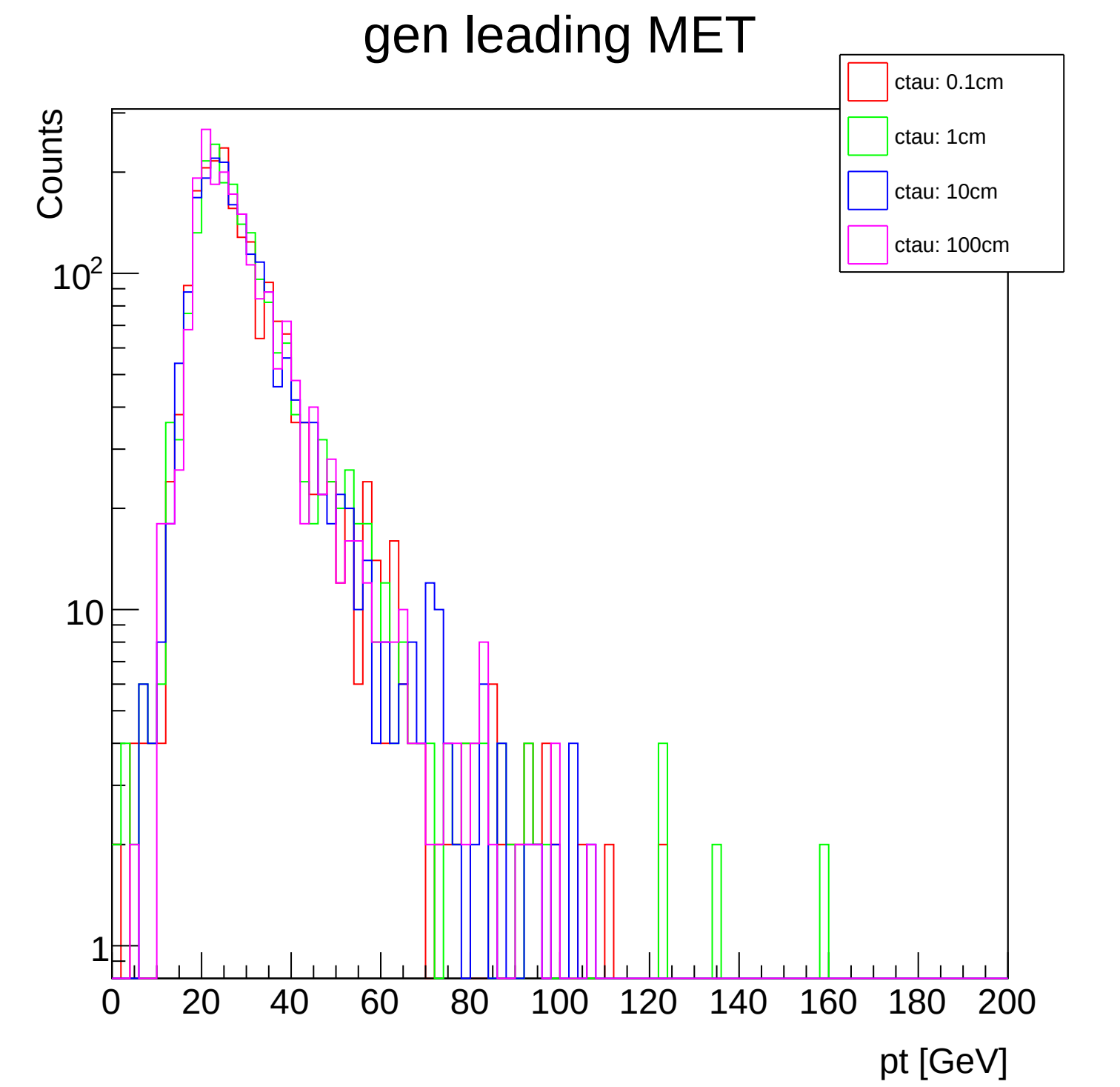
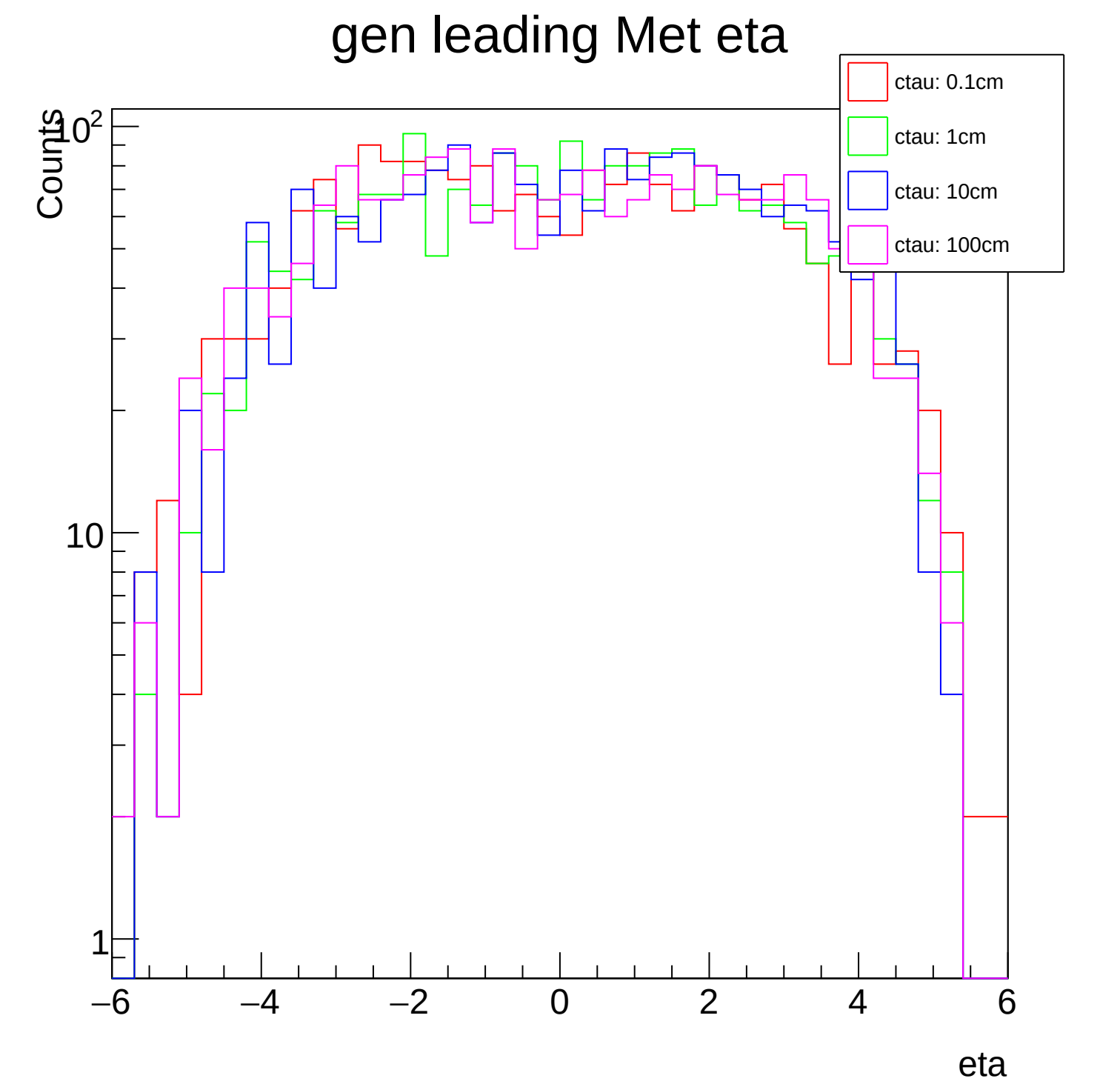
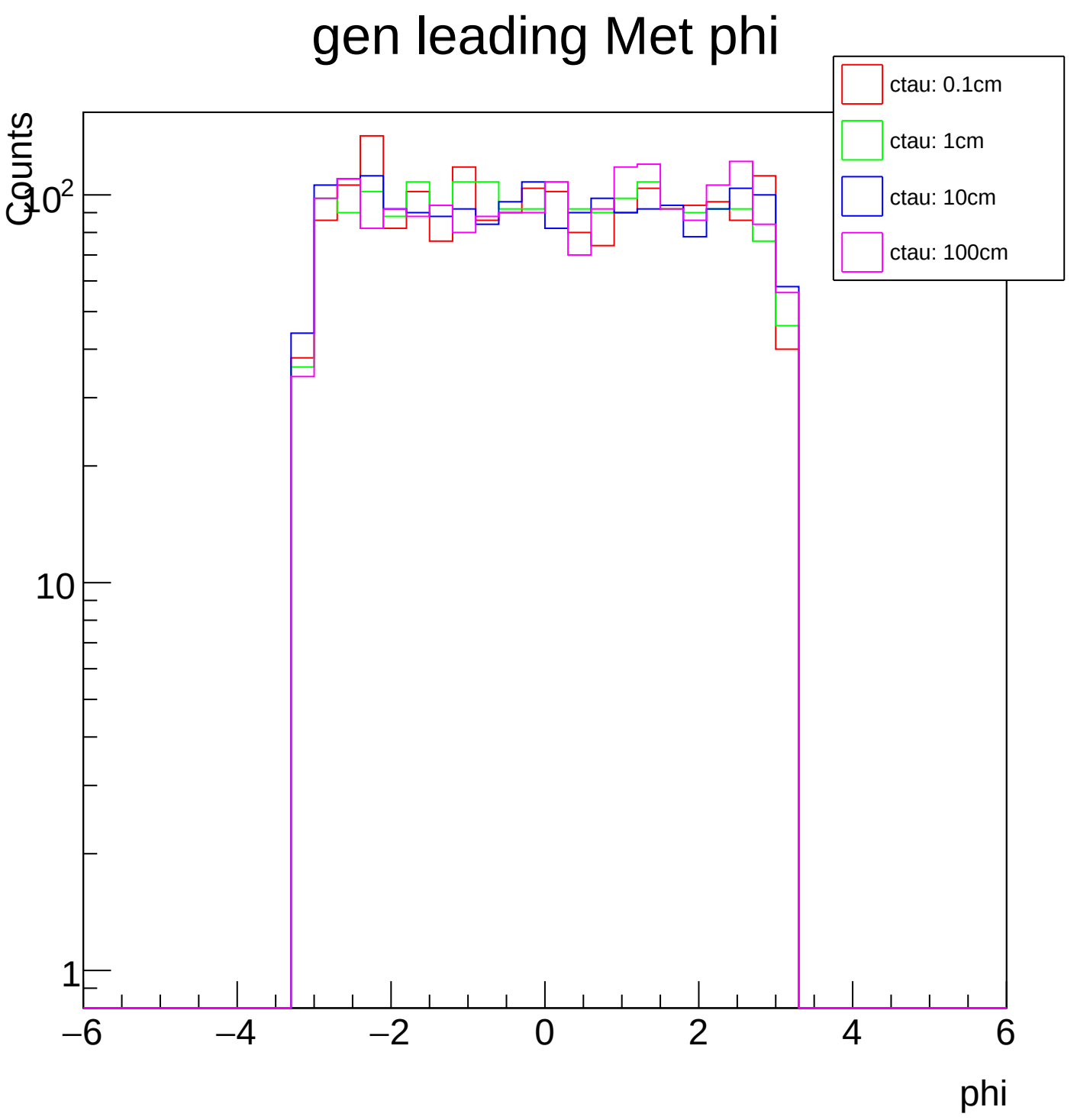
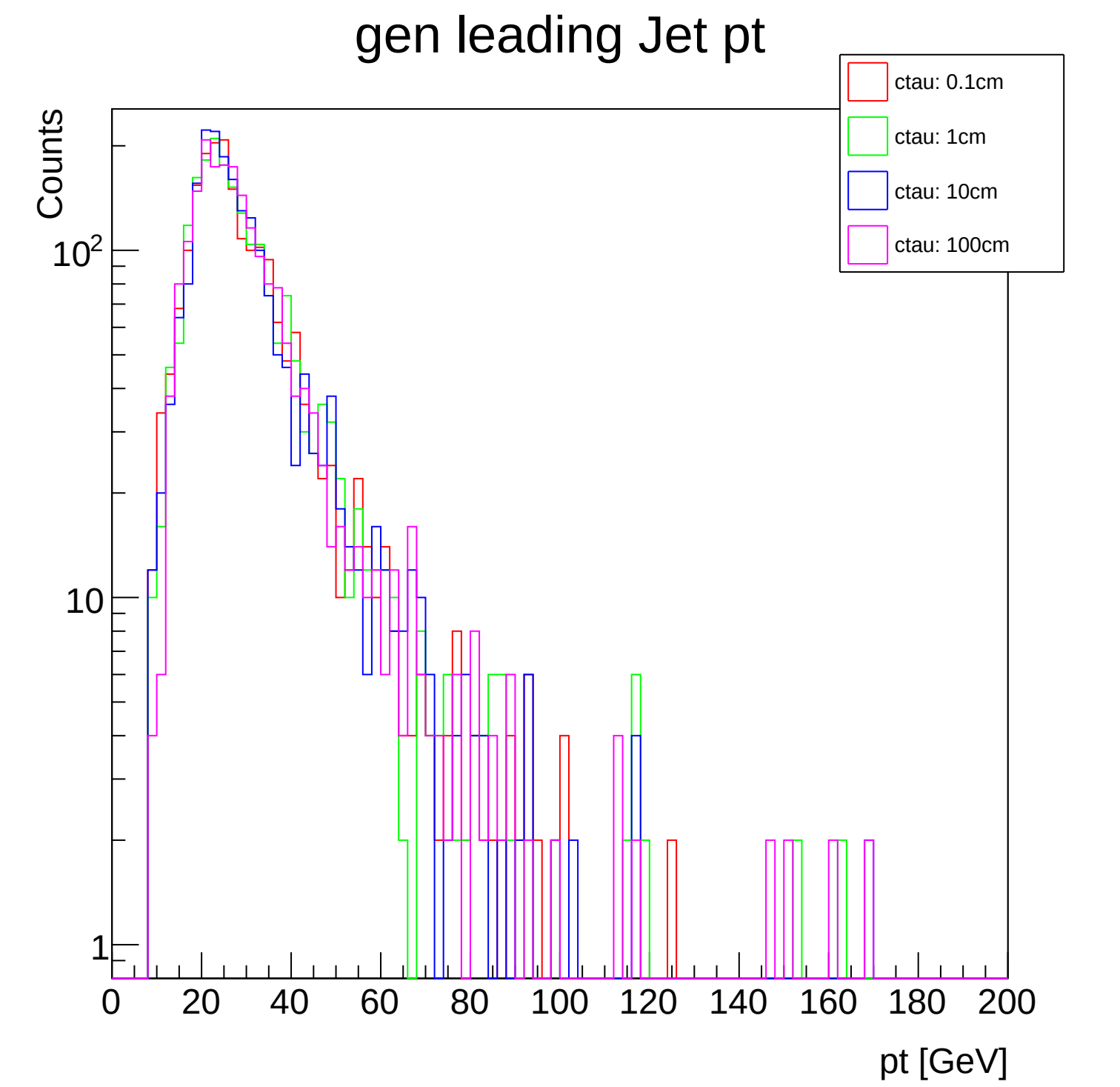
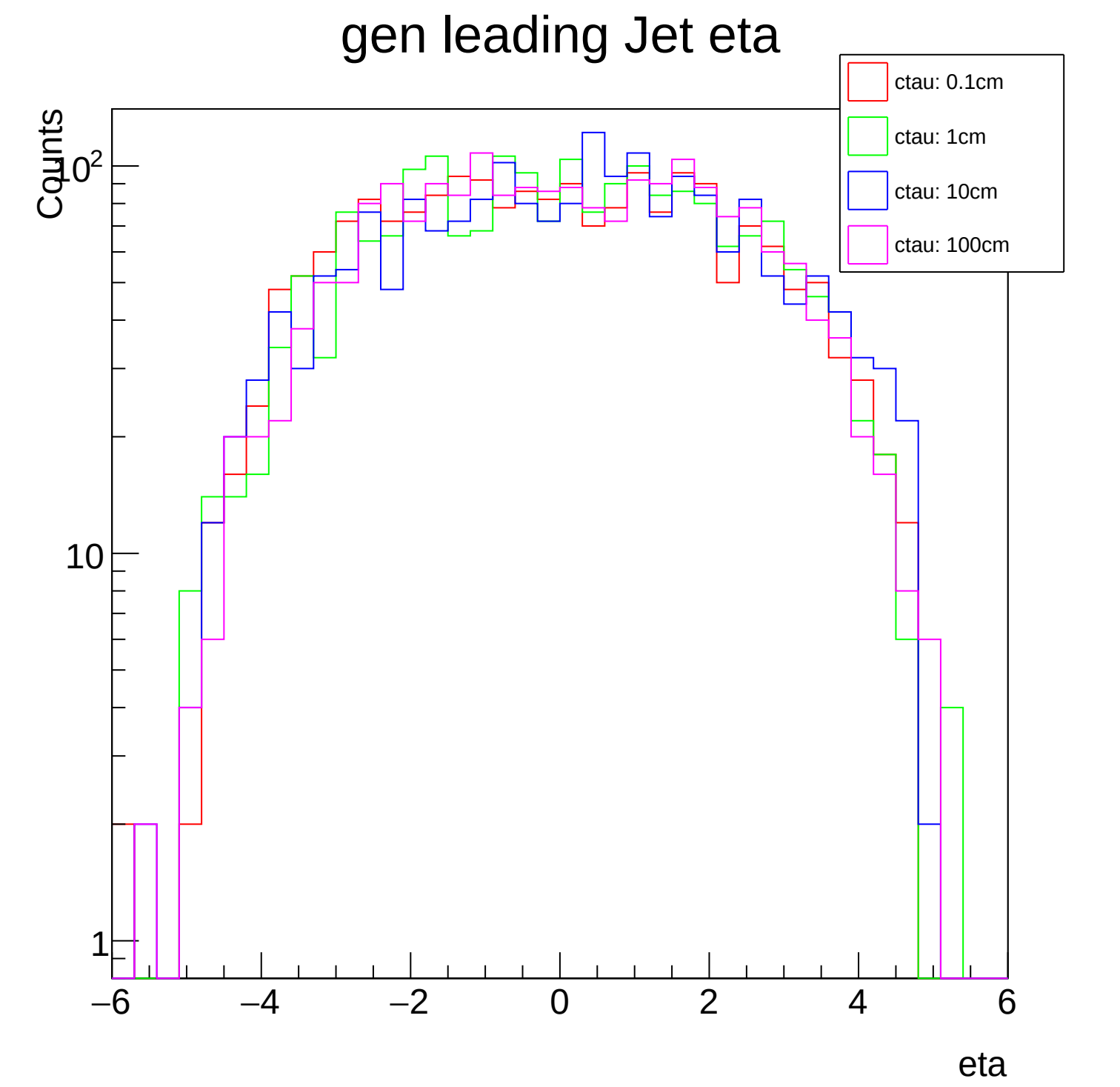
5 GeV (10%)

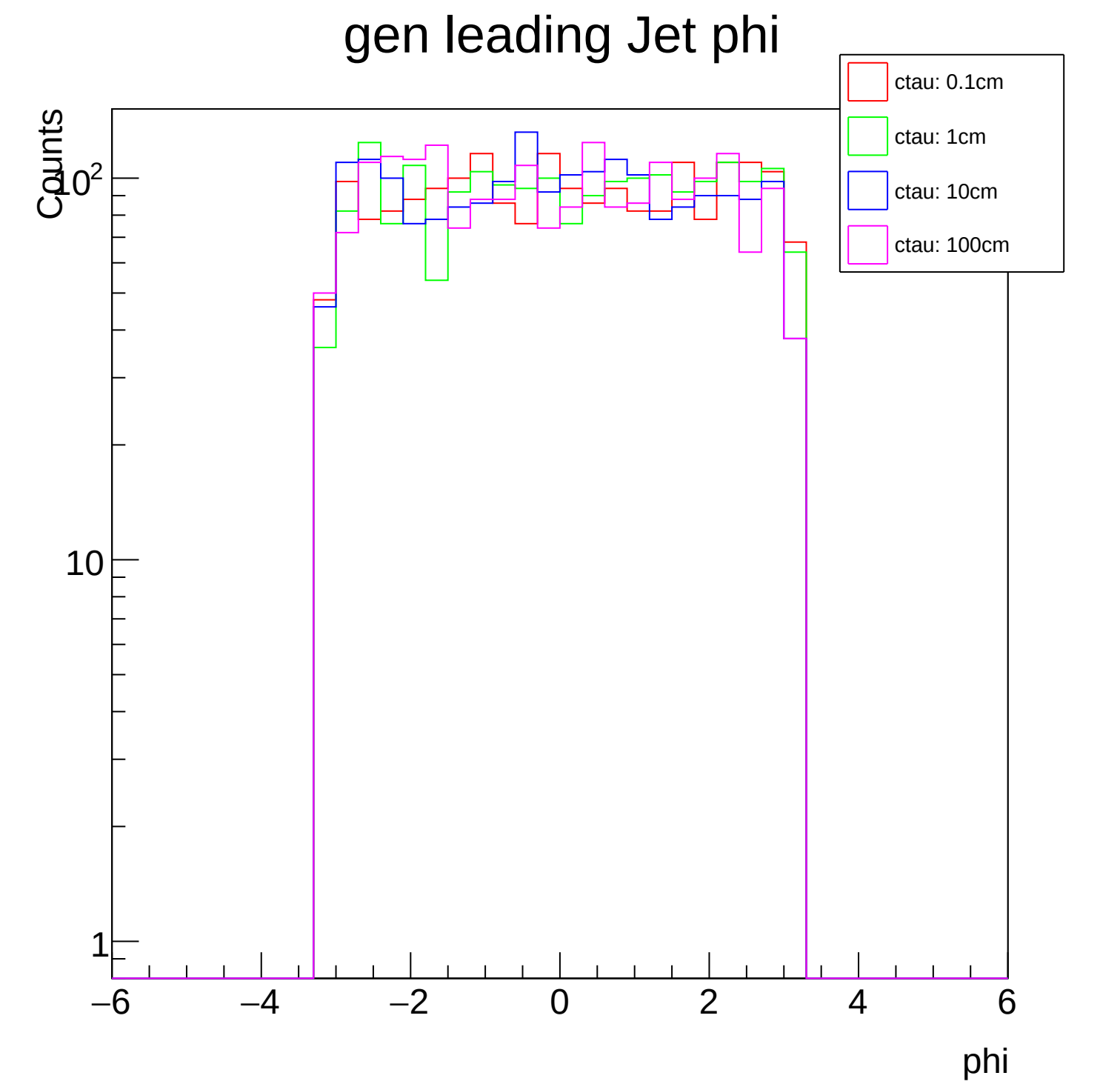

gen leading MET
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
10^2
10
1
0
20
40
60
80
100
120
140
160
180
200
pt [GeV]

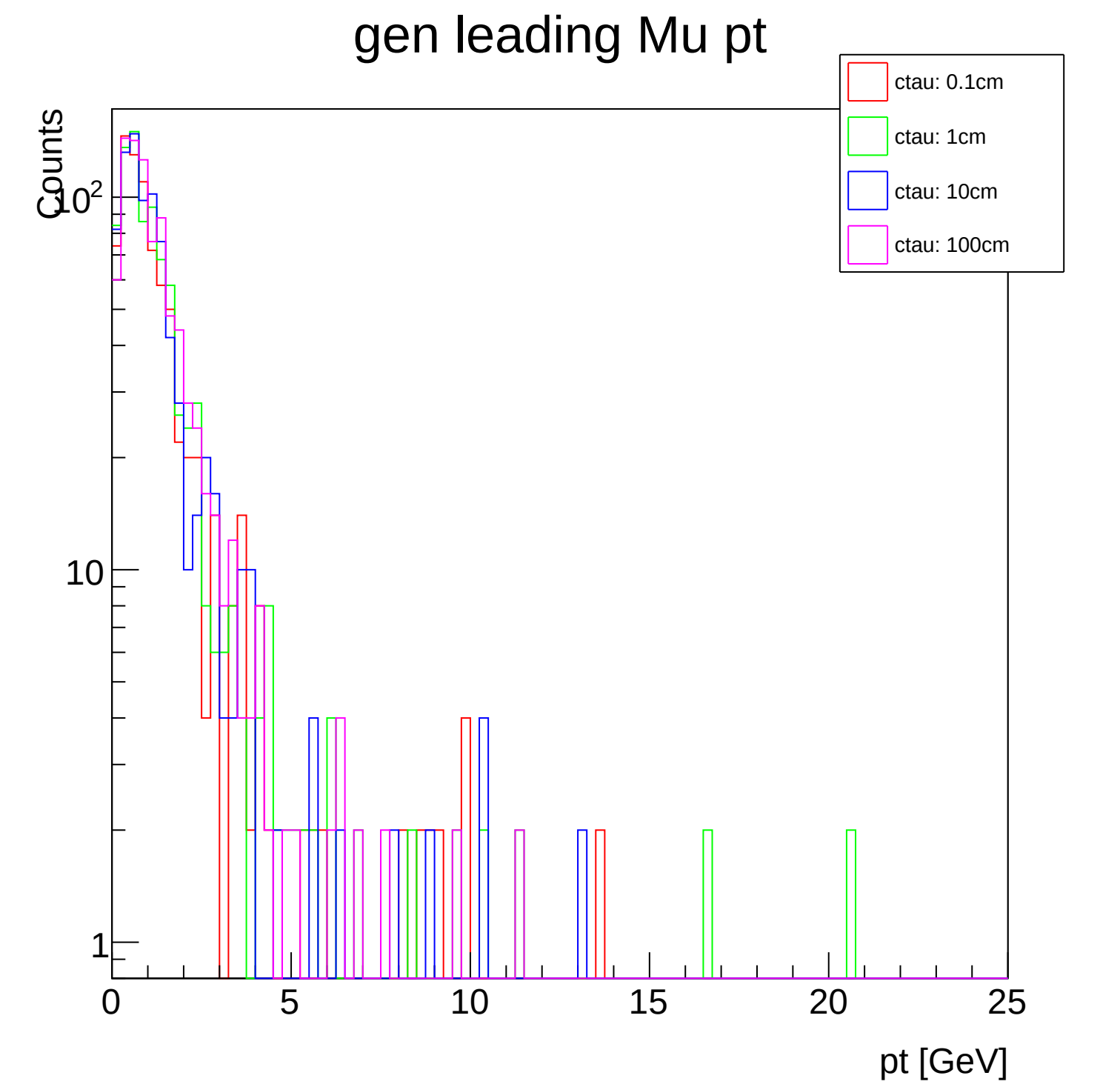

gen leading Met eta
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
10^2
10
1
−6
−4
−2
0
2
4
6
eta

