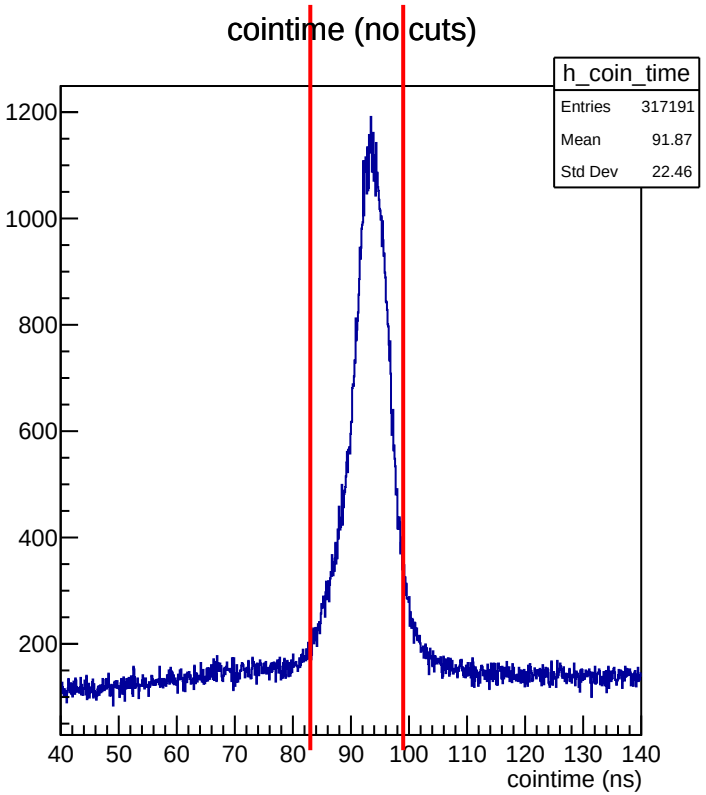
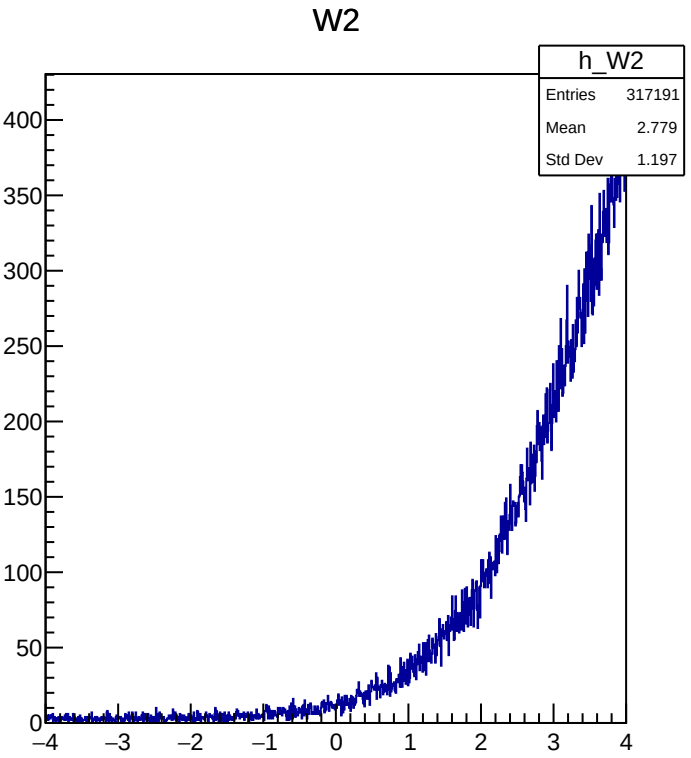
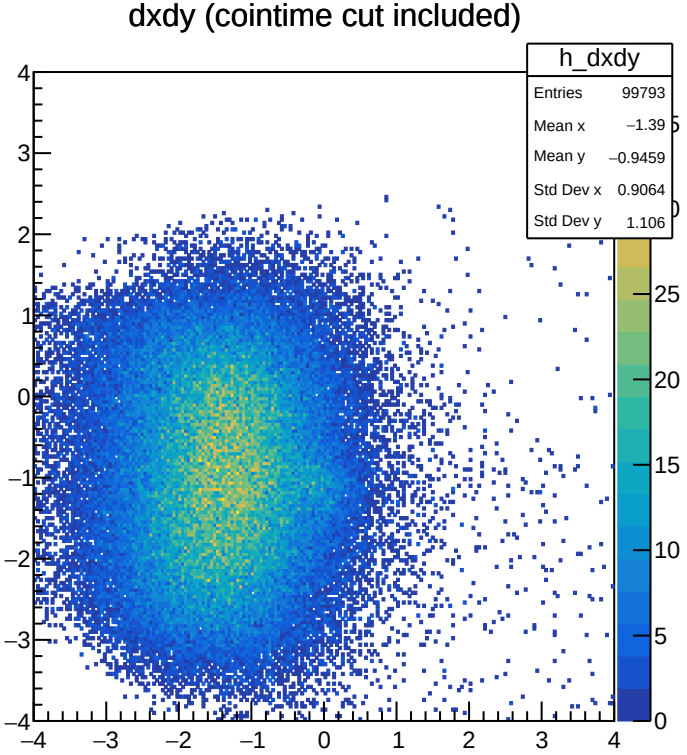
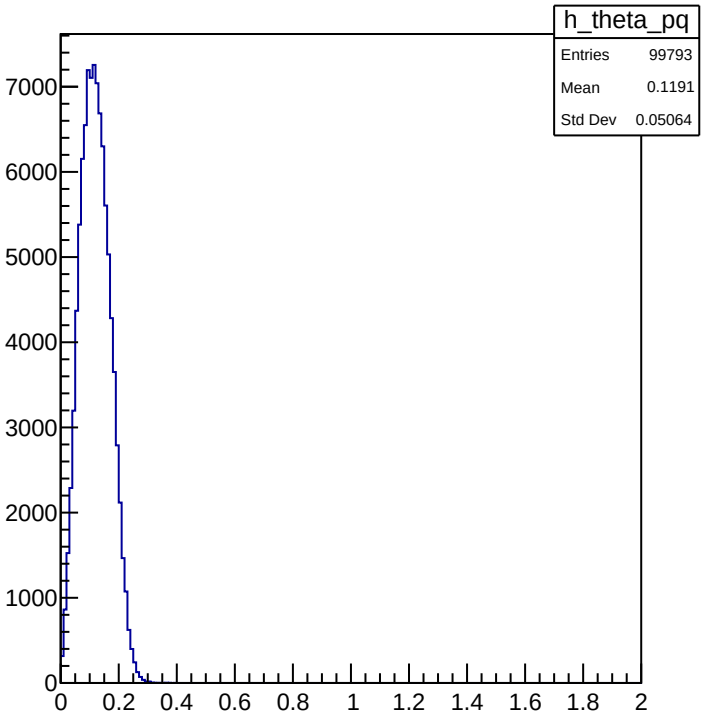

cointime (no cuts)
h_coin_time
Entries 317191
Mean 91.87
Std Dev 22.46
cointime (ns)

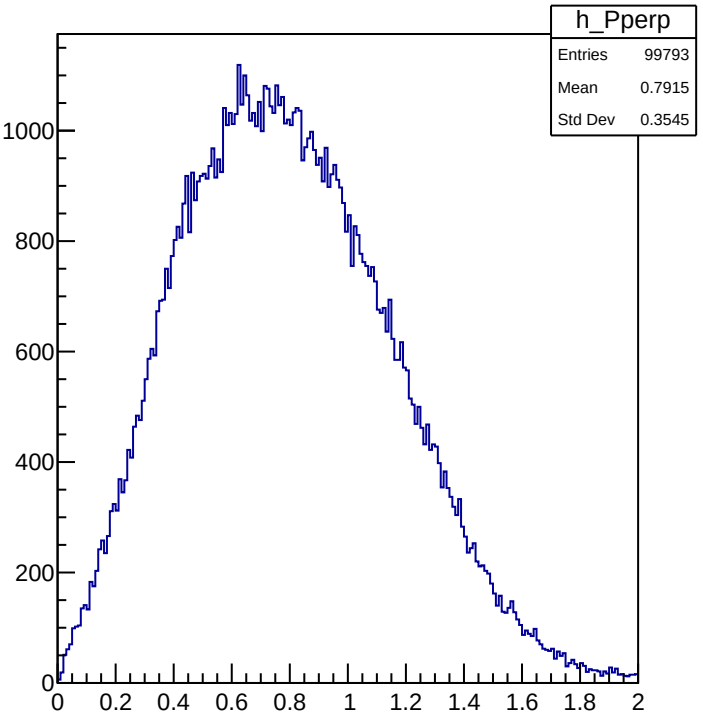

W2
h_W2
Entries 317191
Mean 2.779
Std Dev 1.197


dxdy (cointime cut included)
h_dxdy
Entries 99793
Mean x −1.39
Mean y −0.9459
Std Dev x 0.9064
Std Dev y 1.106

