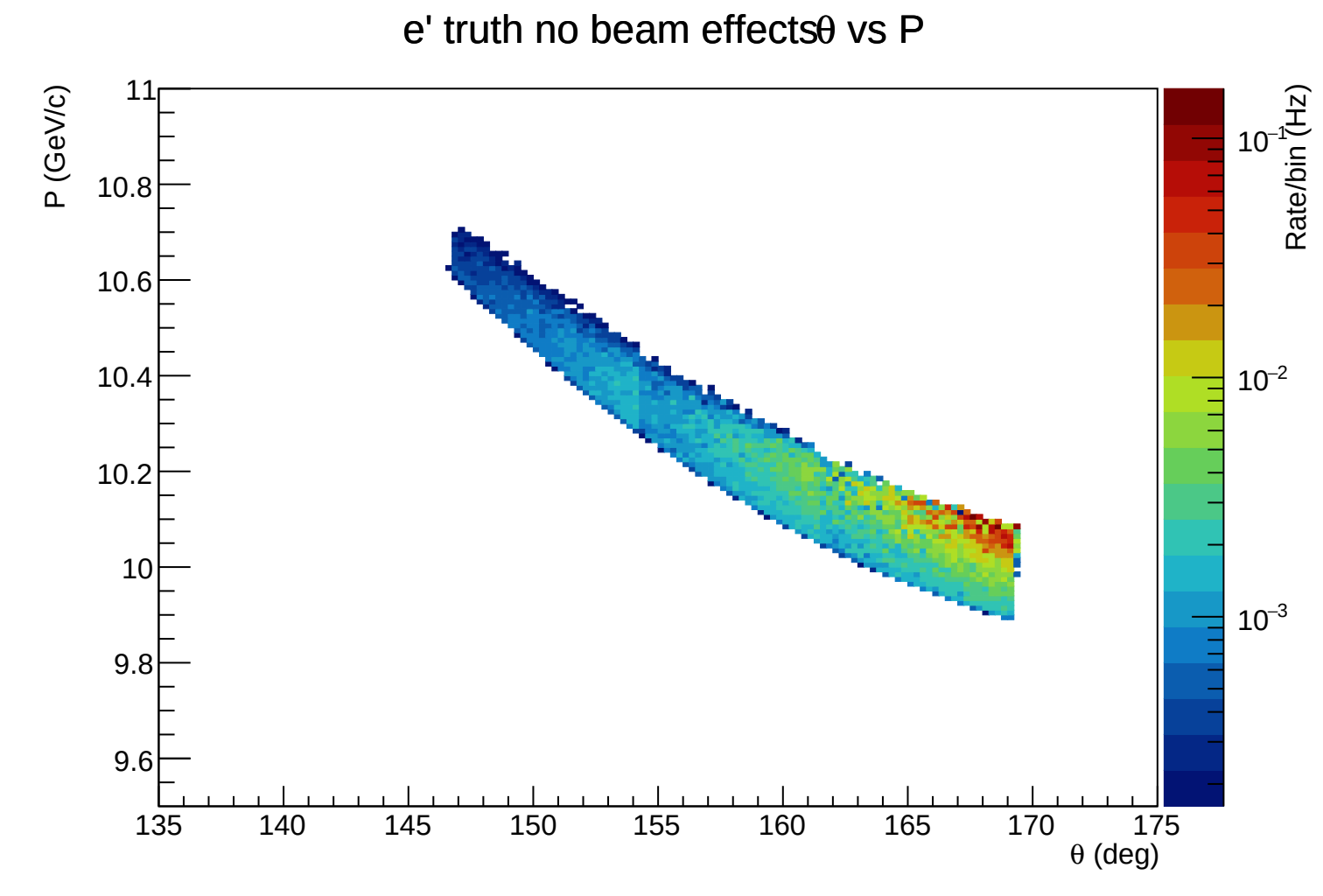
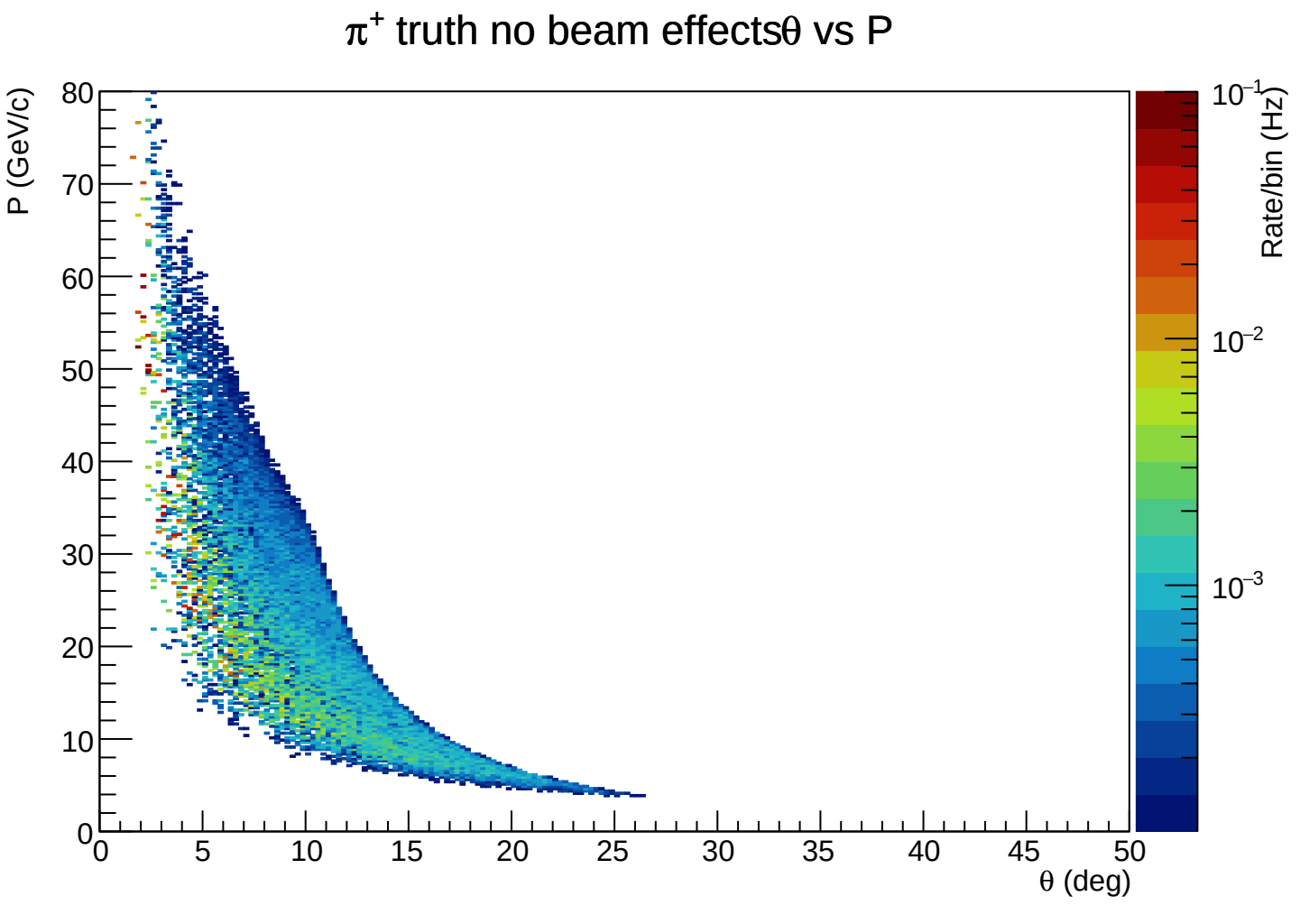
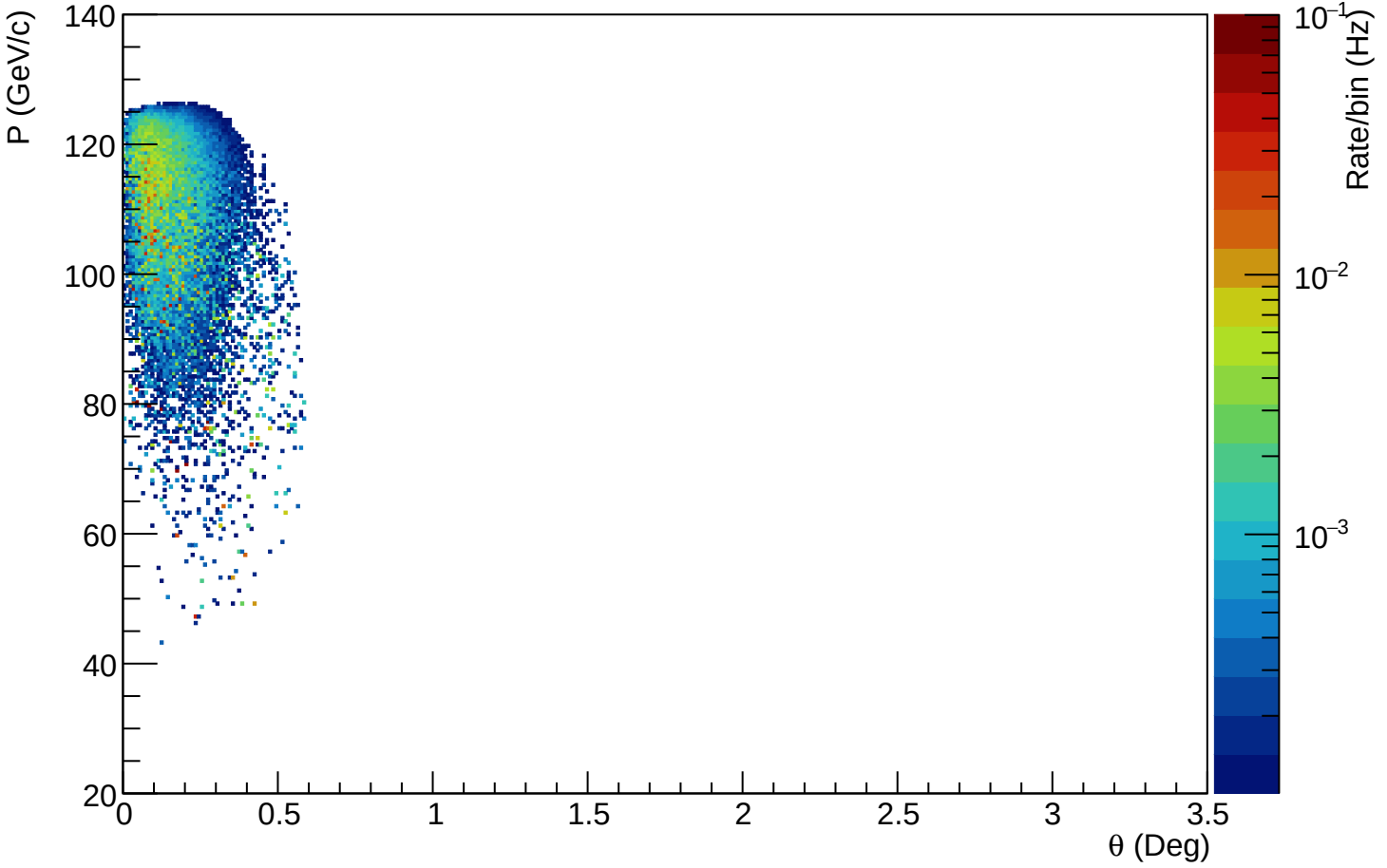
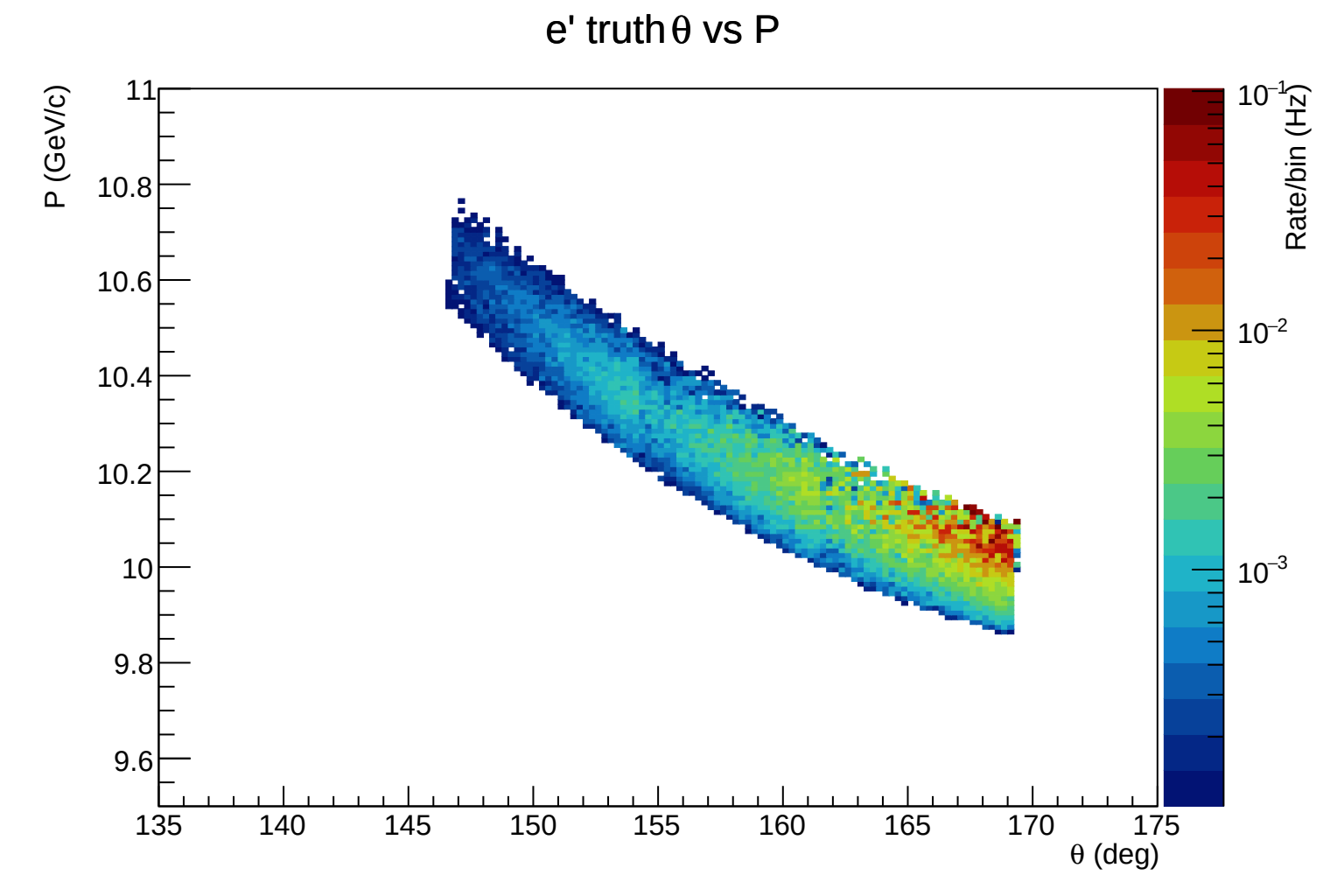
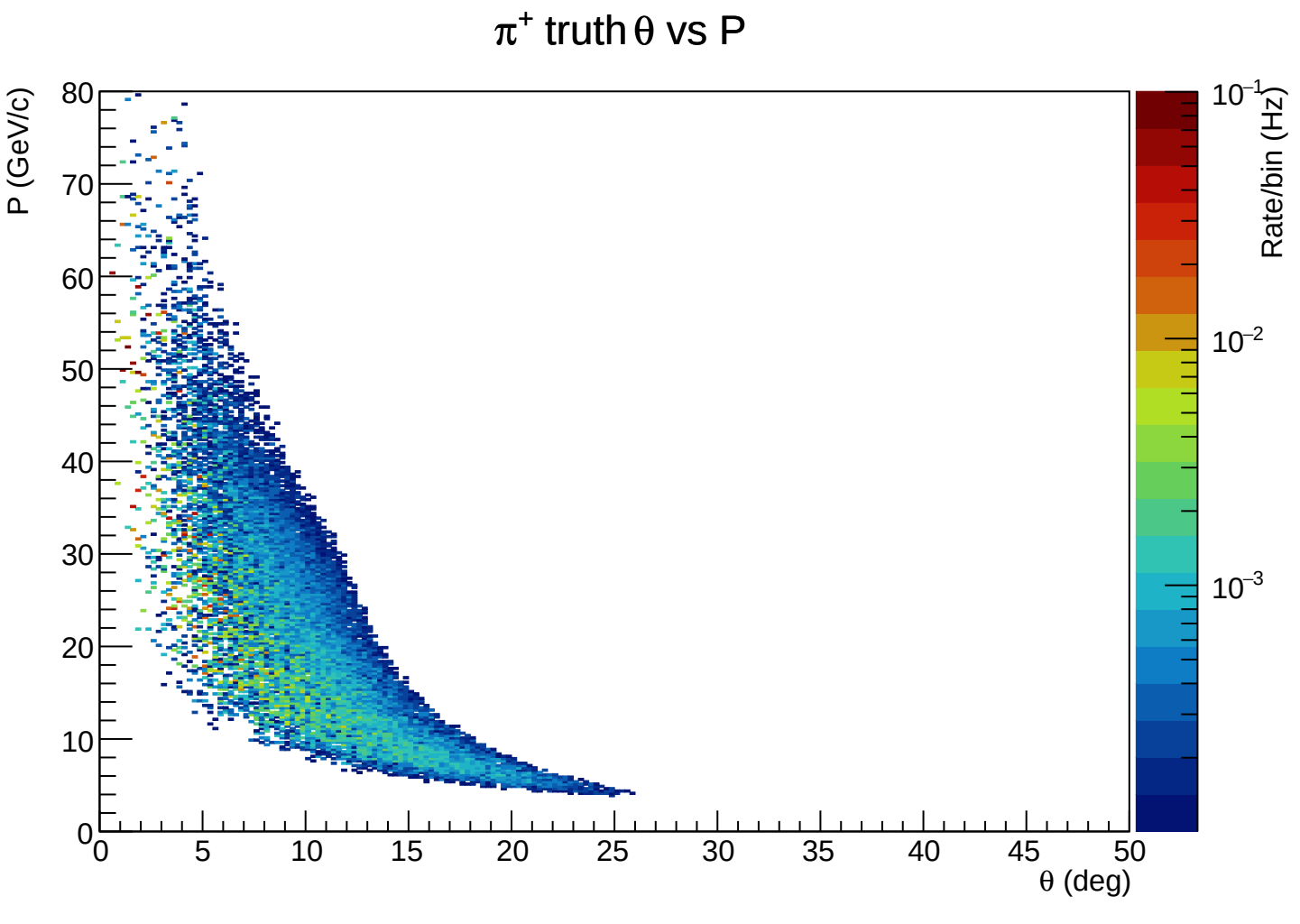
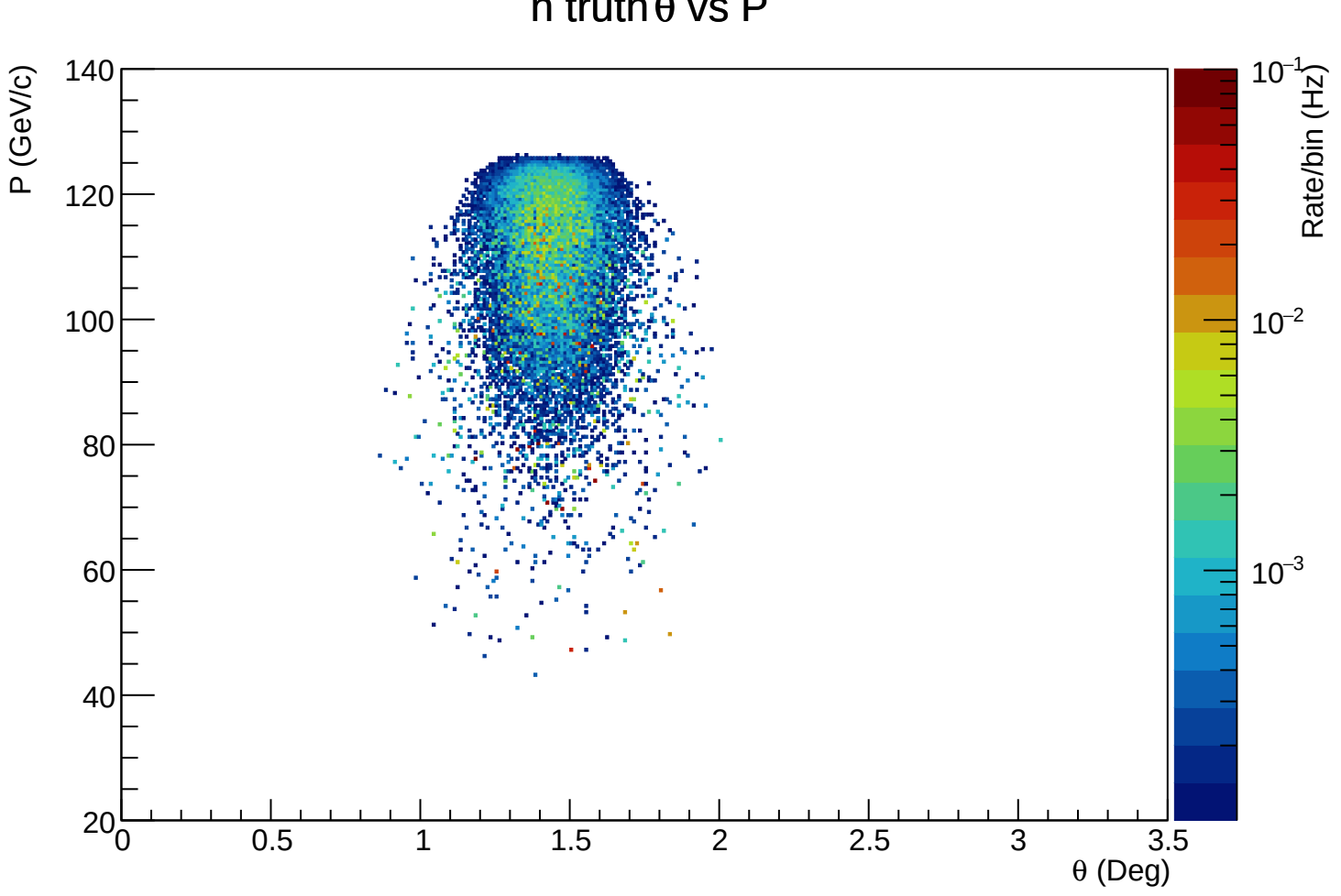

e' truth no beam effects θ vs P
P (GeV/c)
11
10.8
10.6
10.4
10.2
10
9.8
9.6
135
140
145
150
155
160
165
170
175
θ (deg)
Rate/bin (Hz)
10^{-1}
10^{-2}
10^{-3}

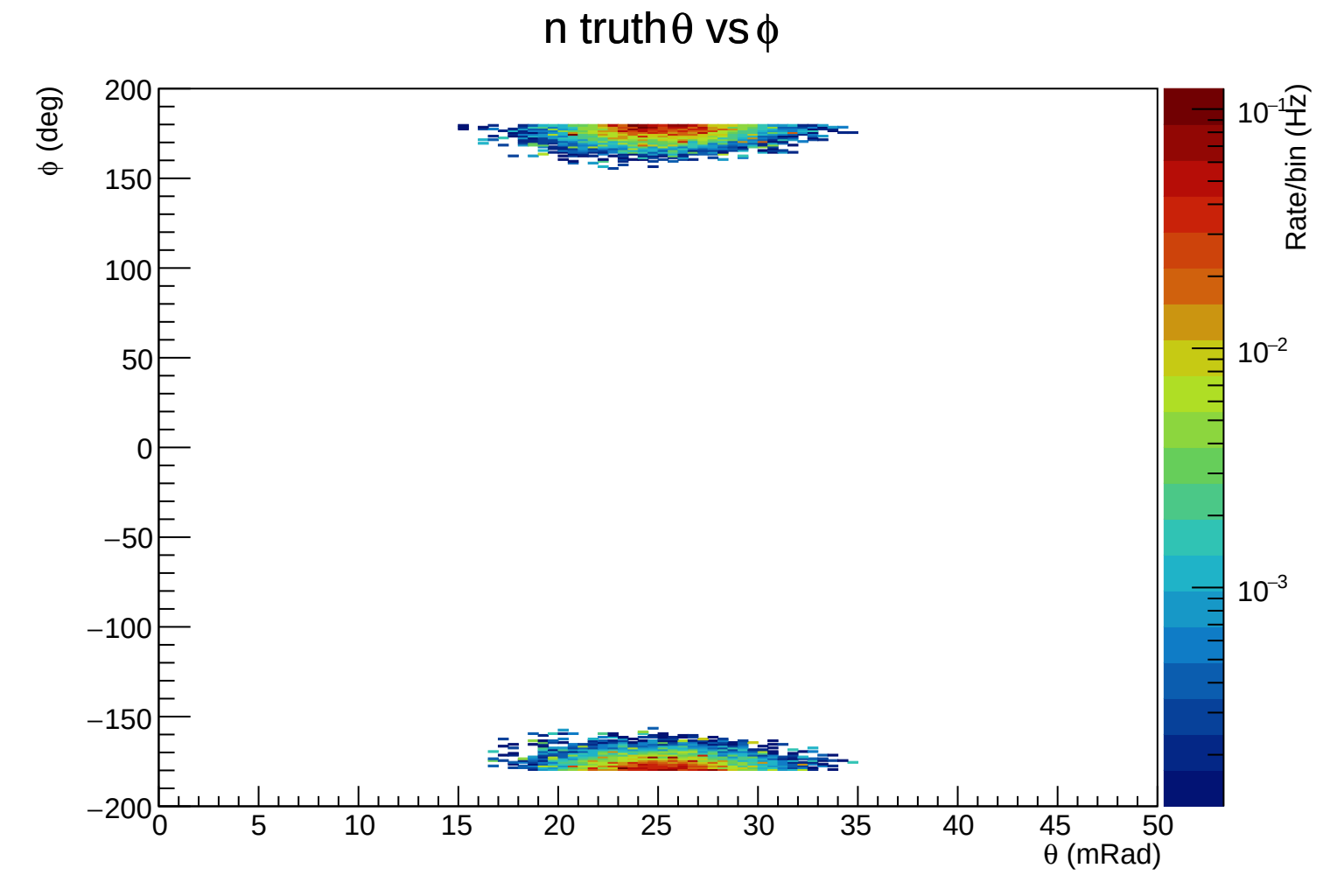

π^+ truth no beam effectsθ vs P
P (GeV/c)
θ (deg)
Rate/bin (Hz)
0
10
20
30
40
50
60
70
80
0
5
10
15
20
25
30
35
40
45
50
10^{-1}
10^{-2}
10^{-3}

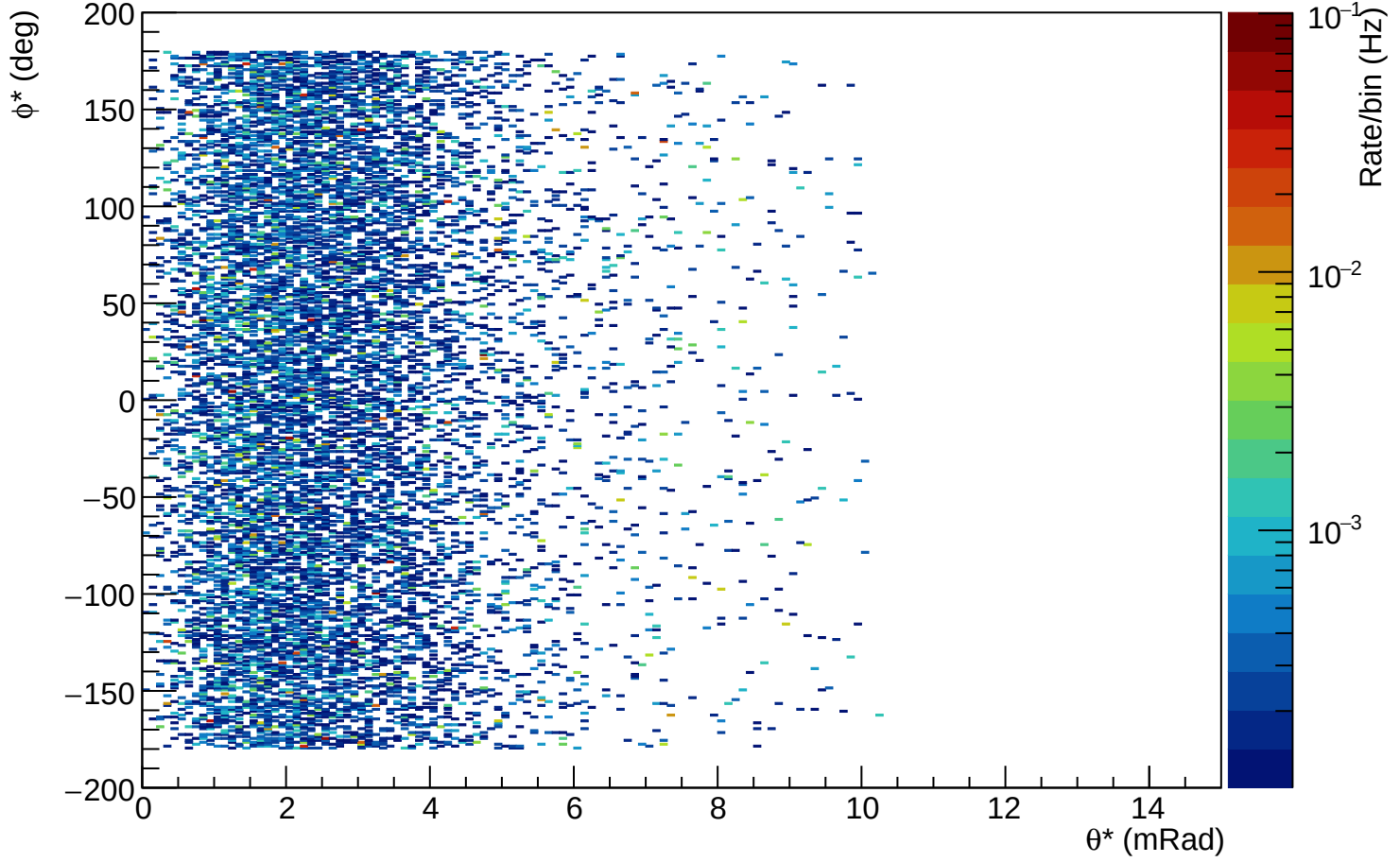

n truth no beam effectsθ vs P
P (GeV/c)
140
120
100
80
60
40
20
0
0.5
1
1.5
2
2.5
3
3.5
θ (Deg)
Rate/bin (Hz)
10^{-1}
10^{-2}
10^{-3}

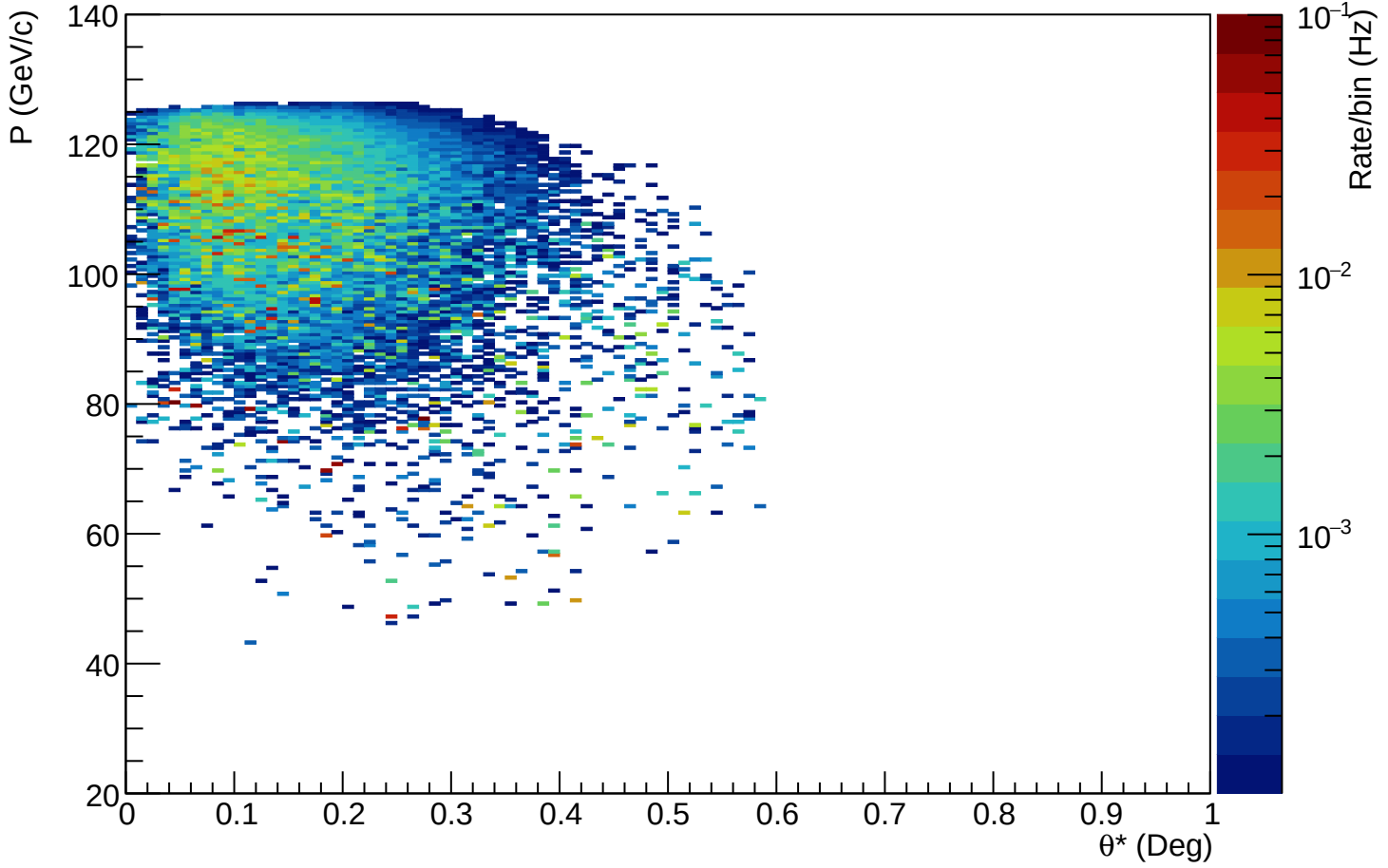

e' truth θ vs P
P (GeV/c)
11
10.8
10.6
10.4
10.2
10
9.8
9.6
135
140
145
150
155
160
165
170
175
θ (deg)
Rate/bin (Hz)
10^{-1}
10^{-2}
10^{-3}

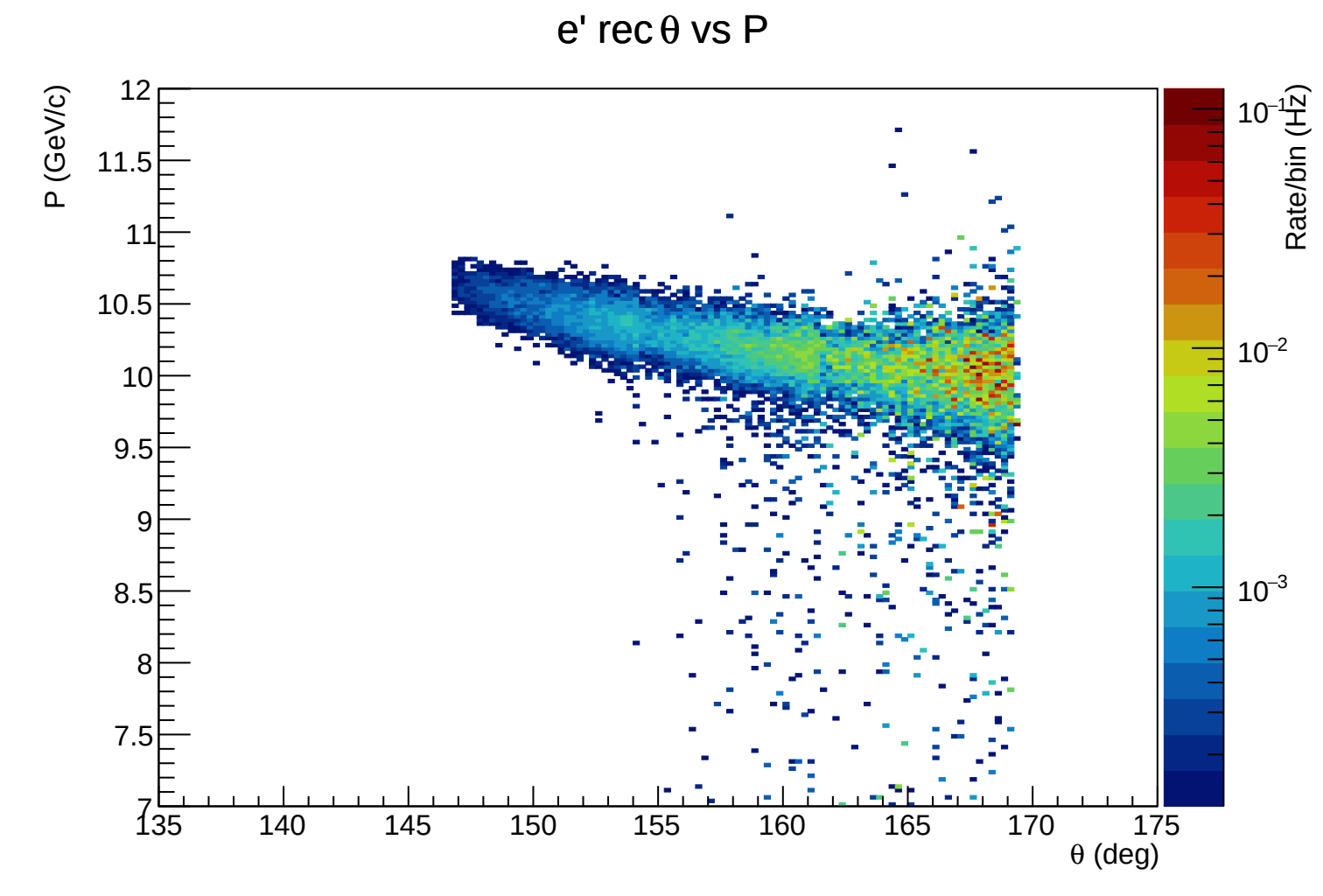

π^+ truth θ vs P
P (GeV/c)
θ (deg)
Rate/bin (Hz)
0
10
20
30
40
50
60
70
80
0
5
10
15
20
25
30
35
40
45
50
10^{-1}
10^{-2}
10^{-3}

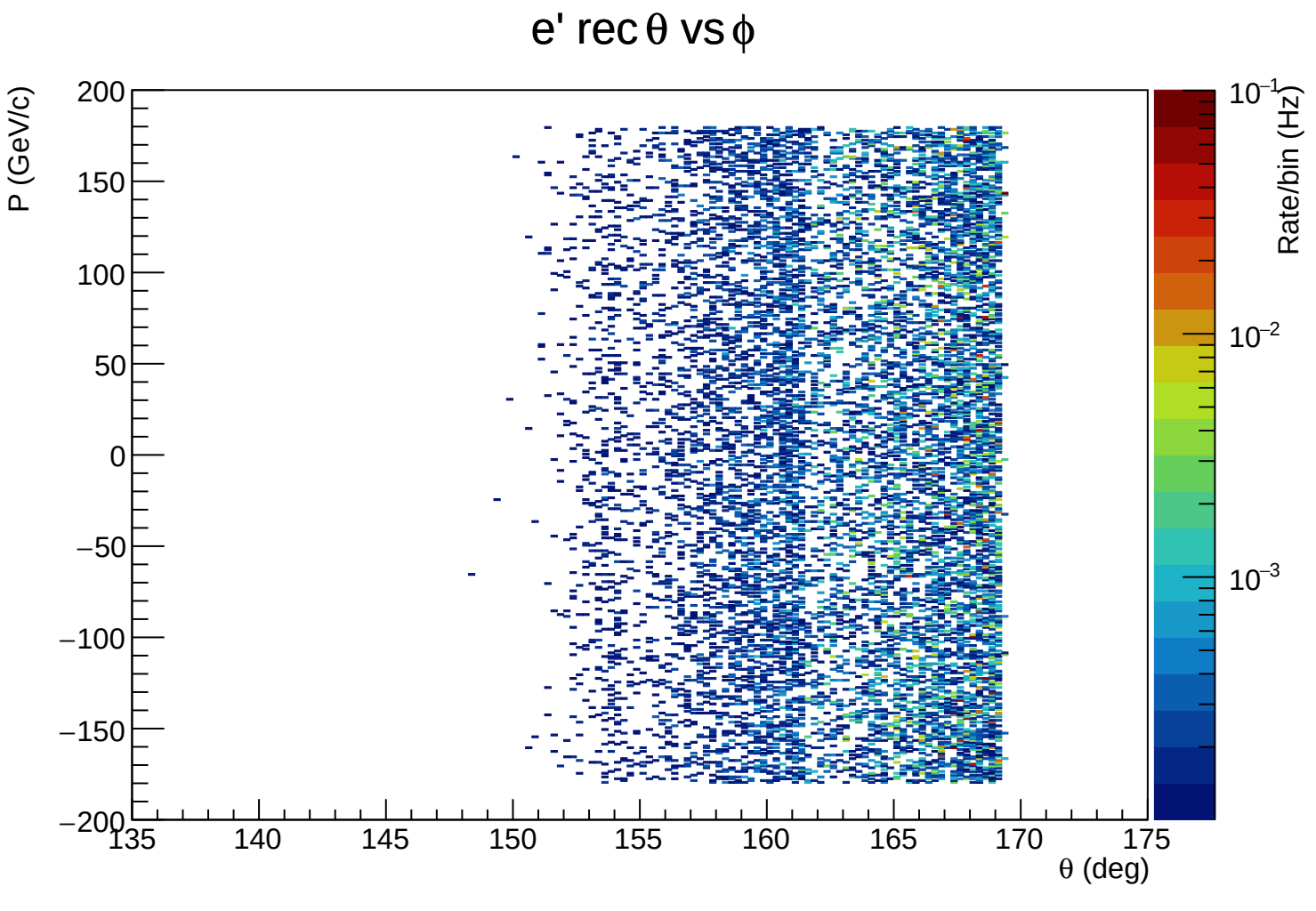

n truth θ vs P
P (GeV/c)
140
120
100
80
60
40
20
0
0.5
1
1.5
2
2.5
3
3.5
θ (Deg)
Rate/bin (Hz)
10^{-1}
10^{-2}
10^{-3}

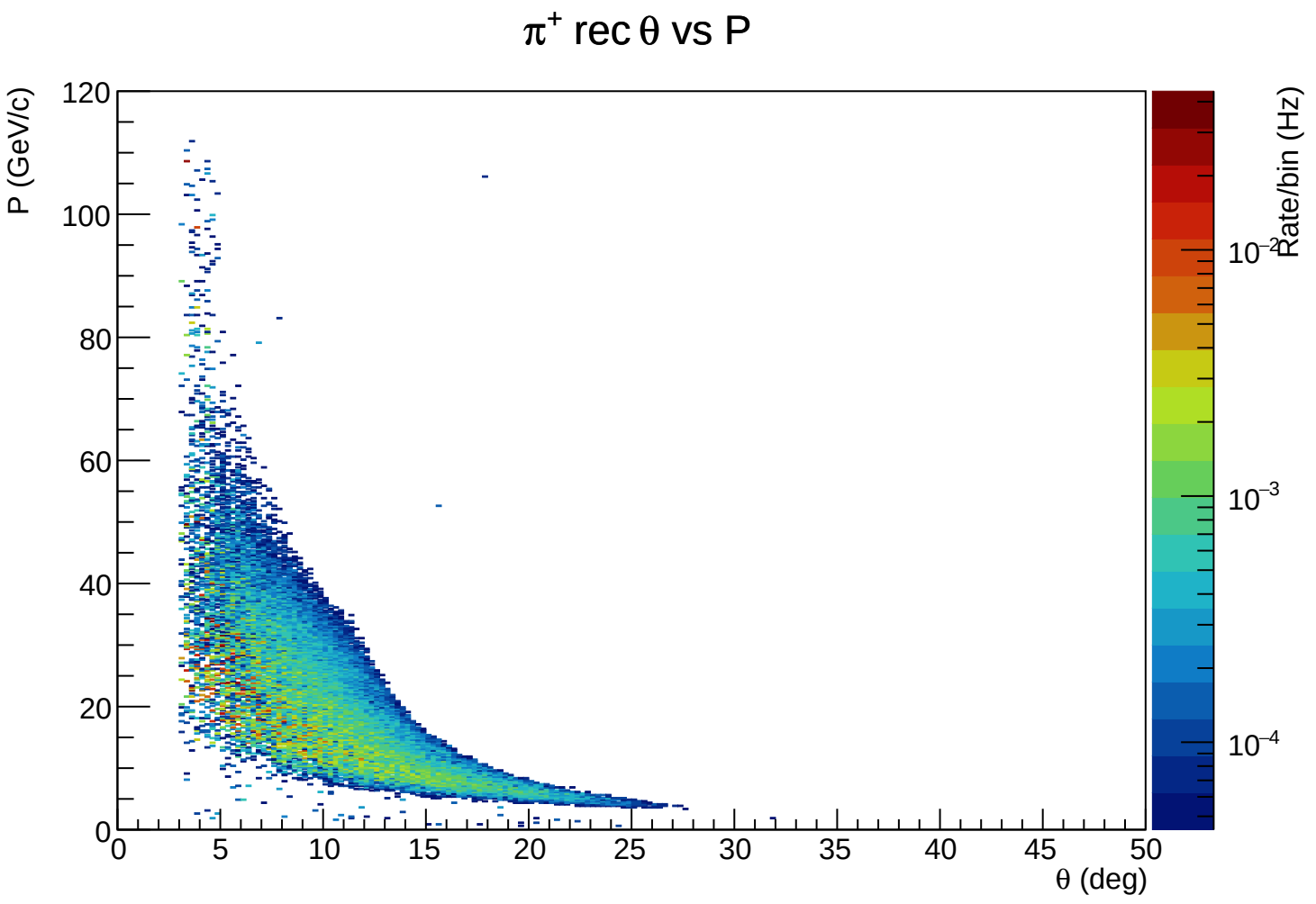

n truth θ vs ϕ
ϕ (deg)
200
150
100
50
0
−50
−100
−150
−200
0
5
10
15
20
25
30
35
40
45
50
θ (mRad)
Rate/bin (Hz)
10^{-1}
10^{-2}
10^{-3}

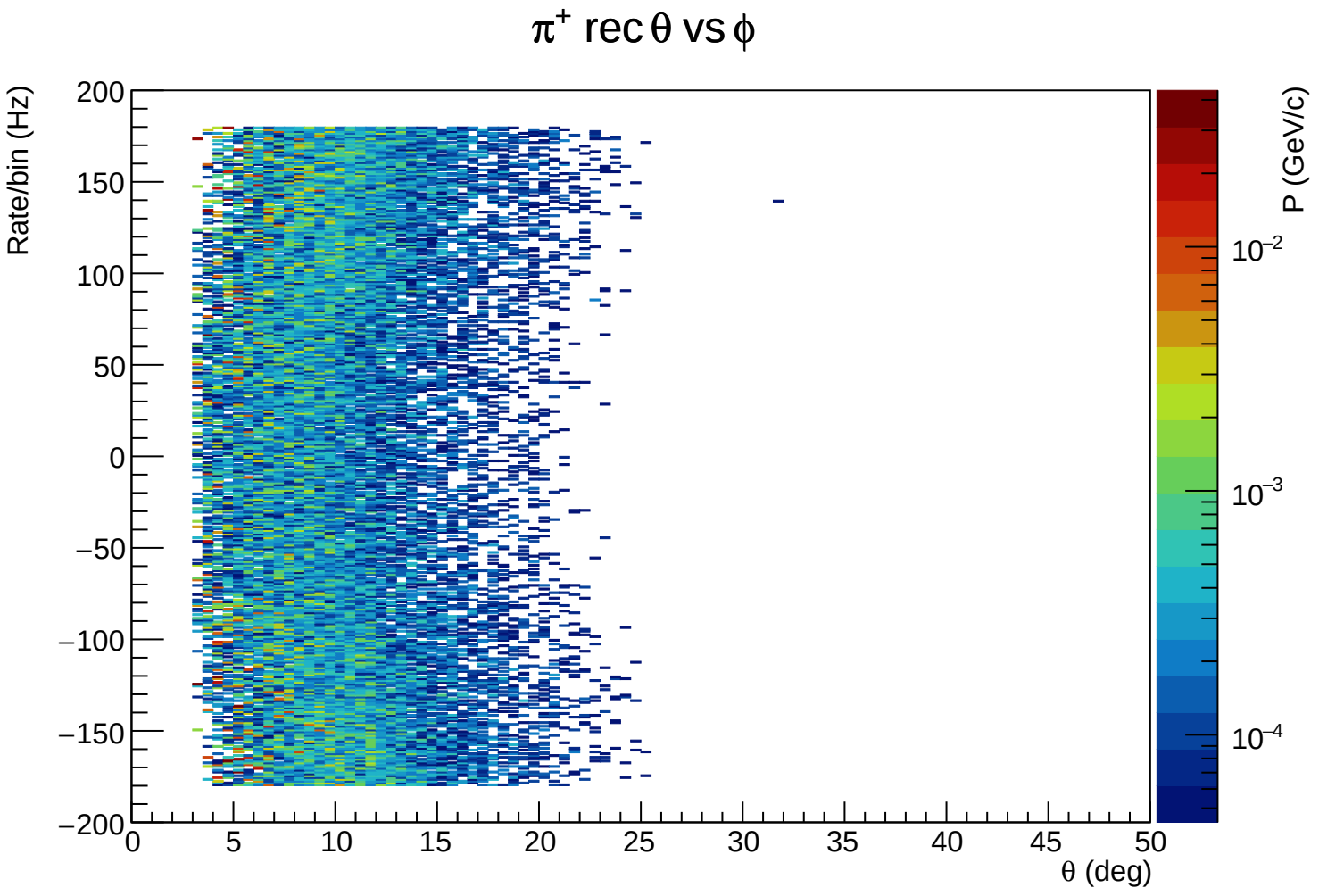

n truth θ* vs ϕ* around p axis
ϕ* (deg)
200
150
100
50
0
−50
−100
−150
−200
0
2
4
6
8
10
12
14
θ* (mRad)
Rate/bin (Hz)
10^{-1}
10^{-2}
10^{-3}

