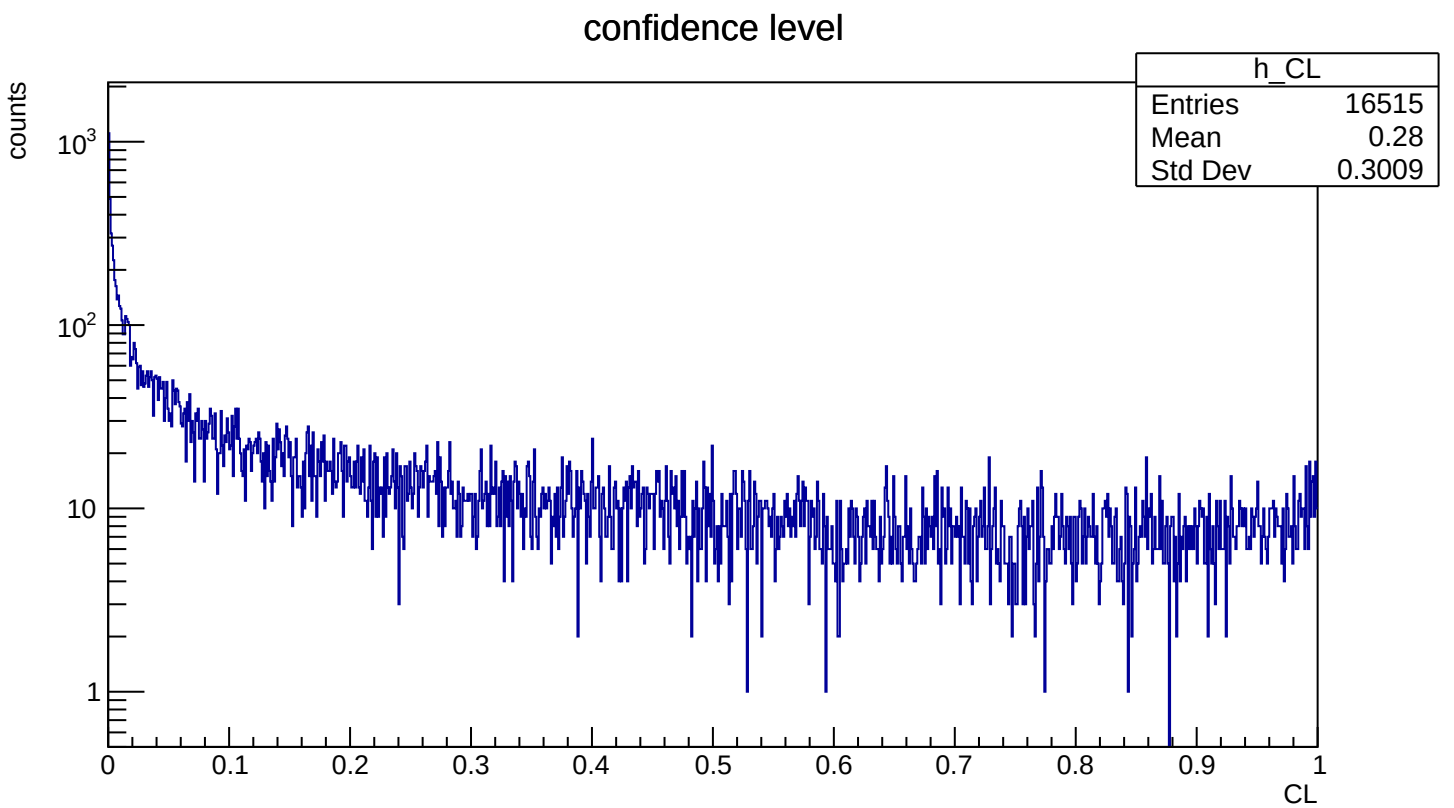
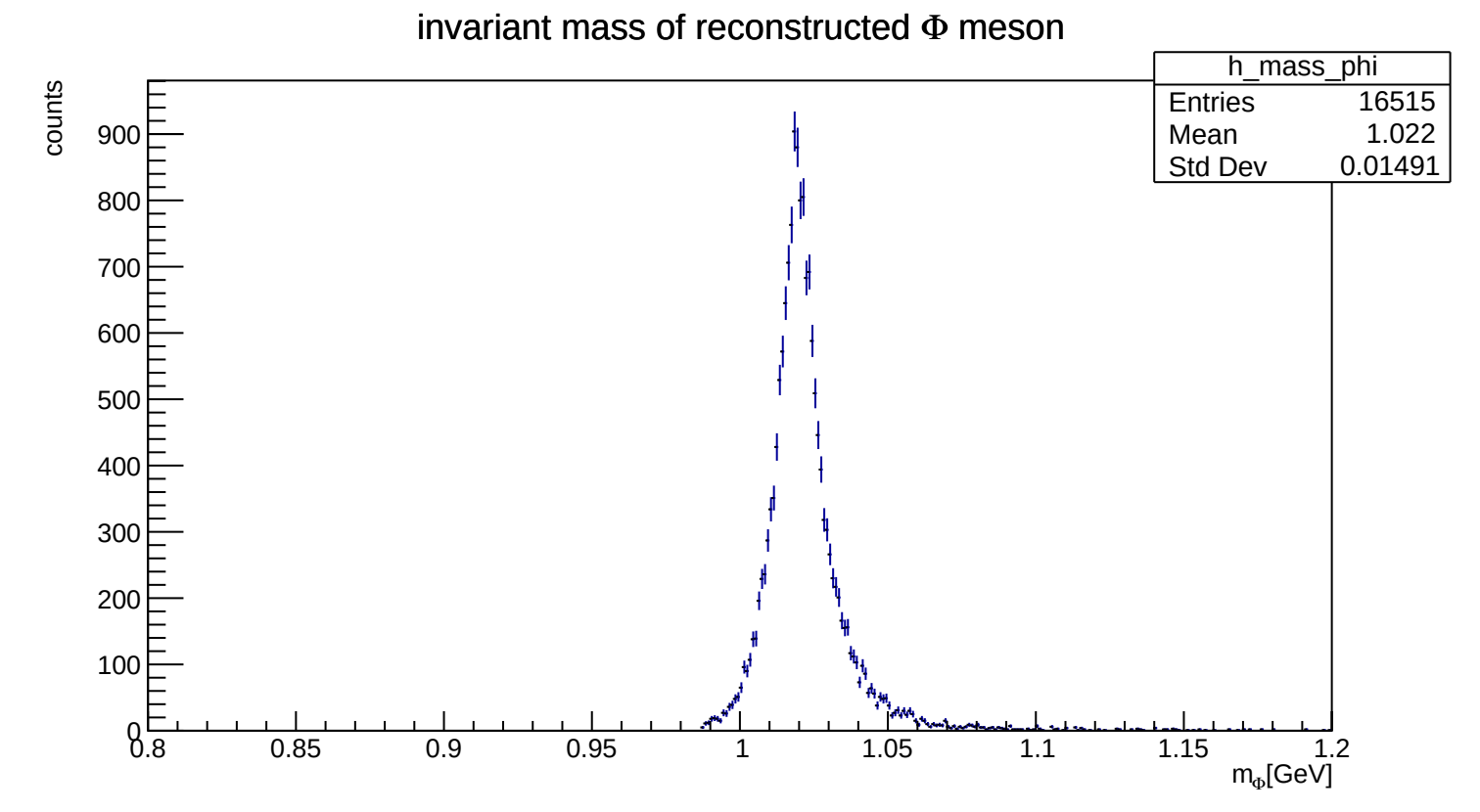