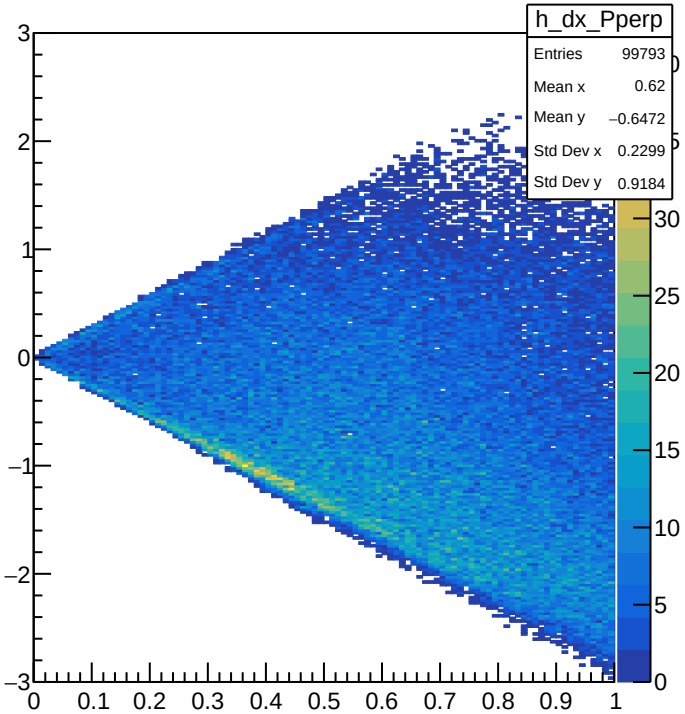
theta_pq only with cointime cut



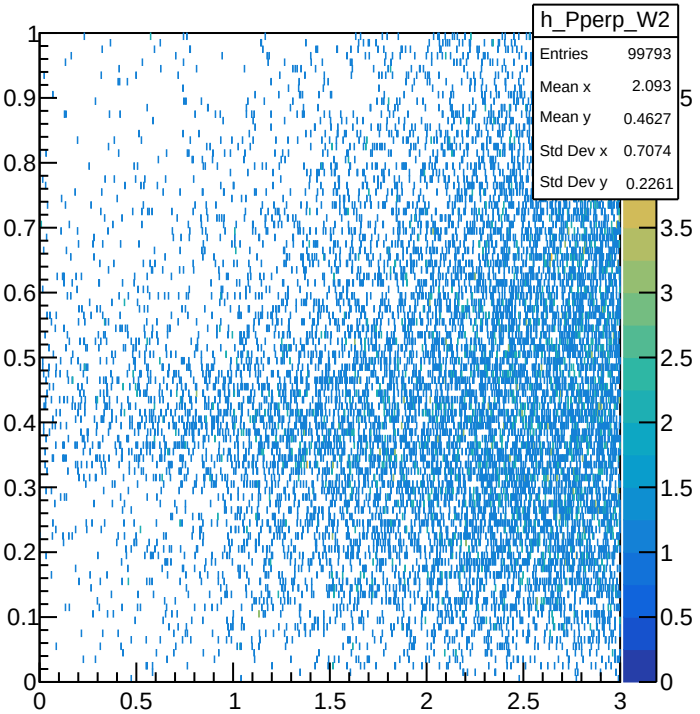
Pperp only with cointime cut



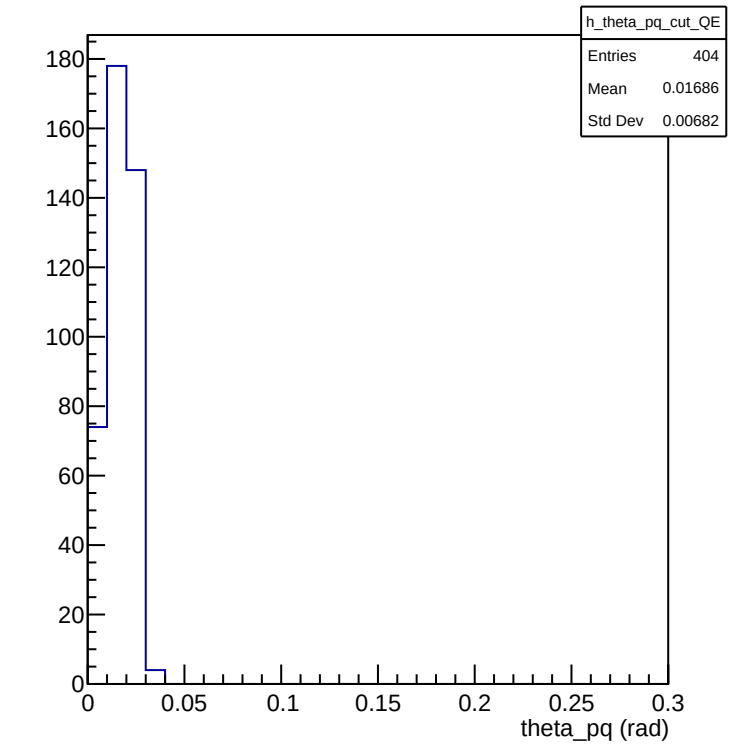
dx v Pperp dist only with cointime cut



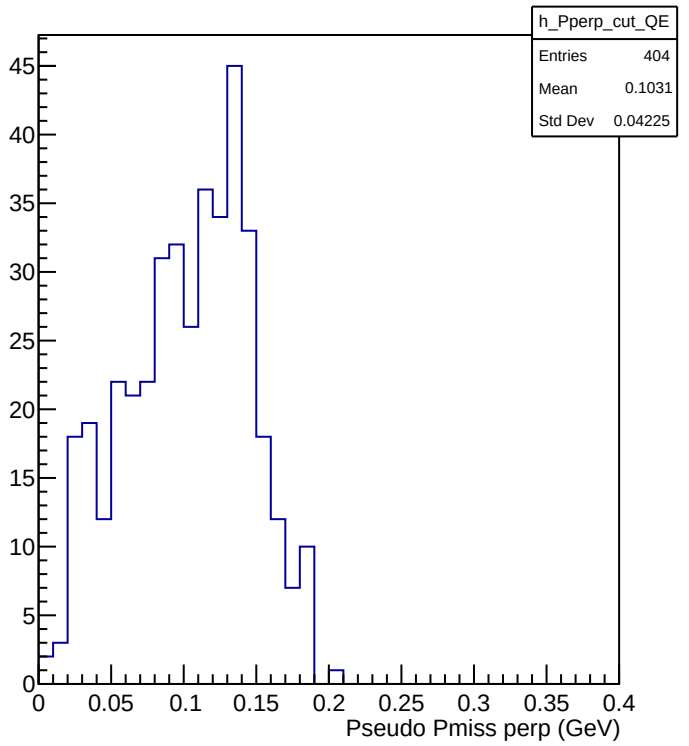
Pperp v W2 dist only with cointime cut



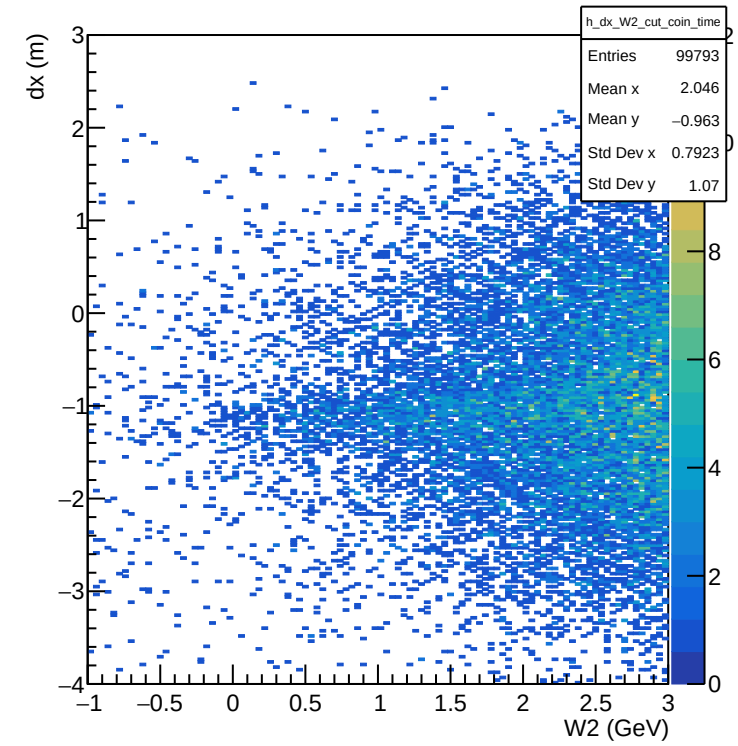
theta_pq with QE cuts



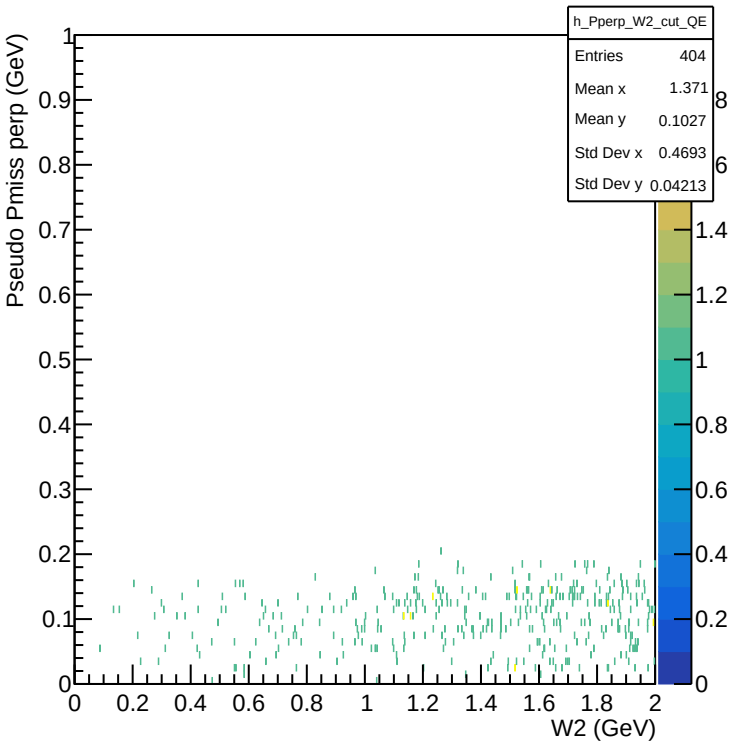
Pperp with QE cuts

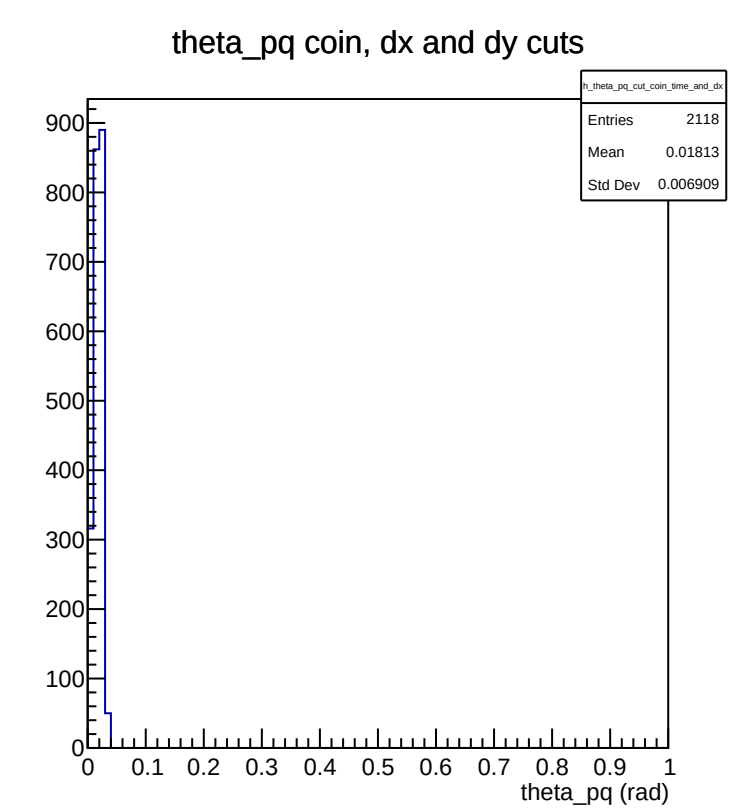


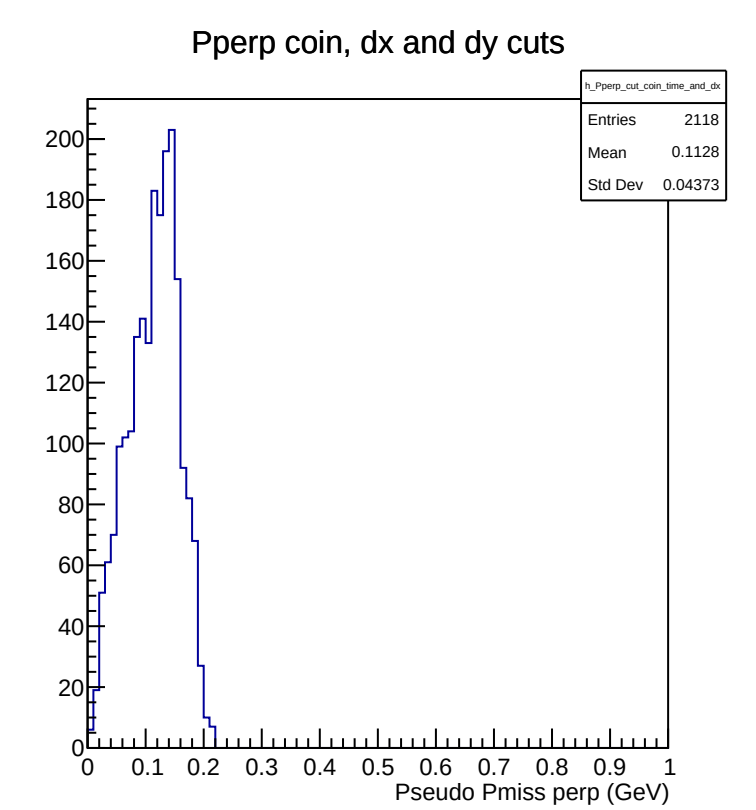
dx v W2 dist with coin time cut

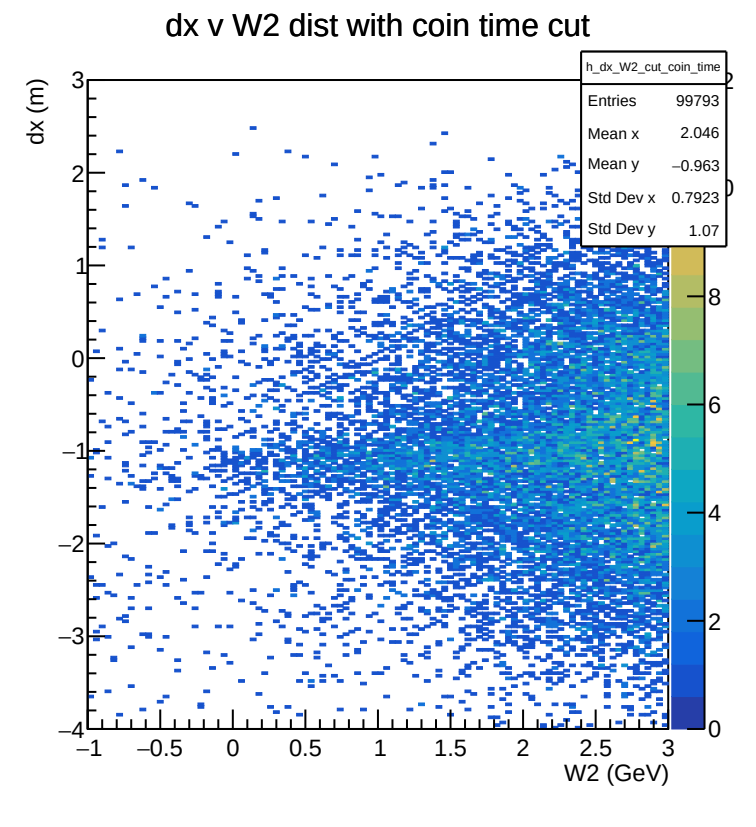


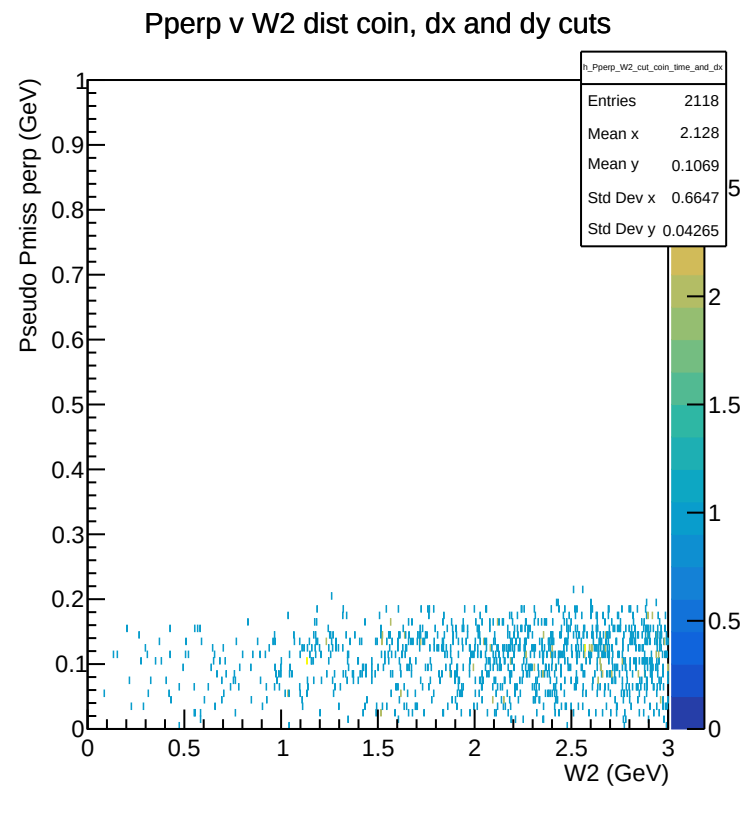
Pperp v W2 dist with QE cuts



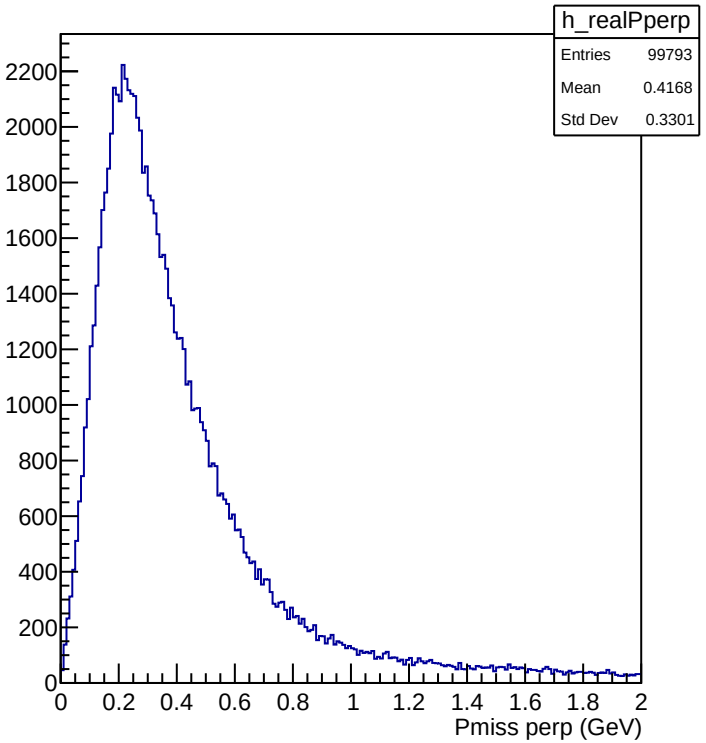

theta_pq coin, dx and dy cuts
h_theta_pq_cut_coin_time_and_dx
Entries 2118
Mean 0.01813
Std Dev 0.006909
theta_pq (rad)


Pperp coin, dx and dy cuts
h_Pperp_cut_coin_time_and_dx
Entries 2118
Mean 0.1128
Std Dev 0.04373
Pseudo Pmiss perp (GeV)

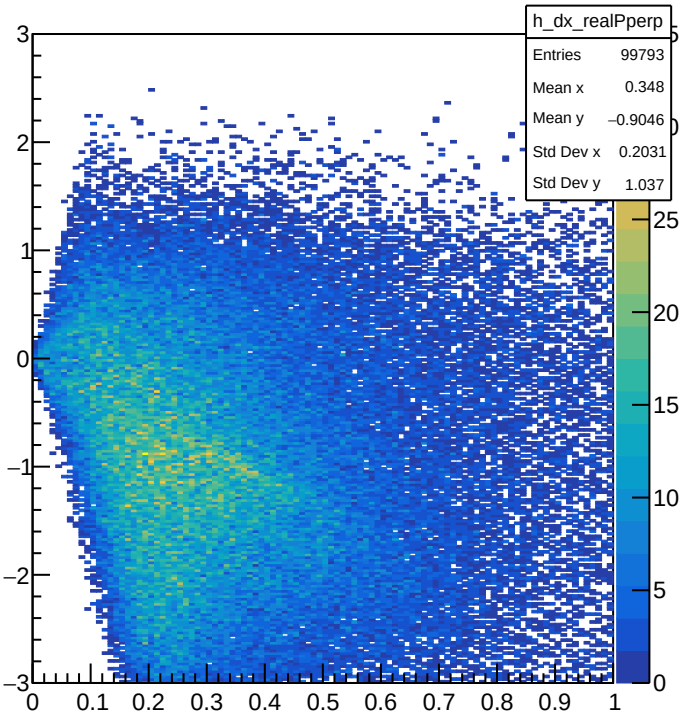

dx v W2 dist with coin time cut
h_dx_W2_cut_coin_time
Entries 99793
Mean x 2.046
Mean y −0.963
Std Dev x 0.7923
Std Dev y 1.07
dx (m)
W2 (GeV)


Pperp v W2 dist coin, dx and dy cuts
h_Pperp_W2_cut_coin_time_and_dx
Entries 2118
Mean x 2.128
Mean y 0.1069
Std Dev x 0.6647
Std Dev y 0.04265
Pseudo Pmiss perp (GeV)
W2 (GeV)

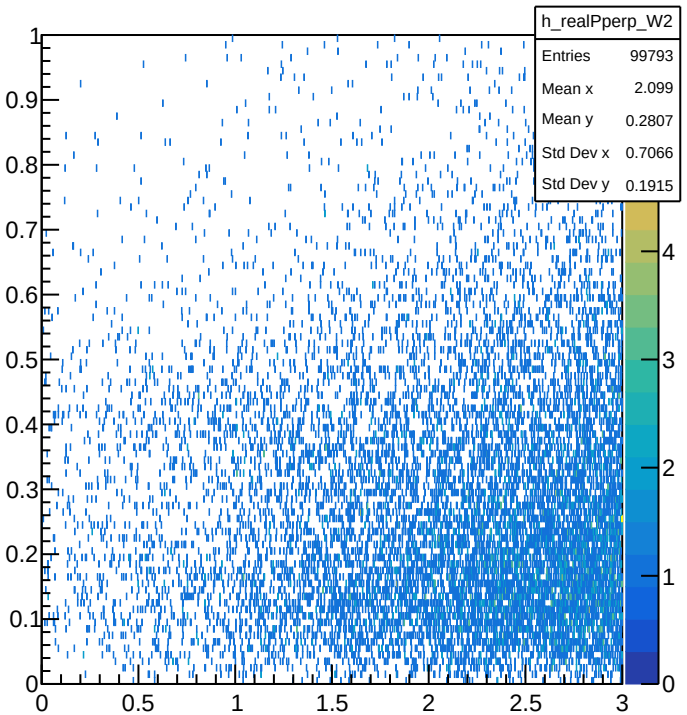
realPperp only with cointime cut

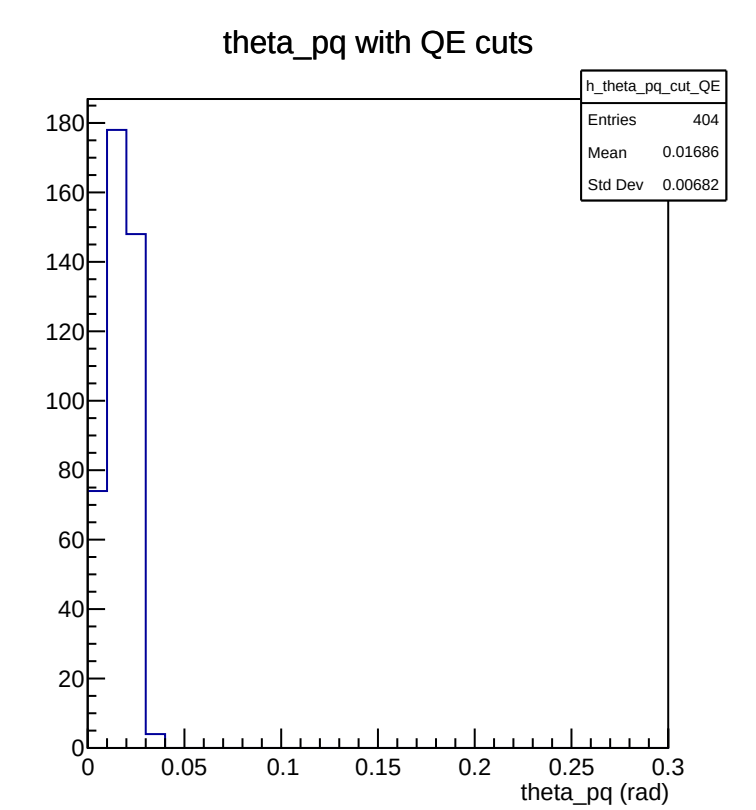


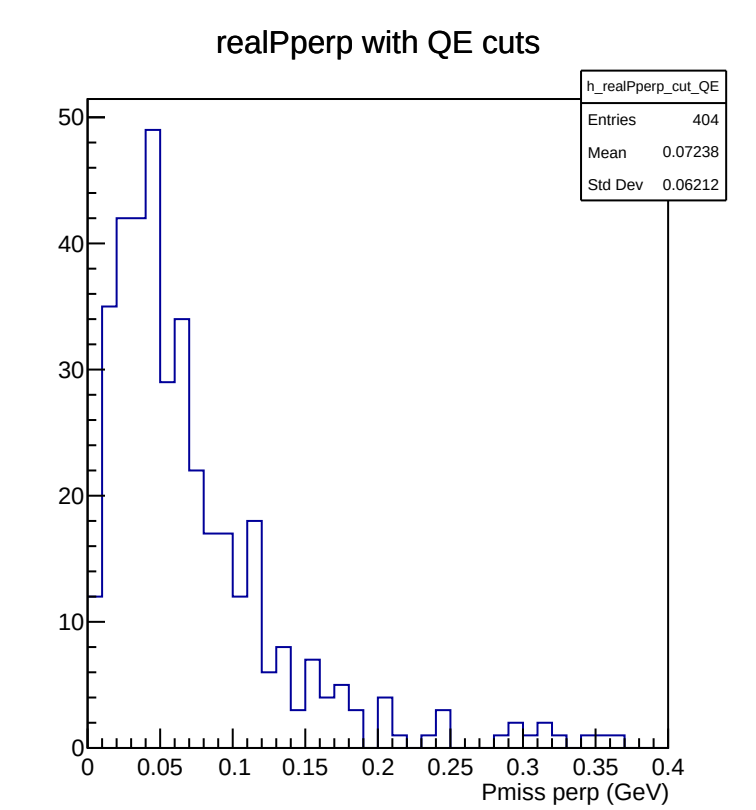
dx v realPperp dist only with cointime cut

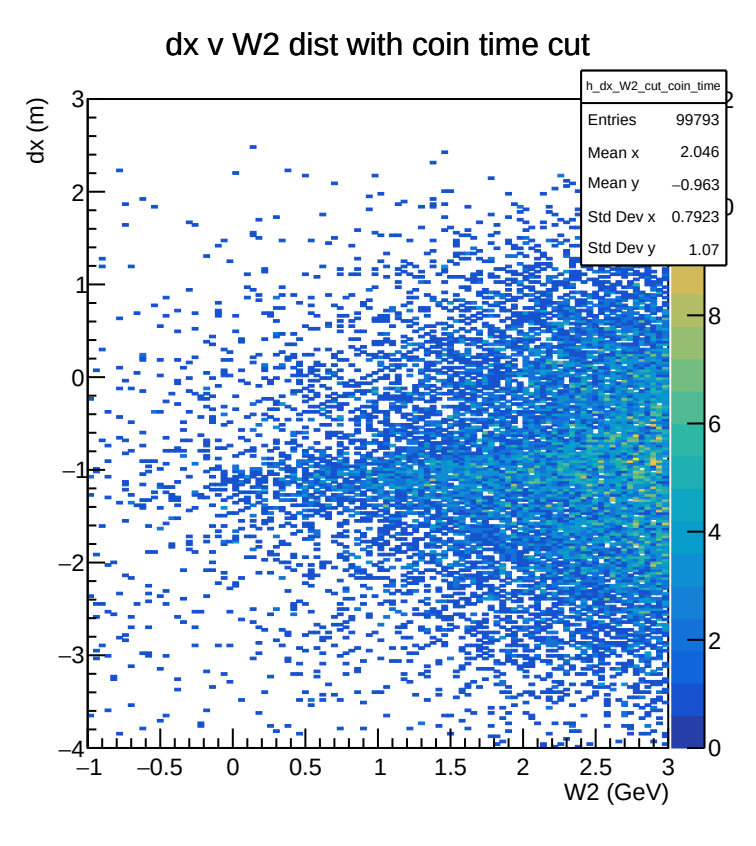


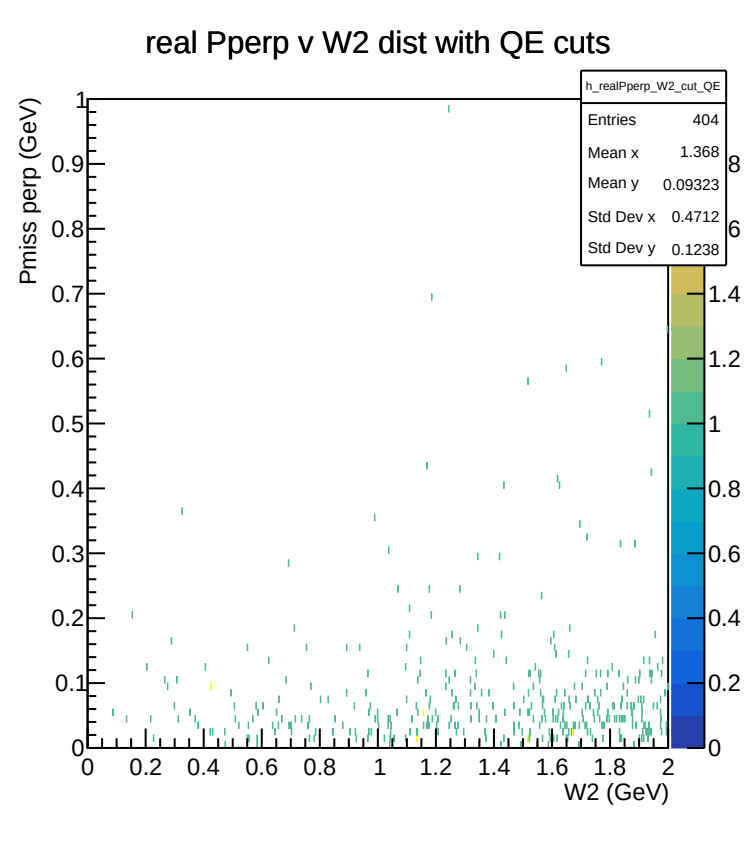
realPperp v W2 dist only with cointime cut