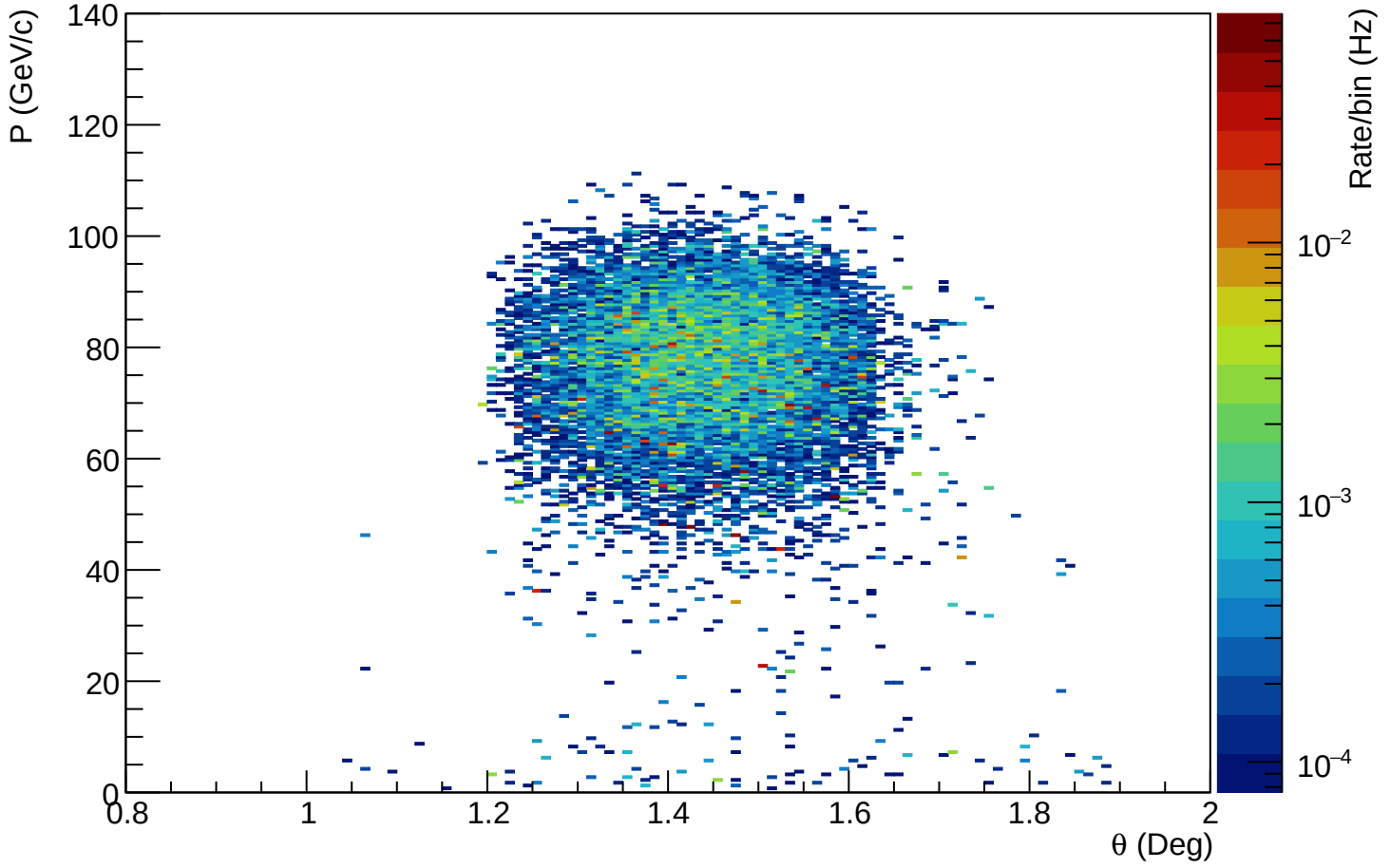

n truth θ* vs P around p axis
P (GeV/c)
140
120
100
80
60
40
20
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
θ* (Deg)
Rate/bin (Hz)
10^-1
10^-2
10^-3

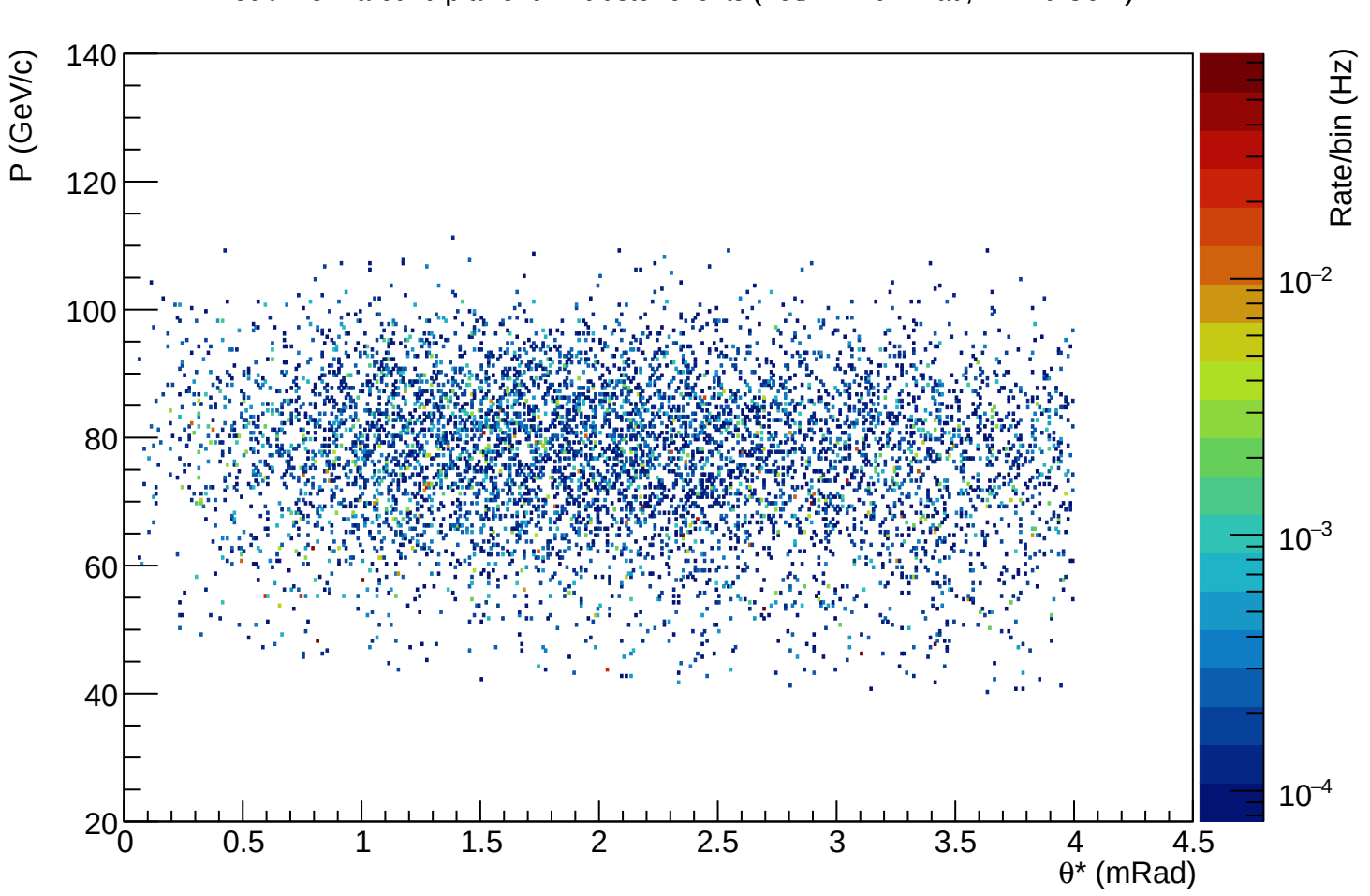

e' rec θ vs P
P (GeV/c)
12
11.5
11
10.5
10
9.5
9
8.5
8
7.5
7
135
140
145
150
155
160
165
170
175
θ (deg)
Rate/bin (Hz)
10^{-1}
10^{-2}
10^{-3}

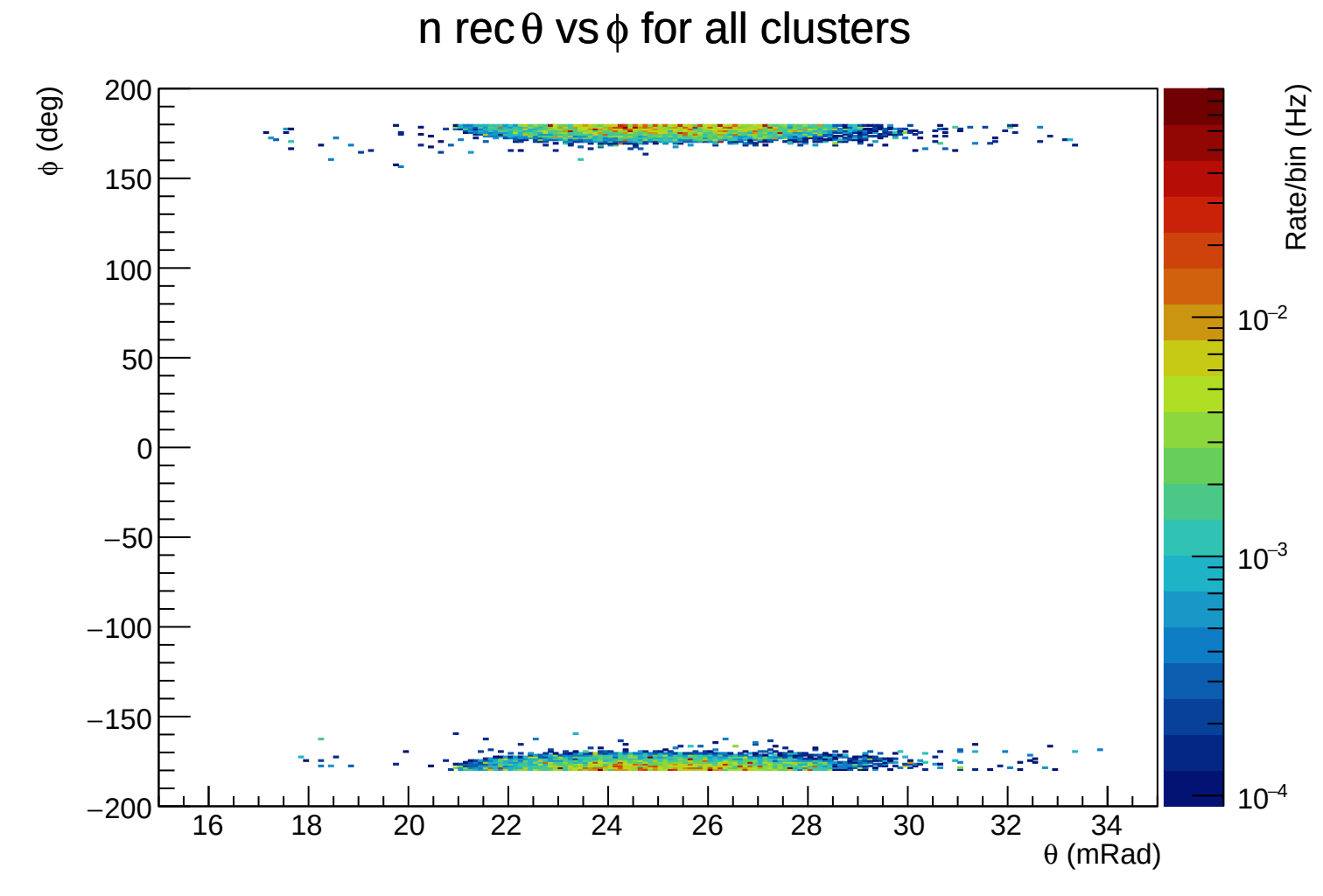

e' rec θ vs ϕ
P (GeV/c)
200
150
100
50
0
−50
−100
−150
−200
135
140
145
150
155
160
165
170
175
θ (deg)
Rate/bin (Hz)
10^{-1}
10^{-2}
10^{-3}

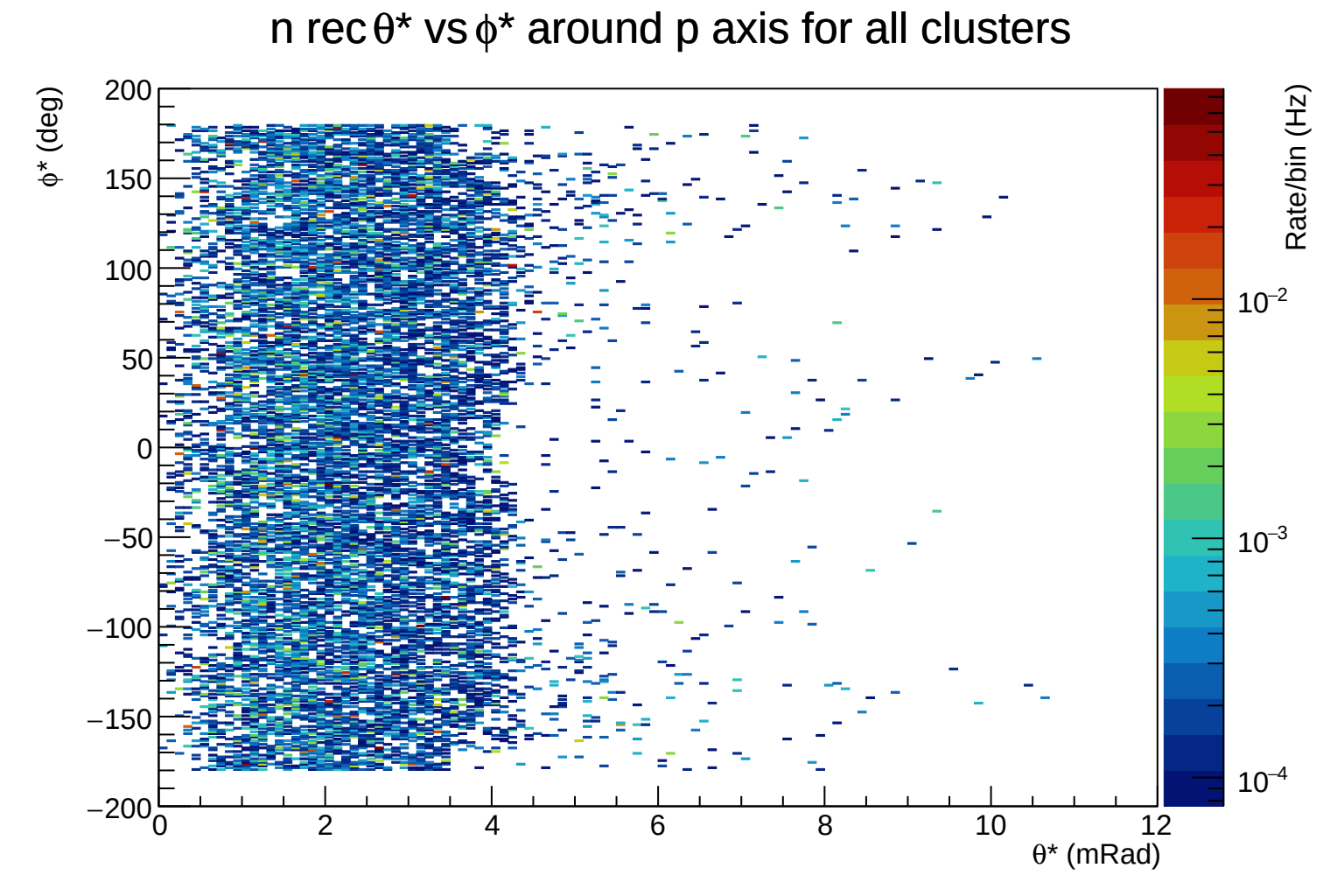

π^+ rec θ vs P
P (GeV/c)
θ (deg)
Rate/bin (Hz)
0
20
40
60
80
100
120
0
5
10
15
20
25
30
35
40
45
50
10^{-2}
10^{-3}
10^{-4}

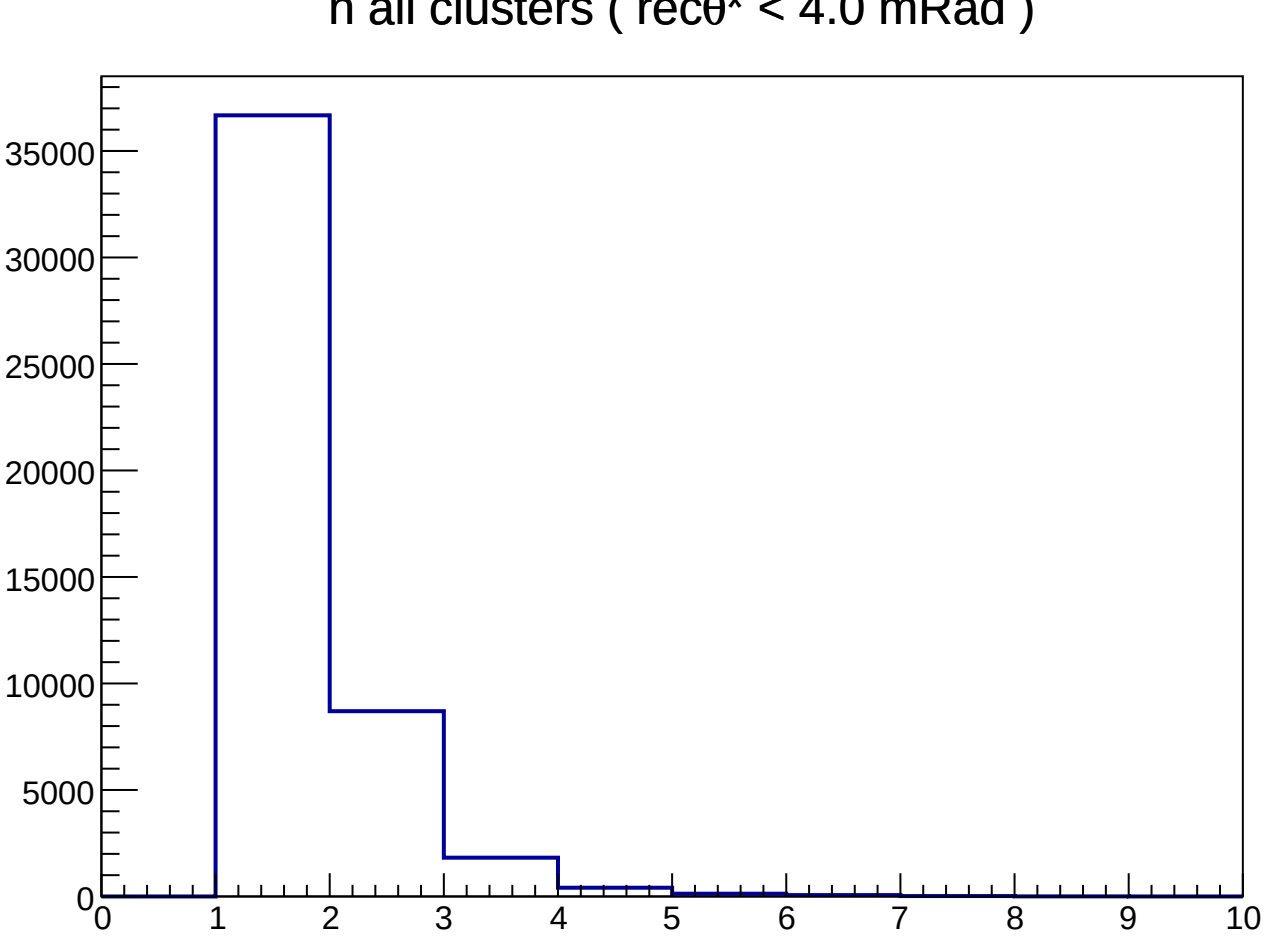

π^+ rec θ vs ϕ
Rate/bin (Hz)
200
150
100
50
0
−50
−100
−150
−200
0
5
10
15
20
25
30
35
40
45
50
θ (deg)
P (GeV/c)
10^{-2}
10^{-3}
10^{-4}

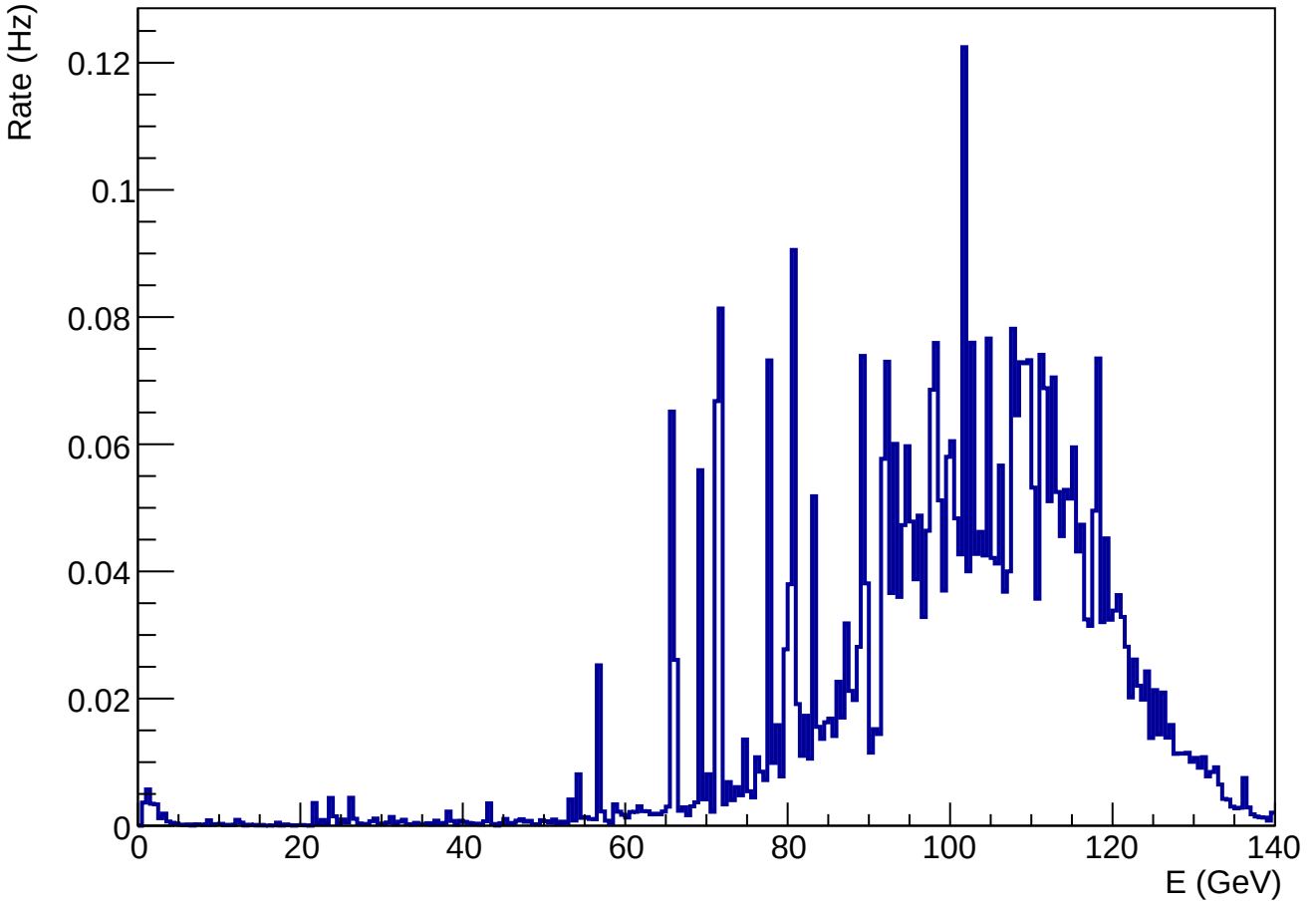

n rec θ vs P for 1 cluster events
P (GeV/c)
140
120
100
80
60
40
20
0
0.8
1
1.2
1.4
1.6
1.8
2
θ (Deg)
Rate/bin (Hz)
10^{-2}
10^{-3}
10^{-4}

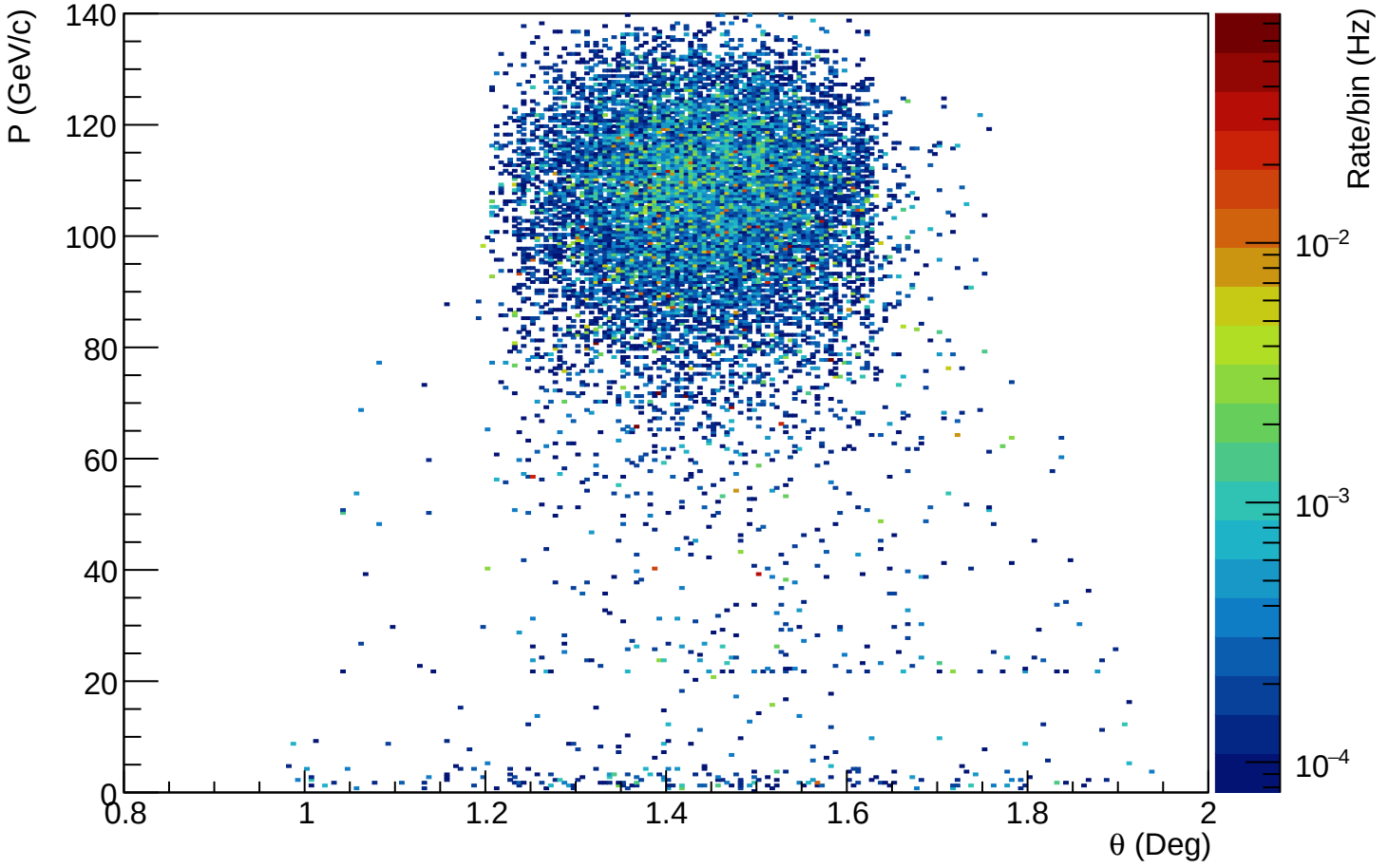

n rec θ* vs P around p axis for 1 cluster events (rec θ* < 4.0 mRad, E > 40 GeV)
P (GeV/c)
140
120
100
80
60
40
20
0
0.5
1
1.5
2
2.5
3
3.5
4
4.5
θ* (mRad)
Rate/bin (Hz)
10^-2
10^-3
10^-4

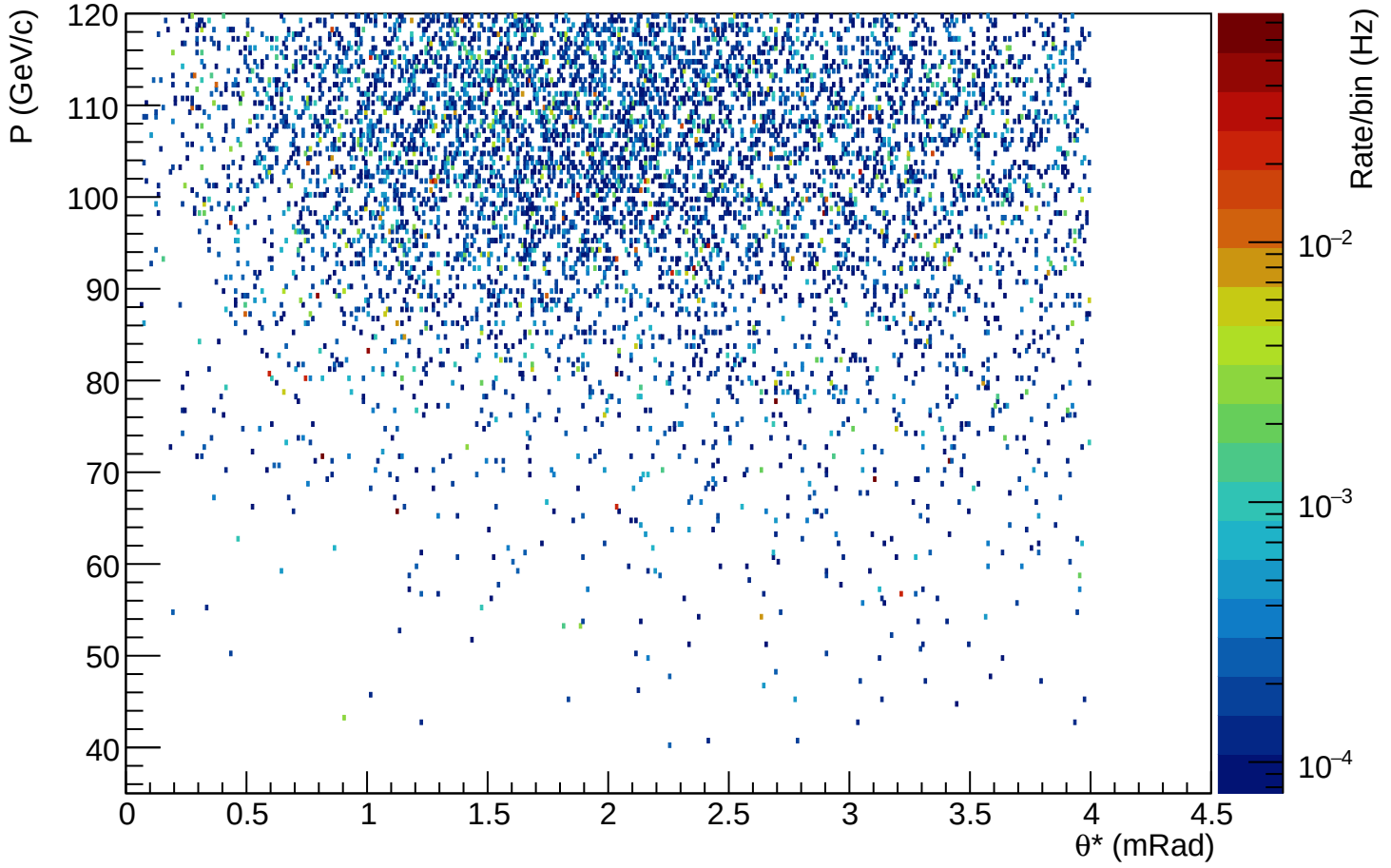

n rec θ vs ϕ for all clusters
ϕ (deg)
200
150
100
50
0
−50
−100
−150
−200
16
18
20
22
24
26
28
30
32
34
θ (mRad)
Rate/bin (Hz)
10^{-2}
10^{-3}
10^{-4}

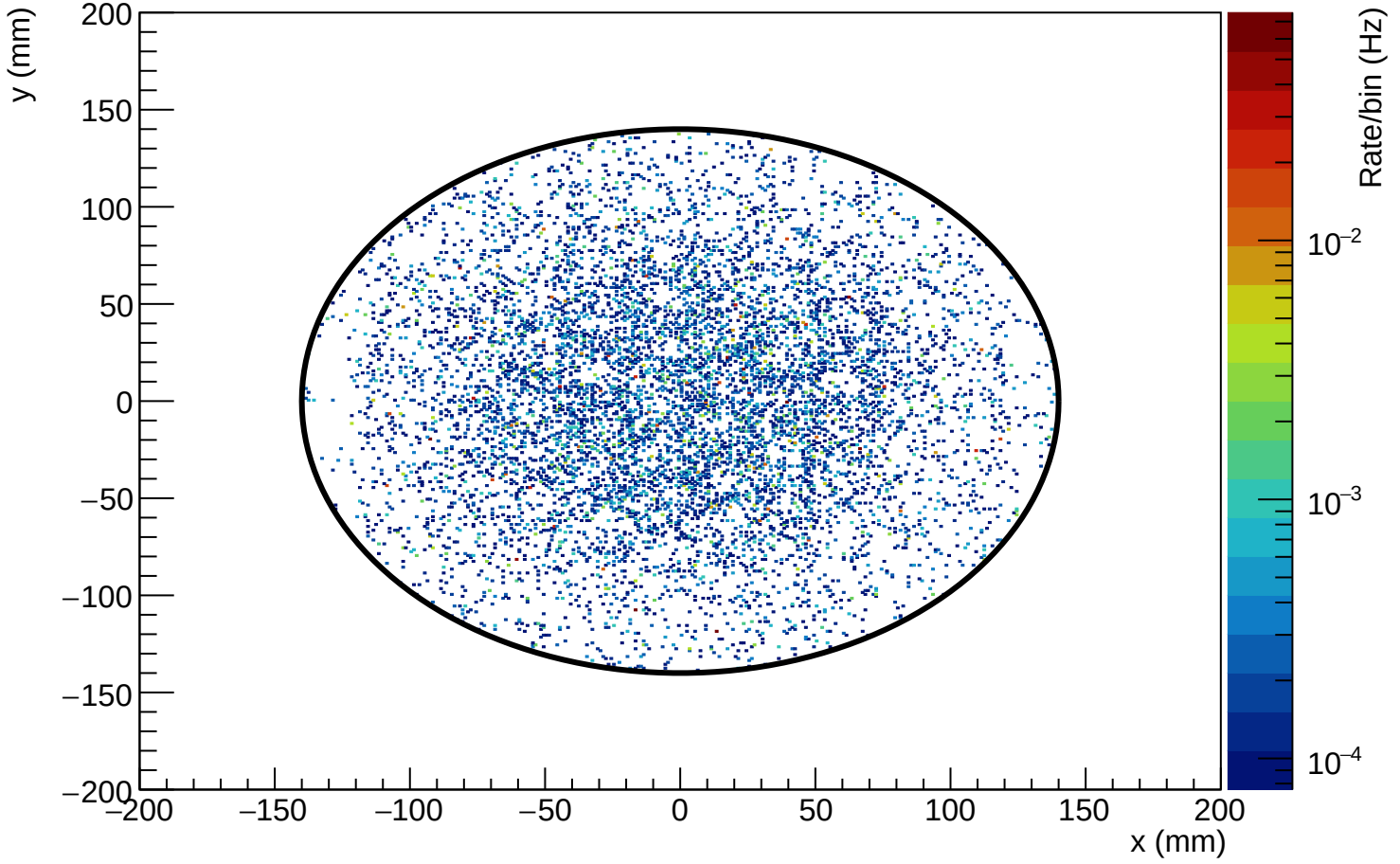

n rec θ* vs ϕ* around p axis for all clusters
ϕ* (deg)
200
150
100
50
0
−50
−100
−150
−200
0
2
4
6
8
10
12
θ* (mRad)
Rate/bin (Hz)
10^{-2}
10^{-3}
10^{-4}

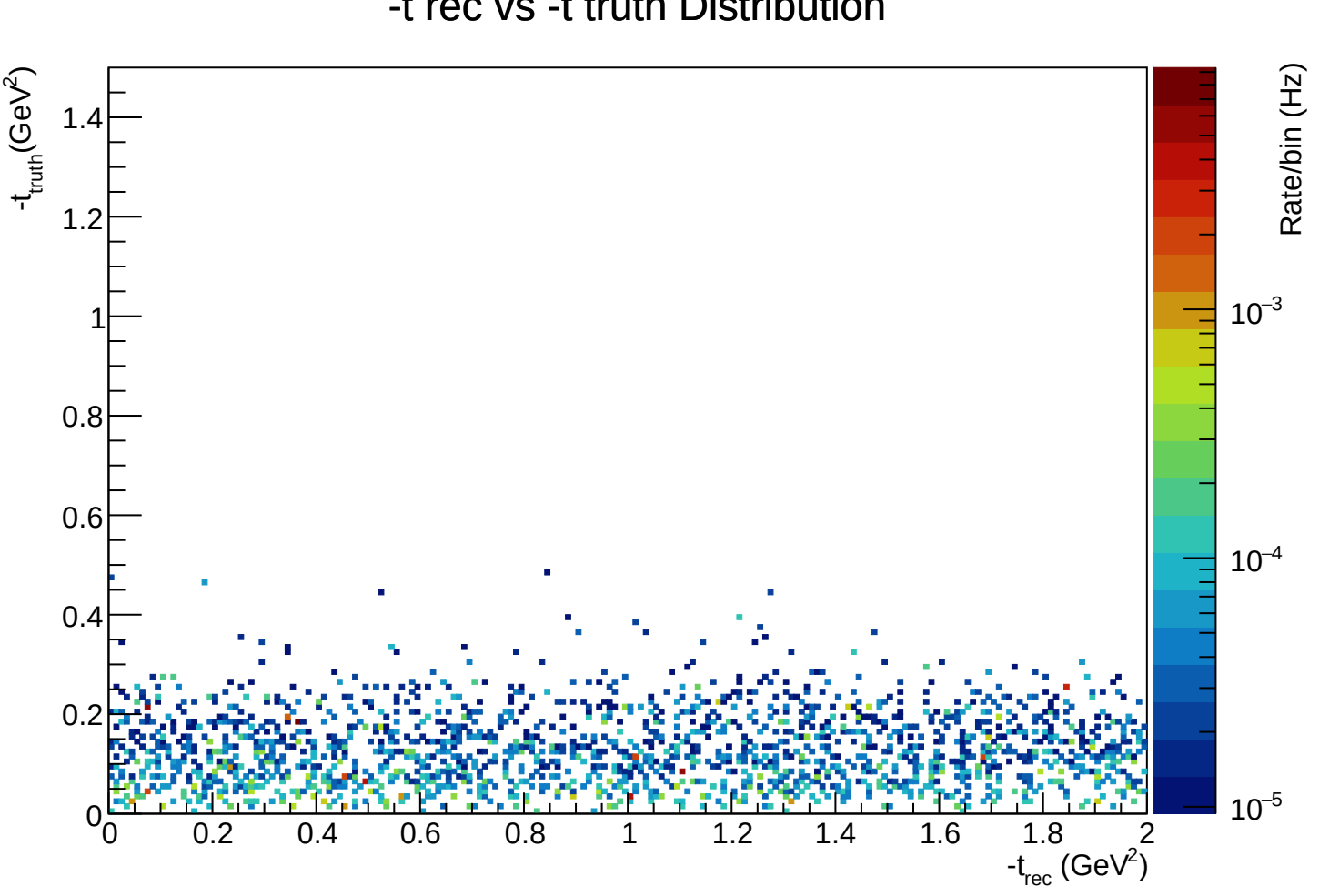

n all clusters (recθ* < 4.0 mRad)
35000
30000
25000
20000
15000
10000
5000
0
0
1
2
3
4
5
6
7
8
9
10

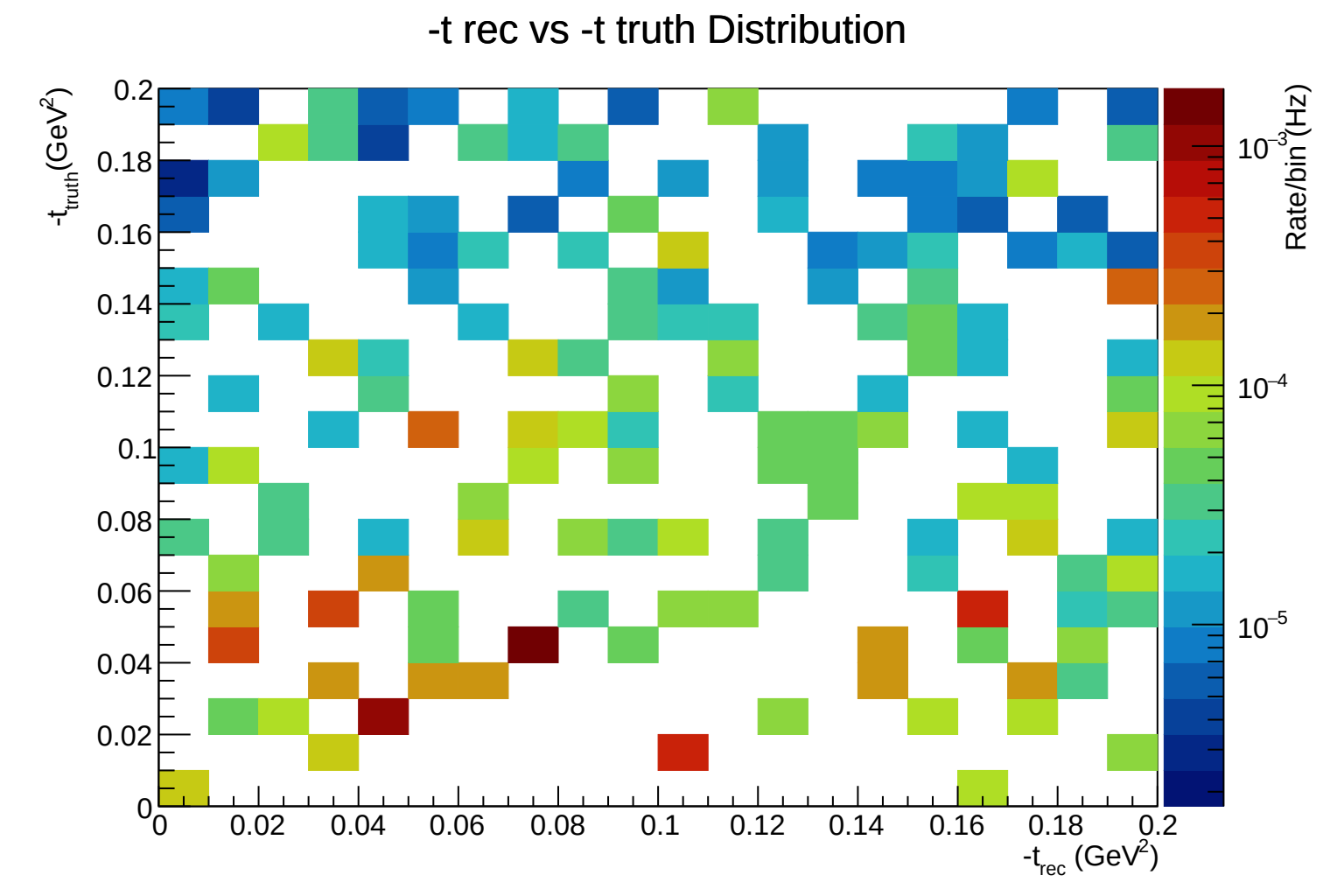

n rec E for all clusters (recθ* < 4.0 mRad)
Rate (Hz)
0.12
0.1
0.08
0.06
0.04
0.02
0
0
20
40
60
80
100
120
140
E (GeV)

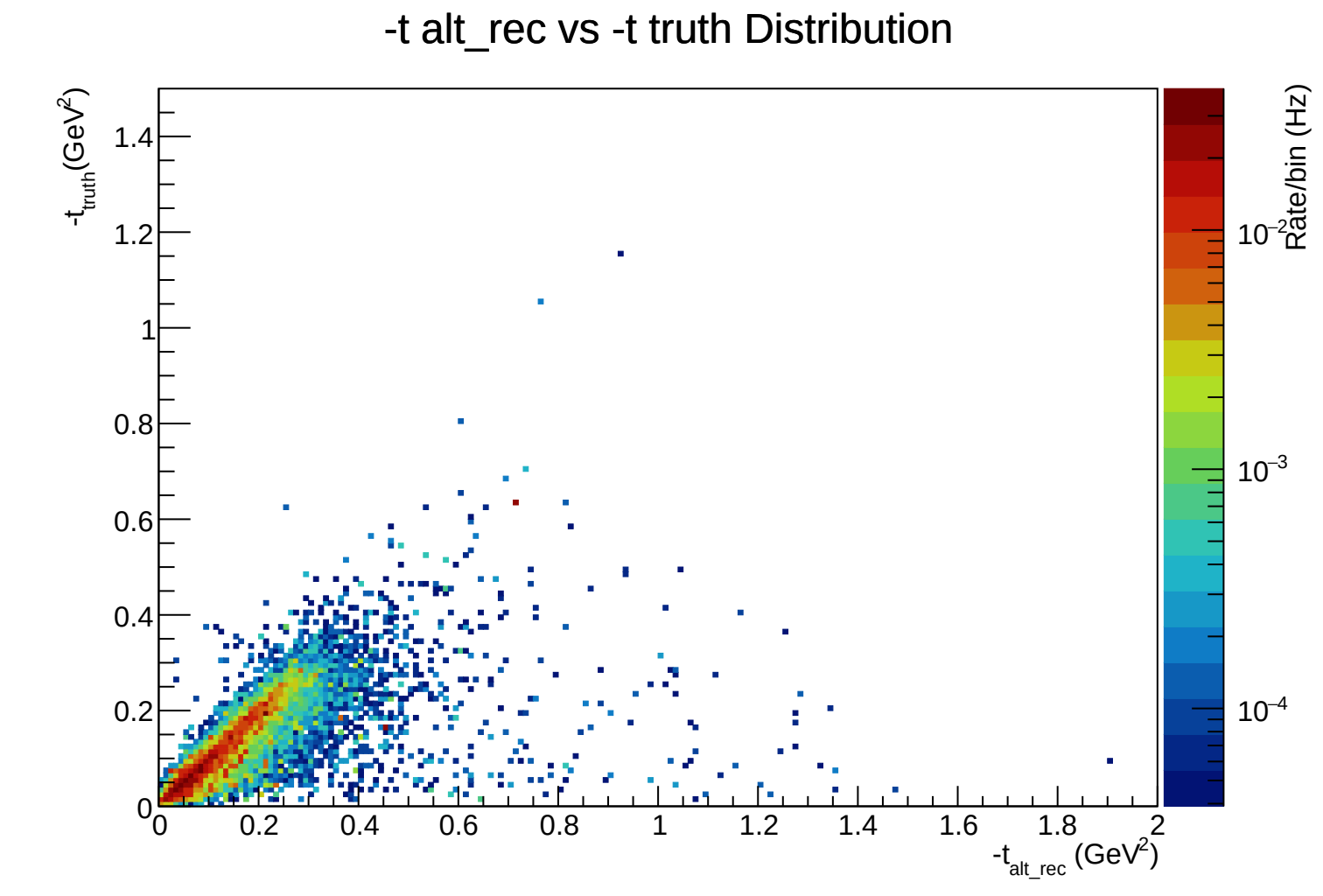

n rec θ vs P
P (GeV/c)
140
120
100
80
60
40
20
0
0.8
1
1.2
1.4
1.6
1.8
2
θ (Deg)
Rate/bin (Hz)
10^{-2}
10^{-3}
10^{-4}

