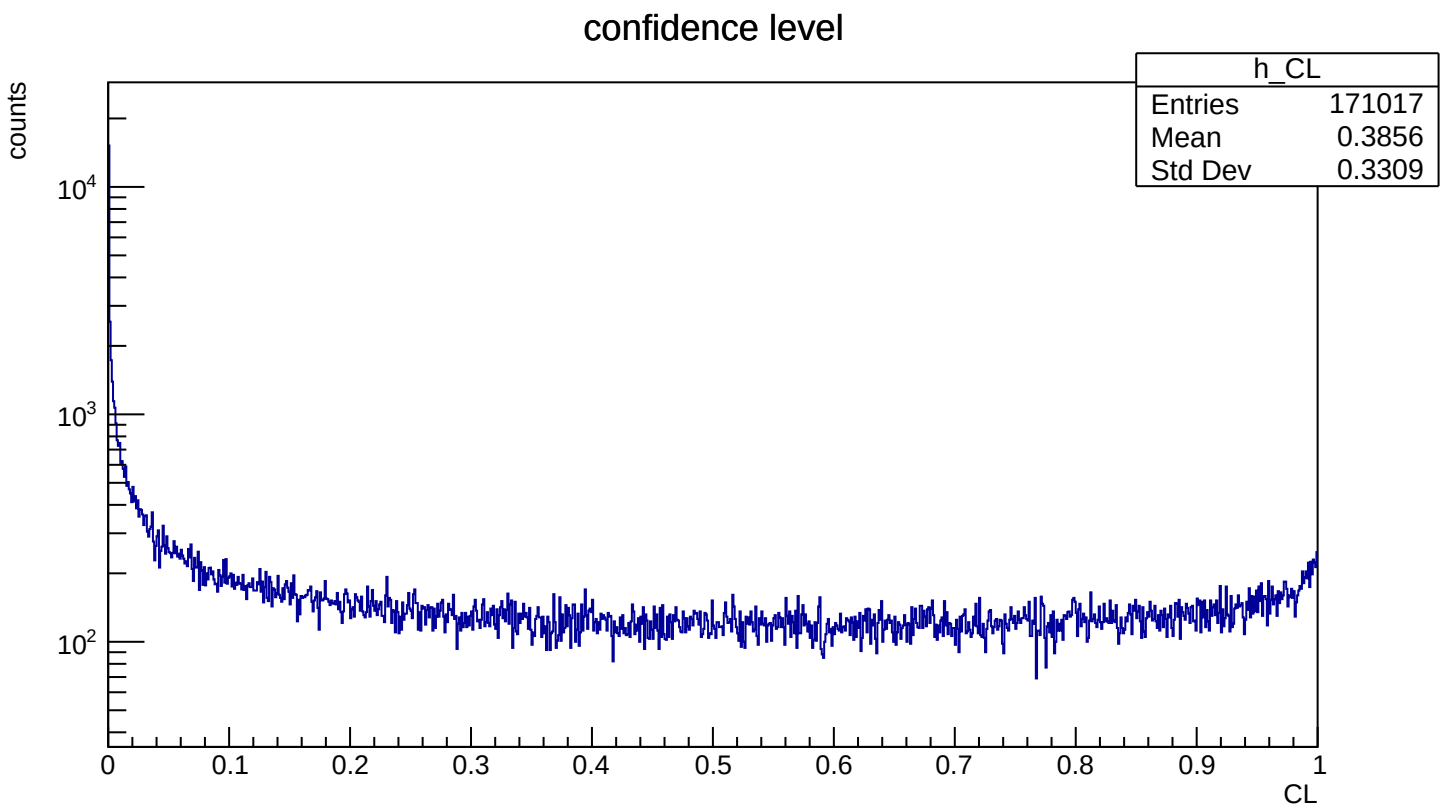
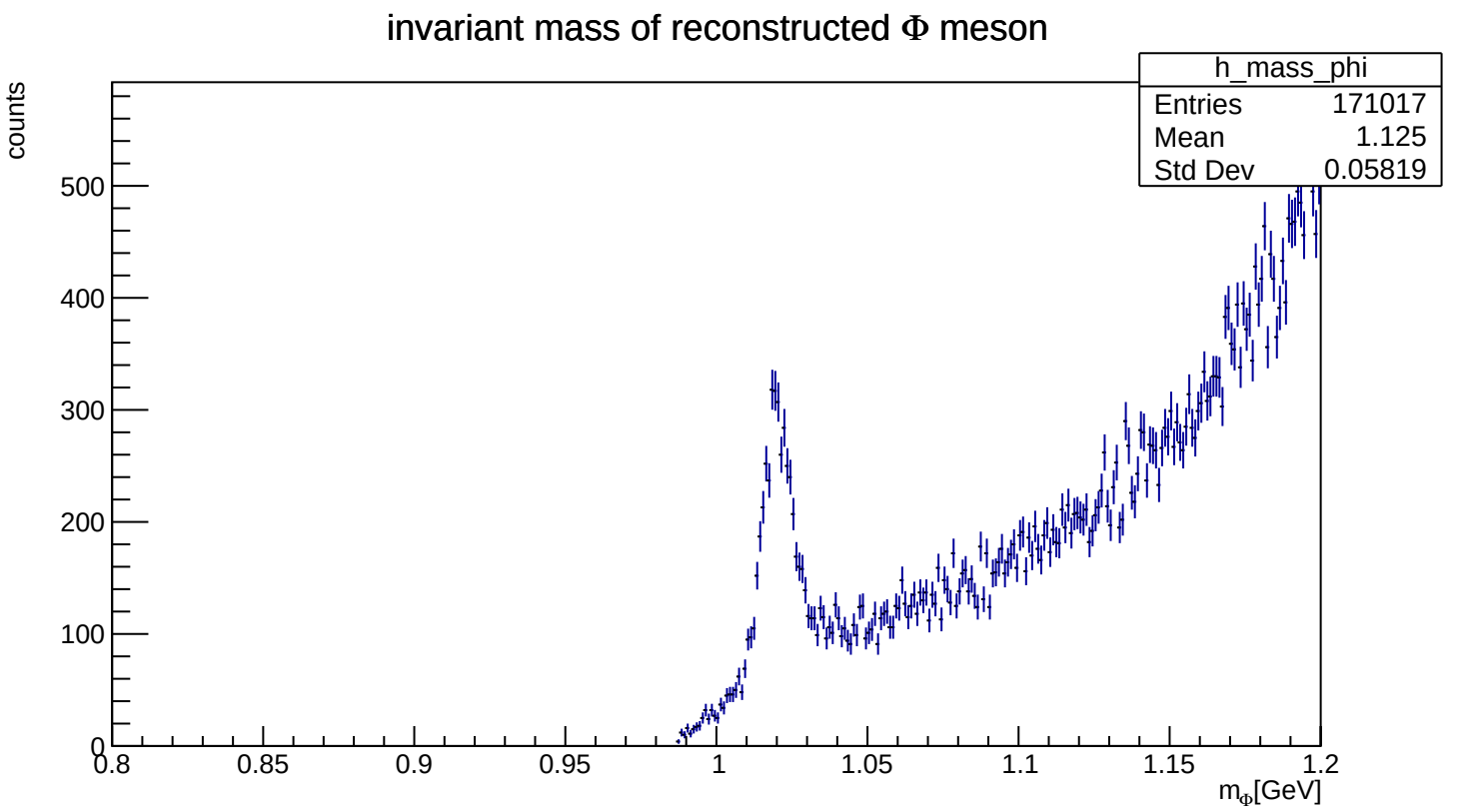