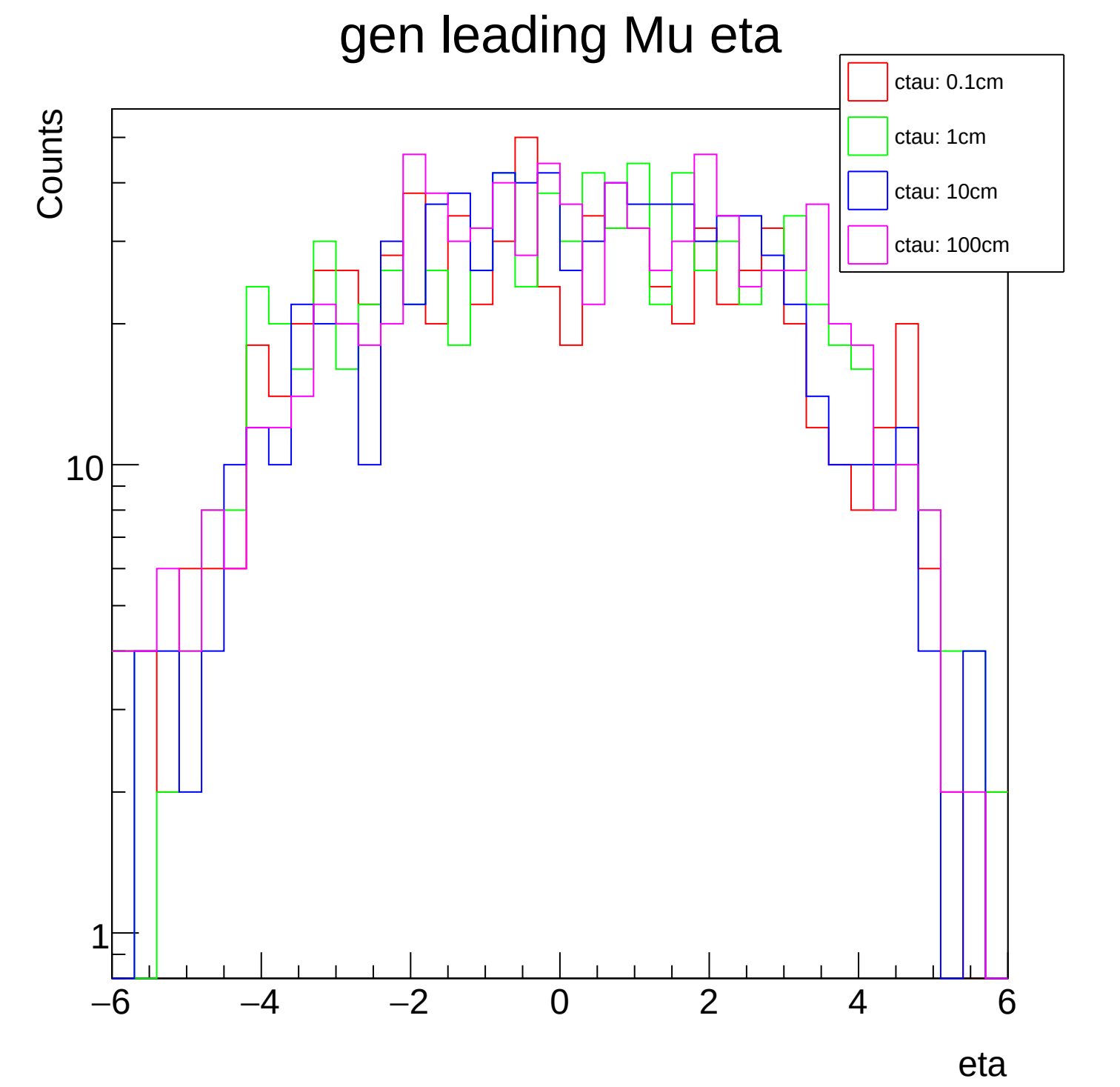

gen leading Met phi
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
10^2
10
1
−6
−4
−2
0
2
4
6
phi

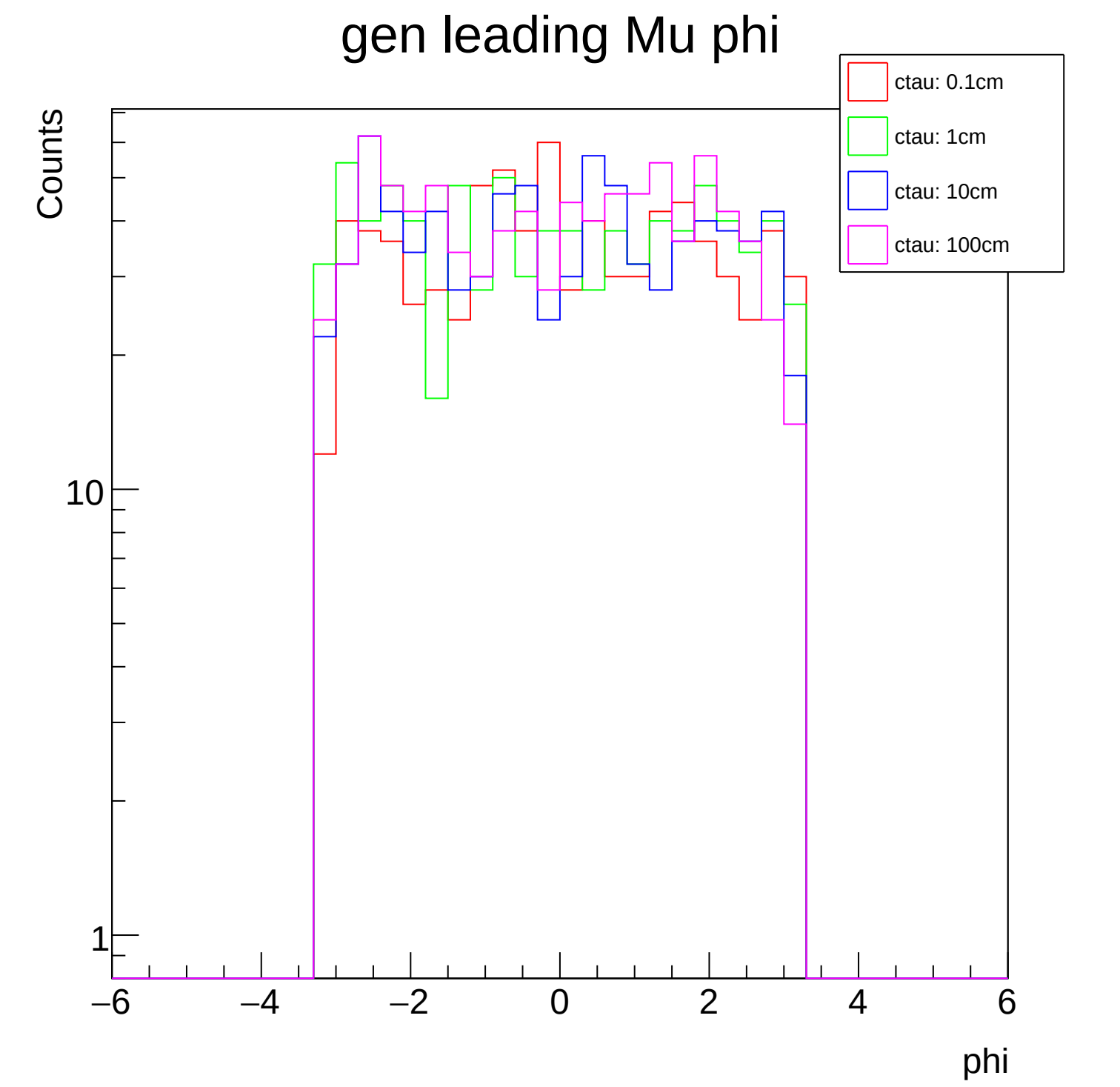

gen leading Jet pt
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
10^2
10
1
0
20
40
60
80
100
120
140
160
180
200
pt [GeV]

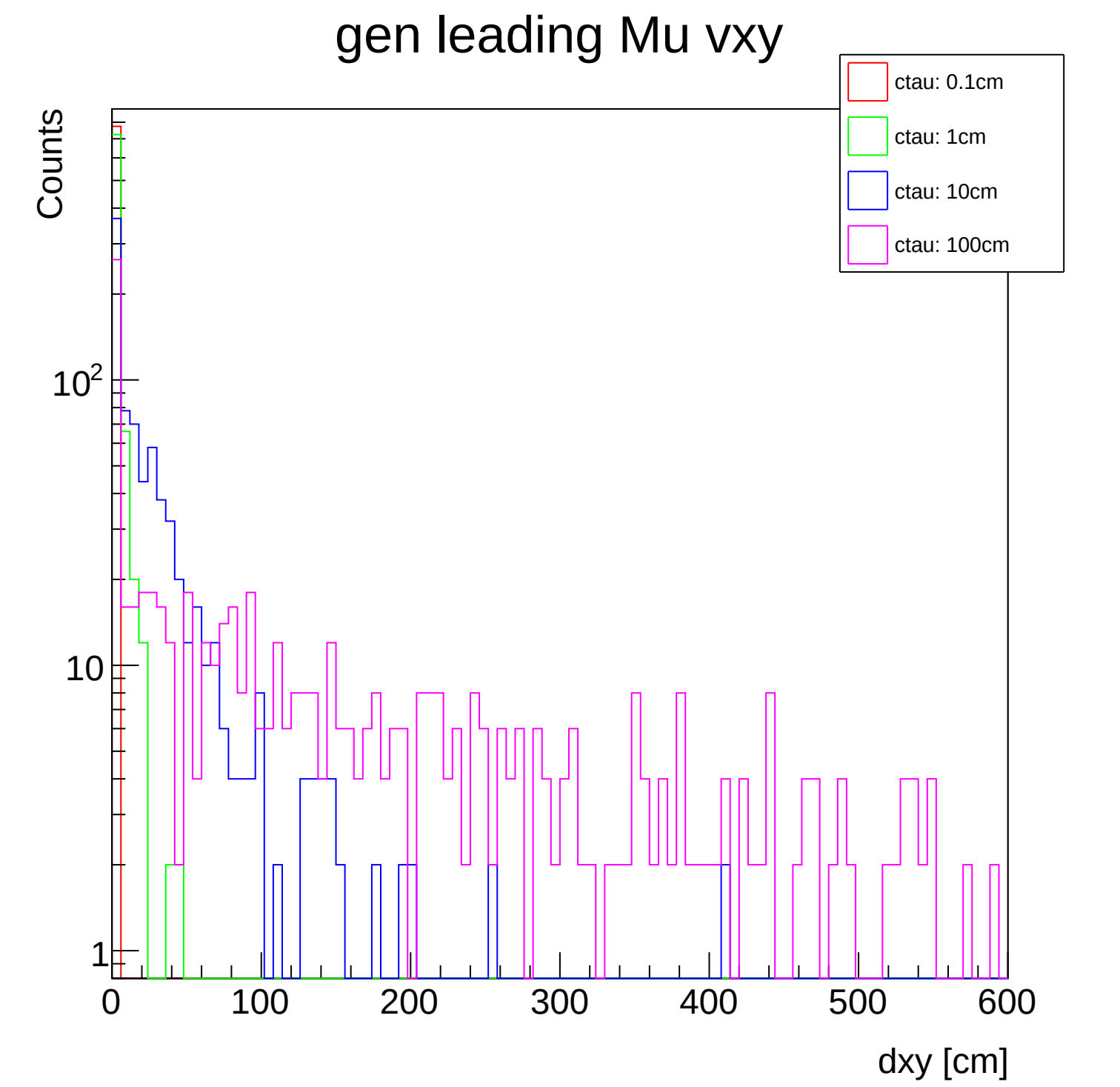

gen leading Jet eta
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
10^2
10
1
−6
−4
−2
0
2
4
6
eta

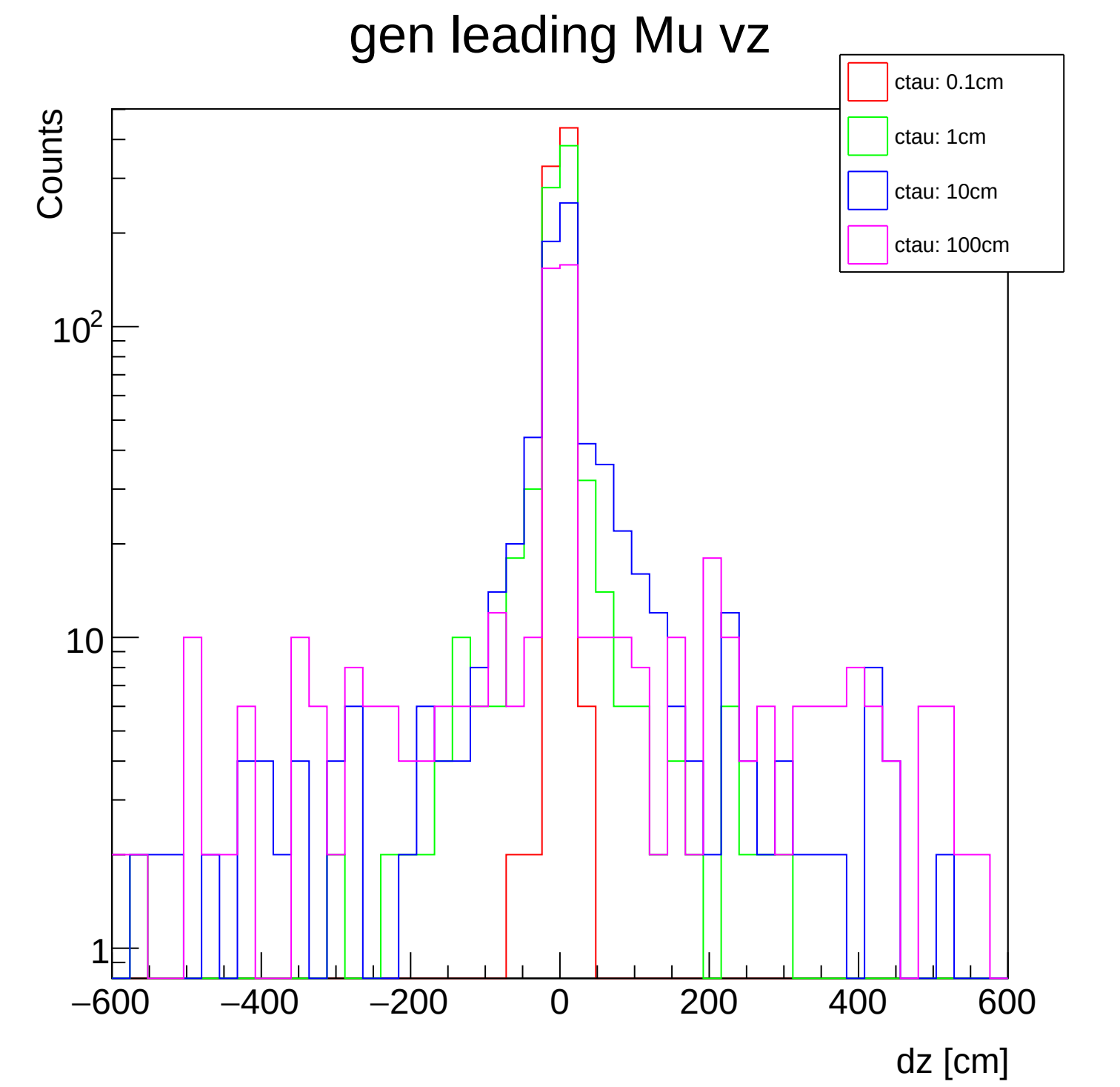

gen leading Jet phi
Counts
10^2
10
1
–6
–4
–2
0
2
4
6
phi
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm

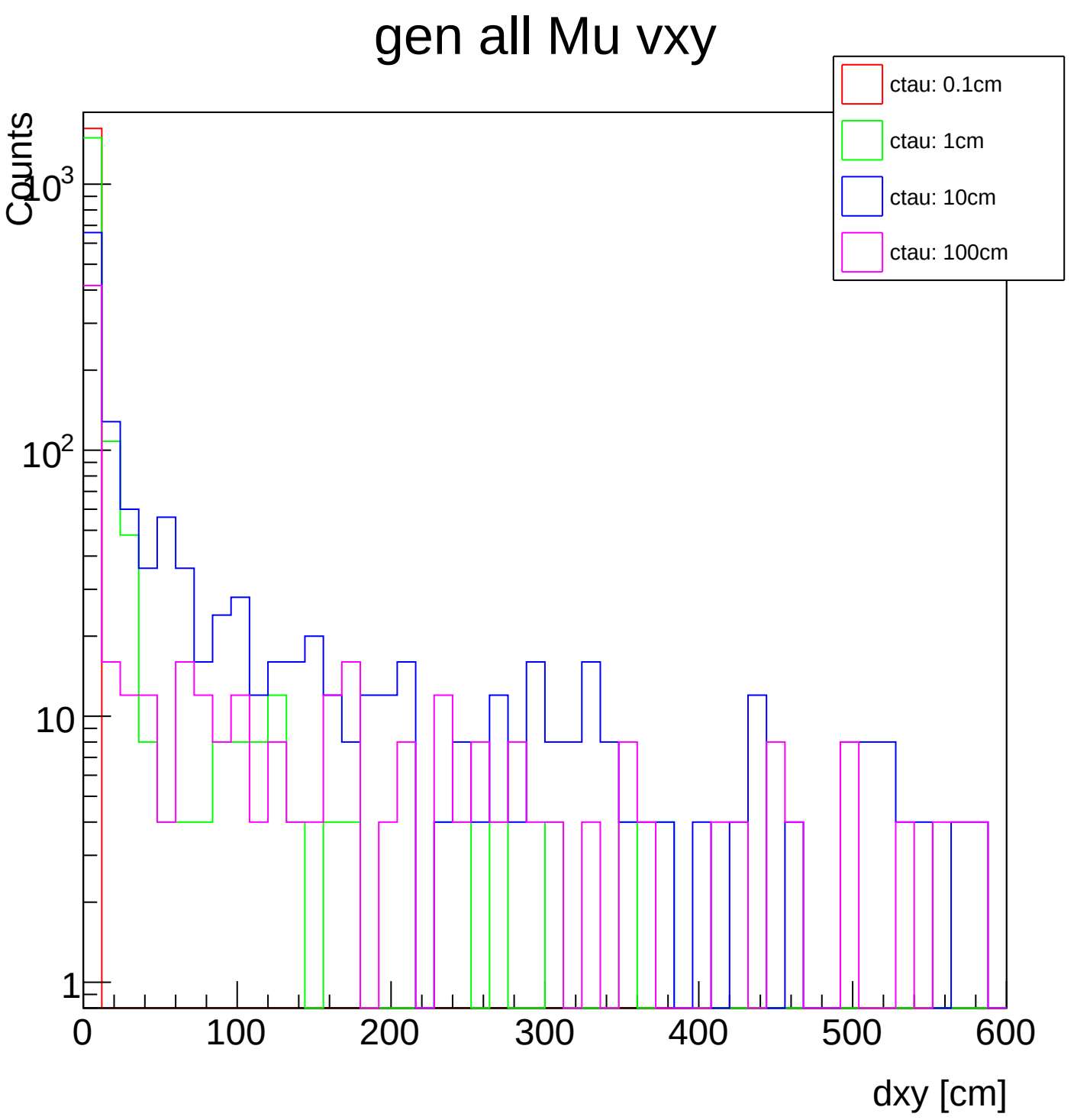

gen leading Mu pt
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
10^2
10
1
0
5
10
15
20
25
pt [GeV]

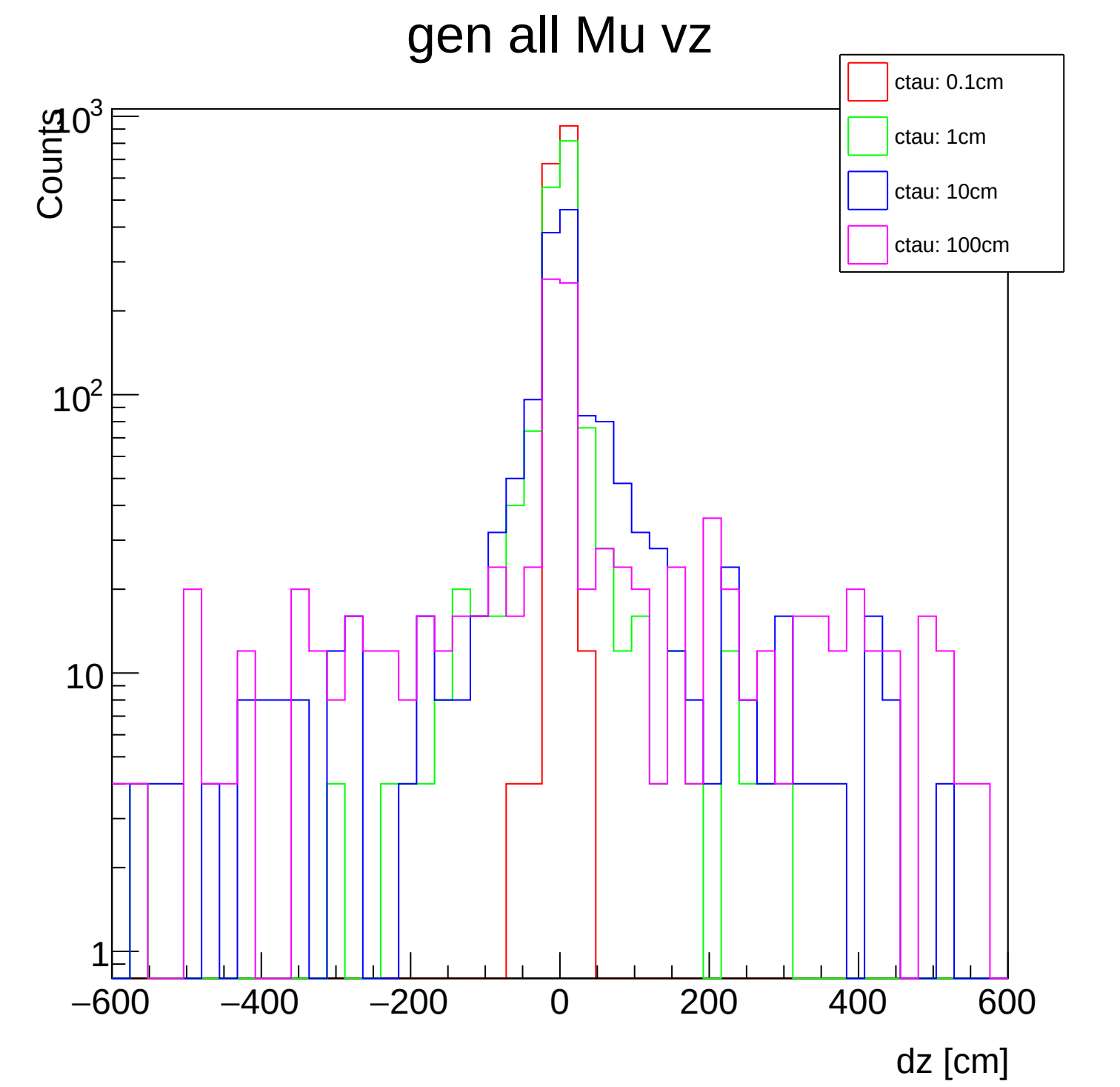

gen leading Mu eta
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
10
1
–6
–4
–2
0
2
4
6
eta

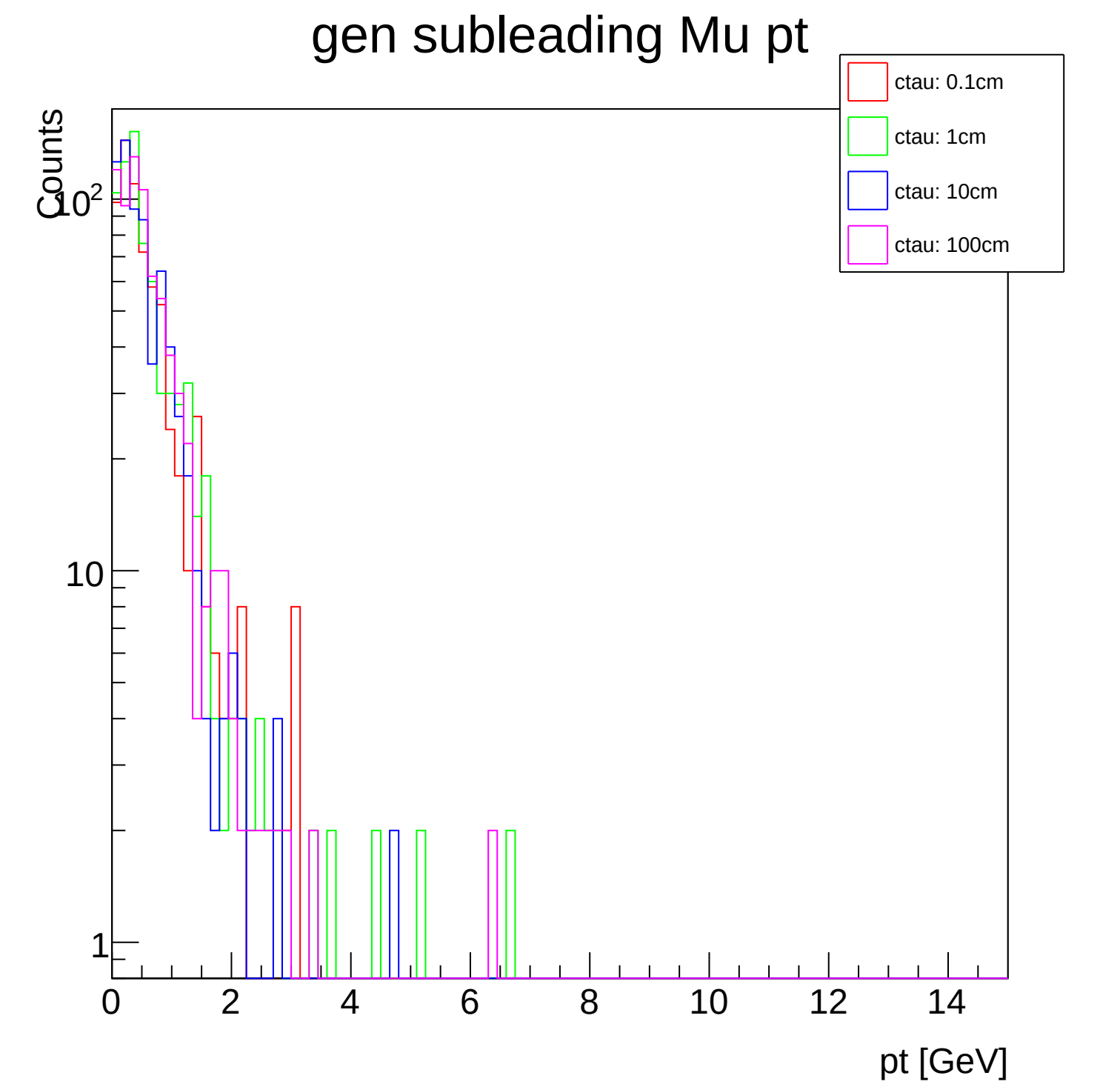

gen leading Mu phi
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
10
1
–6
–4
–2
0
2
4
6
phi