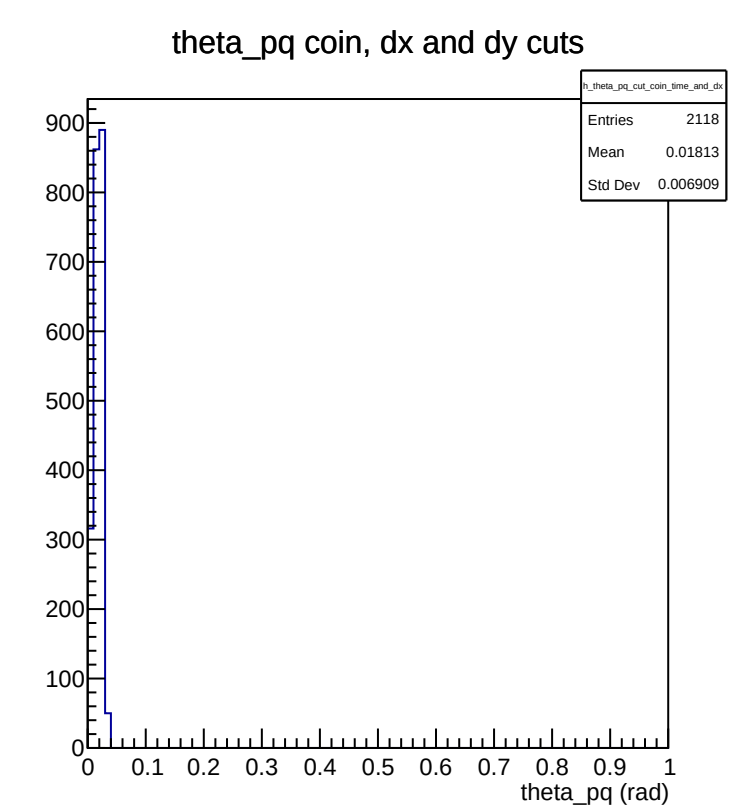


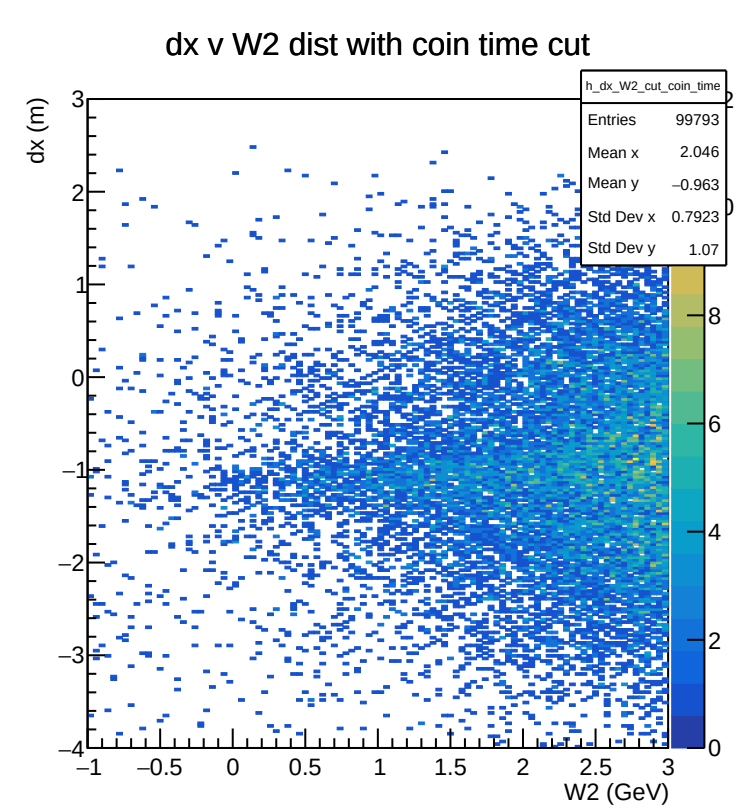

theta_pq with QE cuts
h_theta_pq_cut_QE
Entries 404
Mean 0.01686
Std Dev 0.00682
theta_pq (rad)

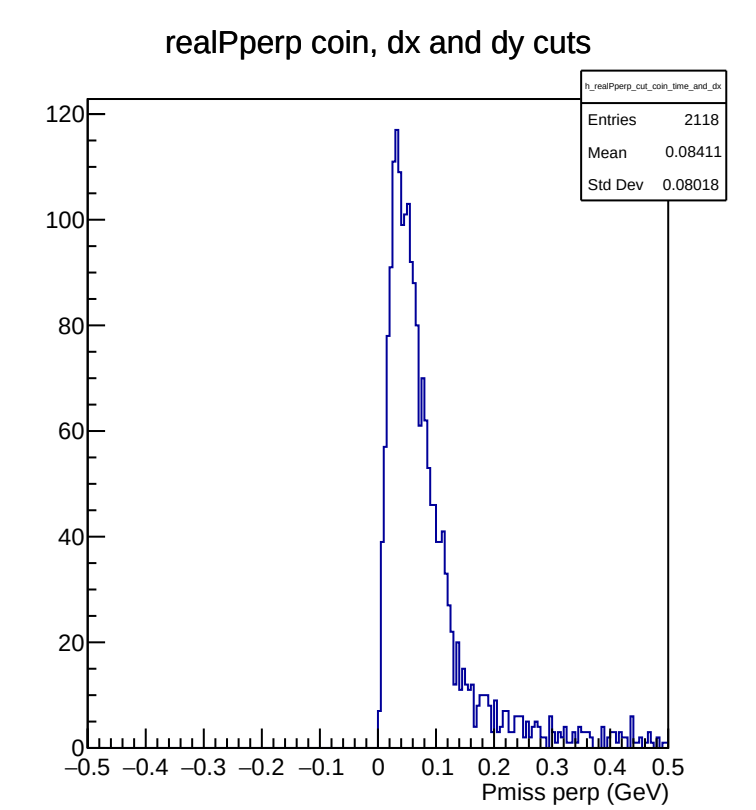

realPperp with QE cuts
h_realPperp_cut_QE
Entries 404
Mean 0.07238
Std Dev 0.06212
Pmiss perp (GeV)

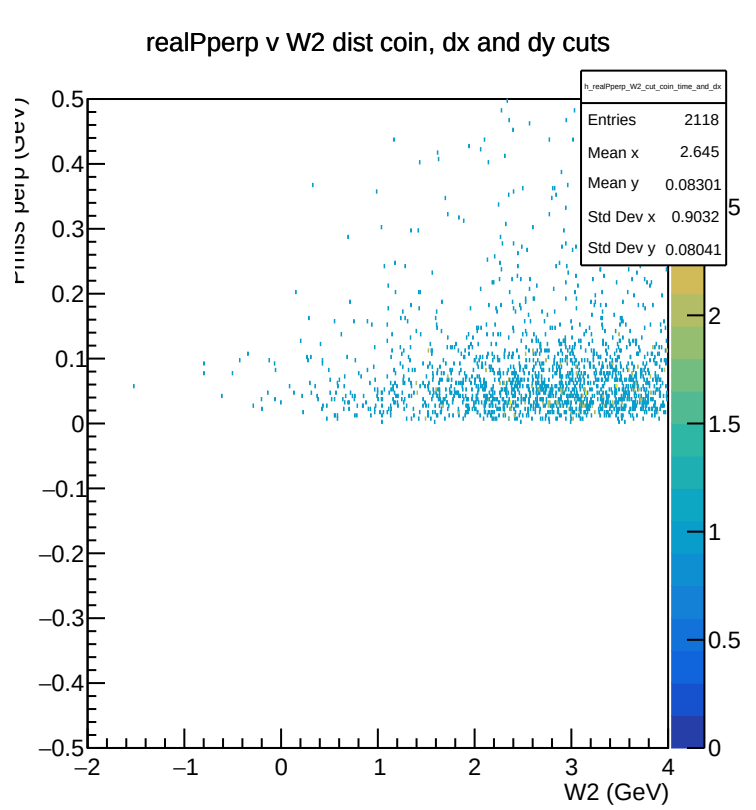

dx v W2 dist with coin time cut
h_dx_W2_cut_coin_time
Entries 99793
Mean x 2.046
Mean y −0.963
Std Dev x 0.7923
Std Dev y 1.07
dx (m)
W2 (GeV)


real Pperp v W2 dist with QE cuts
h_realPperp_W2_cut_QE
Entries 404
Mean x 1.368
Mean y 0.09323
Std Dev x 0.4712
Std Dev y 0.1238
Pmiss perp (GeV)
W2 (GeV)

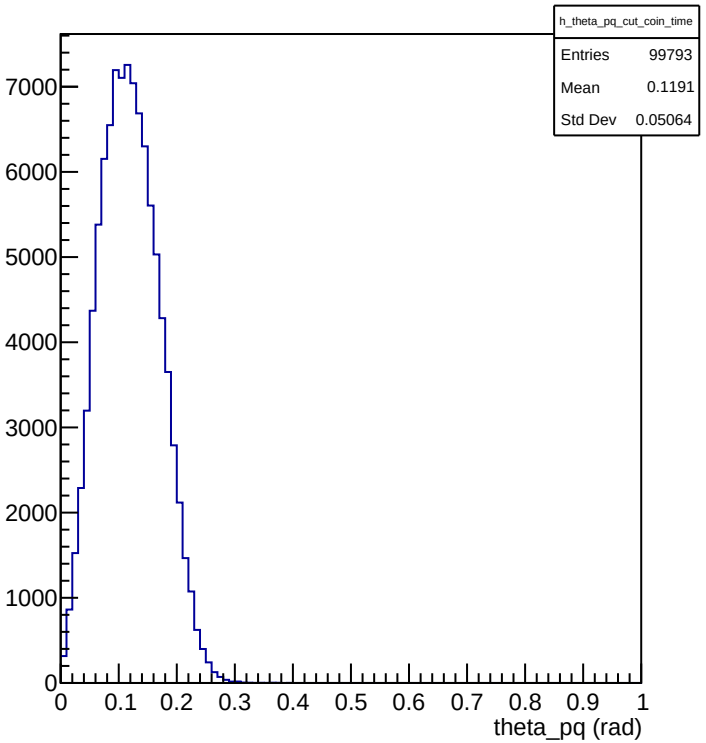

theta_pq coin, dx and dy cuts
h_theta_pq_cut_coin_time_and_dx
Entries 2118
Mean 0.01813
Std Dev 0.006909
theta_pq (rad)


dx v W2 dist with coin time cut
h_dx_W2_cut_coin_time
Entries 99793
Mean x 2.046
Mean y −0.963
Std Dev x 0.7923
Std Dev y 1.07
dx (m)
W2 (GeV)

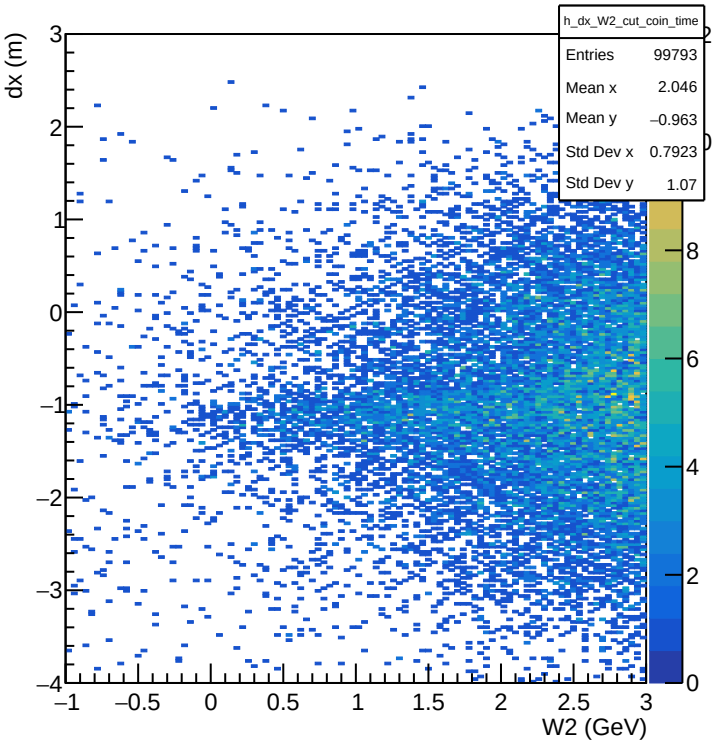

realPperp coin, dx and dy cuts
h_realPperp_cut_coin_time_and_dx
Entries 2118
Mean 0.08411
Std Dev 0.08018
Pmiss perp (GeV)


realPperp v W2 dist coin, dx and dy cuts
h_realPperp_W2_cut_coin_time_and_dx
Entries 2118
Mean x 2.645
Mean y 0.08301
Std Dev x 0.9032
Std Dev y 0.08041
Pmiss perp (GeV)
W2 (GeV)

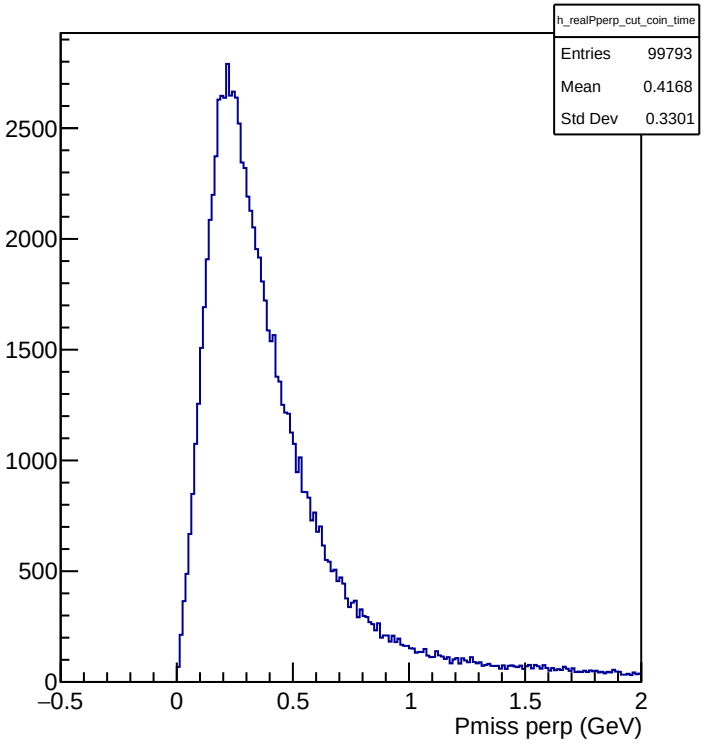
theta_pq only with coin cut



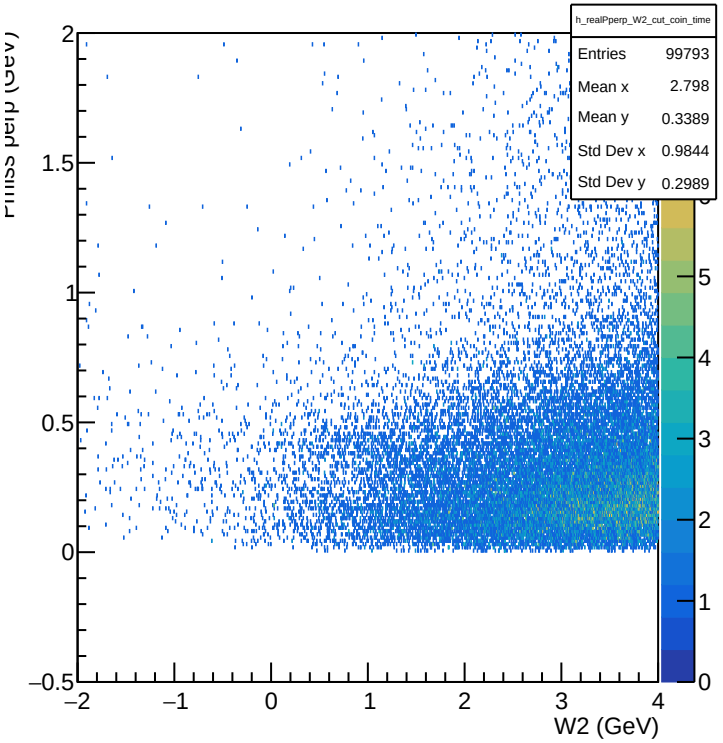
dx v W2 dist with coin time cut



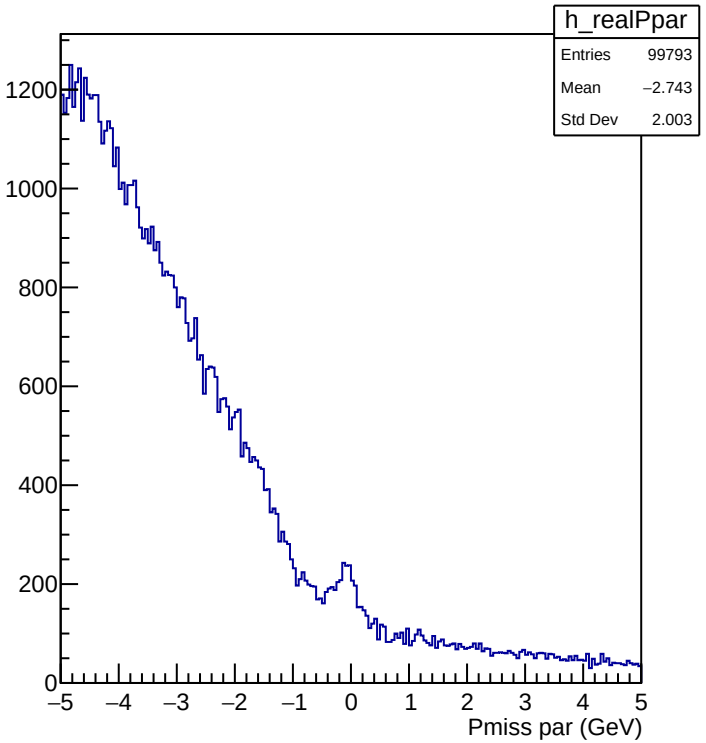
realPperp only with coin cut



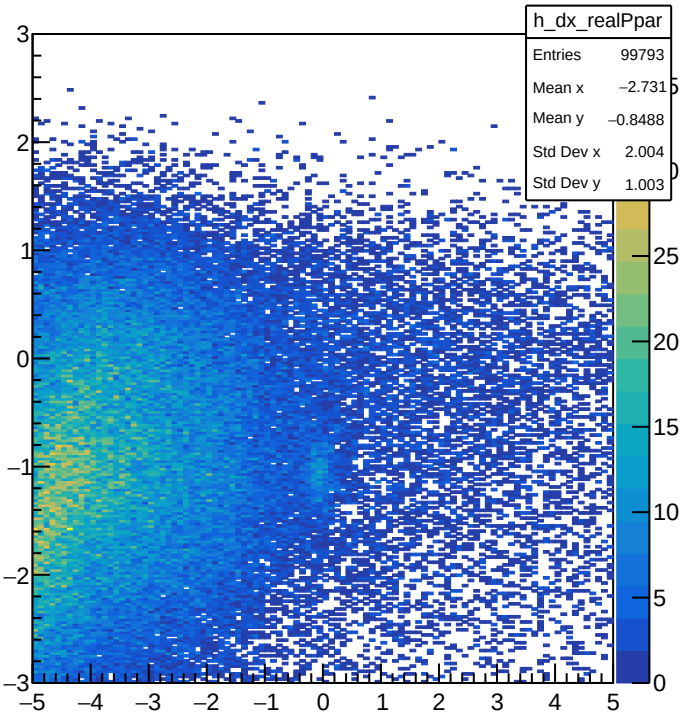
realPperp v W2 dist only with coin cut



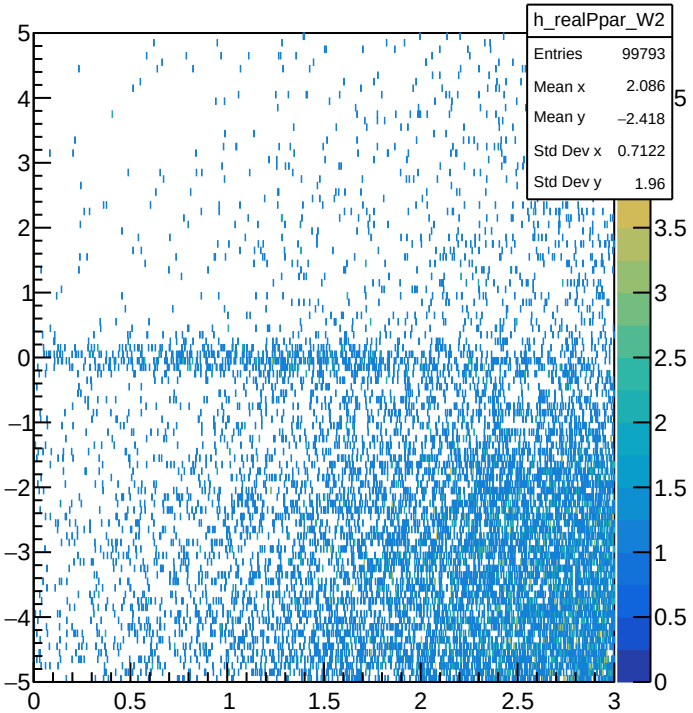
realPpar only with cointime cut

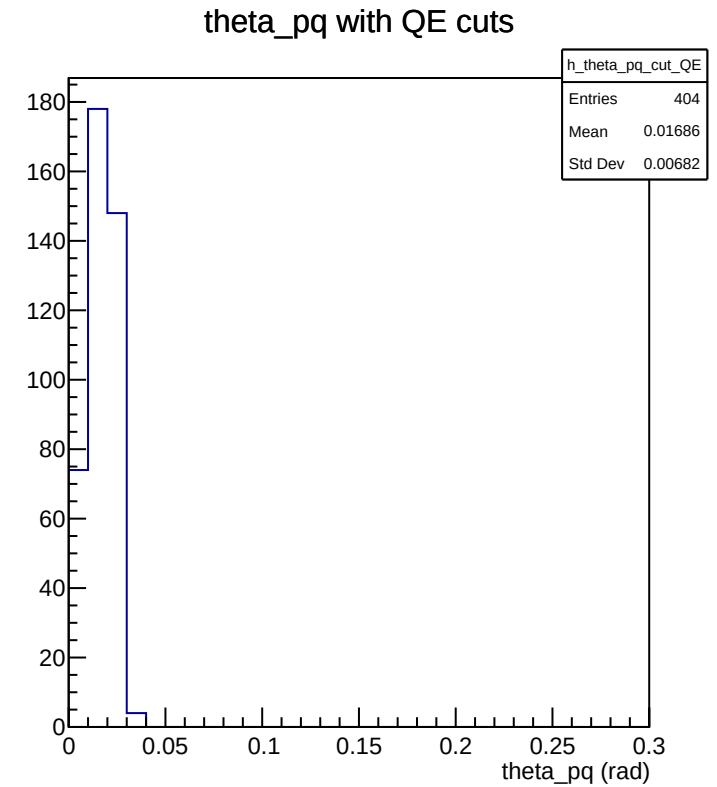


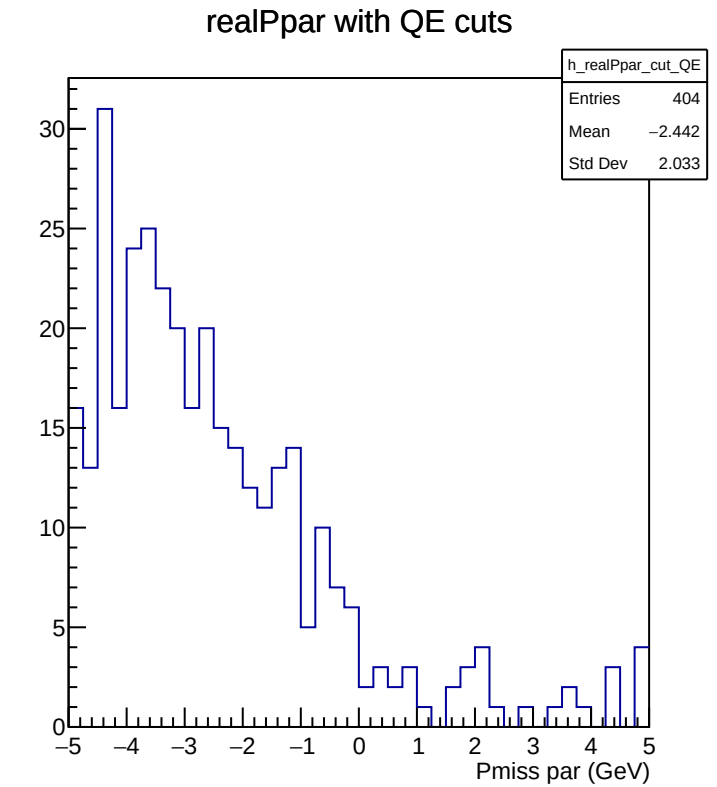
dx v realPpar dist only with cointime cut