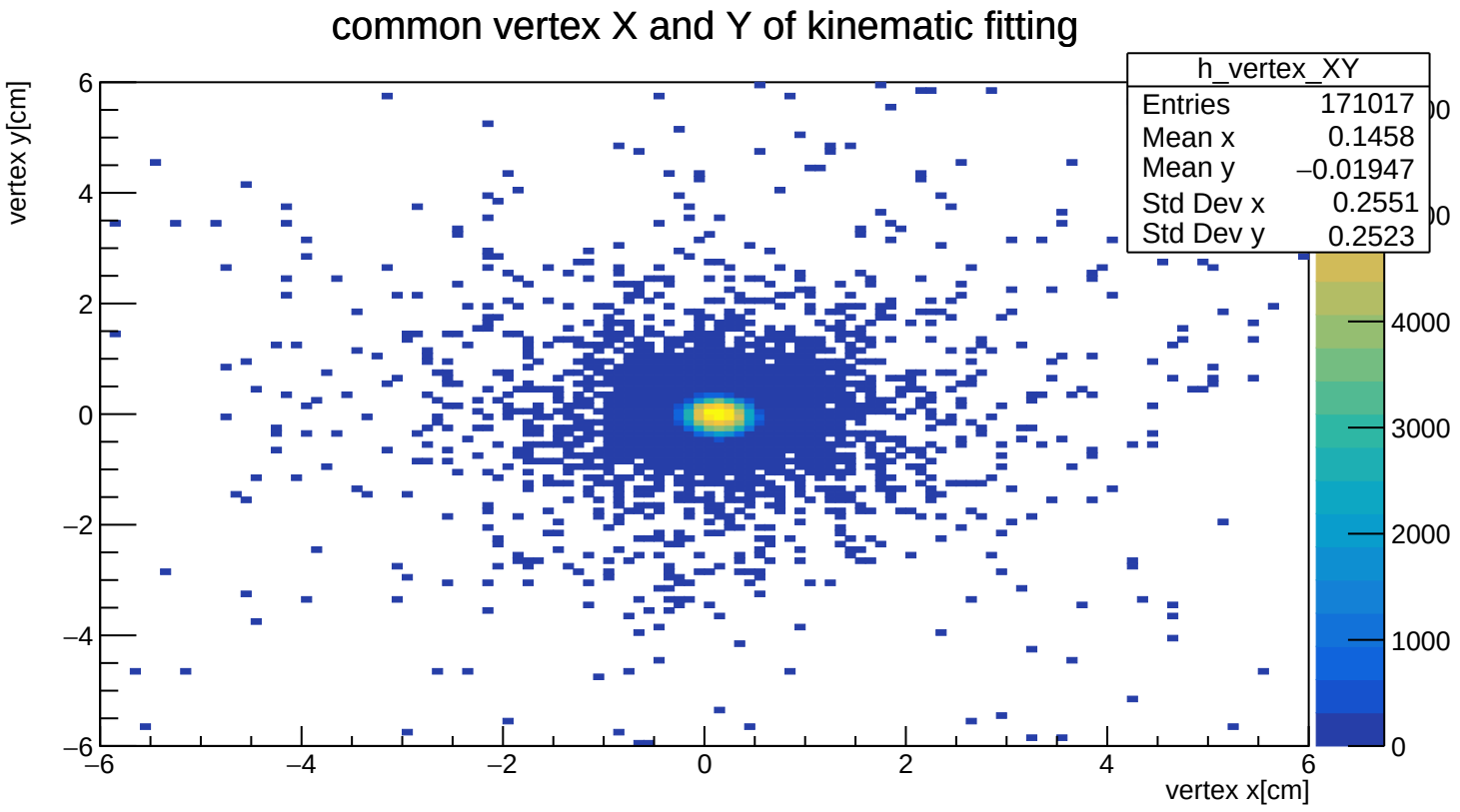
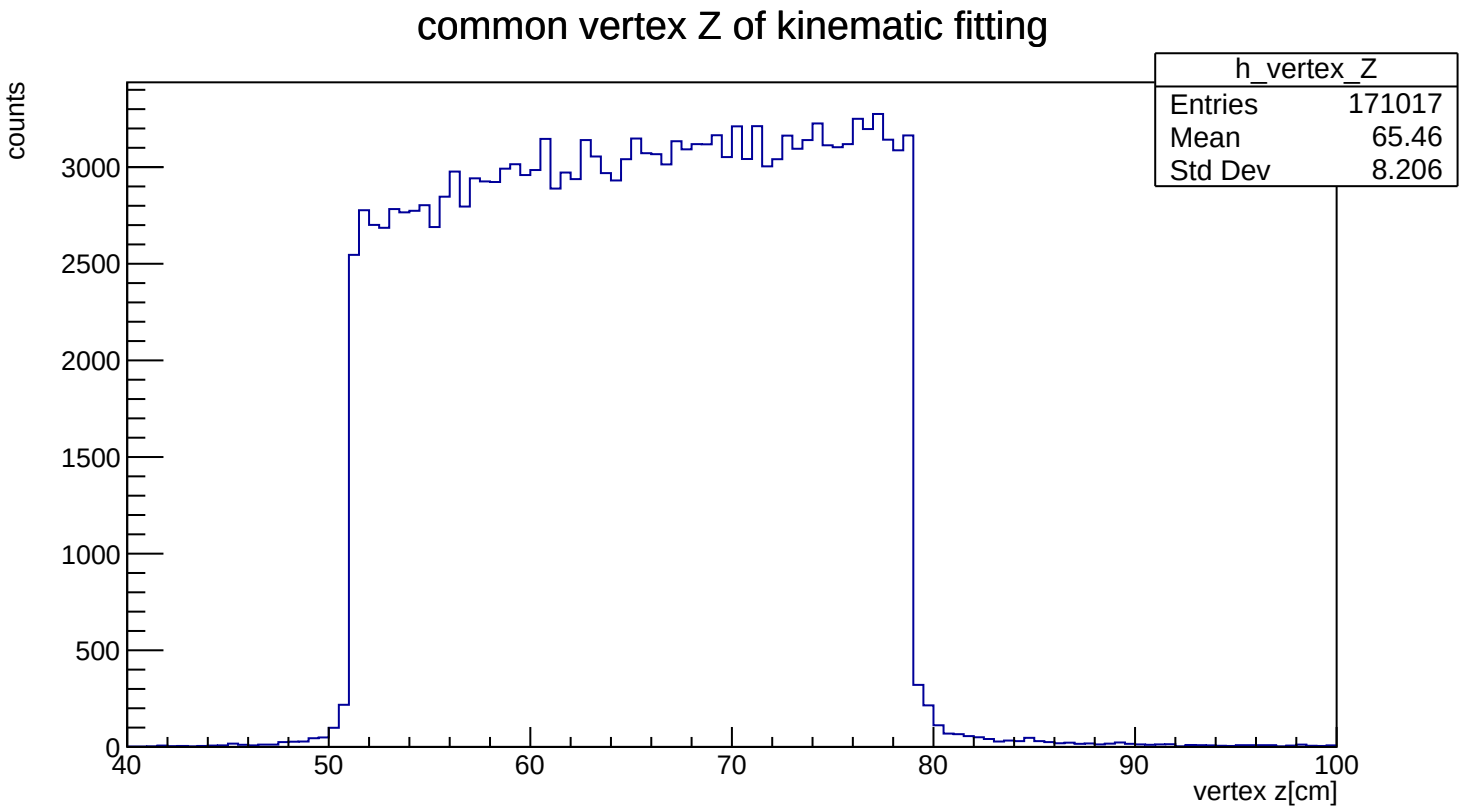