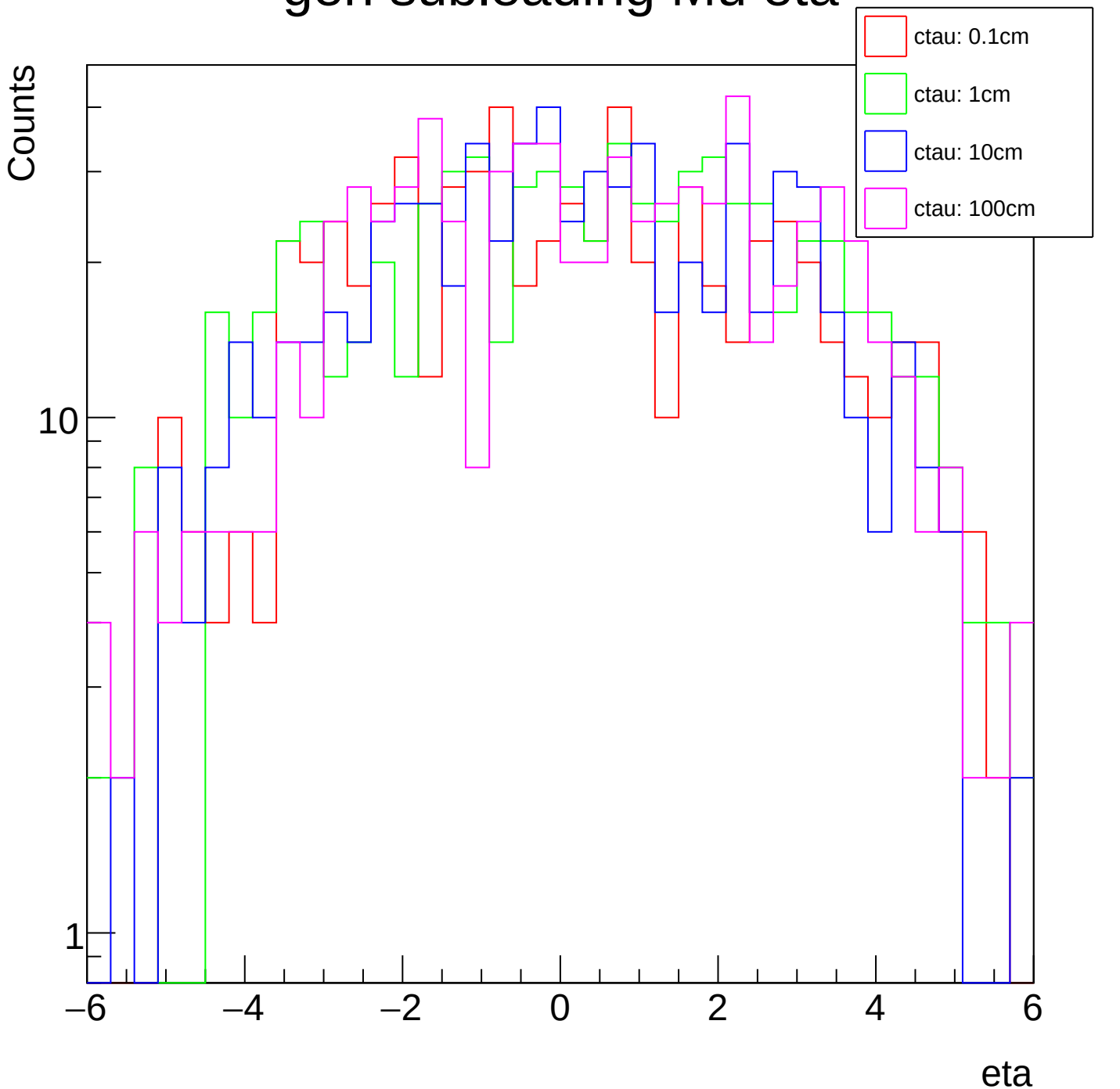

gen leading Mu vxy
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
10^2
10
1
0
100
200
300
400
500
600
dxy [cm]

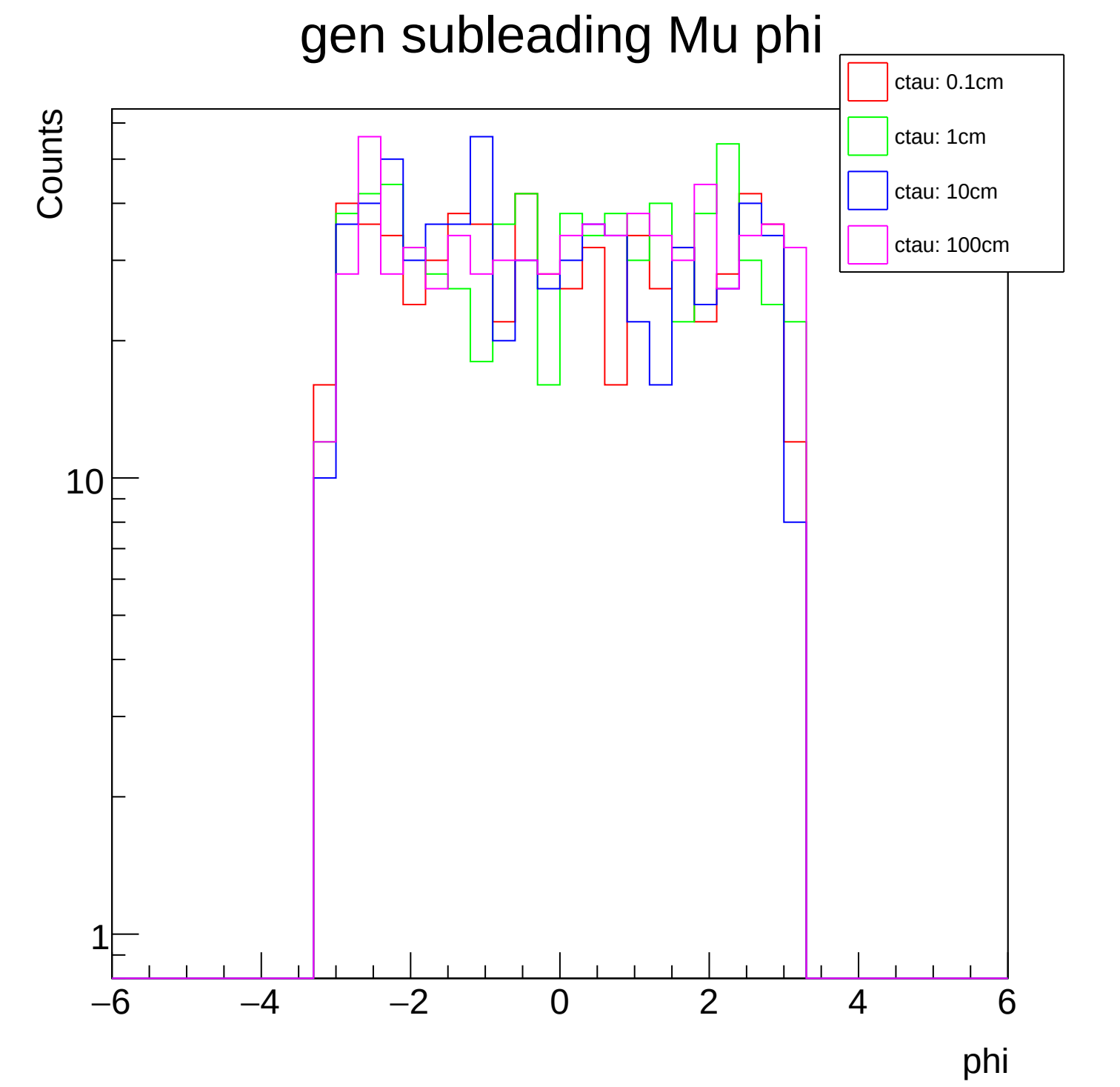

gen leading Mu vz
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
10^2
10
1
−600
−400
−200
0
200
400
600
dz [cm]

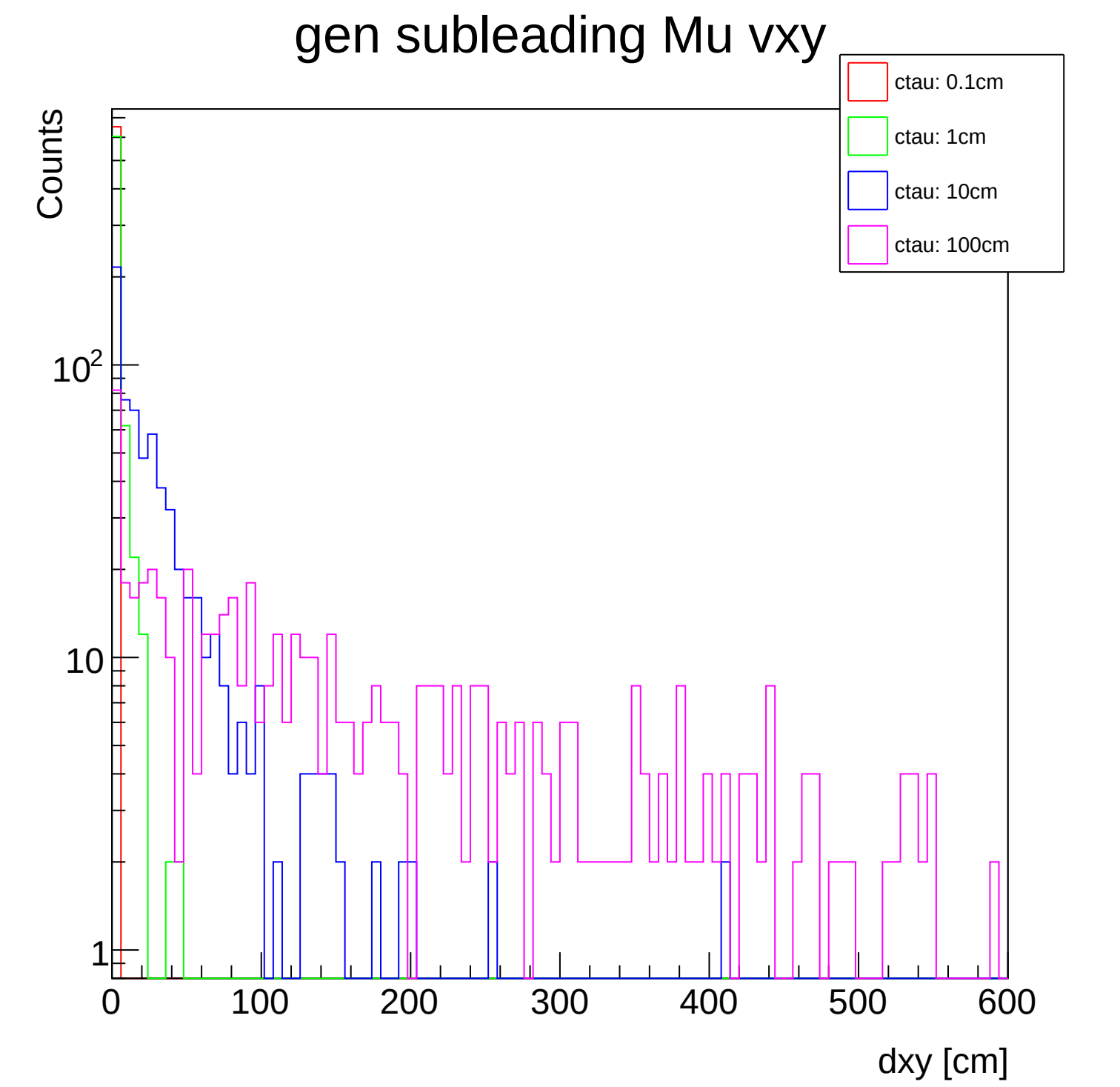

gen all Mu vxy
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
10^3
10^2
10
1
0
100
200
300
400
500
600
dxy [cm]

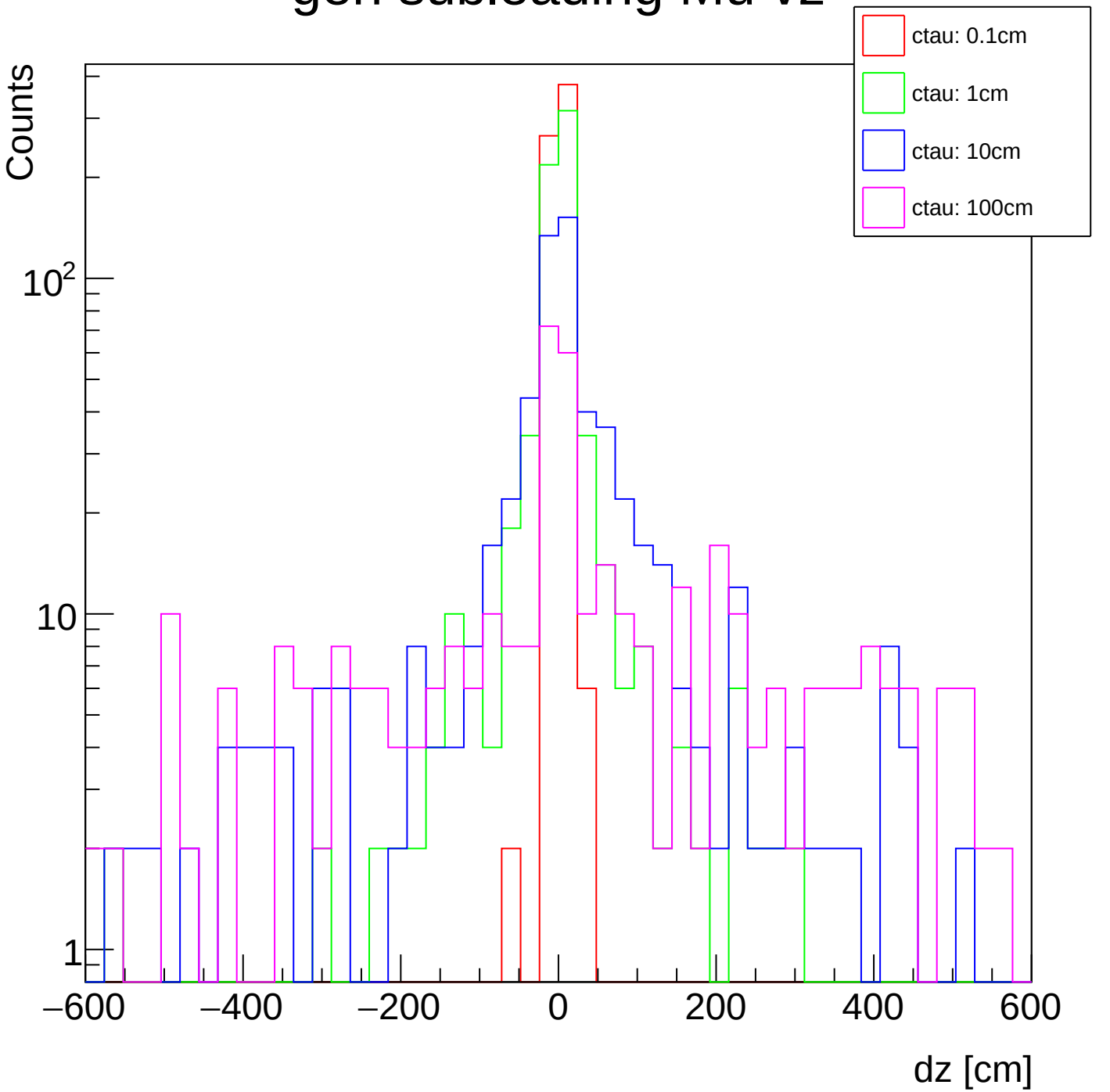

gen all Mu vz
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
10^3
10^2
10
1
−600
−400
−200
0
200
400
600
dz [cm]

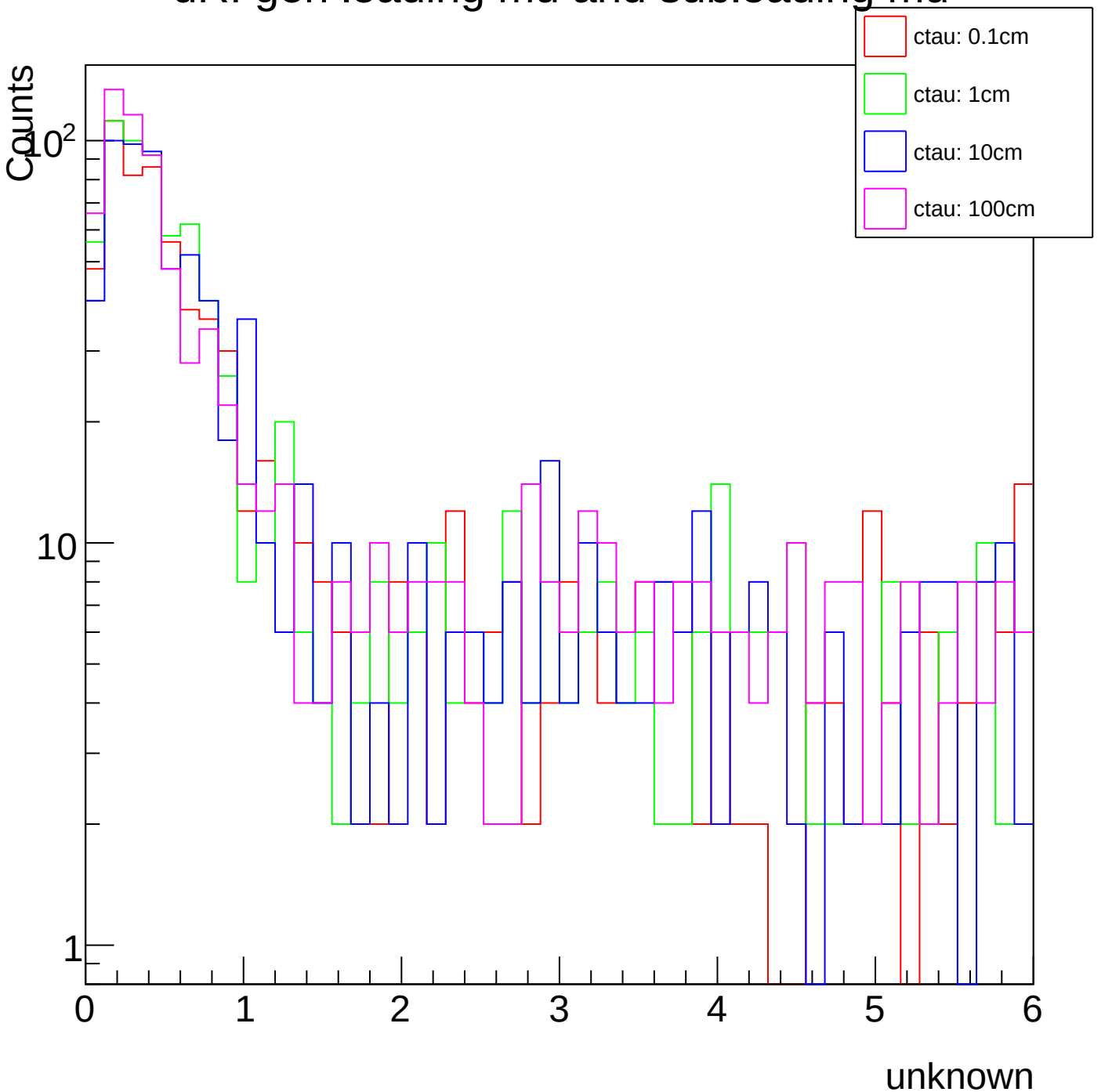

gen subleading Mu pt
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
10^2
10
1
0
2
4
6
8
10
12
14
pt [GeV]

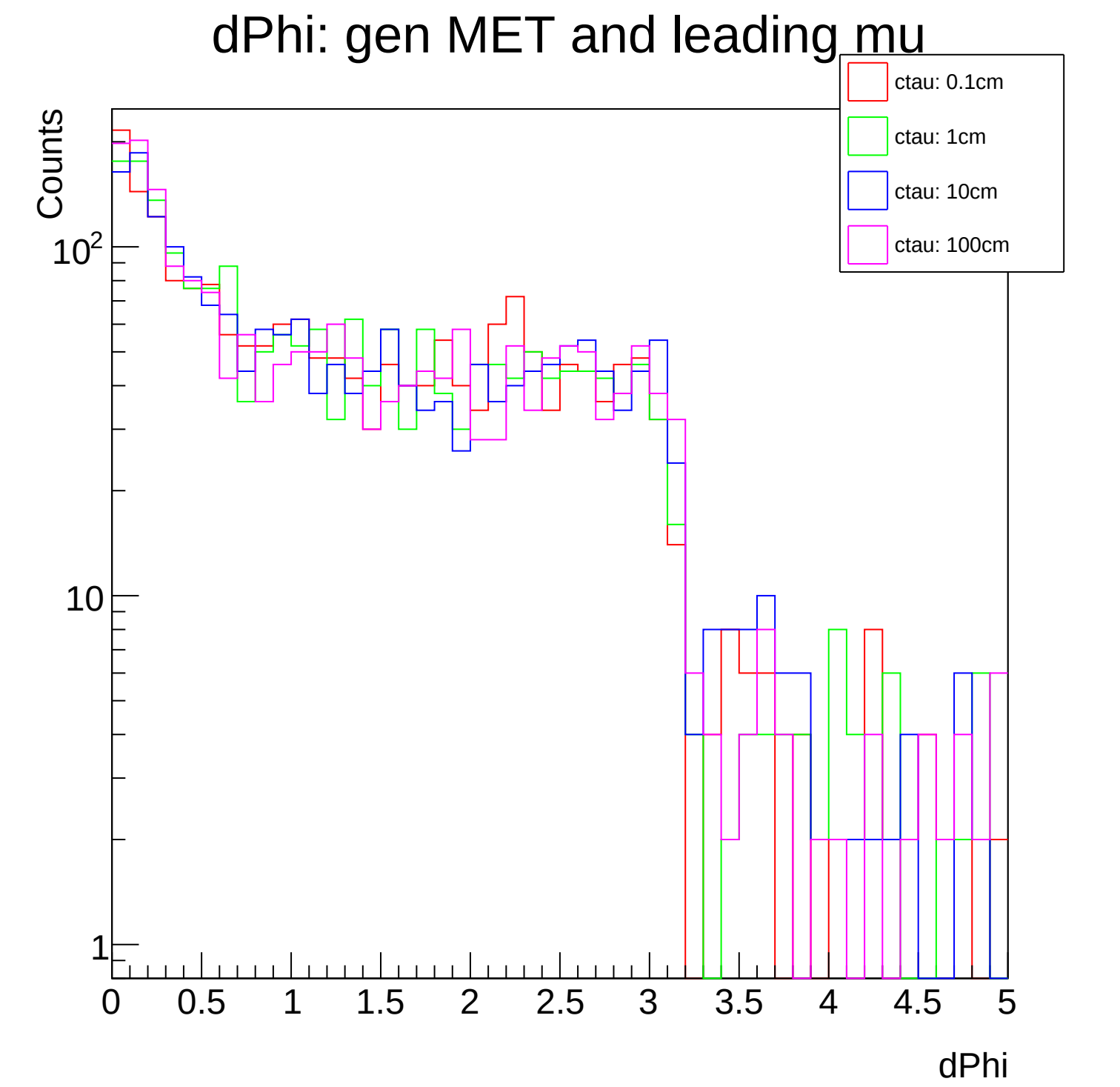

gen subleading Mu eta
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
10
1
–6
–4
–2
0
2
4
6
eta

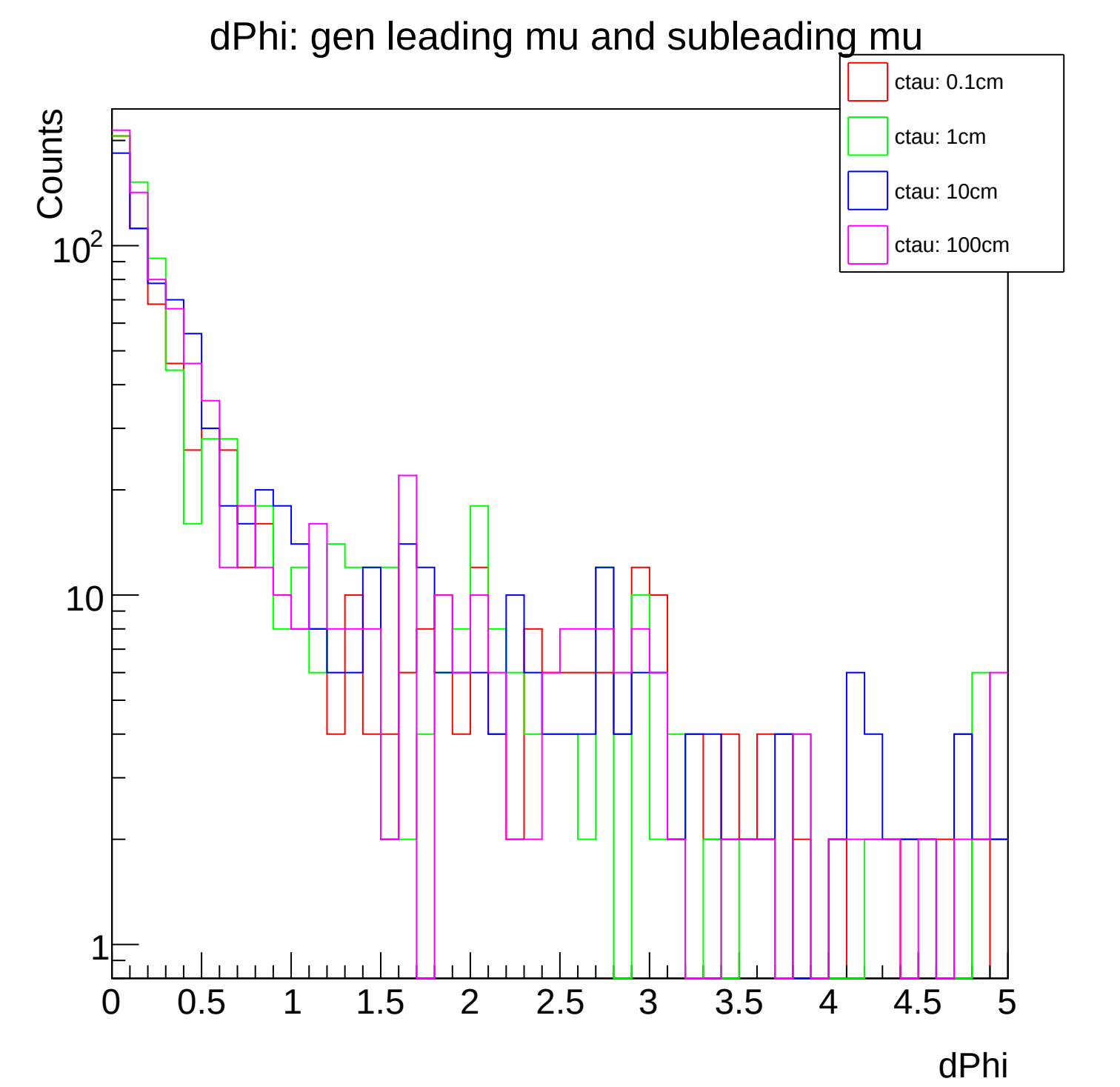

gen subleading Mu phi
Counts
10
1
−6
−4
−2
0
2
4
6
phi
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm