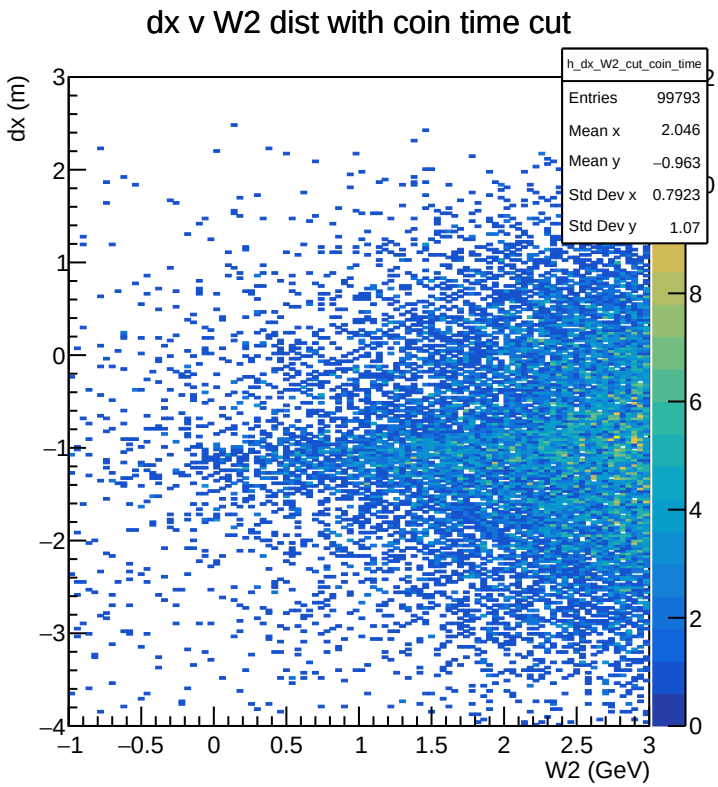


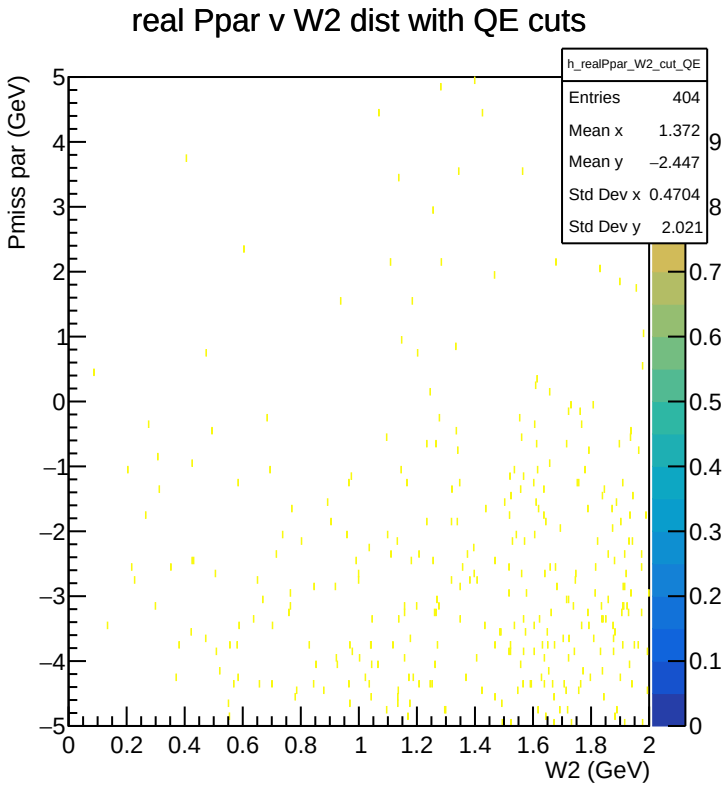
realPpar v W2 dist only with cointime cut

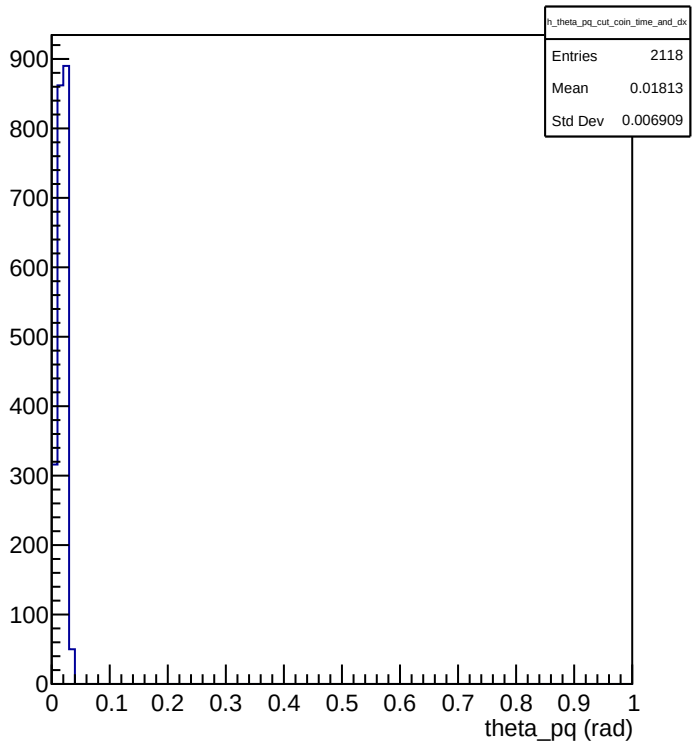


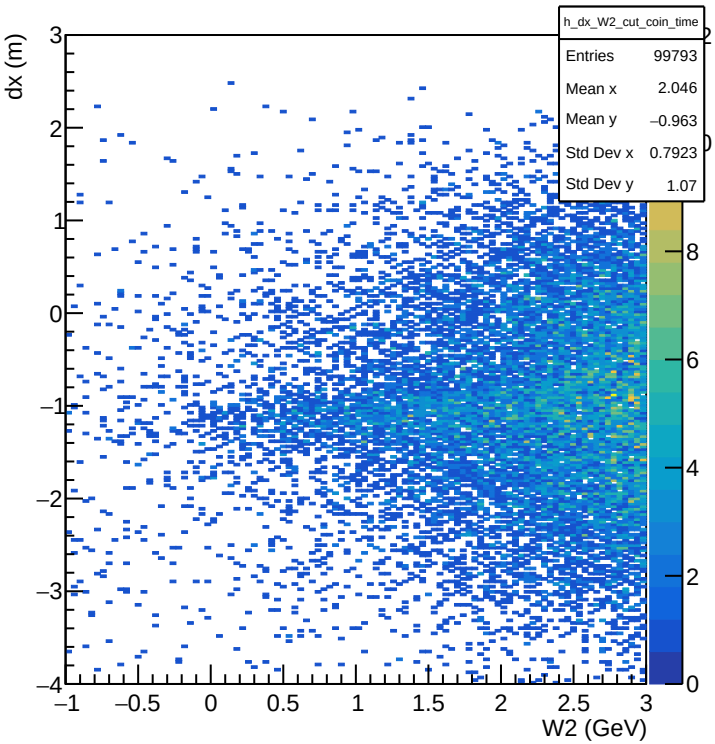

theta_pq with QE cuts
h_theta_pq_cut_QE
Entries 404
Mean 0.01686
Std Dev 0.00682
theta_pq (rad)

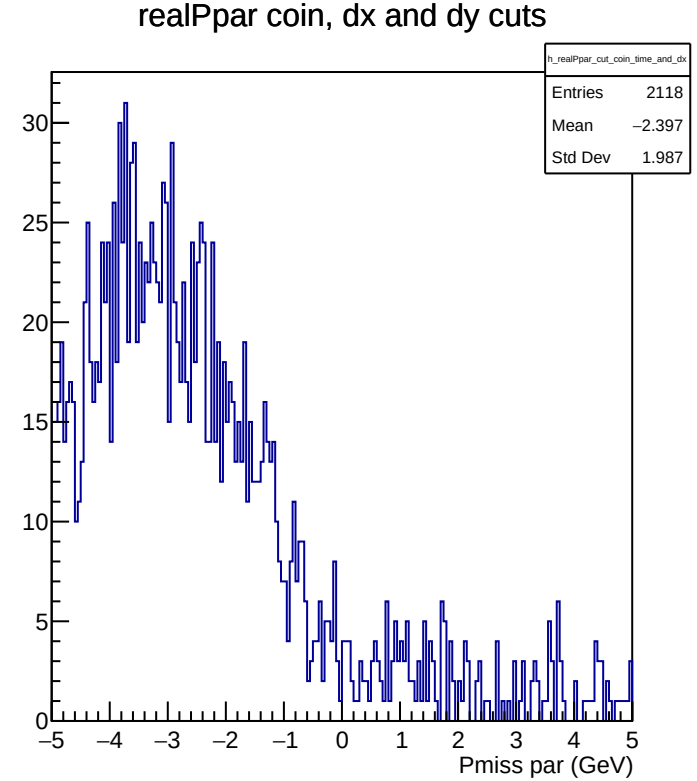

realPpar with QE cuts
h_realPpar_cut_QE
Entries 404
Mean −2.442
Std Dev 2.033
Pmiss par (GeV)

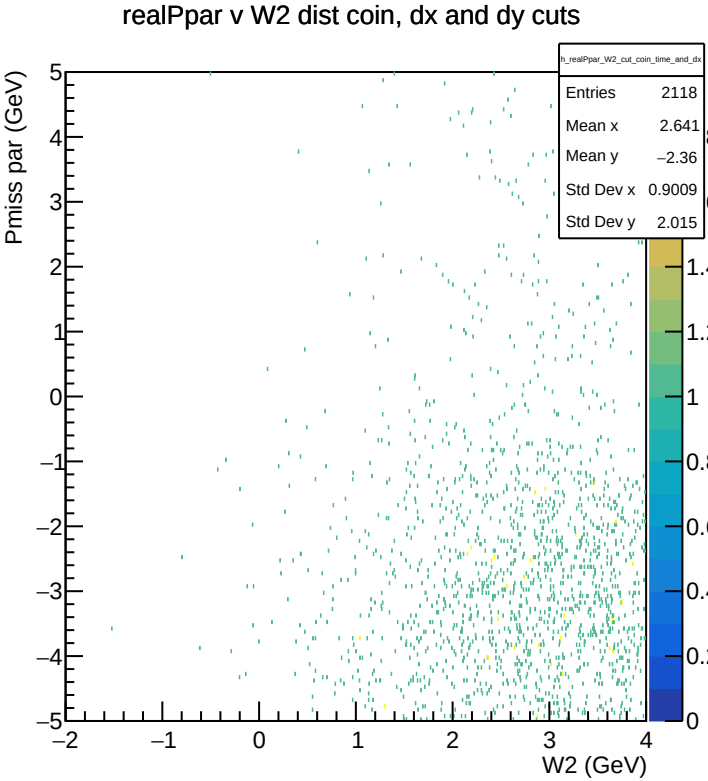

dx v W2 dist with coin time cut
h_dx_W2_cut_coin_time
Entries 99793
Mean x 2.046
Mean y −0.963
Std Dev x 0.7923
Std Dev y 1.07
dx (m)
W2 (GeV)


real Ppar v W2 dist with QE cuts
h_realPpar_W2_cut_QE
Entries 404
Mean x 1.372
Mean y −2.447
Std Dev x 0.4704
Std Dev y 2.021
Pmiss par (GeV)
W2 (GeV)

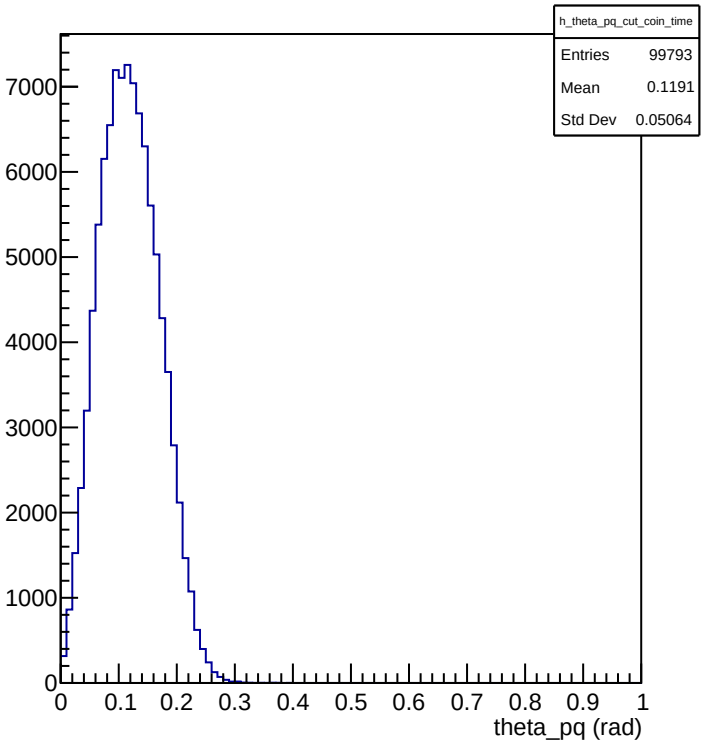

theta_pq coin, dx and dy cuts
h_theta_pq_cut_coin_time_and_dx
Entries 2118
Mean 0.01813
Std Dev 0.006909
theta_pq (rad)


dx v W2 dist with coin time cut
h_dx_W2_cut_coin_time
Entries 99793
Mean x 2.046
Mean y −0.963
Std Dev x 0.7923
Std Dev y 1.07
dx (m)
W2 (GeV)

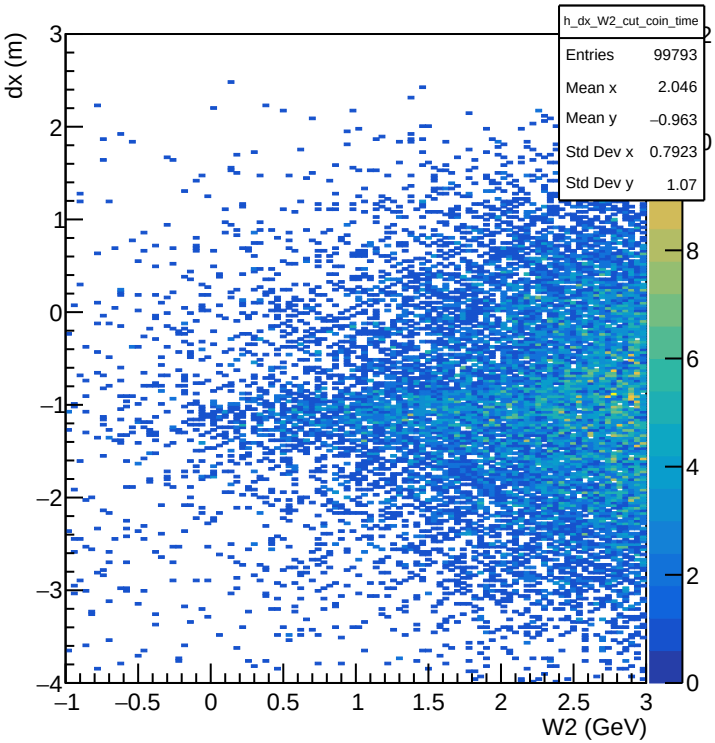

realPpar coin, dx and dy cuts
h_realPpar_cut_coin_time_and_dx
Entries 2118
Mean −2.397
Std Dev 1.987
Pmiss par (GeV)


realPpar v W2 dist coin, dx and dy cuts
h_realPpar_W2_cut_coin_time_and_dx
Entries 2118
Mean x 2.641
Mean y −2.36
Std Dev x 0.9009
Std Dev y 2.015
Pmiss par (GeV)
W2 (GeV)

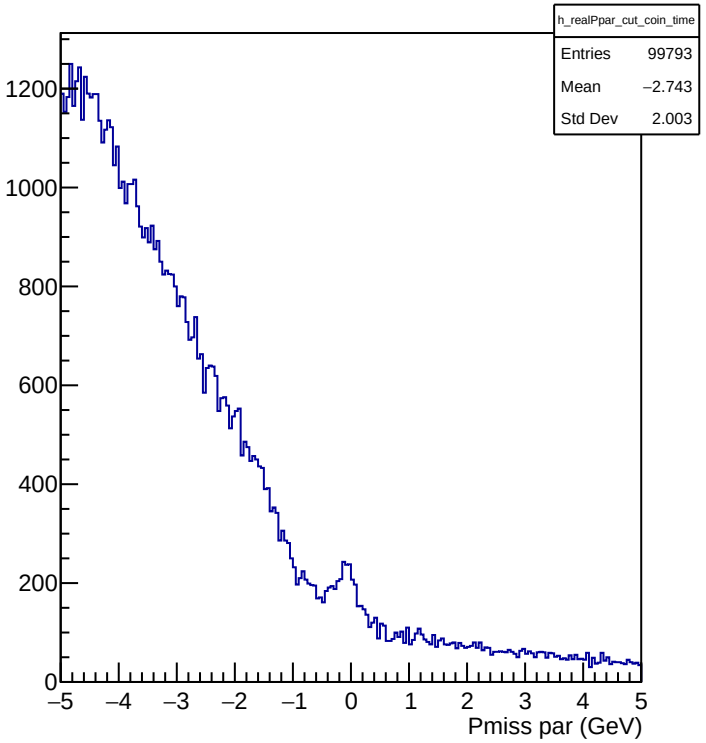
theta_pq only with coin cut



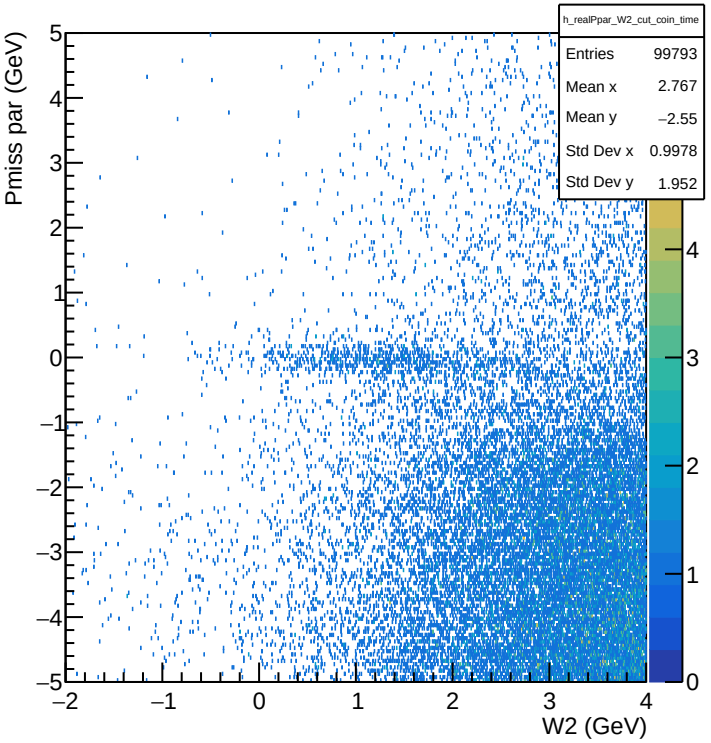
dx v W2 dist with coin time cut



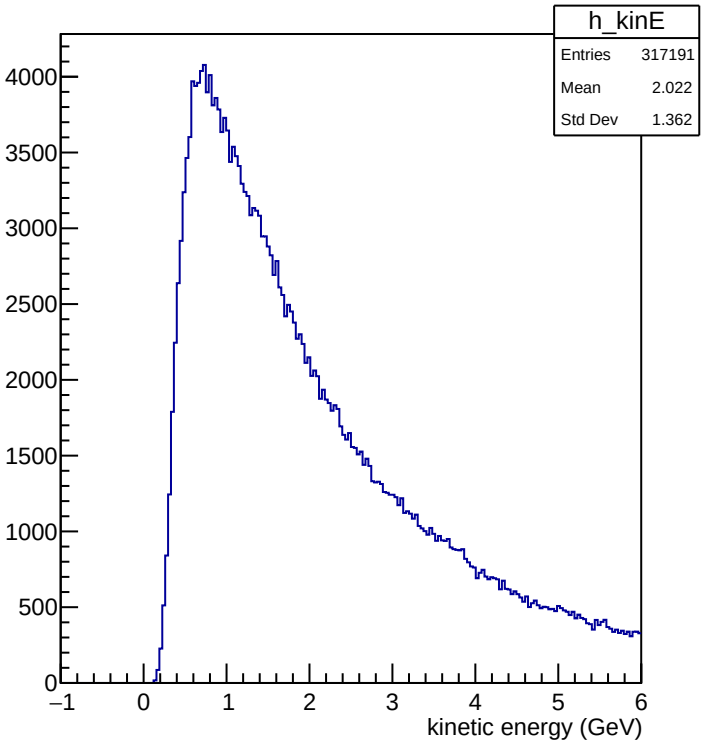
realPpar only with coin cut



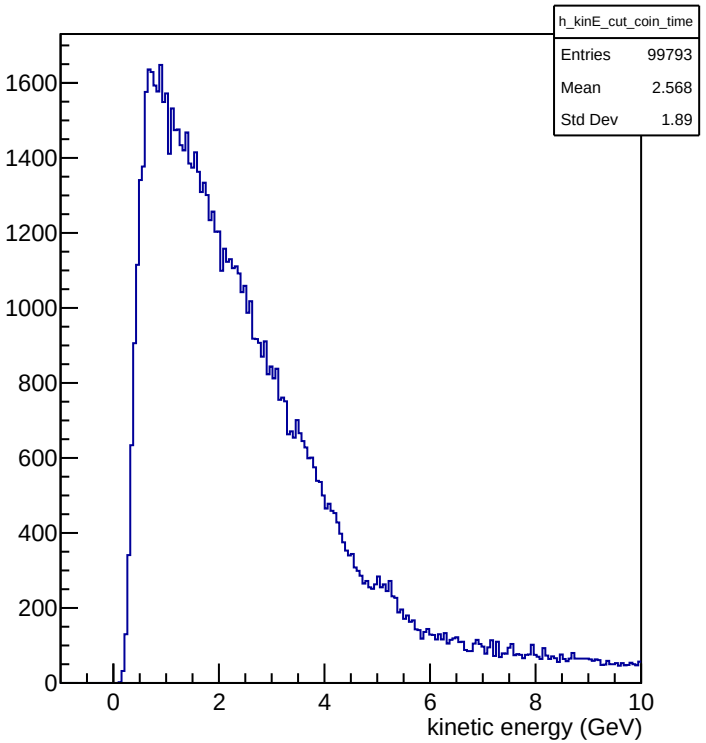
realPpar v W2 dist only with coin coin cut



