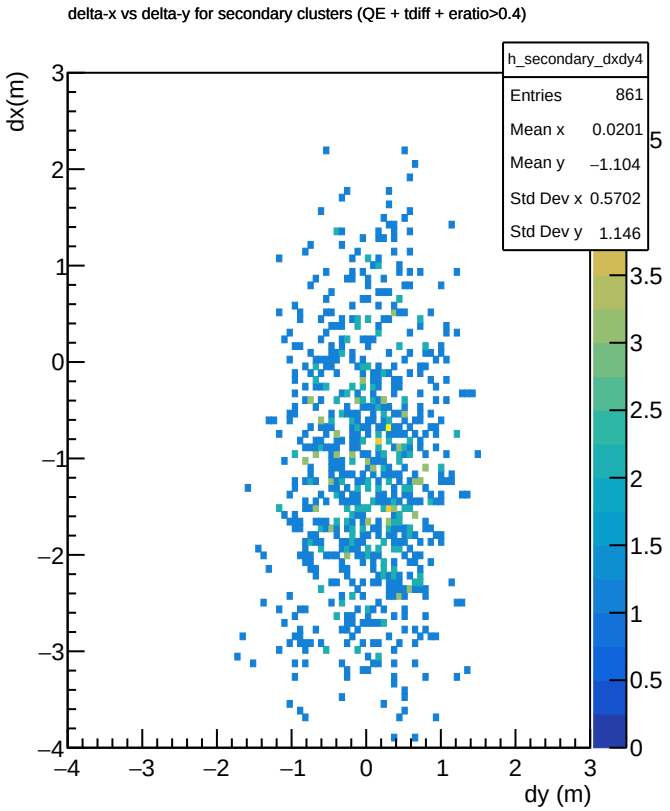

eratio vs delta-x
h_dxeratio
Entries 324441
Mean x −0.9034
Mean y 0.05778
Std Dev x 1.389
Std Dev y 0.072
eratio
delta-x (m)

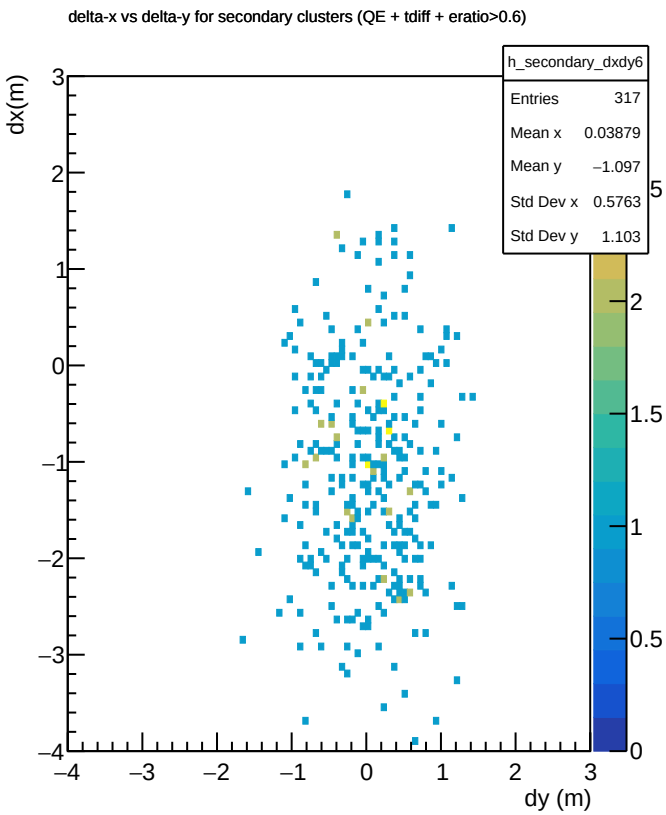

delta-x vs delta-y for secondary clusters (QE + tdiff)
h_secondary_dxdy
Entries 33777
Mean x 0.0576
Mean y −0.9304
Std Dev x 0.6545
Std Dev y 1.267
dx(m)
dy (m)