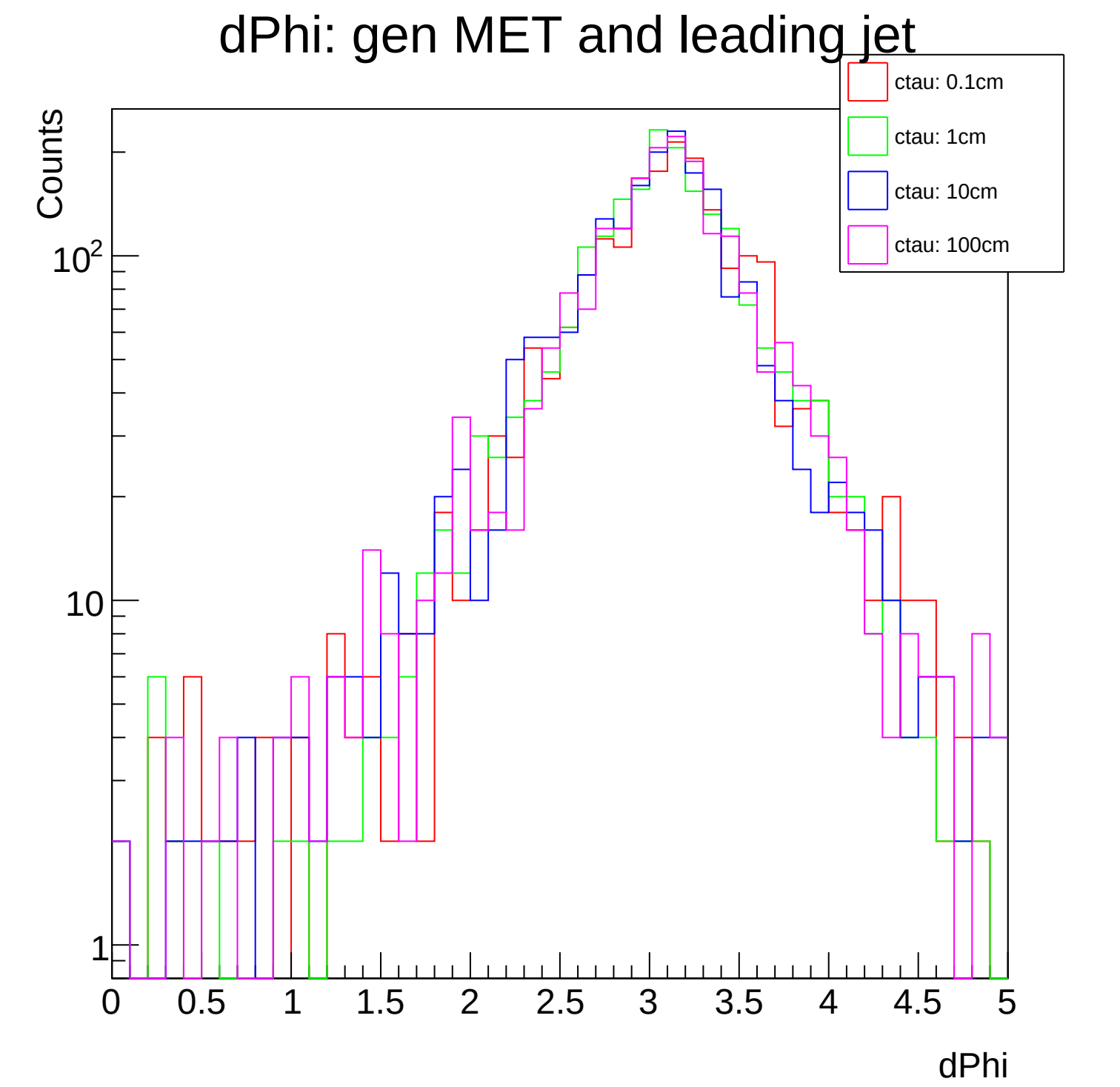

gen subleading Mu vxy
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
10^2
10
1
0
100
200
300
400
500
600
dxy [cm]

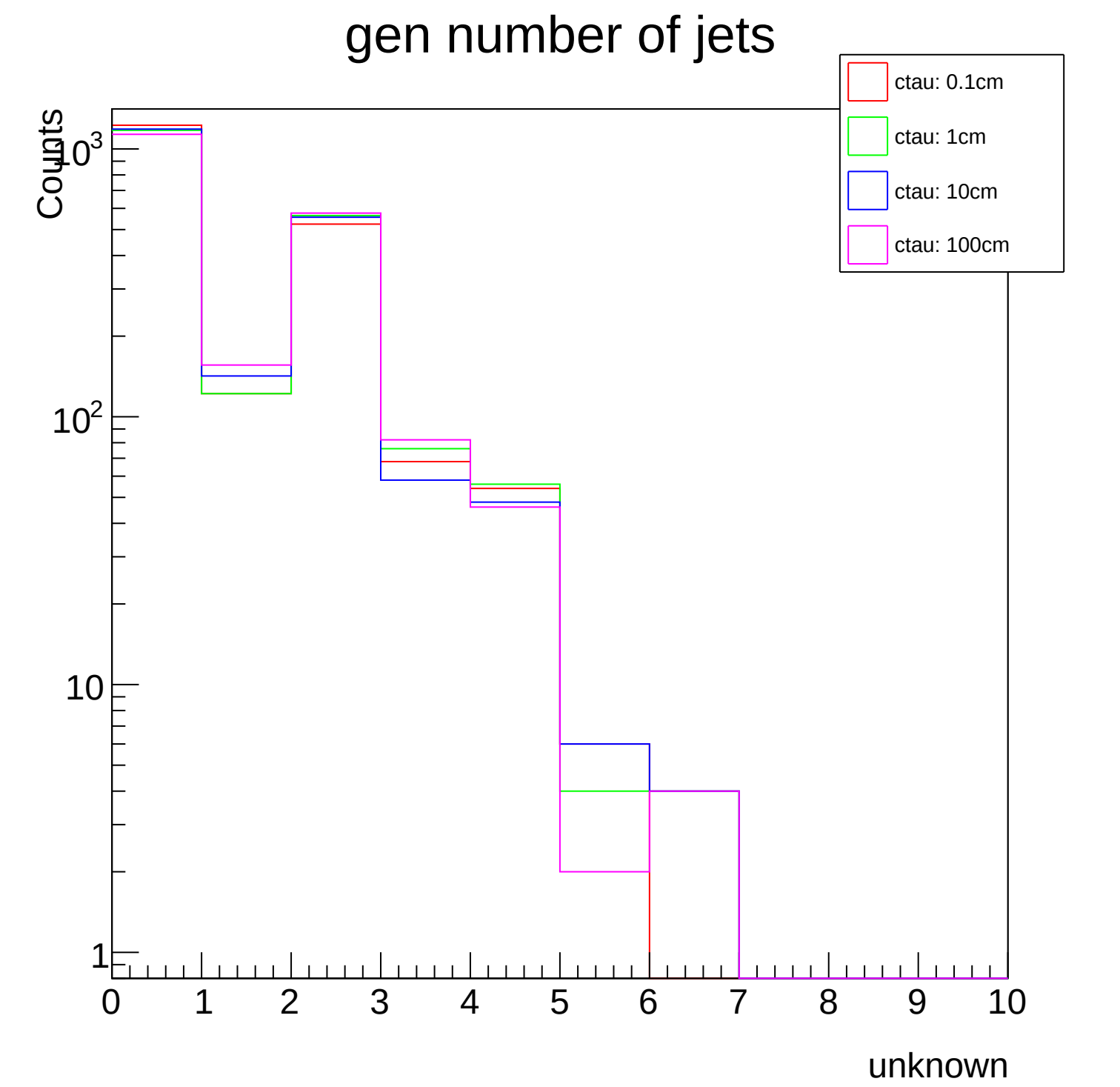

gen subleading Mu vz
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
10^2
10
1
−600
−400
−200
0
200
400
600
dz [cm]

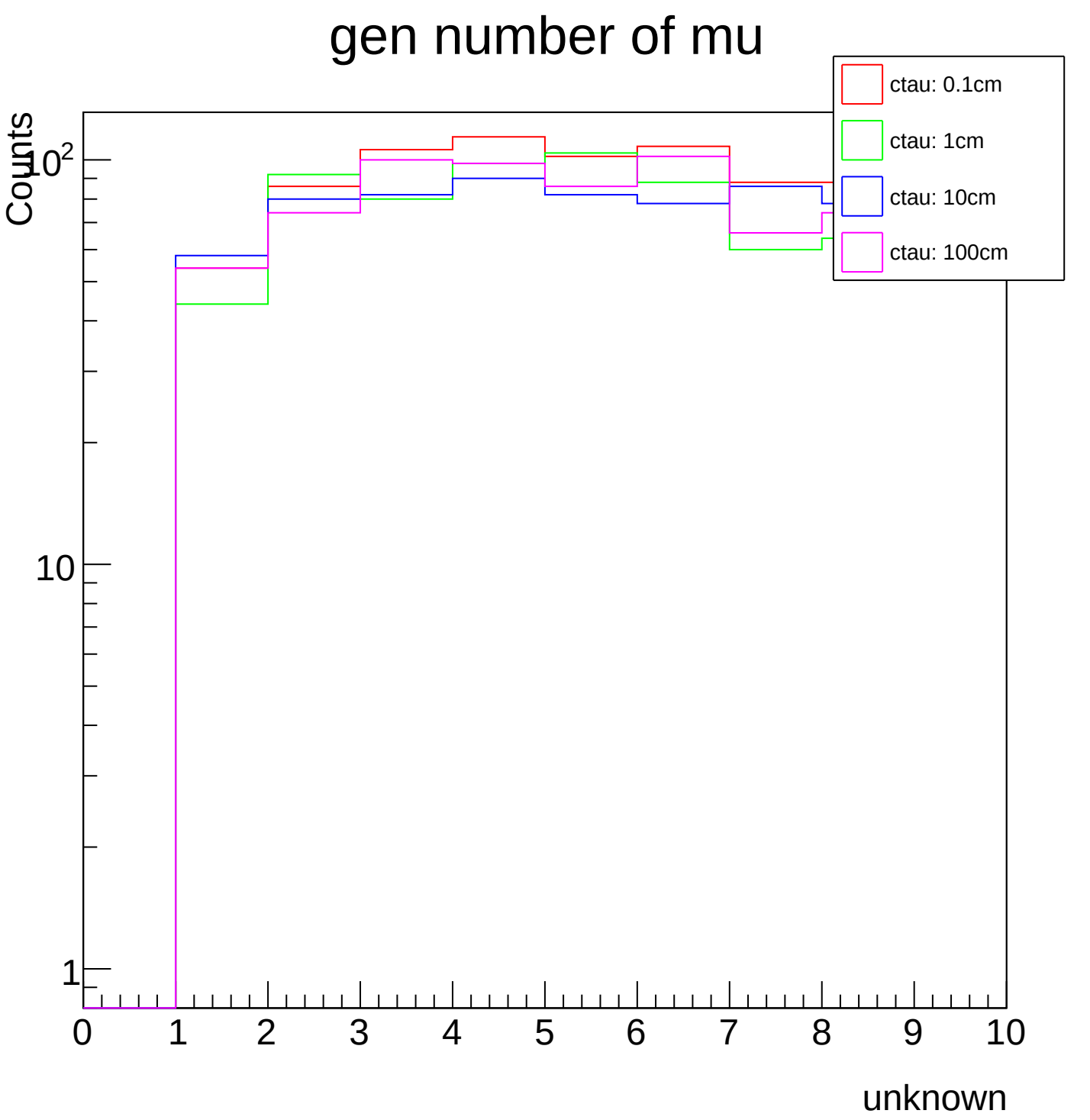

dR: gen leading mu and subleading mu
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
10^2
10
1
0
1
2
3
4
5
6
unknown

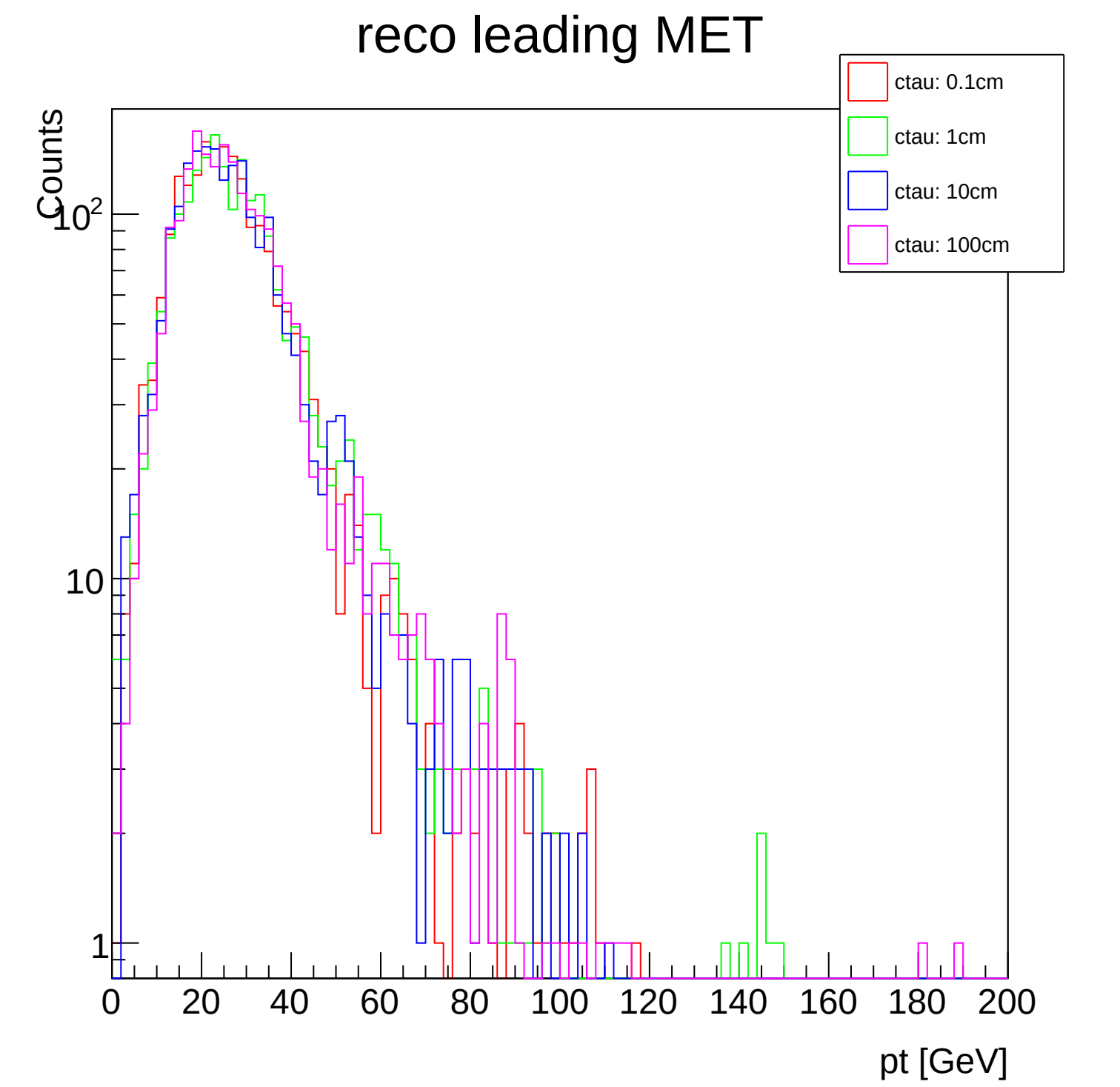

dPhi: gen MET and leading mu
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
10^2
10
1
0
0.5
1
1.5
2
2.5
3
3.5
4
4.5
5
dPhi

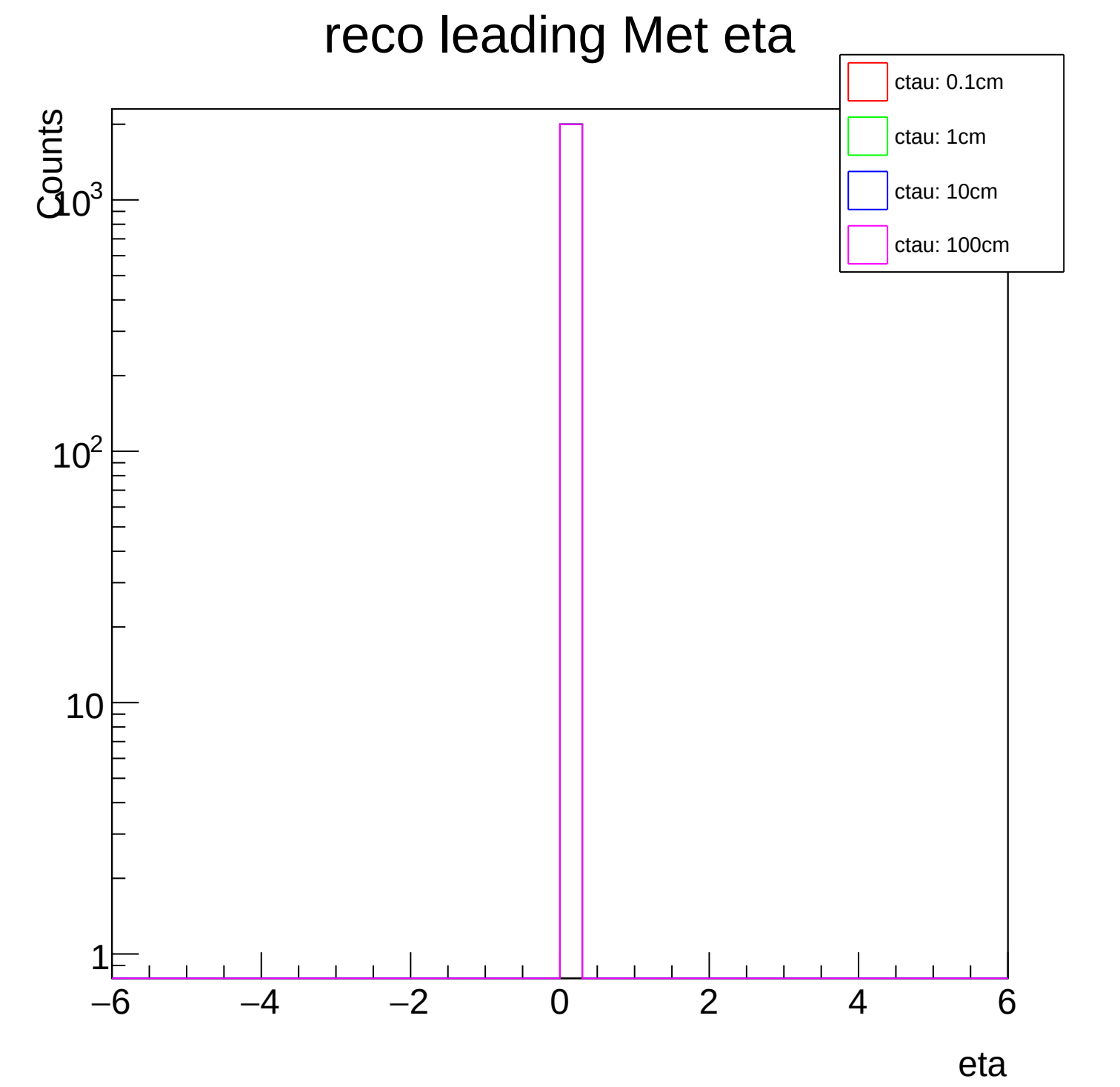

dPhi: gen leading mu and subleading mu
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
10^2
10
1
0
0.5
1
1.5
2
2.5
3
3.5
4
4.5
5
dPhi

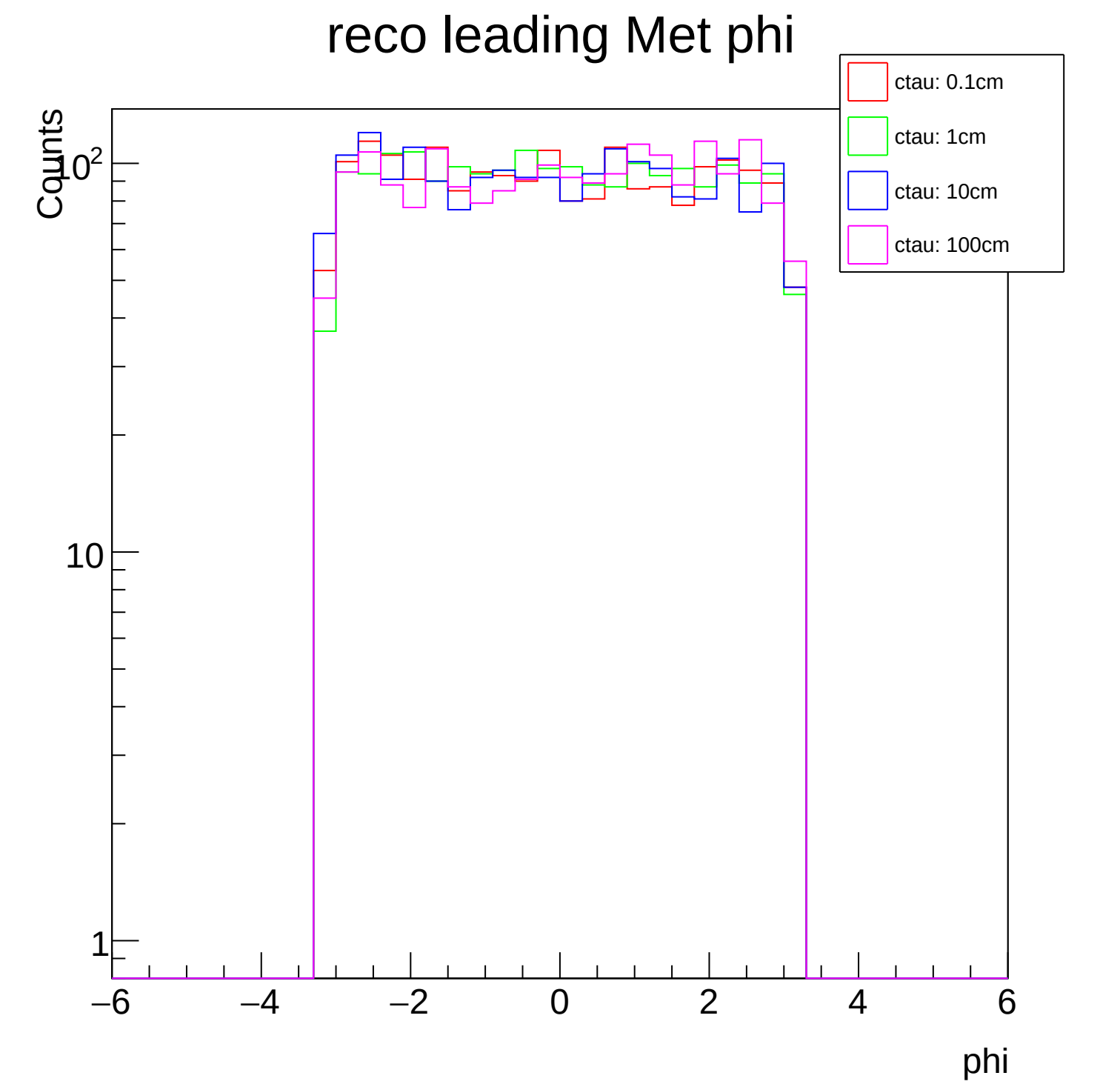

dPhi: gen MET and leading jet
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
10^2
10
1
0
0.5
1
1.5
2
2.5
3
3.5
4
4.5
5
dPhi

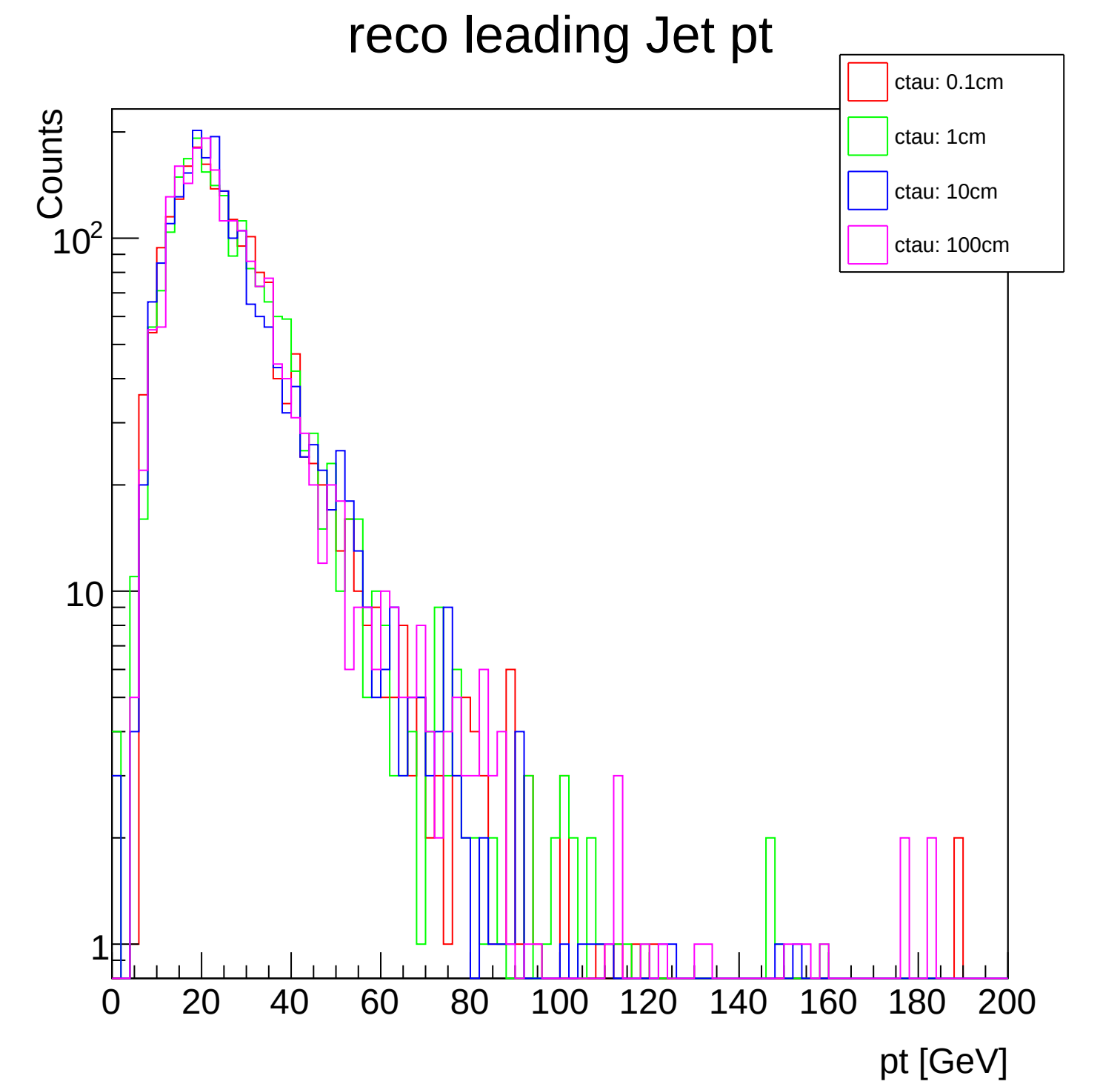

gen number of jets
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
10^3
10^2
10
1
0
1
2
3
4
5
6
7
8
9
10
unknown