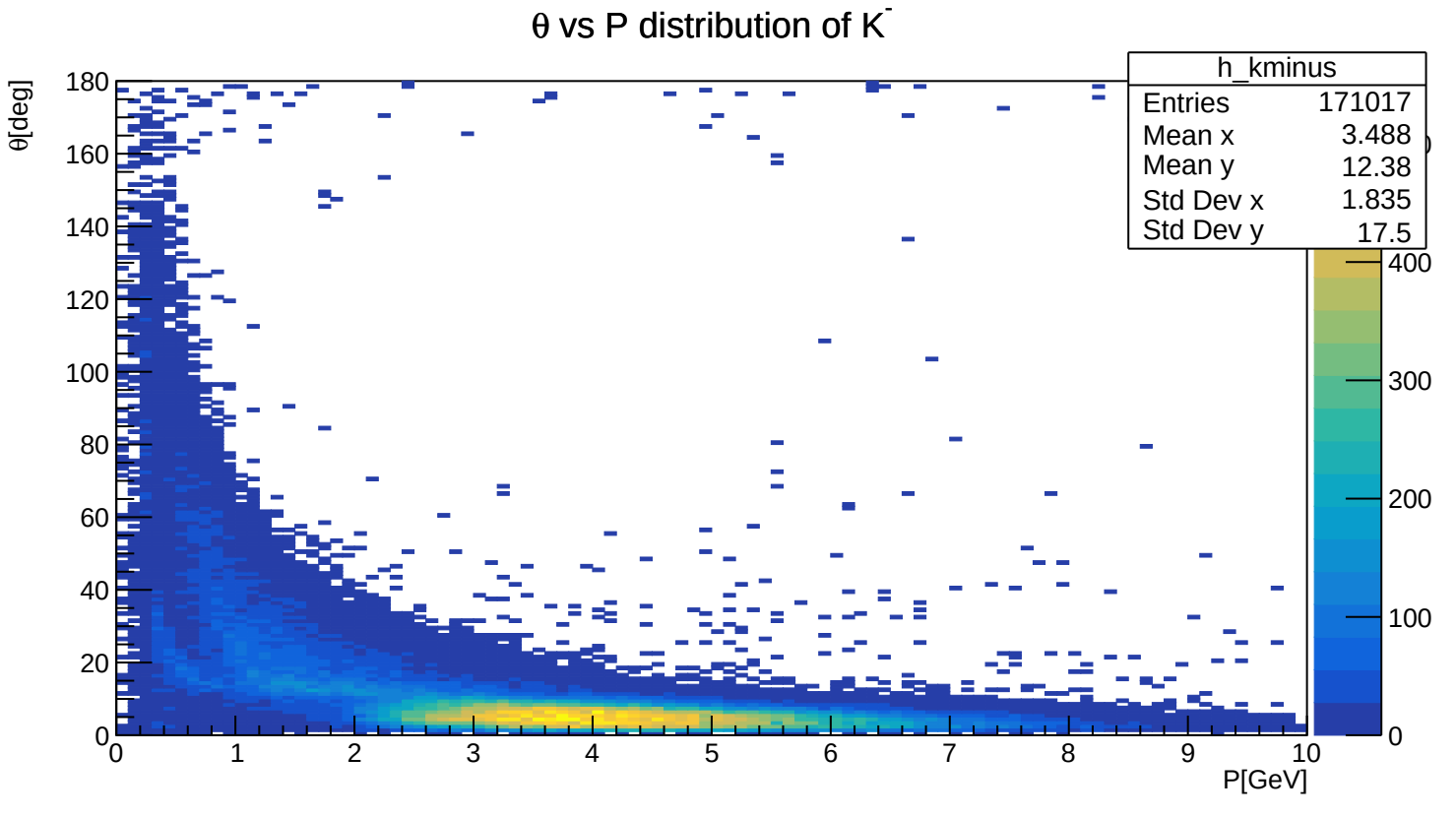
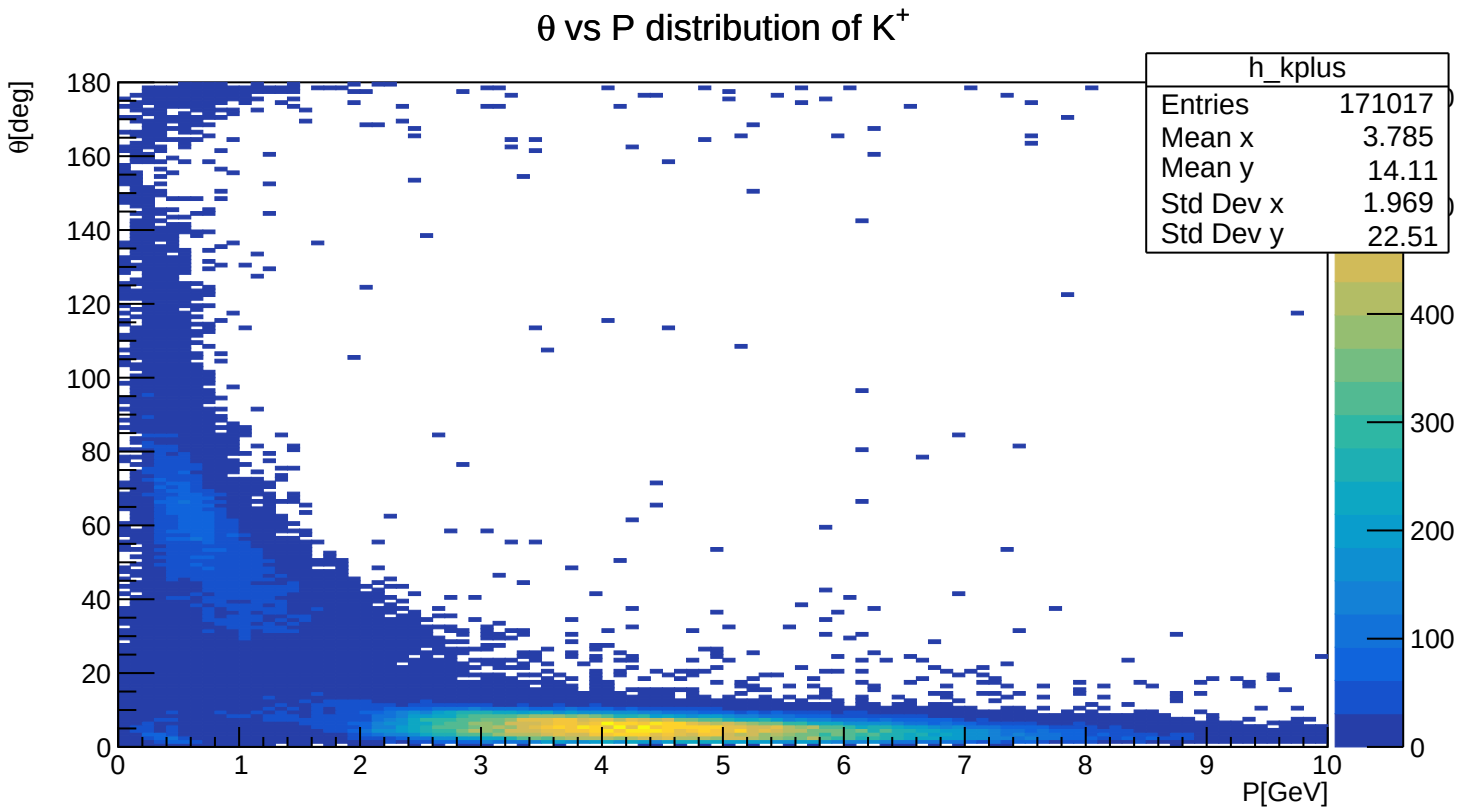