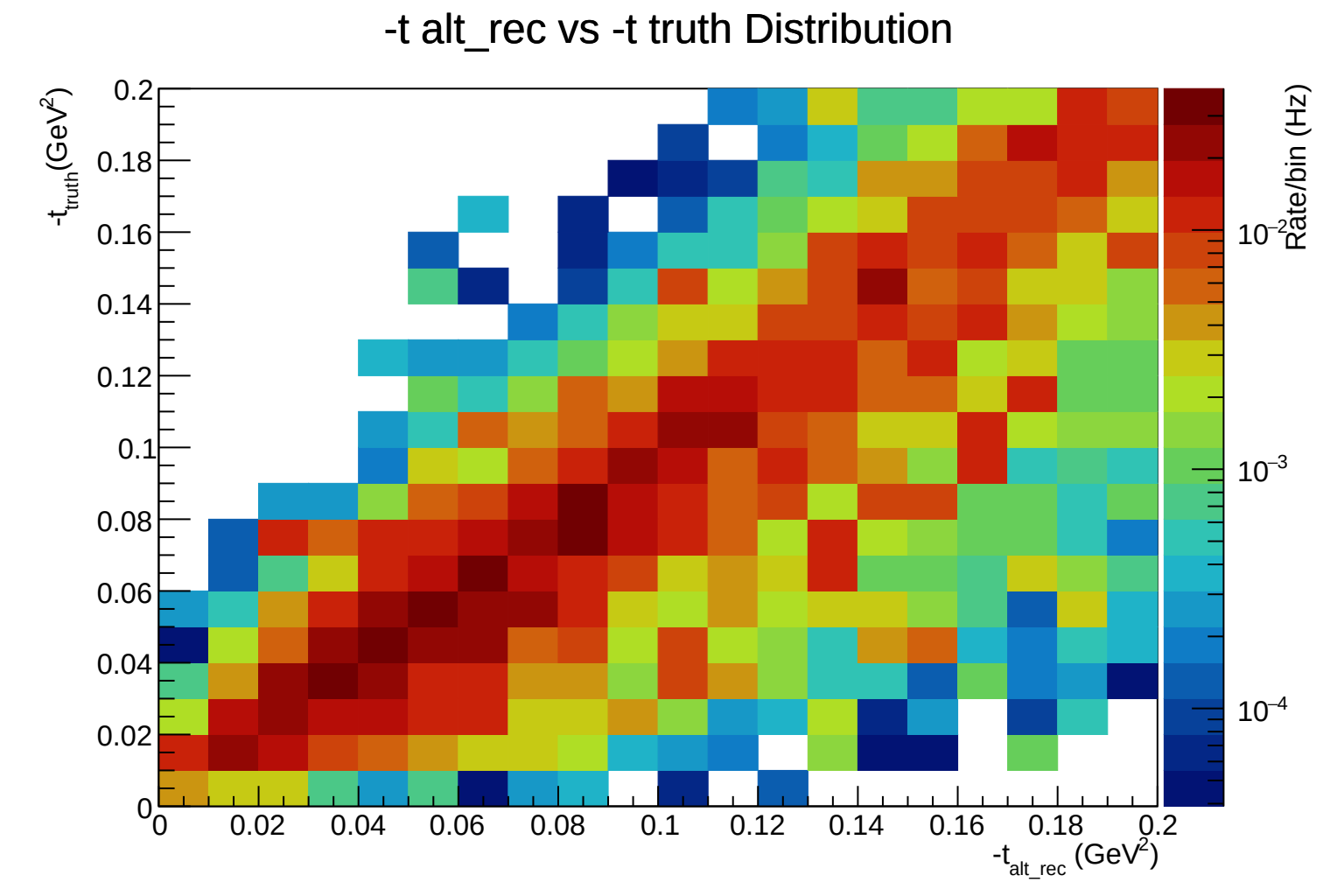

n rec θ* vs P around p axis for all clusters (rec θ* < 4.0 mRad, E > 40 GeV)
P (GeV/c)
120
110
100
90
80
70
60
50
40
0
0.5
1
1.5
2
2.5
3
3.5
4
4.5
θ* (mRad)
Rate/bin (Hz)
10^{-2}
10^{-3}
10^{-4}

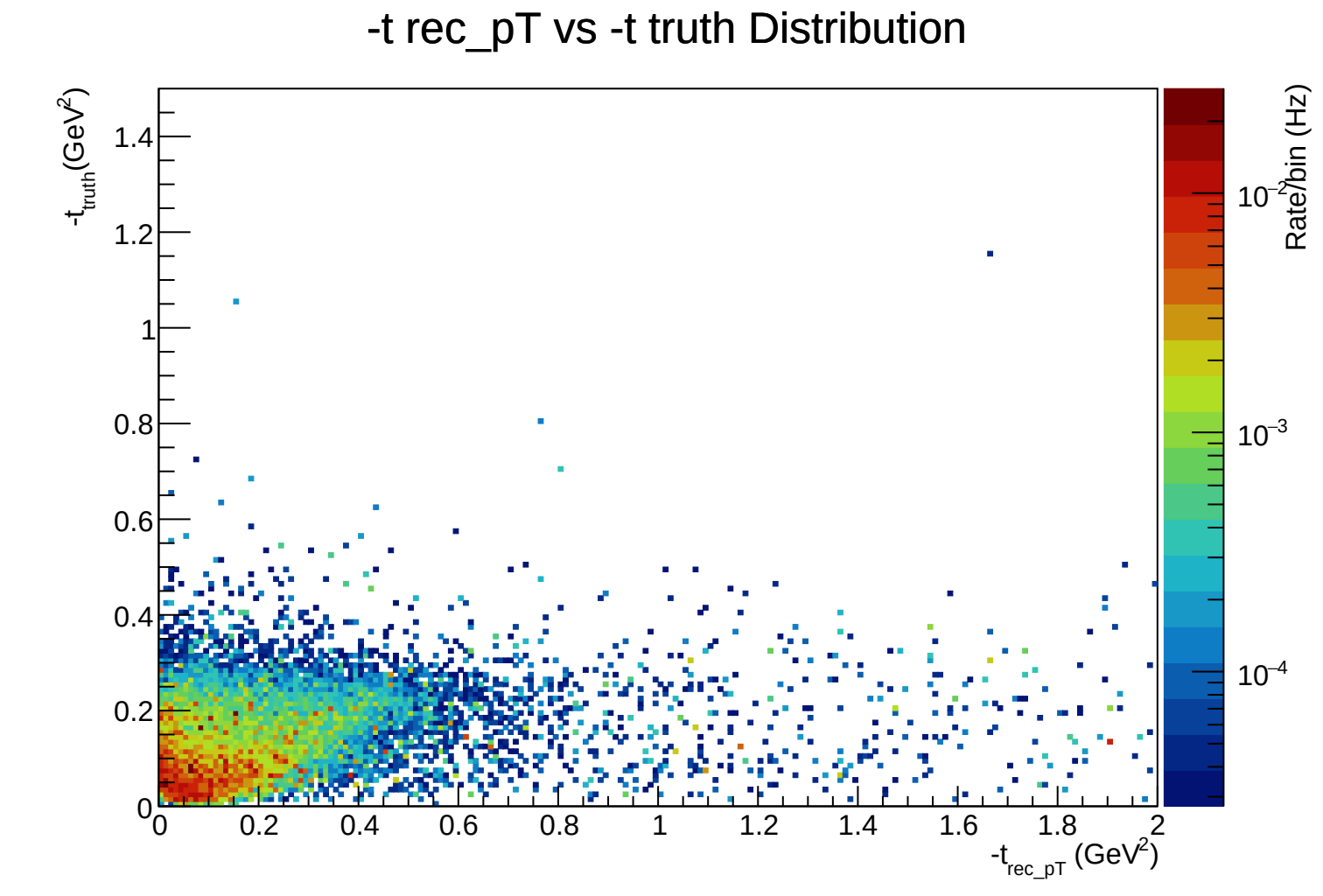

n X vs Y around proton axis at Z = 35 m for all clusters (reθ* < 4.0 mRad, E > 40 GeV)
y (mm)
200
150
100
50
0
−50
−100
−150
−200
−200
−150
−100
−50
0
50
100
150
200
x (mm)
Rate/bin (Hz)
10−2
10−3
10−4

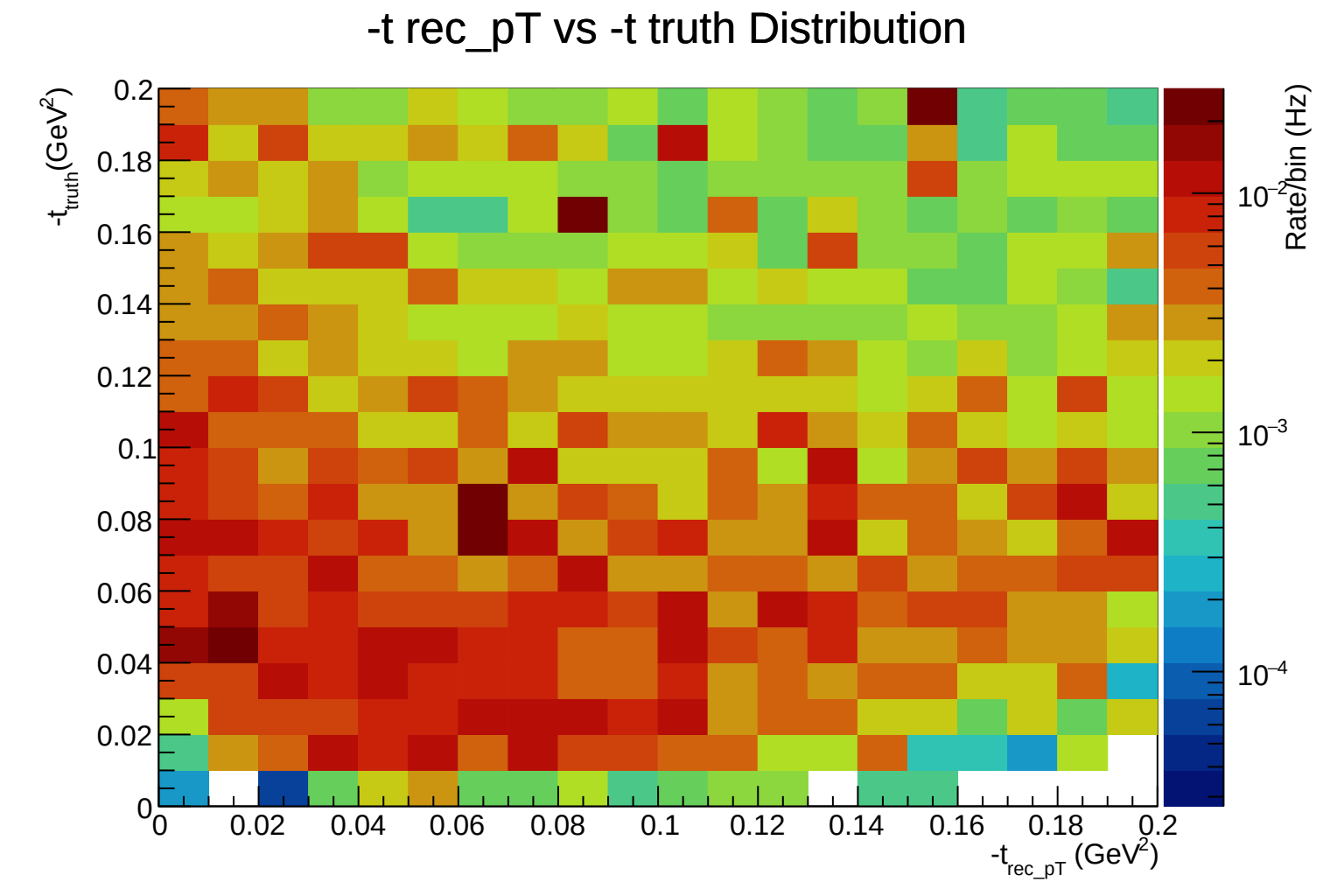

-t rec vs -t truth Distribution
-t_truth (GeV^2)
0
0.2
0.4
0.6
0.8
1
1.2
1.4
-t_rec (GeV^2)
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2
Rate/bin (Hz)
10^-3
10^-4
10^-5

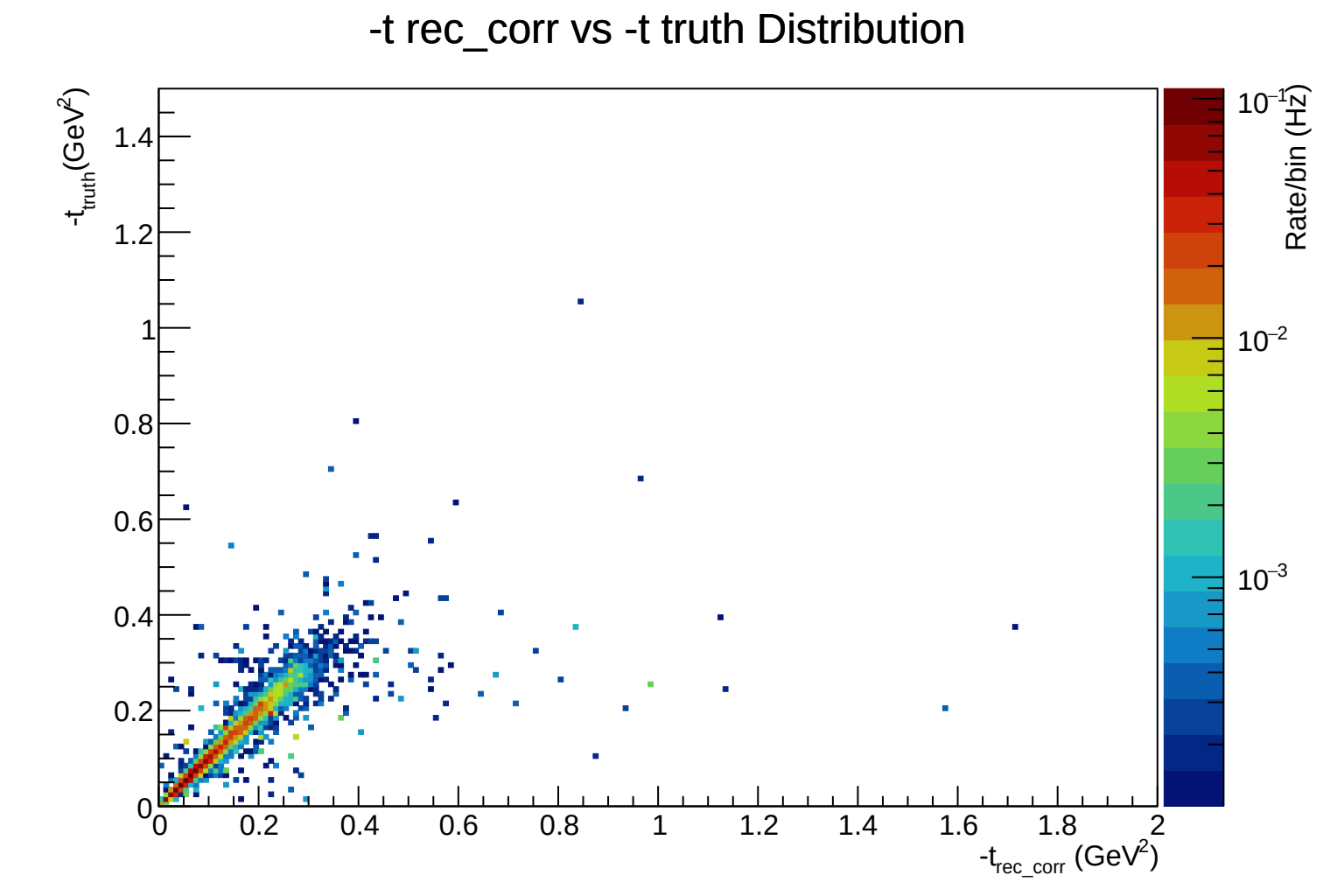

-t rec vs -t truth Distribution
$-t_{truth}$ (GeV^2)
$-t_{rec}$ (GeV^2)
Rate/bin (Hz)
0
0.02
0.04
0.06
0.08
0.1
0.12
0.14
0.16
0.18
0.2
10^{-3}
10^{-4}
10^{-5}

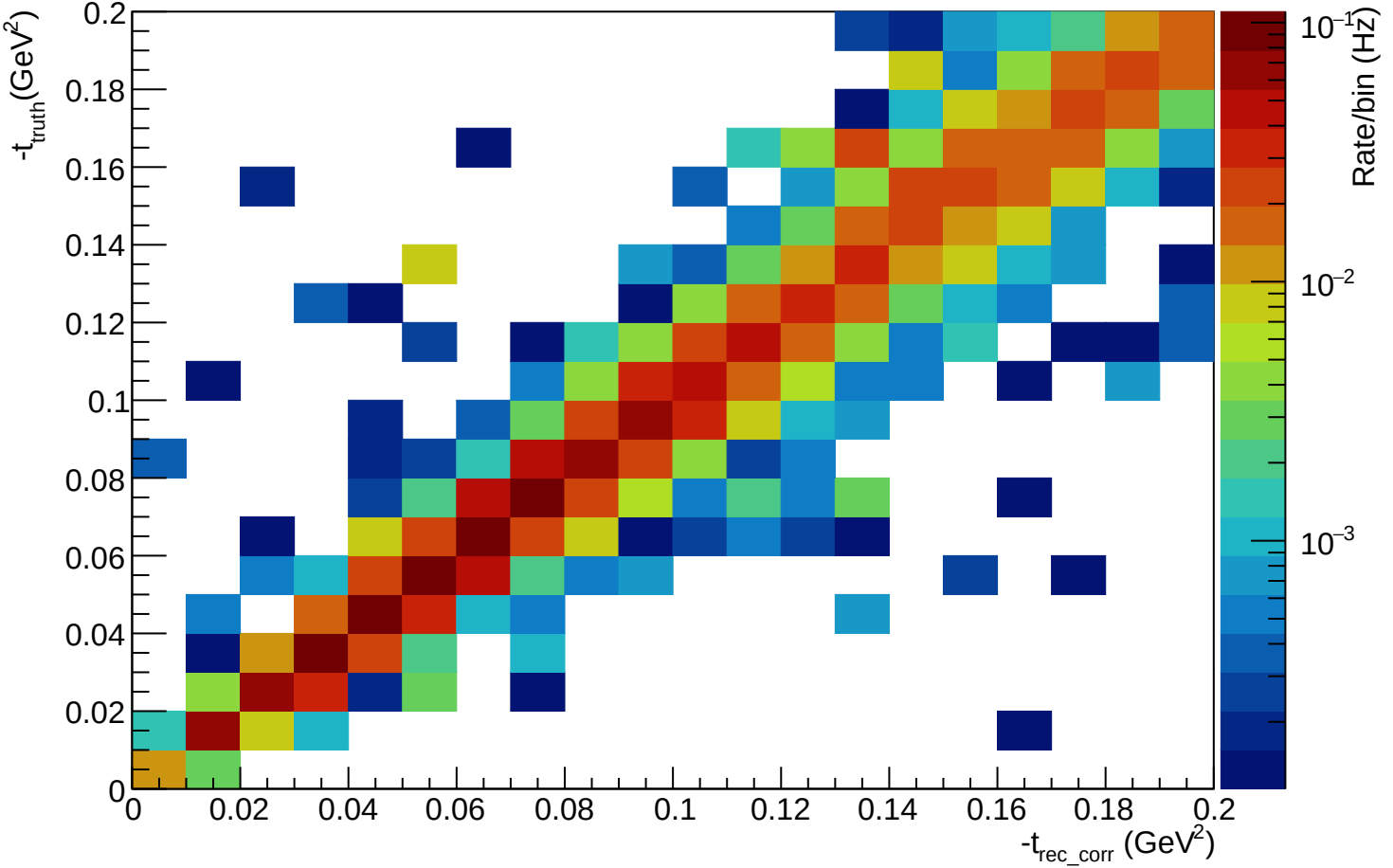

-t alt_rec vs -t truth Distribution
-t_truth (GeV^2)
0
0.2
0.4
0.6
0.8
1
1.2
1.4
-t_alt_rec (GeV^2)
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2
Rate/bin (Hz)
10^-2
10^-3
10^-4

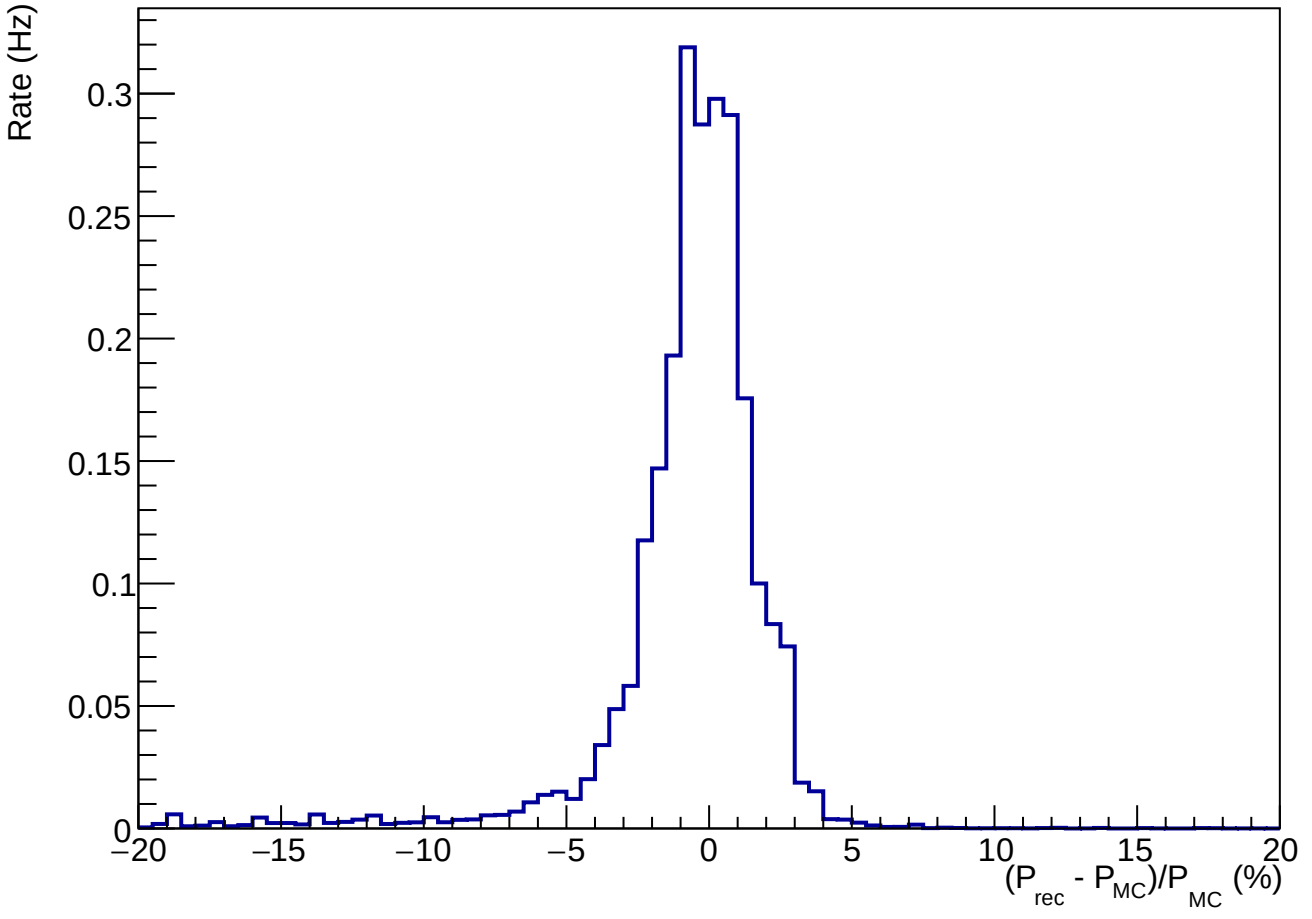

-t alt_rec vs -t truth Distribution
-t_truth (GeV^2)
0.2
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
0
0.02
0.04
0.06
0.08
0.1
0.12
0.14
0.16
0.18
0.2
-t_alt_rec (GeV^2)
Rate/bin (Hz)
10^-2
10^-3
10^-4

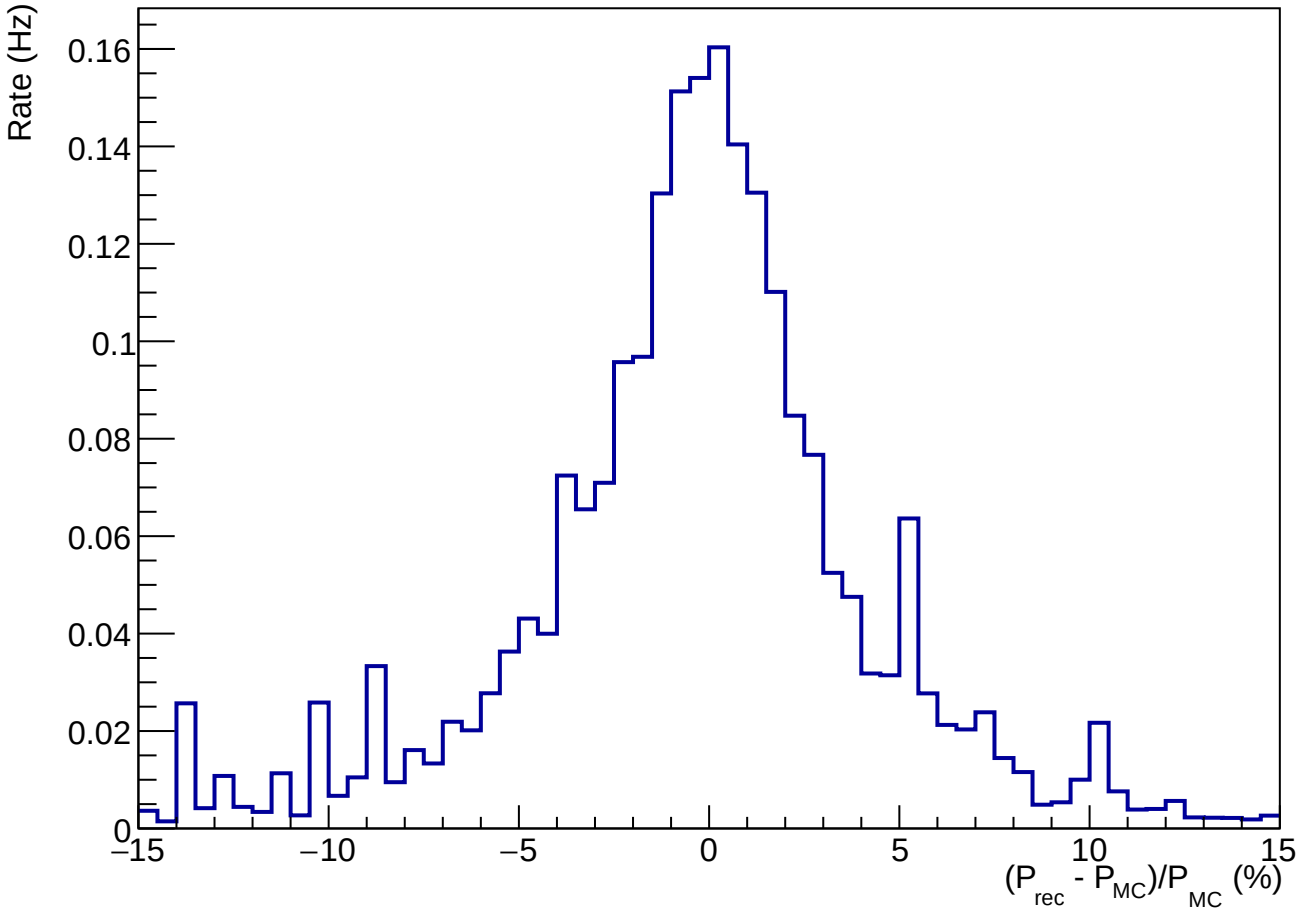

-t rec_pT vs -t truth Distribution
-t_truth (GeV^2)
0
0.2
0.4
0.6
0.8
1
1.2
1.4
-t_rec_pT (GeV^2)
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2
Rate/bin (Hz)
10^-2
10^-3
10^-4

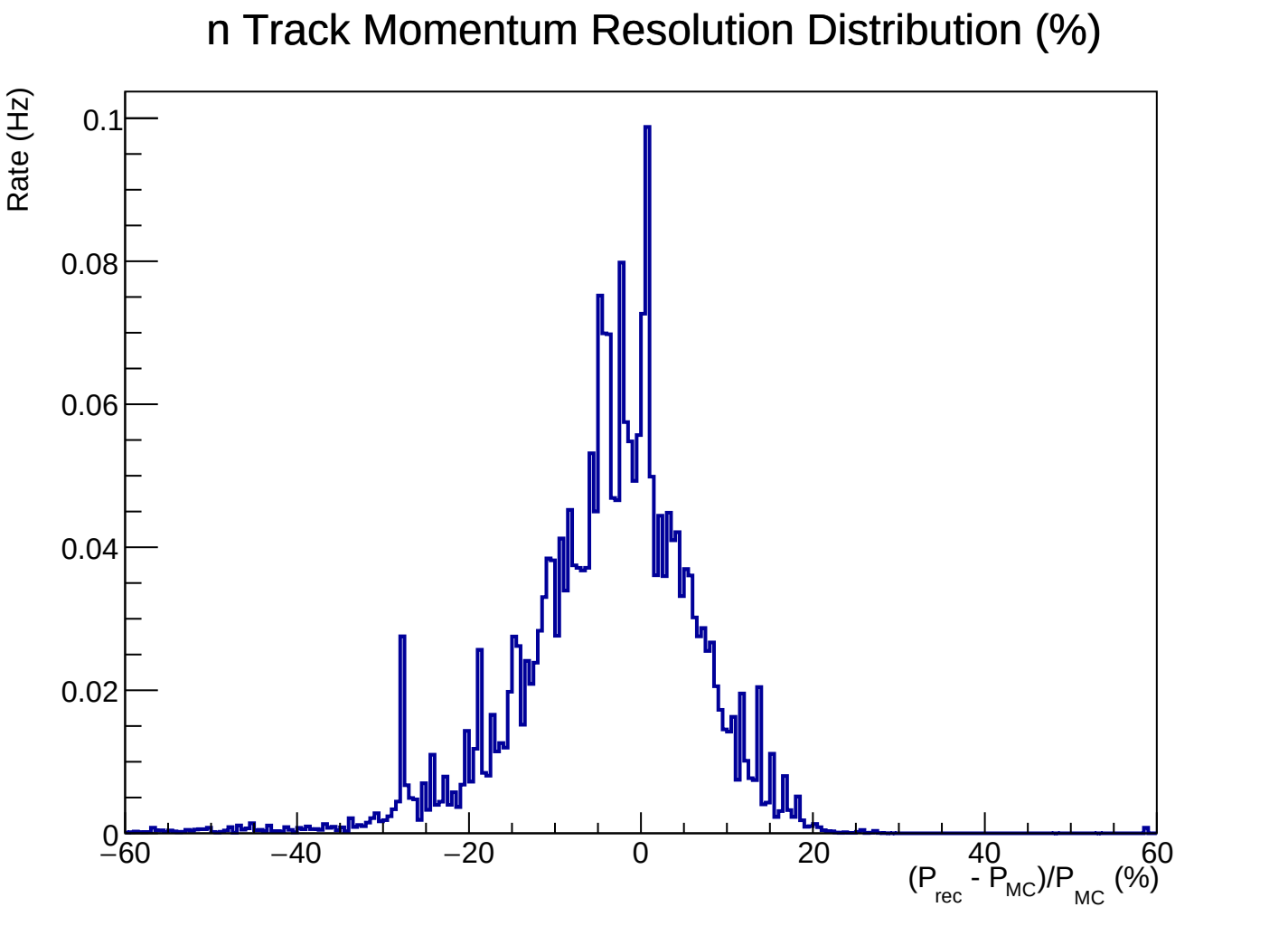

-t rec_pT vs -t truth Distribution
-t_truth (GeV^2)
0.2
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
0
0.02
0.04
0.06
0.08
0.1
0.12
0.14
0.16
0.18
0.2
-t_rec_pT (GeV^2)
Rate/bin (Hz)
10^-2
10^-3
10^-4

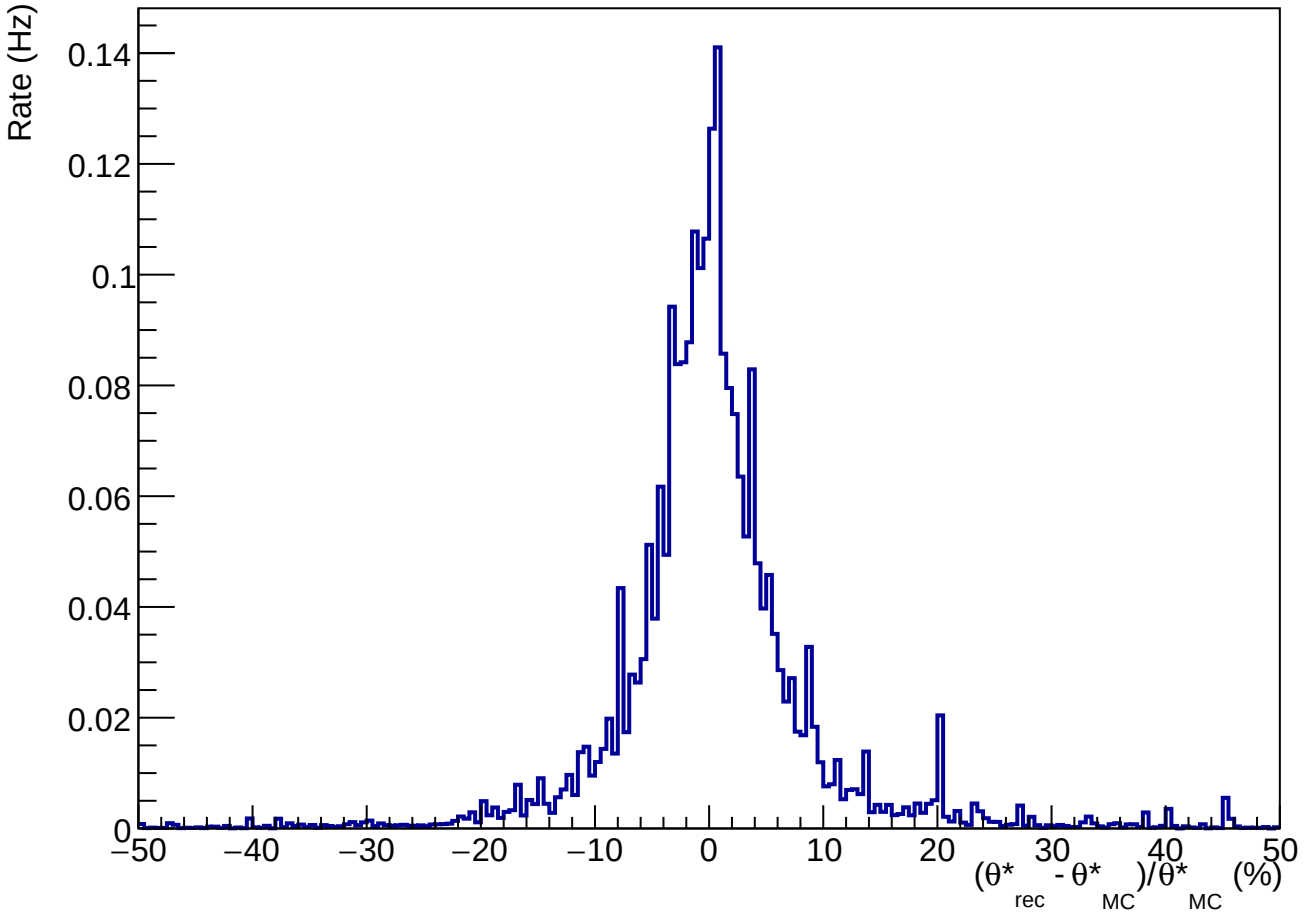

-t rec_corr vs -t truth Distribution
-t_truth (GeV^2)
0
0.2
0.4
0.6
0.8
1
1.2
1.4
-t_rec_corr (GeV^2)
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2
Rate/bin (Hz)
10^-1
10^-2
10^-3

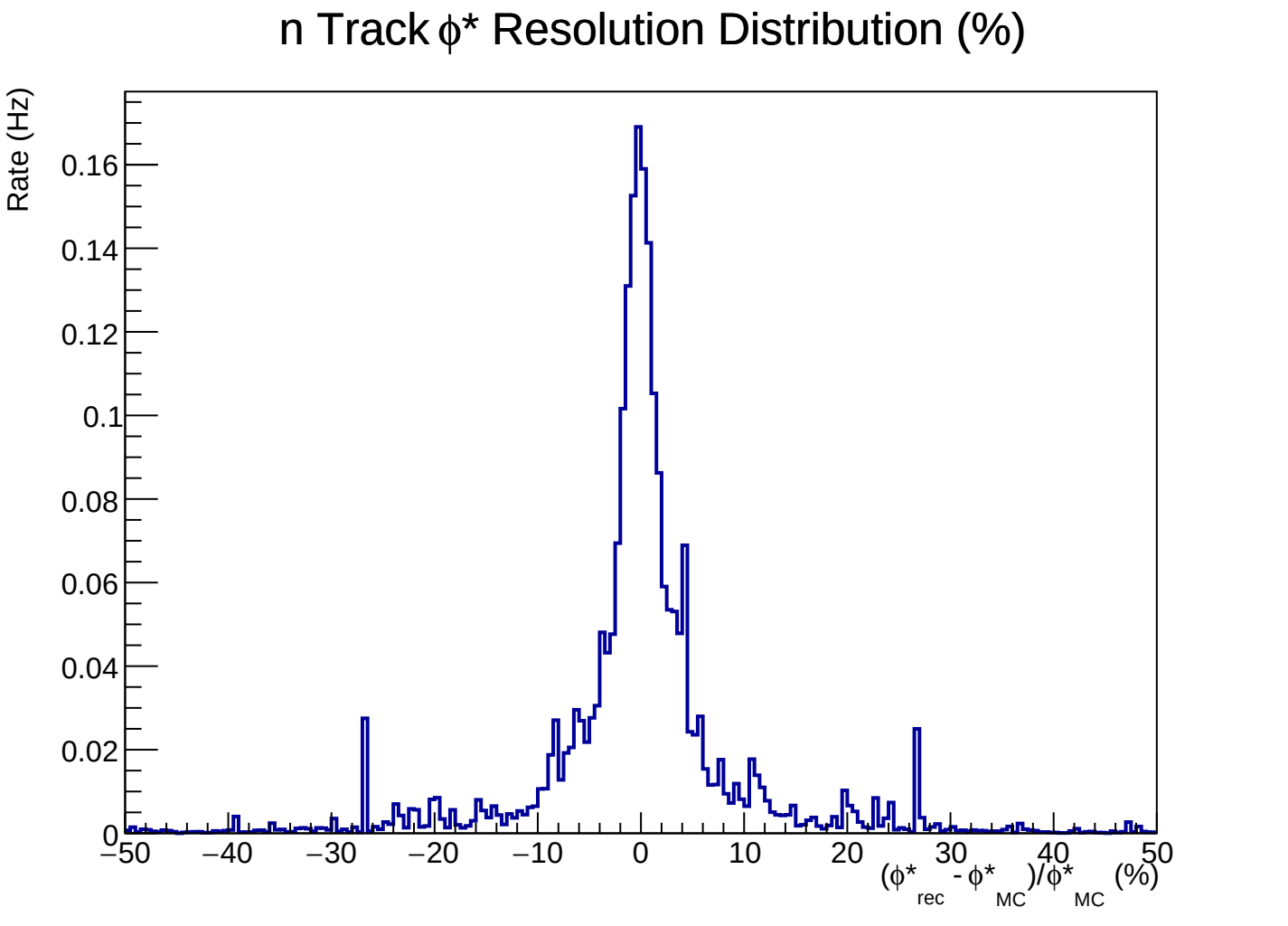

-t rec_corr vs -t truth Distribution
-t_truth (GeV^2)
0.2
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
0
0.02
0.04
0.06
0.08
0.1
0.12
0.14
0.16
0.18
0.2
-t_rec_corr (GeV^2)
Rate/bin (Hz)
10^-1
10^-2
10^-3

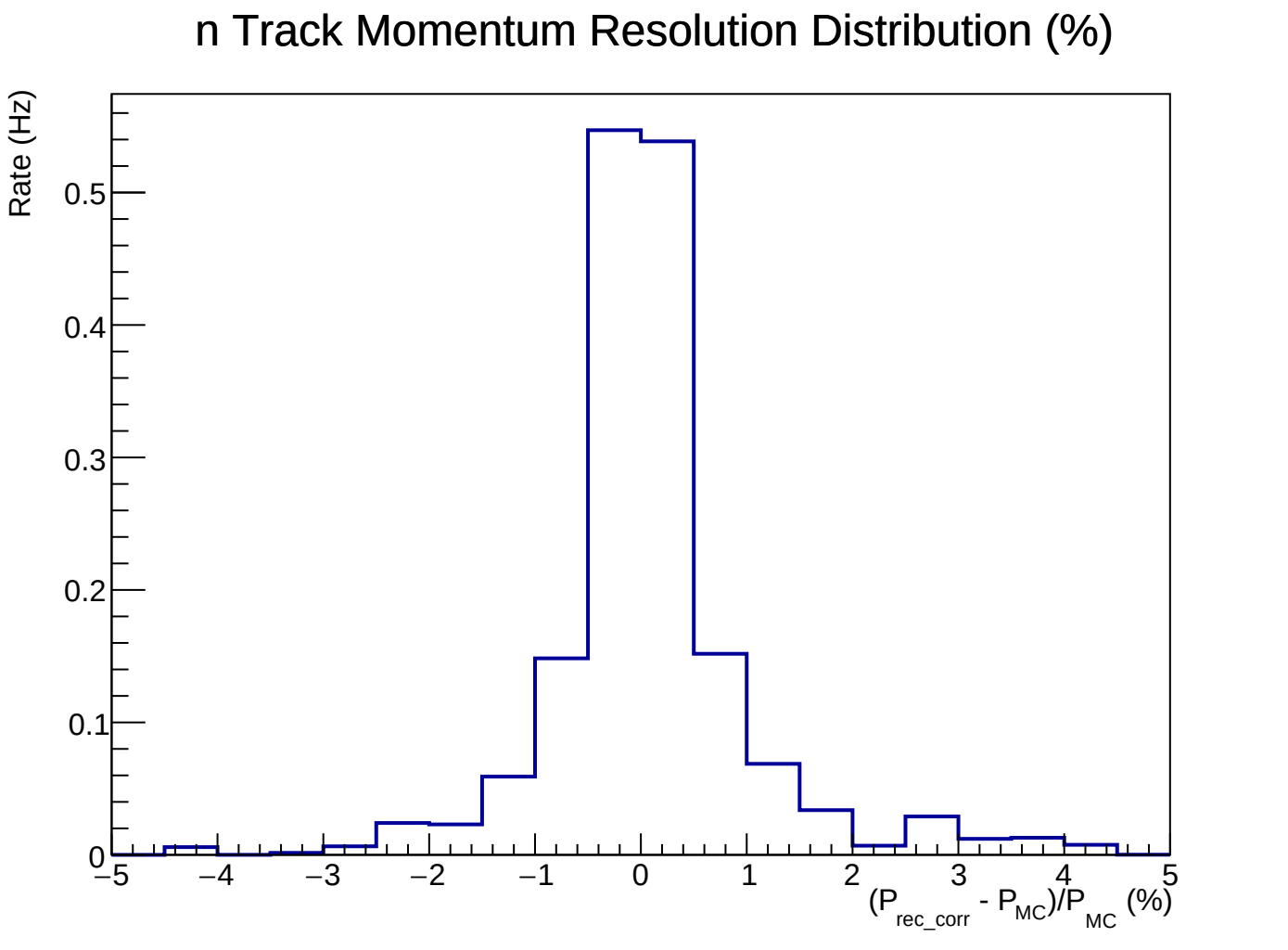

e' Track Momentum Resolution Distribution (%)
Rate (Hz)
0.3
0.25
0.2
0.15
0.1
0.05
0
−20
−15
−10
−5
0
5
10
15
20
(P_rec - P_MC)/P_MC (%)

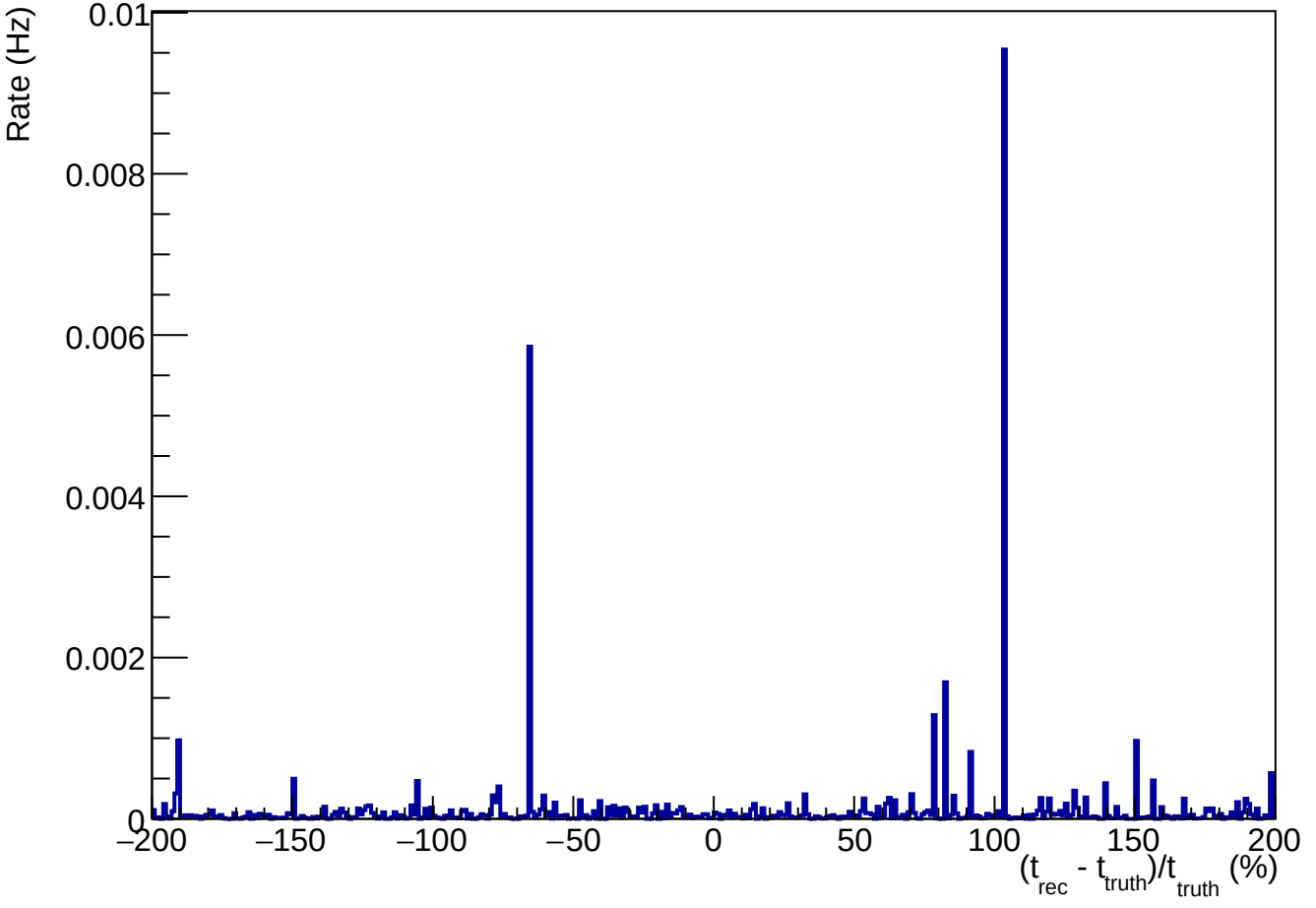

π^+ Track Momentum Resolution Distribution (%)
Rate (Hz)
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
−15
−10
−5
0
5
10
15
$(P_{rec} - P_{MC})/P_{MC}$ (%)

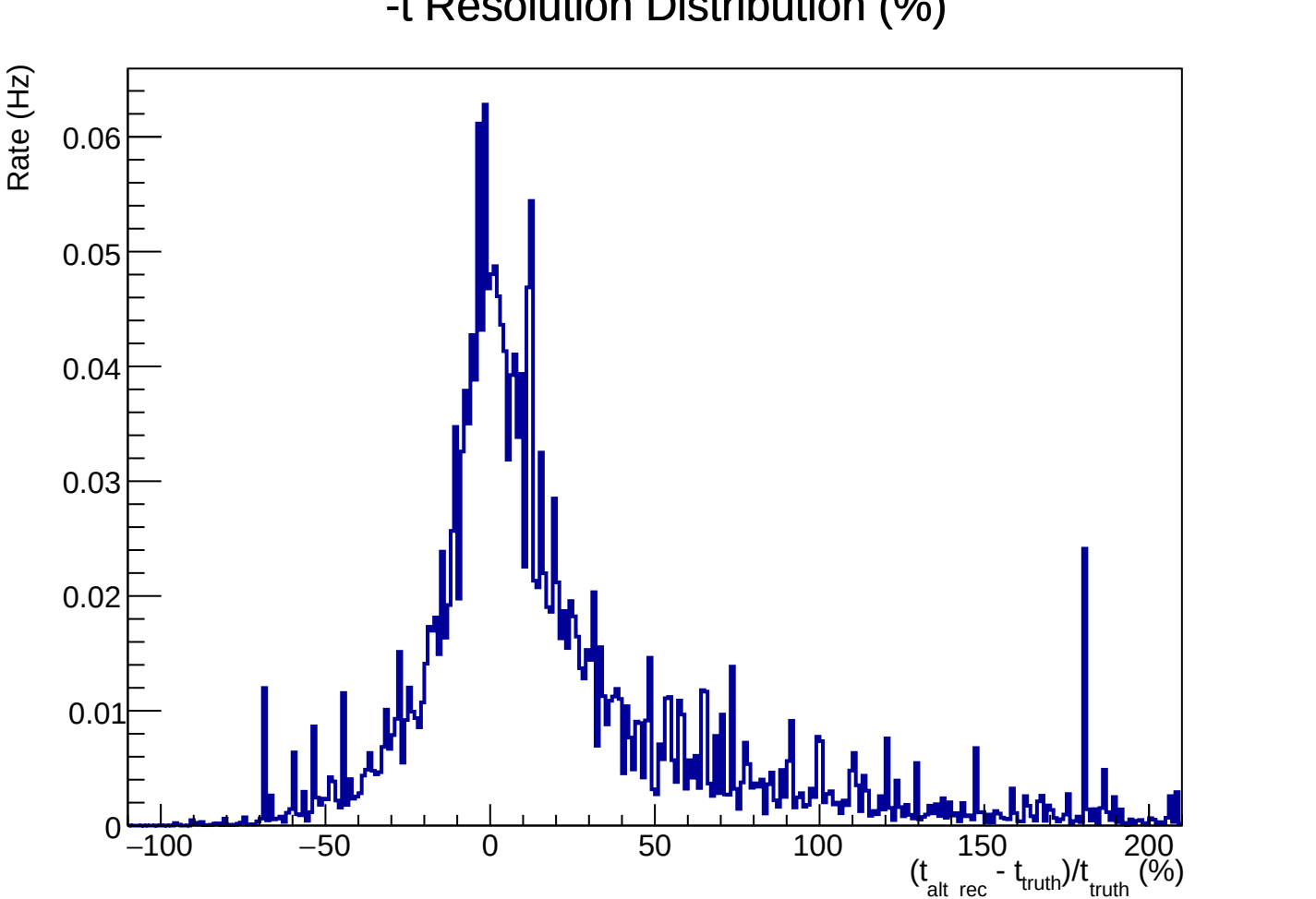

n Track Momentum Resolution Distribution (%)
Rate (Hz)
0.1
0.08
0.06
0.04
0.02
0
−60
−40
−20
0
20
40
60
(P_rec - P_MC)/P_MC (%)