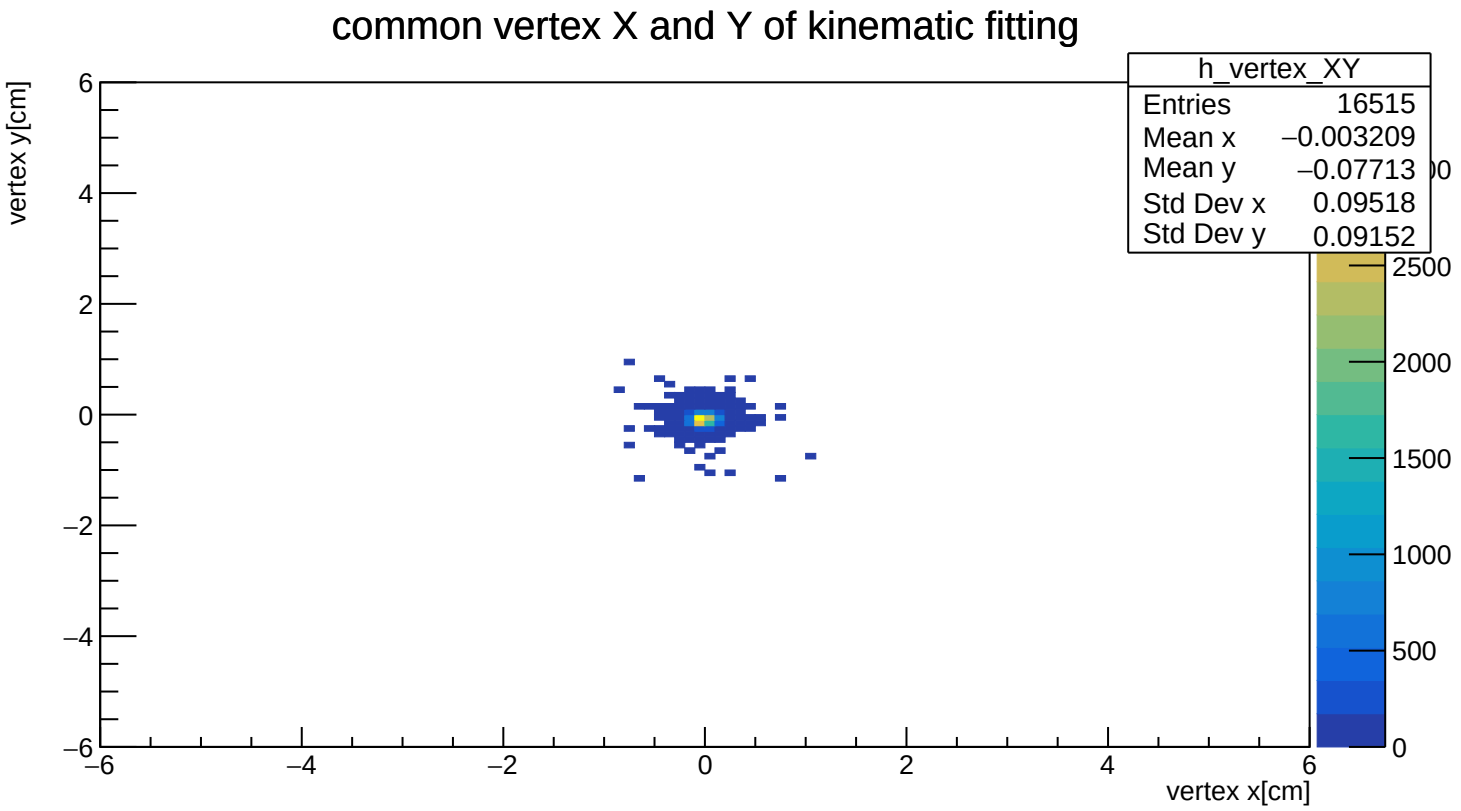
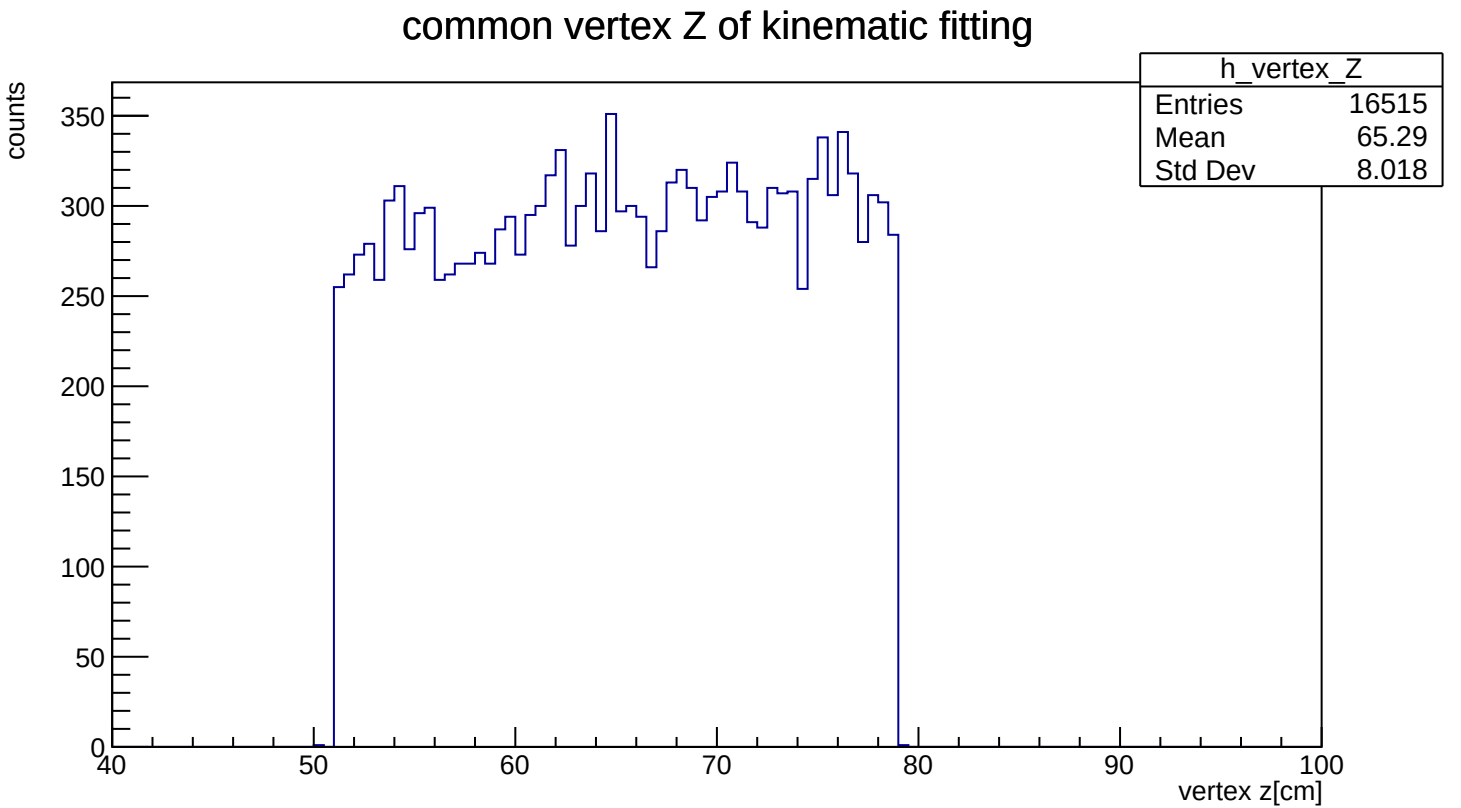