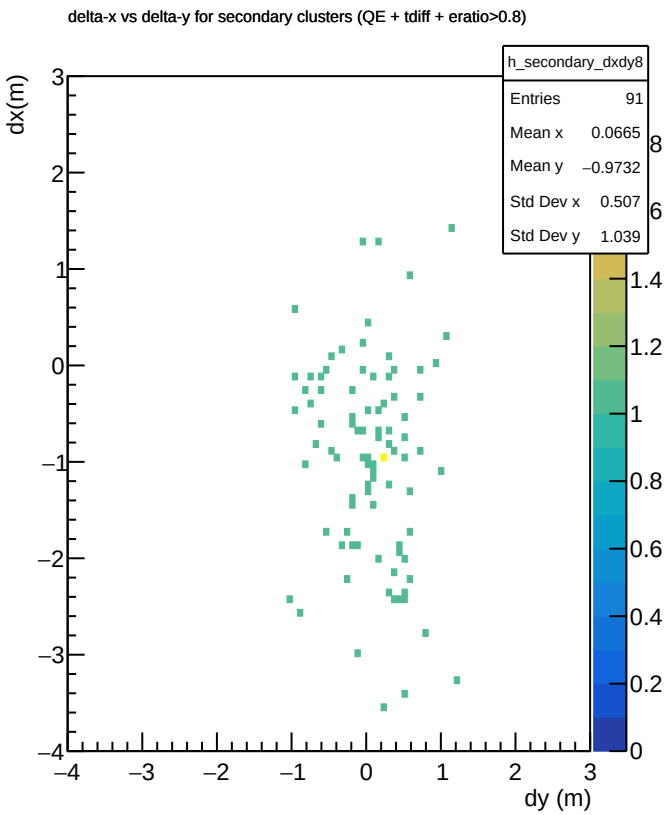

distance vs delta-x (QE cuts)
h_secondary_dx_dist
Entries 358218
Mean x −0.906
Mean y 1.439
Std Dev x 1.378
Std Dev y 0.6735
distance(m)
dx(m)

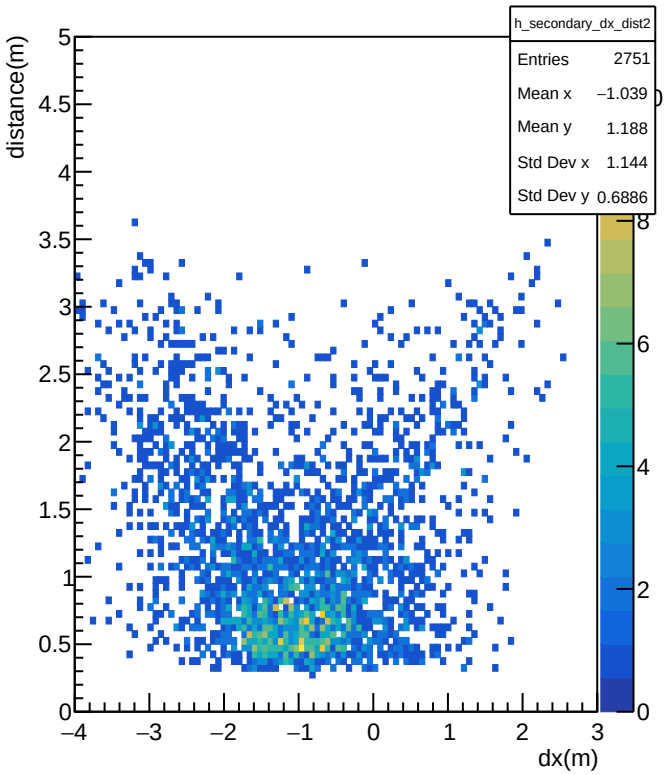

distance vs delta-y (QE cuts)
h_secondary_dy_dist
Entries 358218
Mean x 0.0746
Mean y 1.45
Std Dev x 0.7005
Std Dev y 0.6834
distance(m)
dy(m)

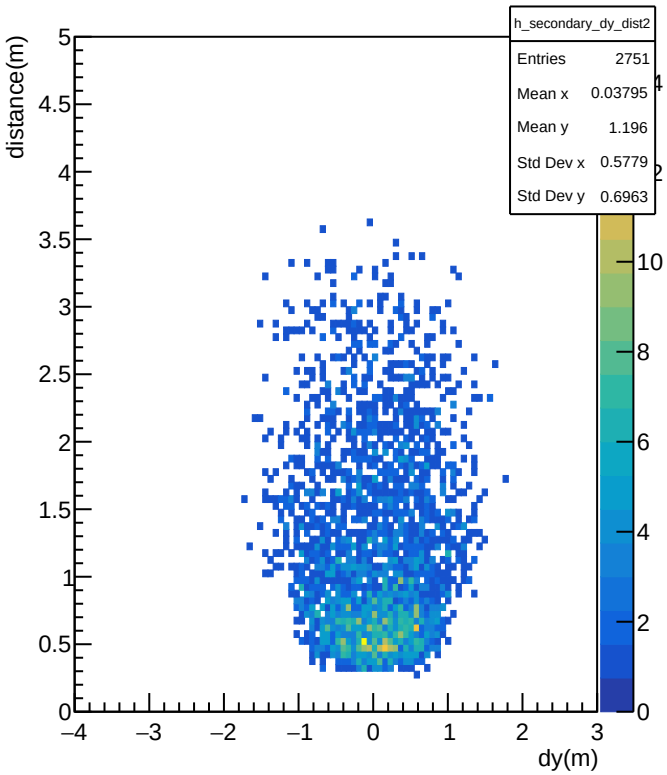

delta-x vs delta-y for secondary clusters (QE + tdiff + eratio>0.2)
h_secondary_dxdy2
Entries 2751
Mean x 0.03907
Mean y −1.039
Std Dev x 0.5784
Std Dev y 1.144
dx(m)
dy (m)