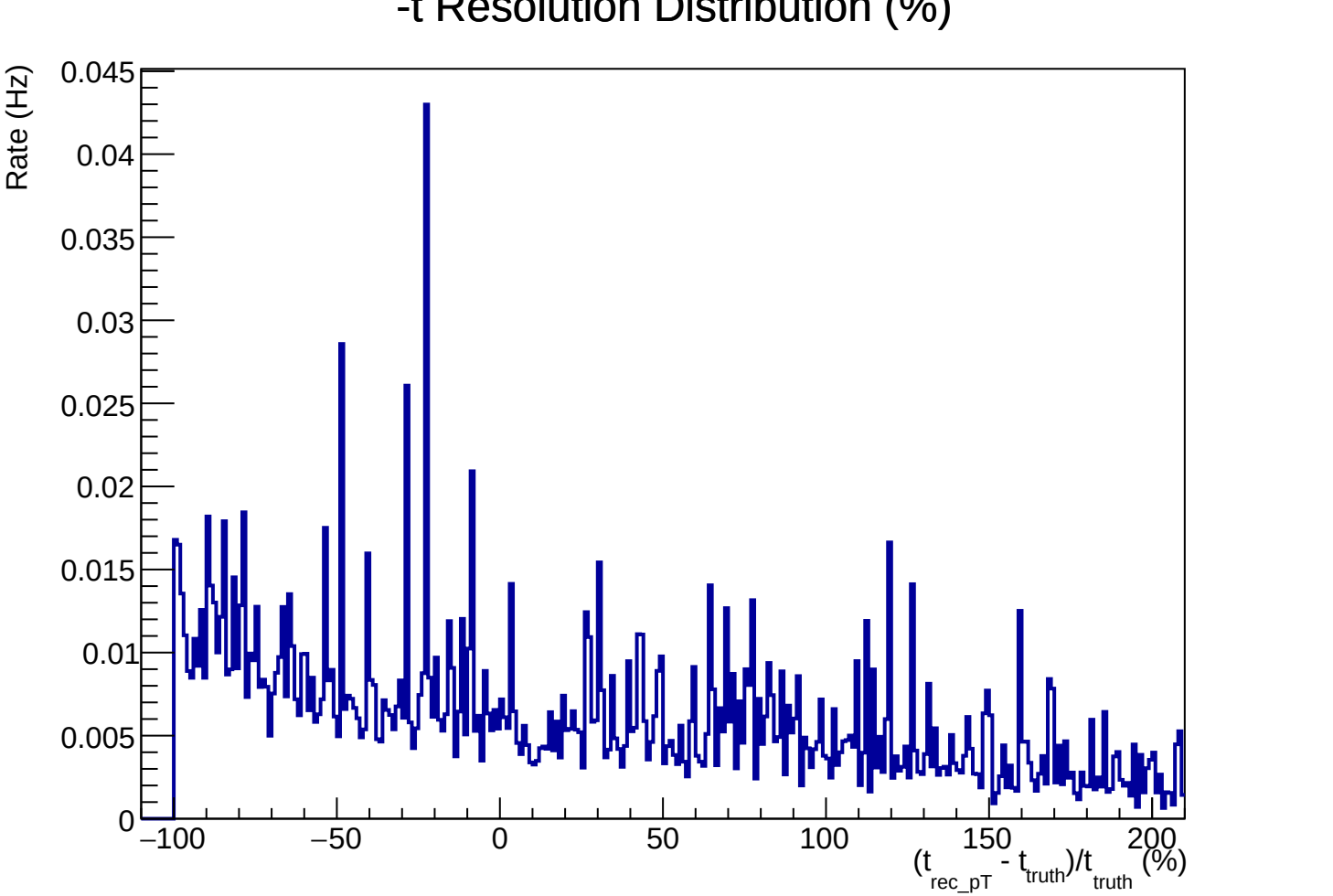

n Track θ* Resolution Distribution (%)
Rate (Hz)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
−50
−40
−30
−20
−10
0
10
20
30
40
50
(θ*rec - θ*MC)/θ*MC (%)

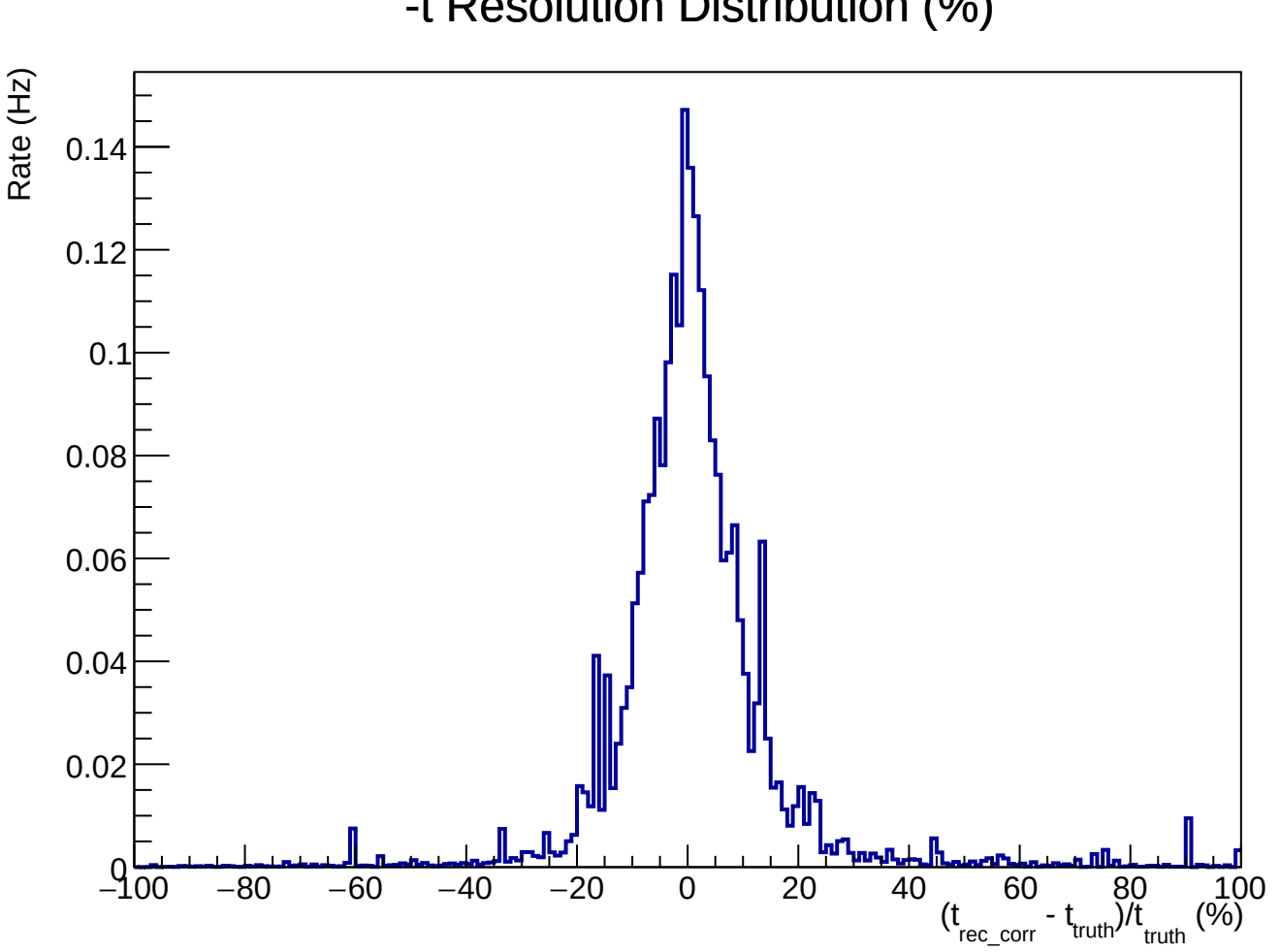

n Track ϕ* Resolution Distribution (%)
Rate (Hz)
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
−50
−40
−30
−20
−10
0
10
20
30
40
50
(ϕ*rec - ϕ*MC)/ϕ*MC (%)

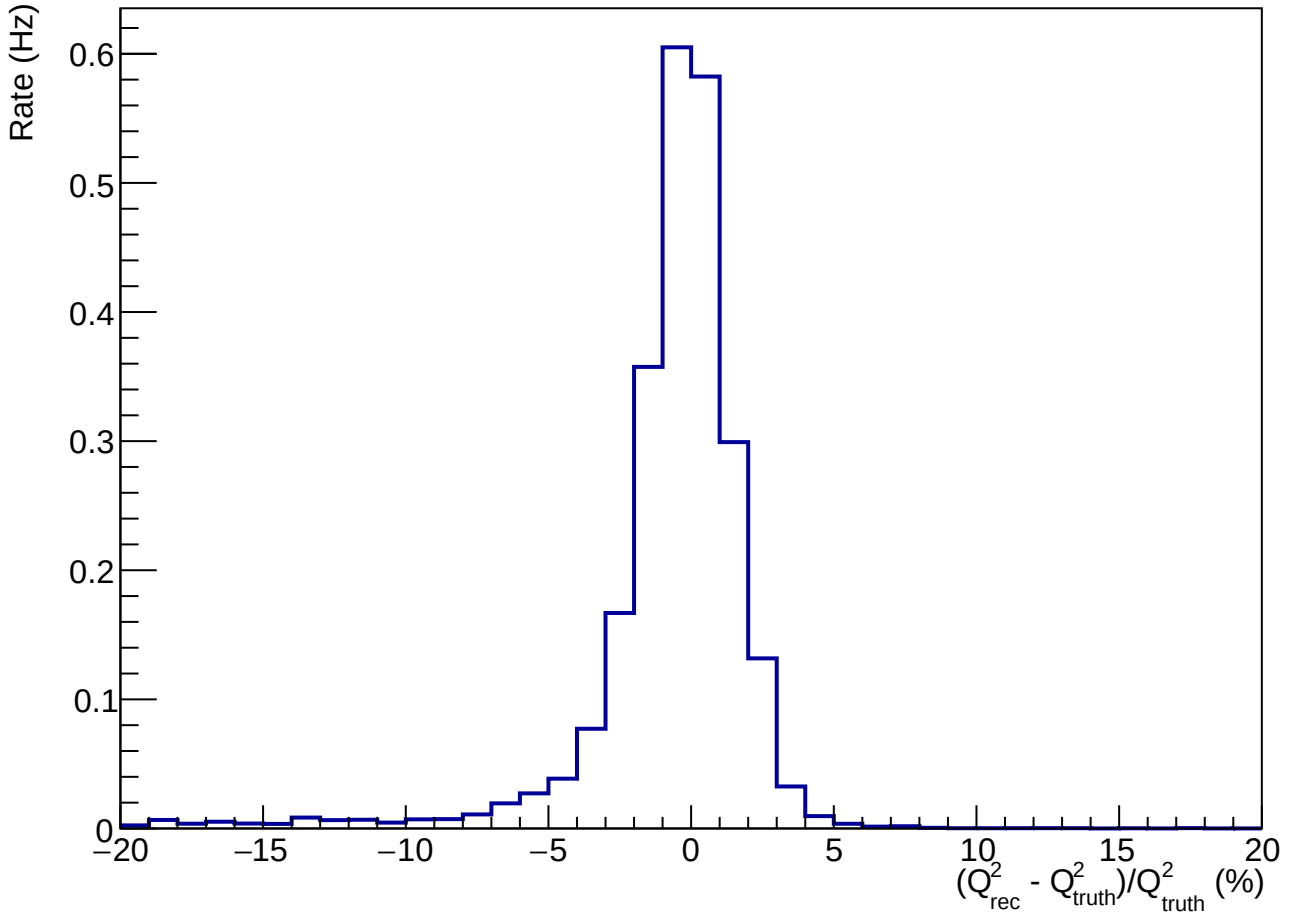

n Track Momentum Resolution Distribution (%)
Rate (Hz)
0.5
0.4
0.3
0.2
0.1
0
−5
−4
−3
−2
−1
0
1
2
3
4
5
(P rec_corr - P MC)/P MC (%)

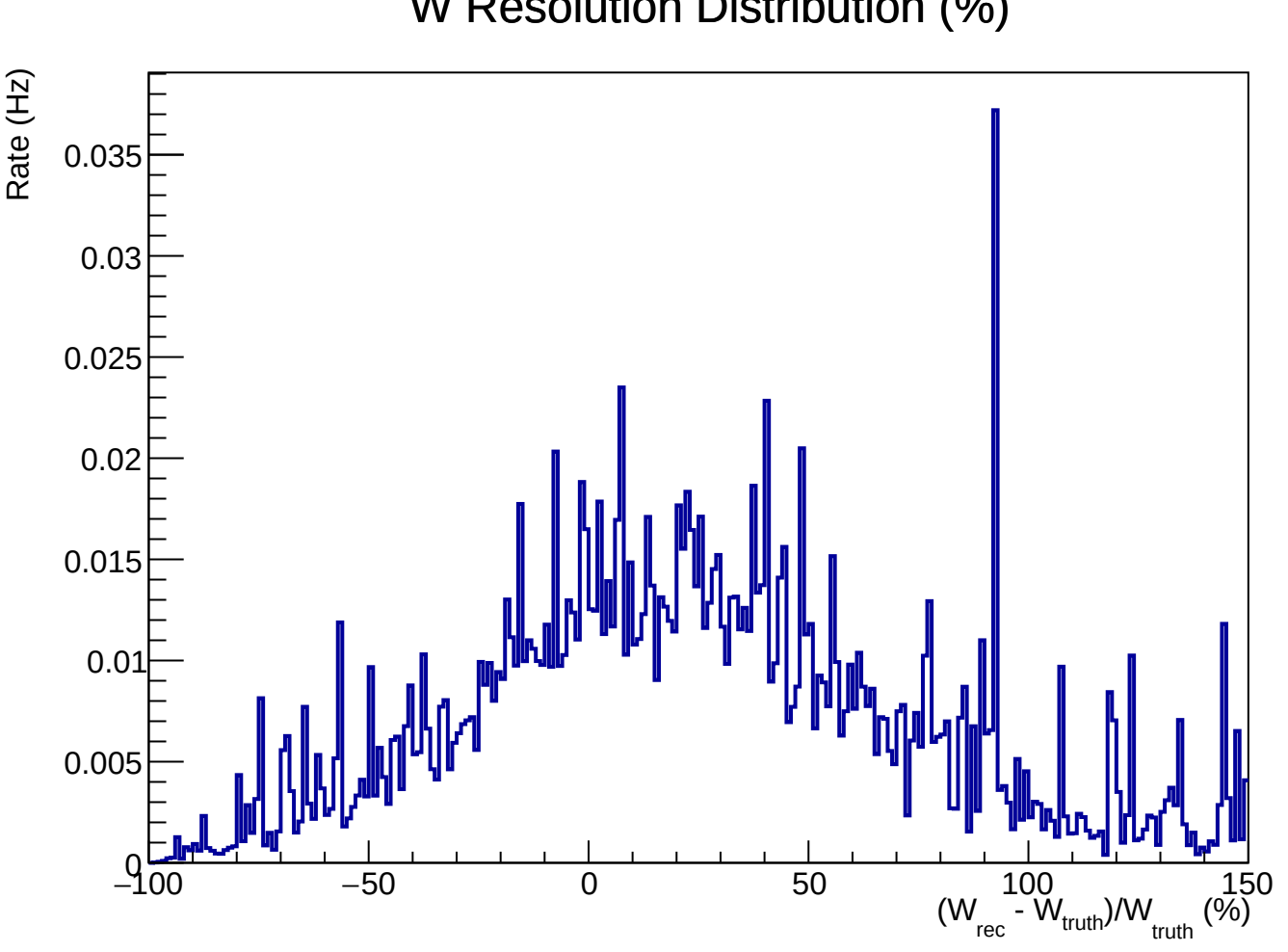

-t Resolution Distribution (%)
Rate (Hz)
0.01
0.008
0.006
0.004
0.002
0
−200
−150
−100
−50
0
50
100
150
200
(t_rec - t_truth)/t_truth (%)

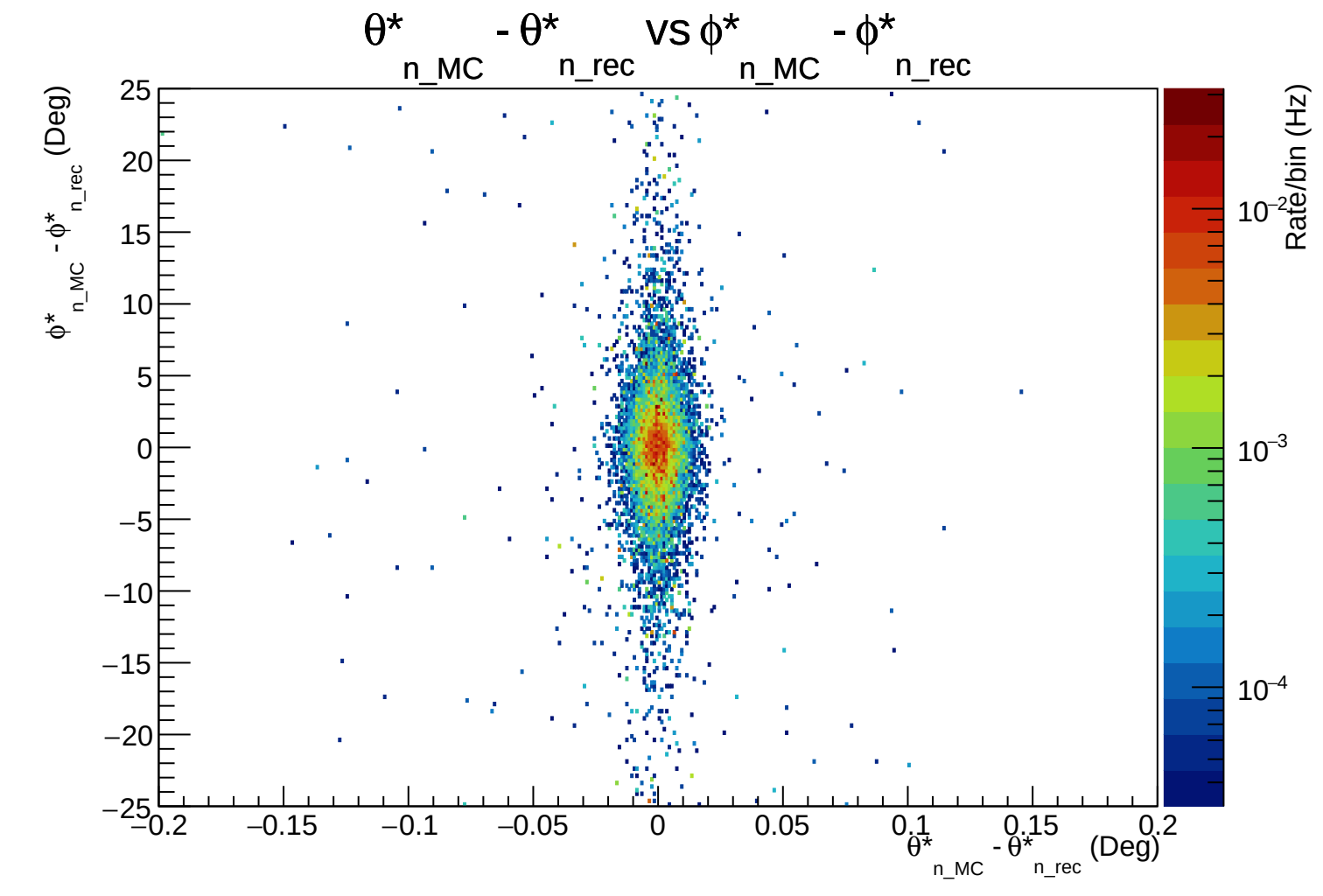

-t Resolution Distribution (%)
Rate (Hz)
0.06
0.05
0.04
0.03
0.02
0.01
0
−100
−50
0
50
100
150
200
(t alt_rec - t truth)/t truth (%)

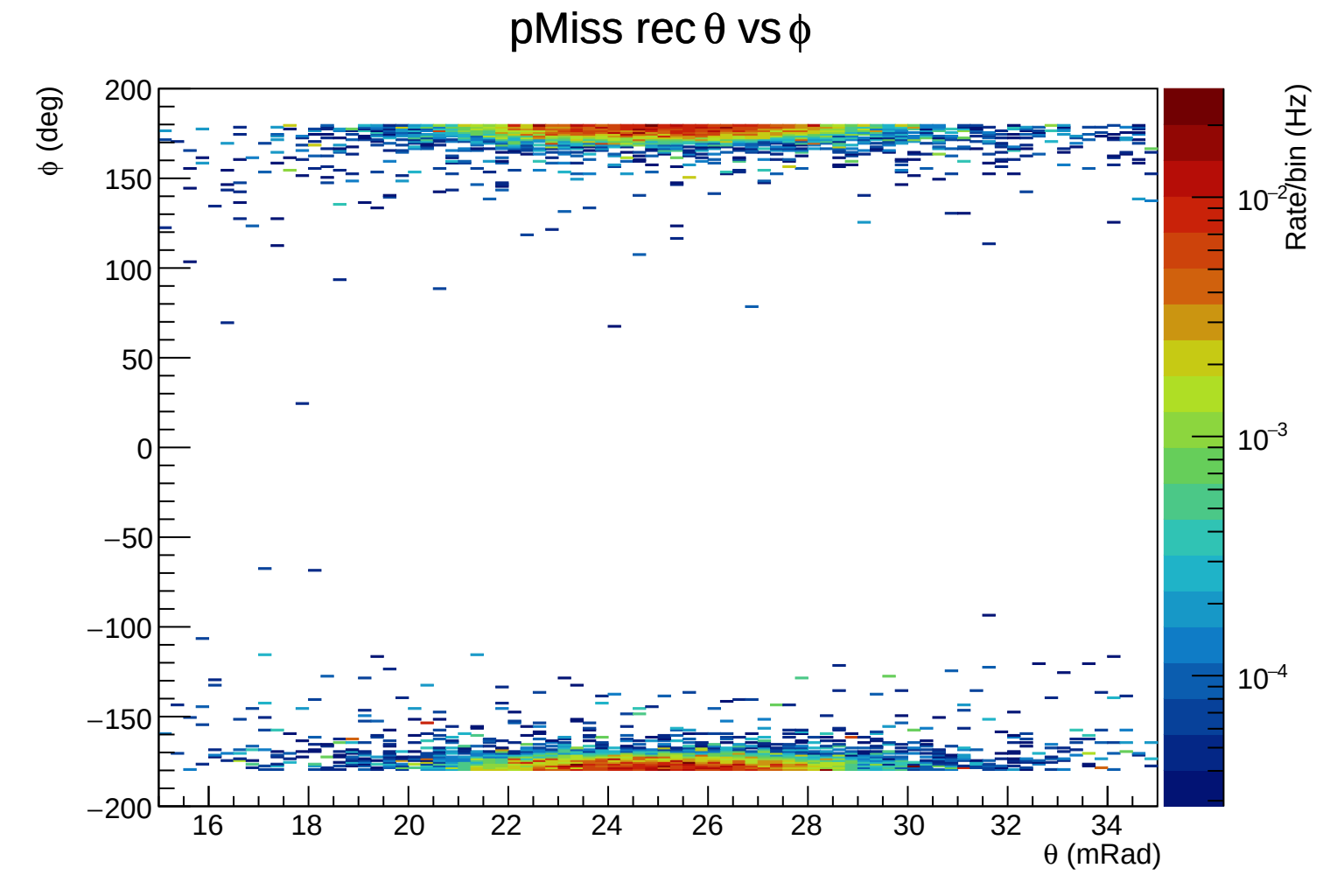

-t Resolution Distribution (%)
Rate (Hz)
0.045
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
−100
−50
0
50
100
150
200
(t rec_pT - t truth)/t truth (%)

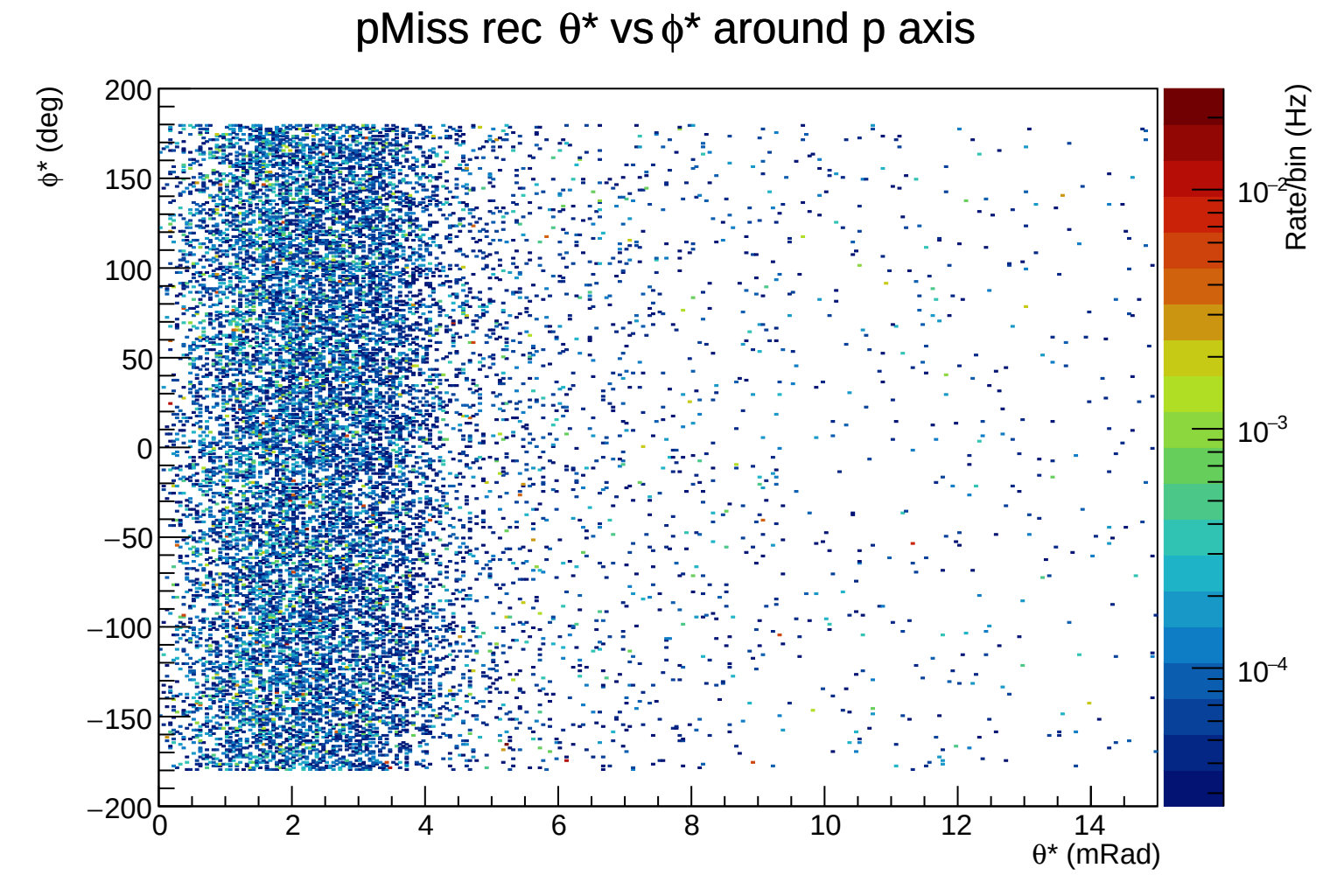

-t Resolution Distribution (%)
Rate (Hz)
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
−100
−80
−60
−40
−20
0
20
40
60
80
100
(t rec_corr - t truth)/t truth (%)

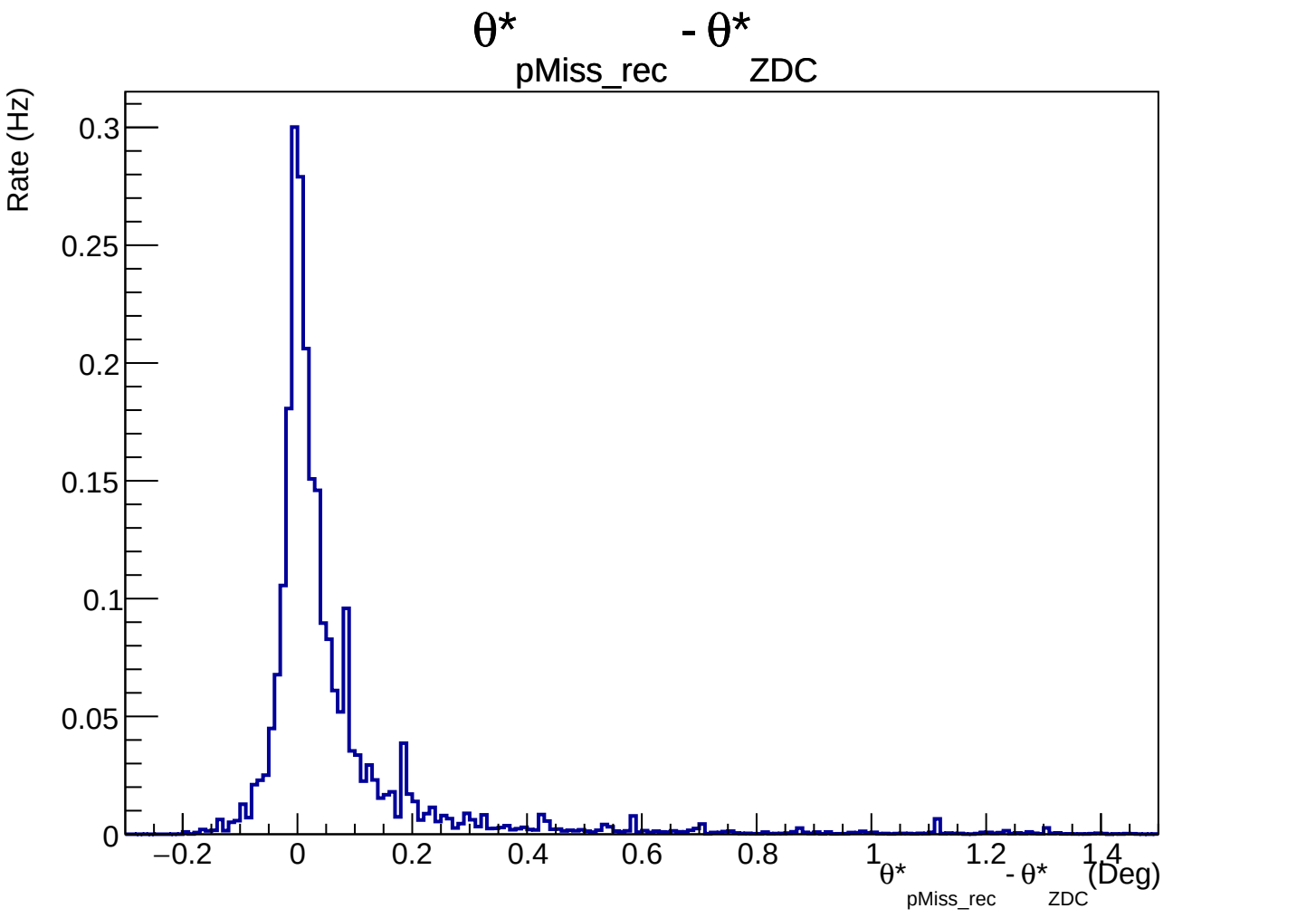

Q^2 Resolution Distribution (%)
Rate (Hz)
0.6
0.5
0.4
0.3
0.2
0.1
0
−20
−15
−10
−5
0
5
10
15
20
$(Q^2_{rec} - Q^2_{truth})/Q^2_{truth}$ (%)

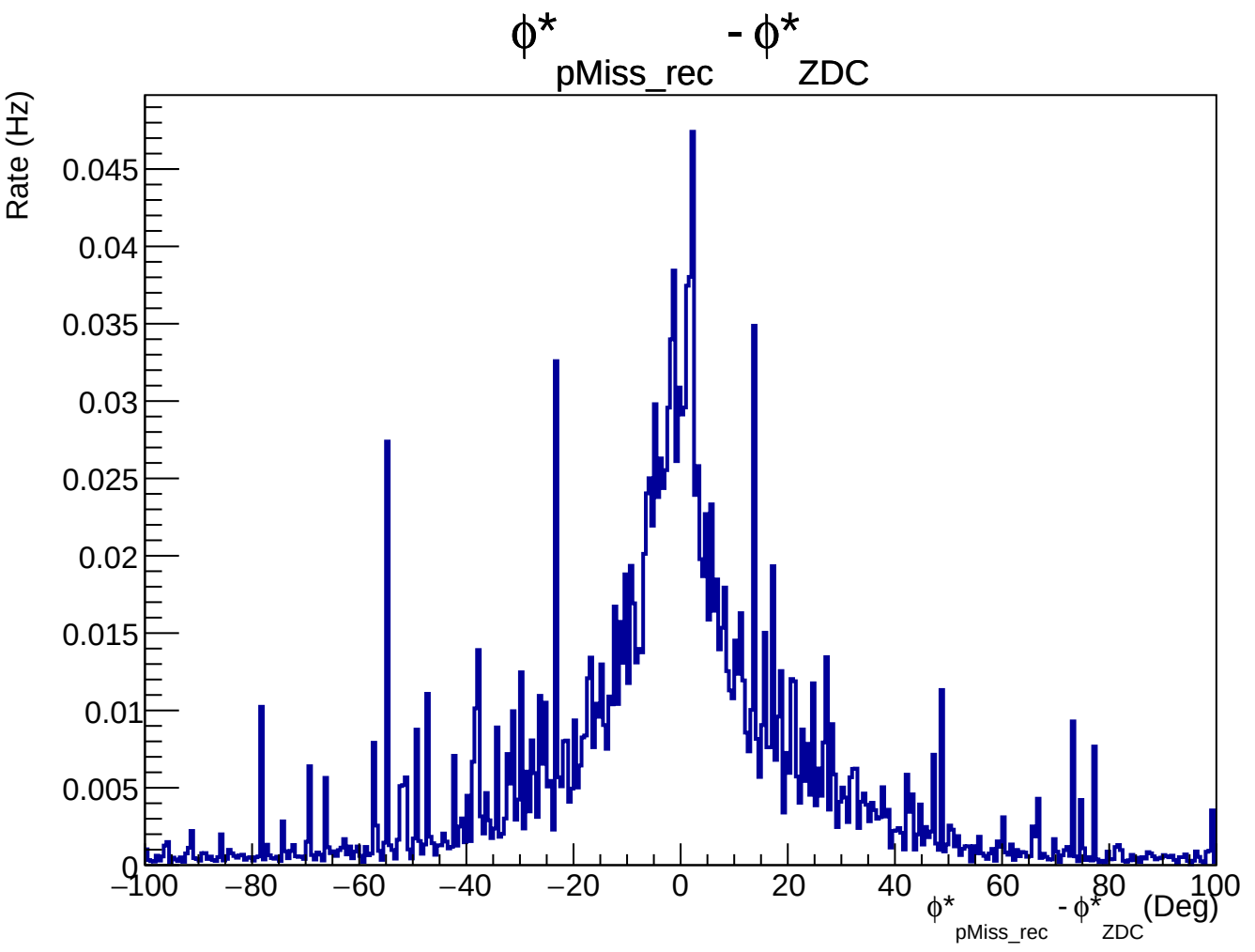

W Resolution Distribution (%)
Rate (Hz)
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
−100
−50
0
50
100
150
(W_rec - W_truth)/W_truth (%)

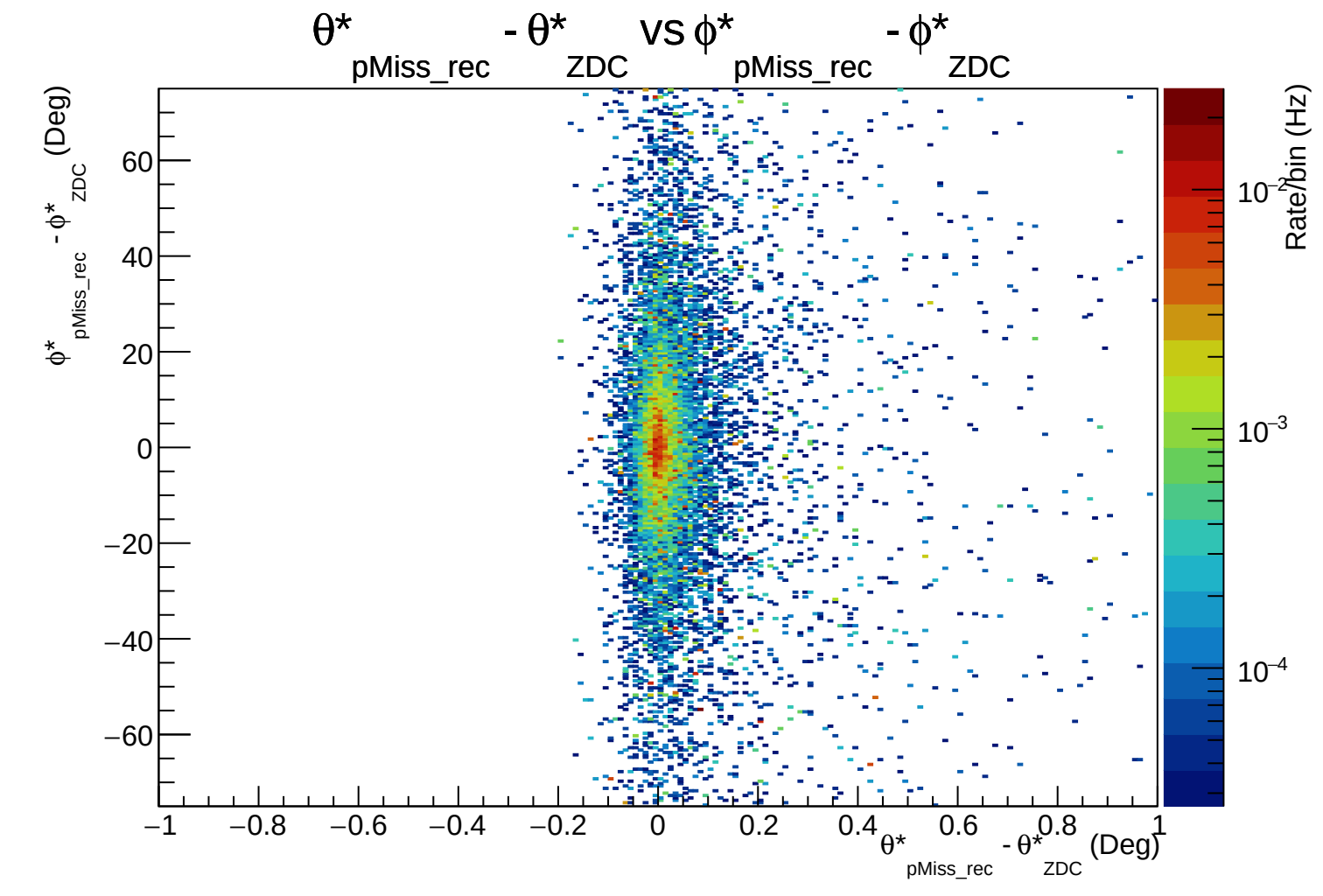

θ*n_MC - θ*n_rec vs ϕ*n_MC - ϕ*n_rec
ϕ*n_MC - ϕ*n_rec (Deg)
θ*n_MC - θ*n_rec (Deg)
Rate/bin (Hz)
25
20
15
10
5
0
−5
−10
−15
−20
−25
−0.2
−0.15
−0.1
−0.05
0
0.05
0.1
0.15
0.2
10^{-2}
10^{-3}
10^{-4}

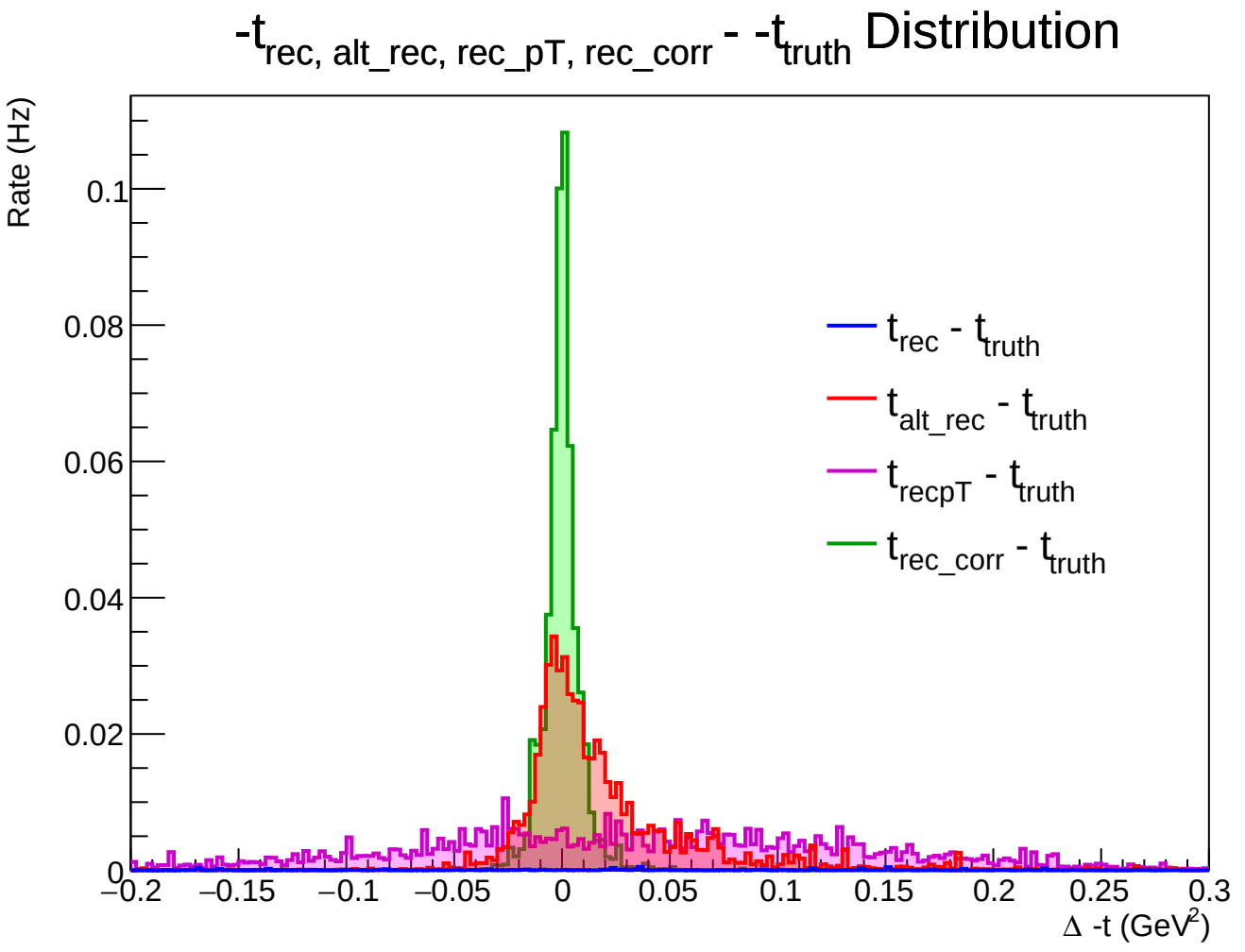

pMiss rec θ vs ϕ
ϕ (deg)
200
150
100
50
0
−50
−100
−150
−200
16
18
20
22
24
26
28
30
32
34
θ (mRad)
Rate/bin (Hz)
10^{-2}
10^{-3}
10^{-4}

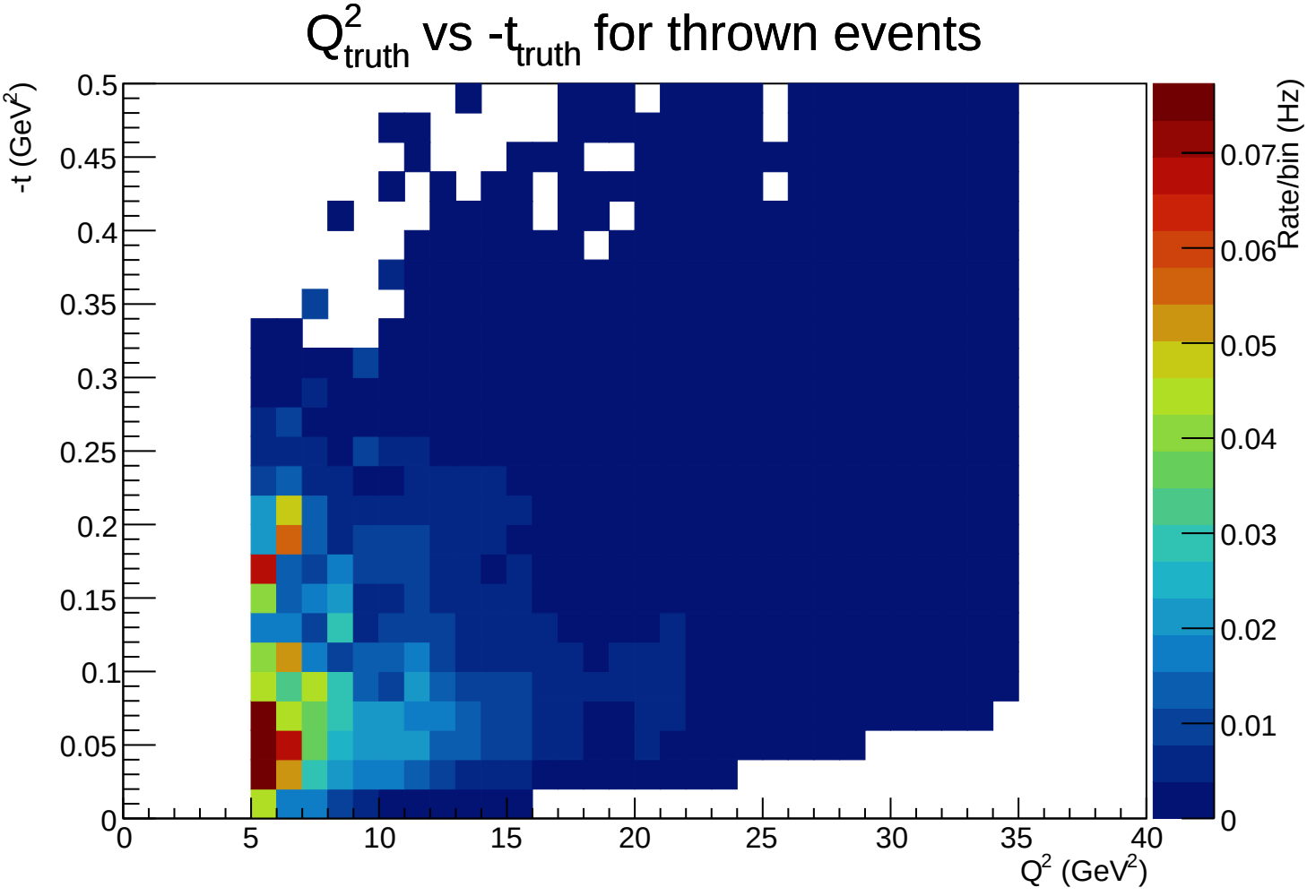

pMiss rec θ* vs ϕ* around p axis
ϕ* (deg)
200
150
100
50
0
−50
−100
−150
−200
0
2
4
6
8
10
12
14
θ* (mRad)
Rate/bin (Hz)
10^{-2}
10^{-3}
10^{-4}