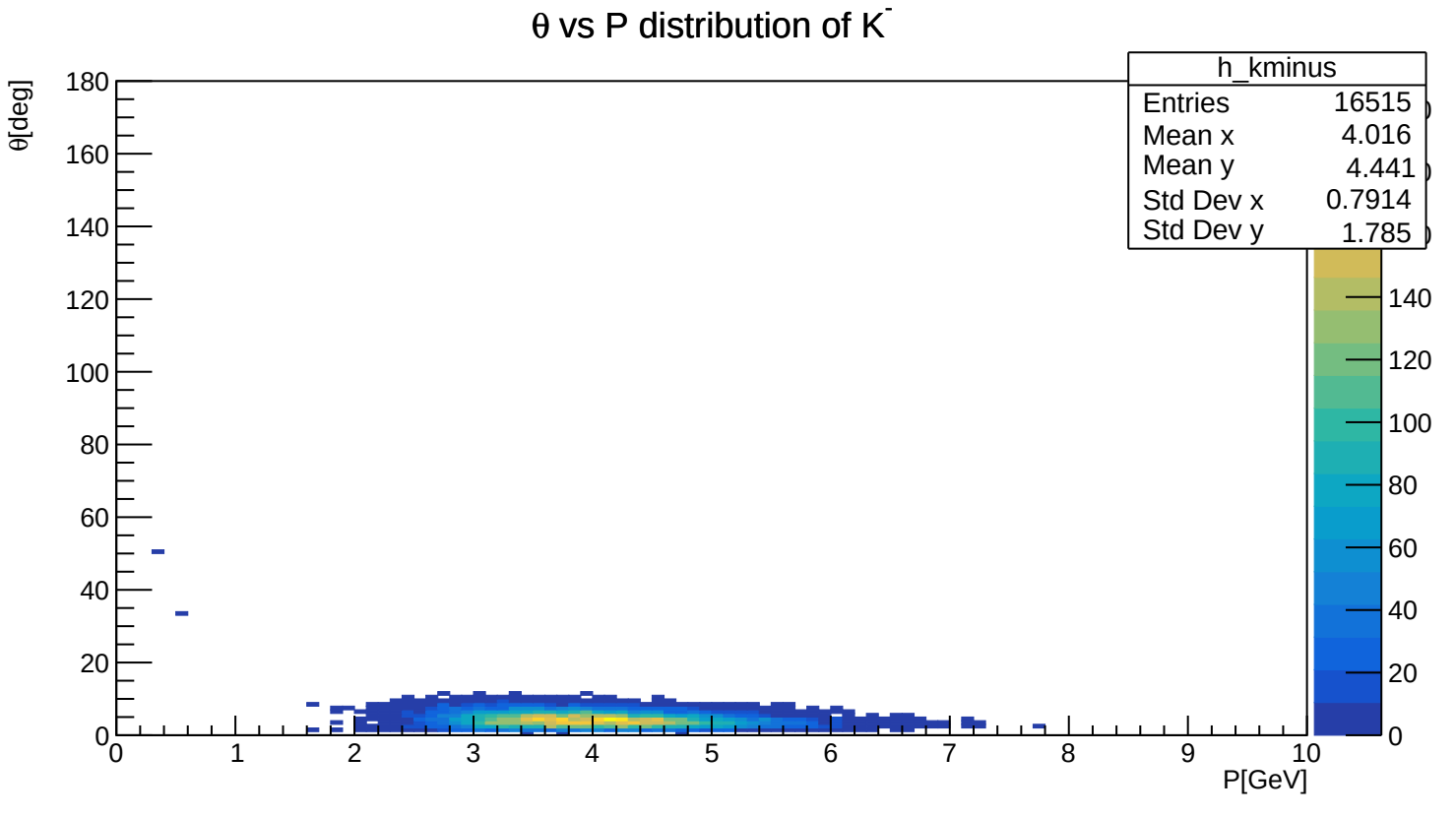
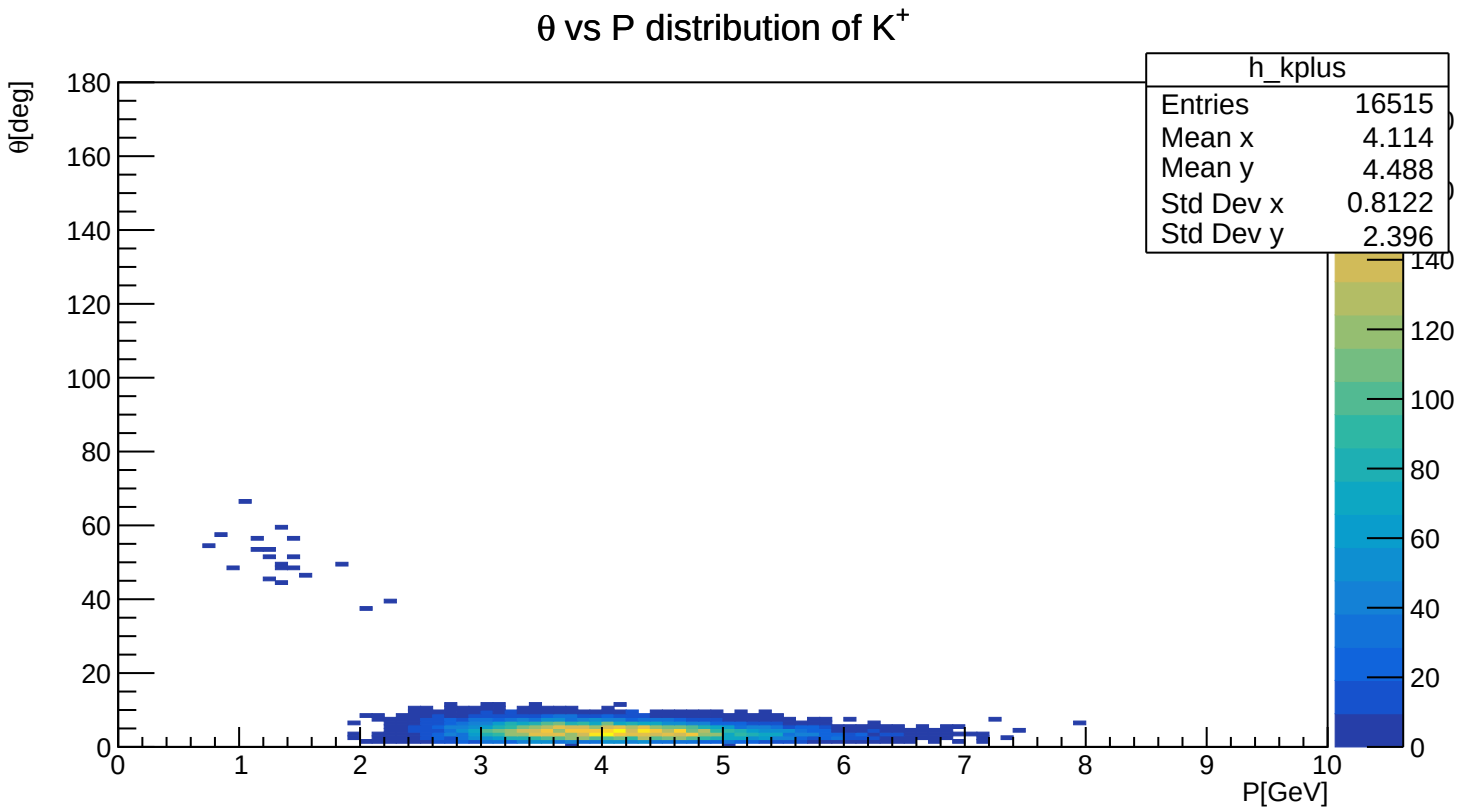