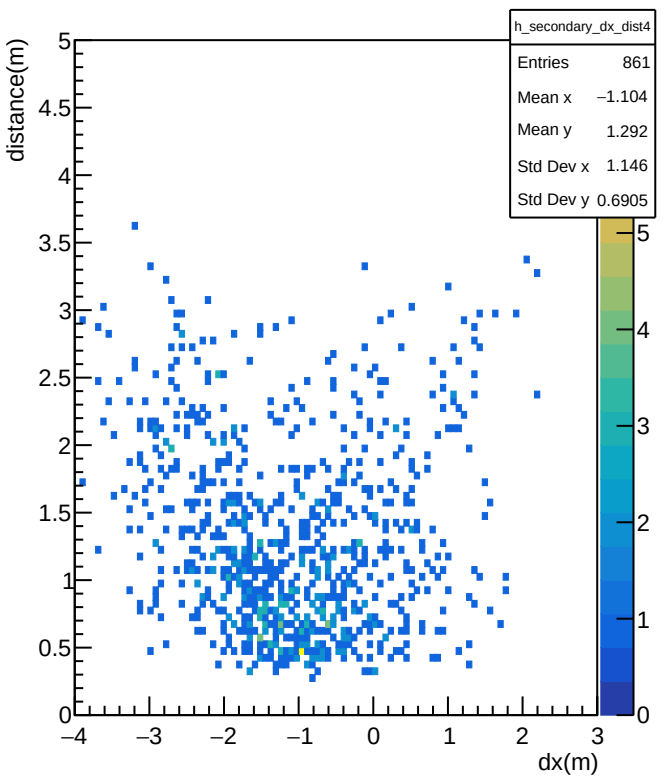

delta-x vs delta-y for secondary clusters (QE + tdiff + eratio>0.4)
h_secondary_dxdy4
Entries 861
Mean x 0.0201
Mean y −1.104
Std Dev x 0.5702
Std Dev y 1.146
dx(m)
dy (m)

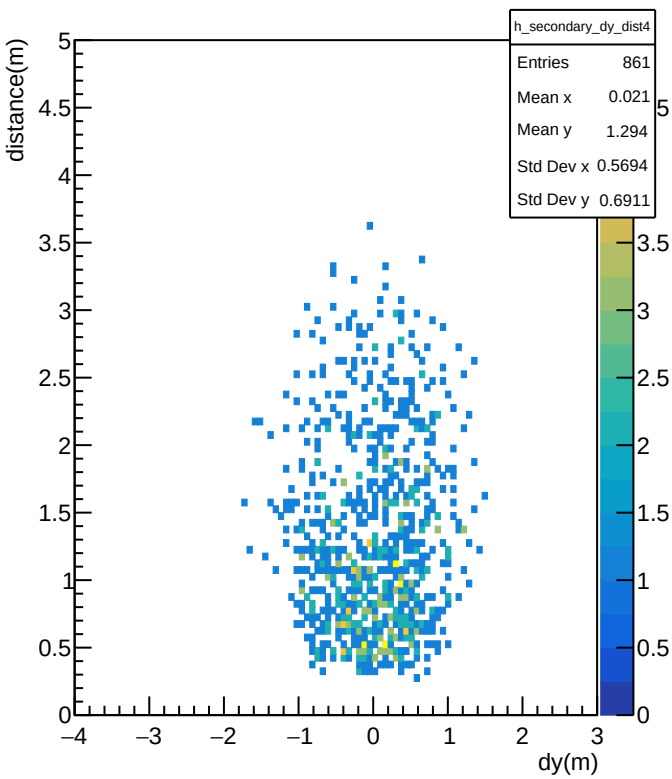

delta-x vs delta-y for secondary clusters (QE + tdiff + eratio>0.6)
h_secondary_dxdy6
Entries 317
Mean x 0.03879
Mean y −1.097
Std Dev x 0.5763
Std Dev y 1.103
dx(m)
dy (m)