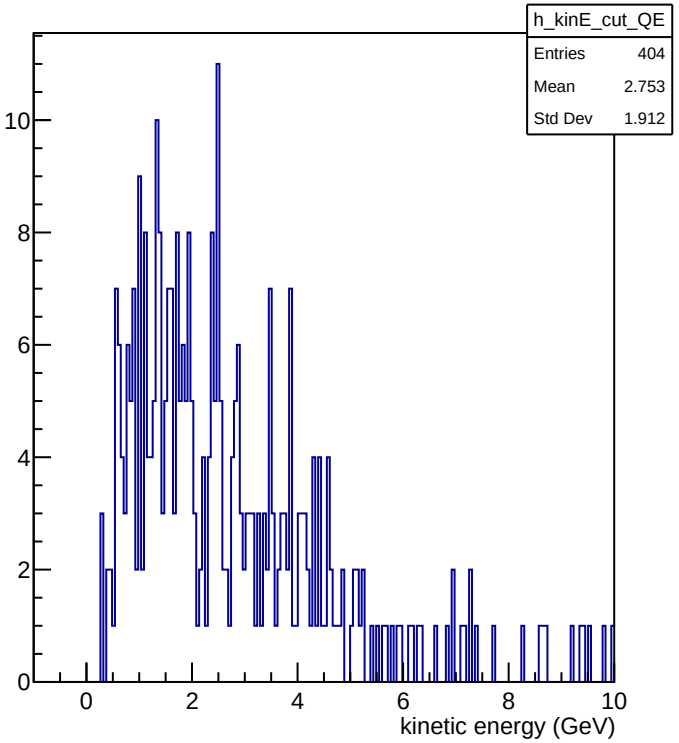
kinetic energy



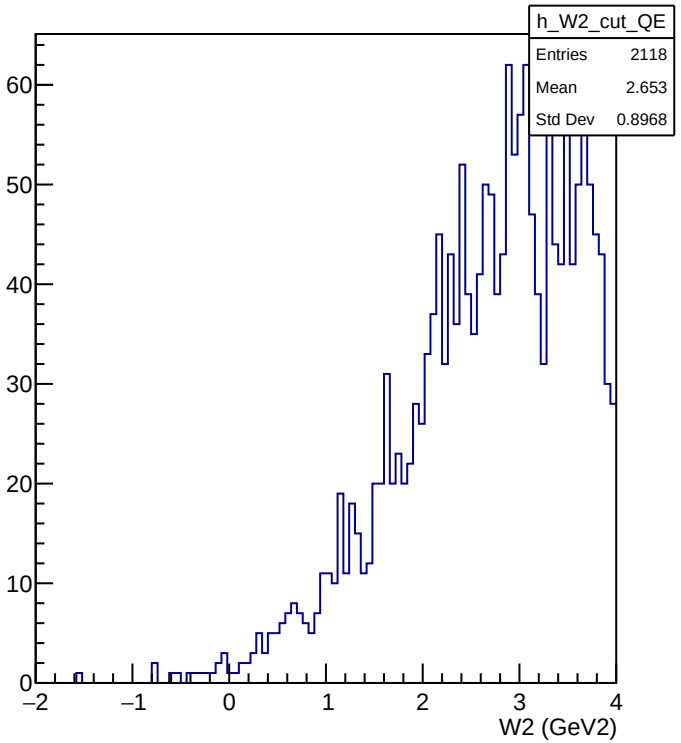
kinetic energy with cointime cut



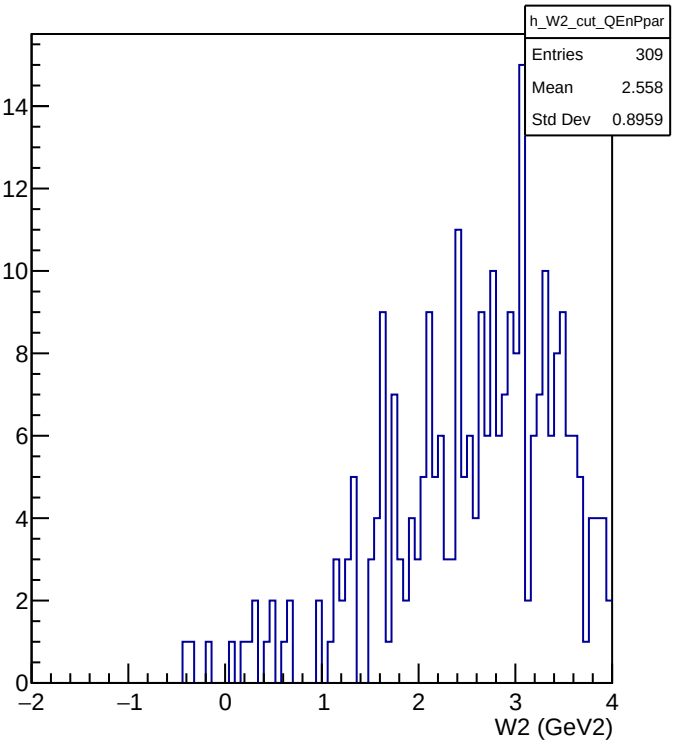
kinetic energy with QE cuts



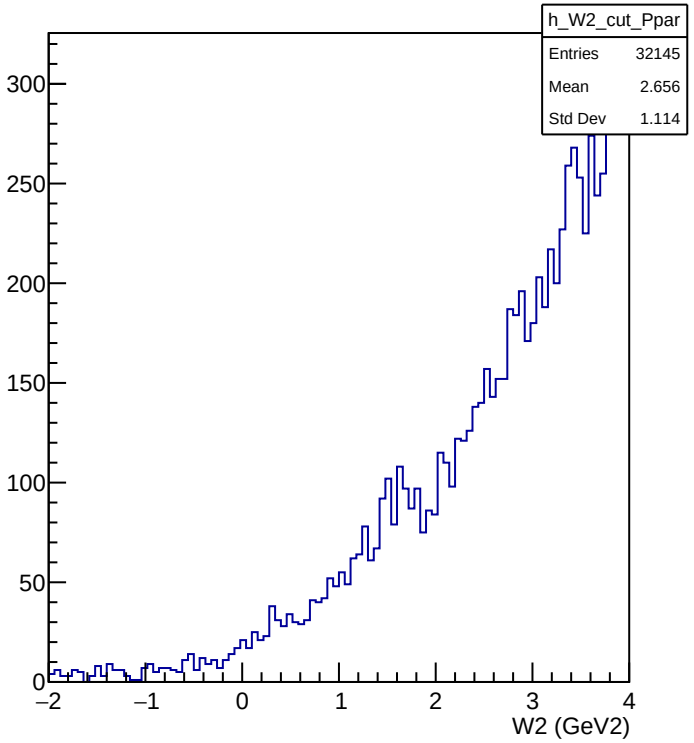
W2 distribution with coin, dx, and dy



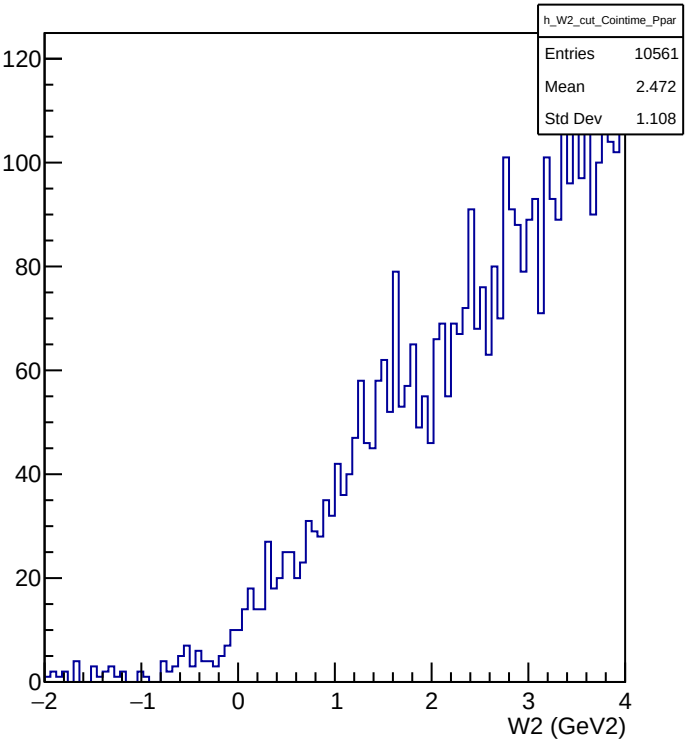
W2 distribution with coin, dx, dy and Ppar cuts



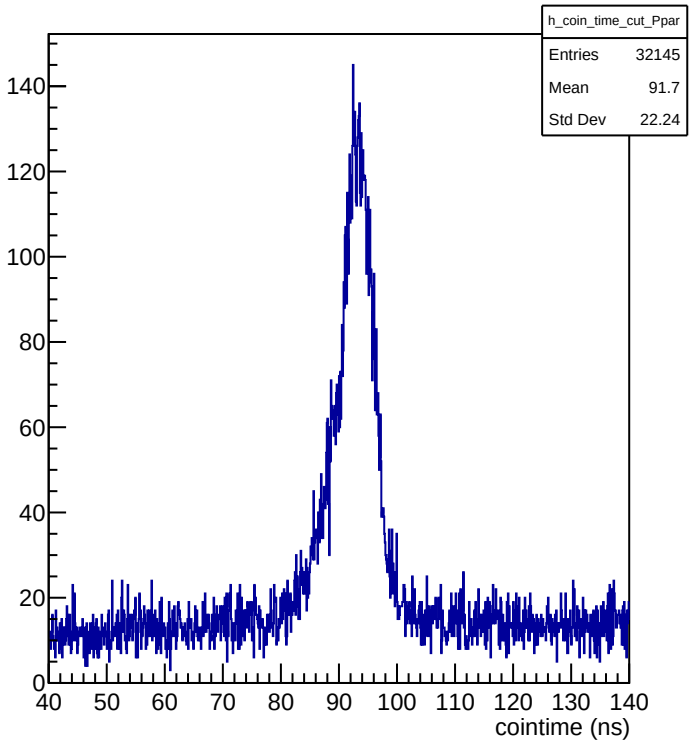
W2 distribution only with Ppar cut



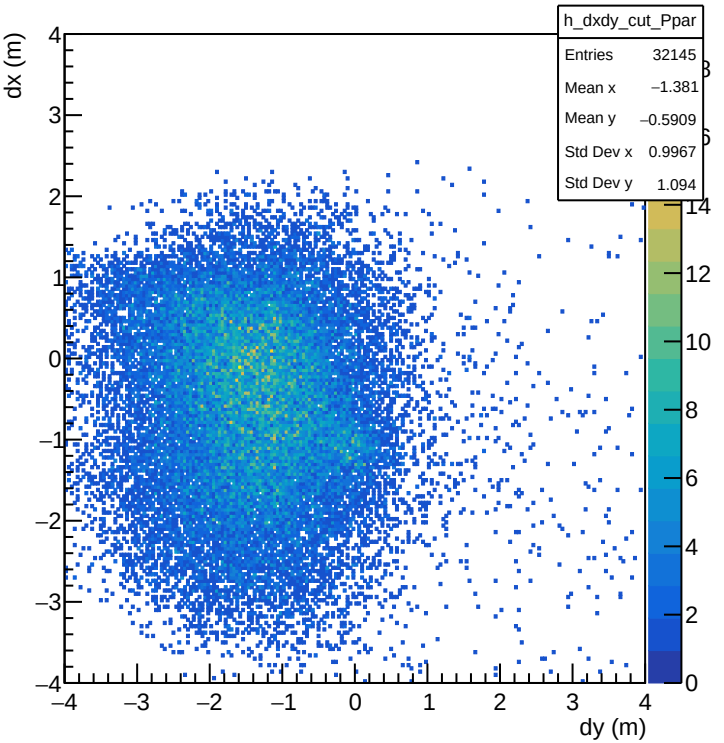
W2 distribution with Cointime and Ppar cut



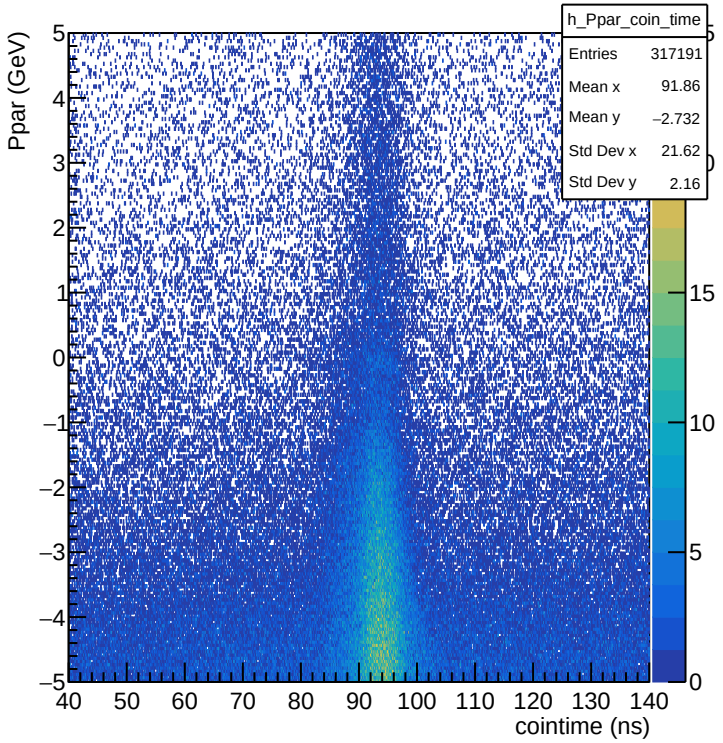
cointime distribution only with Ppar cut