confidence level
h_CL
Entries 16515
Mean 0.28
Std Dev 0.3009
counts
$10^3$
$10^2$
10
1
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
CL

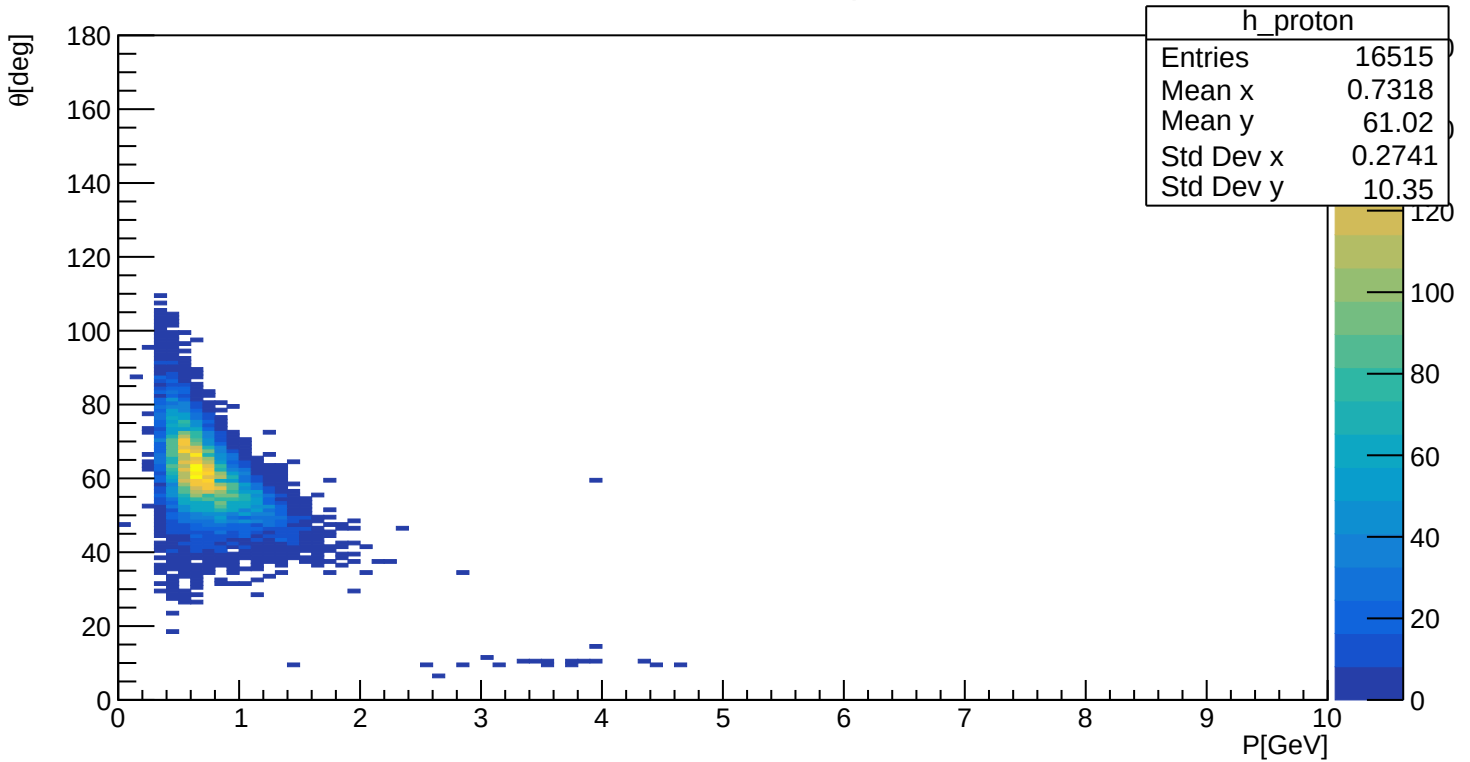

invariant mass of reconstructed Φ meson
h_mass_phi
Entries 16515
Mean 1.022
Std Dev 0.01491
counts
0
100
200
300
400
500
600
700
800
900
0.8
0.85
0.9
0.95
1
1.05
1.1
1.15
1.2
m_Φ[GeV]

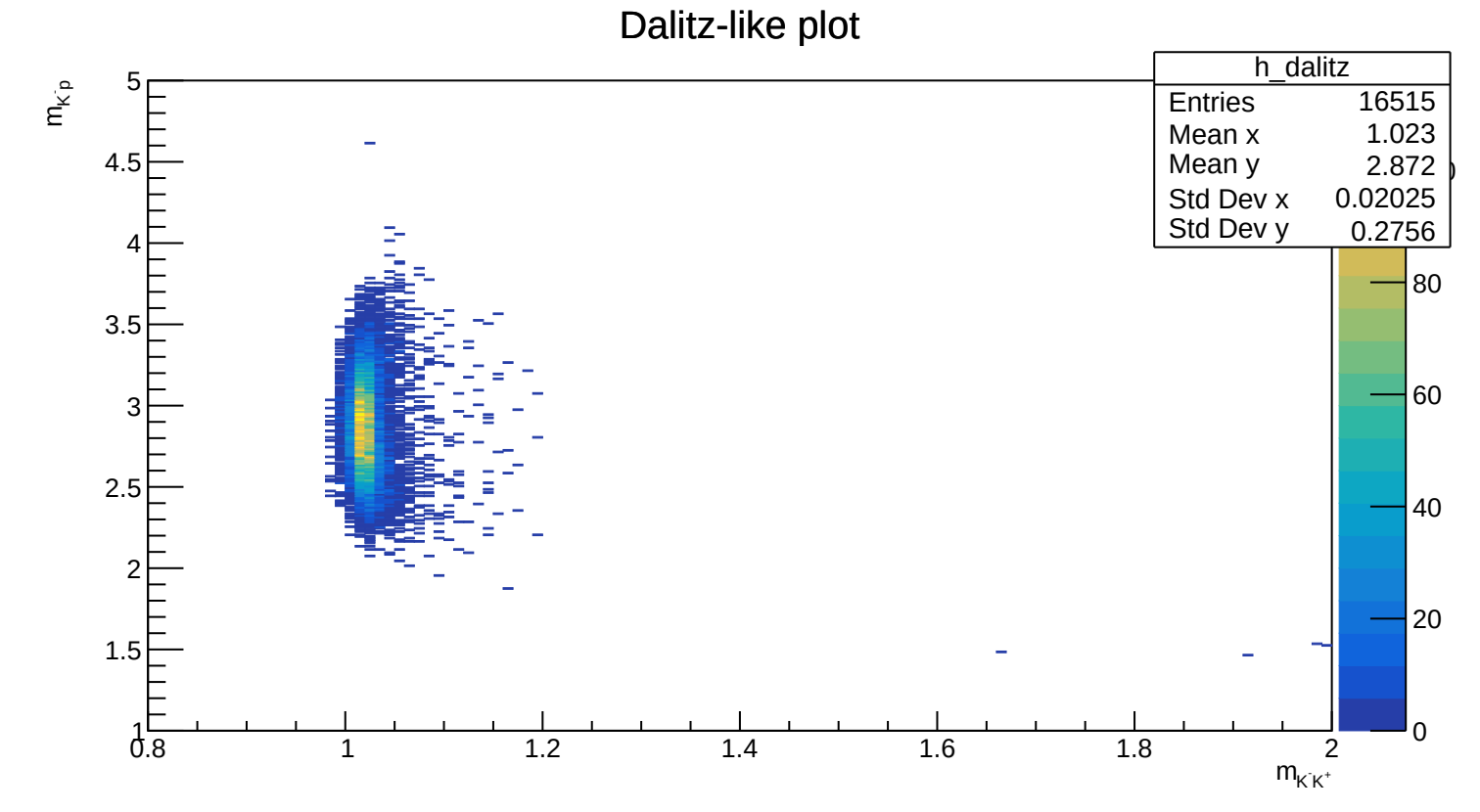

common vertex X and Y of kinematic fitting
h_vertex_XY
Entries 16515
Mean x −0.003209
Mean y −0.07713
Std Dev x 0.09518
Std Dev y 0.09152
vertex y[cm]
vertex x[cm]
6
4
2
0
−2
−4
−6
2500
2000
1500
1000
500
0