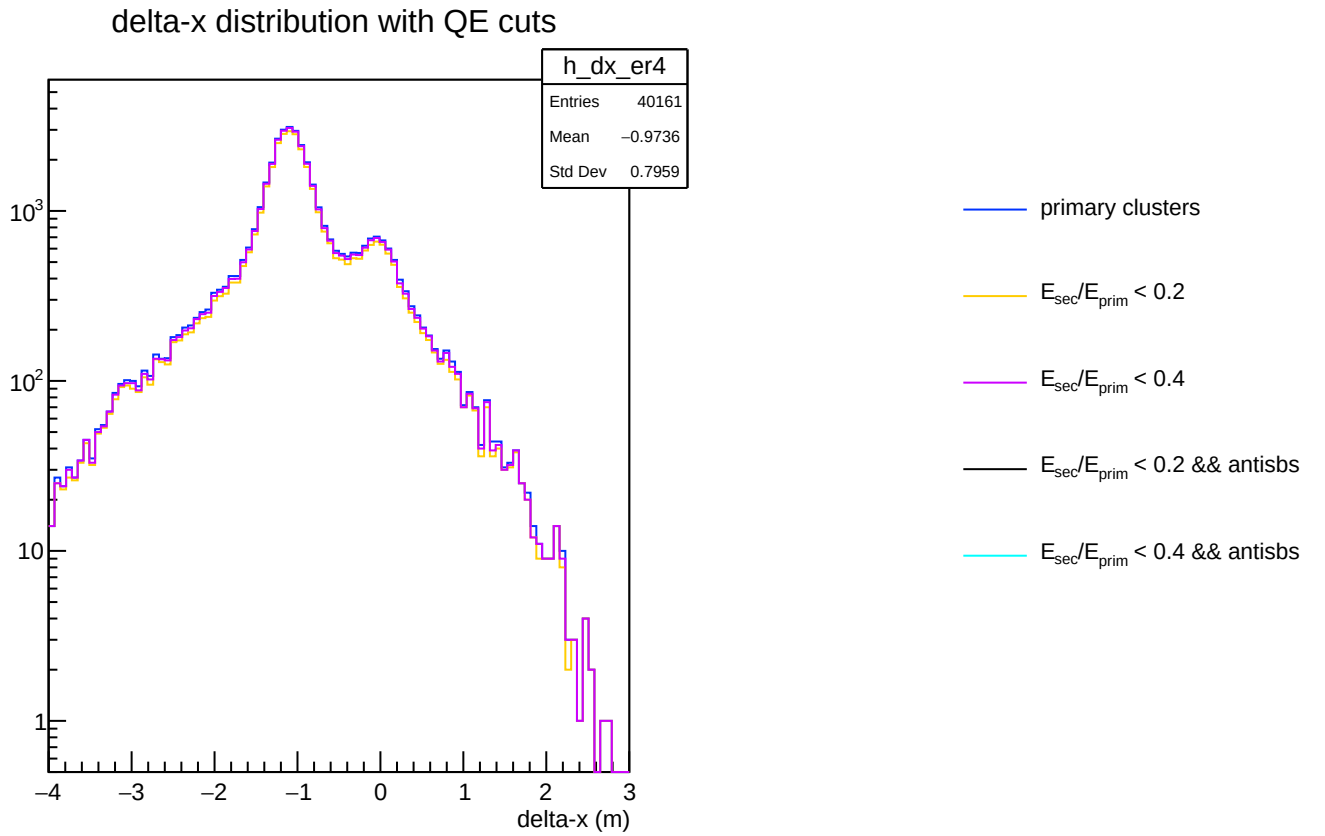

delta-x vs delta-y for secondary clusters (QE + tdiff + eratio>0.8)
h_secondary_dxdy8
Entries 91
Mean x 0.0665
Mean y −0.9732
Std Dev x 0.507
Std Dev y 1.039
dx(m)
dy (m)


distance vs delta-x (QE + tdiff + eratio>0.2)
h_secondary_dx_dist2
Entries 2751
Mean x −1.039
Mean y 1.188
Std Dev x 1.144
Std Dev y 0.6886
distance(m)
dx(m)


distance vs delta-y (QE + tdiff + eratio>0.2)
h_secondary_dy_dist2
Entries 2751
Mean x 0.03795
Mean y 1.196
Std Dev x 0.5779
Std Dev y 0.6963
distance(m)
dy(m)


distance vs delta-x (QE + tdiff + eratio>0.4)
h_secondary_dx_dist4
Entries 861
Mean x −1.104
Mean y 1.292
Std Dev x 1.146
Std Dev y 0.6905
distance(m)
dx(m)


distance vs delta-y (QE + tdiff + eratio>0.4)
h_secondary_dy_dist4
Entries 861
Mean x 0.021
Mean y 1.294
Std Dev x 0.5694
Std Dev y 0.6911
distance(m)
dy(m)


delta-x distribution with QE cuts
h_dx_er4
Entries 40161
Mean −0.9736
Std Dev 0.7959
10^3
10^2
10
1
−4
−3
−2
−1
0
1
2
3
delta-x (m)
primary clusters
$E_{sec}/E_{prim} < 0.2$
$E_{sec}/E_{prim} < 0.4$
$E_{sec}/E_{prim} < 0.2$ && antisbs
$E_{sec}/E_{prim} < 0.4$ && antisbs