confidence level
h_CL
Entries 171017
Mean 0.3856
Std Dev 0.3309
counts
10^4
10^3
10^2
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
CL

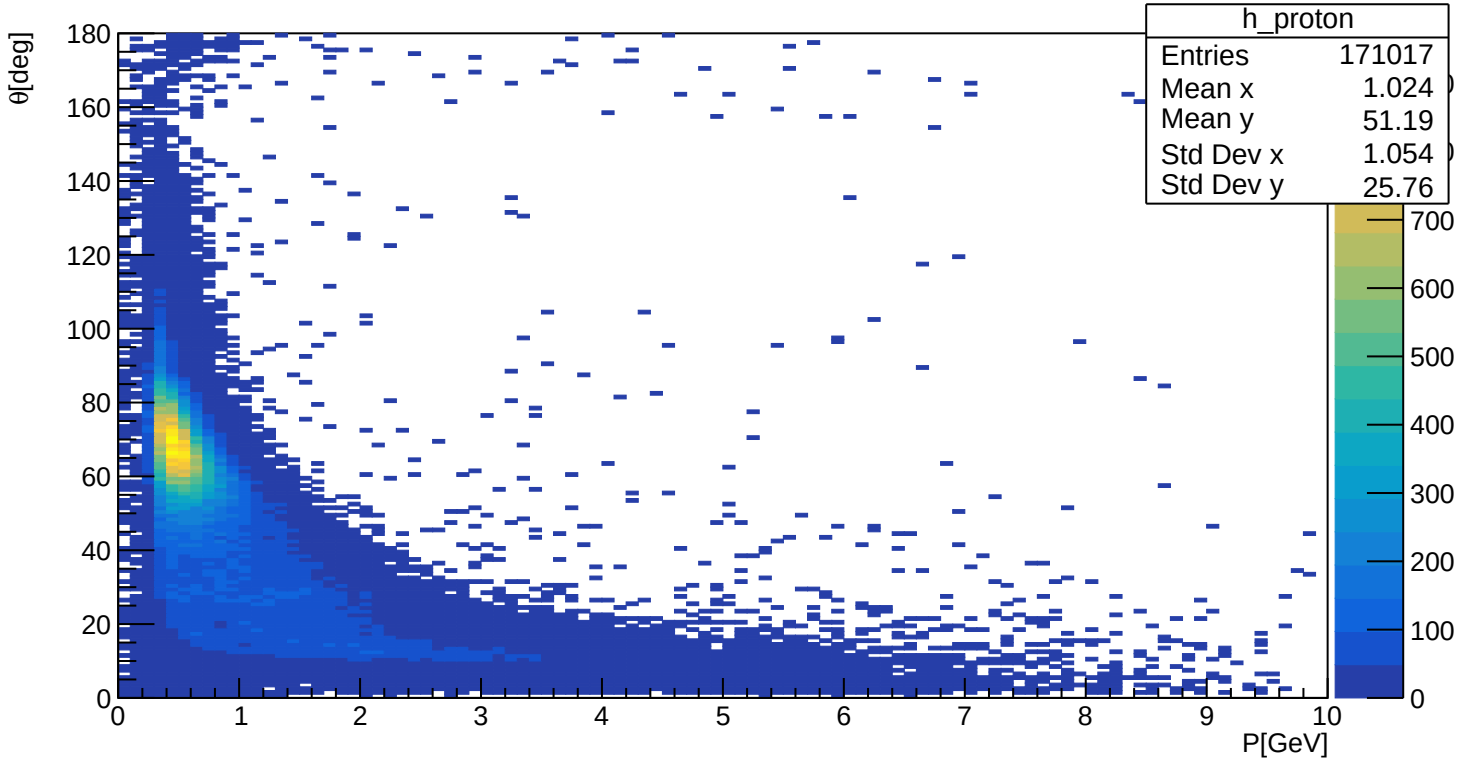

invariant mass of reconstructed Φ meson
h_mass_phi
Entries 171017
Mean 1.125
Std Dev 0.05819
counts
0
100
200
300
400
500
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2
m_Φ[GeV]

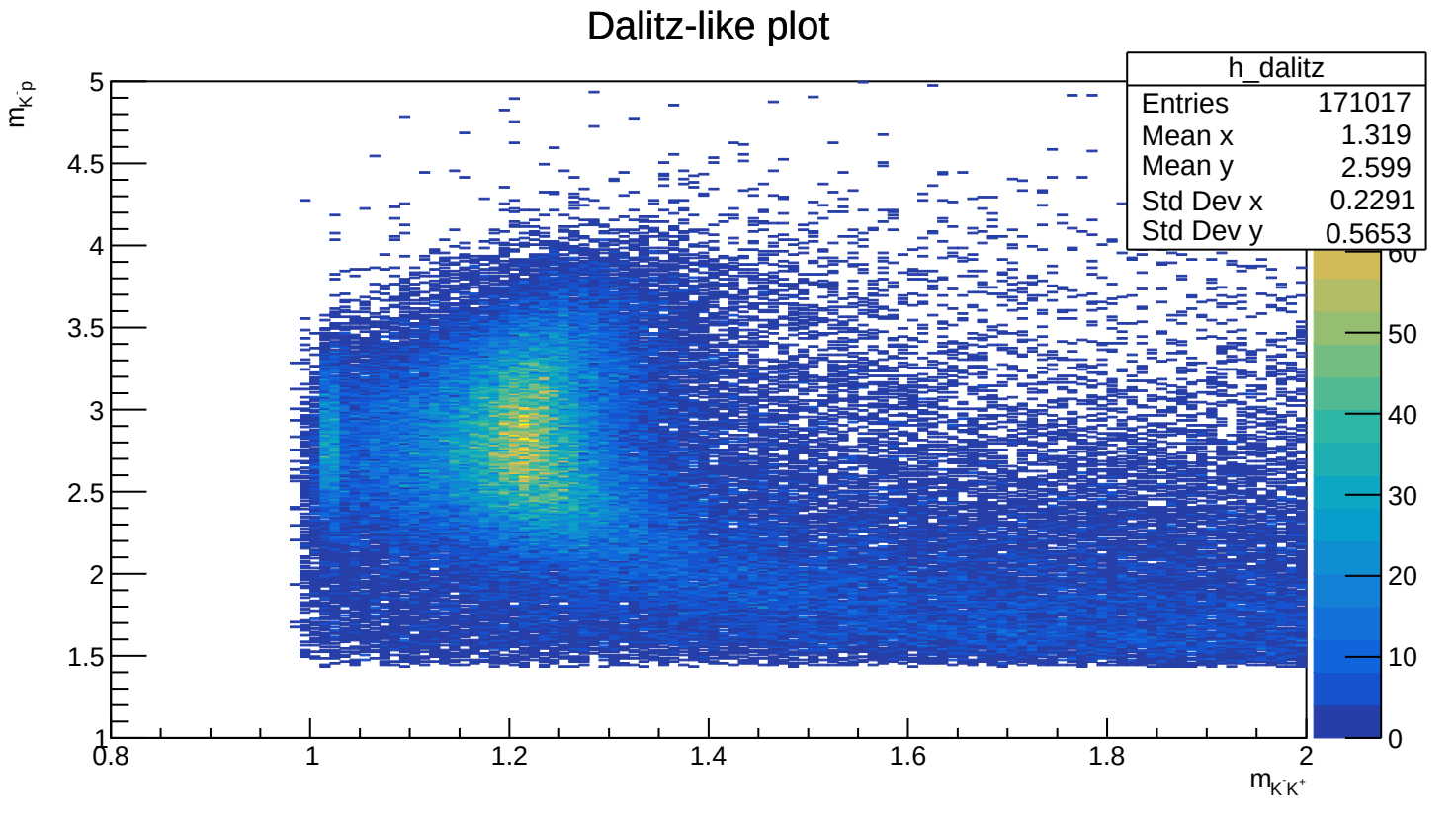

common vertex X and Y of kinematic fitting
h_vertex_XY
Entries 171017
Mean x 0.1458
Mean y −0.01947
Std Dev x 0.2551
Std Dev y 0.2523
vertex y[cm]
vertex x[cm]
6
4
2
0
−2
−4
−6
4000
3000
2000
1000
0