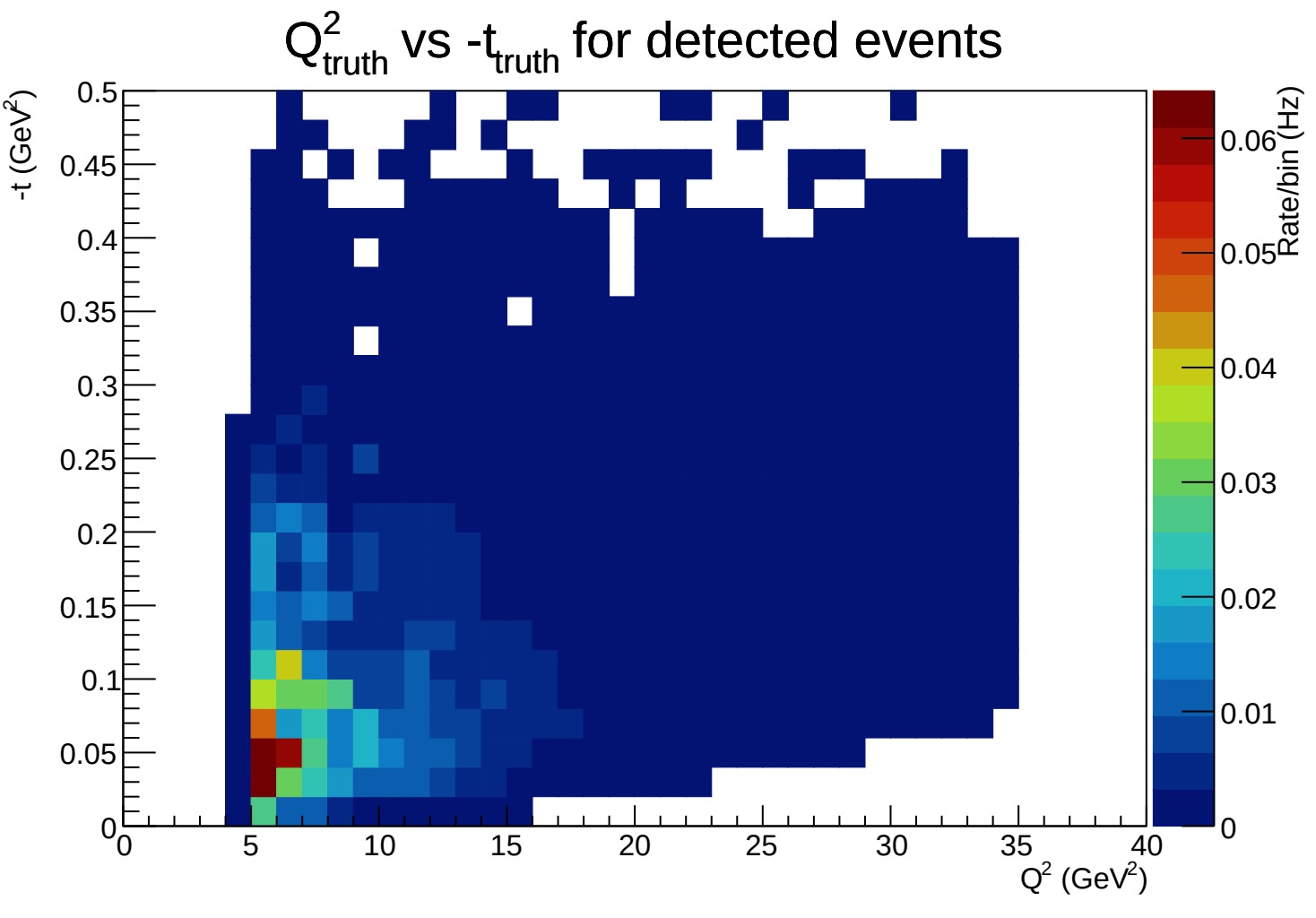

θ* - θ*
pMiss_rec ZDC
Rate (Hz)
0.3
0.25
0.2
0.15
0.1
0.05
0
−0.2
0
0.2
0.4
0.6
0.8
1
1.2
1.4
θ* - θ* (Deg)
pMiss_rec ZDC

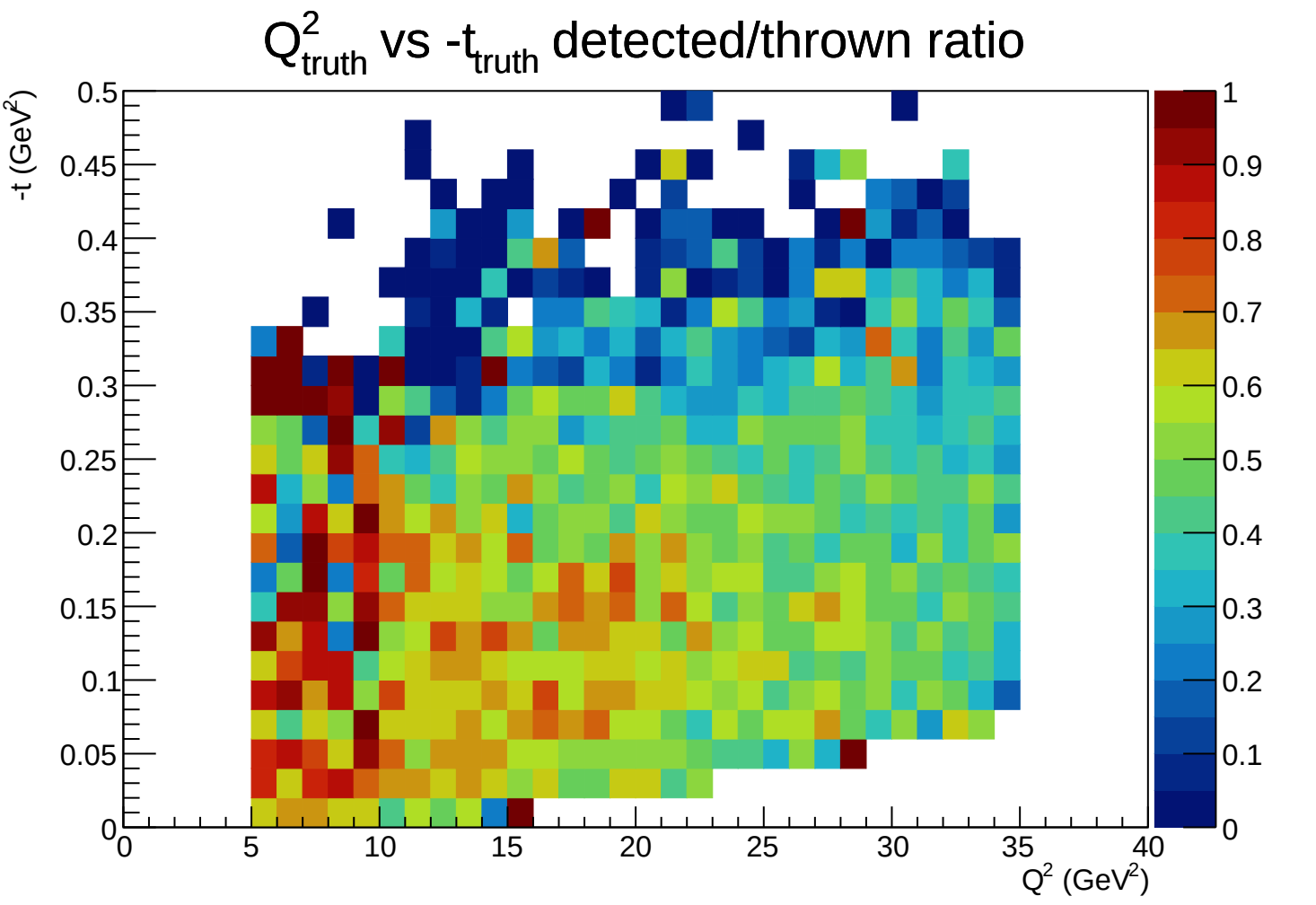

$\phi^*_{pMiss\_rec} - \phi^*_{ZDC}$
Rate (Hz)
0.045
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
−100
−80
−60
−40
−20
0
20
40
60
80
100
$\phi^*_{pMiss\_rec} - \phi^*_{ZDC}$ (Deg)

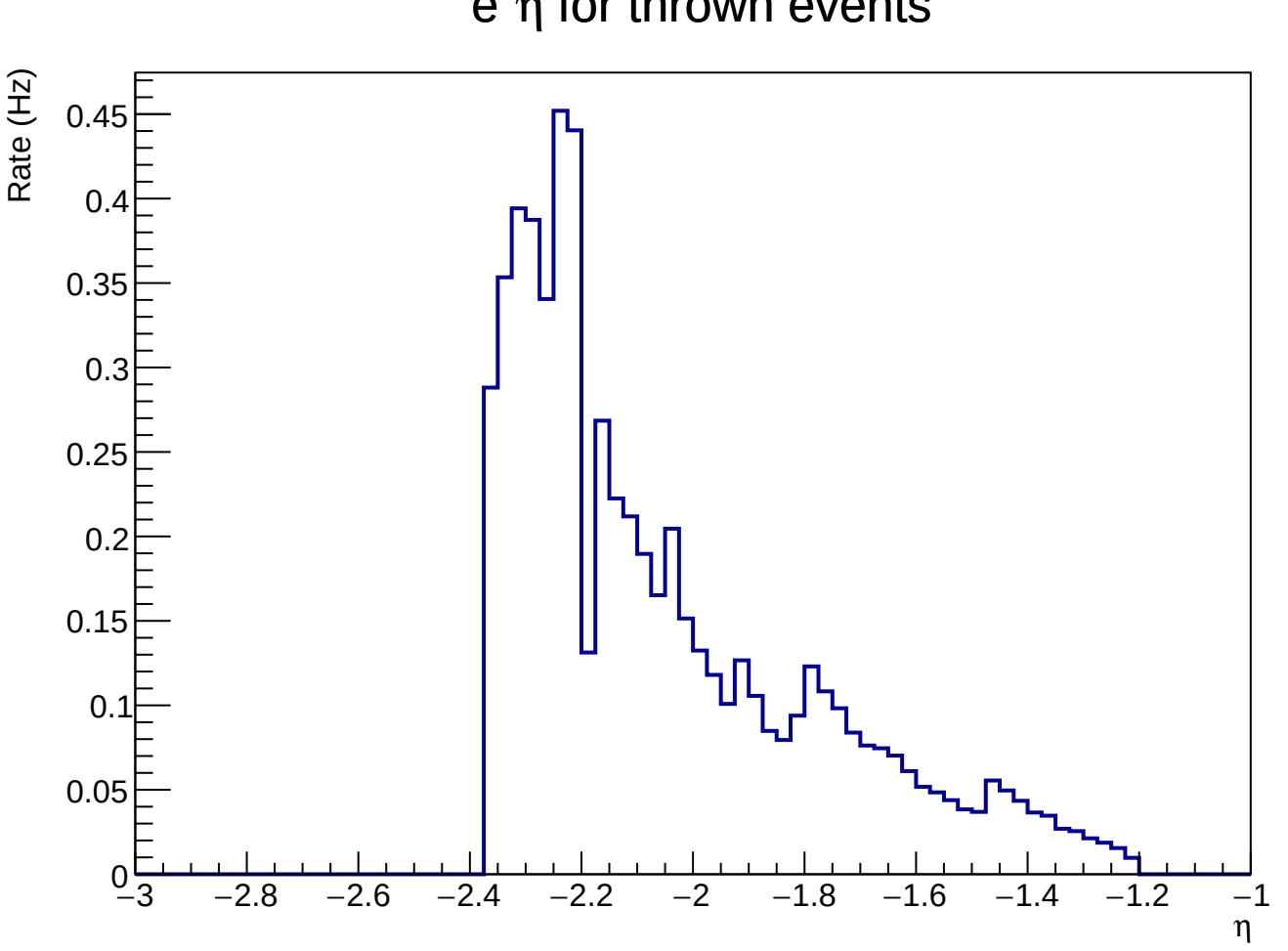

θ* pMiss_rec - θ* ZDC vs ϕ* pMiss_rec - ϕ* ZDC
ϕ* pMiss_rec - ϕ* ZDC (Deg)
θ* pMiss_rec - θ* ZDC (Deg)
Rate/bin (Hz)
60
40
20
0
−20
−40
−60
−1
−0.8
−0.6
−0.4
−0.2
0
0.2
0.4
0.6
0.8
1
10^{-2}
10^{-3}
10^{-4}

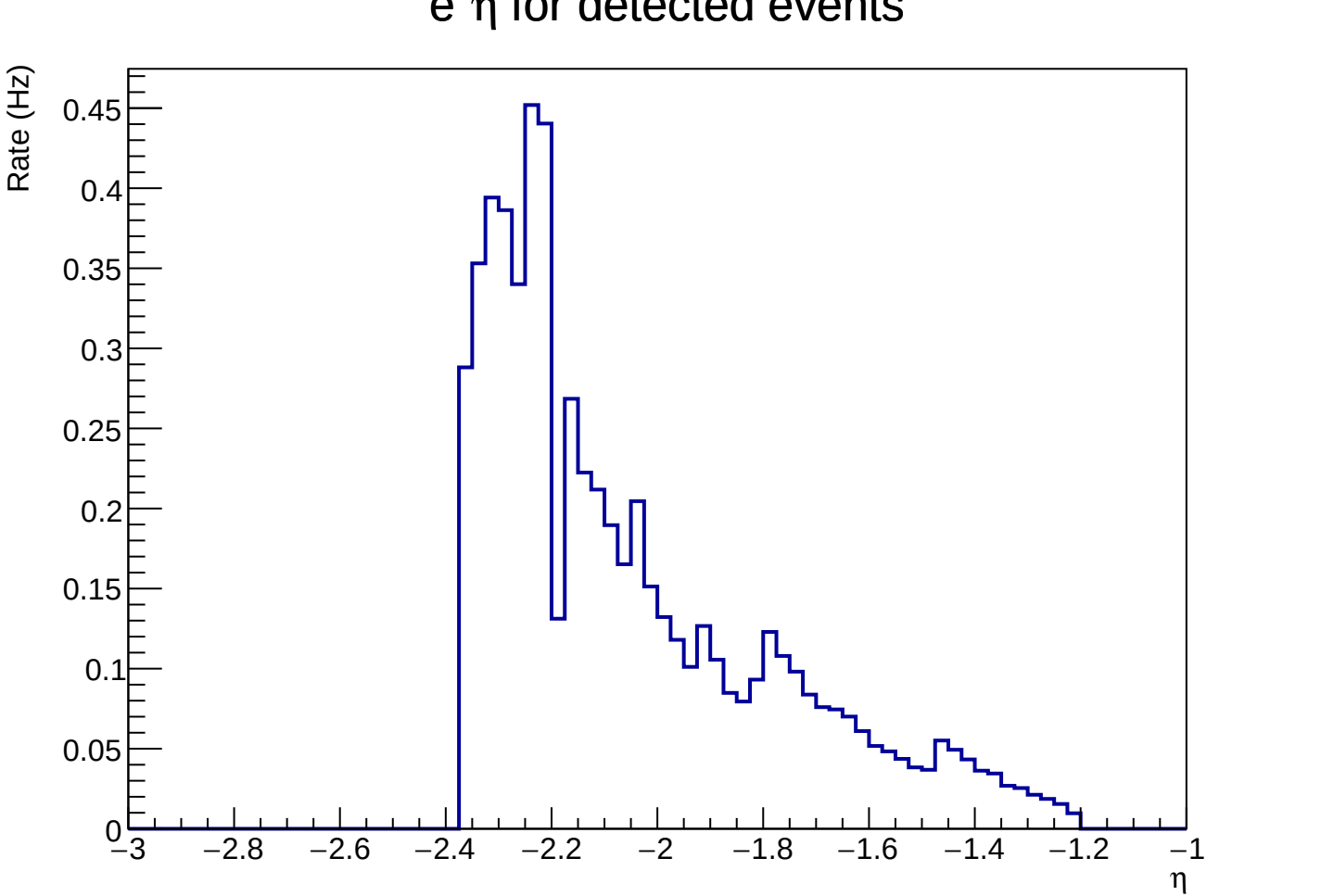

-t rec, alt_rec, rec_pT, rec_corr - -t truth Distribution
Rate (Hz)
0.1
0.08
0.06
0.04
0.02
0
−0.2
−0.15
−0.1
−0.05
0
0.05
0.1
0.15
0.2
0.25
0.3
Δ -t (GeV²)
t rec - t truth
t alt_rec - t truth
t recpT - t truth
t rec_corr - t truth

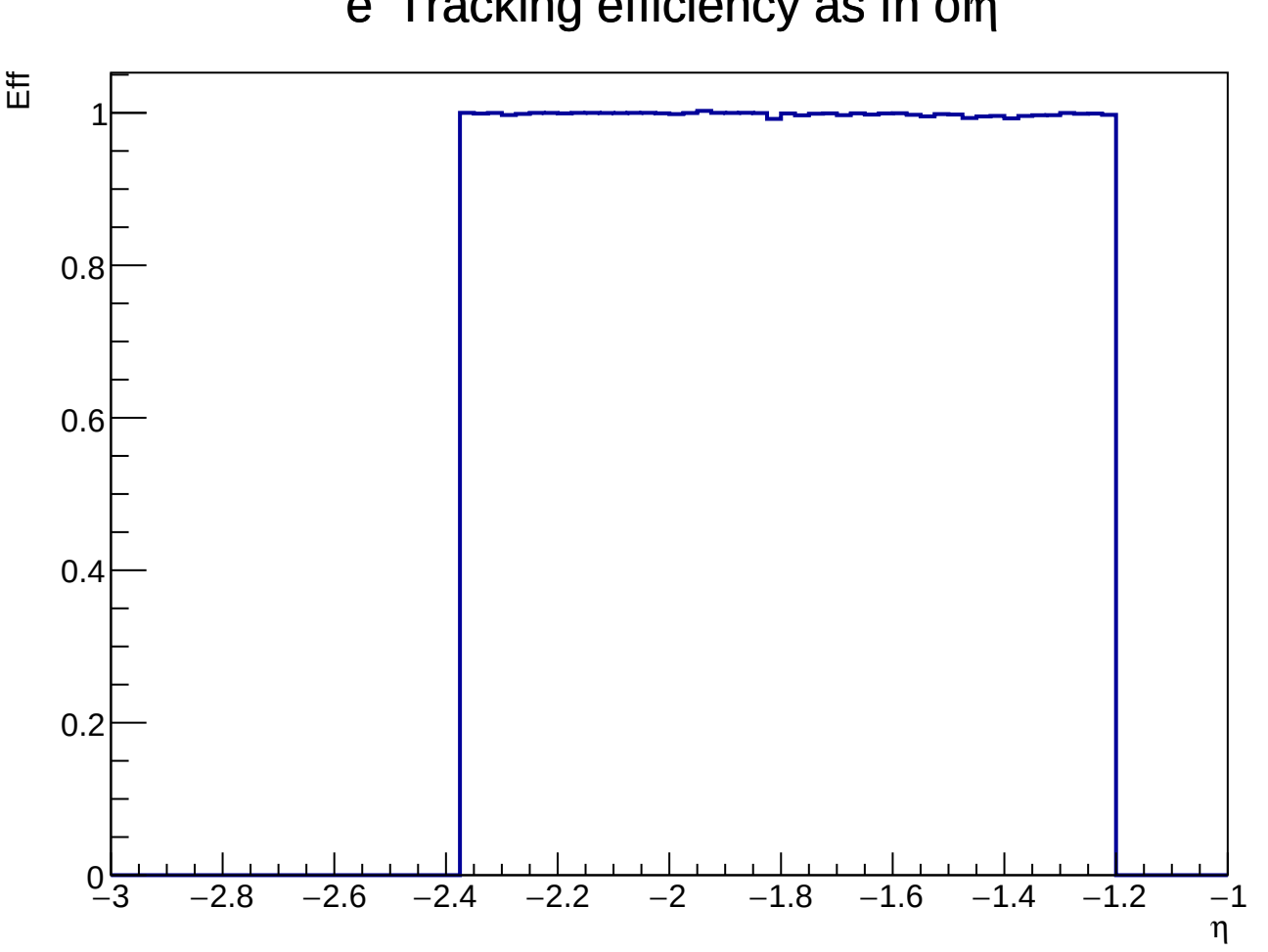

Q^2_{truth} vs $-t_{truth}$ for thrown events
-t (GeV^2)
0
0.05
0.1
0.15
0.2
0.25
0.3
0.35
0.4
0.45
0.5
0
5
10
15
20
25
30
35
40
Q^2 (GeV^2)
Rate/bin (Hz)
0
0.01
0.02
0.03
0.04
0.05
0.06
0.07

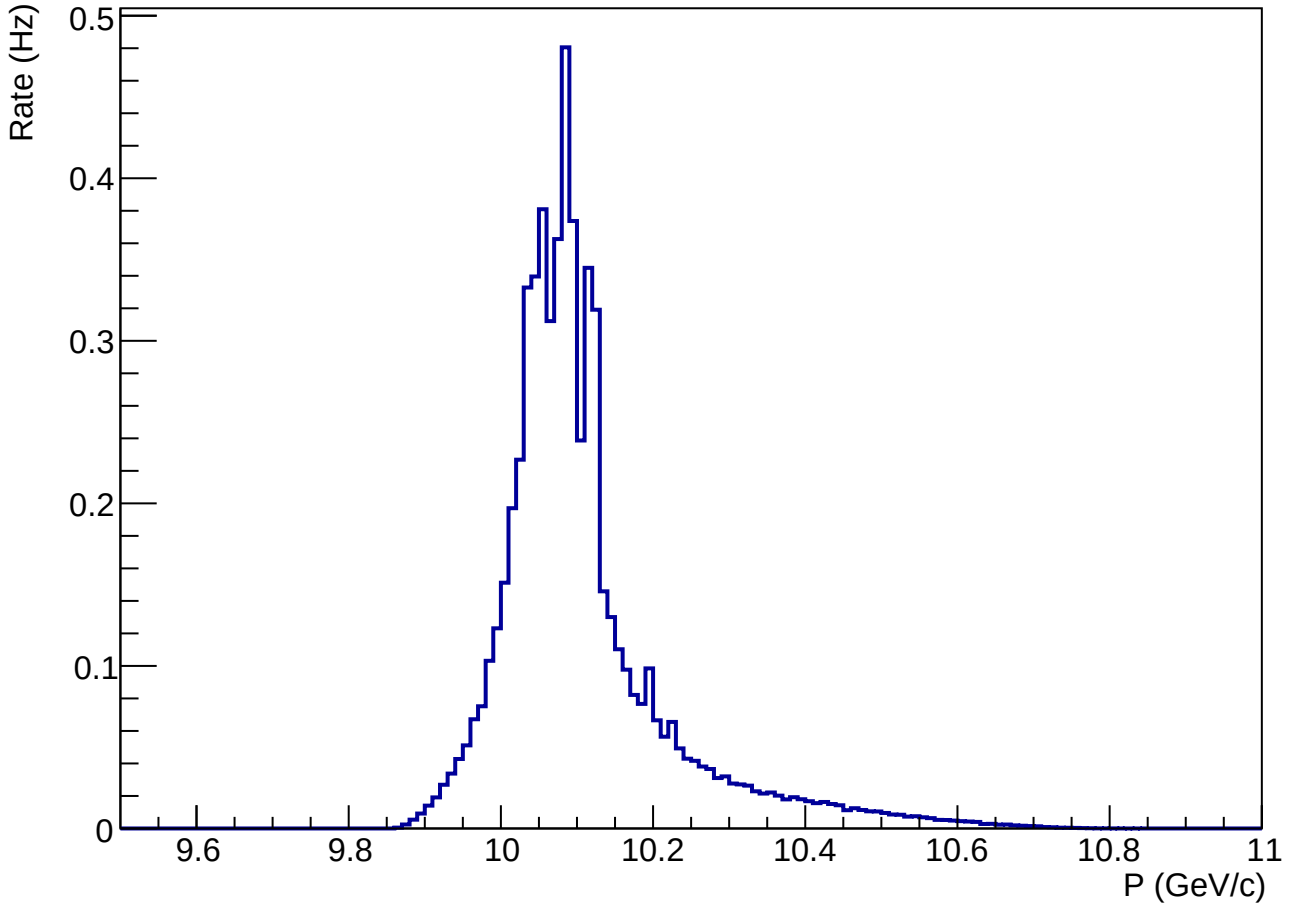

Q^2_{truth} vs $-t_{truth}$ for detected events
-t (GeV^2)
0.5
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
0
5
10
15
20
25
30
35
40
Q^2 (GeV^2)
Rate/bin (Hz)
0.06
0.05
0.04
0.03
0.02
0.01
0

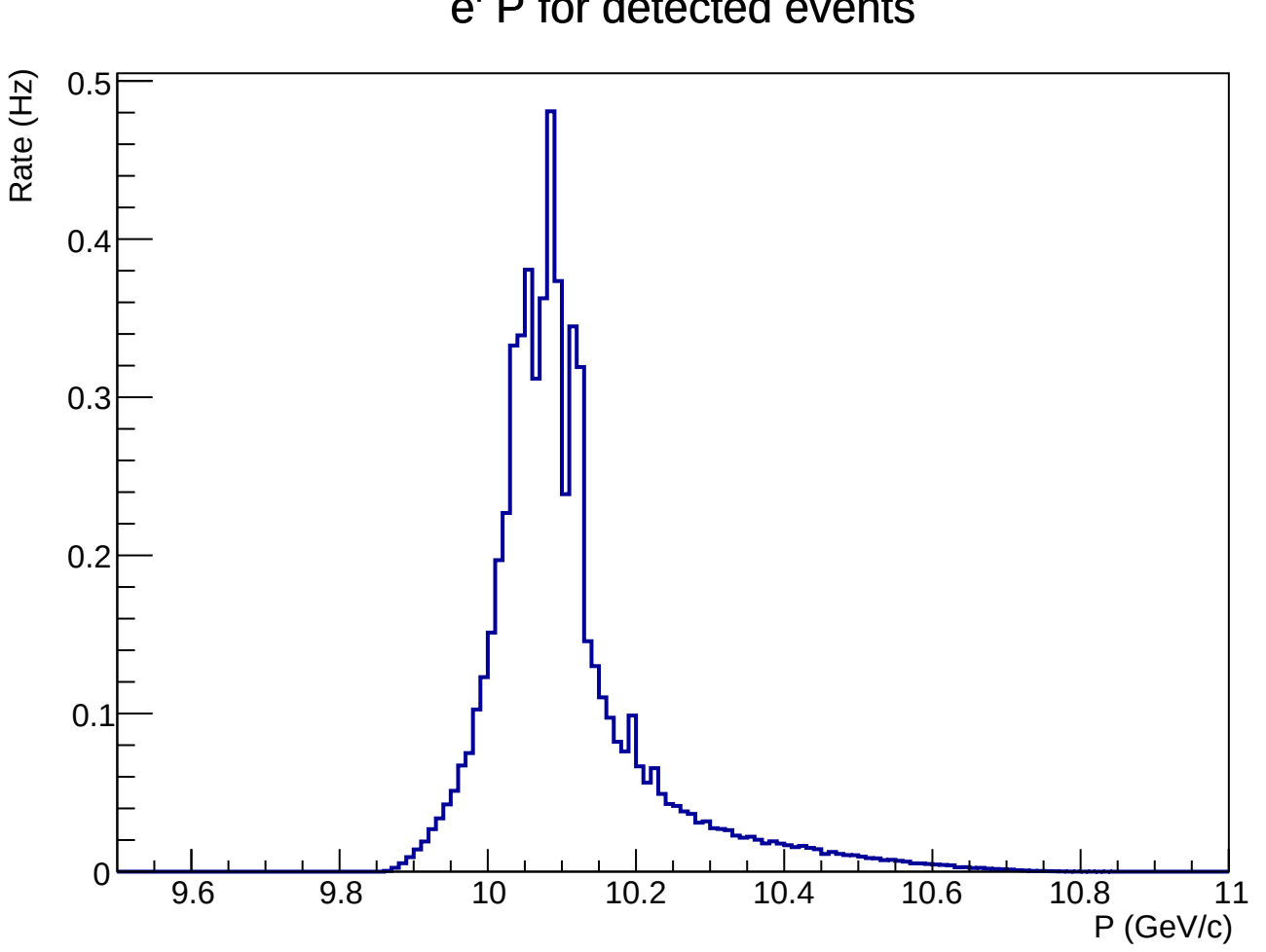

Q^2_{truth} vs $-t_{truth}$ detected/thrown ratio
-t (GeV^2)
0
0.05
0.1
0.15
0.2
0.25
0.3
0.35
0.4
0.45
0.5
0
5
10
15
20
25
30
35
40
Q^2 (GeV^2)
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1

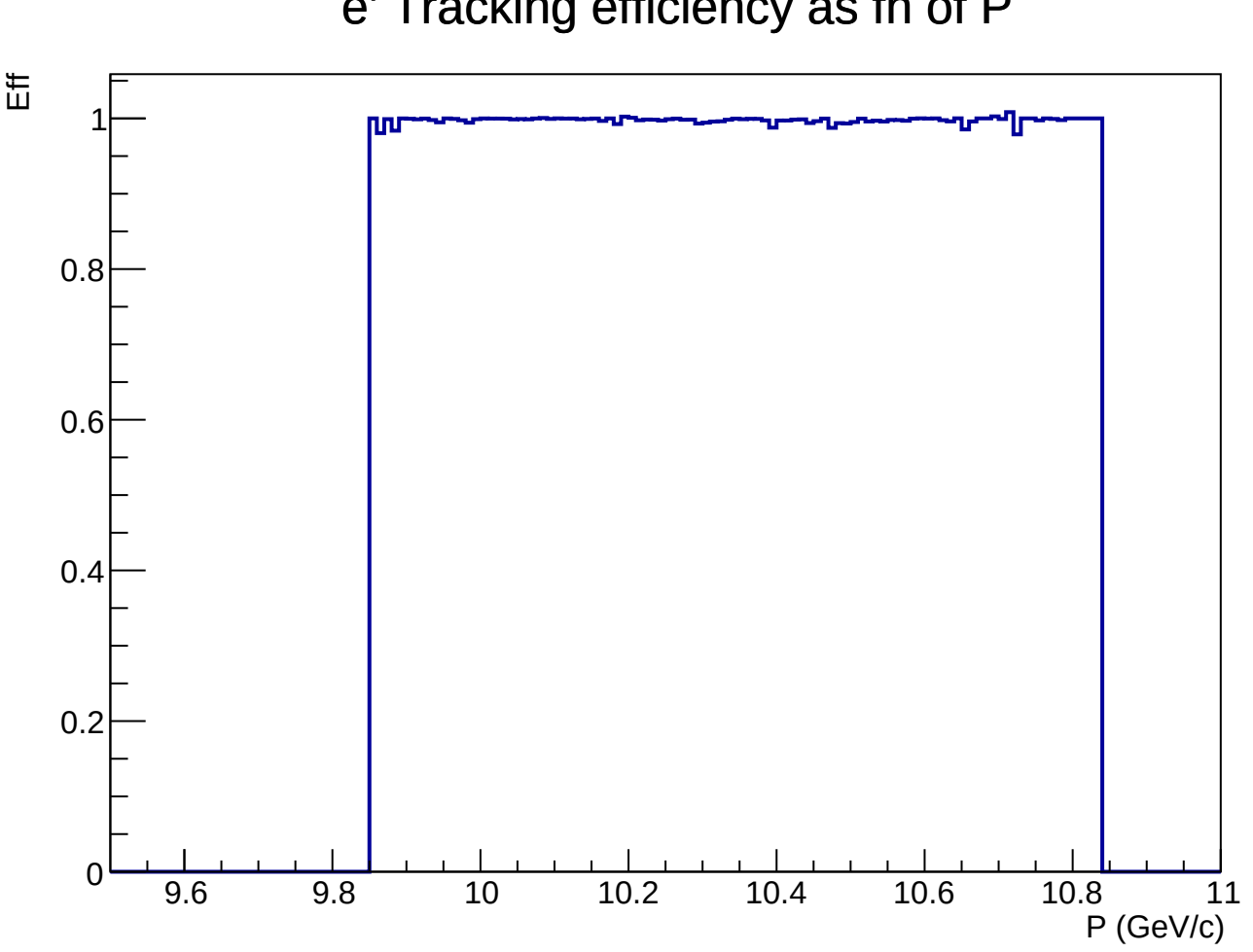

e' η for thrown events
Rate (Hz)
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
−3
−2.8
−2.6
−2.4
−2.2
−2
−1.8
−1.6
−1.4
−1.2
−1
η

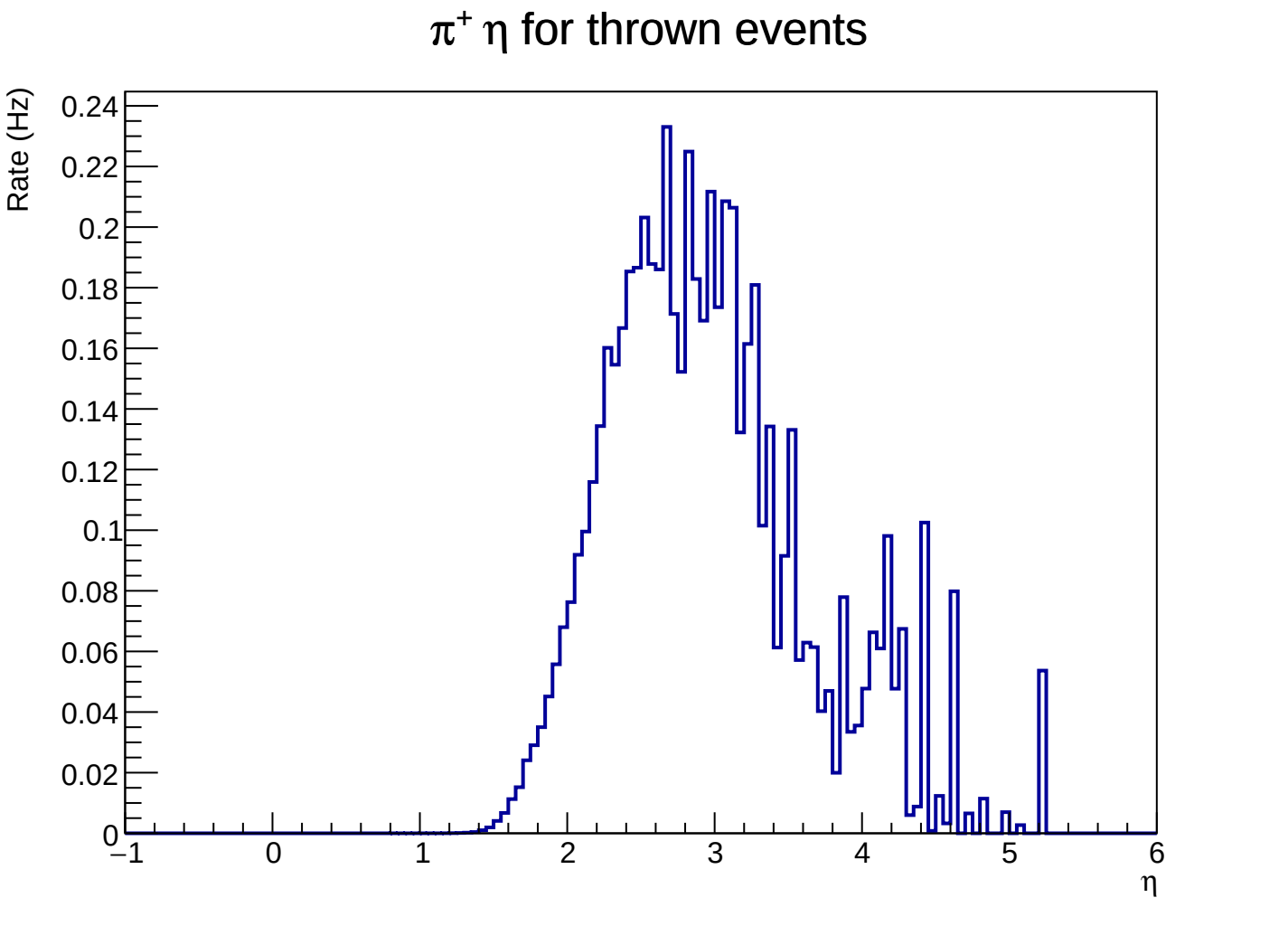

e' η for detected events
Rate (Hz)
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
−3
−2.8
−2.6
−2.4
−2.2
−2
−1.8
−1.6
−1.4
−1.2
−1
η

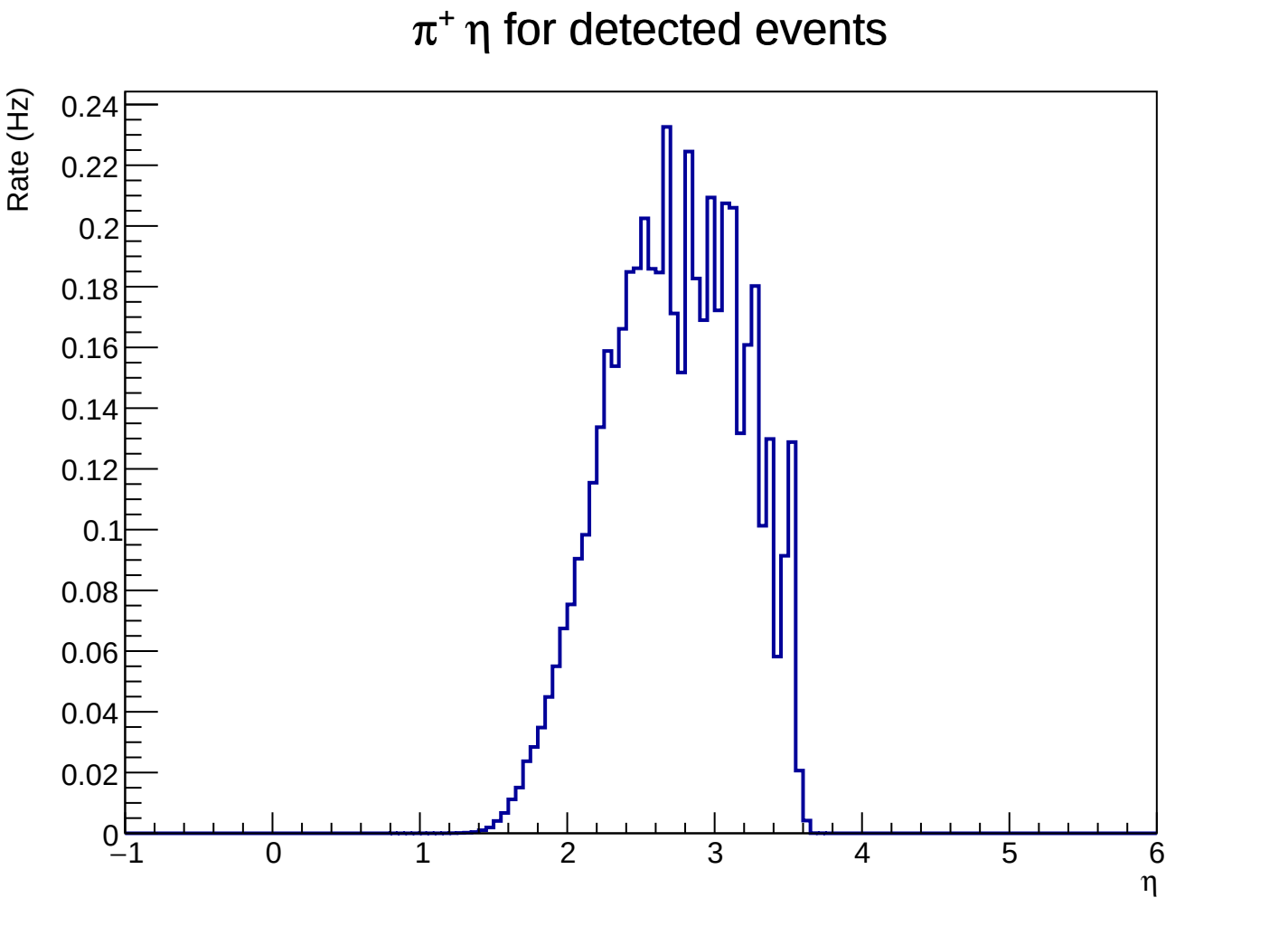

e' Tracking efficiency as fn ofη
Eff
1
0.8
0.6
0.4
0.2
0
−3
−2.8
−2.6
−2.4
−2.2
−2
−1.8
−1.6
−1.4
−1.2
−1
η

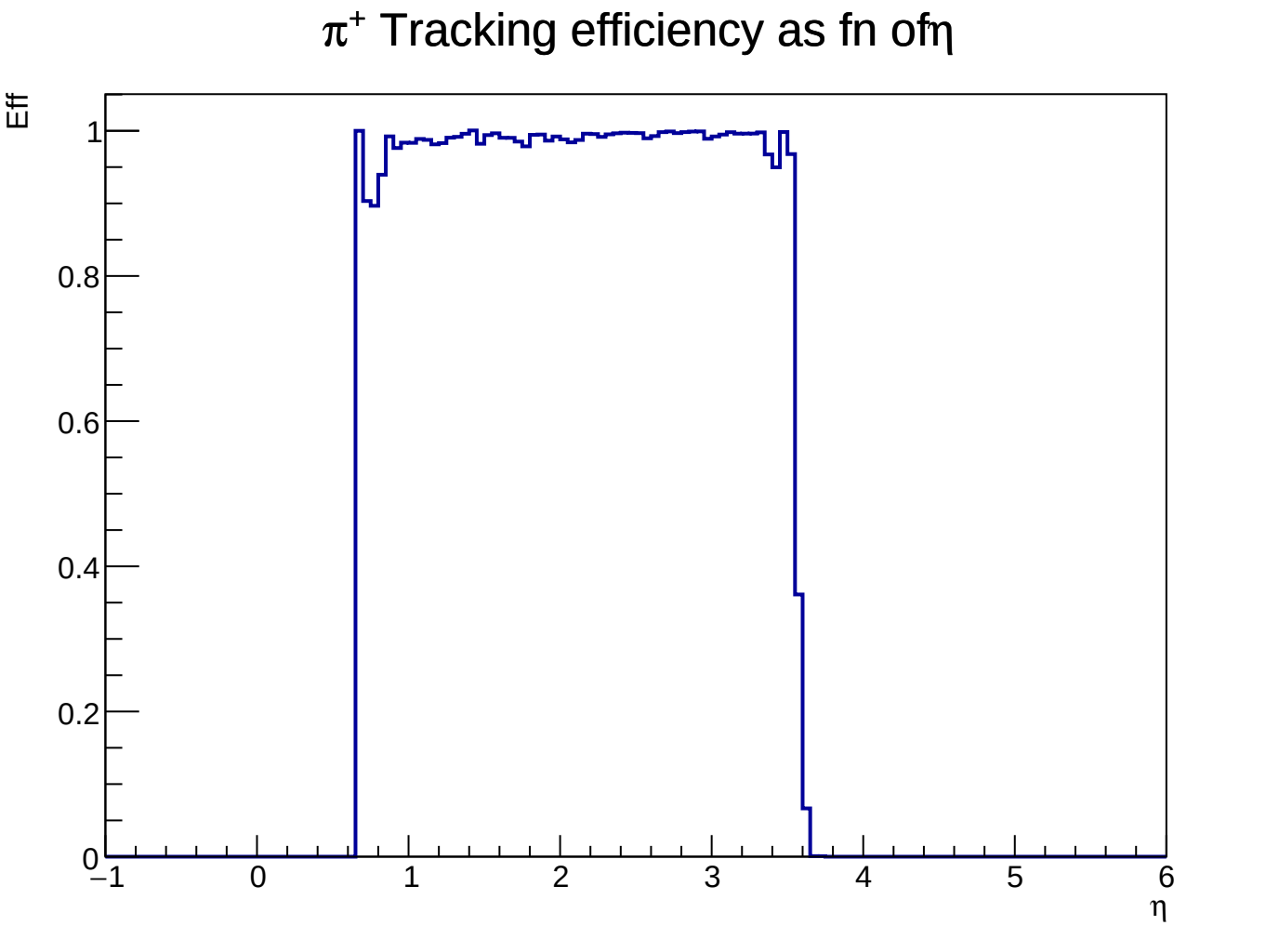

e' P for thrown events
Rate (Hz)
0.5
0.4
0.3
0.2
0.1
0
9.6
9.8
10
10.2
10.4
10.6
10.8
11
P (GeV/c)

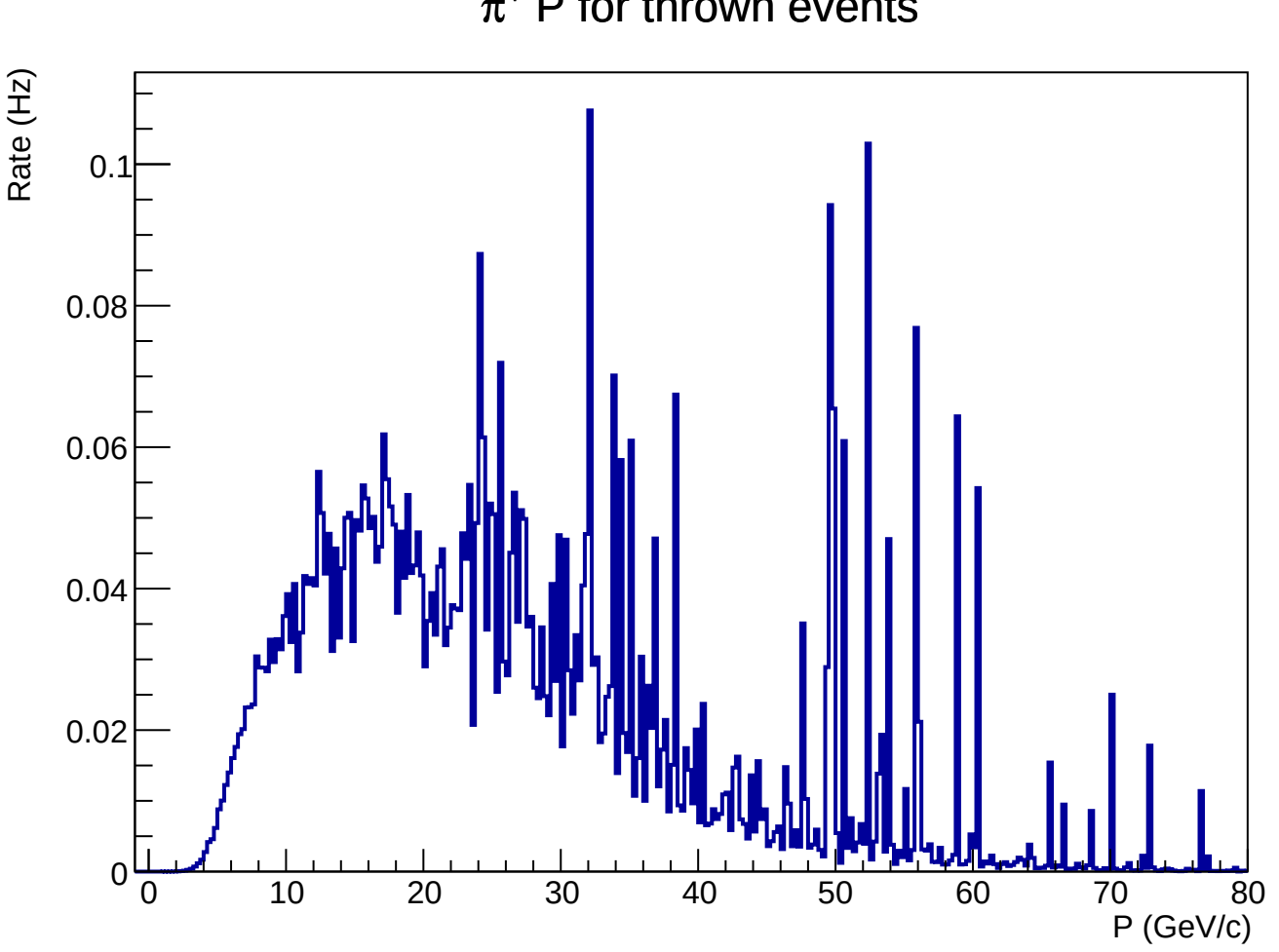

e' P for detected events
Rate (Hz)
0.5
0.4
0.3
0.2
0.1
0
9.6
9.8
10
10.2
10.4
10.6
10.8
11
P (GeV/c)

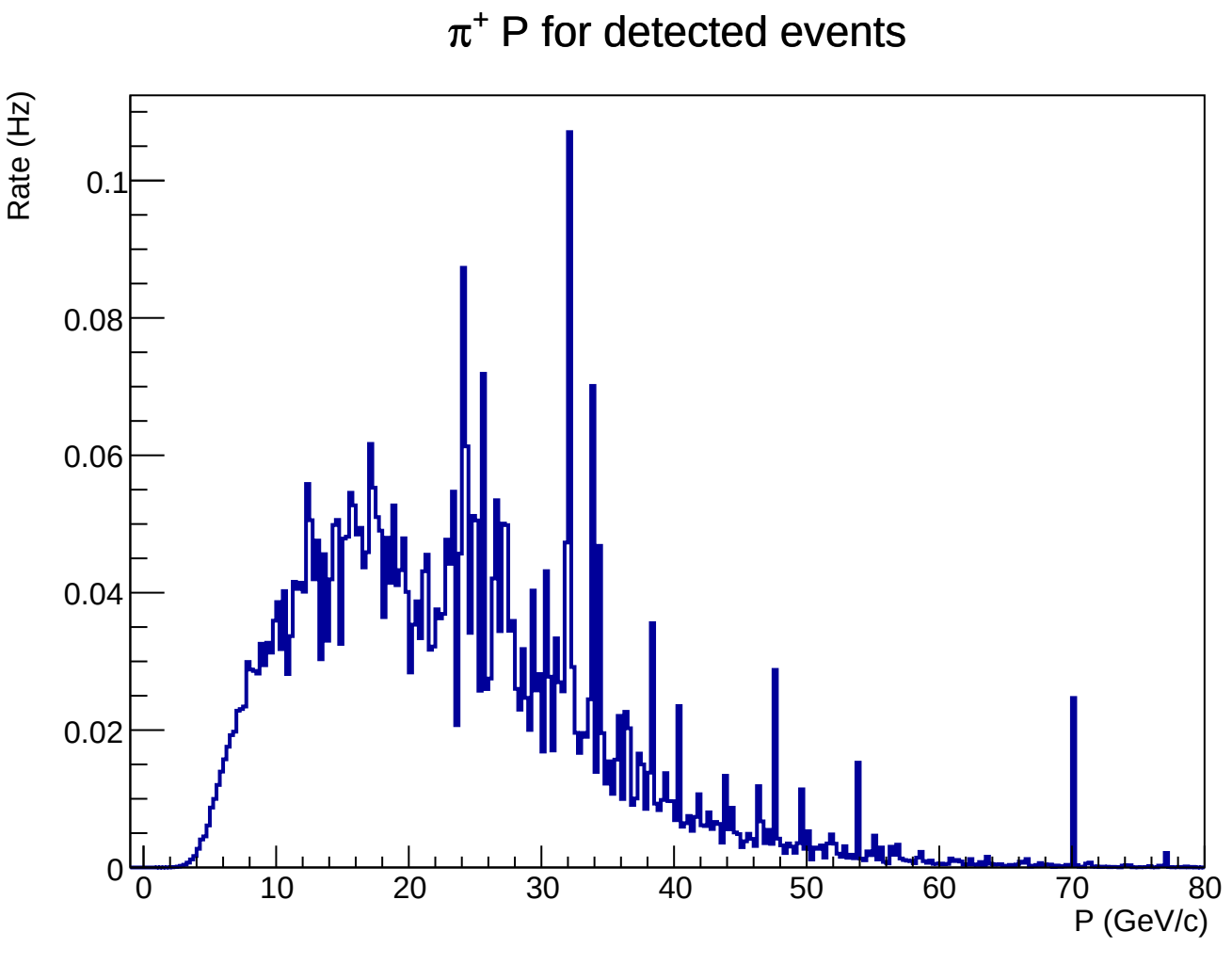

e' Tracking efficiency as fn of P
Eff
1
0.8
0.6
0.4
0.2
0
9.6
9.8
10
10.2
10.4
10.6
10.8
11
P (GeV/c)