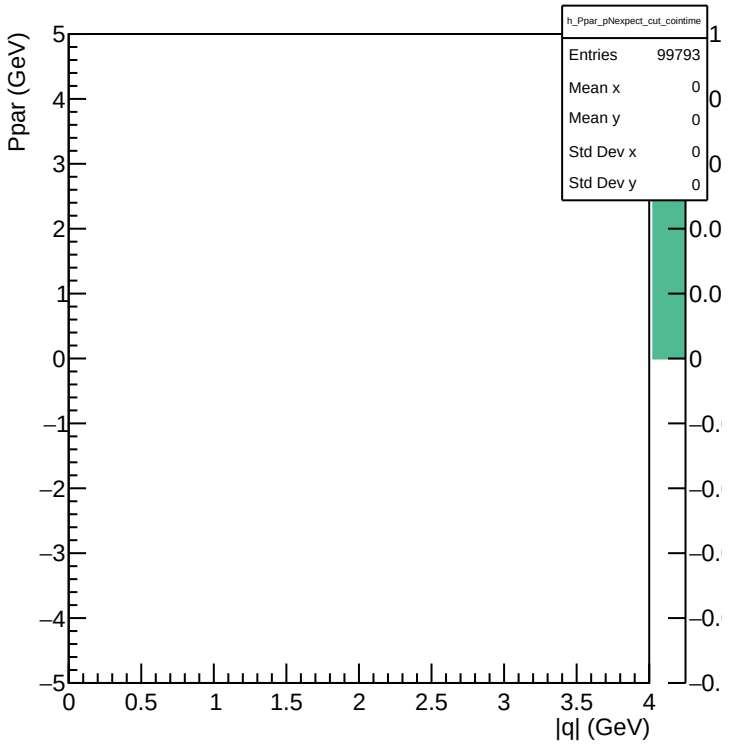
dxdy only with Ppar cut



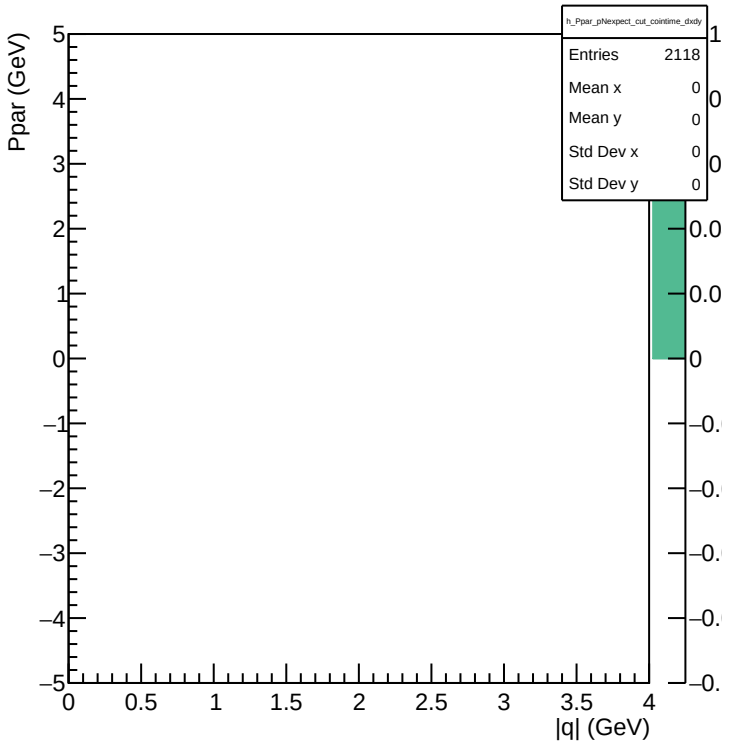
Ppar v cointime distribution



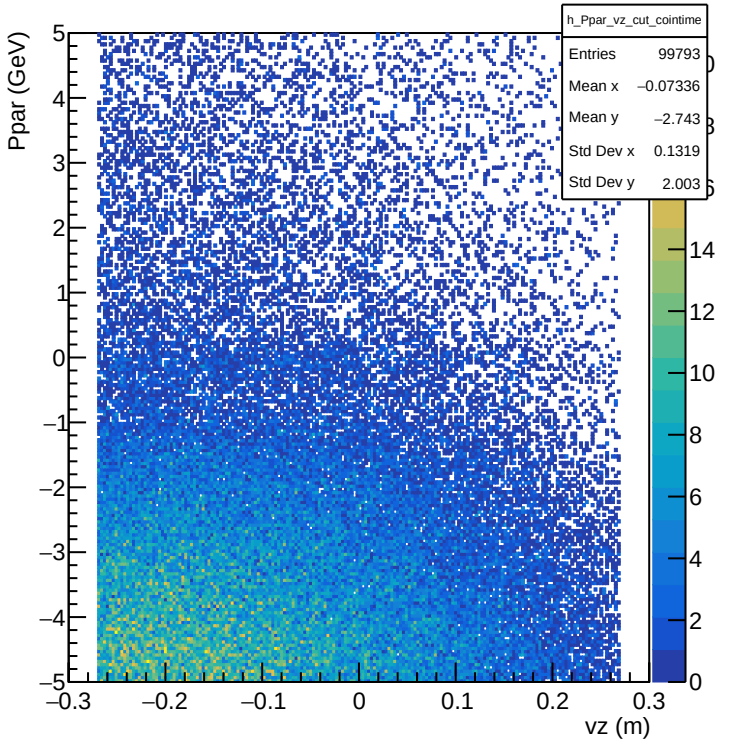
Ppar v |q| only with coin cut



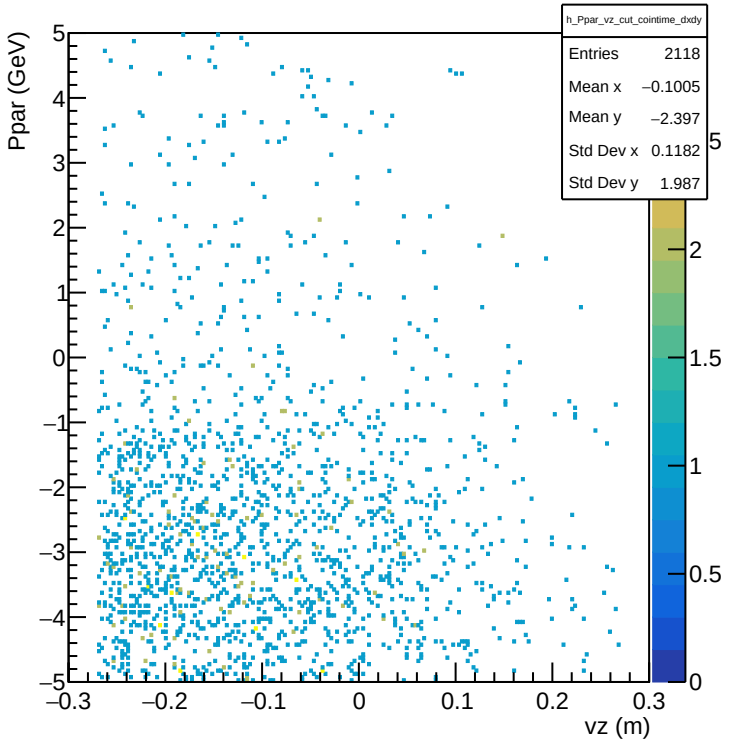
Ppar v |q| with coin, dx and dy cuts



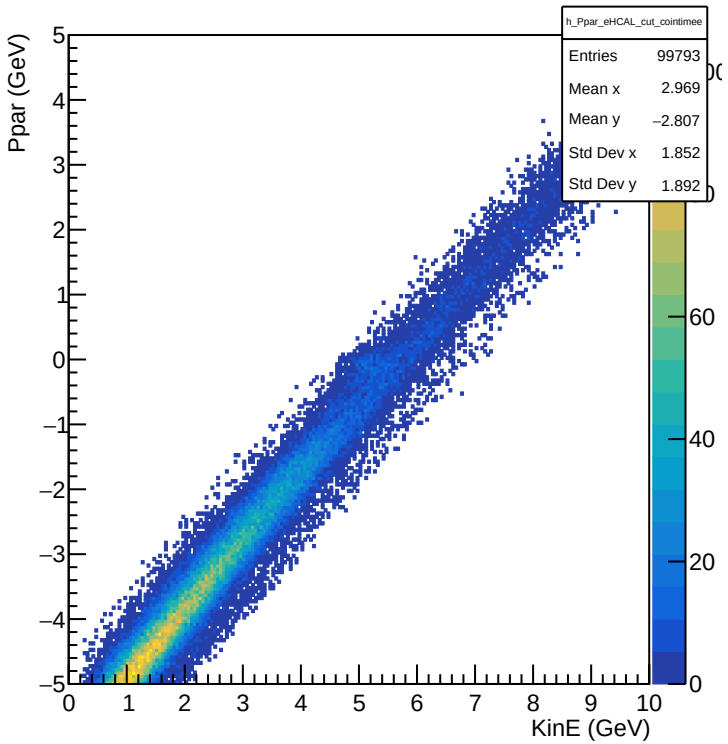
Ppar v vz only with coin cut



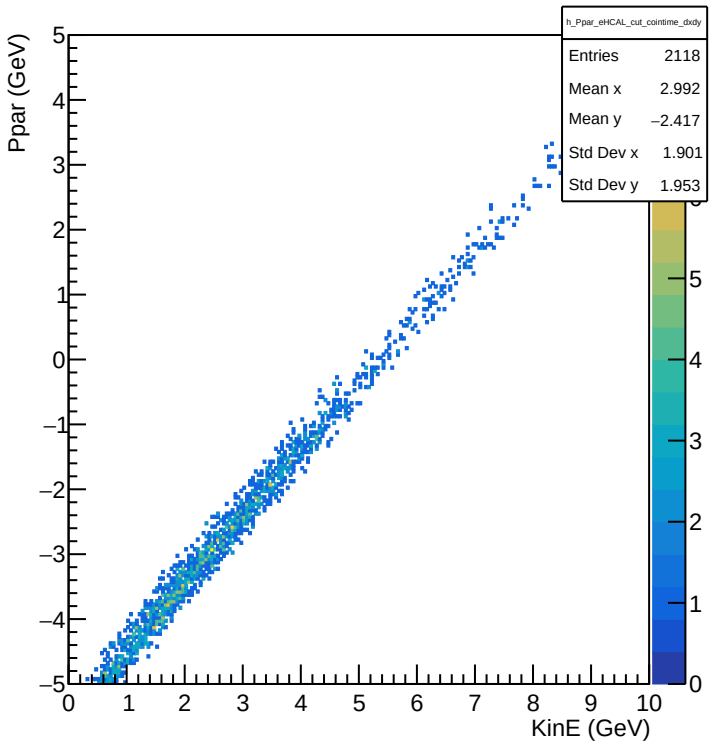
Ppar v vz with coin, dx and dy cuts



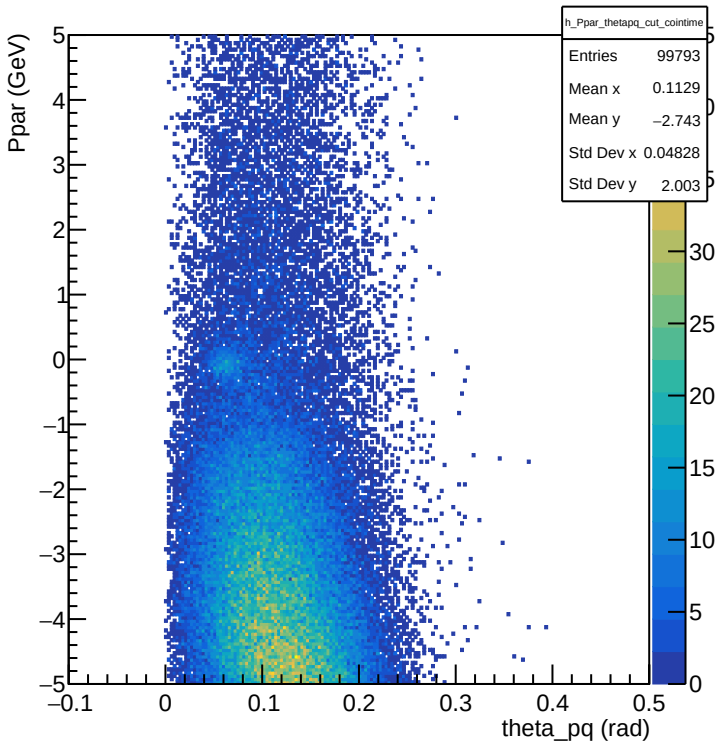
Ppar v eHCAL (KinE) only with coin cut



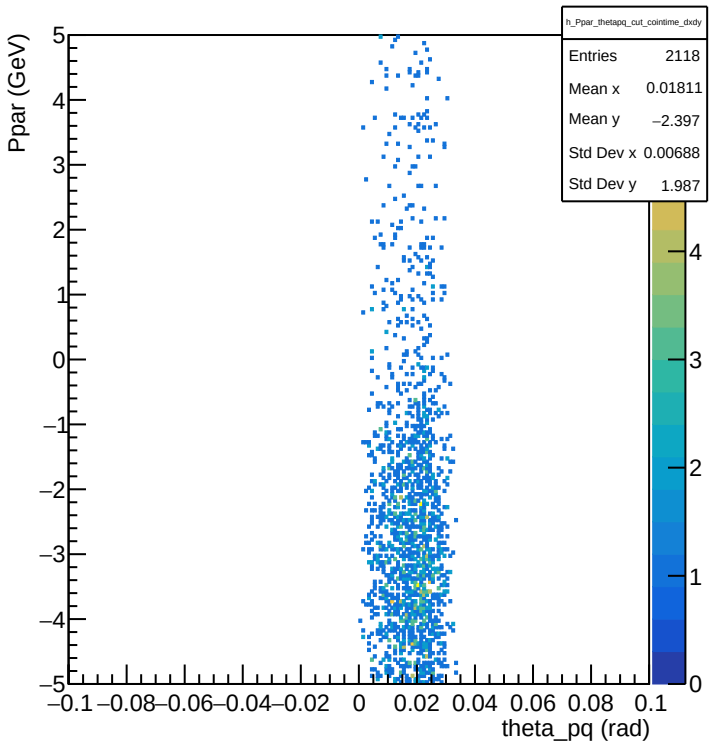
Ppar v eHCAL (KinE) with coin, dx and dy cuts



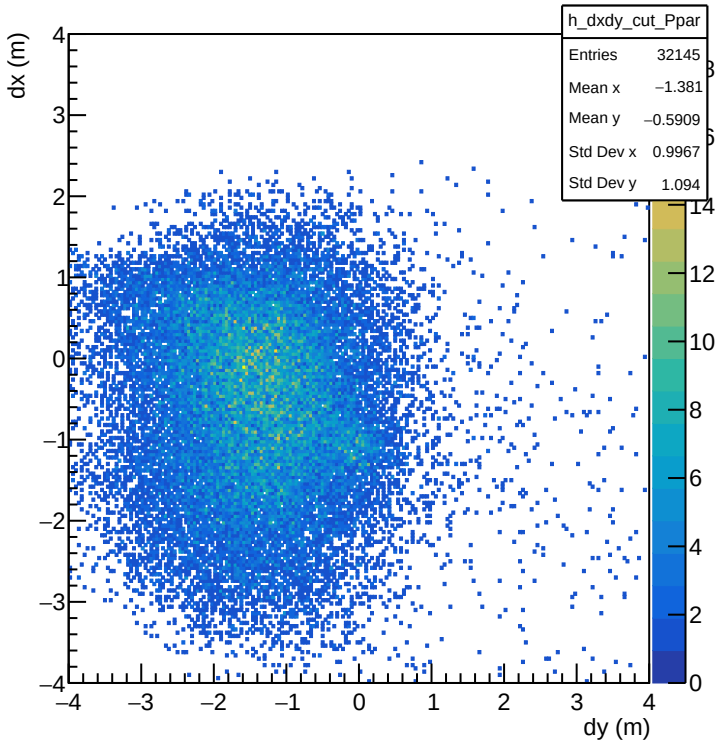
Ppar v theta_pq only with coin cut



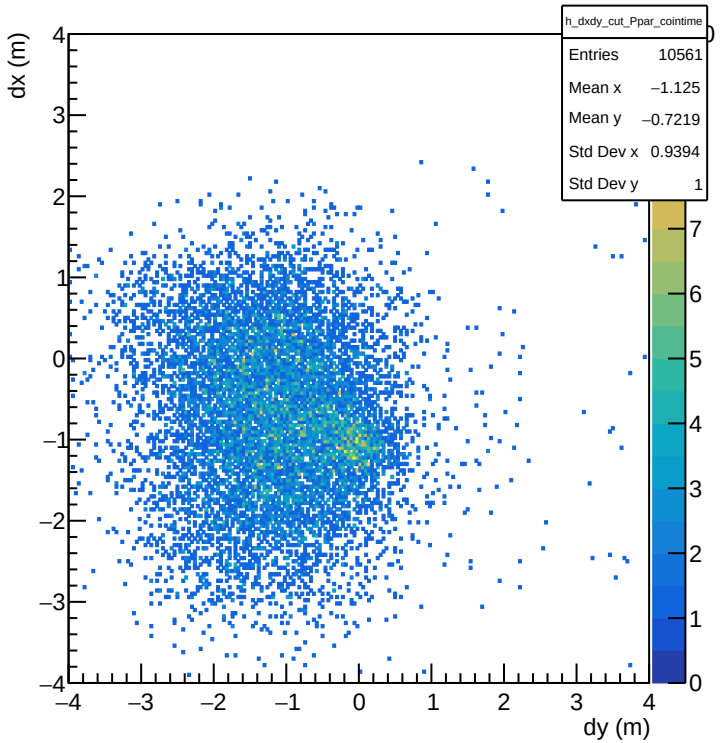
Ppar v theta_pq with coin, dx and dy cut