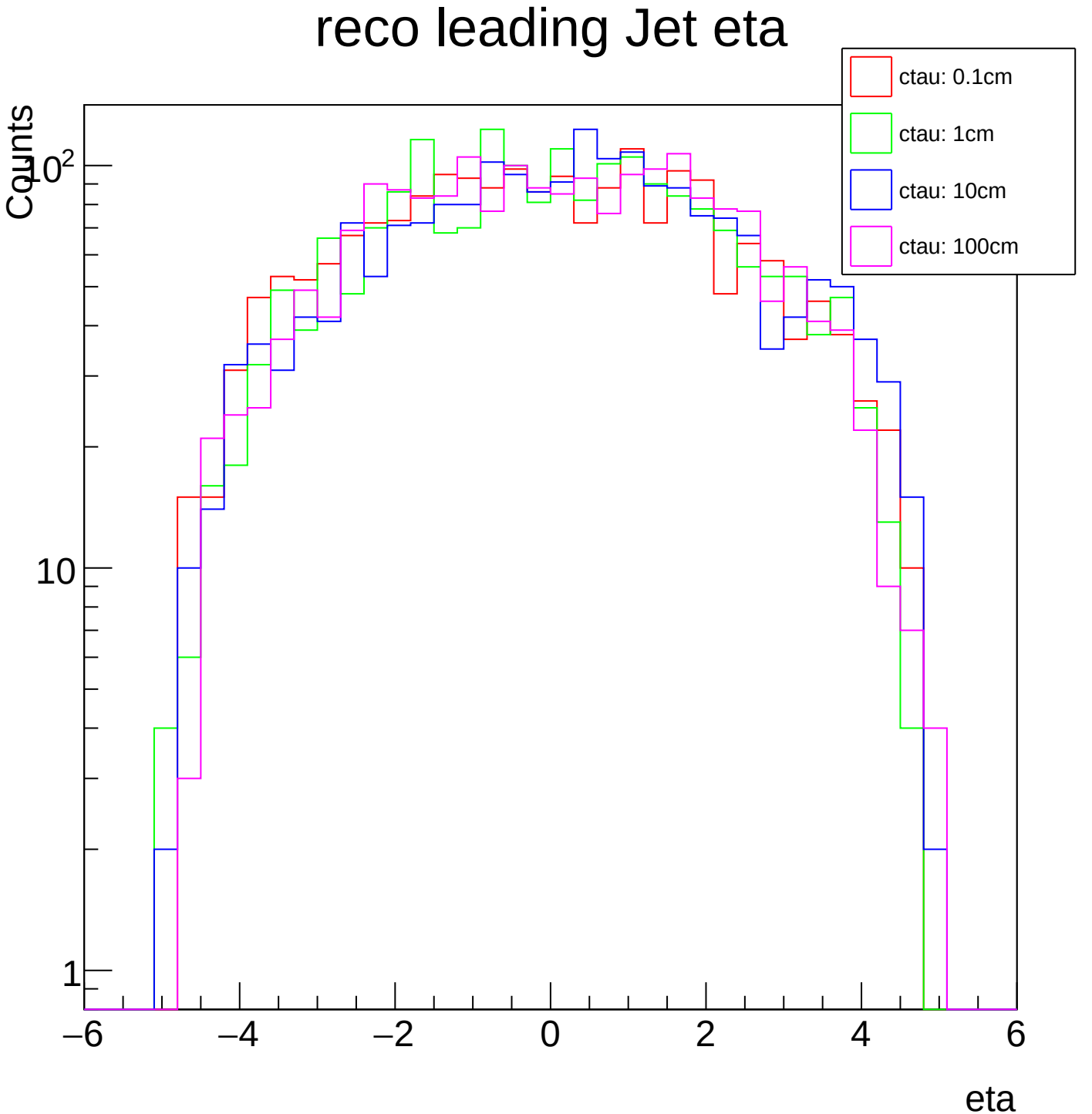

gen number of mu
Counts
10^2
10
1
0
1
2
3
4
5
6
7
8
9
10
unknown
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm

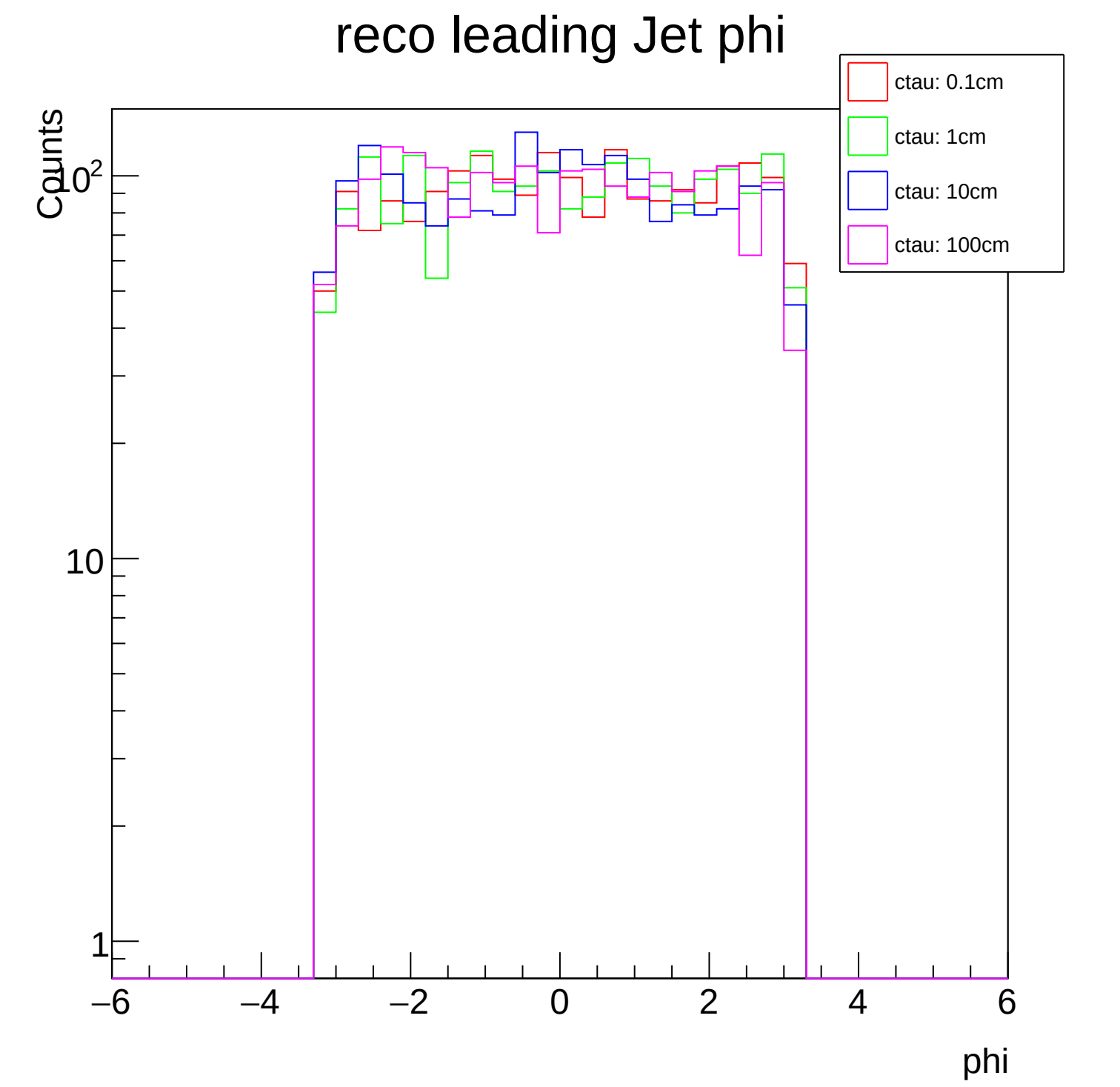

reco leading MET
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
10^2
10
1
0
20
40
60
80
100
120
140
160
180
200
pt [GeV]

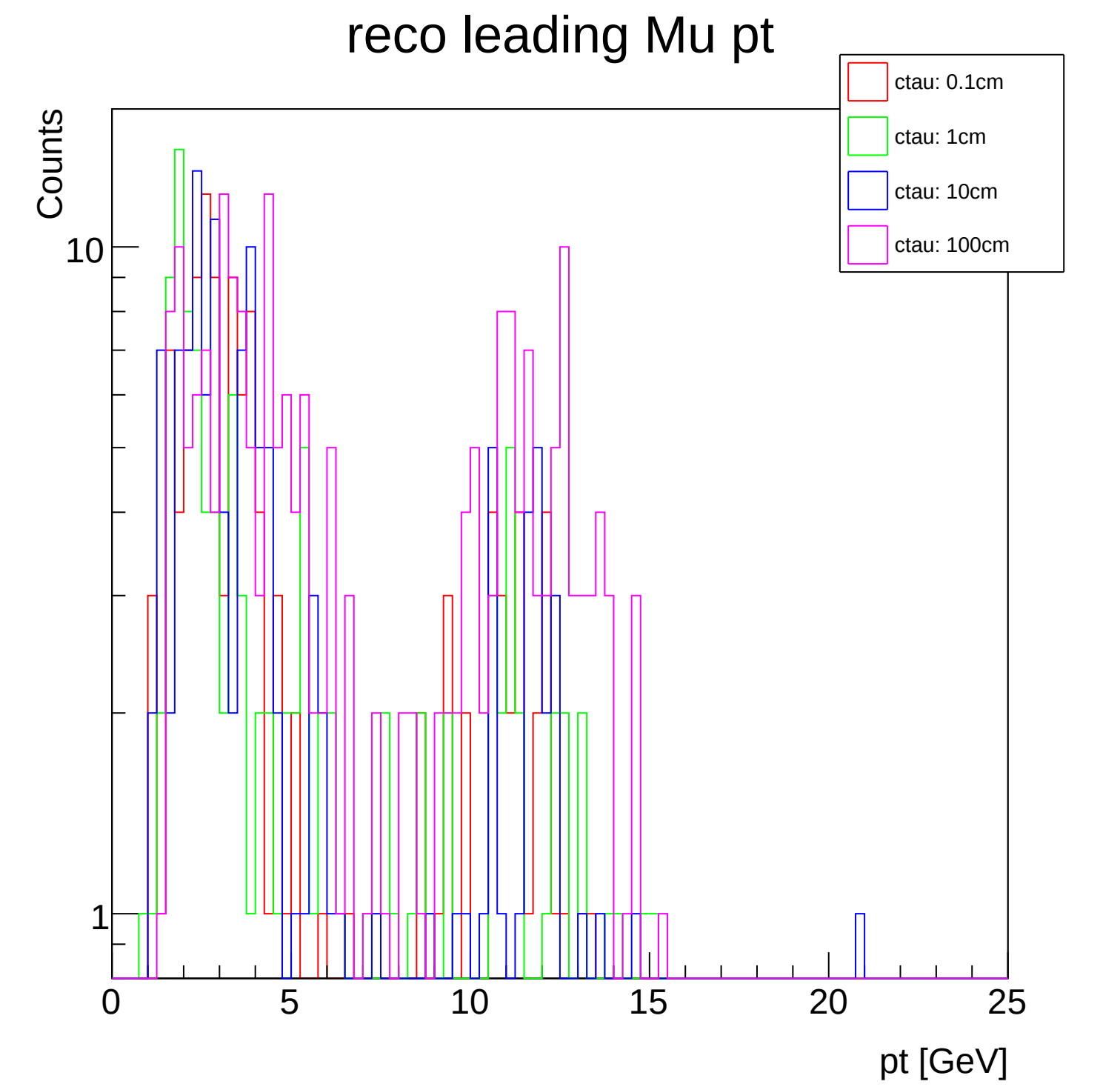

reco leading Met eta
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
10^3
10^2
10
1
–6
–4
–2
0
2
4
6
eta

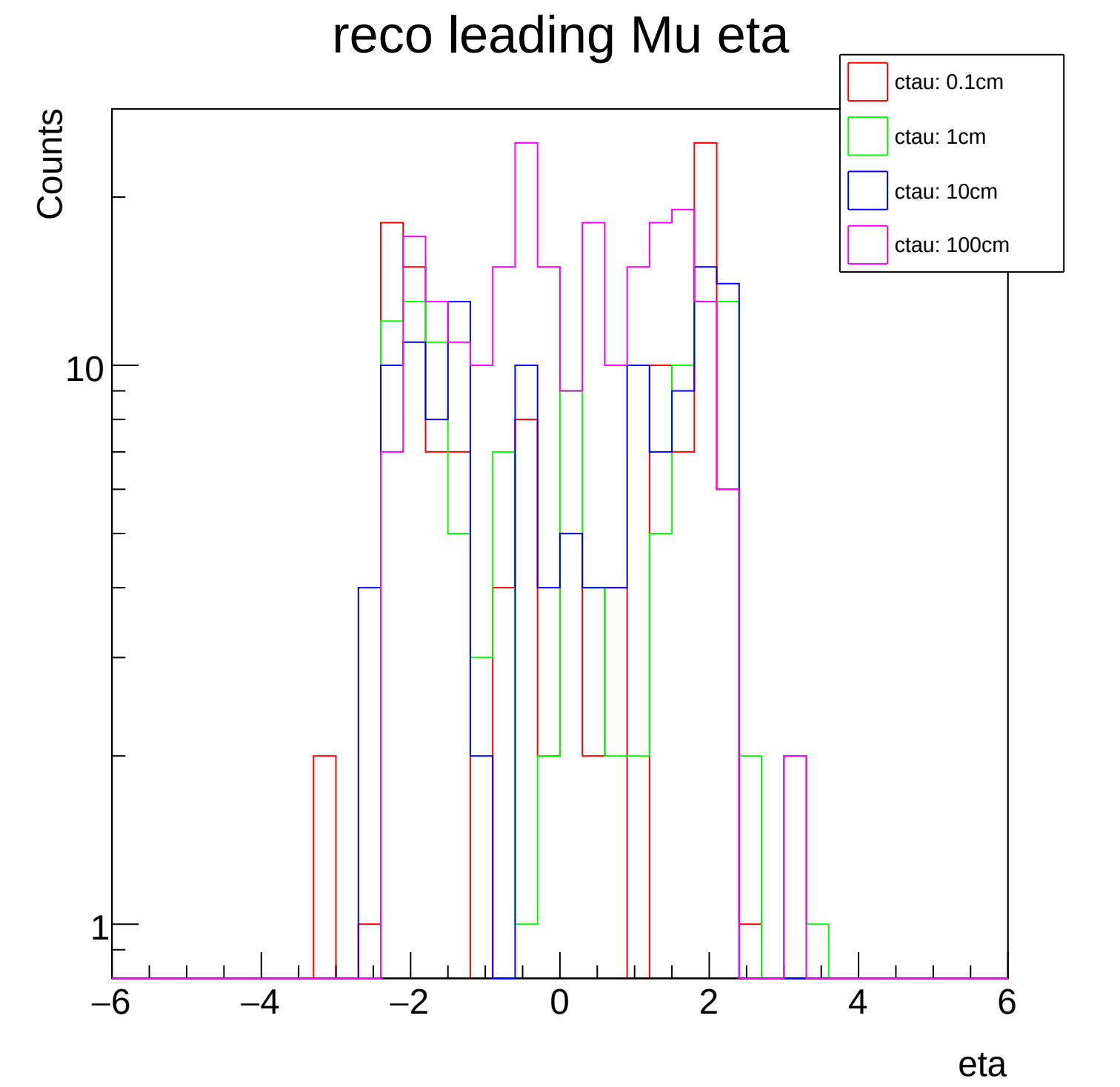

reco leading Met phi
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
10^2
10
1
−6
−4
−2
0
2
4
6
phi

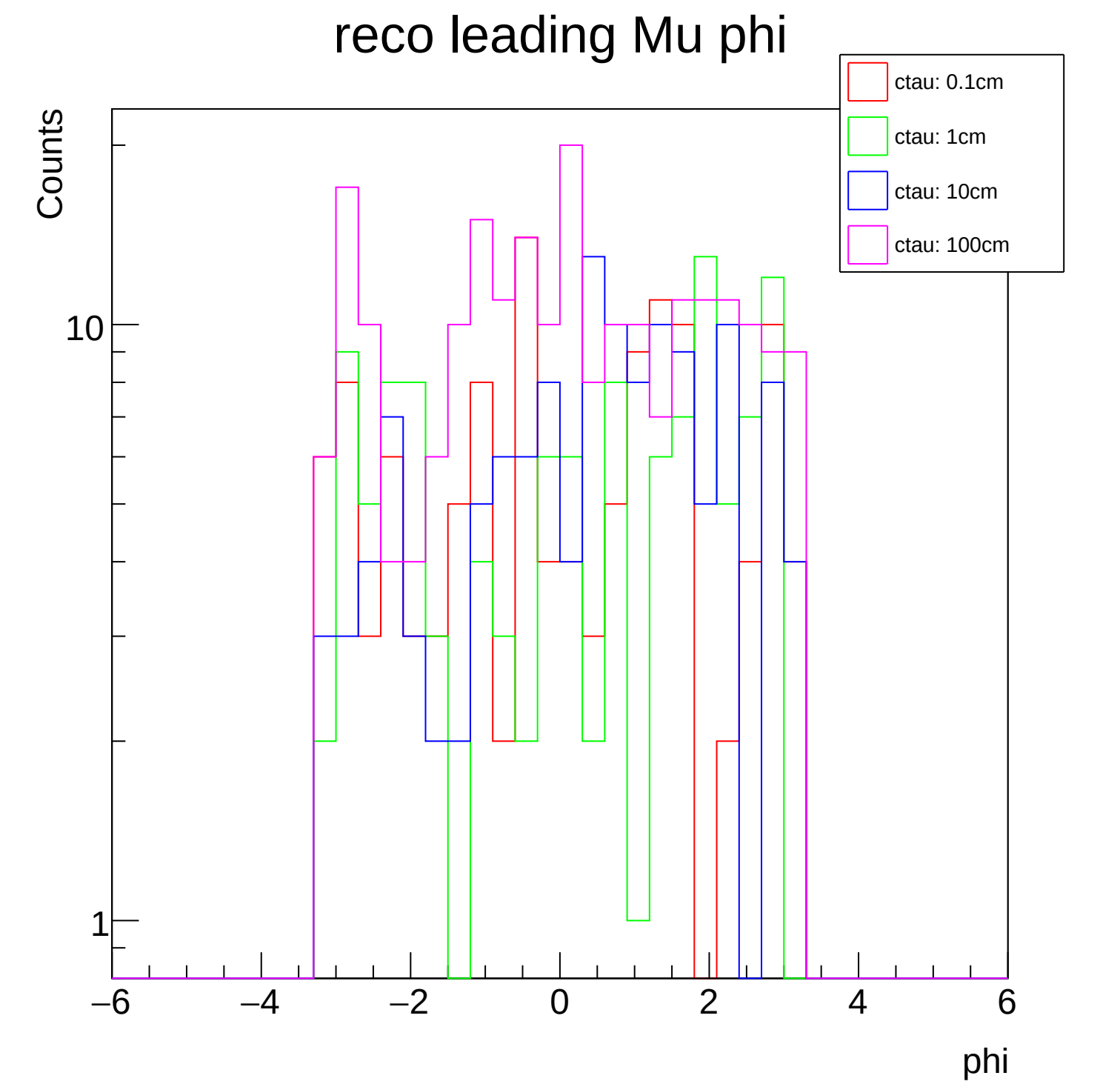

reco leading Jet pt
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
10^2
10
1
0
20
40
60
80
100
120
140
160
180
200
pt [GeV]

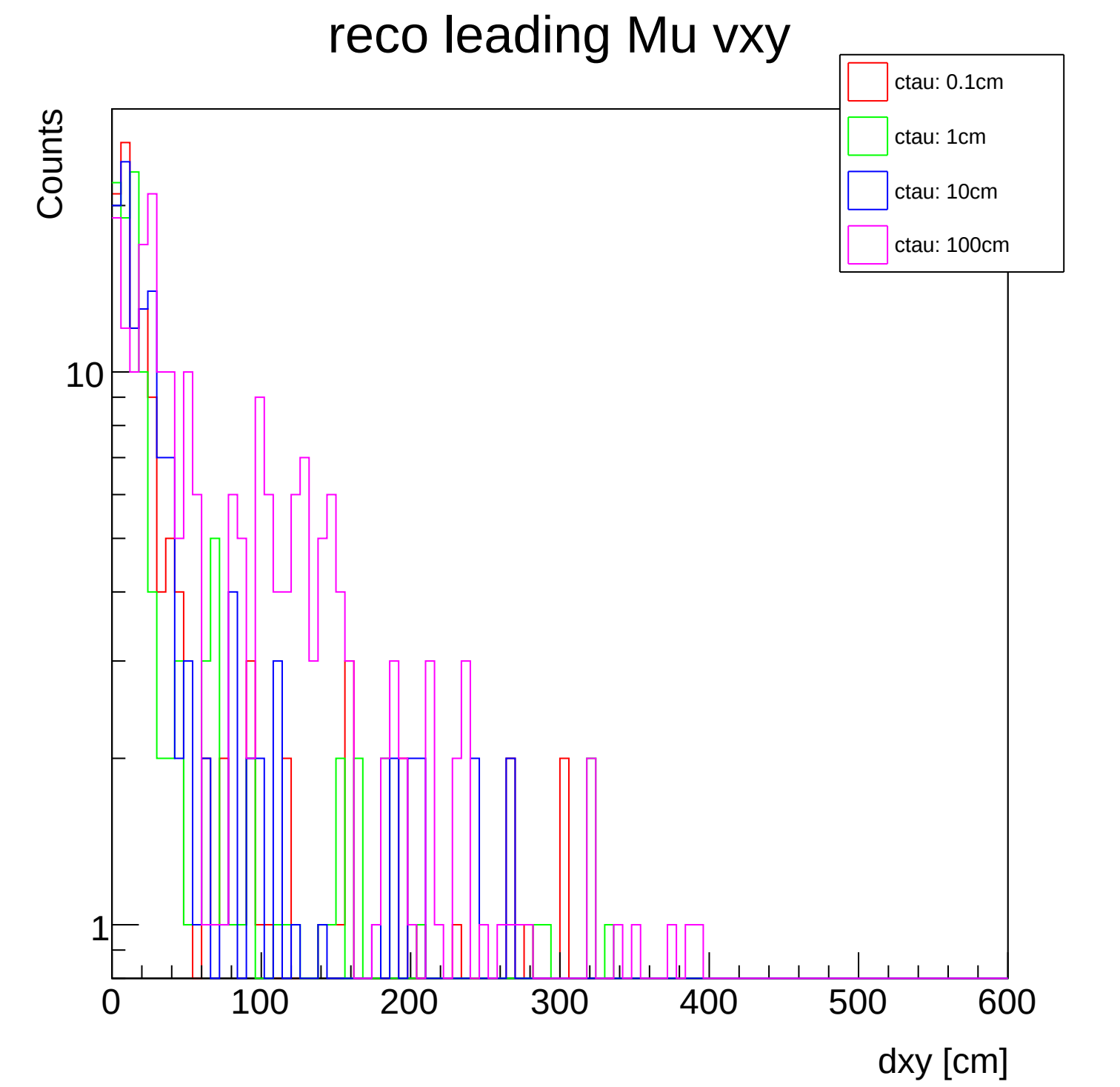

reco leading Jet eta
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
10^2
10
1
−6
−4
−2
0
2
4
6
eta

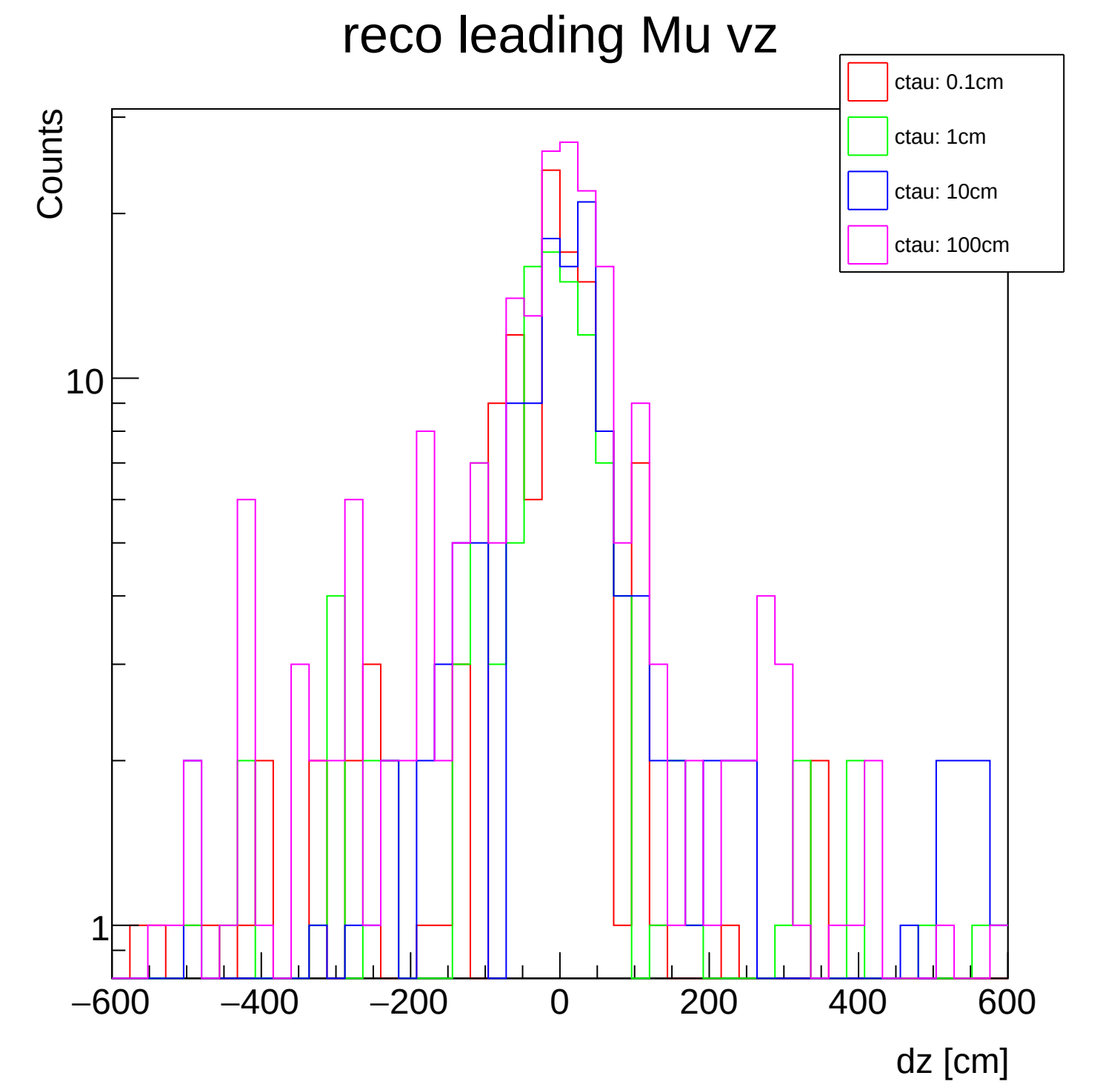

reco leading Jet phi
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
10^2
10
1
–6
–4
–2
0
2
4
6
phi