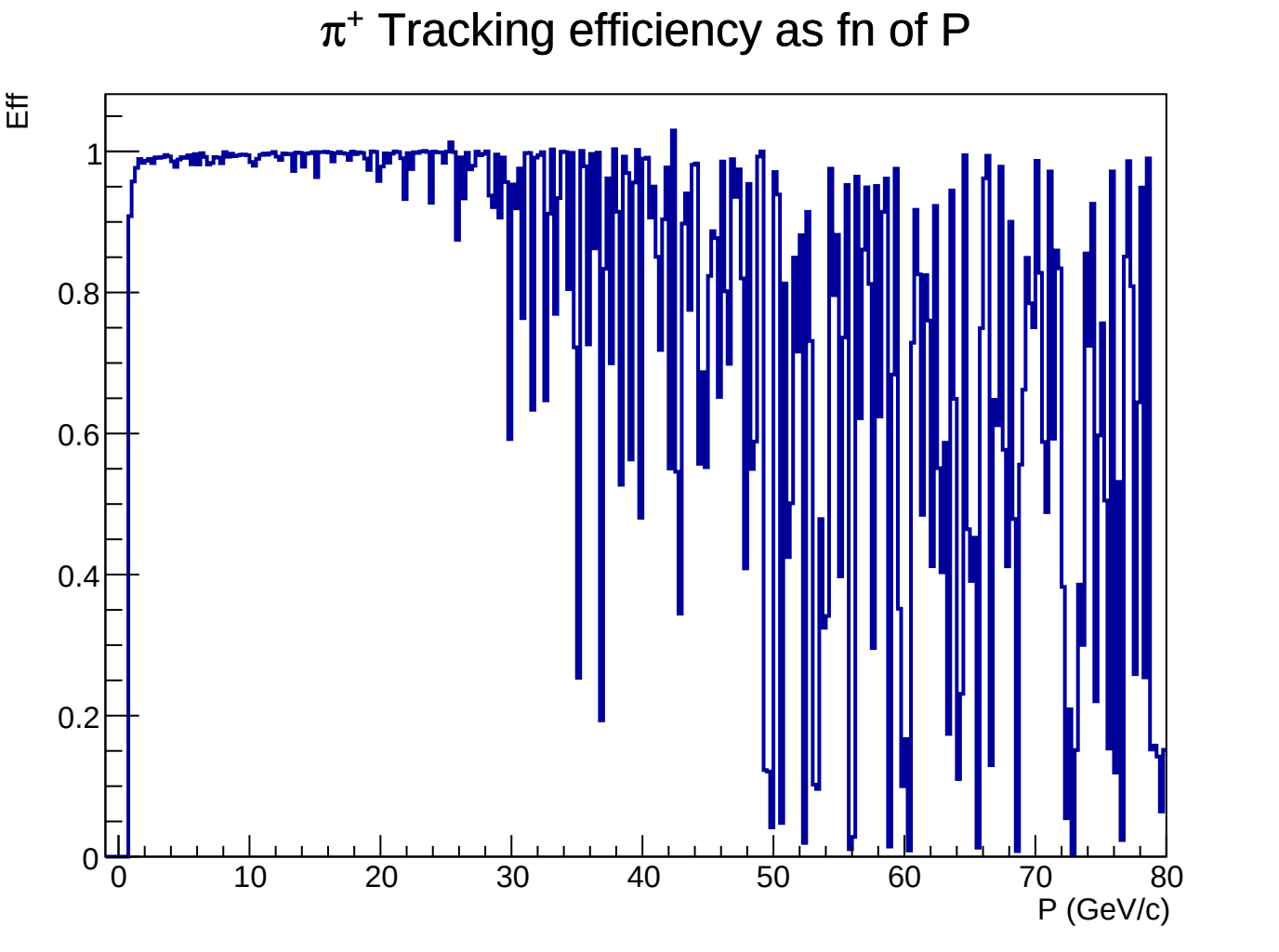

$\pi^+ \eta$ for thrown events
Rate (Hz)
0.24
0.22
0.2
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
−1
0
1
2
3
4
5
6
η

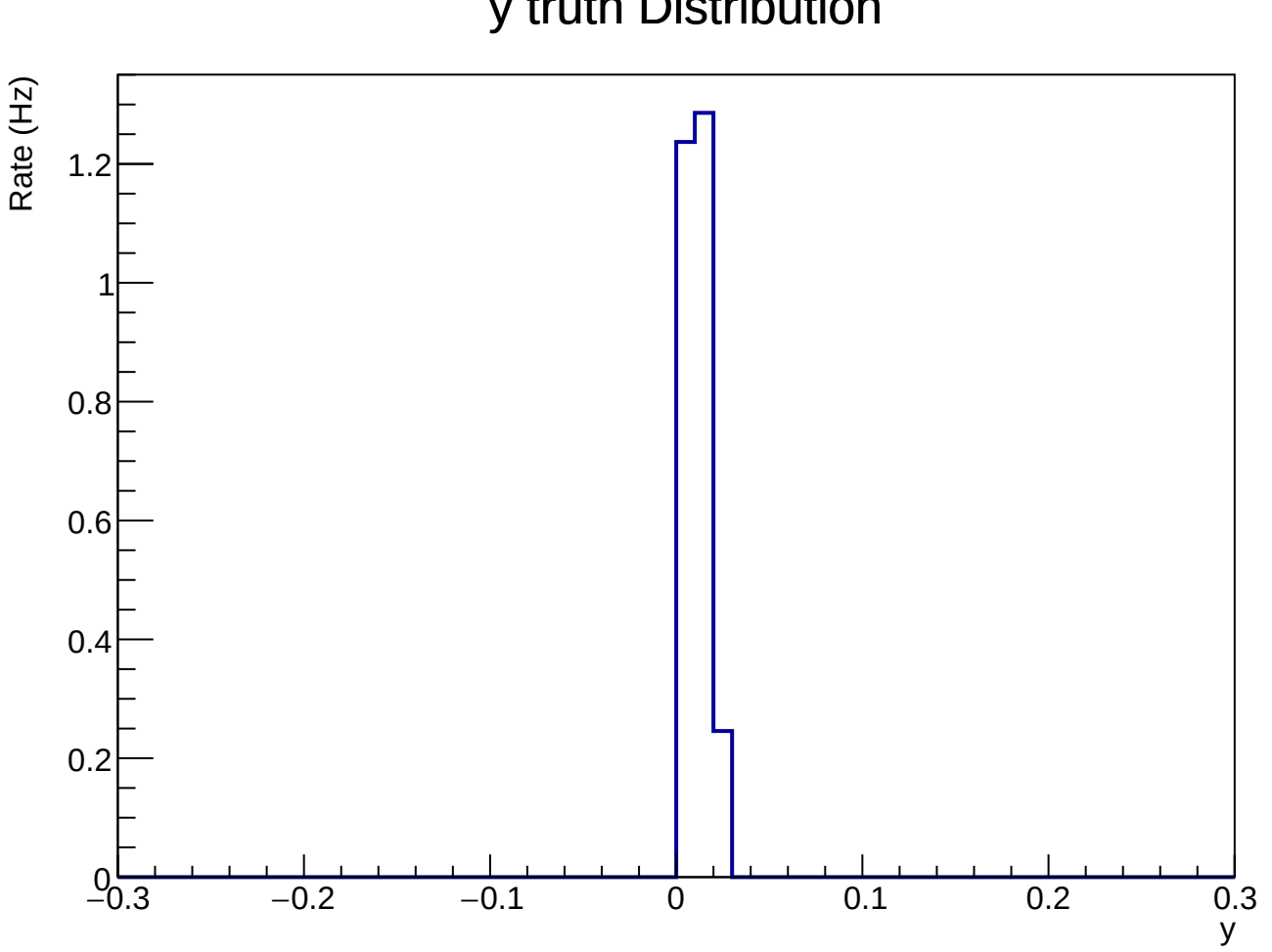

$\pi^+ \eta$ for detected events
Rate (Hz)
0.24
0.22
0.2
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
−1
0
1
2
3
4
5
6
η

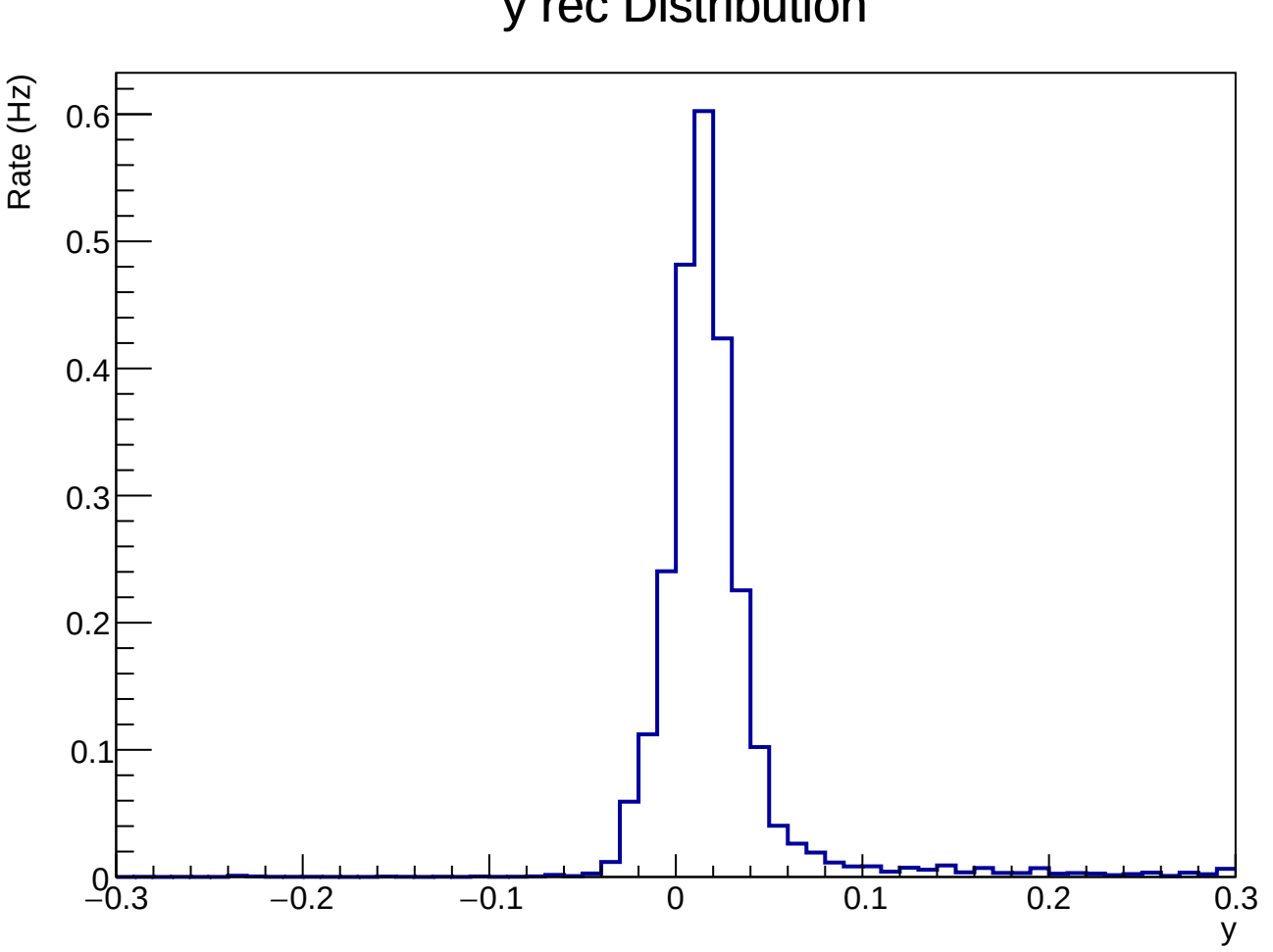

π^+ Tracking efficiency as fn of η
Eff
1
0.8
0.6
0.4
0.2
0
−1
0
1
2
3
4
5
6
η

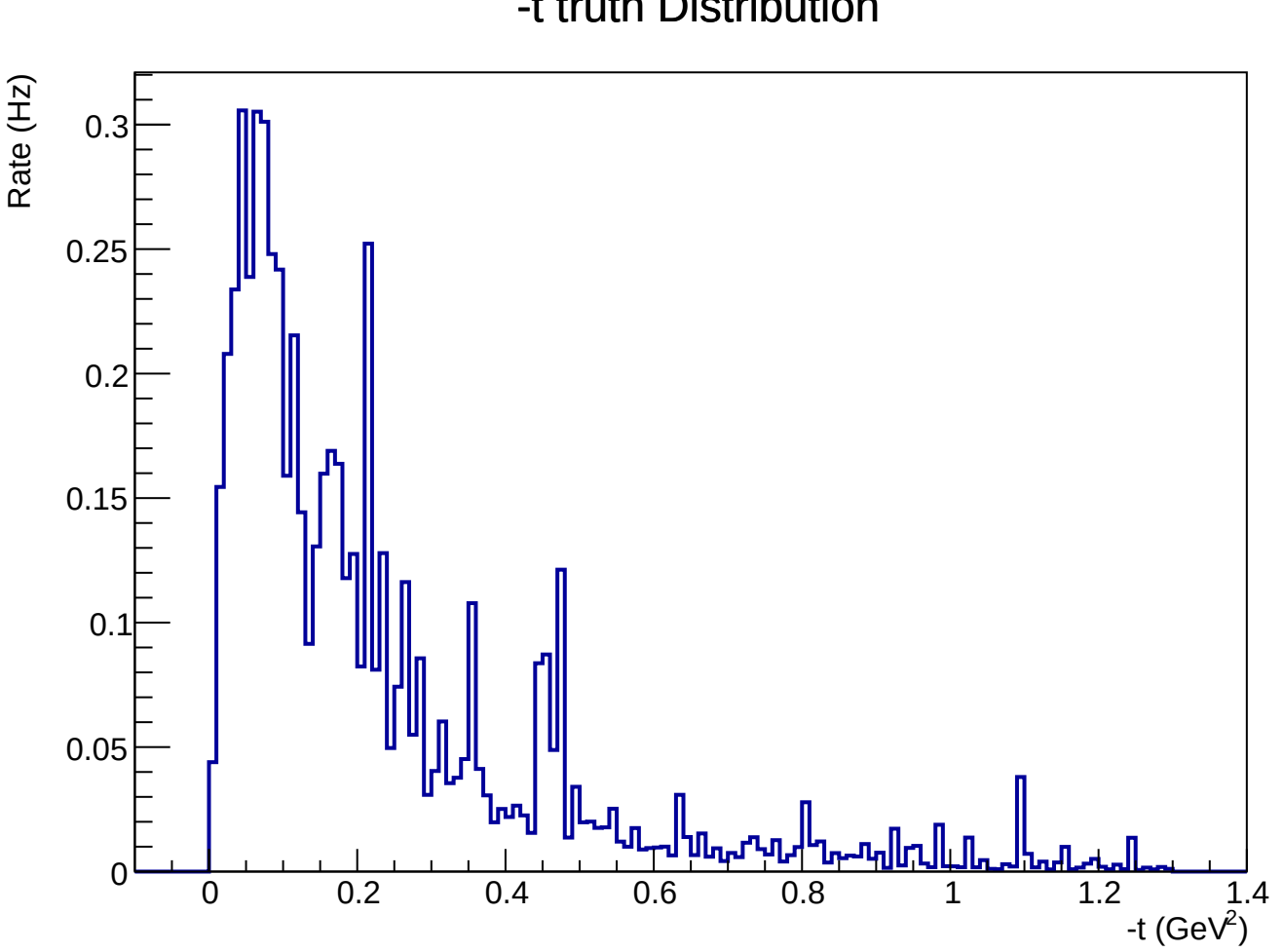

π^+ P for thrown events
Rate (Hz)
0.1
0.08
0.06
0.04
0.02
0
0
10
20
30
40
50
60
70
80
P (GeV/c)

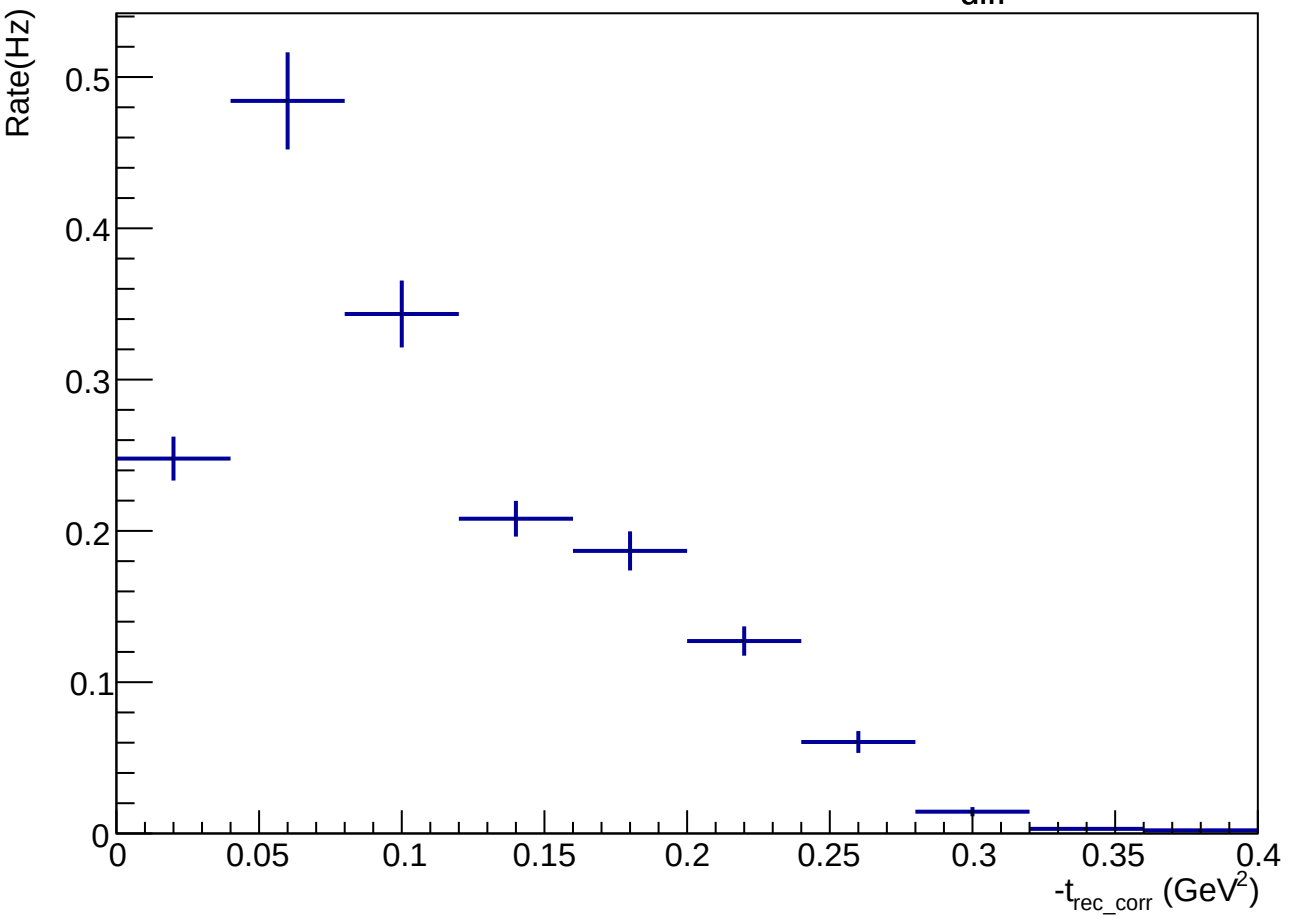

π^+ P for detected events
Rate (Hz)
0.1
0.08
0.06
0.04
0.02
0
0
10
20
30
40
50
60
70
80
P (GeV/c)

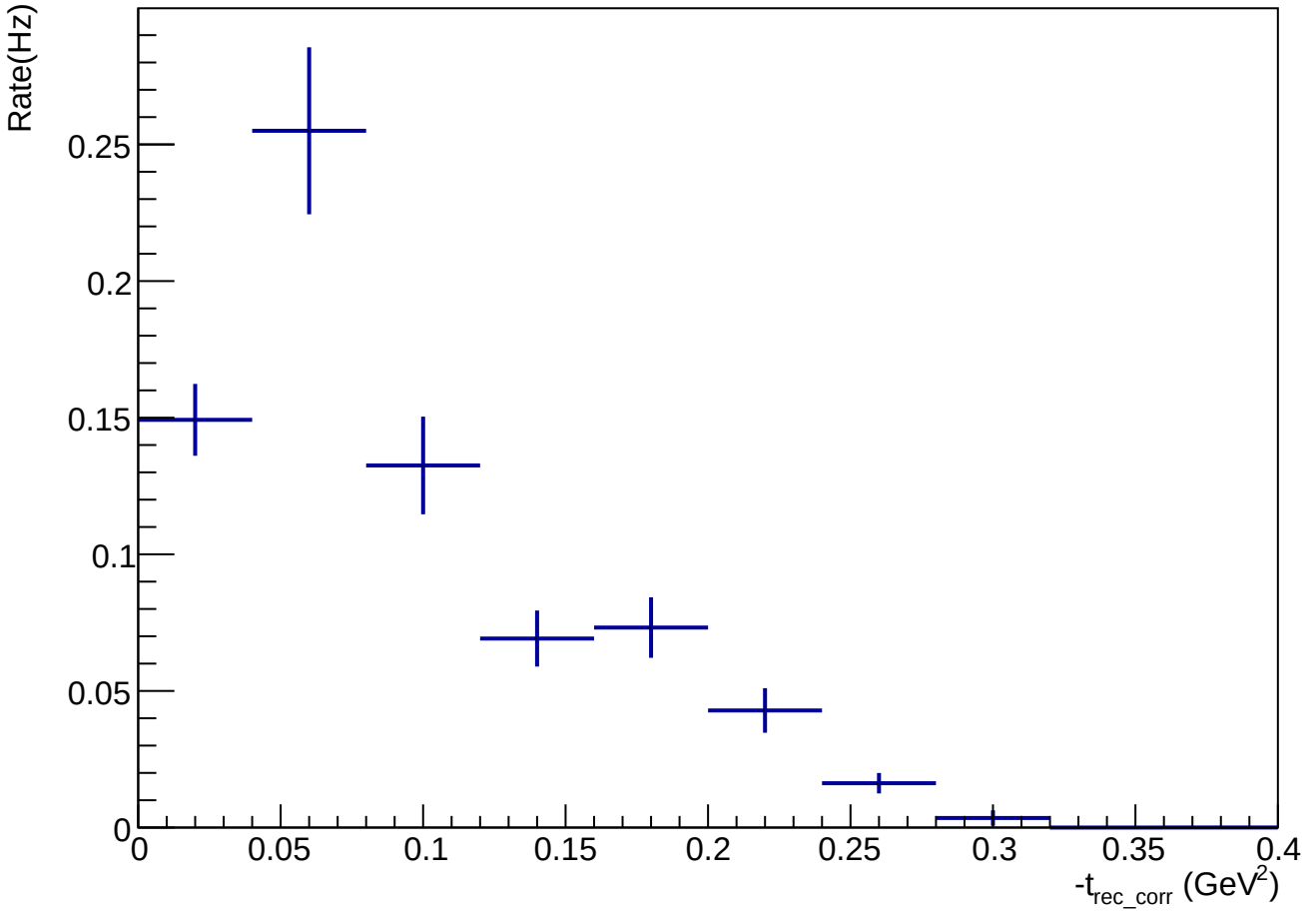

π^+ Tracking efficiency as fn of P
Eff
1
0.8
0.6
0.4
0.2
0
0
10
20
30
40
50
60
70
80
P (GeV/c)

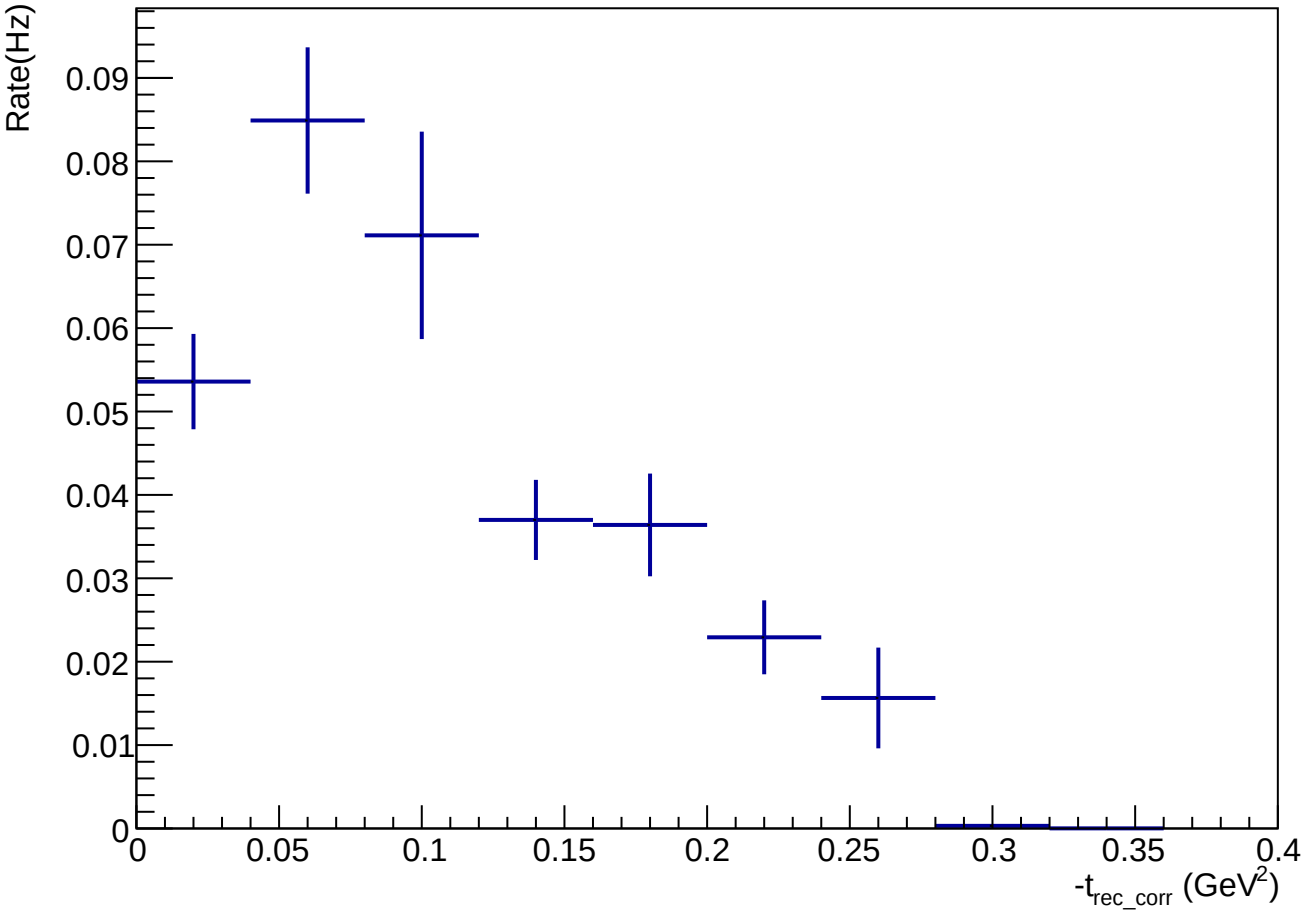

y truth Distribution
Rate (Hz)
1.2
1
0.8
0.6
0.4
0.2
0
−0.3
−0.2
−0.1
0
0.1
0.2
0.3
y

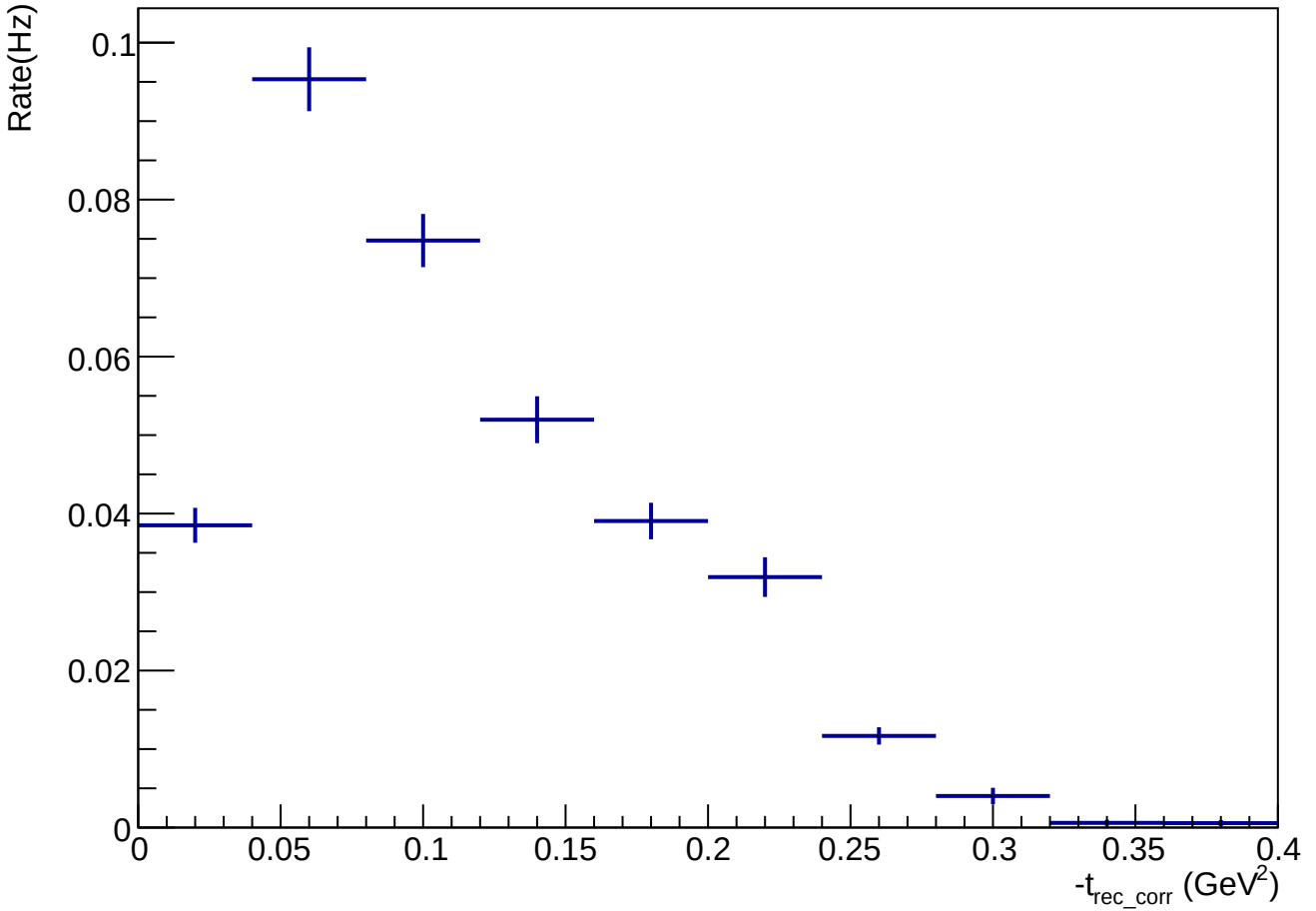

y rec Distribution
Rate (Hz)
0.6
0.5
0.4
0.3
0.2
0.1
0
−0.3
−0.2
−0.1
0
0.1
0.2
0.3
y

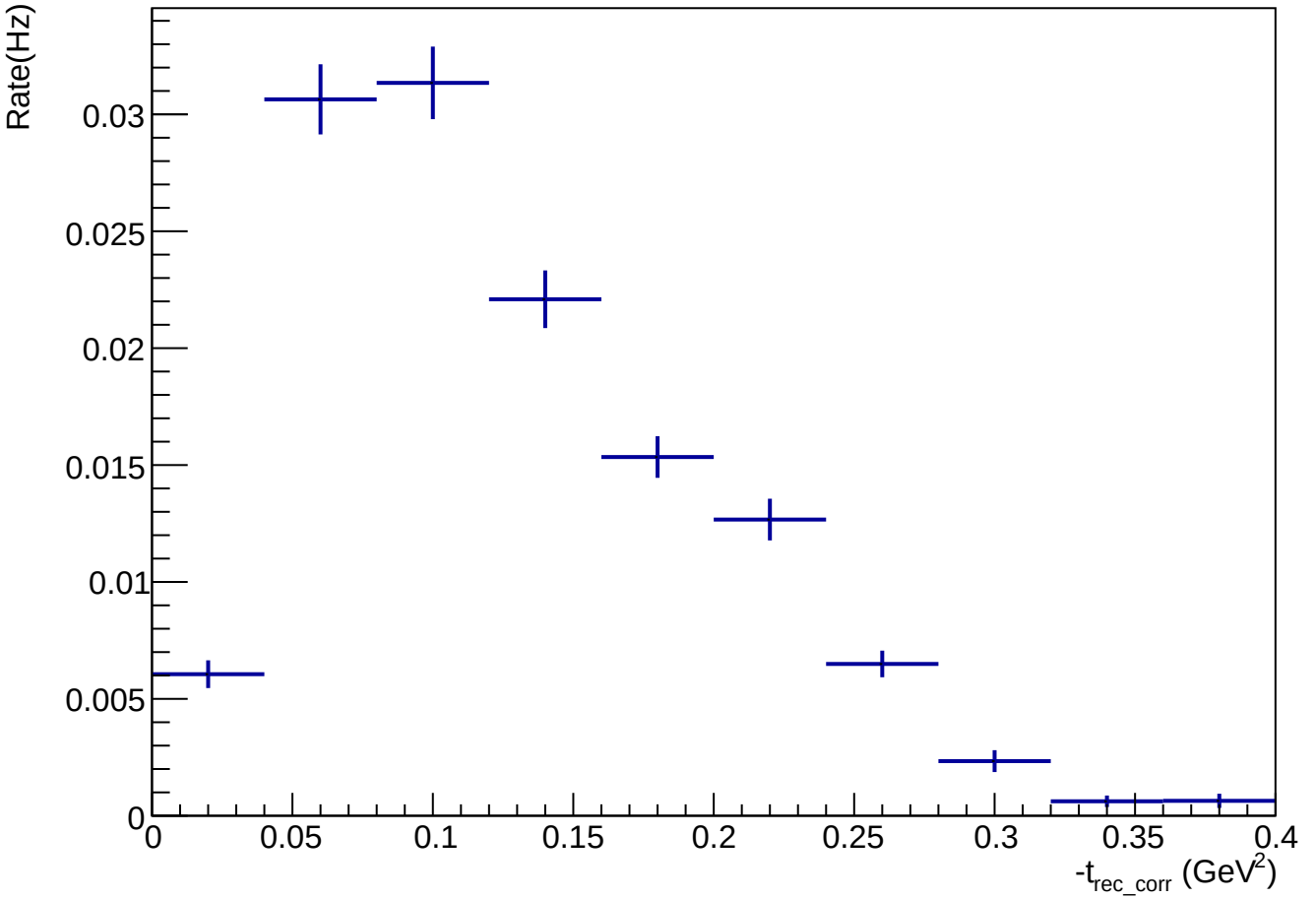

-t truth Distribution
Rate (Hz)
0.3
0.25
0.2
0.15
0.1
0.05
0
0
0.2
0.4
0.6
0.8
1
1.2
1.4
-t (GeV^2)

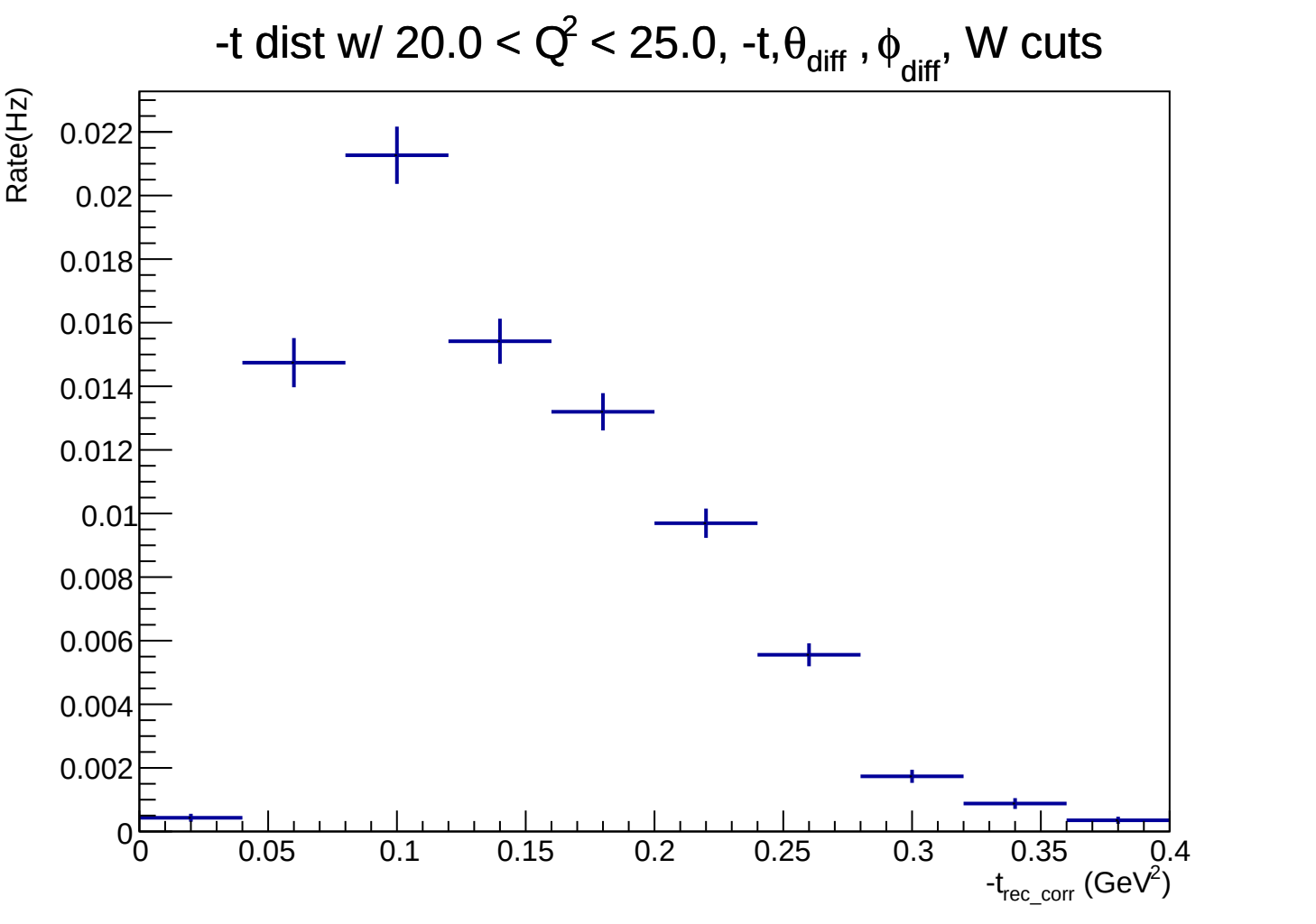

-t dist w/ 5.0 < Q2 < 35.0, -t, θdiff , ϕdiff, W cuts
Rate(Hz)
0.5
0.4
0.3
0.2
0.1
0
0
0.05
0.1
0.15
0.2
0.25
0.3
0.35
0.4
-trec_corr (GeV2)

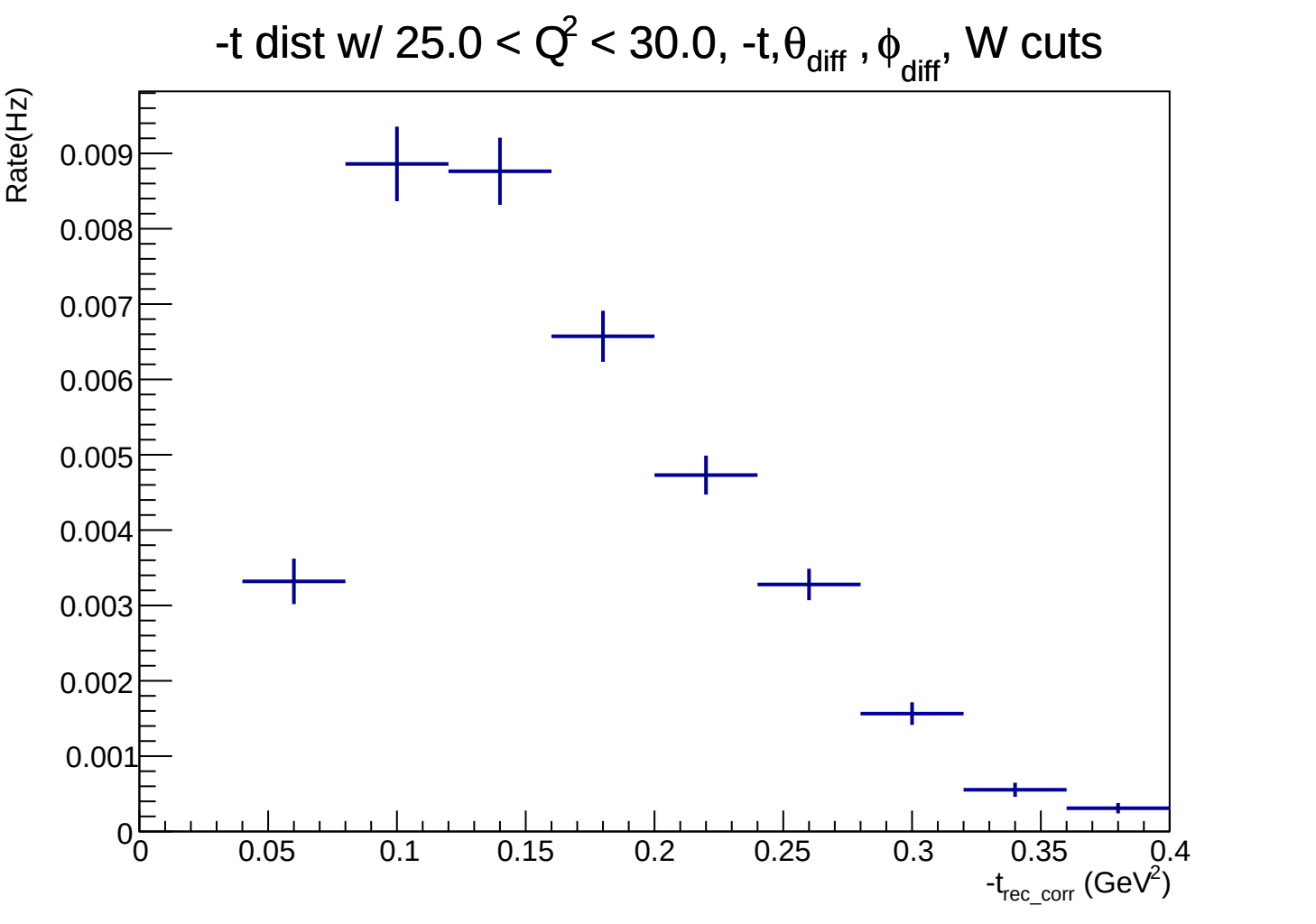

-t dist w/ 5.0 < Q2 < 7.5, -t,θdiff ,ϕdiff, W cuts
Rate(Hz)
0.25
0.2
0.15
0.1
0.05
0
0
0.05
0.1
0.15
0.2
0.25
0.3
0.35
0.4
-trec_corr (GeV2)

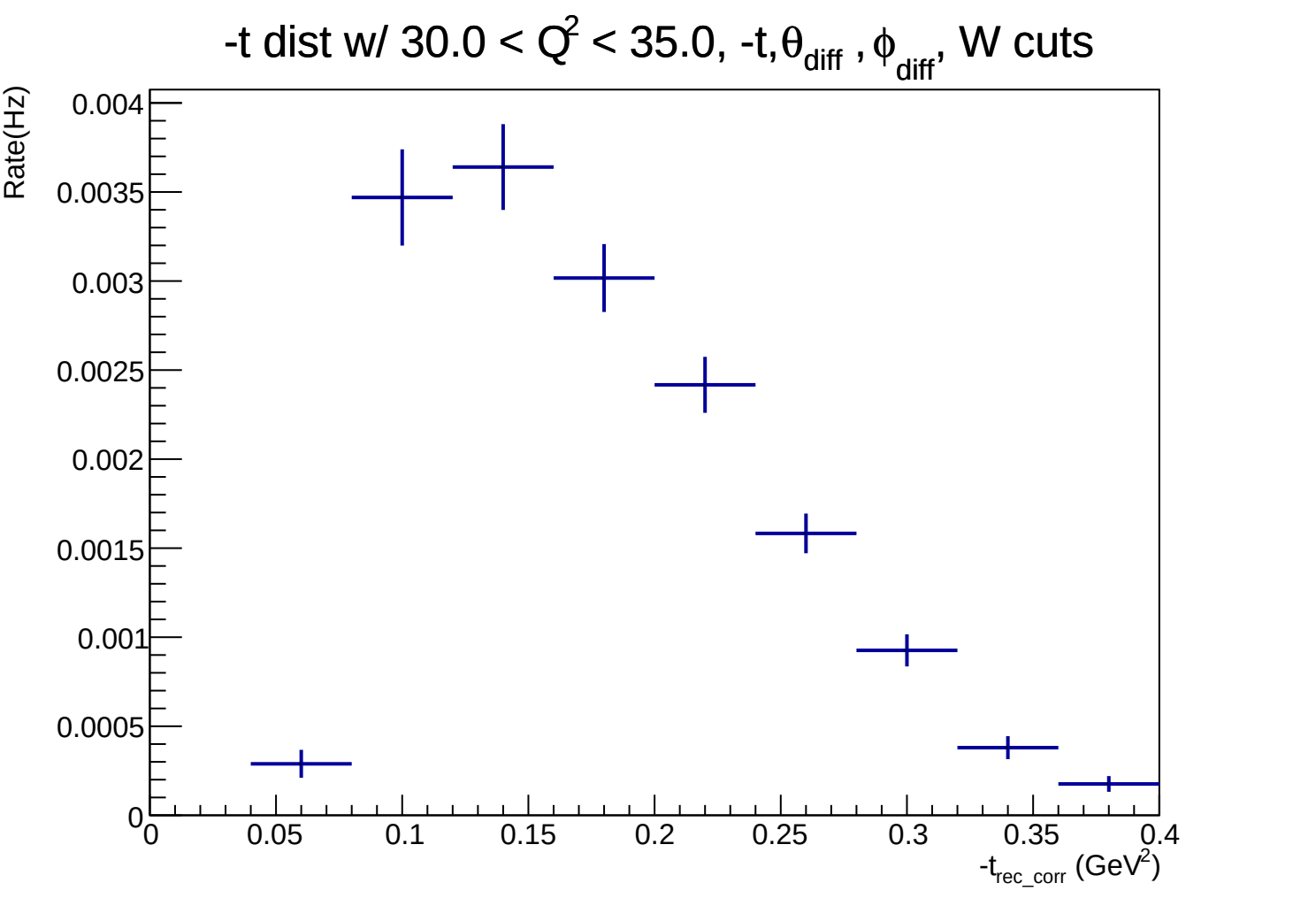

-t dist w/ 7.5 < Q2 < 10.0, -t, θdiff , ϕdiff, W cuts
Rate(Hz)
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0
0.05
0.1
0.15
0.2
0.25
0.3
0.35
0.4
-trec_corr (GeV2)