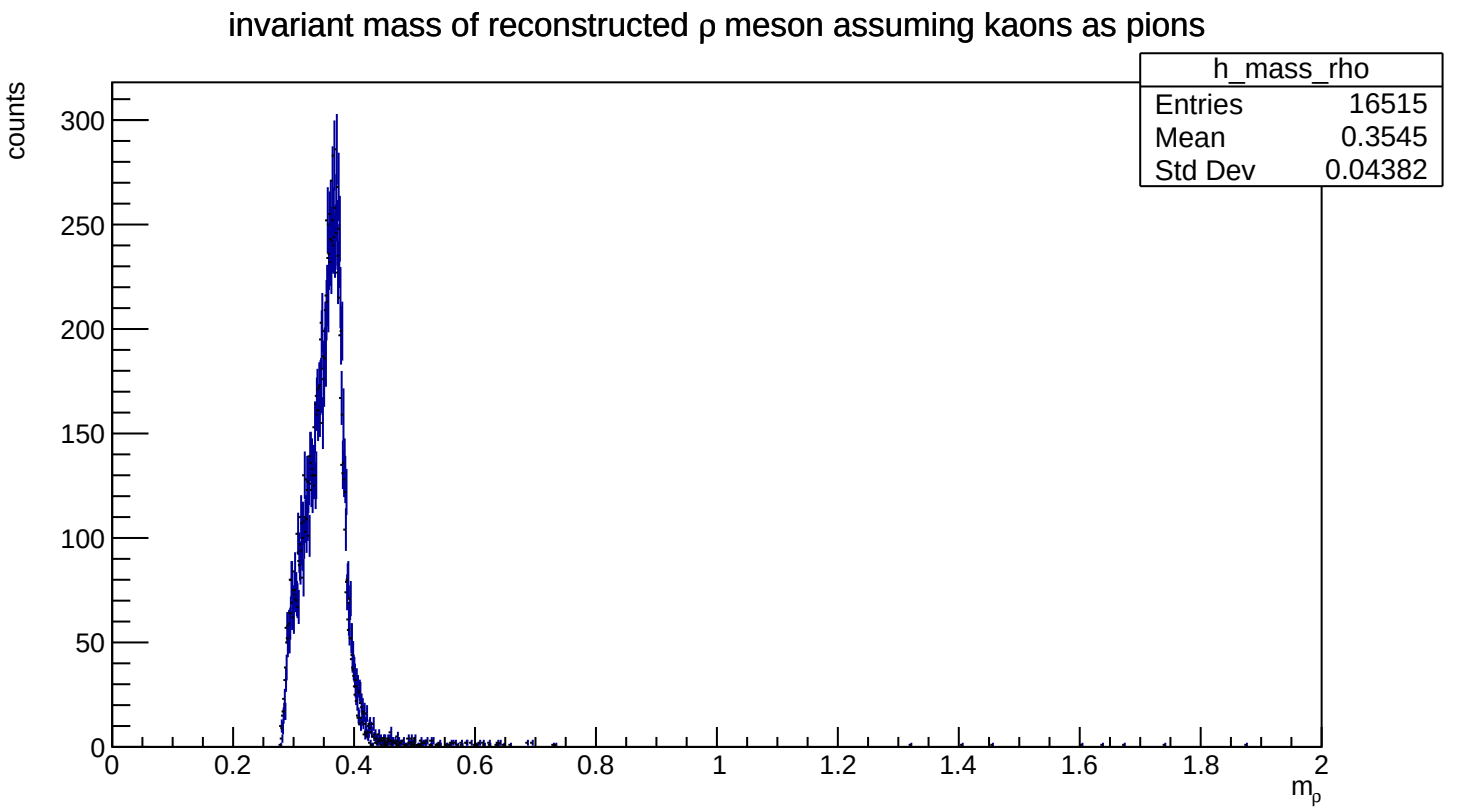

common vertex Z of kinematic fitting
h_vertex_Z
Entries 16515
Mean 65.29
Std Dev 8.018
counts
0
50
100
150
200
250
300
350
40
50
60
70
80
90
100
vertex z[cm]