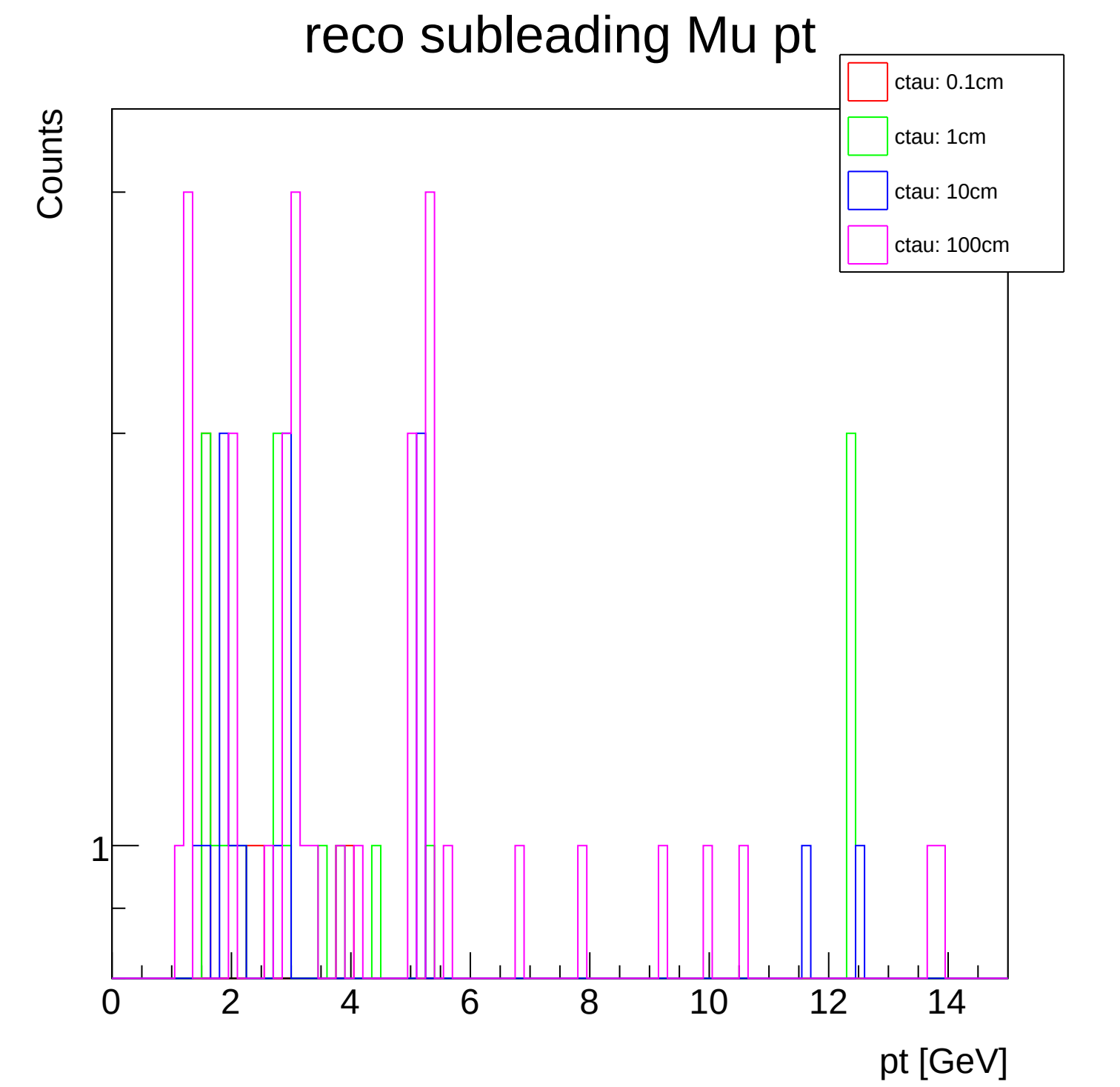

reco leading Mu pt
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
10
1
0
5
10
15
20
25
pt [GeV]

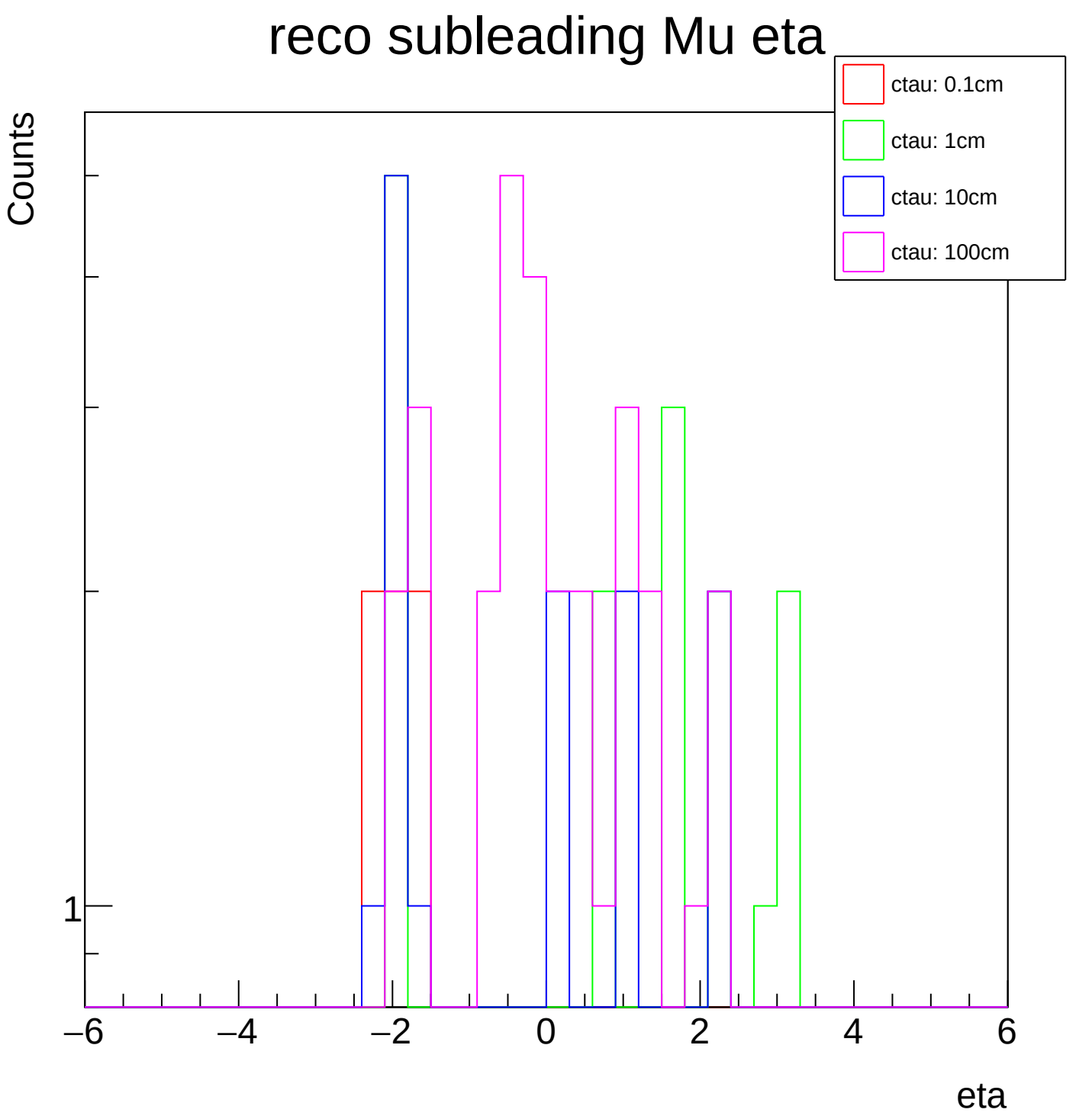

reco leading Mu eta
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
10
1
–6
–4
–2
0
2
4
6
eta

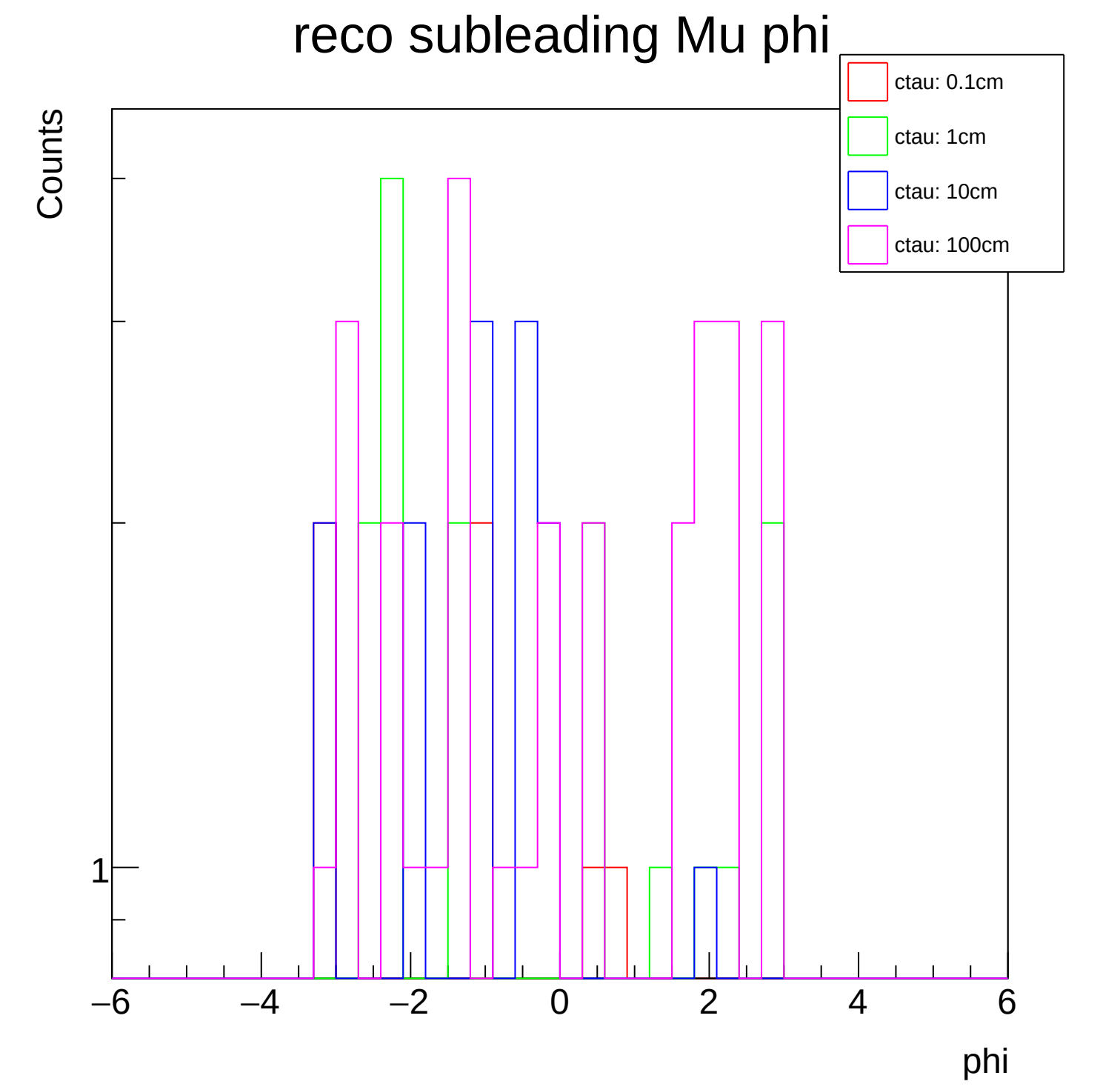

reco leading Mu phi
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
10
1
−6
−4
−2
0
2
4
6
phi

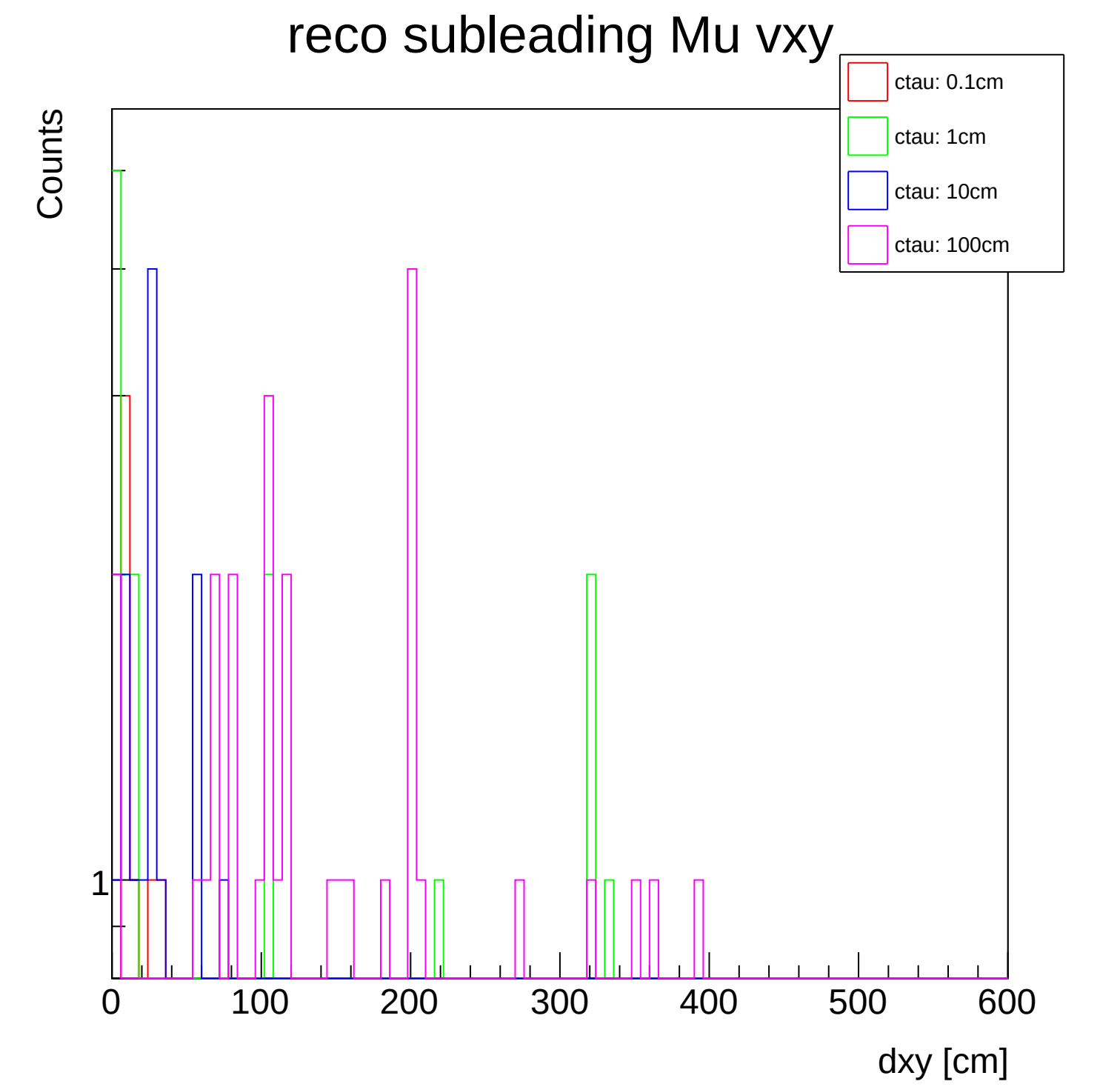

reco leading Mu vxy
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
10
1
0
100
200
300
400
500
600
dxy [cm]

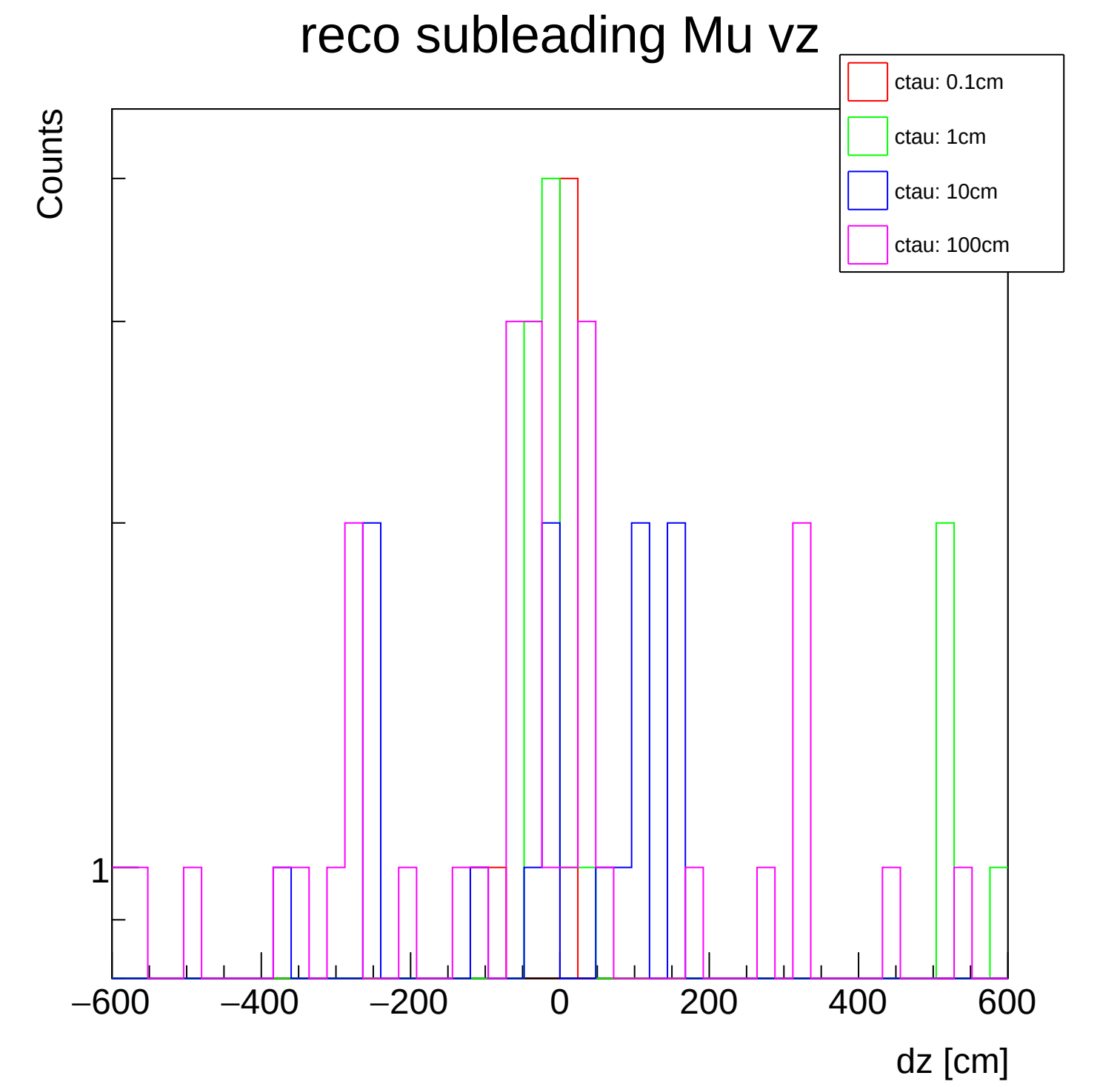

reco leading Mu vz
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
10
1
−600
−400
−200
0
200
400
600
dz [cm]

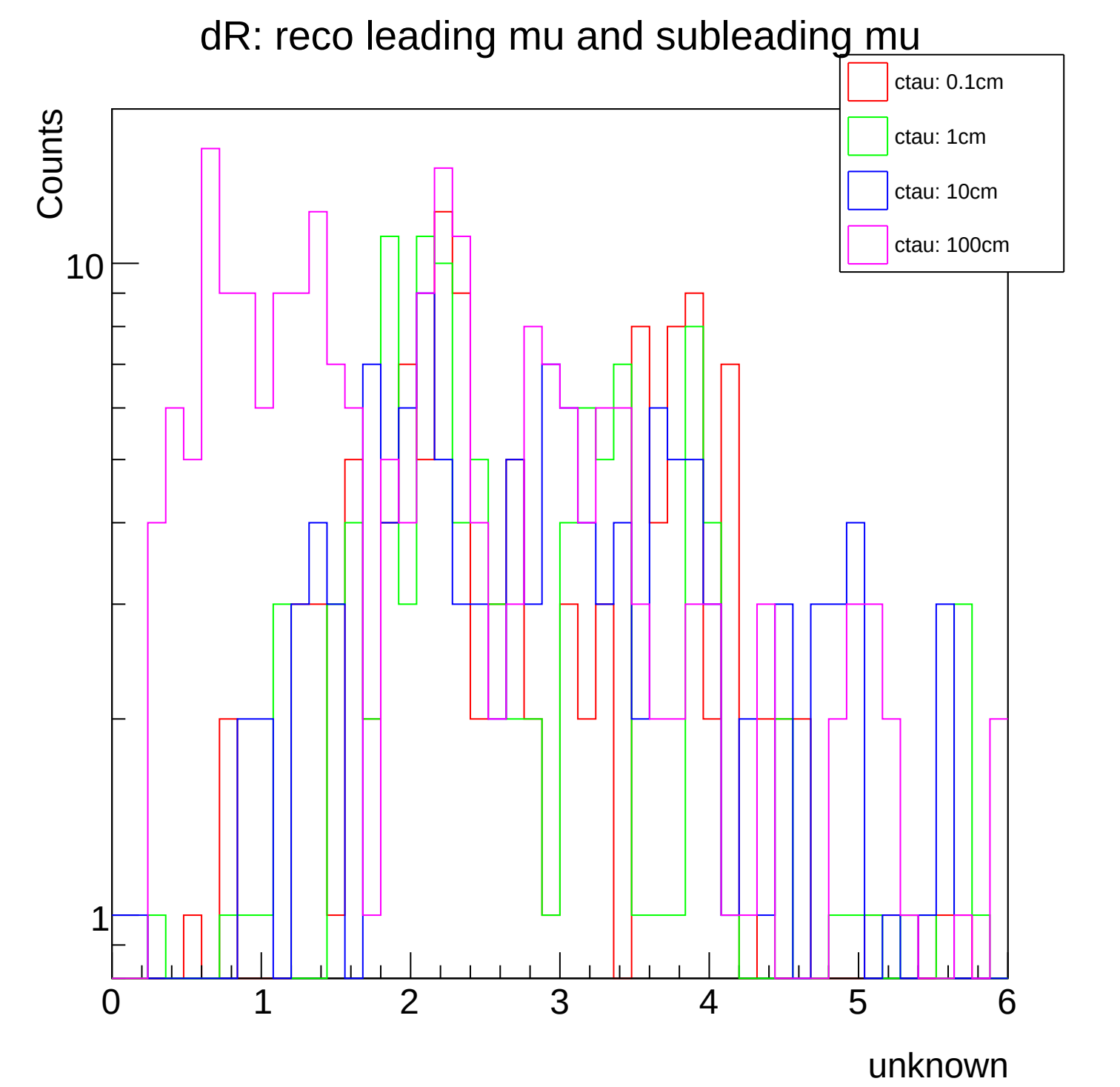

reco subleading Mu pt
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
1
0
2
4
6
8
10
12
14
pt [GeV]