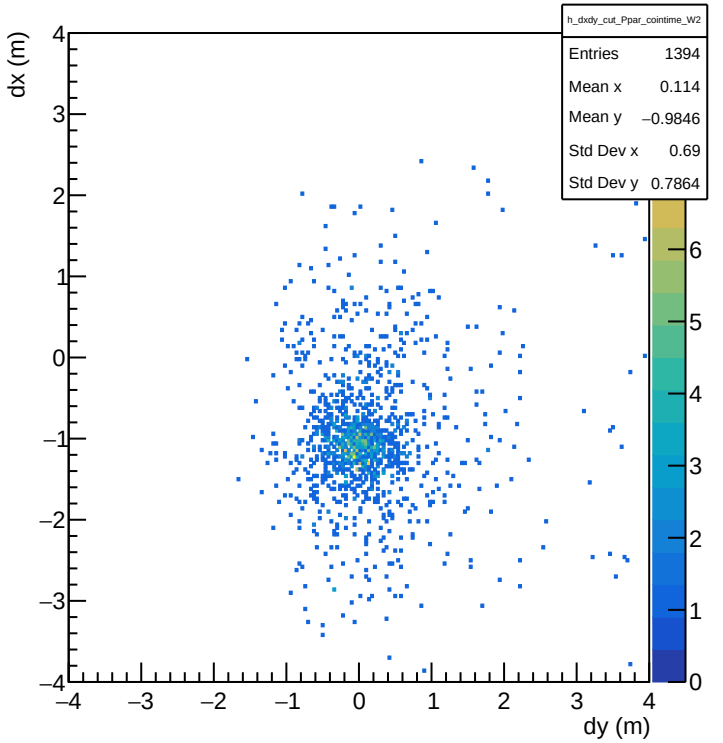
dxdy only with Ppar cut



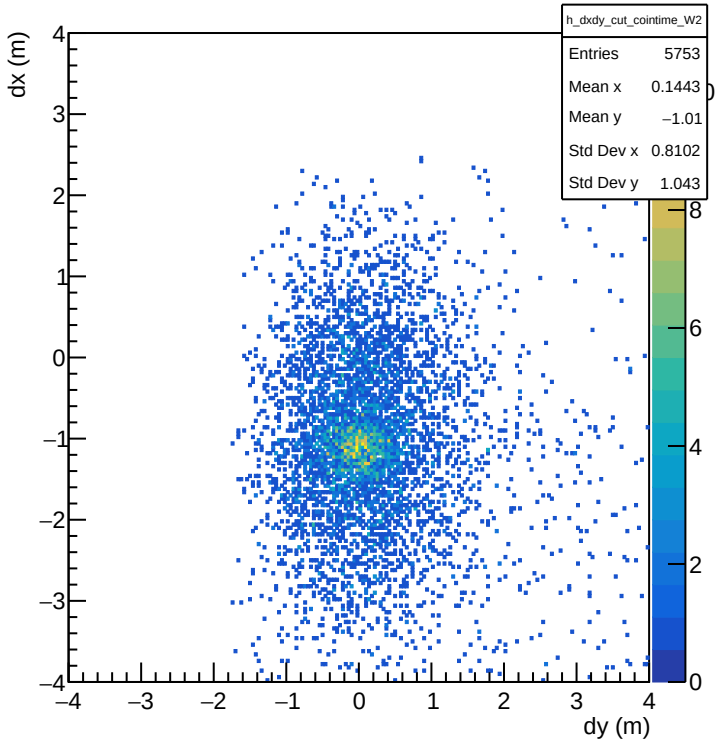
dxdy Ppar and cointime cut



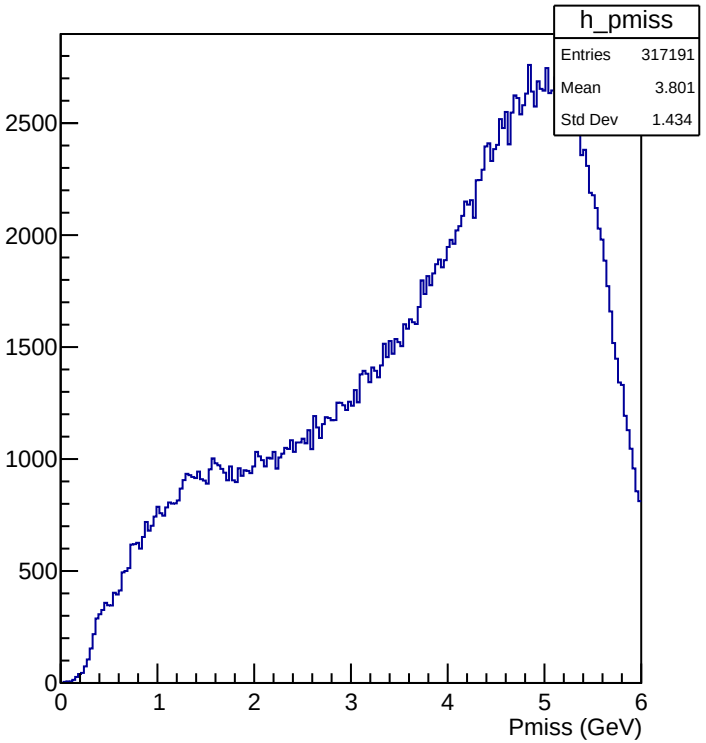
dxdy Ppar, cointime and W2 cut



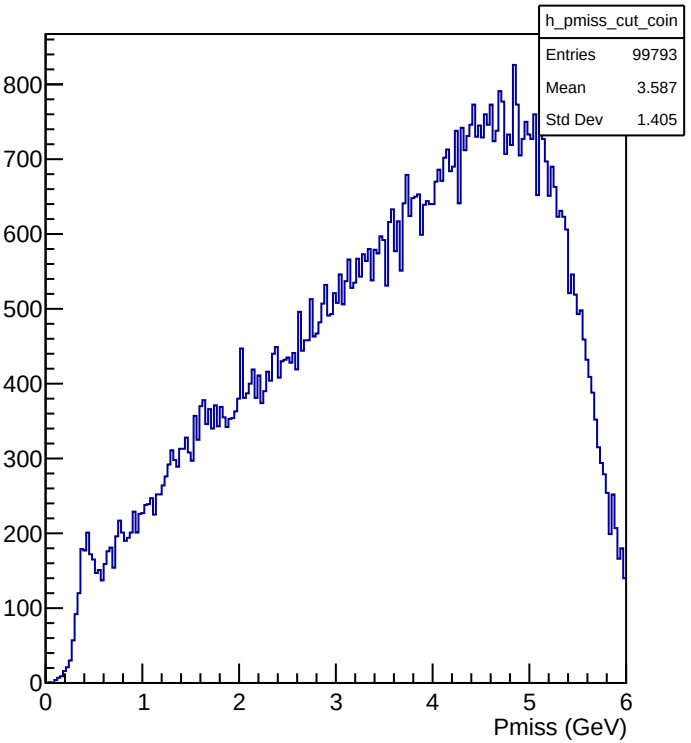
dxdy with cointime and W2 cuts



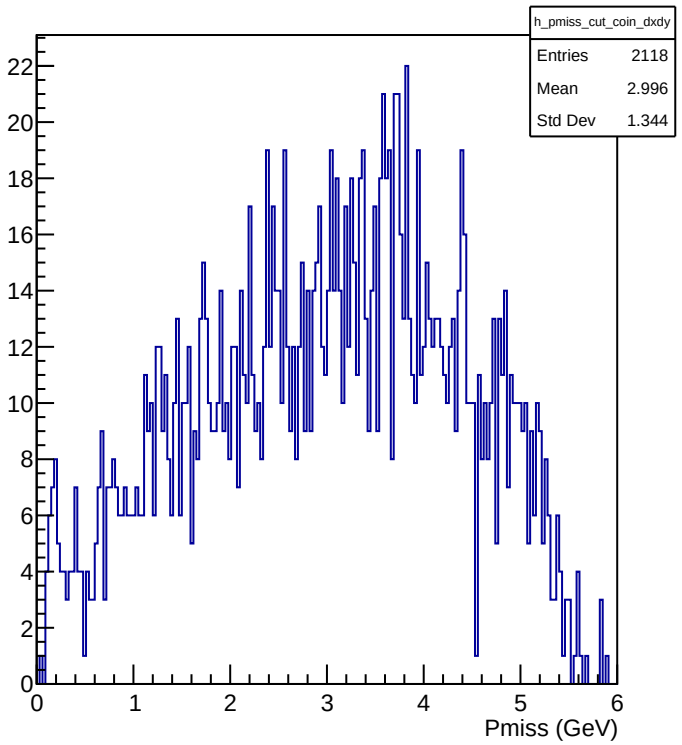
Pmiss distribution

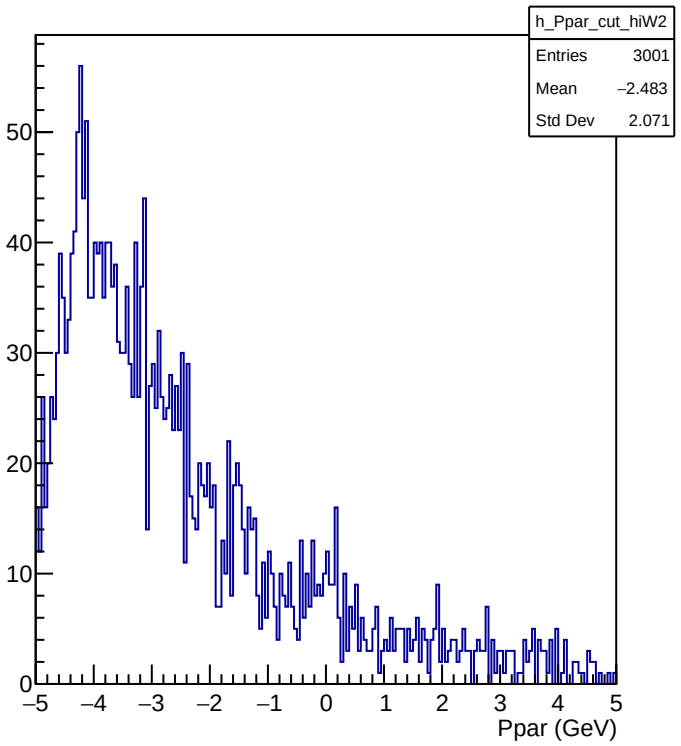


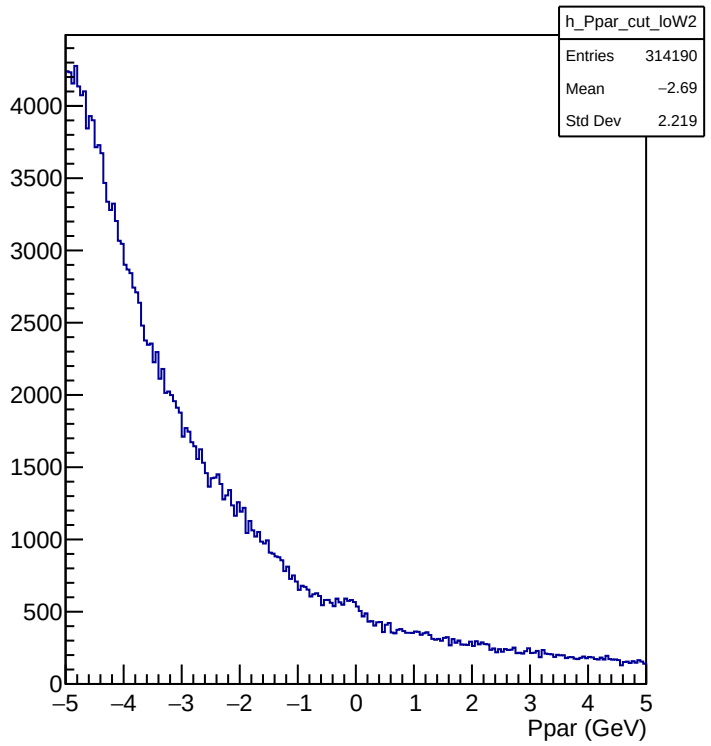
Pmiss distribution only with cointime cut



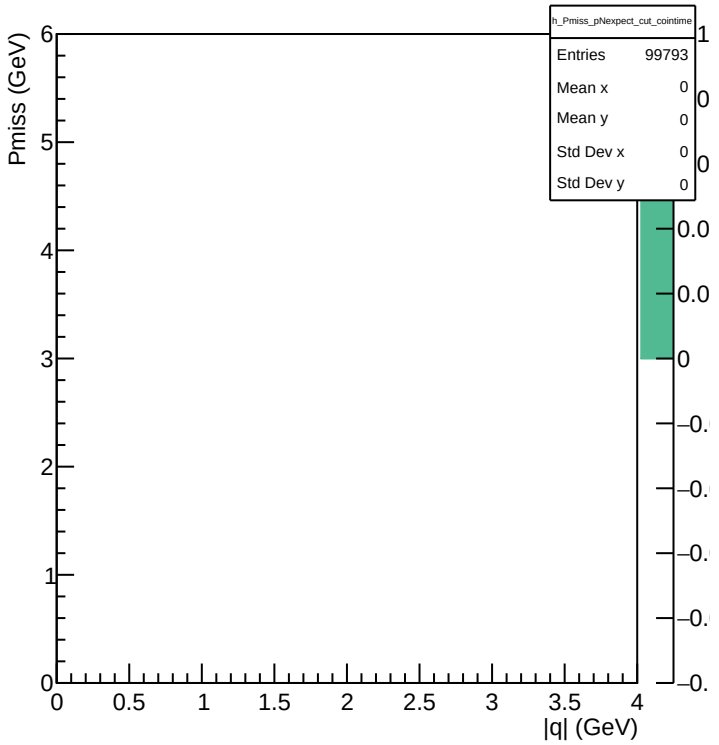
Pmiss distribution with cointime, dx and dy cuts



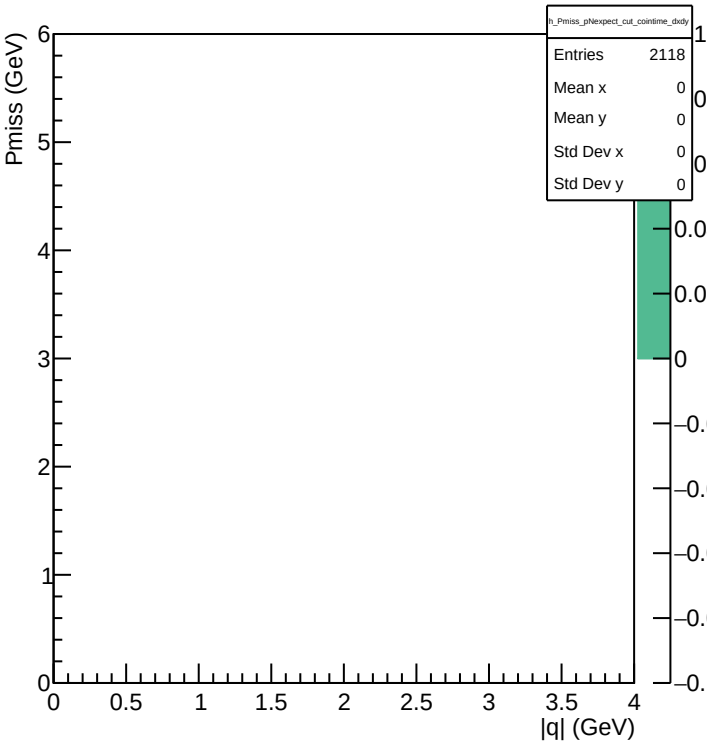

Ppar distribution for W2<0
h_Ppar_cut_hiW2
Entries 3001
Mean −2.483
Std Dev 2.071
50
40
30
20
10
0
−5 −4 −3 −2 −1 0 1 2 3 4 5
Ppar (GeV)


Ppar distribution for W2>=0
h_Ppar_cut_loW2
Entries 314190
Mean −2.69
Std Dev 2.219
4000
3500
3000
2500
2000
1500
1000
500
0
−5 −4 −3 −2 −1 0 1 2 3 4 5
Ppar (GeV)

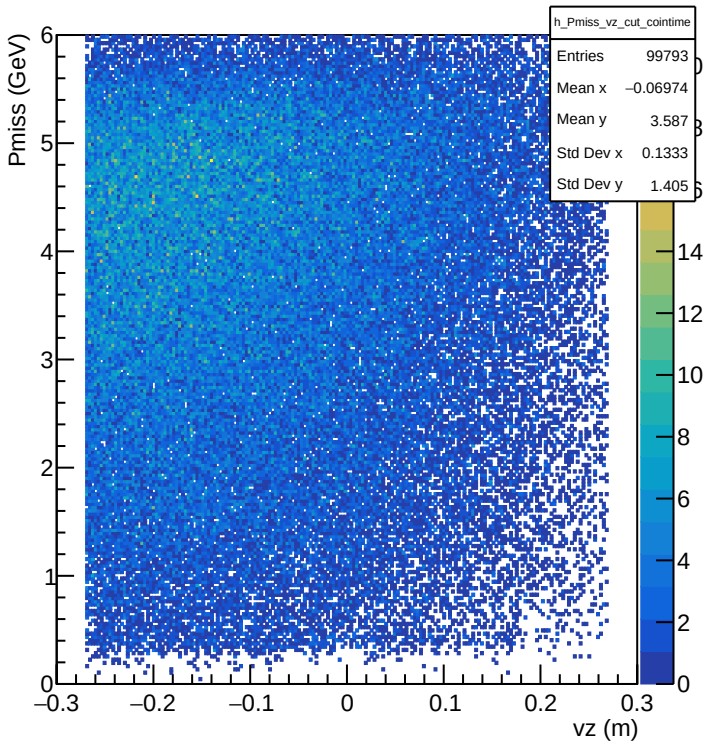
Pmiss v |q| only with coin cut



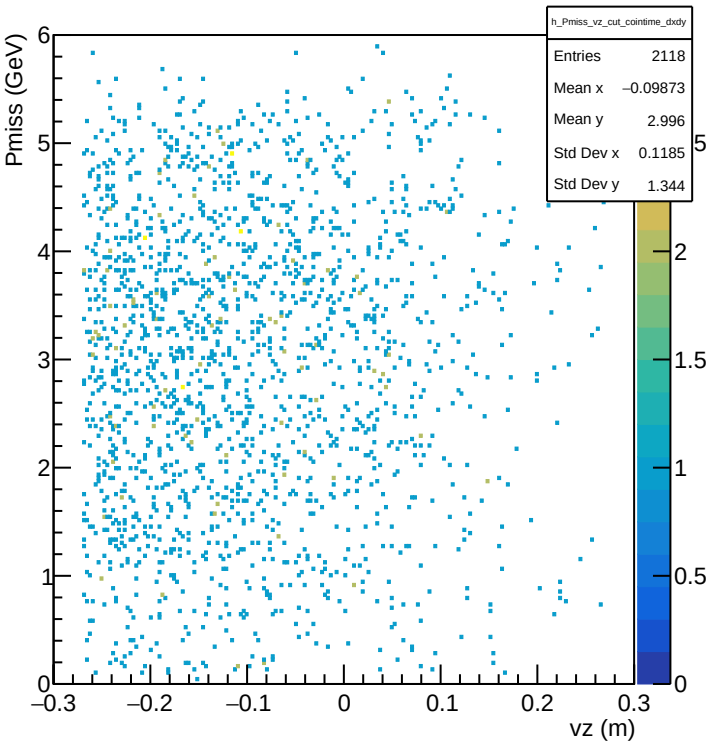
Pmiss v |q| with coin, dx and dy cuts



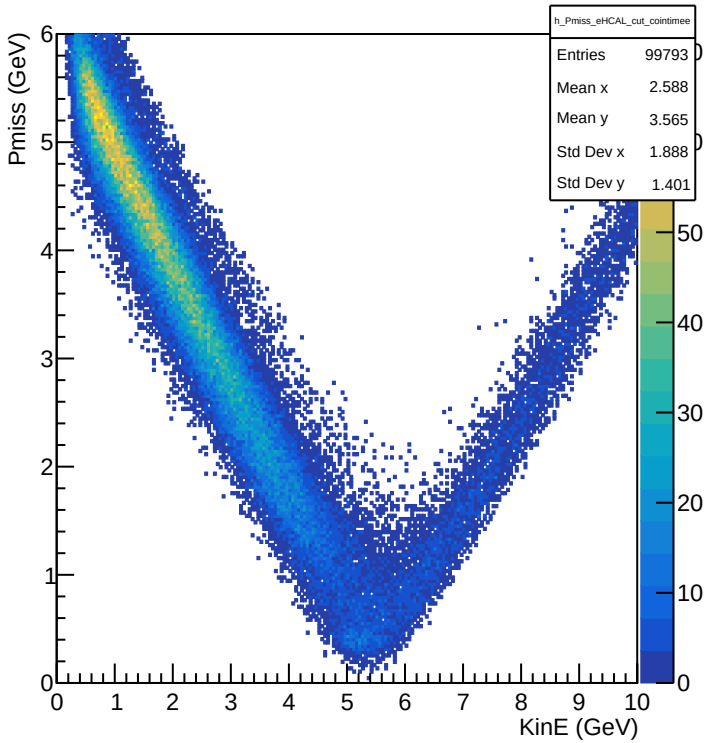
Pmiss v vz only with coin cut



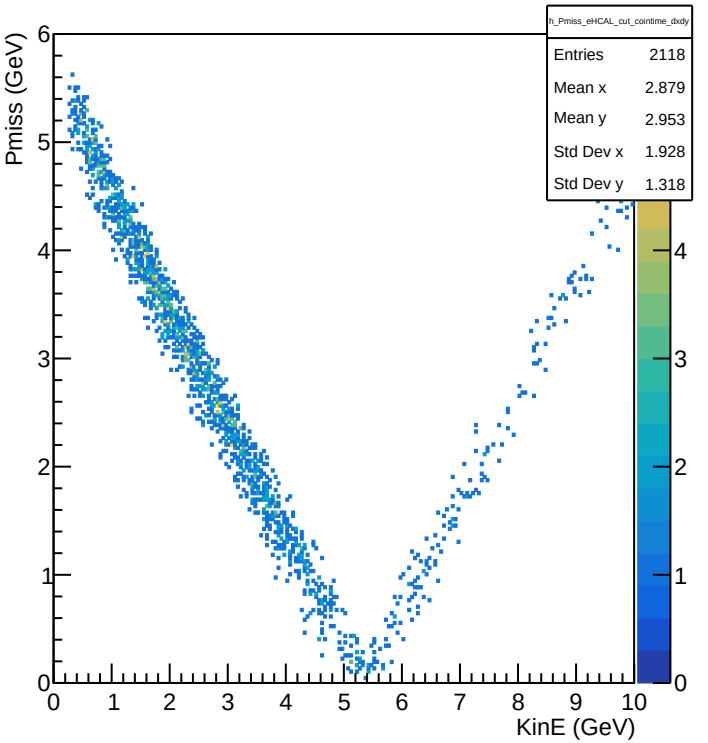
Pmiss v vz with coin, dx and dy cuts



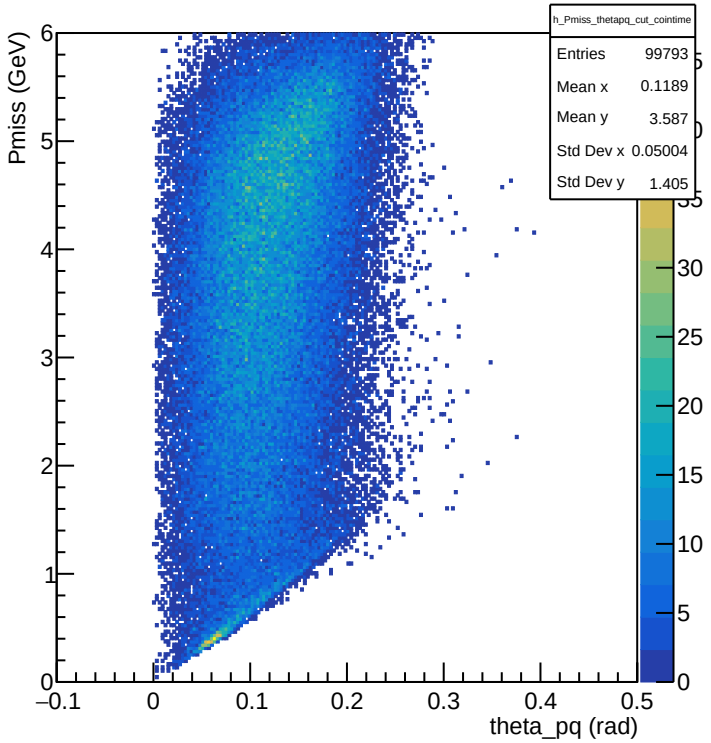
Pmiss v eHCAL (KinE) only with coin cut



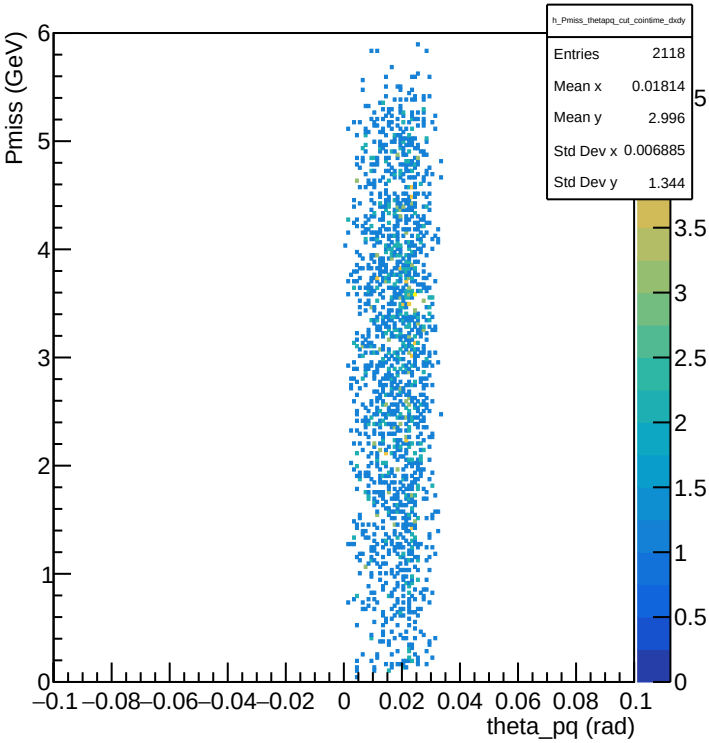
Pmiss v eHCAL (KinE) with coin, dx and dy cuts



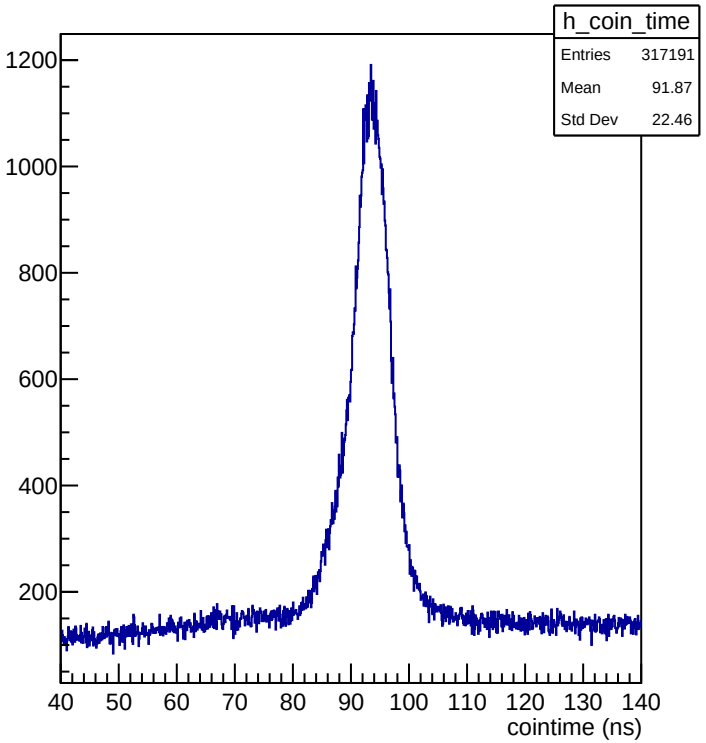
Pmiss v theta_pq only with coin cut



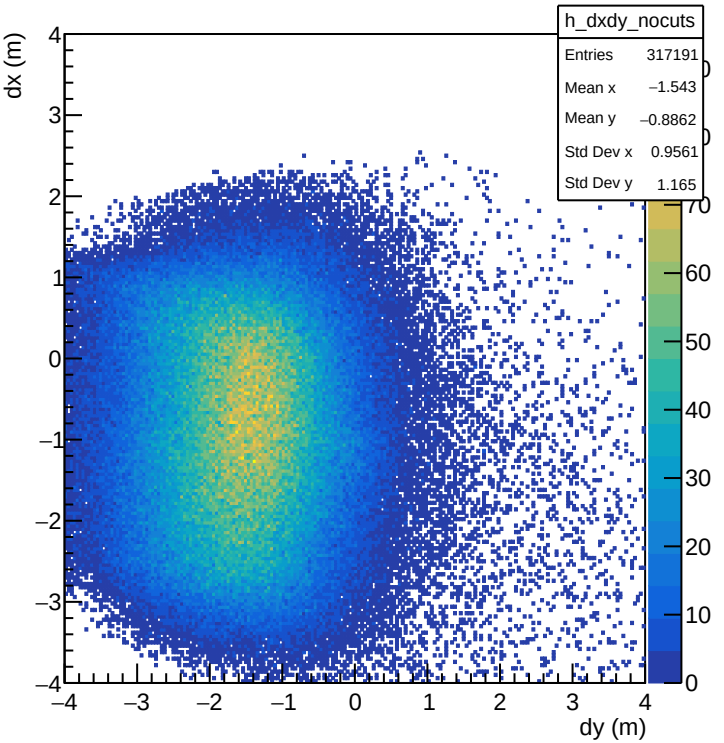
Pmiss v theta_pq with coin, dx and dy cut