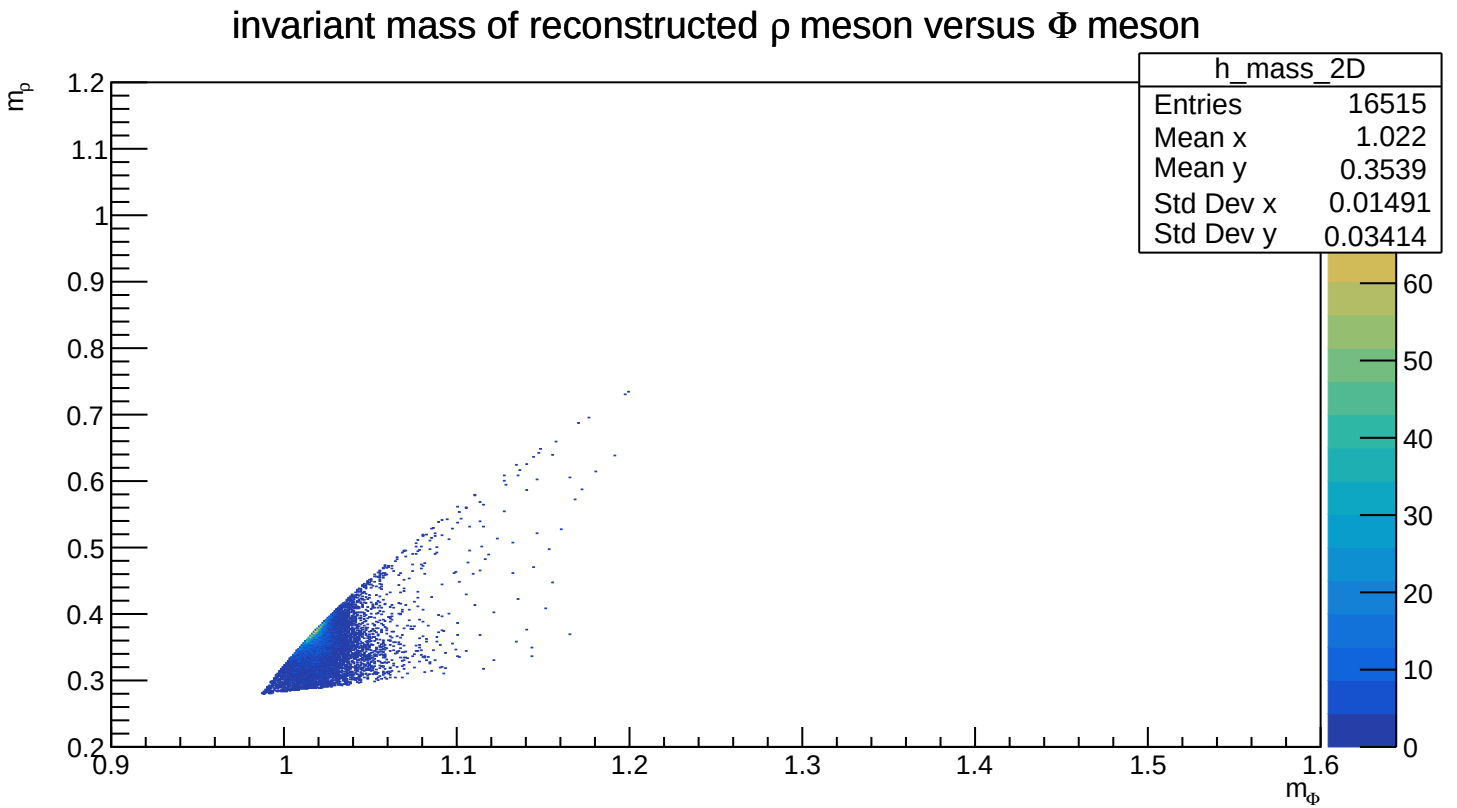

θ vs P distribution of K-
h_kminus
Entries 16515
Mean x 4.016
Mean y 4.441
Std Dev x 0.7914
Std Dev y 1.785
θ[deg]
P[GeV]
0
20
40
60
80
100
120
140
160
180
1
2
3
4
5
6
7
8
9
10

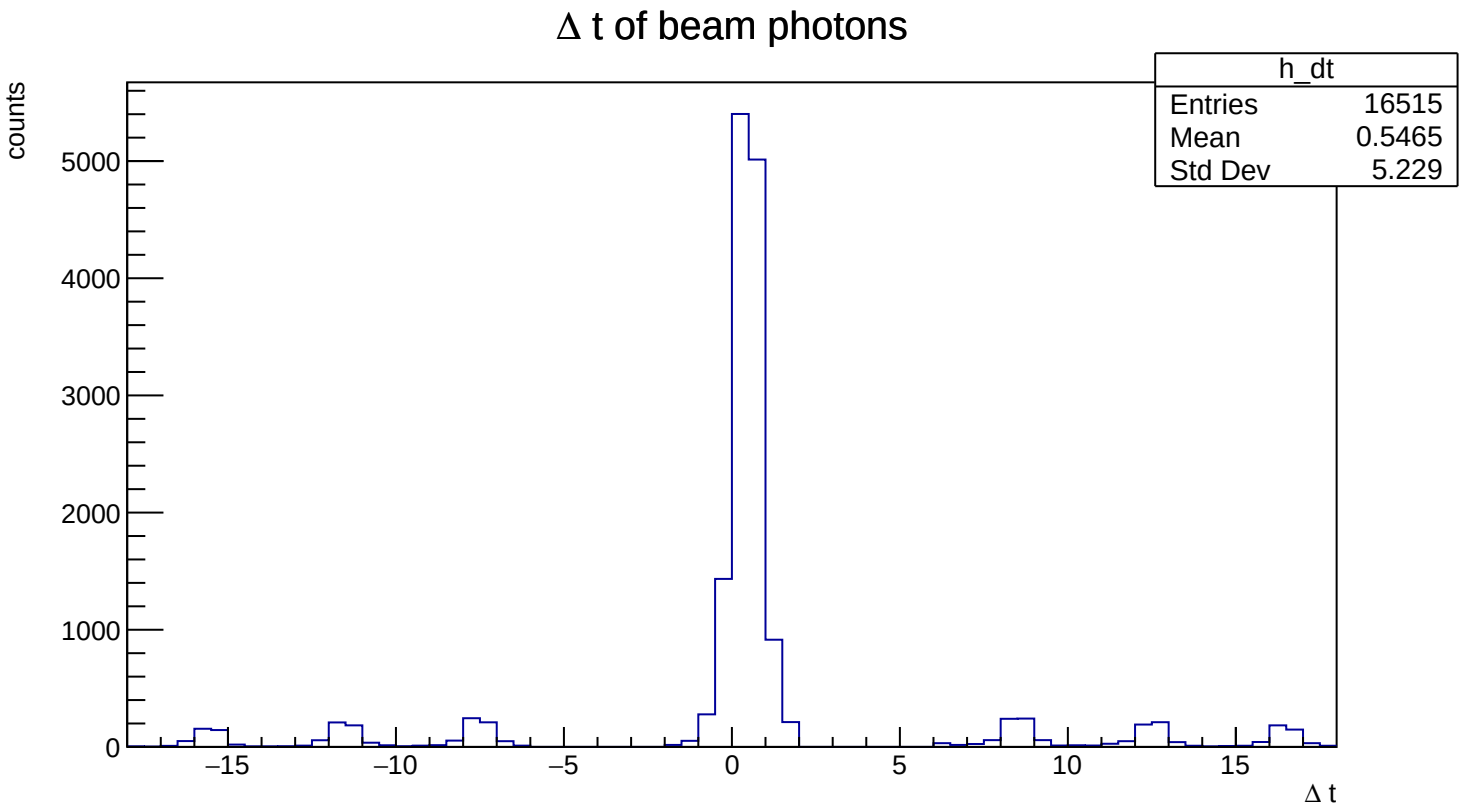

θ vs P distribution of K+
h_kplus
Entries 16515
Mean x 4.114
Mean y 4.488
Std Dev x 0.8122
Std Dev y 2.396
θ[deg]
P[GeV]
0
20
40
60
80
100
120
140
160
180
1
2
3
4
5
6
7
8
9
10