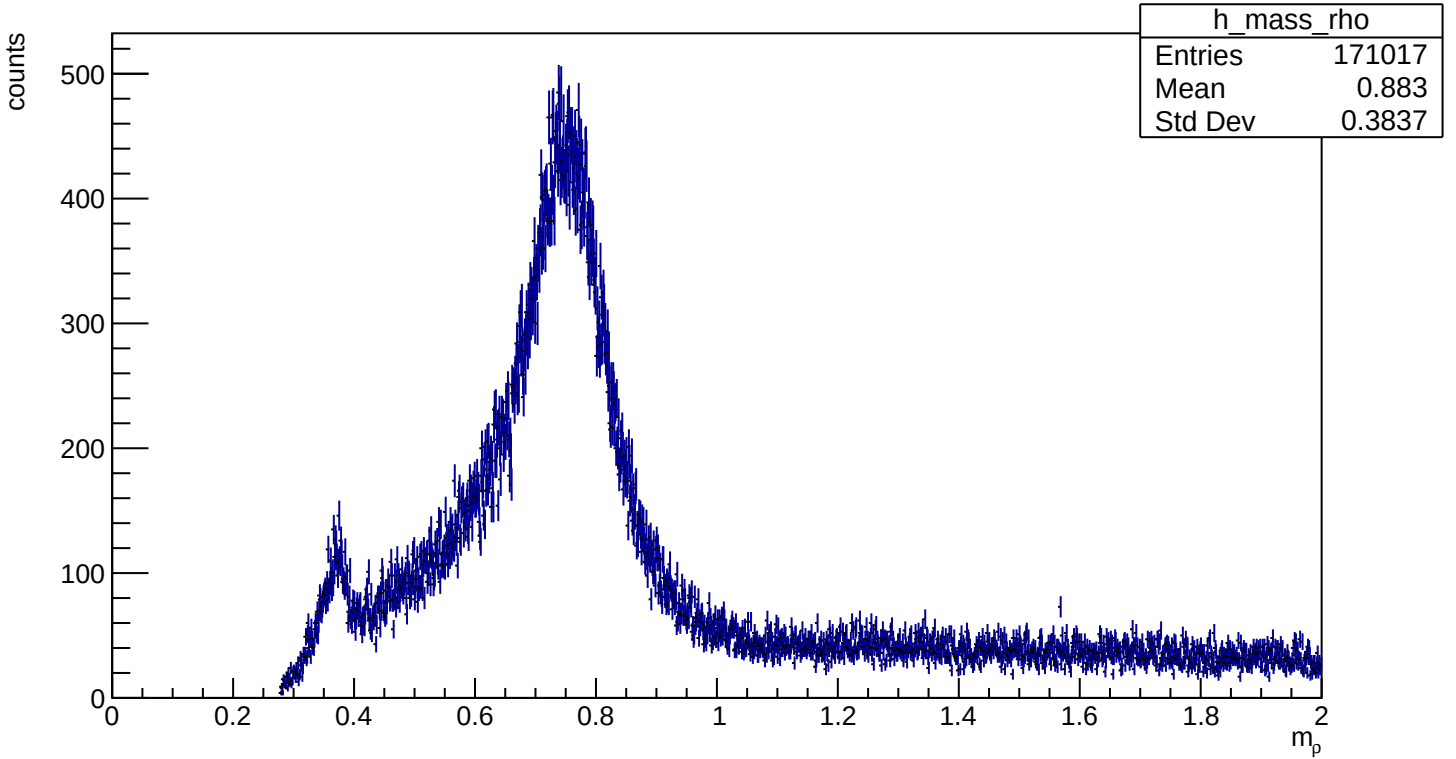

common vertex Z of kinematic fitting
h_vertex_Z
Entries 171017
Mean 65.46
Std Dev 8.206
counts
0
500
1000
1500
2000
2500
3000
40
50
60
70
80
90
100
vertex z[cm]

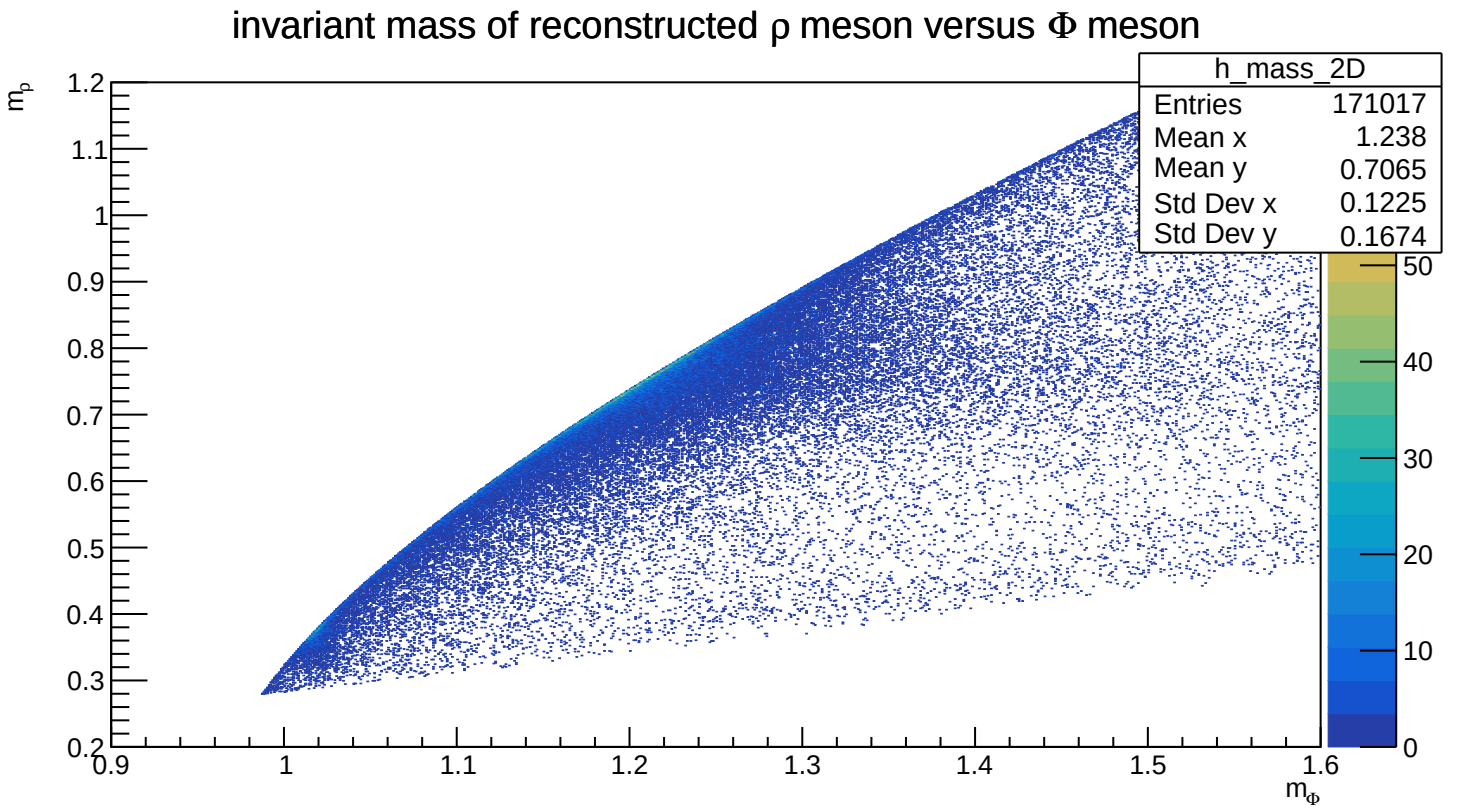

θ vs P distribution of K-
h_kminus
Entries 171017
Mean x 3.488
Mean y 12.38
Std Dev x 1.835
Std Dev y 17.5
θ[deg]
P[GeV]
0
20
40
60
80
100
120
140
160
180
1
2
3
4
5
6
7
8
9
10
100
200
300
400