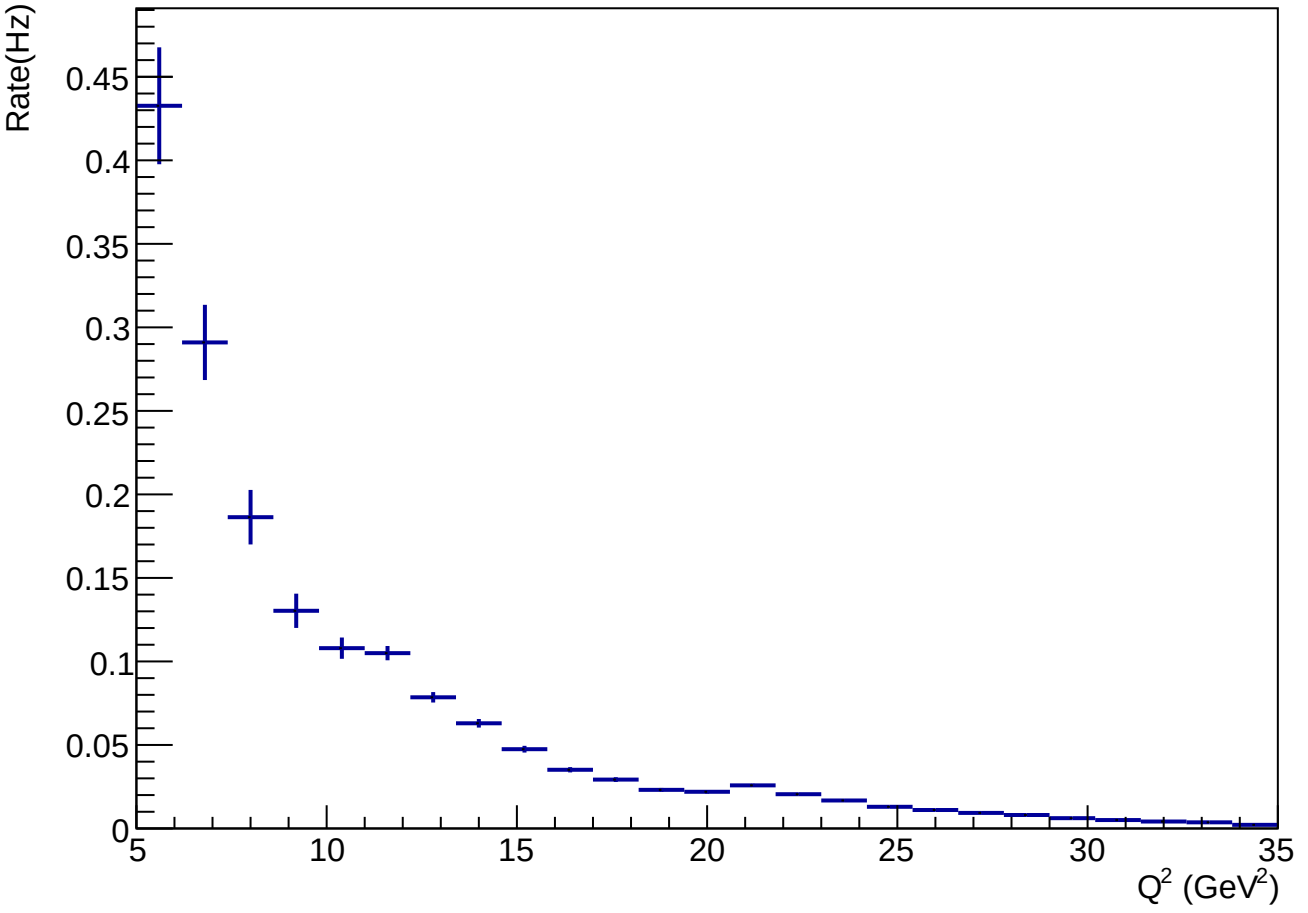

-t dist w/ 10.0 < Q2 < 15.0, -t,θdiff ,ϕdiff, W cuts
Rate(Hz)
0.1
0.08
0.06
0.04
0.02
0
0
0.05
0.1
0.15
0.2
0.25
0.3
0.35
0.4
-trec_corr (GeV2)

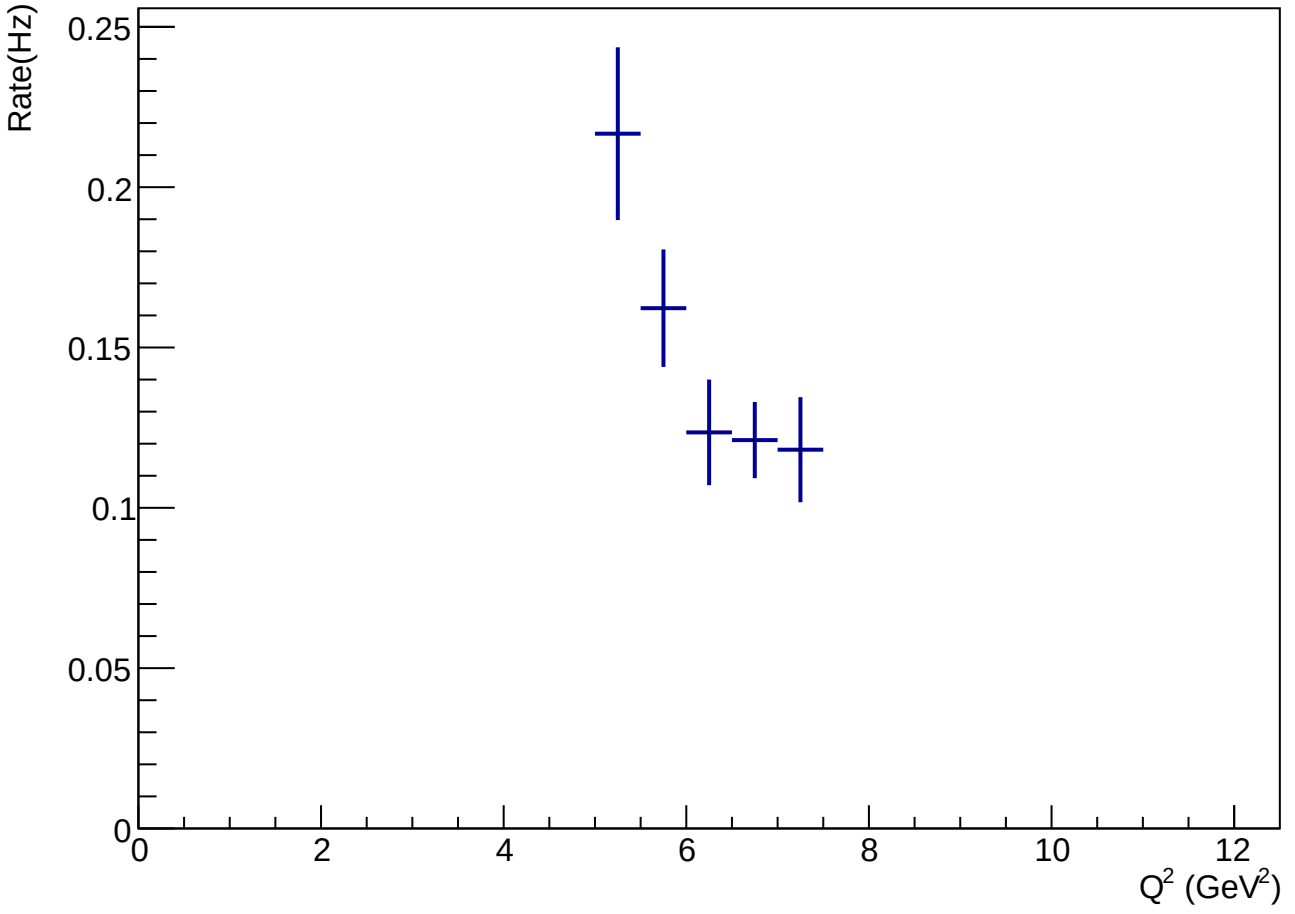

-t dist w/ 15.0 < Q2 < 20.0, -t,θdiff ,ϕdiff, W cuts
Rate(Hz)
0.03
0.025
0.02
0.015
0.01
0.005
0
0
0.05
0.1
0.15
0.2
0.25
0.3
0.35
0.4
-trec_corr (GeV2)

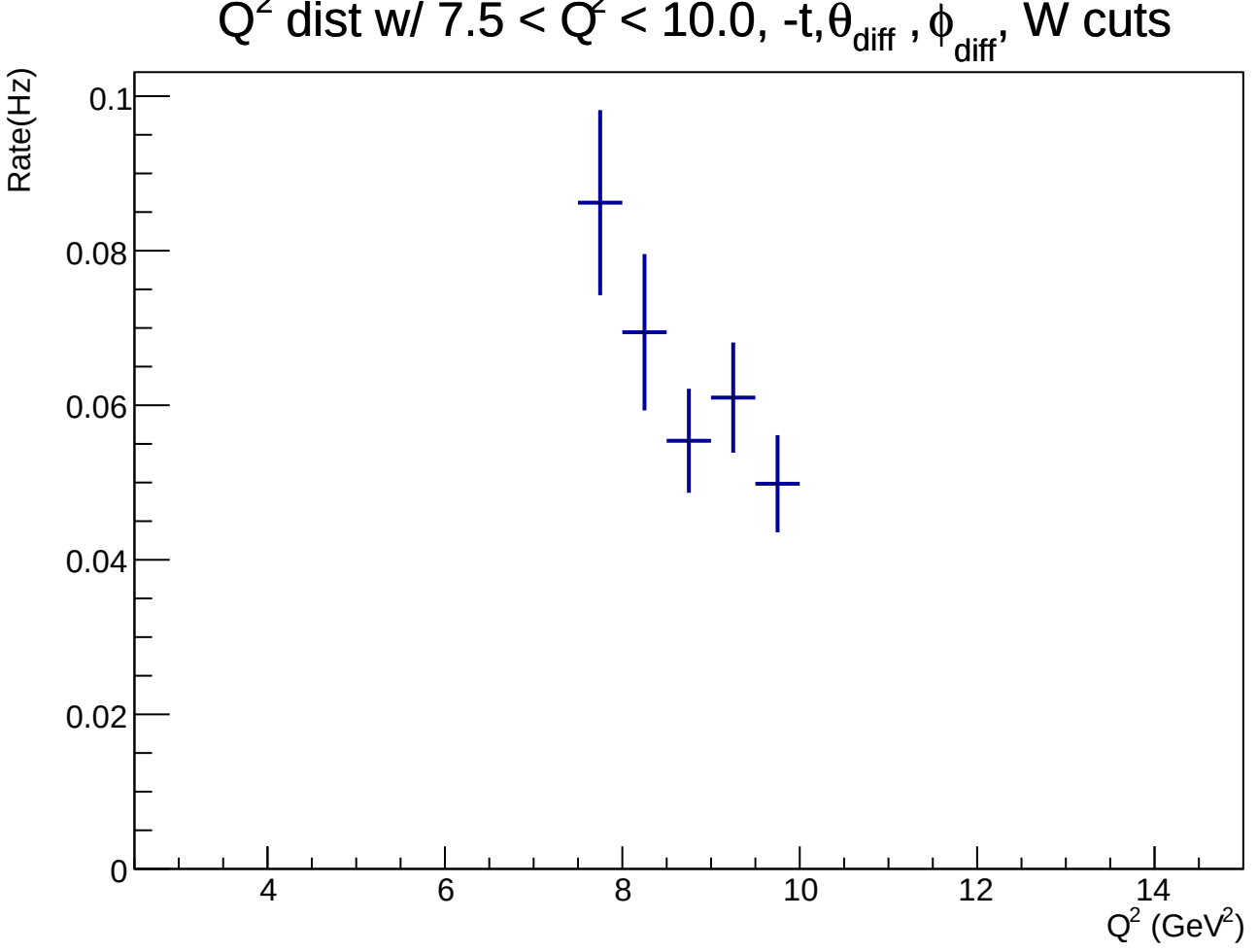

-t dist w/ 20.0 < Q2 < 25.0, -t,θdiff ,ϕdiff, W cuts
Rate(Hz)
0.022
0.02
0.018
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
0
0.05
0.1
0.15
0.2
0.25
0.3
0.35
0.4
-trec_corr (GeV2)

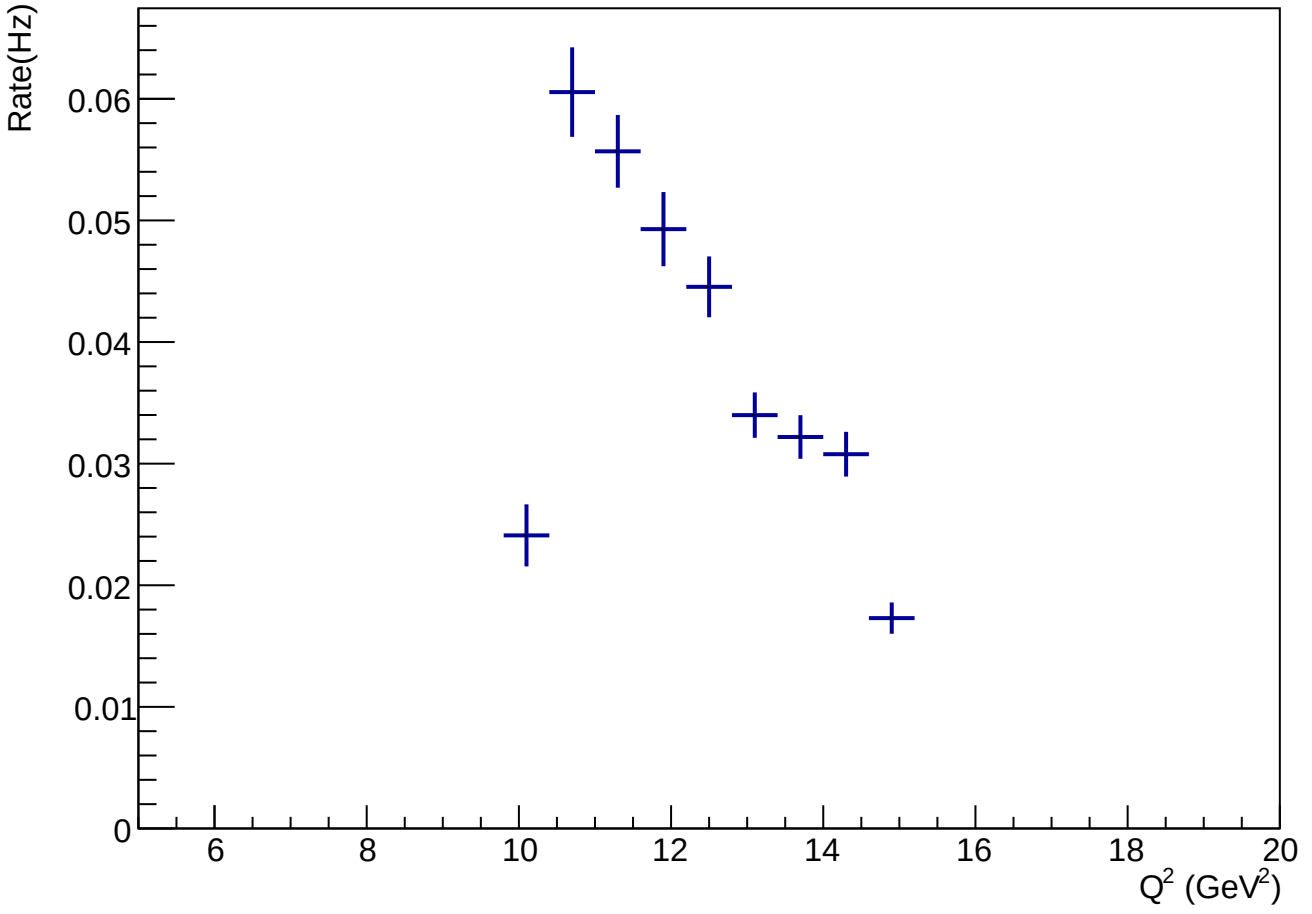

-t dist w/ 25.0 < Q2 < 30.0, -t,θdiff ,ϕdiff, W cuts
Rate(Hz)
0.009
0.008
0.007
0.006
0.005
0.004
0.003
0.002
0.001
0
0
0.05
0.1
0.15
0.2
0.25
0.3
0.35
0.4
-trec_corr (GeV2)

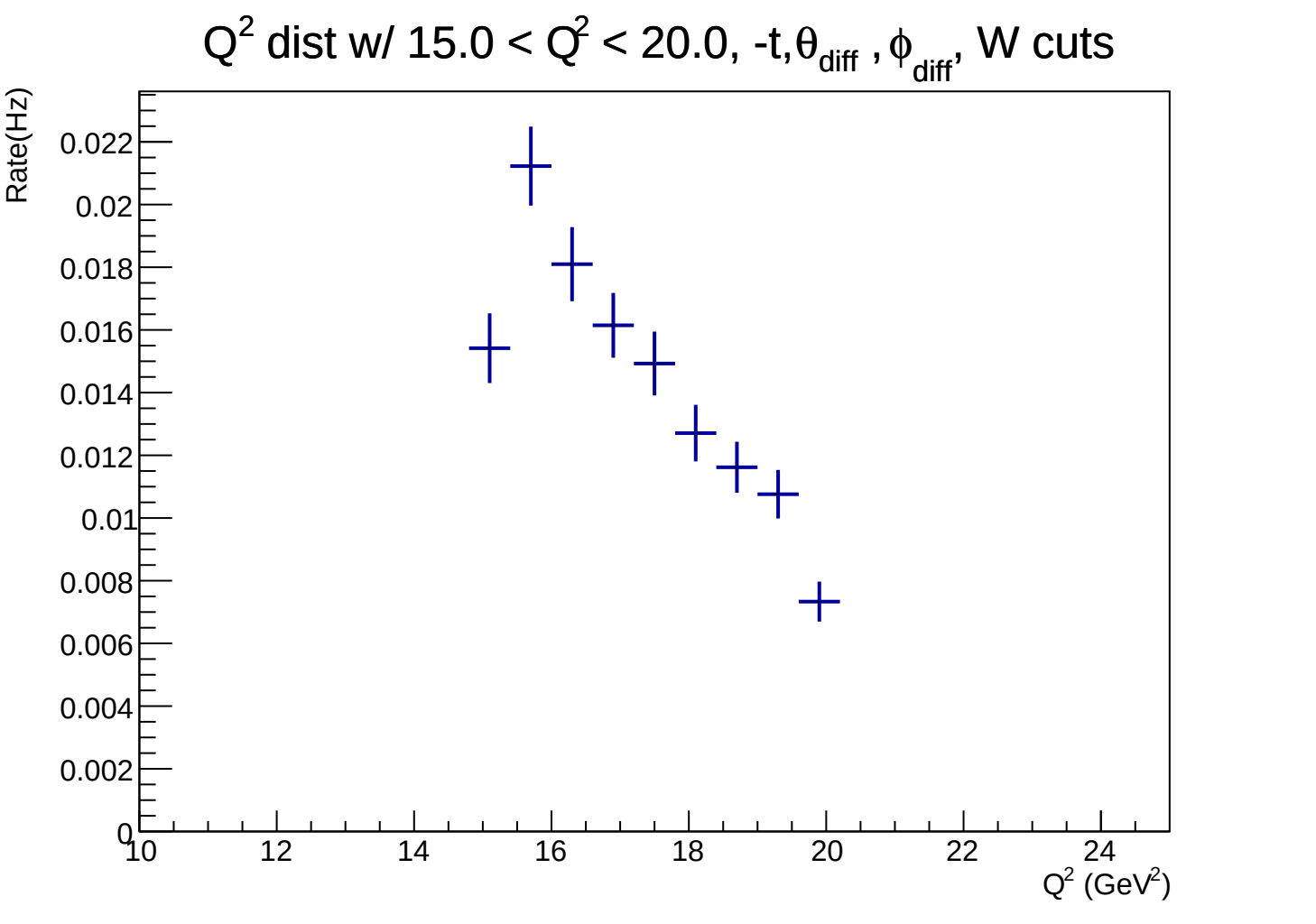

-t dist w/ 30.0 < Q2 < 35.0, -t,θdiff ,ϕdiff, W cuts
Rate(Hz)
0.004
0.0035
0.003
0.0025
0.002
0.0015
0.001
0.0005
0
0
0.05
0.1
0.15
0.2
0.25
0.3
0.35
0.4
-trec_corr (GeV2)

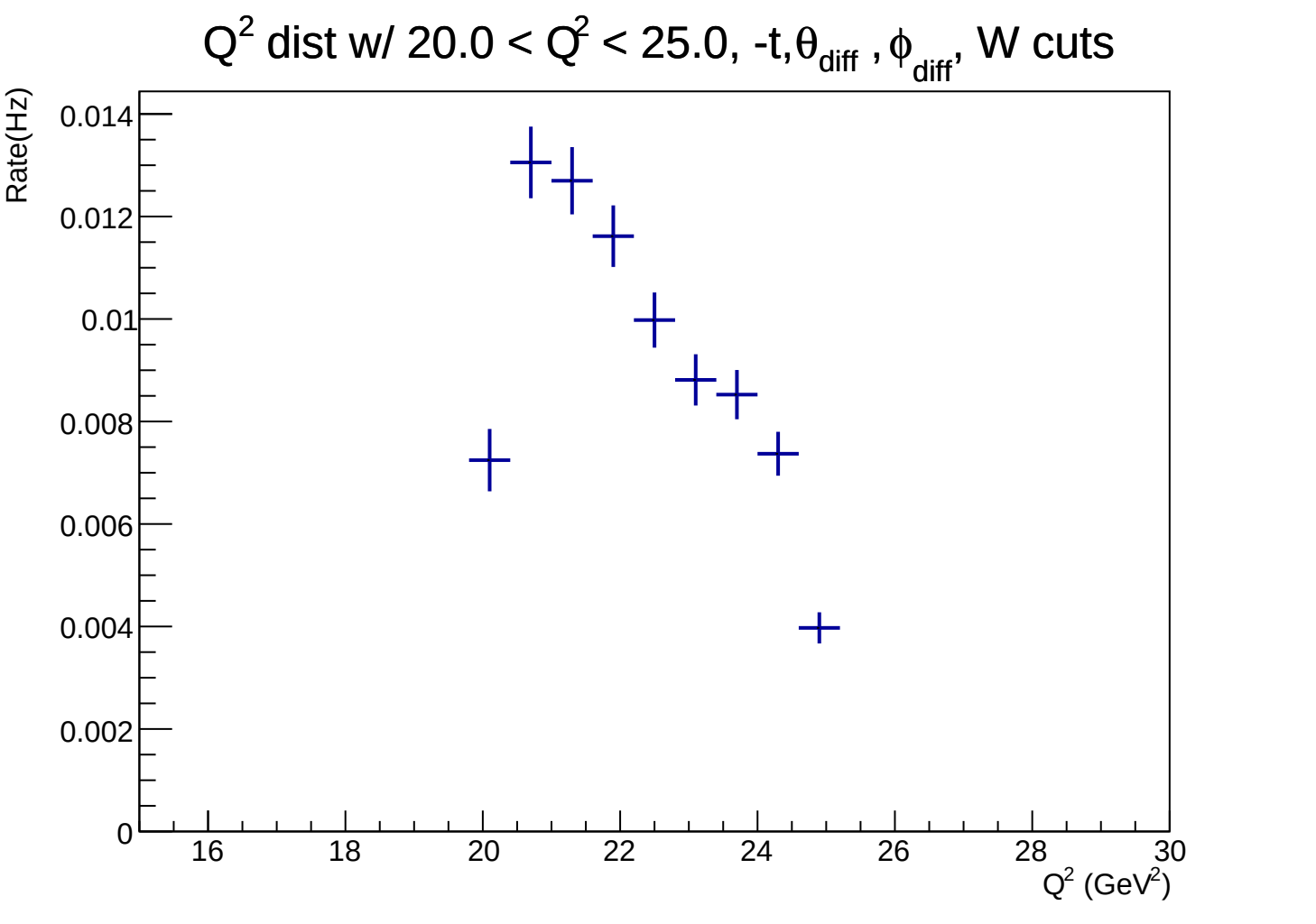

Q^2 dist w/ 5.0 < Q^2 < 35.0, -t,θ_{diff} , ϕ_{diff}, W cuts
Rate(Hz)
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
5
10
15
20
25
30
35
Q^2 (GeV^2)

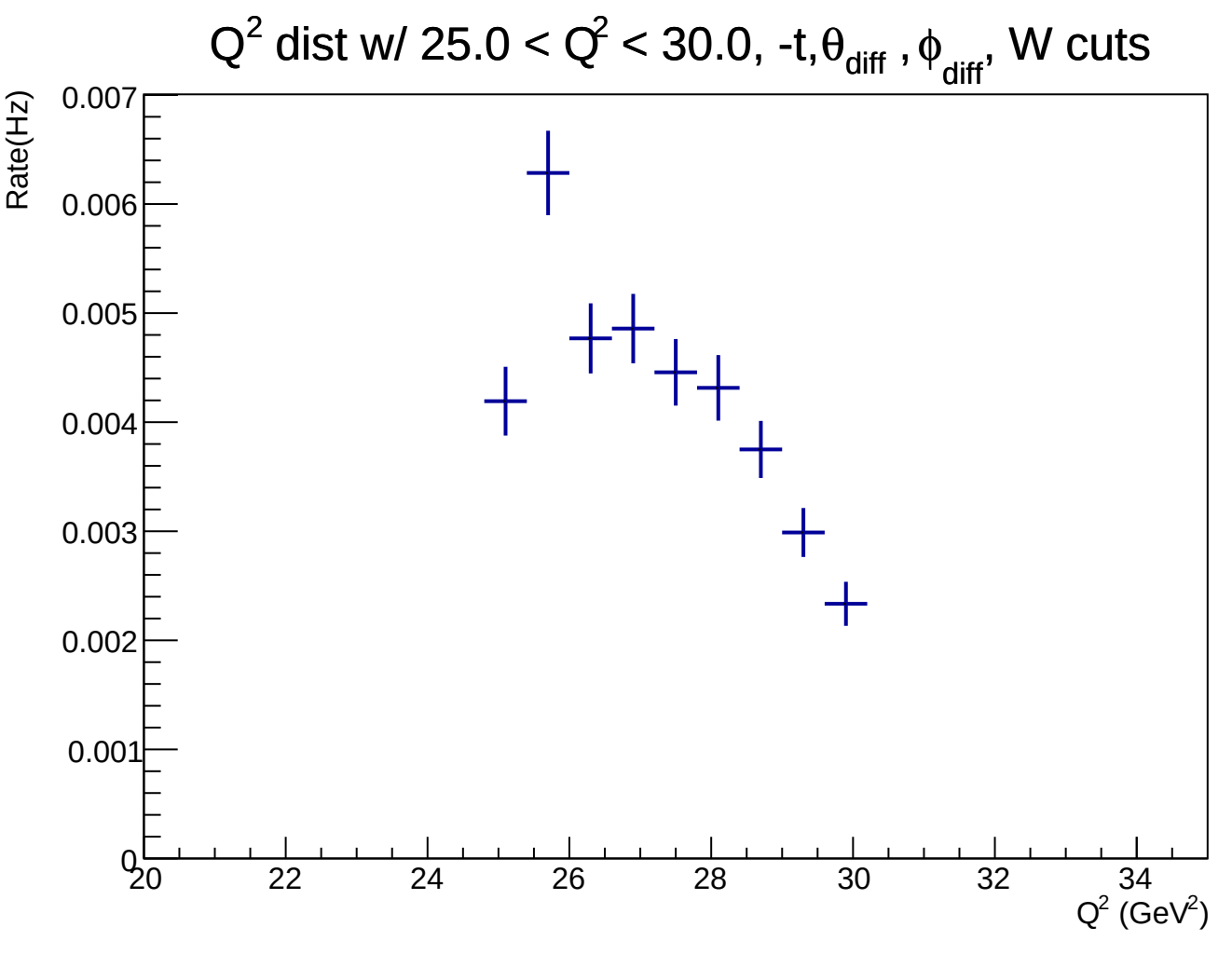

Q^2 dist w/ 5.0 < Q^2 < 7.5, -t,θ_{diff} ,ϕ_{diff}, W cuts
Rate(Hz)
0.25
0.2
0.15
0.1
0.05
0
0
2
4
6
8
10
12
Q^2 (GeV^2)

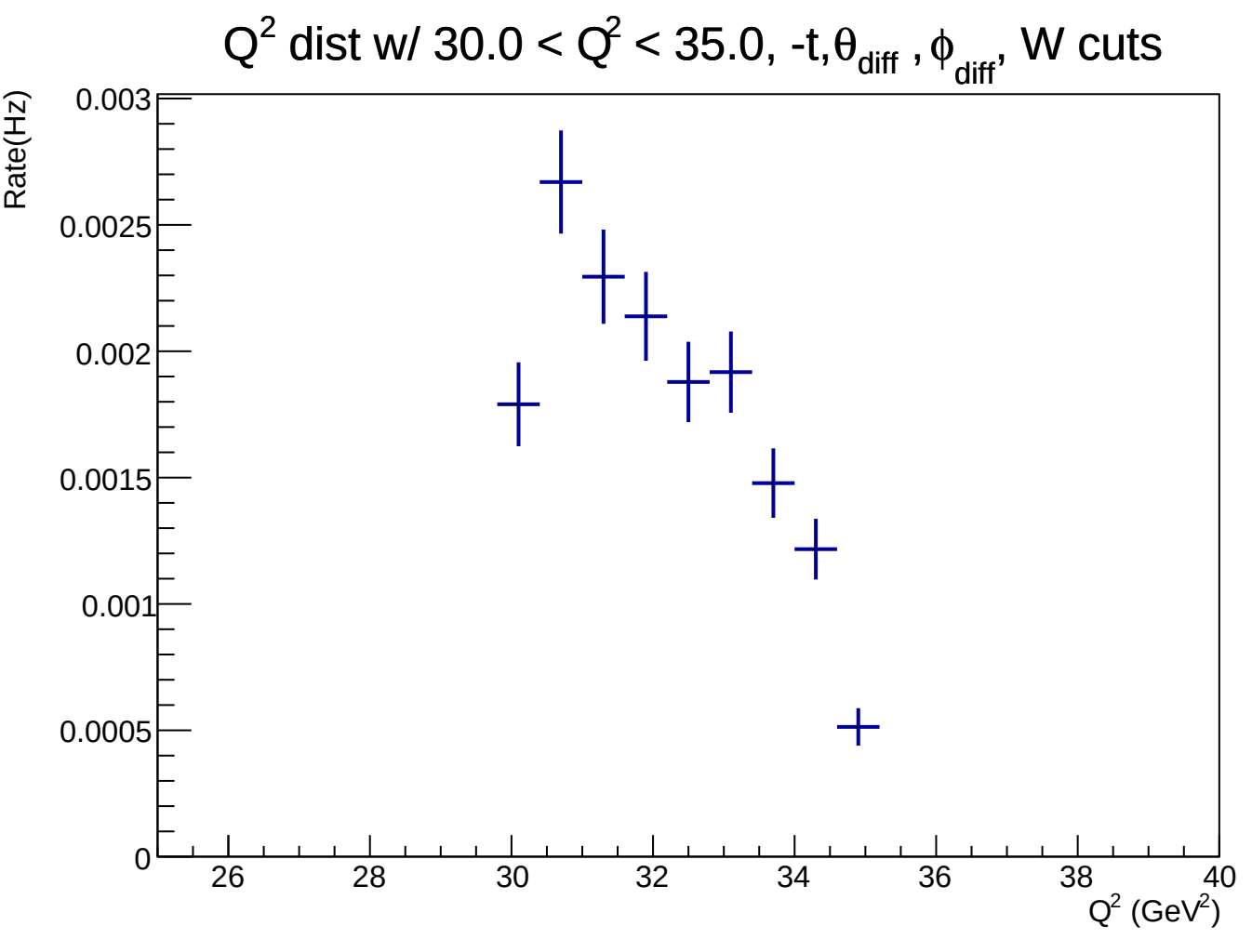

Q^2 dist w/ 7.5 < Q^2 < 10.0, -t,θ_{diff} , ϕ_{diff}, W cuts
Rate(Hz)
0.1
0.08
0.06
0.04
0.02
0
4
6
8
10
12
14
Q^2 (GeV^2)

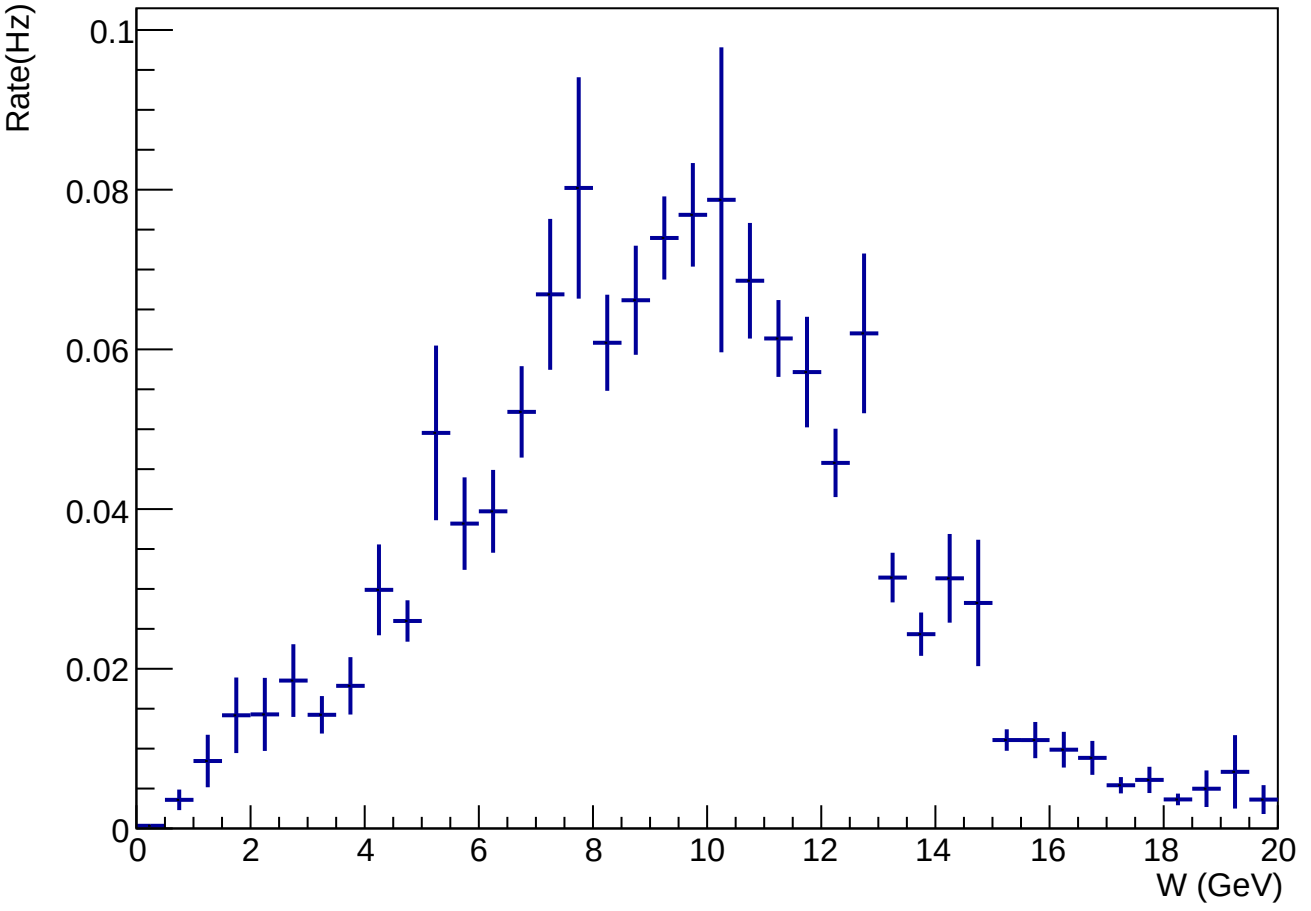

Q^2 dist w/ 10.0 < Q^2 < 15.0, -t,θ_{diff} , ϕ_{diff}, W cuts
Rate(Hz)
0
0.01
0.02
0.03
0.04
0.05
0.06
6
8
10
12
14
16
18
20
Q^2 (GeV^2)

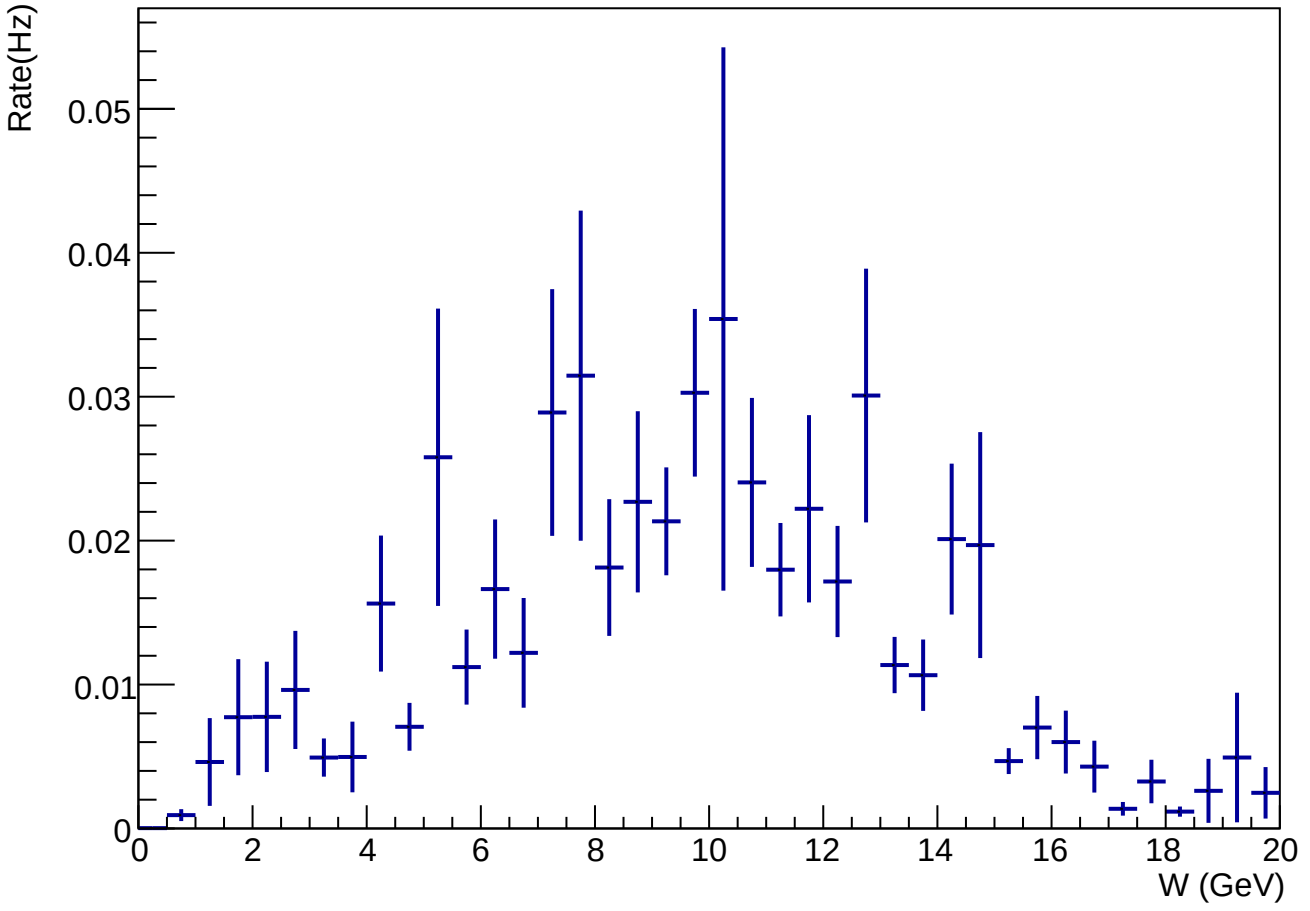

Q^2 dist w/ 15.0 < Q^2 < 20.0, -t,θ_{diff} ,ϕ_{diff}, W cuts
Rate(Hz)
0.022
0.02
0.018
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
10
12
14
16
18
20
22
24
Q^2 (GeV^2)

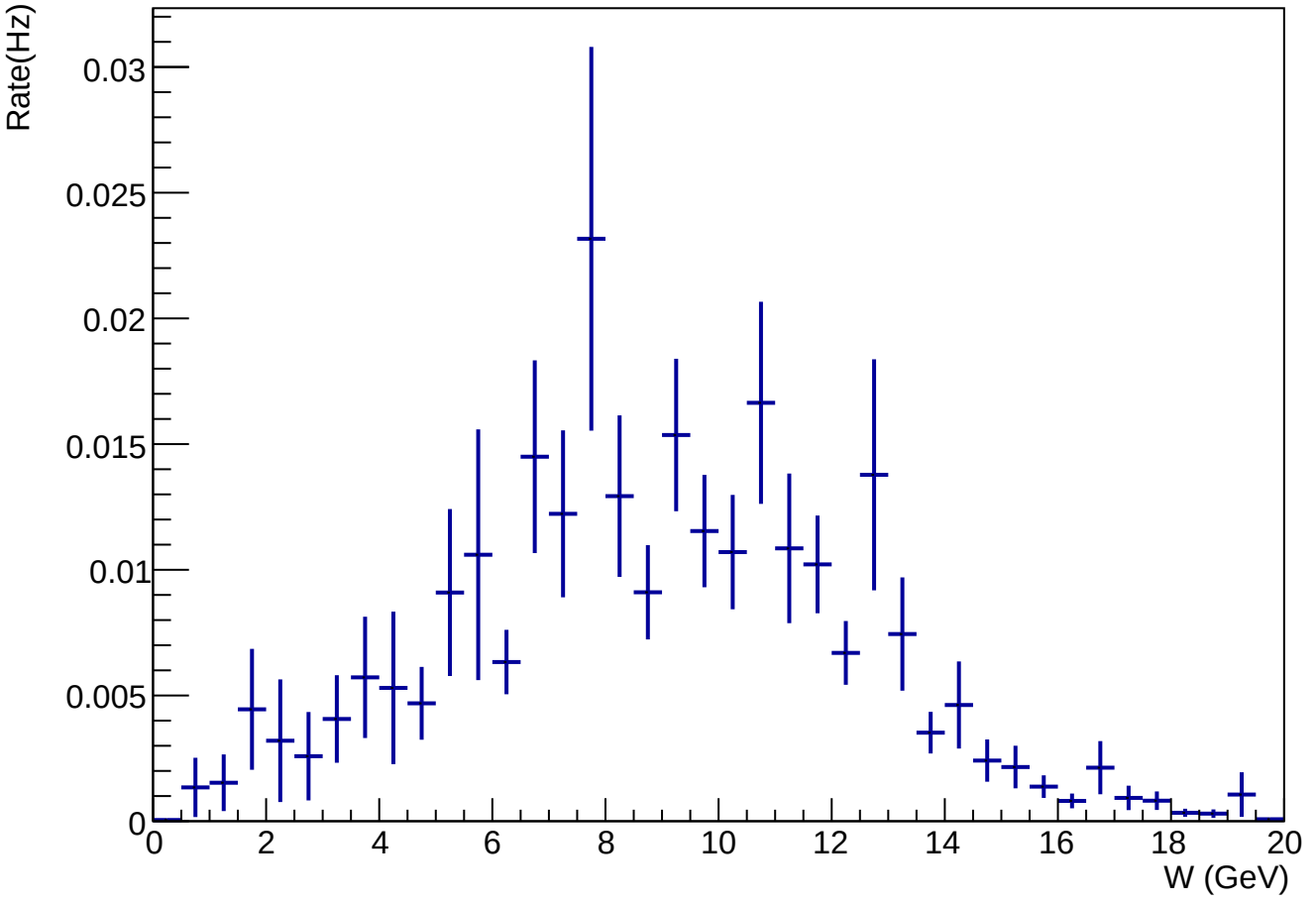

Q^2 dist w/ 20.0 < Q^2 < 25.0, -t,θ_{diff} , ϕ_{diff}, W cuts
Rate(Hz)
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
16
18
20
22
24
26
28
30
Q^2 (GeV^2)

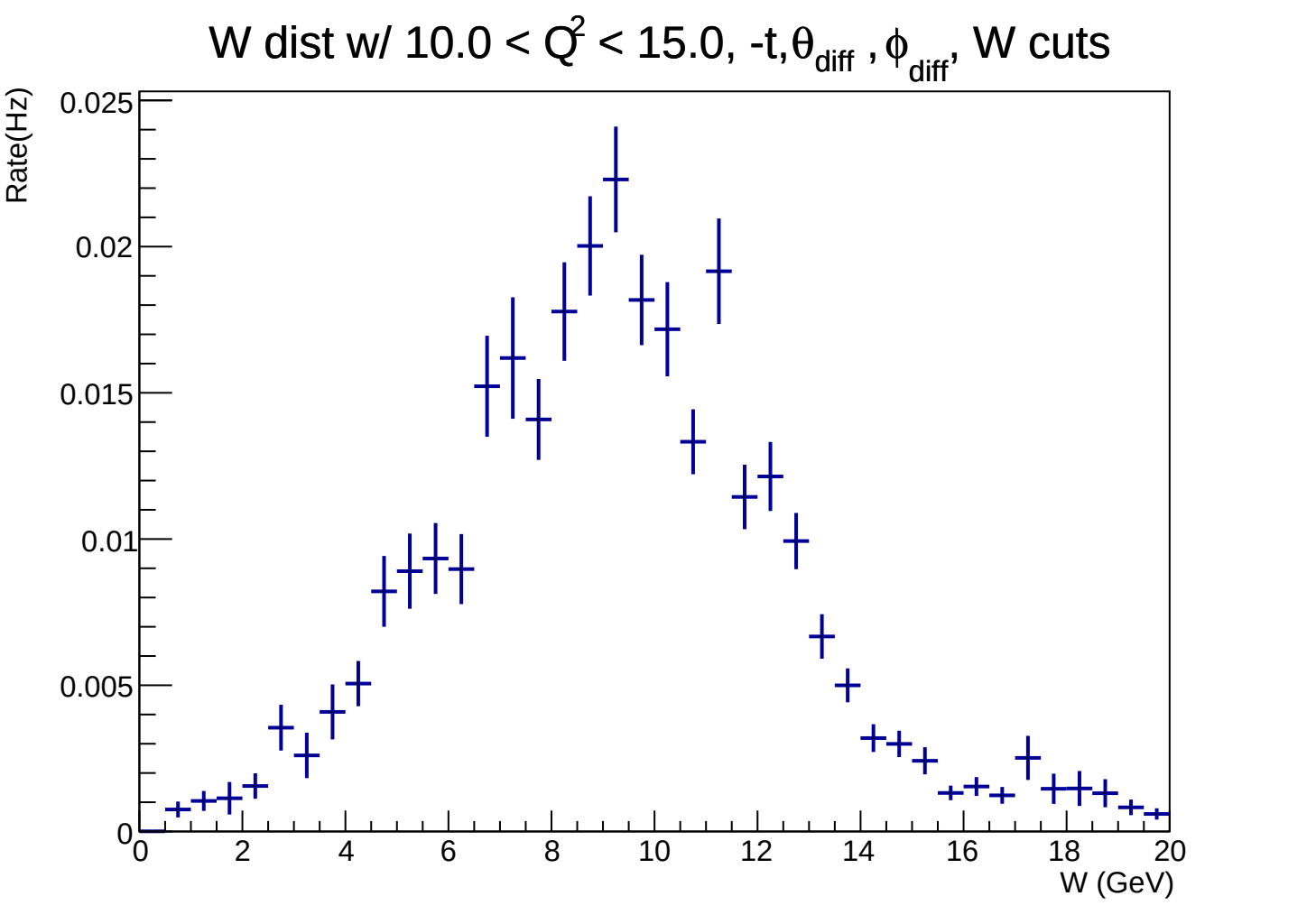

Q^2 dist w/ 25.0 < Q^2 < 30.0, -t,θ_{diff} , ϕ_{diff}, W cuts
Rate(Hz)
0.007
0.006
0.005
0.004
0.003
0.002
0.001
0
20
22
24
26
28
30
32
34
Q^2 (GeV^2)

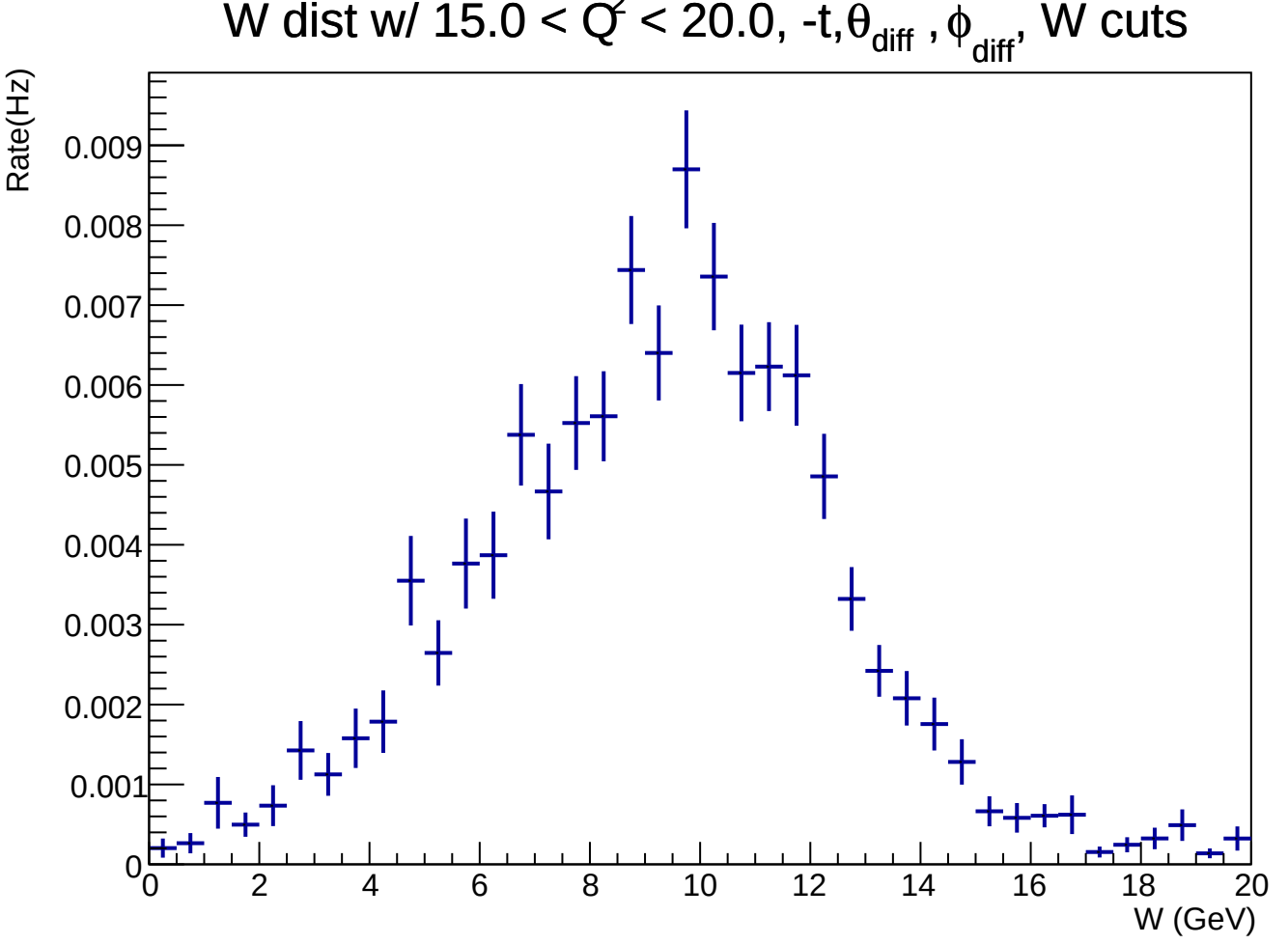

Q^2 dist w/ 30.0 < Q^2 < 35.0, -t,θ_{diff} , ϕ_{diff}, W cuts
Rate(Hz)
0.003
0.0025
0.002
0.0015
0.001
0.0005
0
26
28
30
32
34
36
38
40
Q^2 (GeV^2)