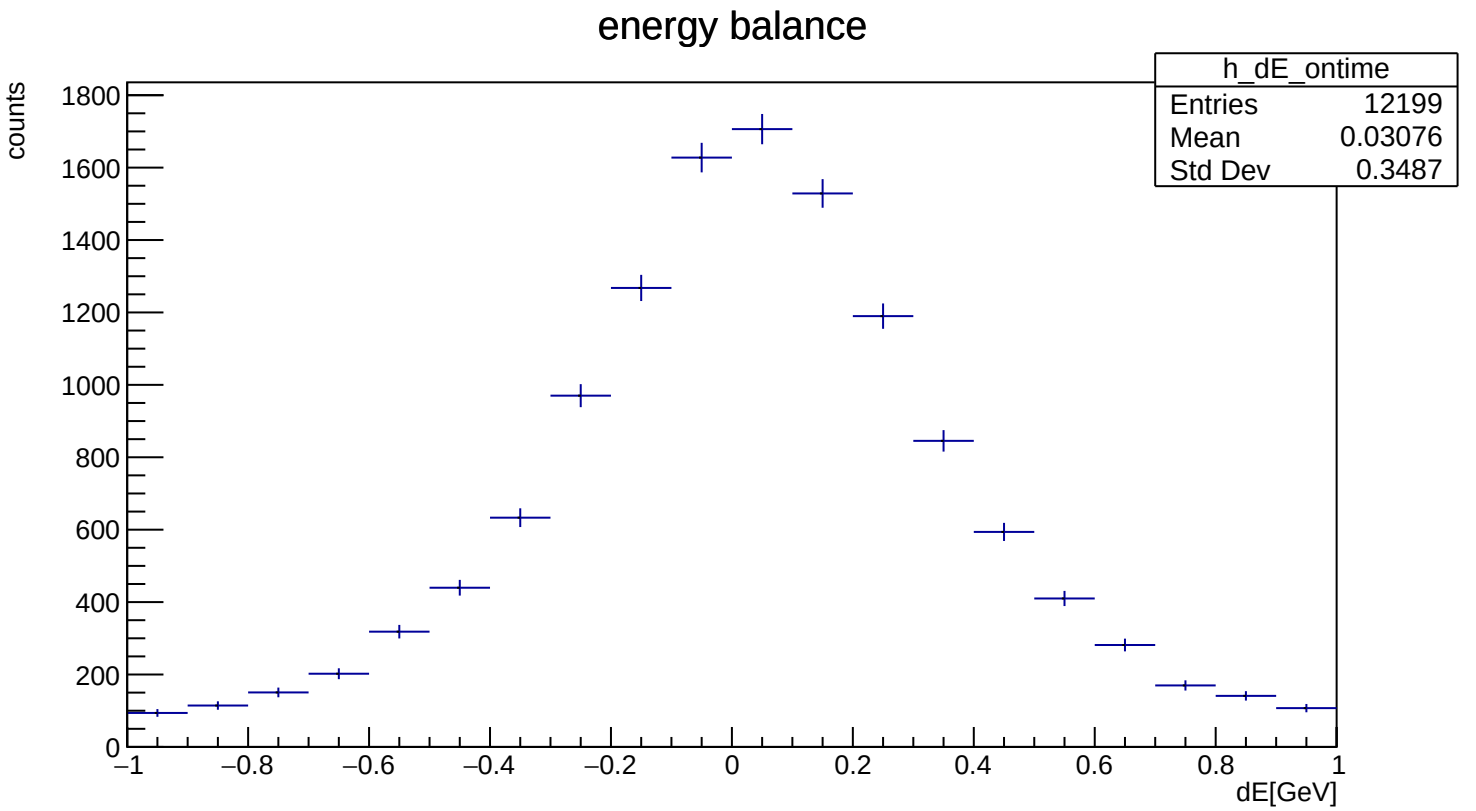

θ vs P distribution of proton
h_proton
Entries 16515
Mean x 0.7318
Mean y 61.02
Std Dev x 0.2741
Std Dev y 10.35
θ[deg]
P[GeV]
0
20
40
60
80
100
120
140
160
180
1
2
3
4
5
6
7
8
9
10

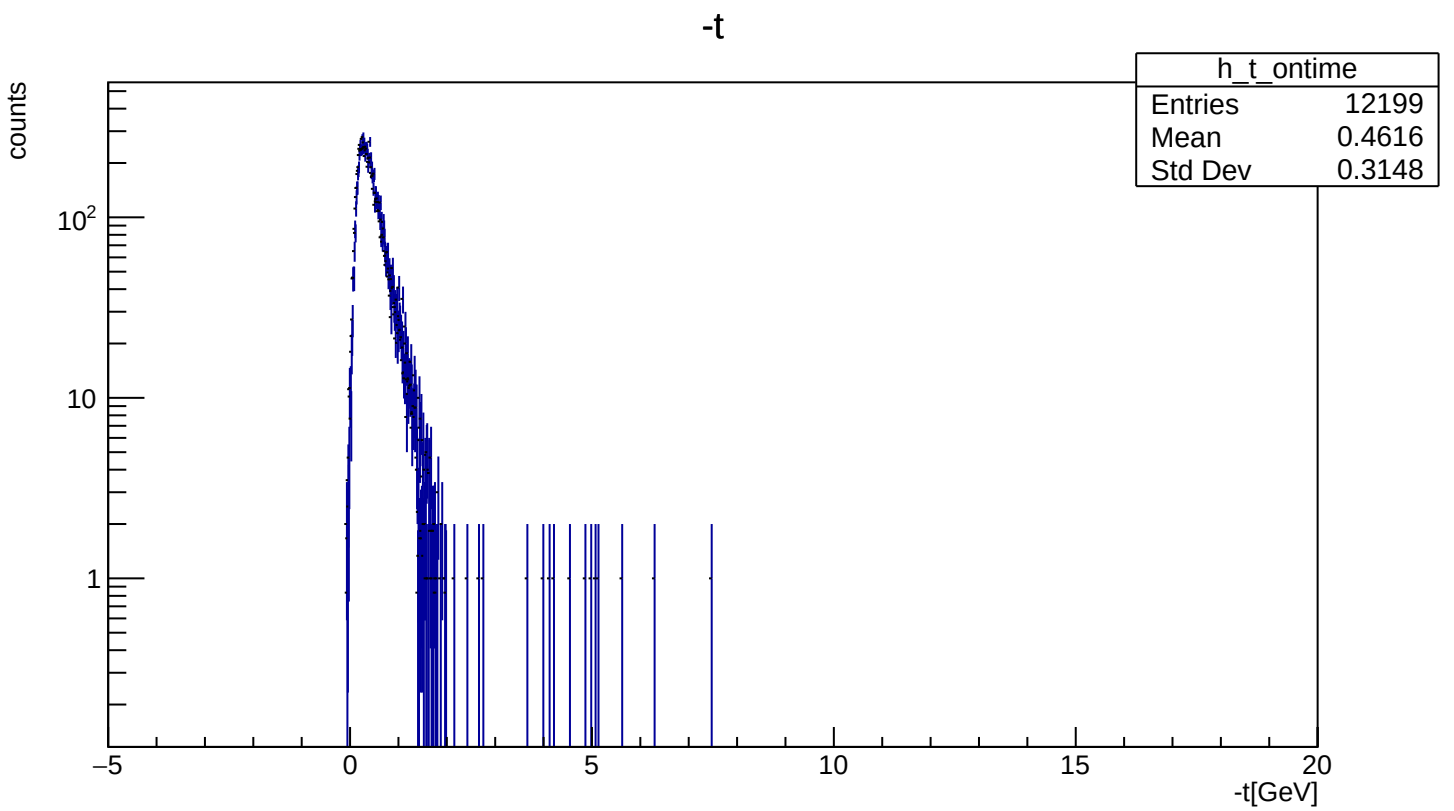

Dalitz-like plot
h_dalitz
Entries 16515
Mean x 1.023
Mean y 2.872
Std Dev x 0.02025
Std Dev y 0.2756
$m_{K^-p}$
$m_{K^-K^+}$
5
4.5
4
3.5
3
2.5
2
1.5
1
0.8
1
1.2
1.4
1.6
1.8
2
80
60
40
20
0