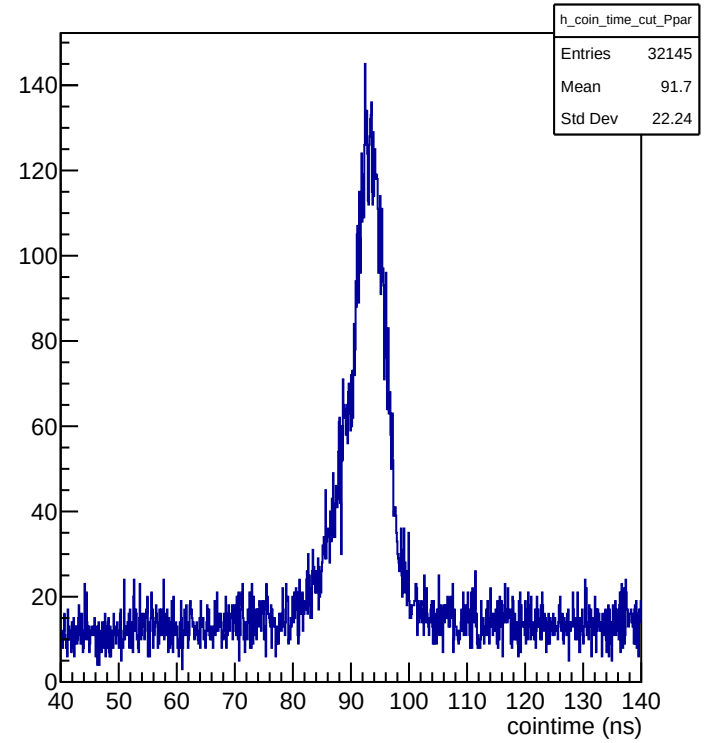
cointime (no cuts)



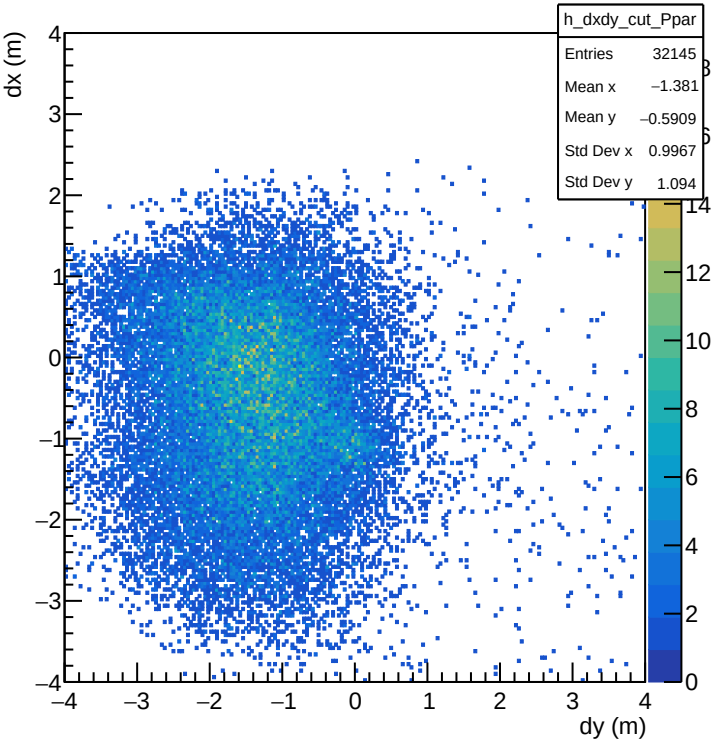
dxdy (no cuts)



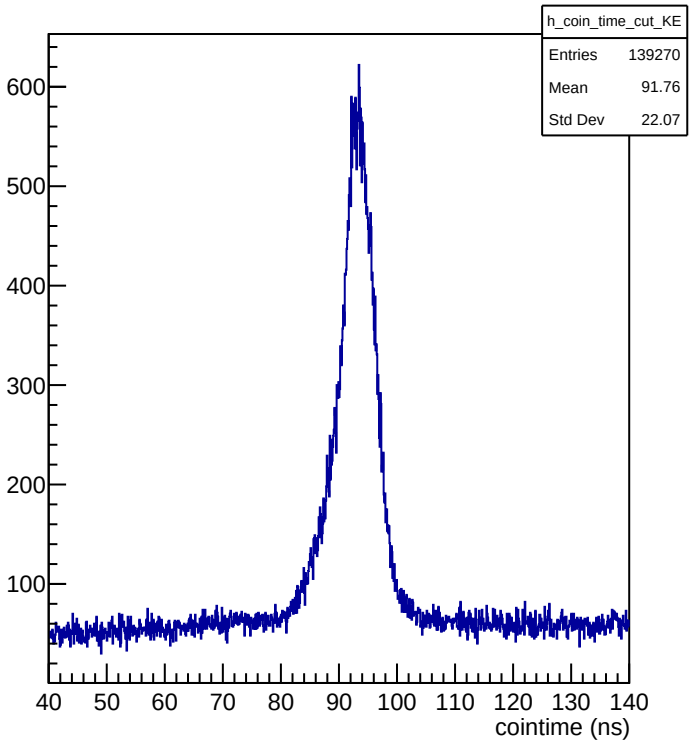
cointime distribution only with Ppar cut



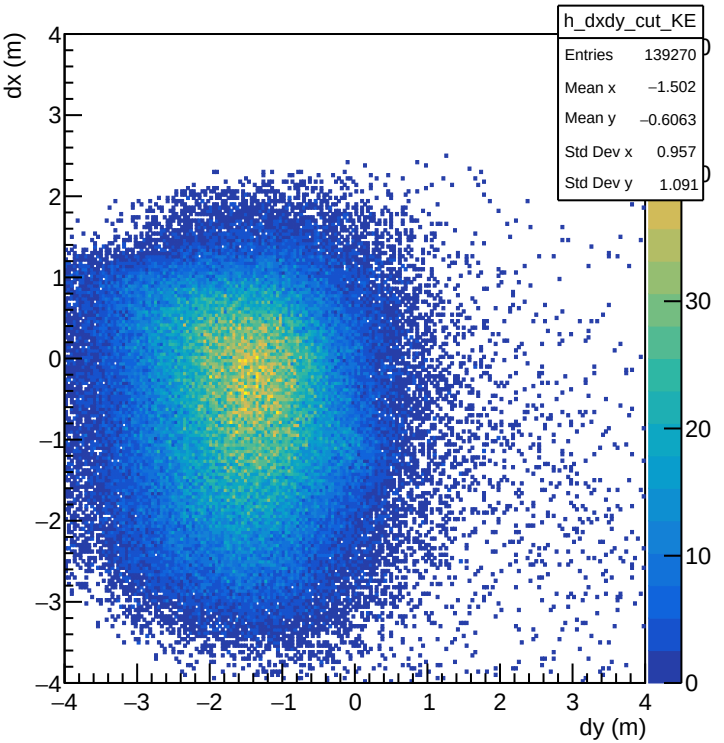
dxdy only with Ppar cut



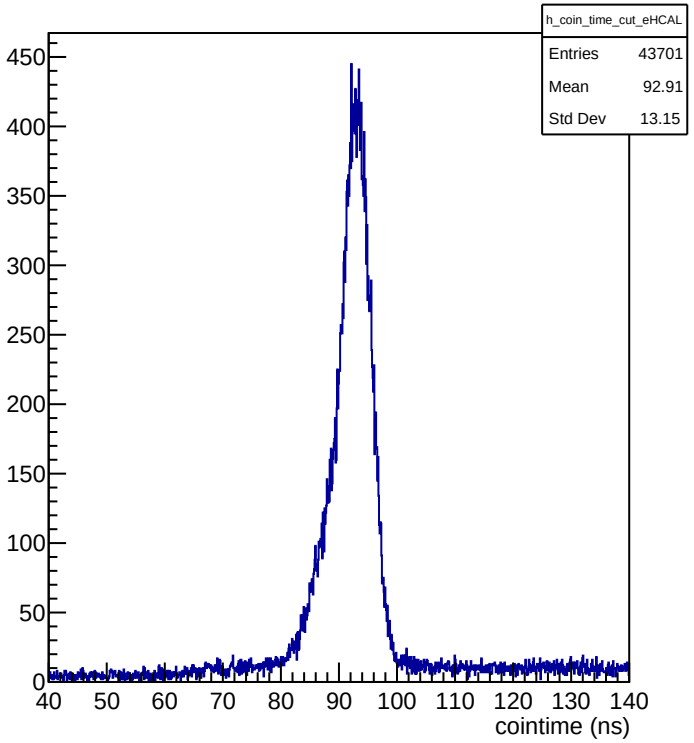
cointime distribution only with KE cut



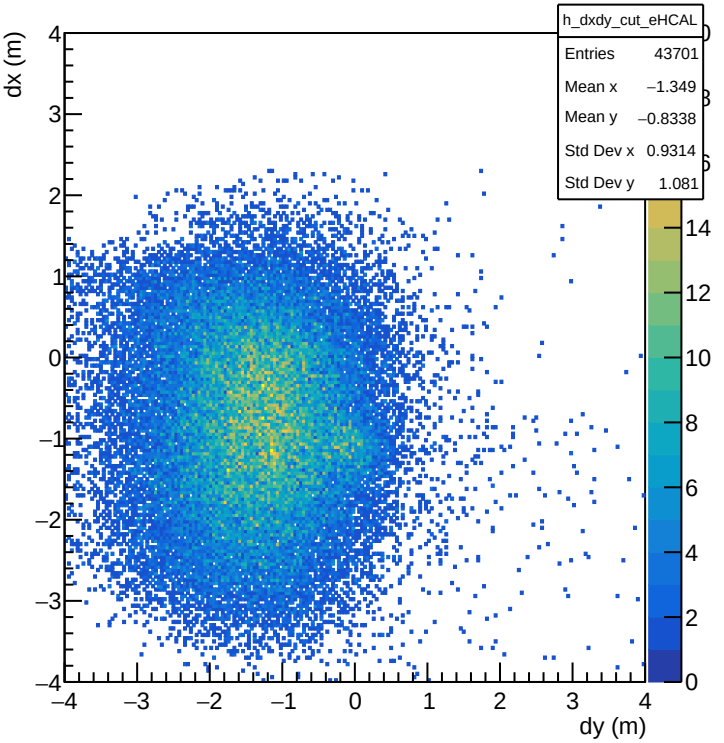
dxdy only with KE cut

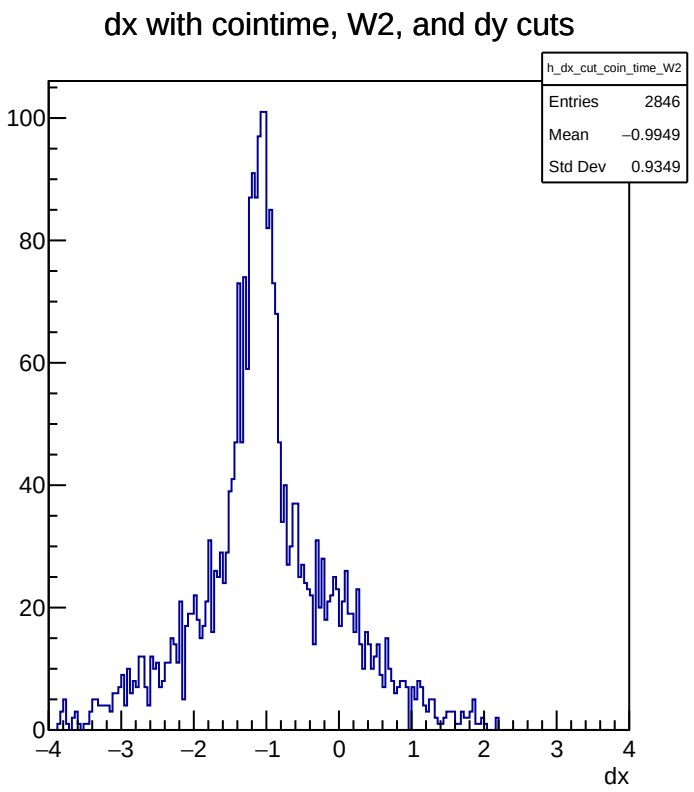


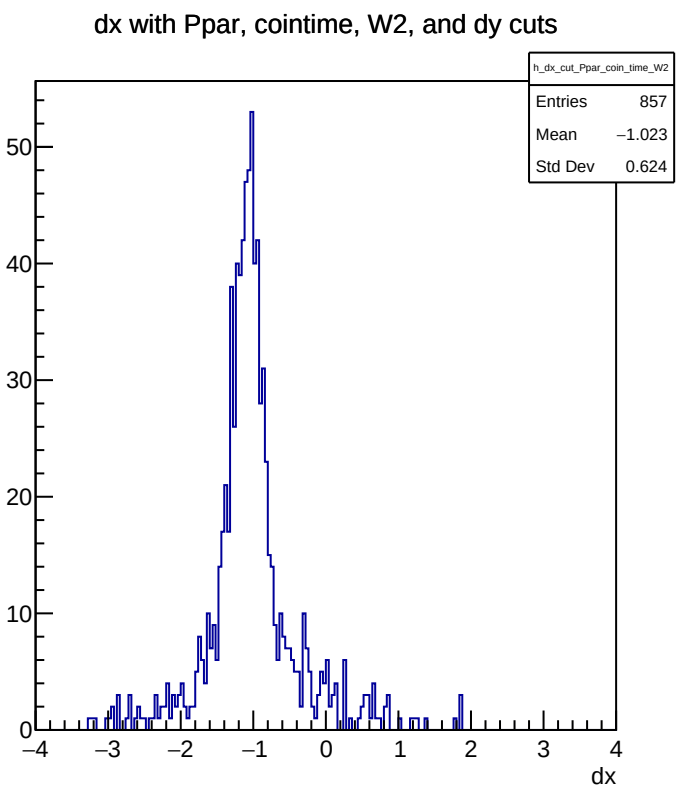
cointime distribution only with eHCAL cut

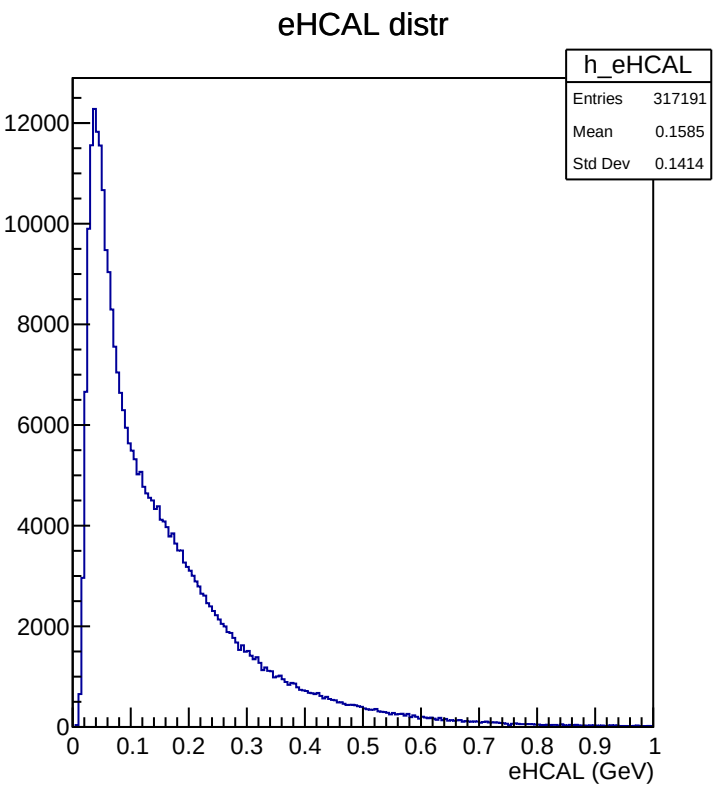


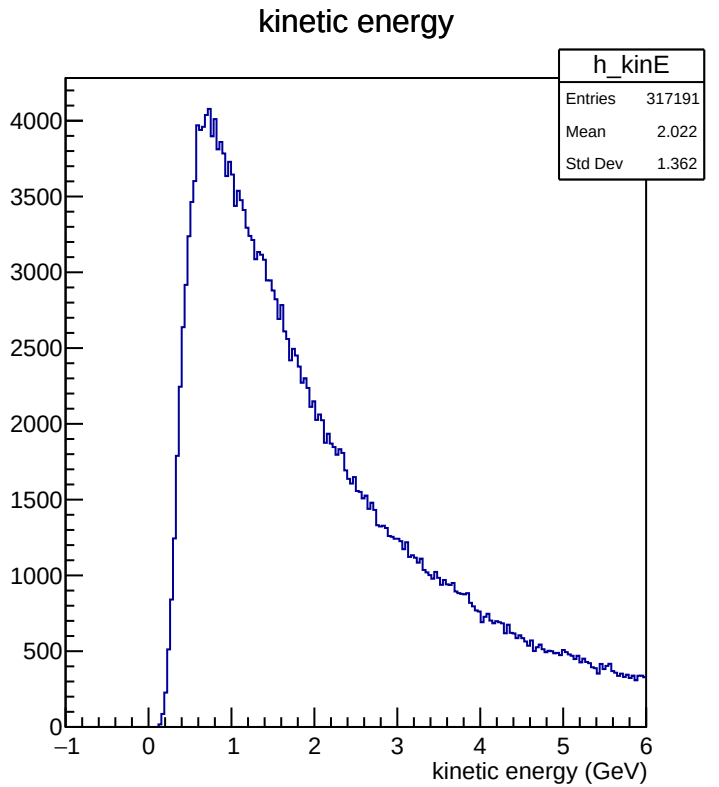
dxdy only with eHCAL cut

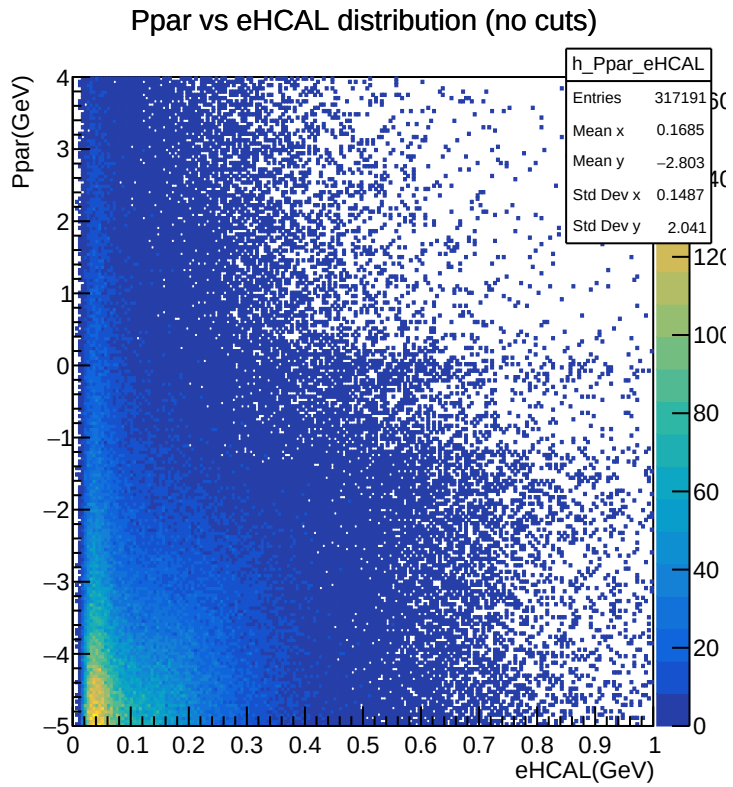



dx with cointime, W2, and dy cuts
h_dx_cut_coin_time_W2
Entries 2846
Mean −0.9949
Std Dev 0.9349
100
80
60
40
20
0
−4
−3
−2
−1
0
1
2
3
4
dx


dx with Ppar, cointime, W2, and dy cuts
h_dx_cut_Ppar_coin_time_W2
Entries 857
Mean −1.023
Std Dev 0.624
50
40
30
20
10
0
−4
−3
−2
−1
0
1
2
3
4
dx


eHCAL distr
h_eHCAL
Entries 317191
Mean 0.1585
Std Dev 0.1414
12000
10000
8000
6000
4000
2000
0
0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1
eHCAL (GeV)


kinetic energy
h_kinE
Entries 317191
Mean 2.022
Std Dev 1.362
4000
3500
3000
2500
2000
1500
1000
500
0
−1 0 1 2 3 4 5 6
kinetic energy (GeV)


Ppar vs eHCAL distribution (no cuts)
h_Ppar_eHCAL
Entries 317191
Mean x 0.1685
Mean y −2.803
Std Dev x 0.1487
Std Dev y 2.041
Ppar(GeV)
4
3
2
1
0
−1
−2
−3
−4
−5
0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1
eHCAL(GeV)
120
100
80
60
40
20
0