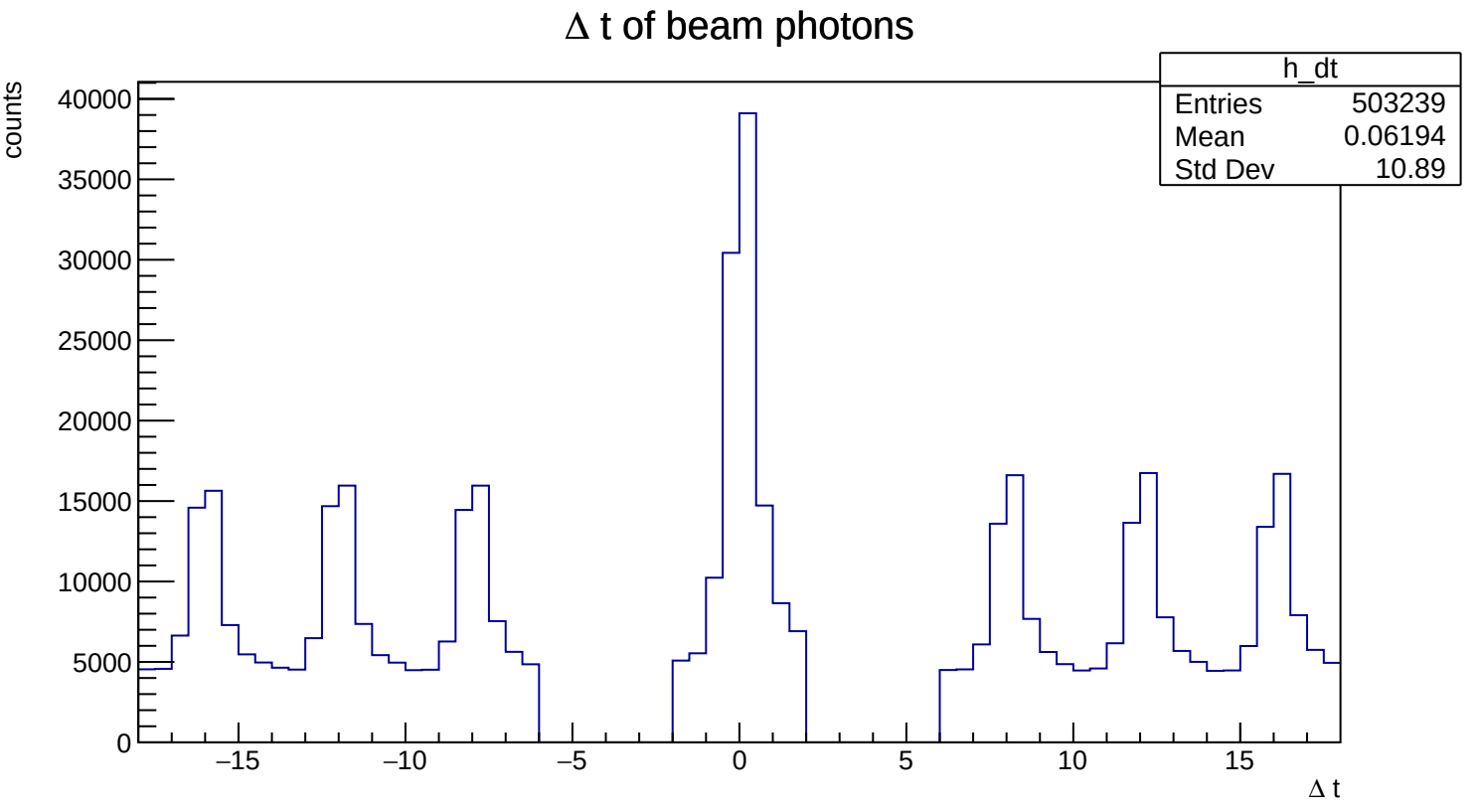

θ vs P distribution of K+
h_kplus
Entries 171017
Mean x 3.785
Mean y 14.11
Std Dev x 1.969
Std Dev y 22.51
θ[deg]
P[GeV]
0
20
40
60
80
100
120
140
160
180
1
2
3
4
5
6
7
8
9
10
100
200
300
400