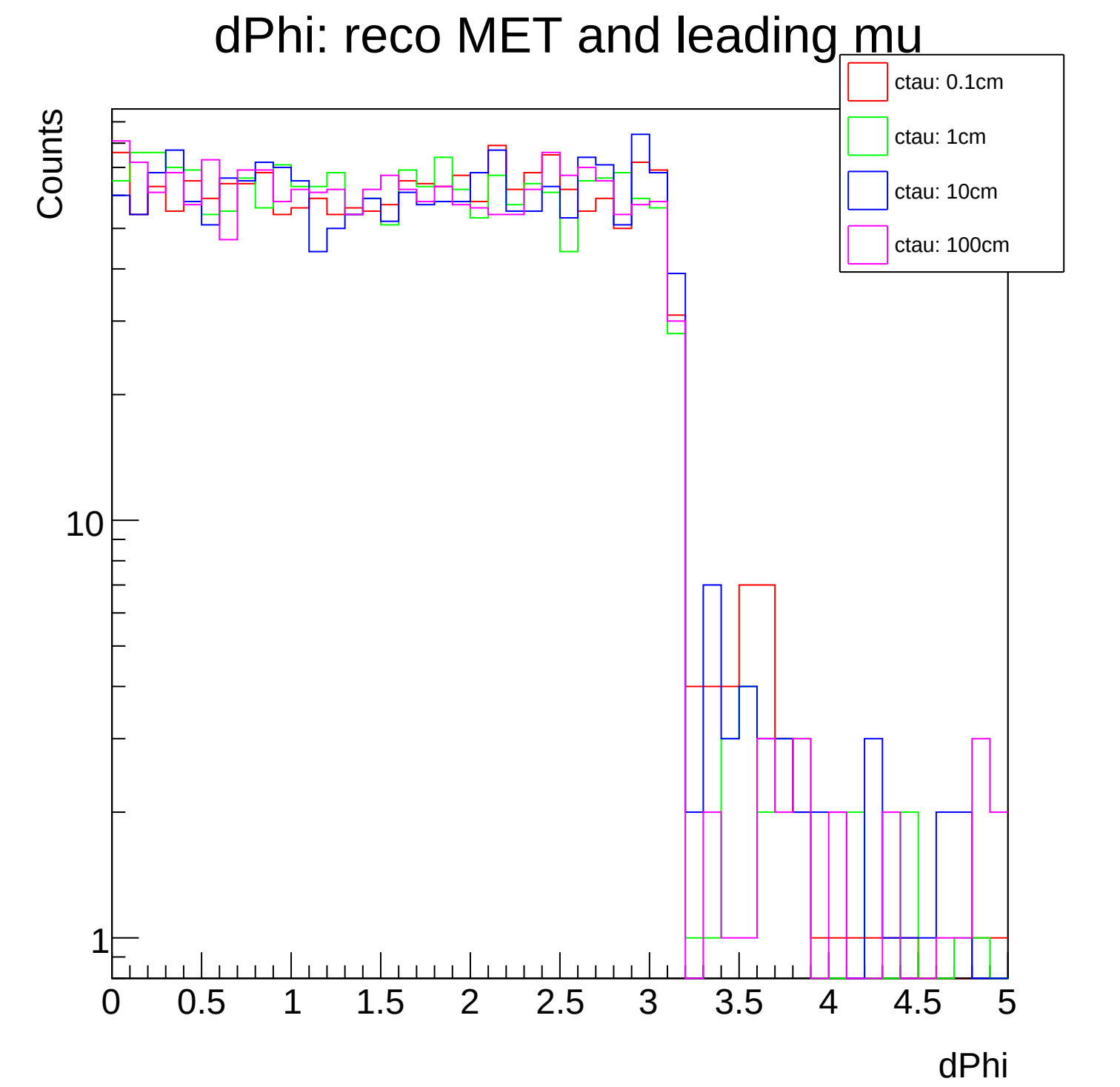

reco subleading Mu eta
Counts
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
1
–6
–4
–2
0
2
4
6
eta

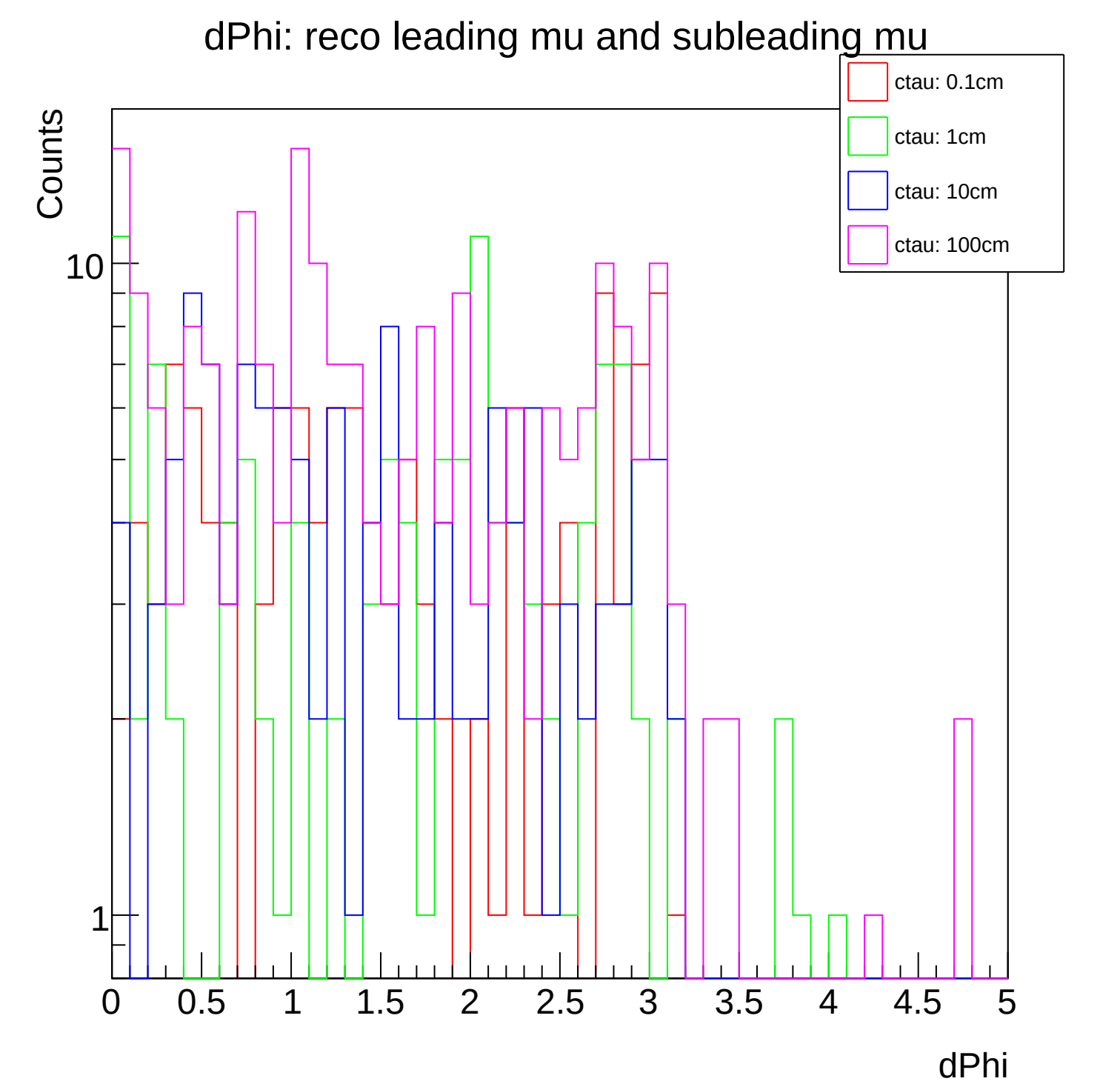

reco subleading Mu phi
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
1
–6
–4
–2
0
2
4
6
phi

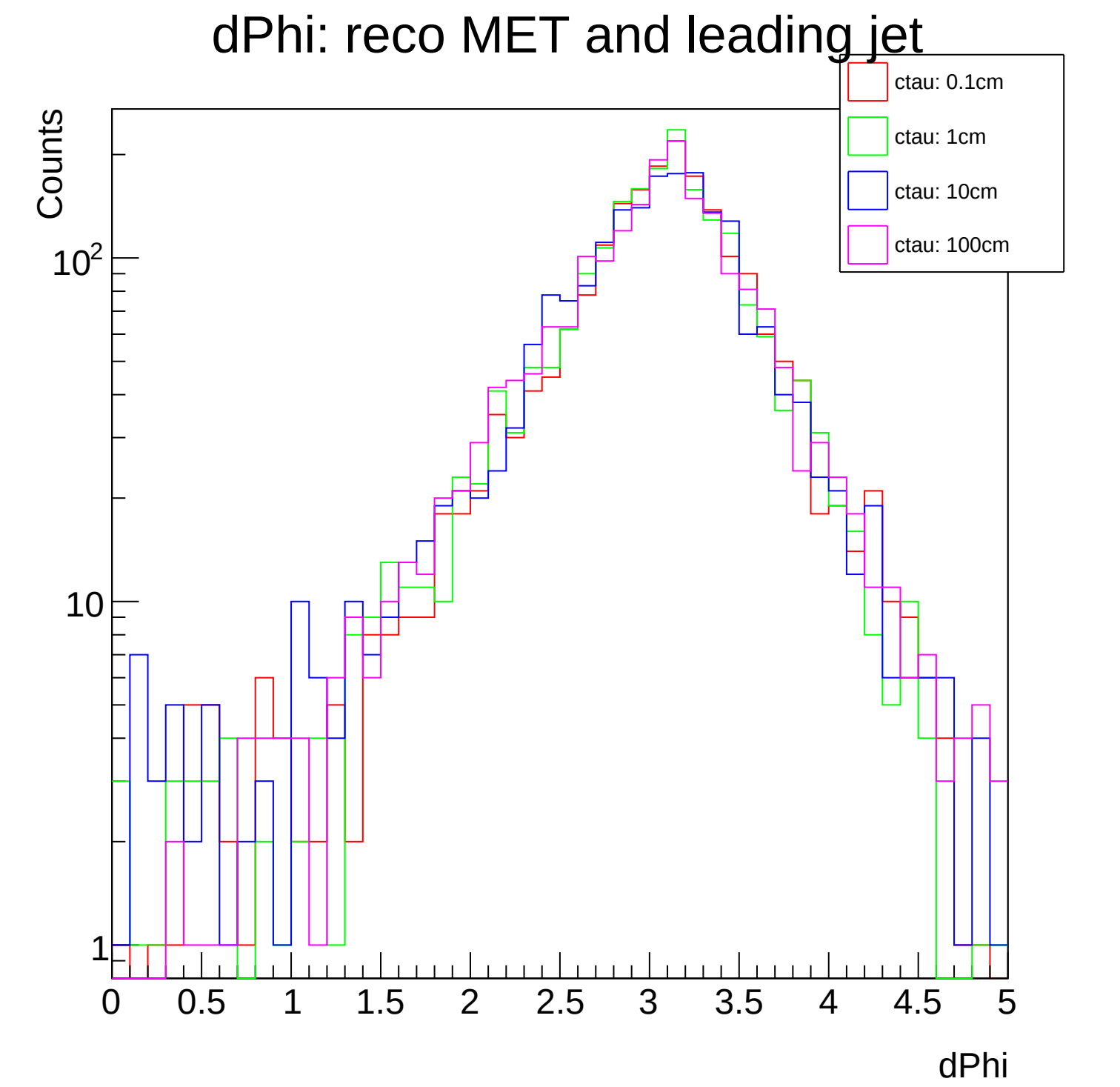

reco subleading Mu vxy
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
1
0
100
200
300
400
500
600
dxy [cm]

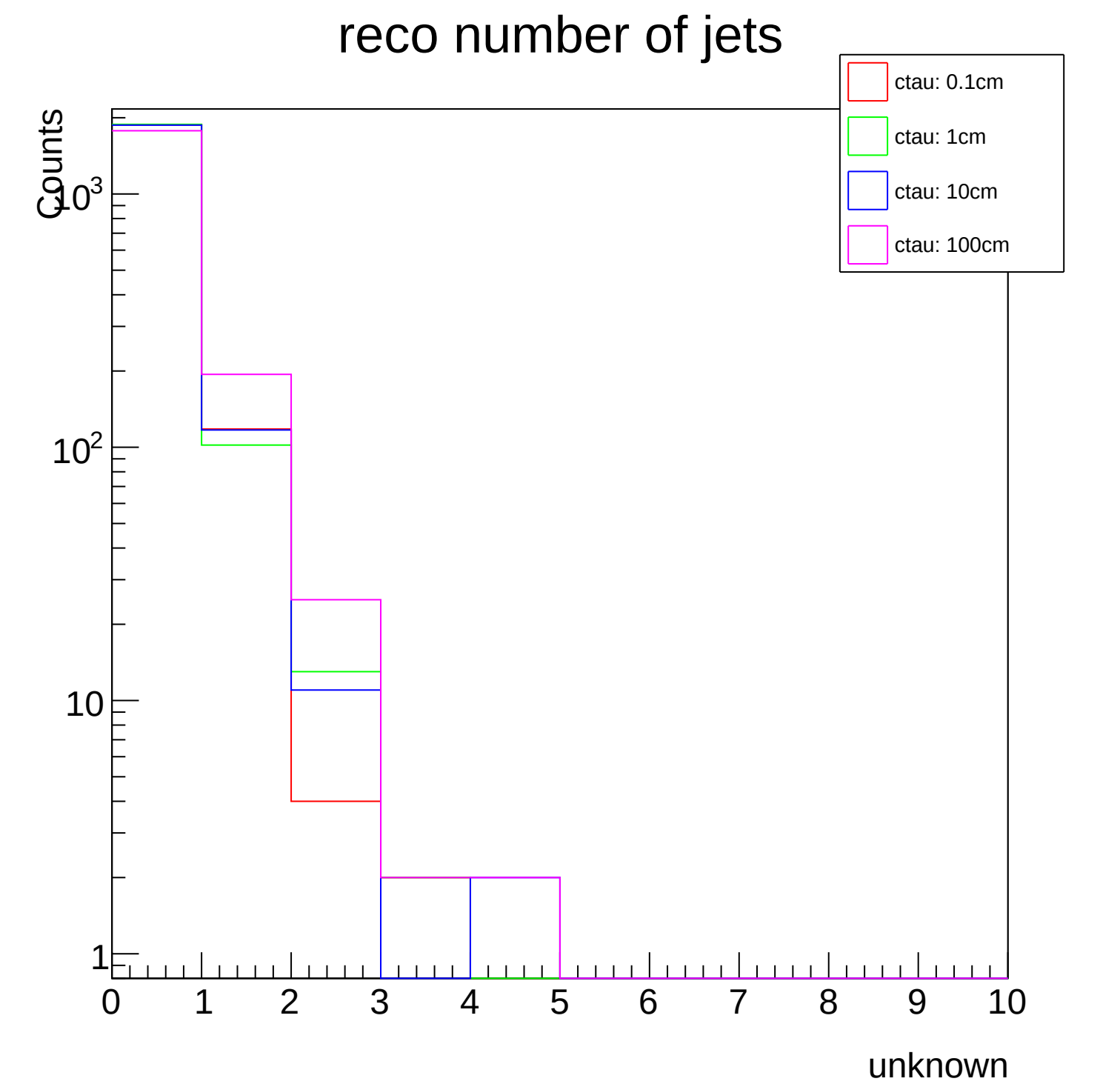

reco subleading Mu vz
Counts
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
1
–600
–400
–200
0
200
400
600
dz [cm]

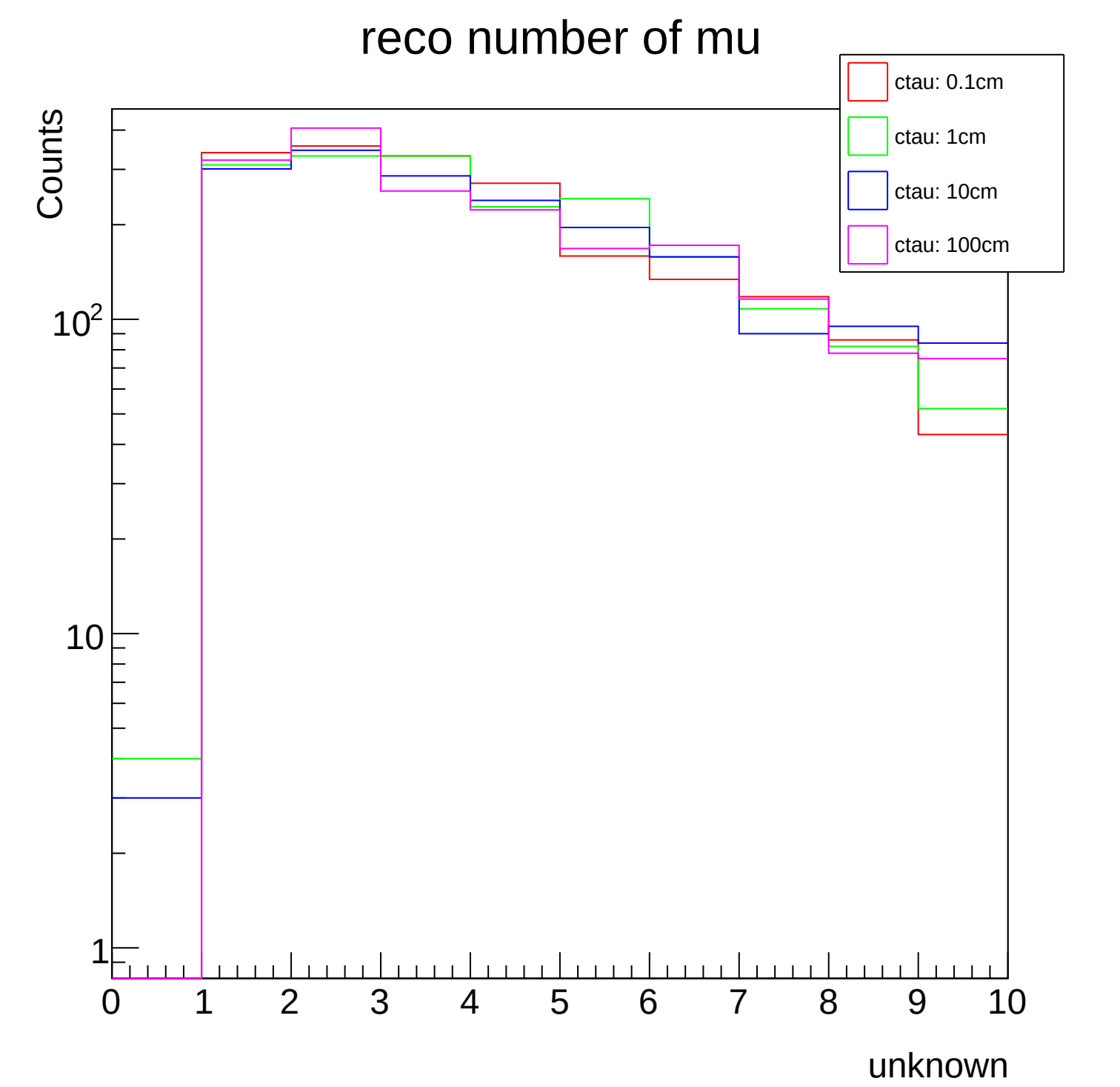

dR: reco leading mu and subleading mu
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
10
1
0
1
2
3
4
5
6
unknown

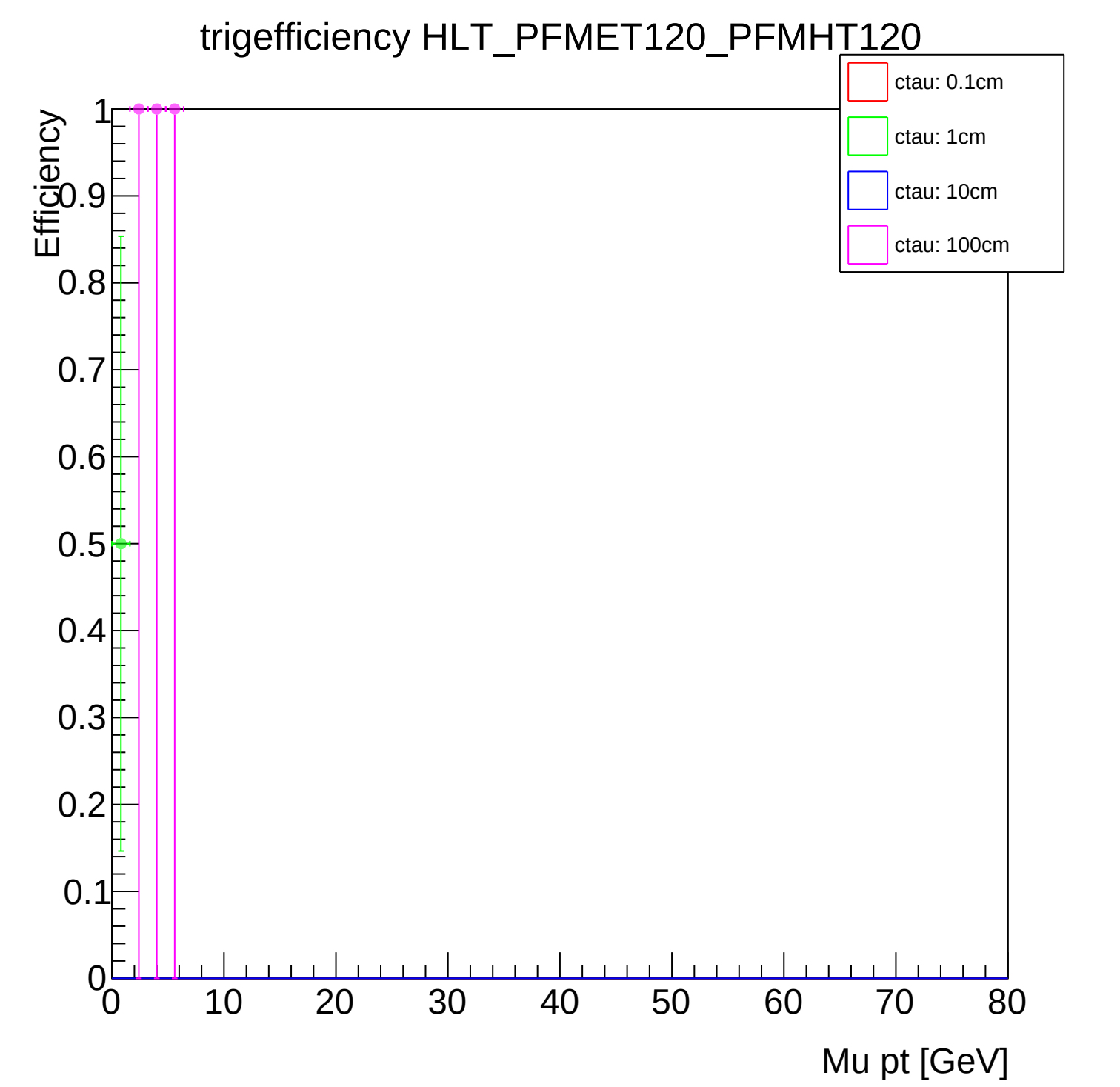

dPhi: reco MET and leading mu
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
10
1
0
0.5
1
1.5
2
2.5
3
3.5
4
4.5
5
dPhi

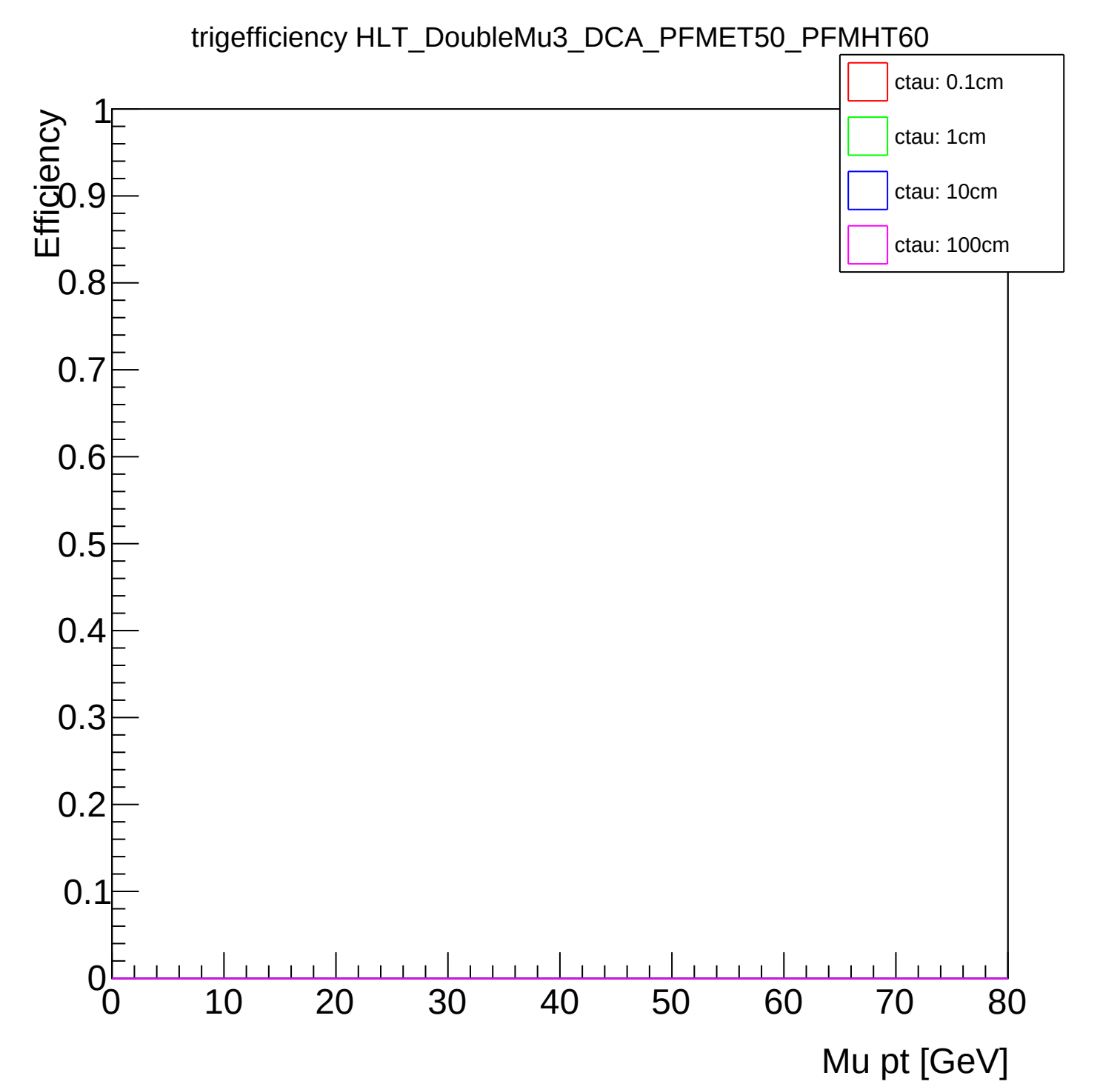

dPhi: reco leading mu and subleading mu
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
10
1
0
0.5
1
1.5
2
2.5
3
3.5
4
4.5
5
dPhi