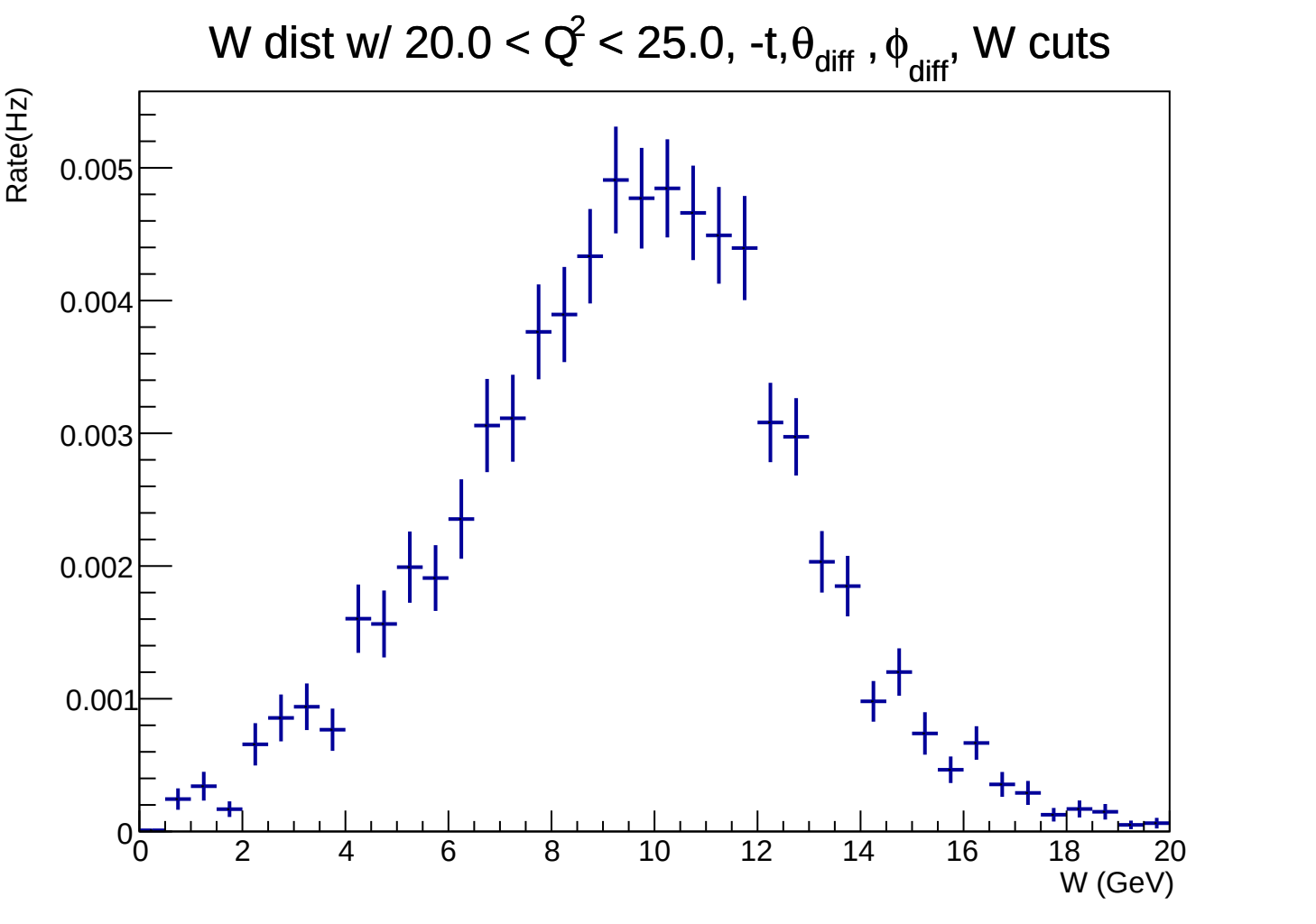

W dist w/ 5.0 < Q2 < 35.0, -t,θdiff ,ϕdiff, W cuts
Rate(Hz)
0.1
0.08
0.06
0.04
0.02
0
0
2
4
6
8
10
12
14
16
18
20
W (GeV)

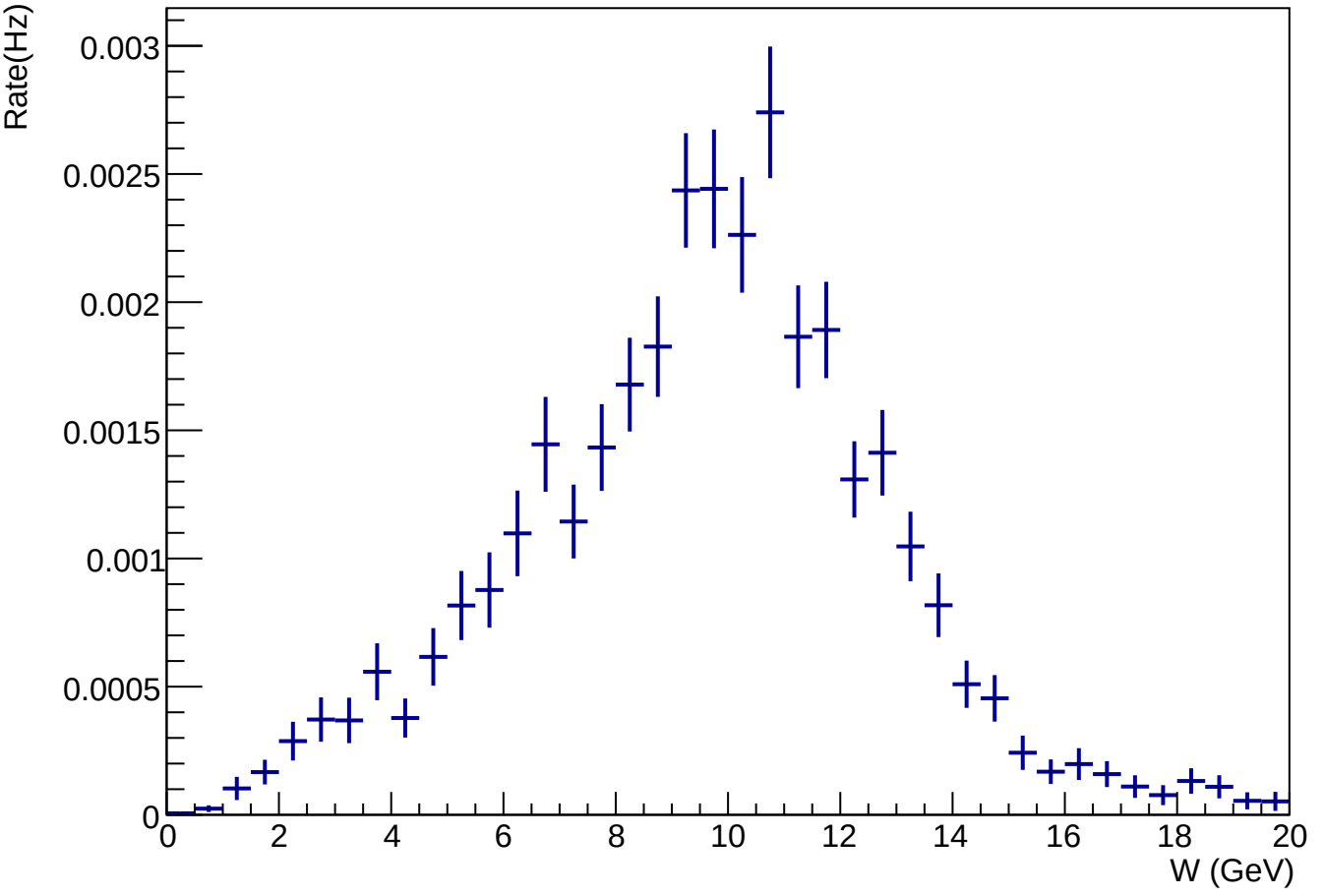

W dist w/ 5.0 < Q2 < 7.5, -t, θdiff , ϕdiff, W cuts
Rate(Hz)
0.05
0.04
0.03
0.02
0.01
0
0
2
4
6
8
10
12
14
16
18
20
W (GeV)

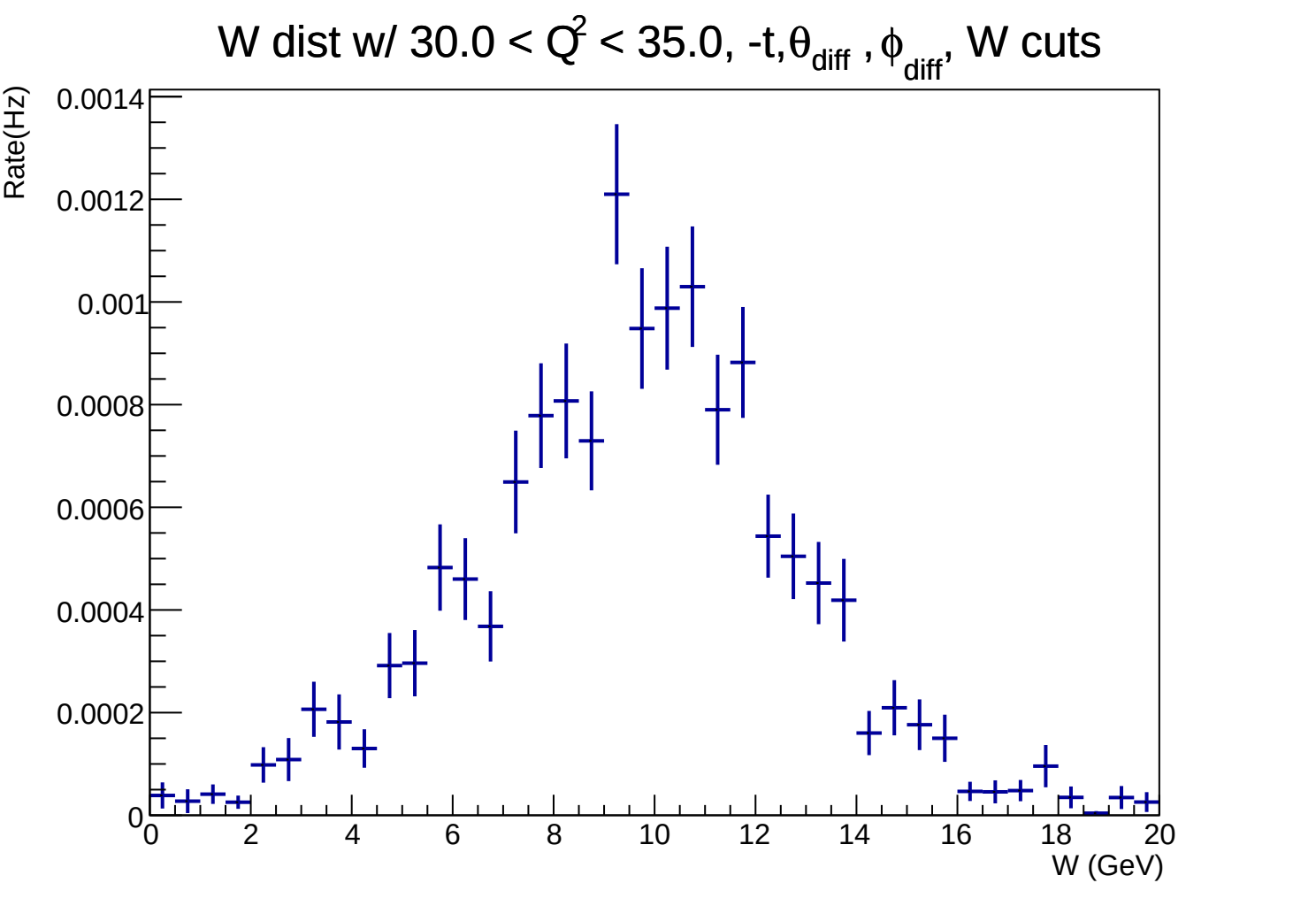

W dist w/ 7.5 < Q2 < 10.0, -t,θdiff ,ϕdiff, W cuts
Rate(Hz)
0.03
0.025
0.02
0.015
0.01
0.005
0
0
2
4
6
8
10
12
14
16
18
20
W (GeV)

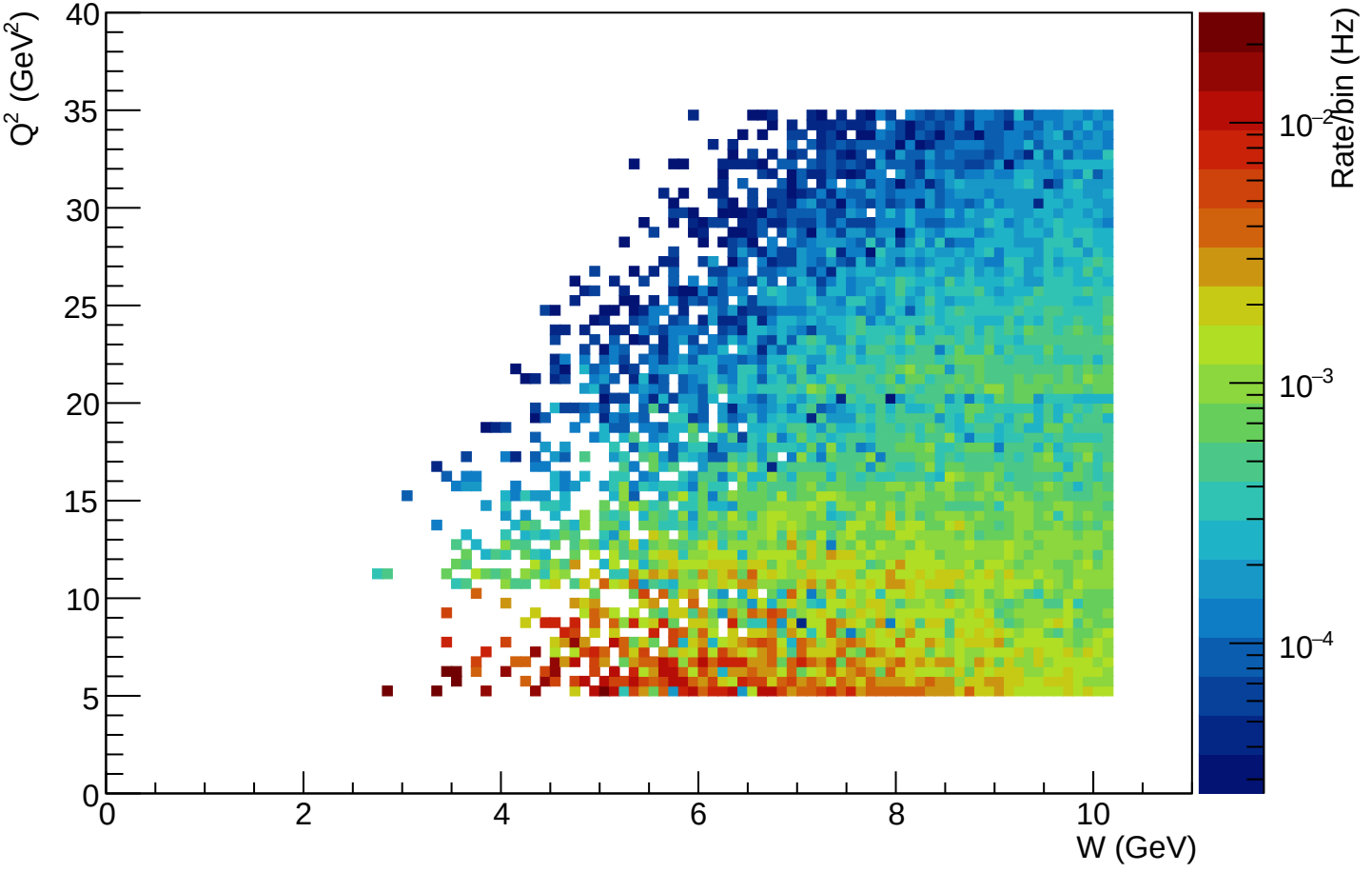

W dist w/ 10.0 < Q² < 15.0, -t,θdiff ,ϕdiff, W cuts
Rate(Hz)
0.025
0.02
0.015
0.01
0.005
0
0
2
4
6
8
10
12
14
16
18
20
W (GeV)

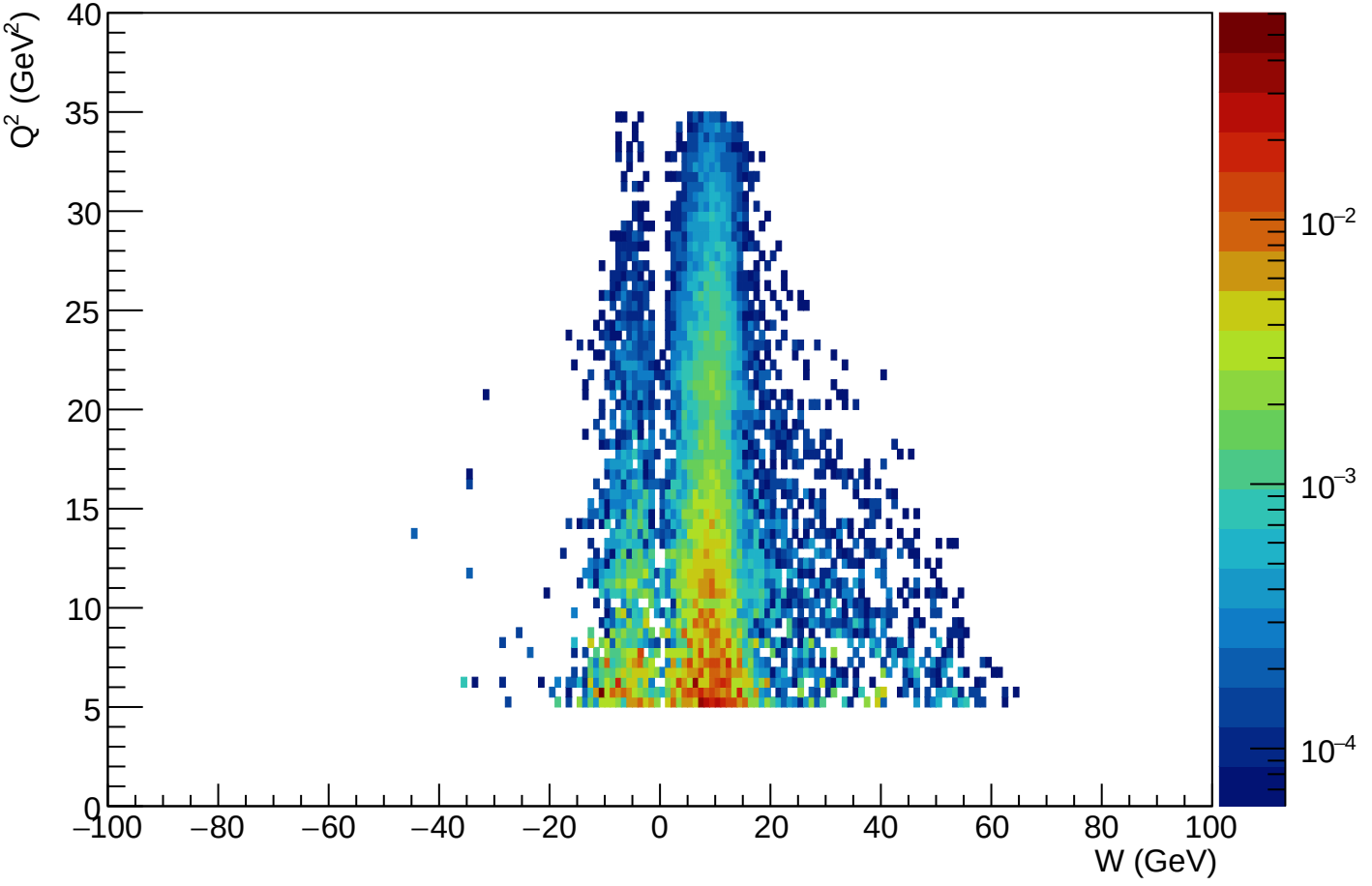

W dist w/ 15.0 < Q2 < 20.0, -t,θdiff ,ϕdiff, W cuts
Rate(Hz)
0.009
0.008
0.007
0.006
0.005
0.004
0.003
0.002
0.001
0
0
2
4
6
8
10
12
14
16
18
20
W (GeV)

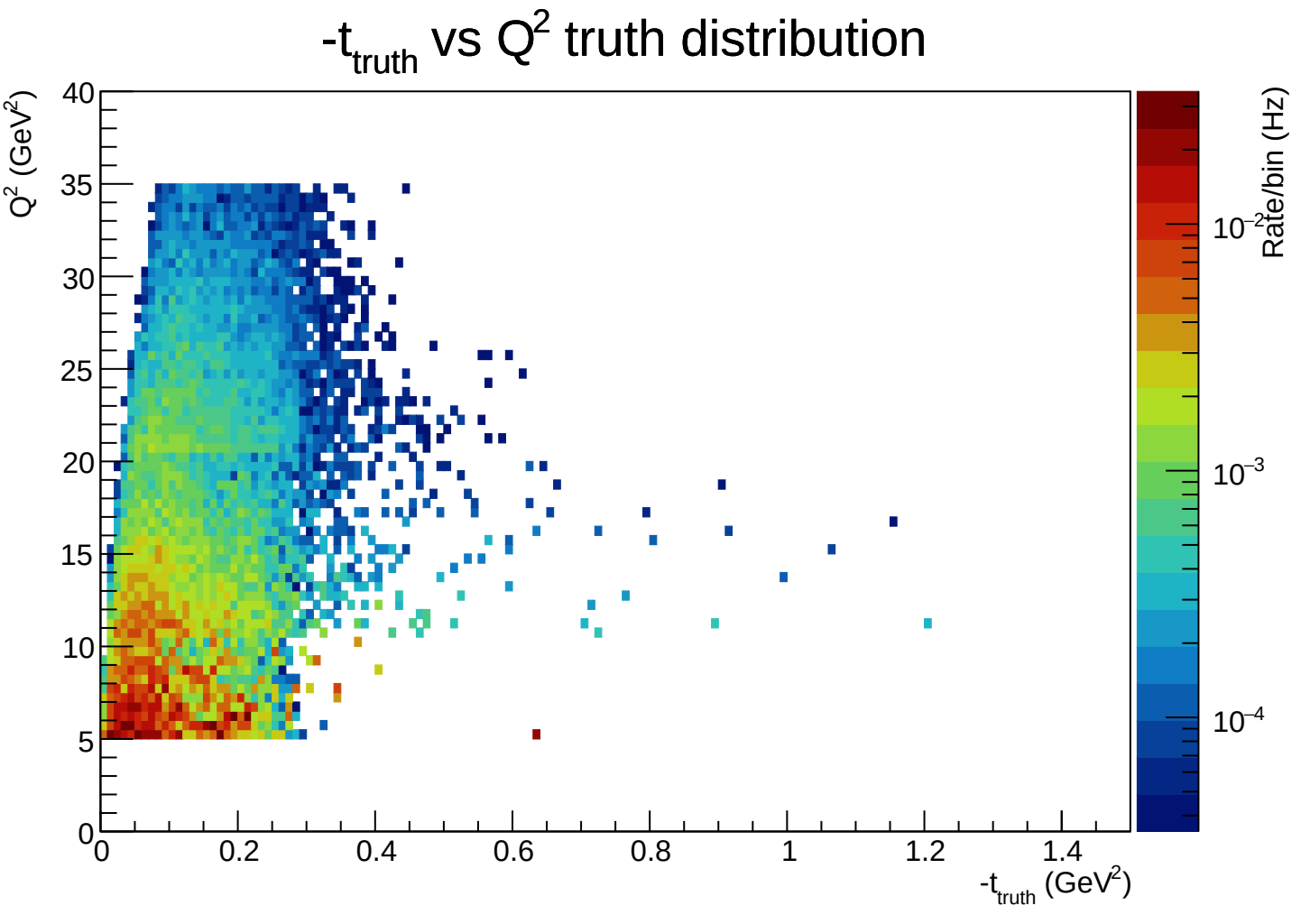

W dist w/ 20.0 < Q2 < 25.0, -t,θdiff ,ϕdiff, W cuts
Rate(Hz)
0.005
0.004
0.003
0.002
0.001
0
0
2
4
6
8
10
12
14
16
18
20
W (GeV)

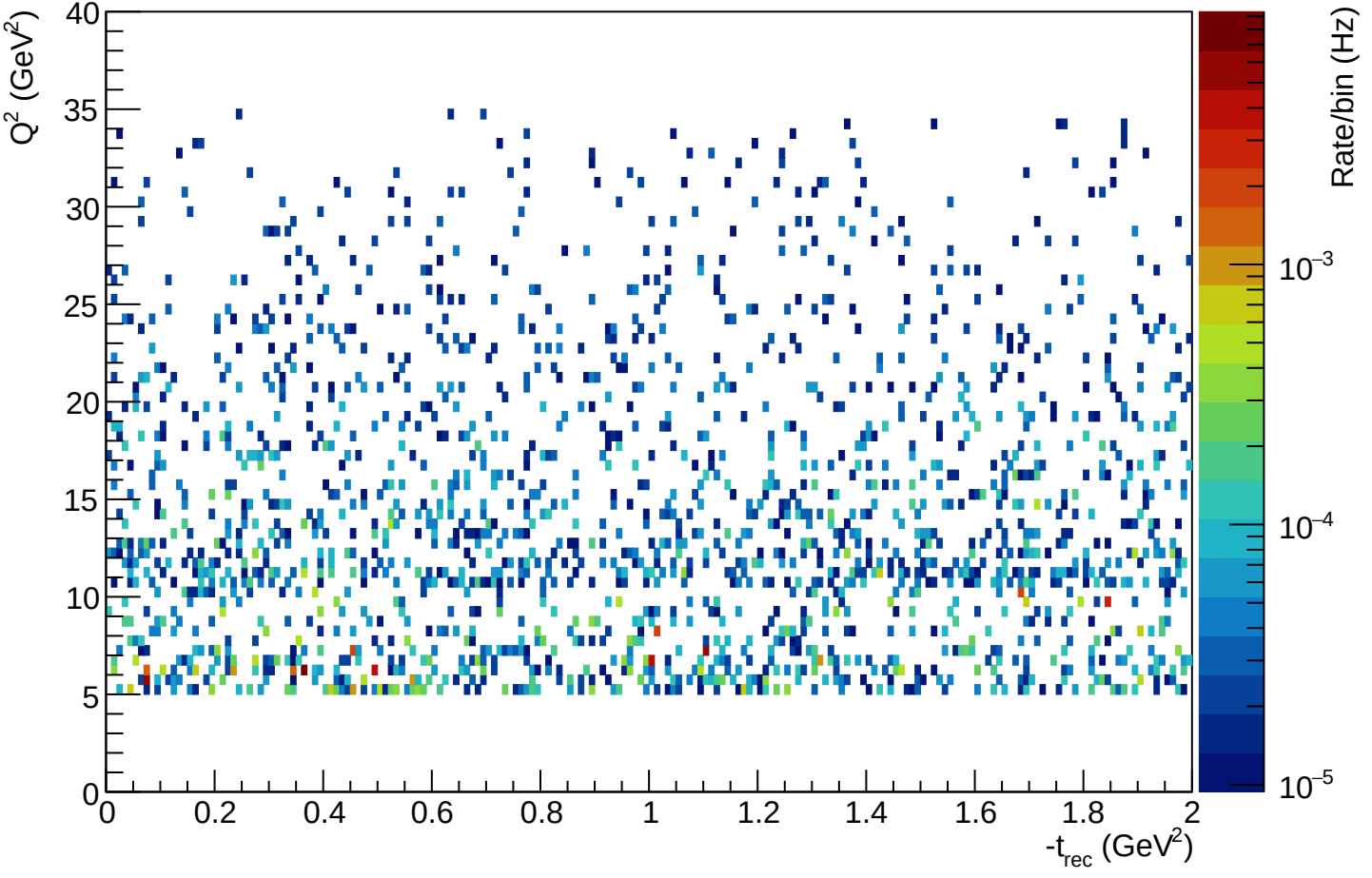

W dist w/ 25.0 < Q2 < 30.0, -t,θdiff ,ϕdiff, W cuts
Rate(Hz)
0.003
0.0025
0.002
0.0015
0.001
0.0005
0
0
2
4
6
8
10
12
14
16
18
20
W (GeV)

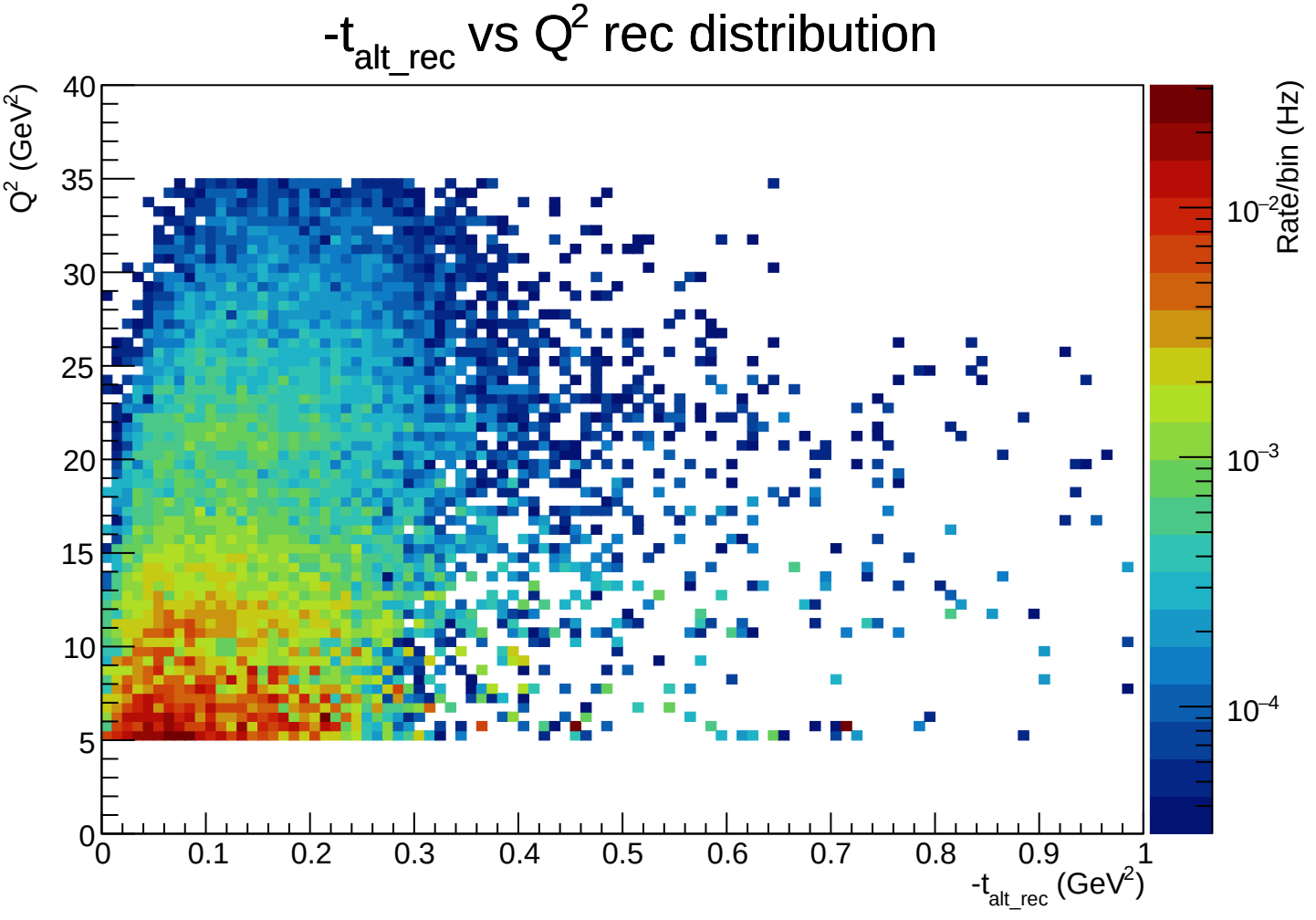

W dist w/ 30.0 < Q² < 35.0, -t,θdiff ,ϕdiff, W cuts
Rate(Hz)
0.0014
0.0012
0.001
0.0008
0.0006
0.0004
0.0002
0
0
2
4
6
8
10
12
14
16
18
20
W (GeV)

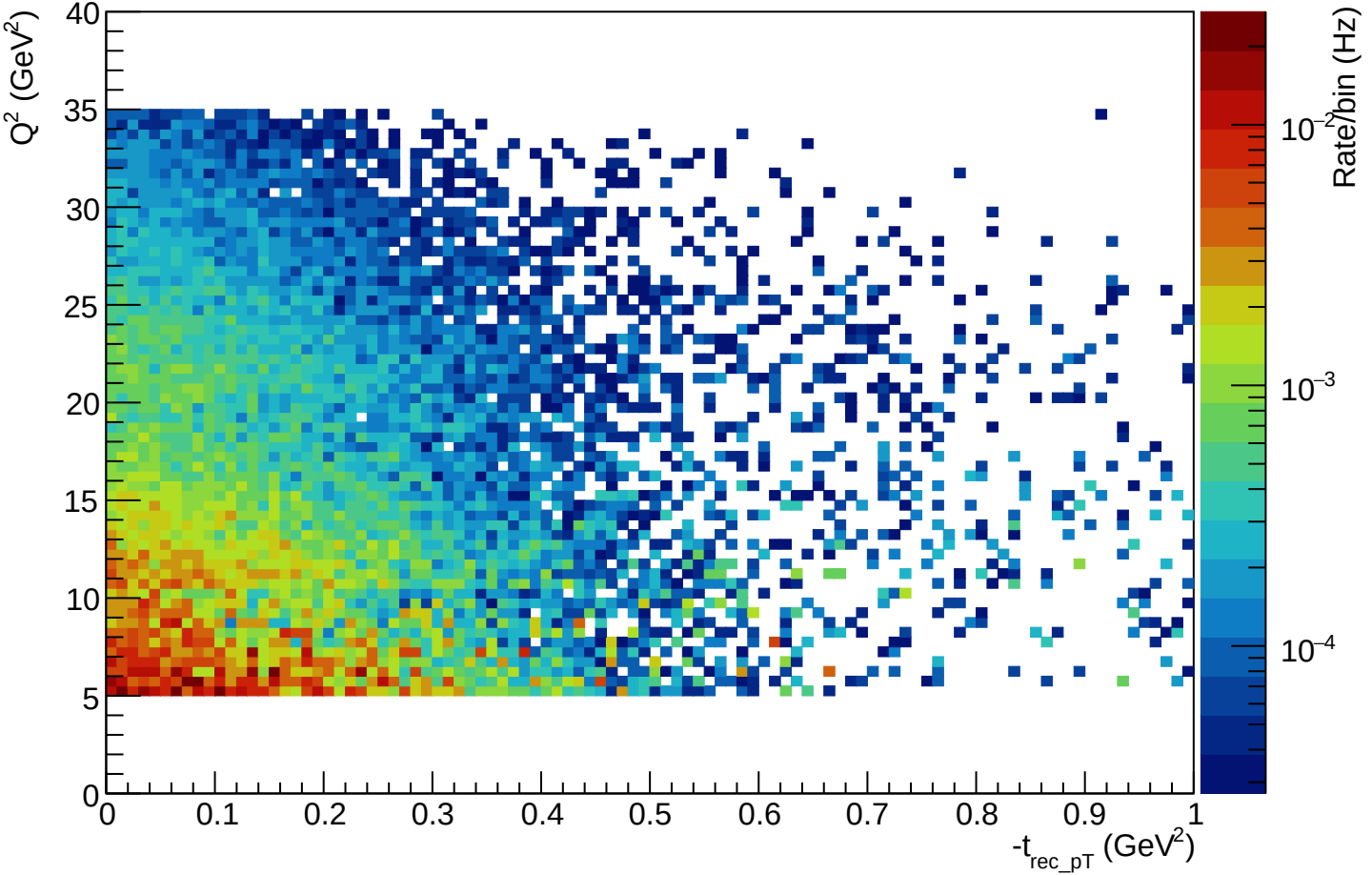

W vs Q2 truth distribution
Q2 (GeV2)
W (GeV)
Rate/bin (Hz)
0
5
10
15
20
25
30
35
40
0
2
4
6
8
10
10−2
10−3
10−4

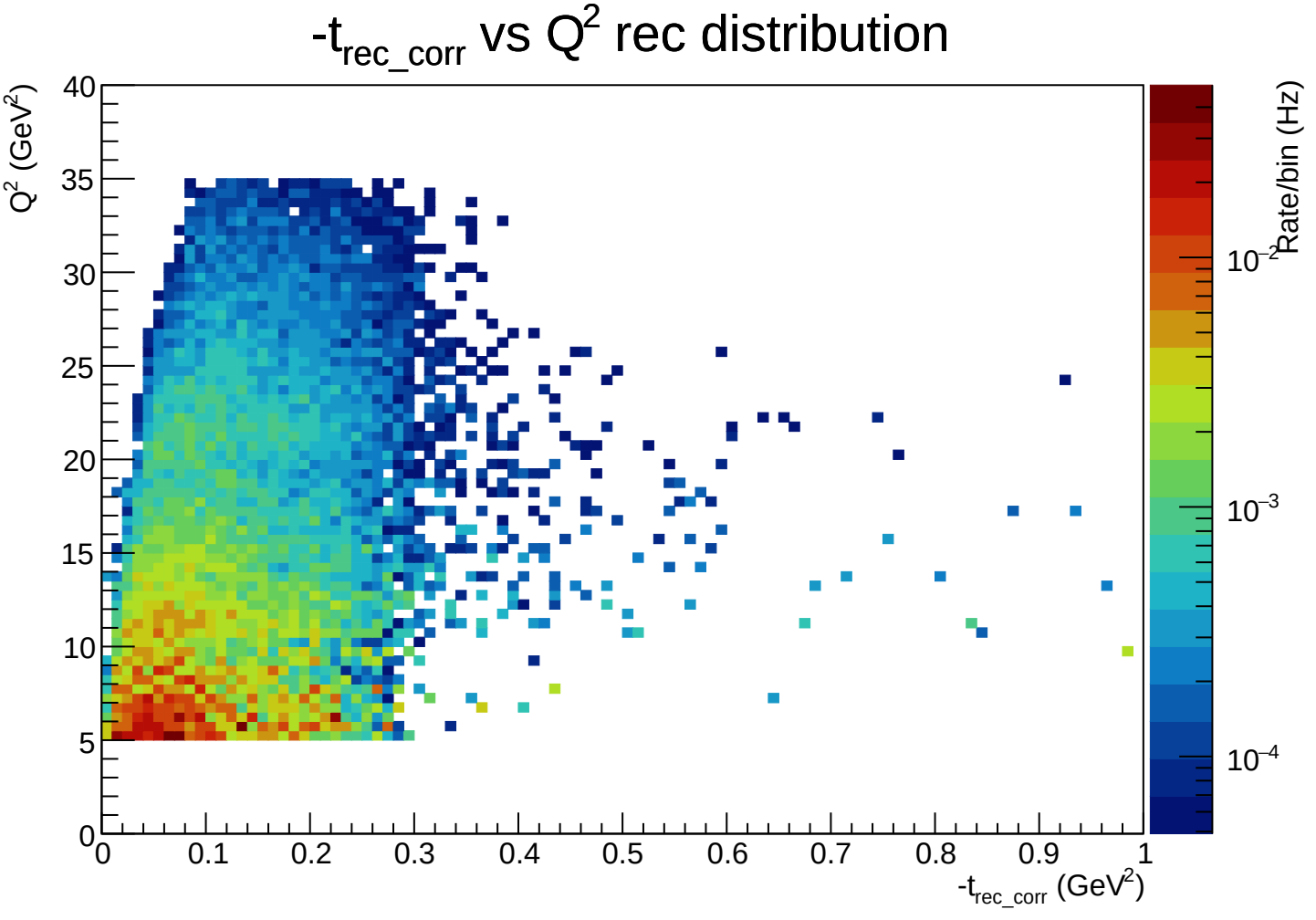

W vs Q2 rec distribution
Q2 (GeV2)
40
35
30
25
20
15
10
5
0
−100
−80
−60
−40
−20
0
20
40
60
80
100
W (GeV)
10−2
10−3
10−4

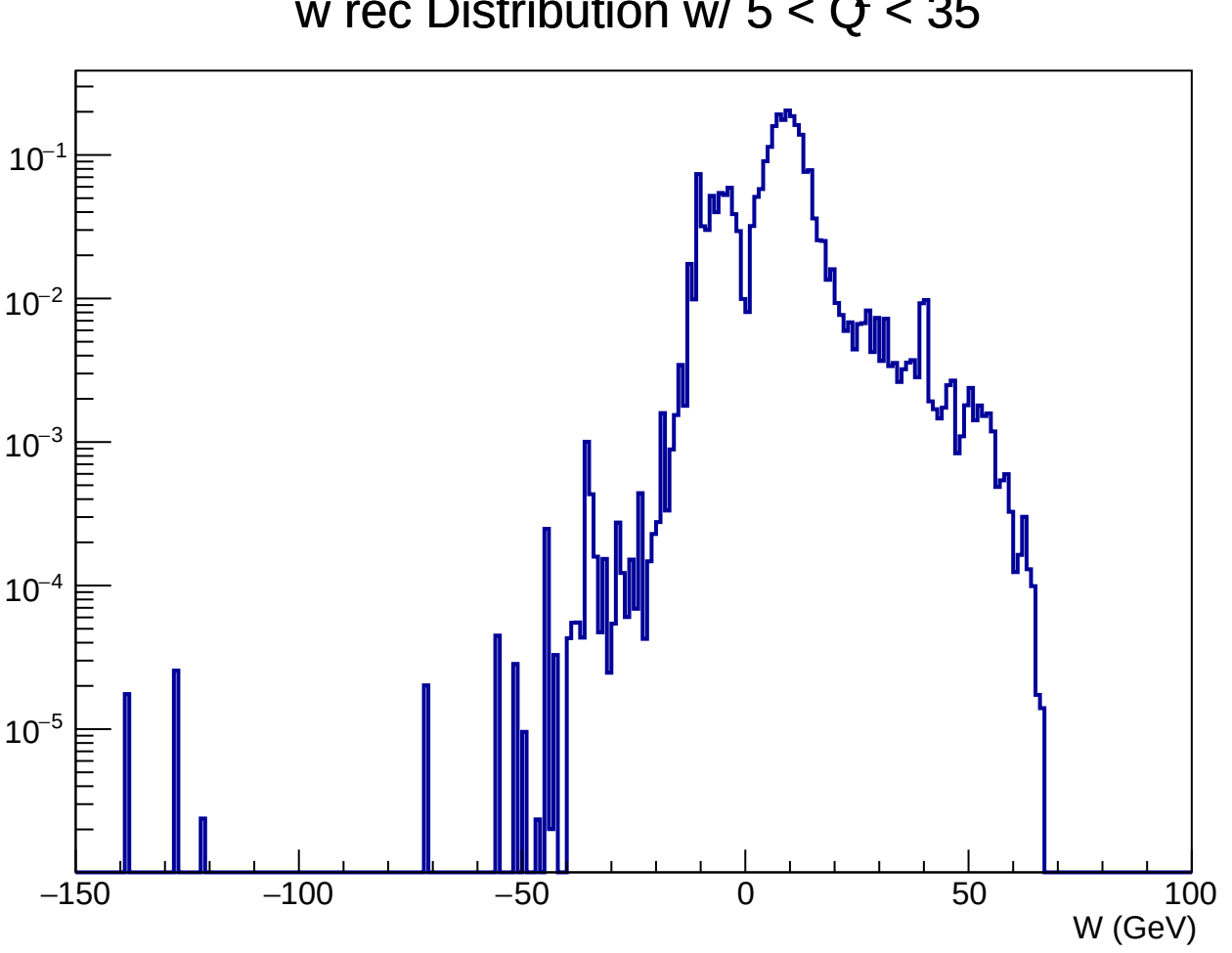

-t_truth vs Q^2 truth distribution
Q^2 (GeV^2)
40
35
30
25
20
15
10
5
0
0
0.2
0.4
0.6
0.8
1
1.2
1.4
-t_truth (GeV^2)
Rate/bin (Hz)
10^-2
10^-3
10^-4

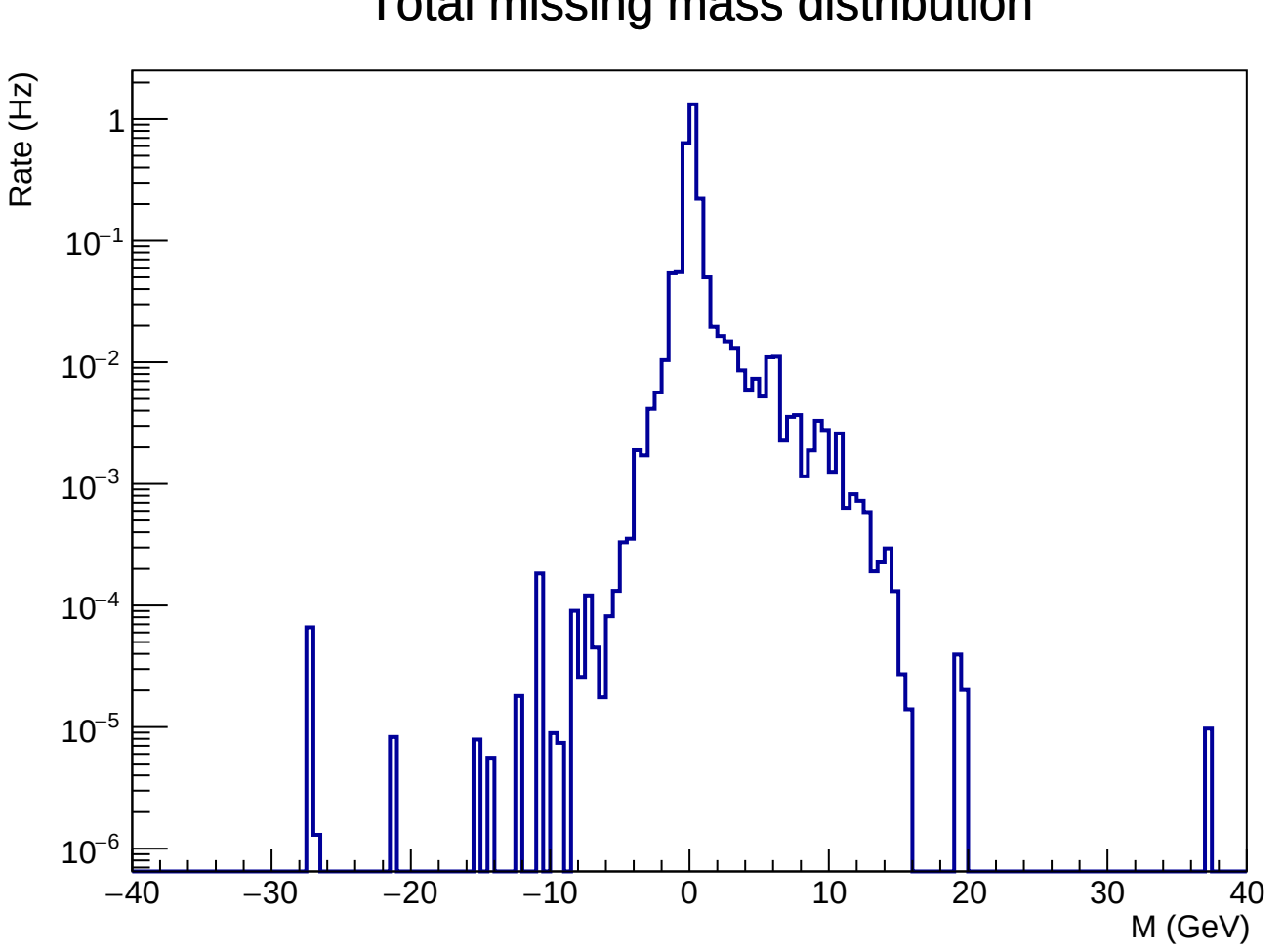

-t_rec vs Q^2 rec distribution
Q^2 (GeV^2)
40
35
30
25
20
15
10
5
0
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2
-t_rec (GeV^2)
Rate/bin (Hz)
10^-3
10^-4
10^-5


-t_alt_rec vs Q^2 rec distribution
Q^2 (GeV^2)
-t_alt_rec (GeV^2)
Rate/bin (Hz)
10^-2
10^-3
10^-4
0
5
10
15
20
25
30
35
40
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1


-t_rec_pT vs Q^2 rec distribution
Q^2 (GeV^2)
40
35
30
25
20
15
10
5
0
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
-t_rec_pT (GeV^2)
Rate/bin (Hz)
10^-2
10^-3
10^-4


-t_rec_corr vs Q^2 rec distribution
Q^2 (GeV^2)
-t_rec_corr (GeV^2)
Rate/bin (Hz)
0
5
10
15
20
25
30
35
40
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
10^-2
10^-3
10^-4


w rec Distribution w/ 5 < Q² < 35
10⁻¹
10⁻²
10⁻³
10⁻⁴
10⁻⁵
−150
−100
−50
0
50
100
W (GeV)


Total missing mass distribution
Rate (Hz)
1
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
−40
−30
−20
−10
0
10
20
30
40
M (GeV)