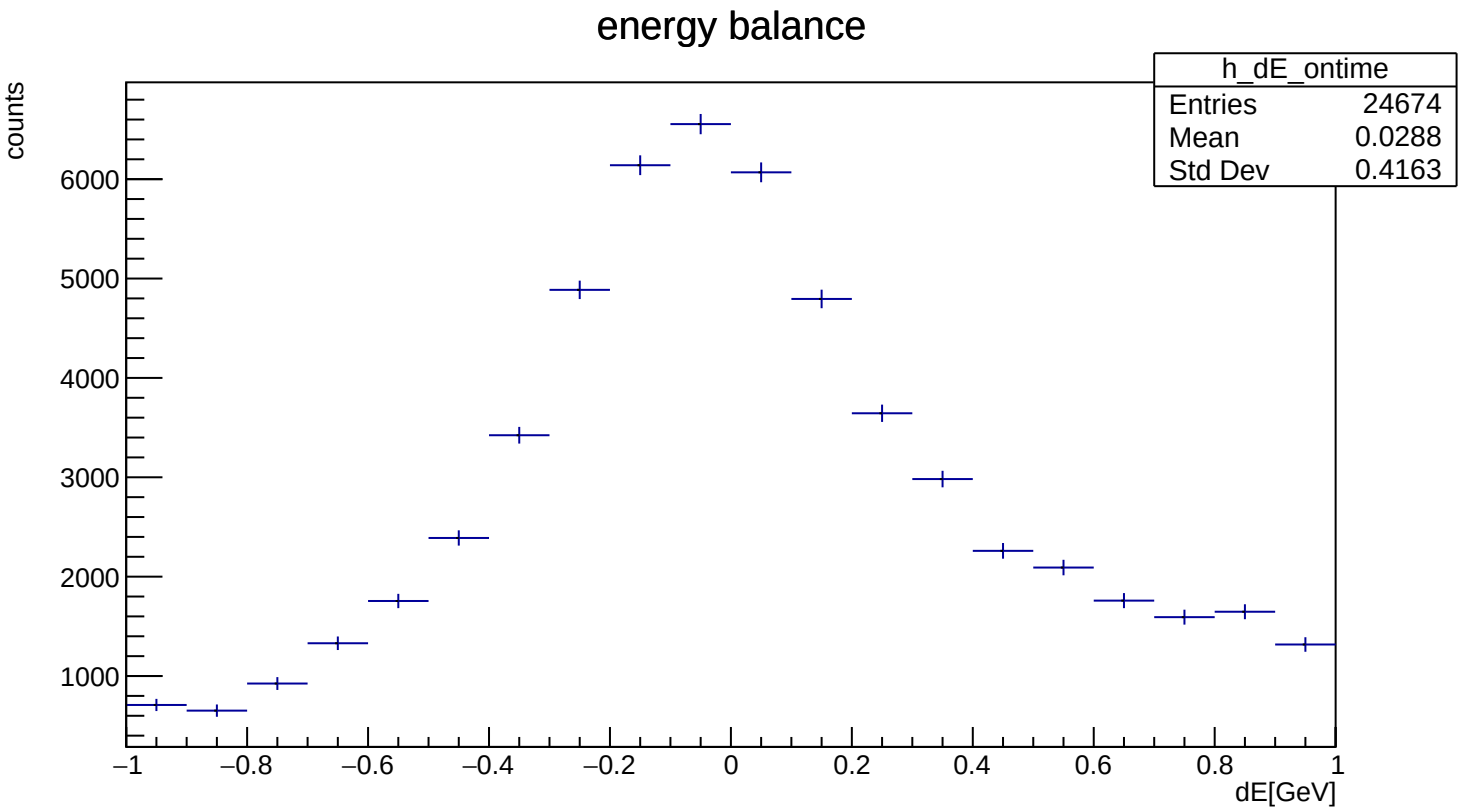

θ vs P distribution of proton
h_proton
Entries 171017
Mean x 1.024
Mean y 51.19
Std Dev x 1.054
Std Dev y 25.76
θ[deg]
P[GeV]
0 20 40 60 80 100 120 140 160 180
0 1 2 3 4 5 6 7 8 9 10
0 100 200 300 400 500 600 700

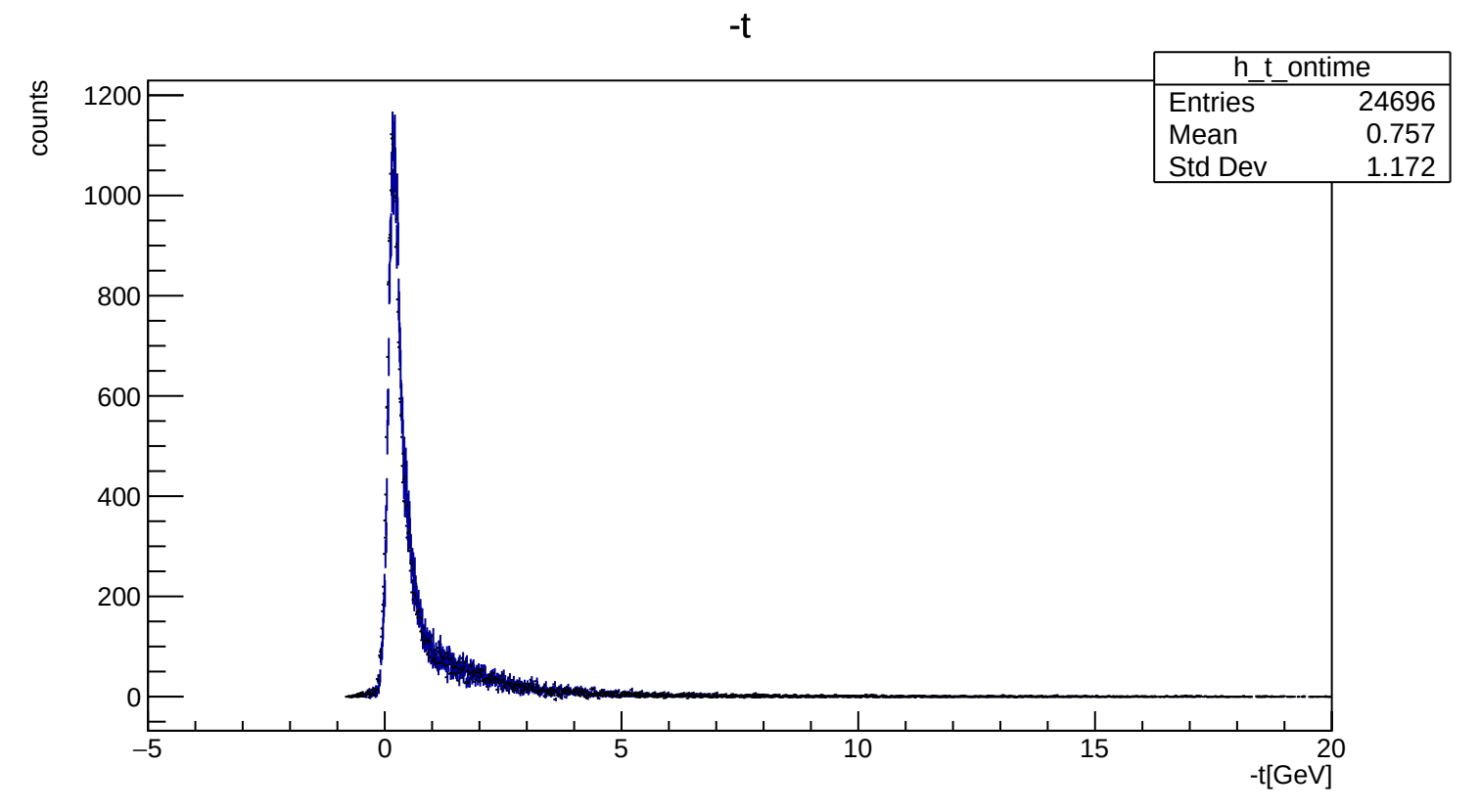

Dalitz-like plot
h_dalitz
Entries 171017
Mean x 1.319
Mean y 2.599
Std Dev x 0.2291
Std Dev y 0.5653
m_{K^-p}
$m_{K^-K^+}$
5
4.5
4
3.5
3
2.5
2
1.5
1
0.8
1
1.2
1.4
1.6
1.8
2
60
50
40
30
20
10
0