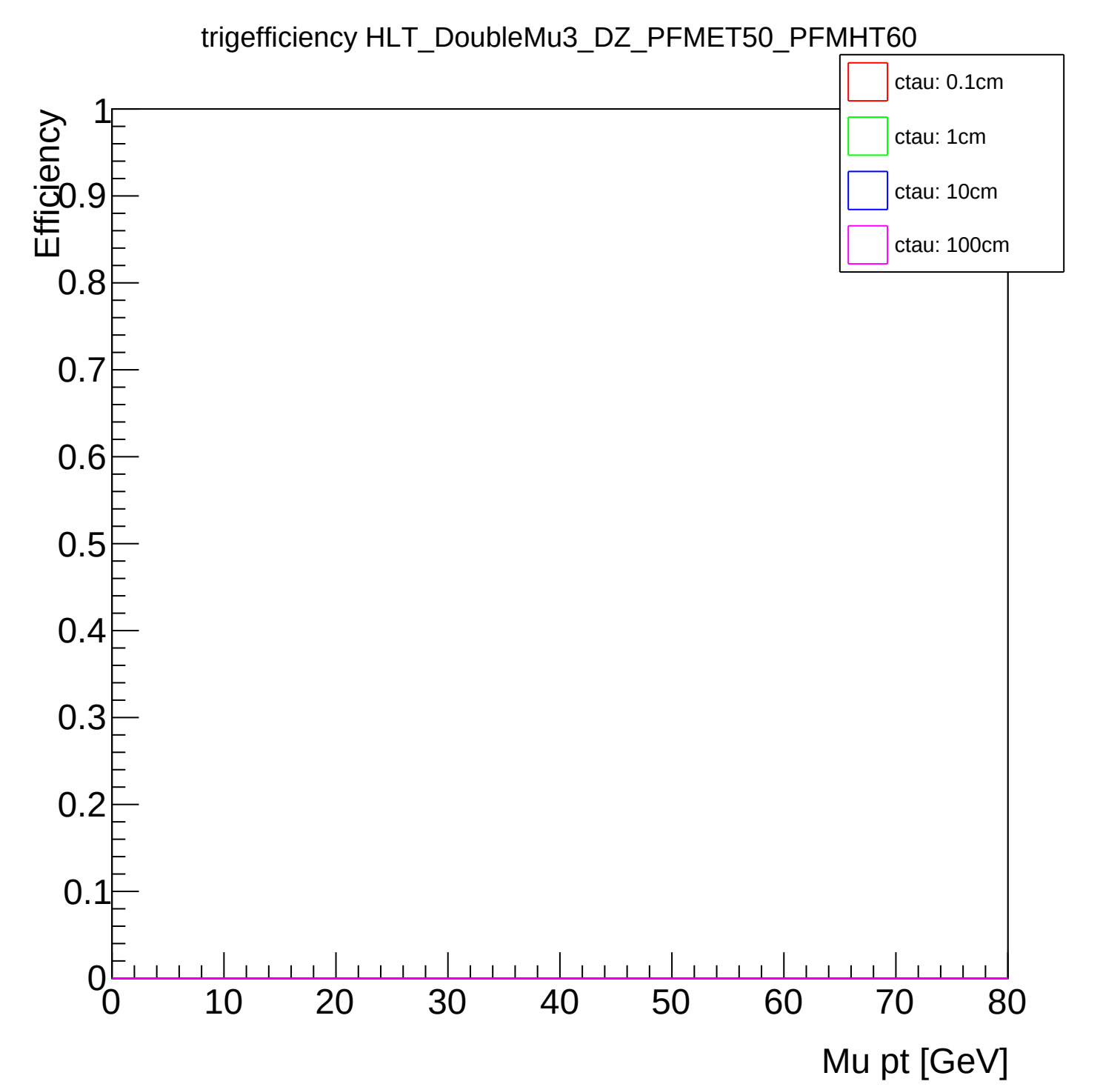

dPhi: reco MET and leading jet
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
10^2
10
1
0
0.5
1
1.5
2
2.5
3
3.5
4
4.5
5
dPhi

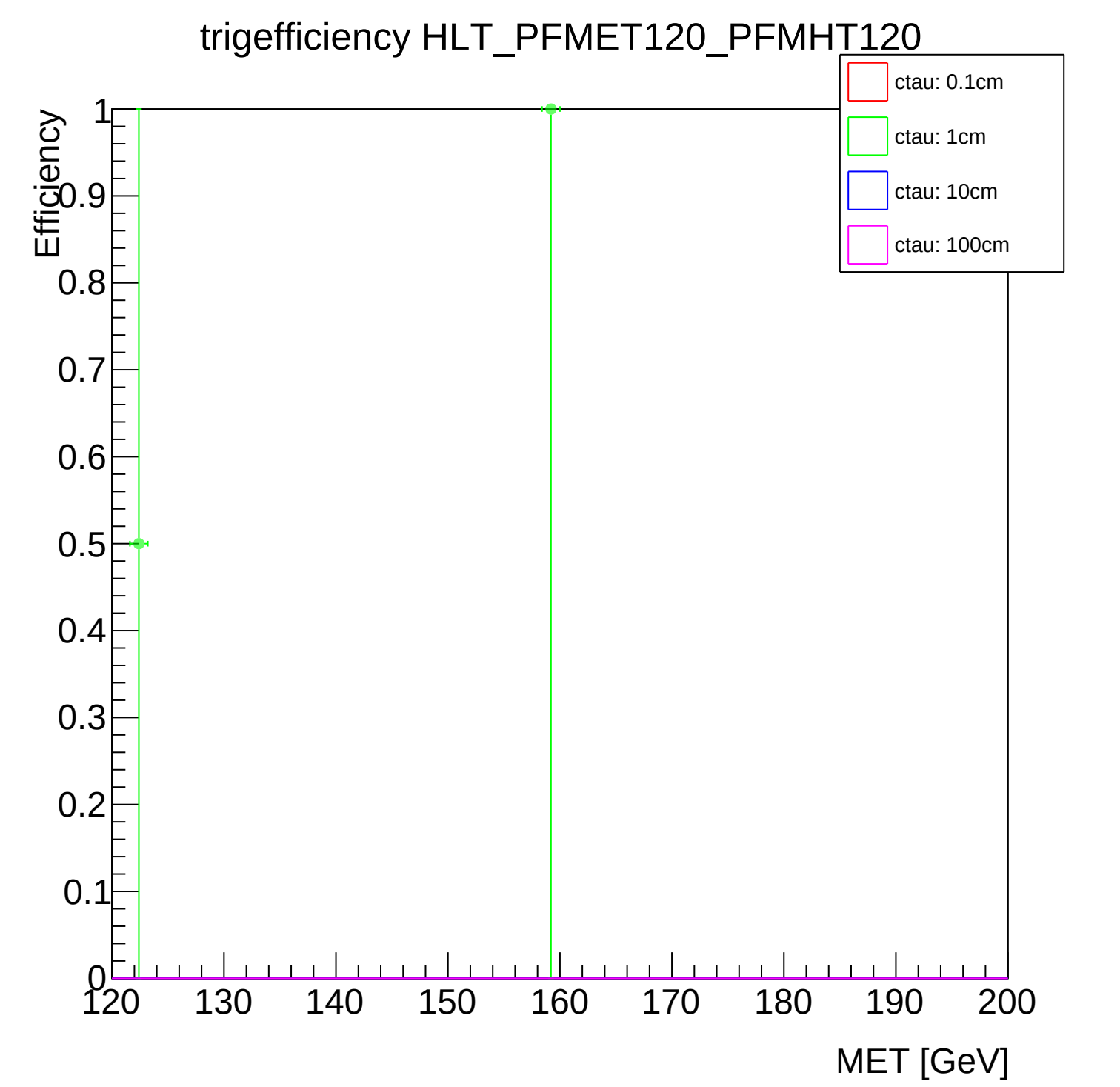

reco number of jets
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
10^3
10^2
10
1
0
1
2
3
4
5
6
7
8
9
10
unknown

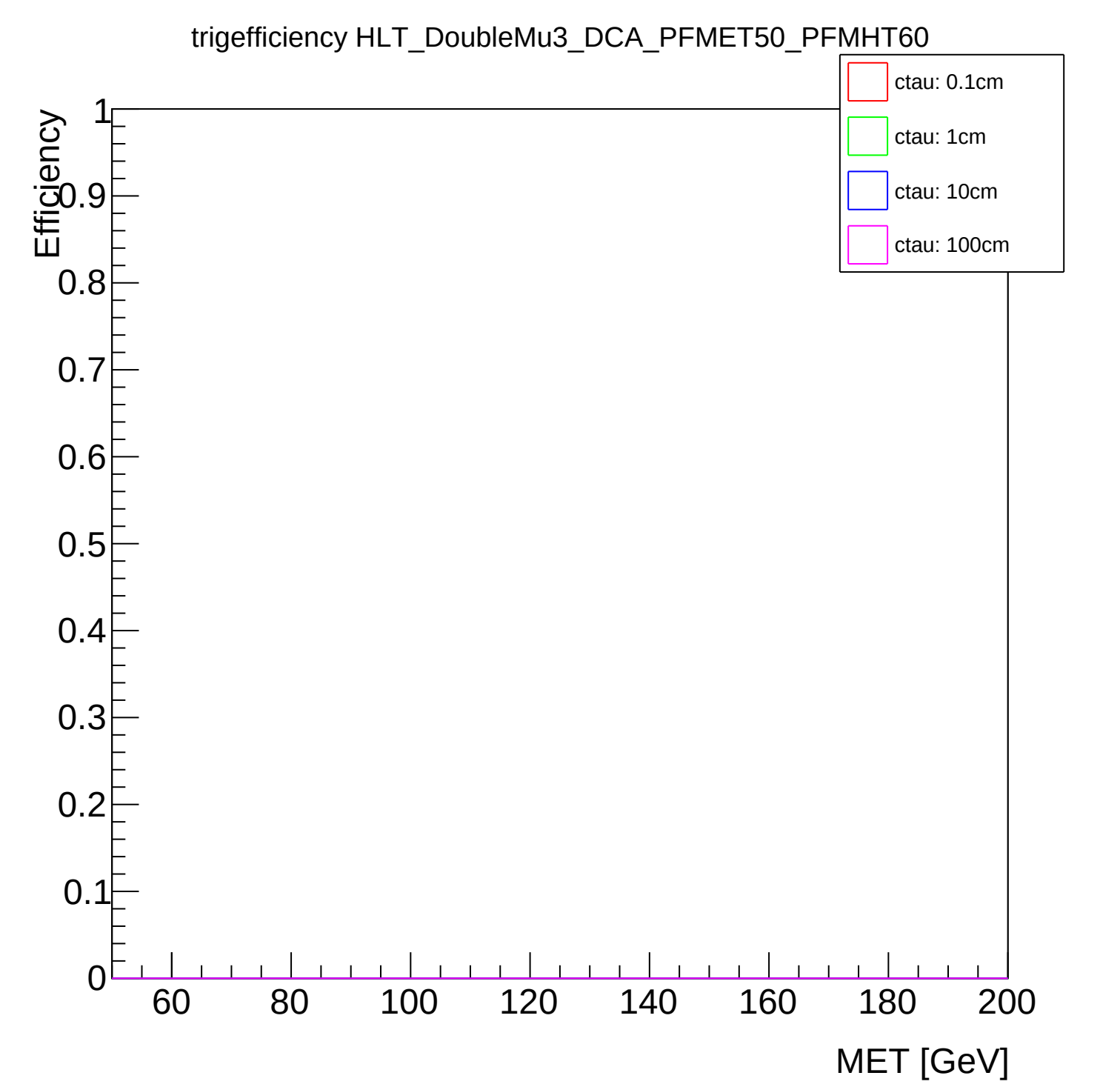

reco number of mu
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Counts
10^2
10
1
0
1
2
3
4
5
6
7
8
9
10
unknown

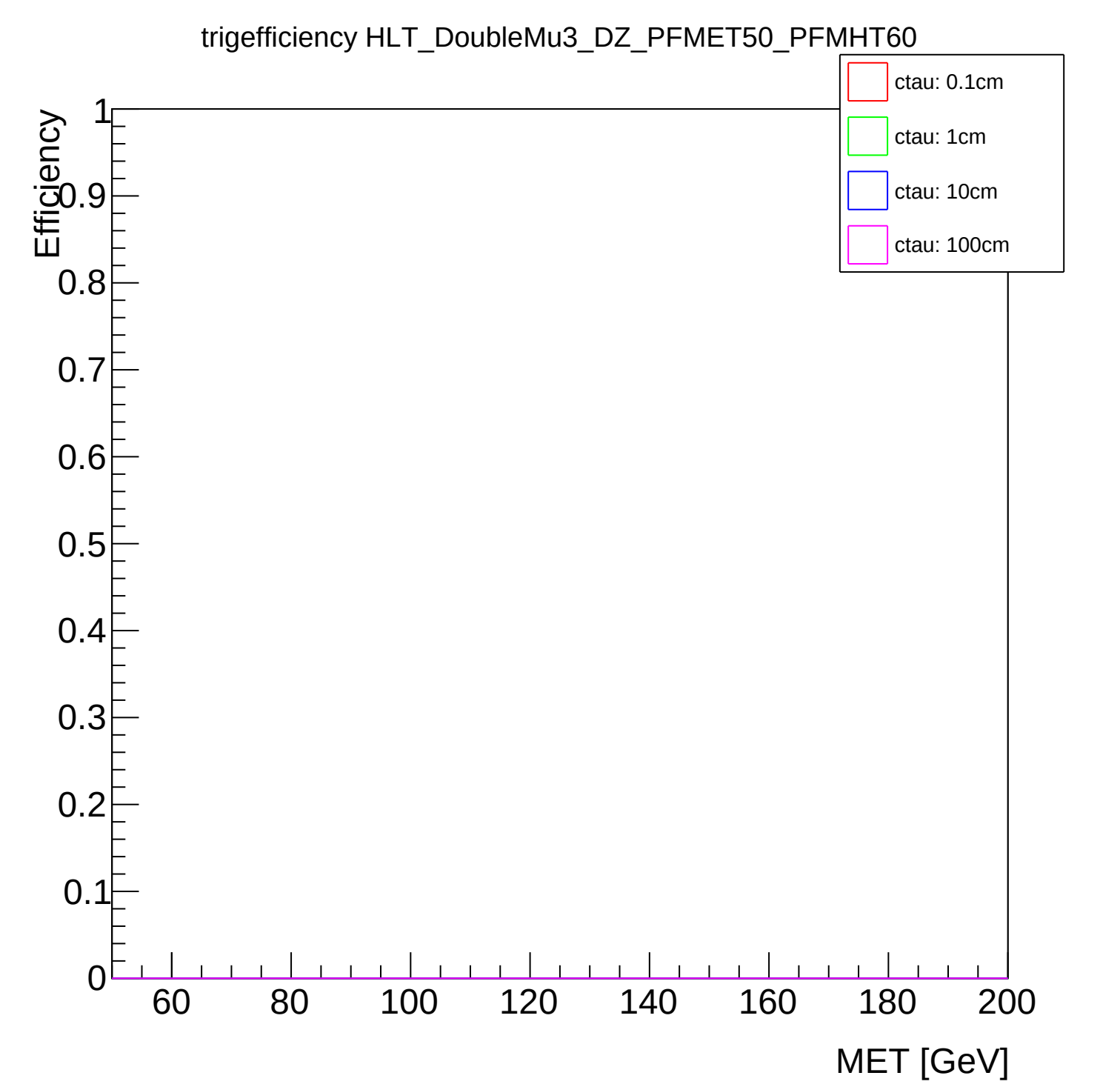

trigefficiency HLT_PFMET120_PFMHT120
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Efficiency
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
10
20
30
40
50
60
70
80
Mu pt [GeV]

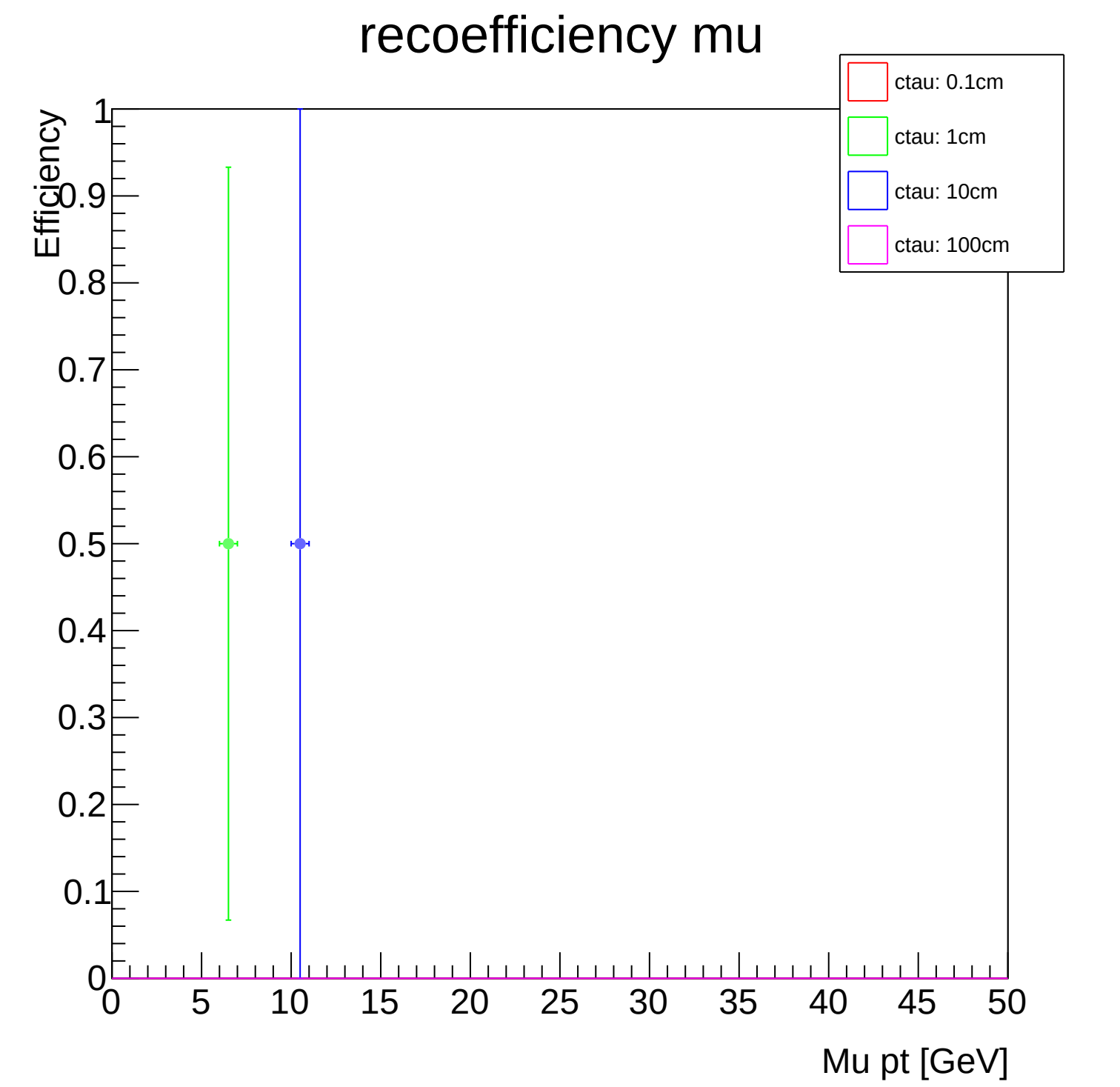

trigefficiency HLT_DoubleMu3_DCA_PFMET50_PFMHT60
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Efficiency
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
10
20
30
40
50
60
70
80
Mu pt [GeV]

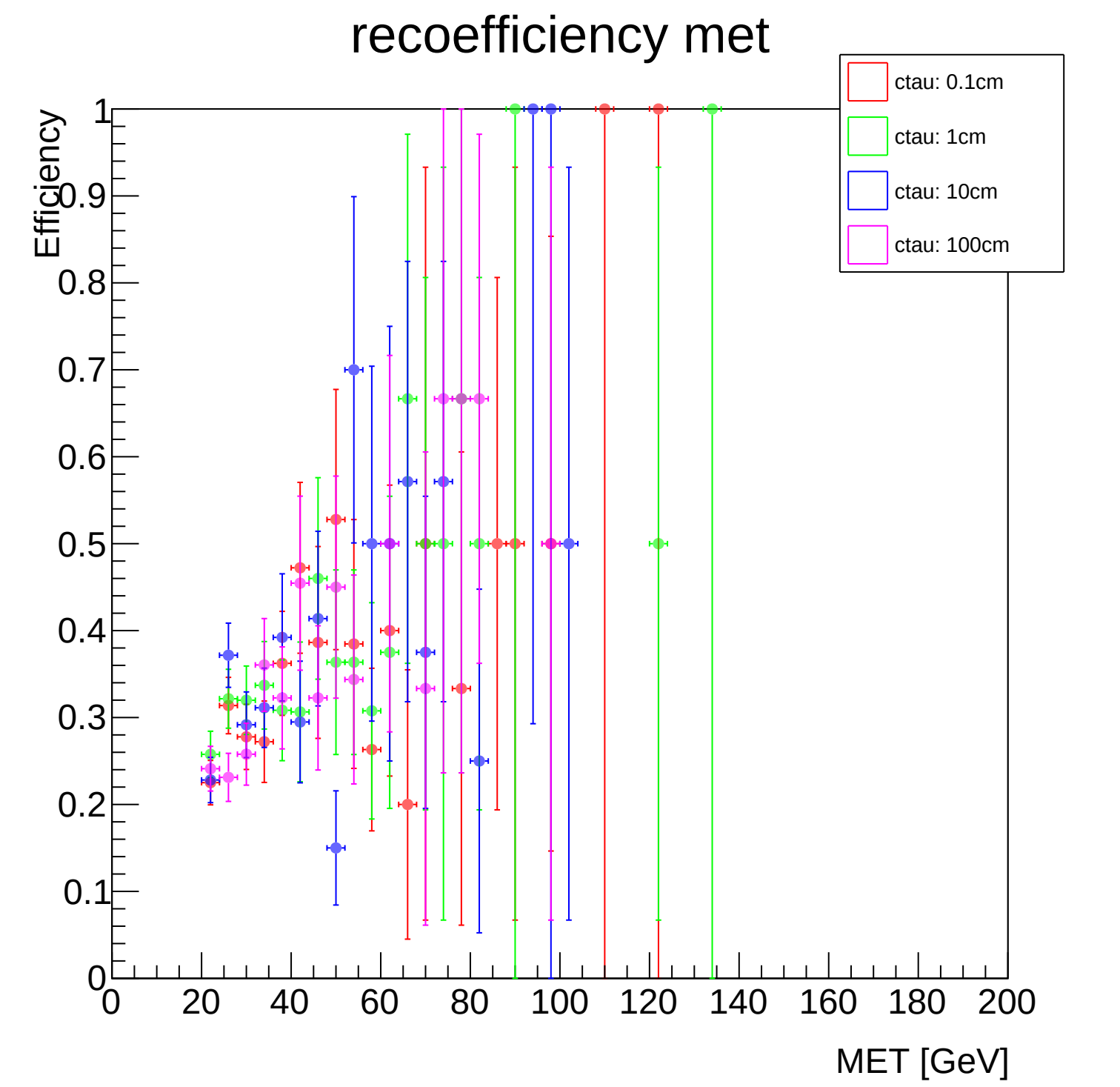

trigefficiency HLT_DoubleMu3_DZ_PFMET50_PFMHT60
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Efficiency
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
10
20
30
40
50
60
70
80
Mu pt [GeV]

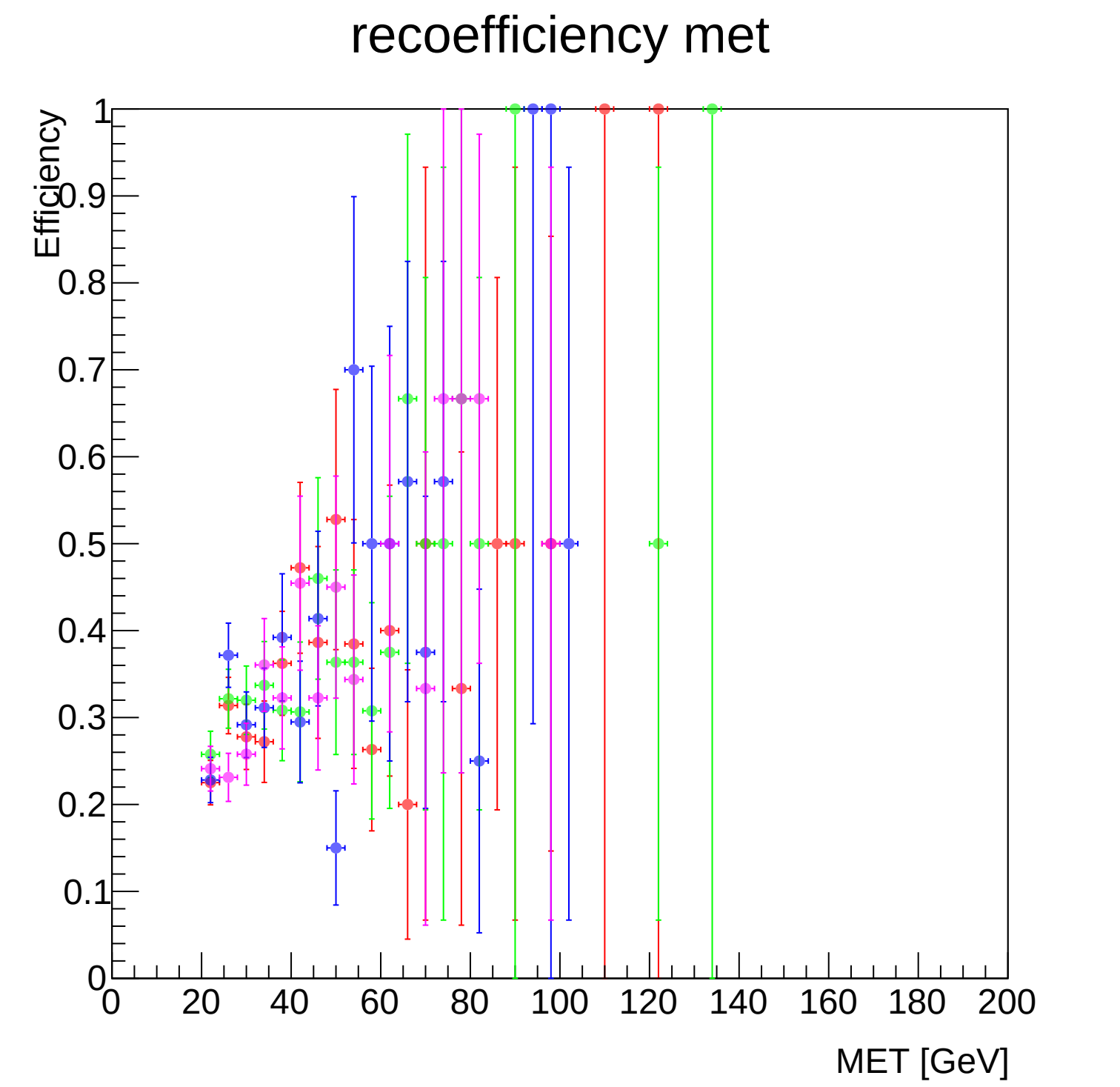

trigefficiency HLT_PFMET120_PFMHT120
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Efficiency
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
120
130
140
150
160
170
180
190
200
MET [GeV]


trigefficiency HLT_DoubleMu3_DCA_PFMET50_PFMHT60
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Efficiency
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
60
80
100
120
140
160
180
200
MET [GeV]


trigefficiency HLT_DoubleMu3_DZ_PFMET50_PFMHT60
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Efficiency
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
60
80
100
120
140
160
180
200
MET [GeV]


recoefficiency mu
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Efficiency
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
0
5
10
15
20
25
30
35
40
45
50
Mu pt [GeV]


recoefficiency met
ctau: 0.1cm
ctau: 1cm
ctau: 10cm
ctau: 100cm
Efficiency
MET [GeV]
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
0
20
40
60
80
100
120
140
160
180
200


recoefficiency met
Efficiency
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
20
40
60
80
100
120
140
160
180
200
MET [GeV]