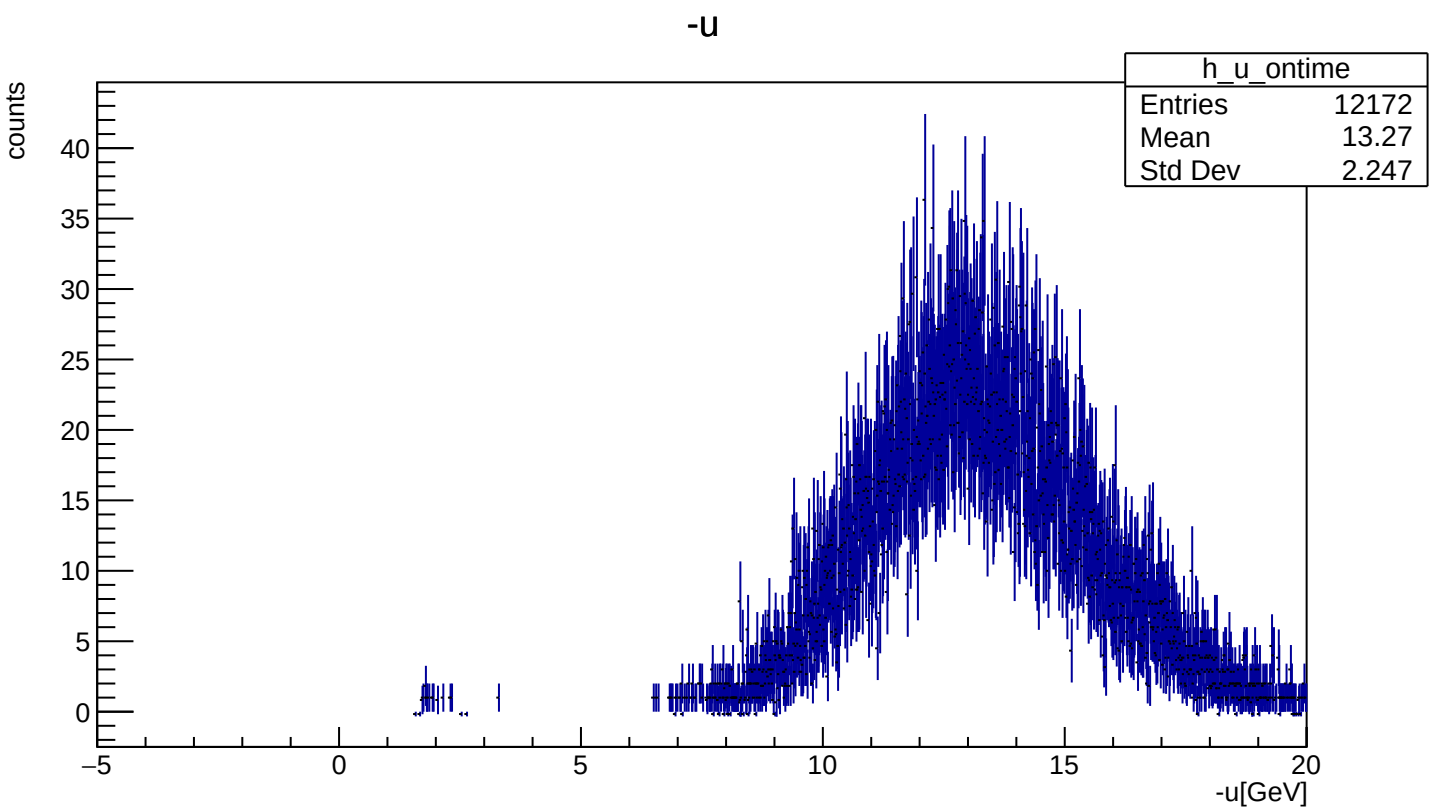

invariant mass of reconstructed ρ meson assuming kaons as pions
h_mass_rho
Entries 16515
Mean 0.3545
Std Dev 0.04382
counts
0
50
100
150
200
250
300
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2
$m_p$

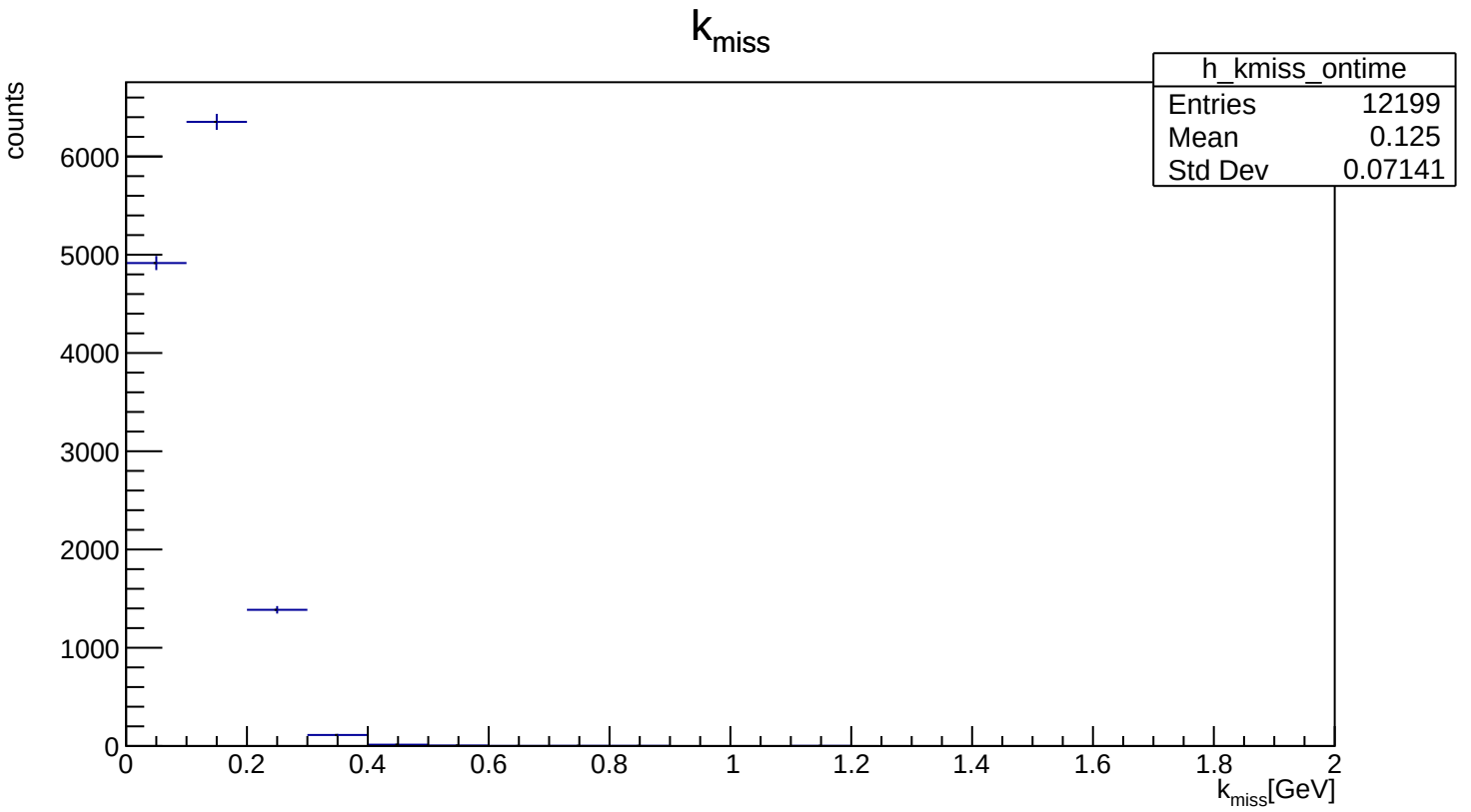

invariant mass of reconstructed ρ meson versus Φ meson
h_mass_2D
Entries 16515
Mean x 1.022
Mean y 0.3539
Std Dev x 0.01491
Std Dev y 0.03414
m_ρ
m_Φ
1.2
1.1
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.9
1
1.1
1.2
1.3
1.4
1.5
1.6
60
50
40
30
20
10
0


Δ t of beam photons
h_dt
Entries 16515
Mean 0.5465
Std Dev 5.229
counts
5000
4000
3000
2000
1000
0
−15
−10
−5
0
5
10
15
Δ t


energy balance
h_dE_ontime
Entries 12199
Mean 0.03076
Std Dev 0.3487
counts
1800
1600
1400
1200
1000
800
600
400
200
0
−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 12199
Mean 0.4616
Std Dev 0.3148
counts
$10^2$
10
1
−5
0
5
10
15
20
-t[GeV]


-u
h_u_ontime
Entries 12172
Mean 13.27
Std Dev 2.247
counts
40
35
30
25
20
15
10
5
0
–5
0
5
10
15
20
-u[GeV]


k_miss
h_kmiss_ontime
Entries 12199
Mean 0.125
Std Dev 0.07141
counts
0
1000
2000
3000
4000
5000
6000
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2
k_miss [GeV]