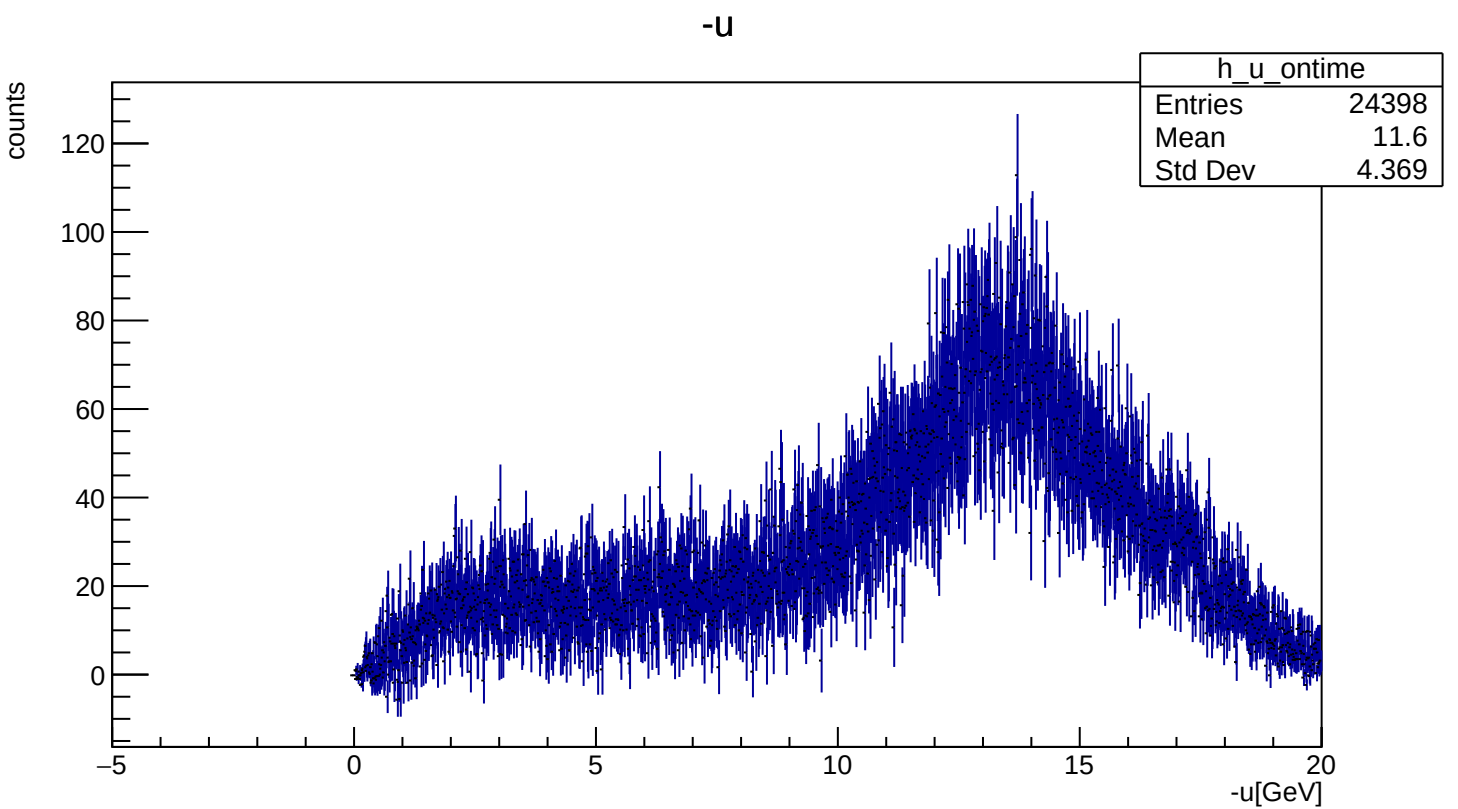

invariant mass of reconstructed ρ meson assuming kaons as pions
h_mass_rho
Entries 171017
Mean 0.883
Std Dev 0.3837
counts
0
100
200
300
400
500
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2
m_p

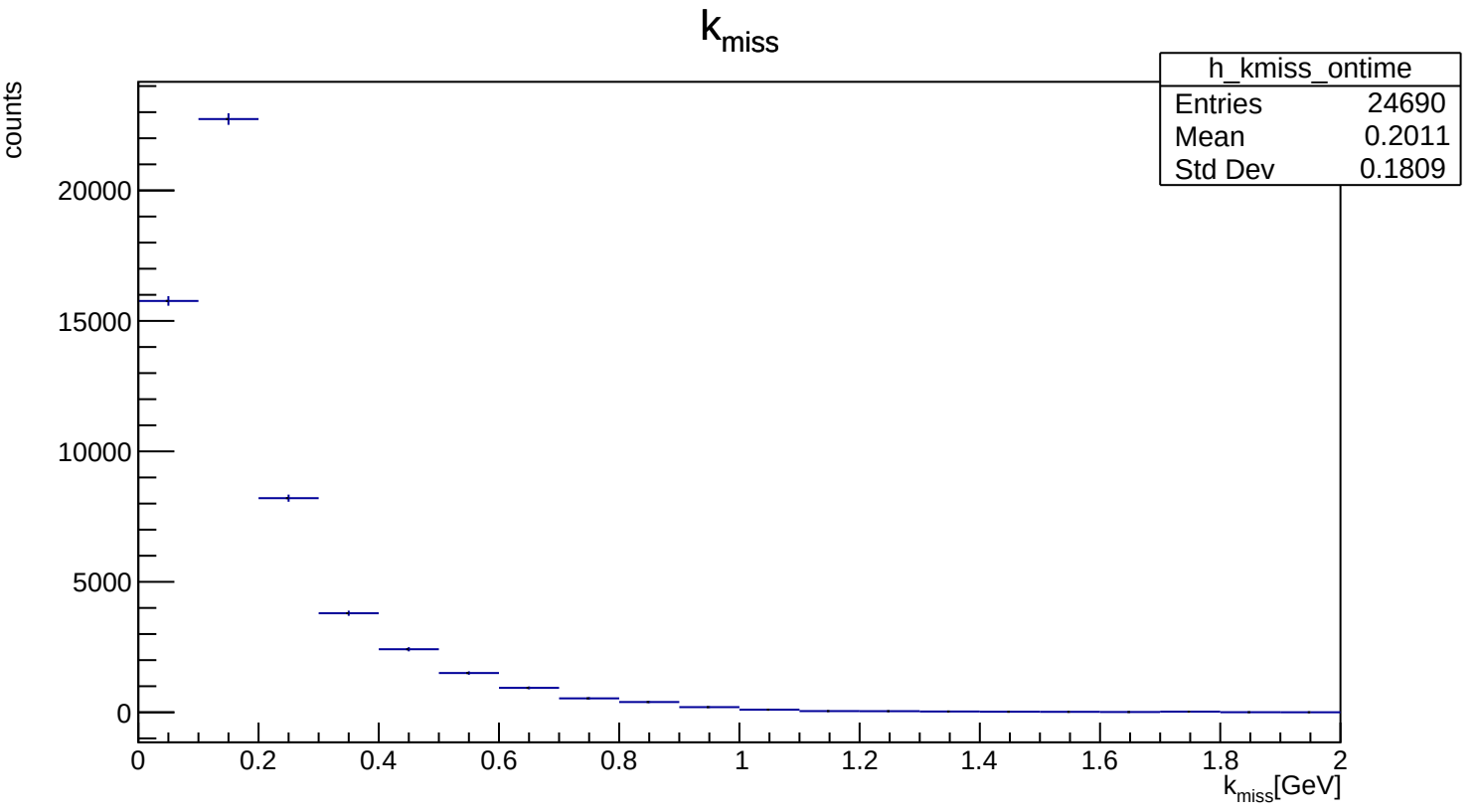

invariant mass of reconstructed ρ meson versus Φ meson
h_mass_2D
Entries 171017
Mean x 1.238
Mean y 0.7065
Std Dev x 0.1225
Std Dev y 0.1674
m_ρ
m_Φ
1.2
1.1
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.9
1
1.1
1.2
1.3
1.4
1.5
1.6
50
40
30
20
10
0


Δ t of beam photons
h_dt
Entries 503239
Mean 0.06194
Std Dev 10.89
counts
40000
35000
30000
25000
20000
15000
10000
5000
0
−15
−10
−5
0
5
10
15
Δ t


energy balance
h_dE_ontime
Entries 24674
Mean 0.0288
Std Dev 0.4163
counts
6000
5000
4000
3000
2000
1000
−1
−0.8
−0.6
−0.4
−0.2
0
0.2
0.4
0.6
0.8
1
dE[GeV]


-t
h_t_ontime
Entries 24696
Mean 0.757
Std Dev 1.172
counts
1200
1000
800
600
400
200
0
−5
0
5
10
15
20
-t[GeV]


-u
h_u_ontime
Entries 24398
Mean 11.6
Std Dev 4.369
counts
120
100
80
60
40
20
0
–5
0
5
10
15
20
-u[GeV]


k_miss
h_kmiss_ontime
Entries 24690
Mean 0.2011
Std Dev 0.1809
counts
20000
15000
10000
5000
0
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2
k_miss [GeV]