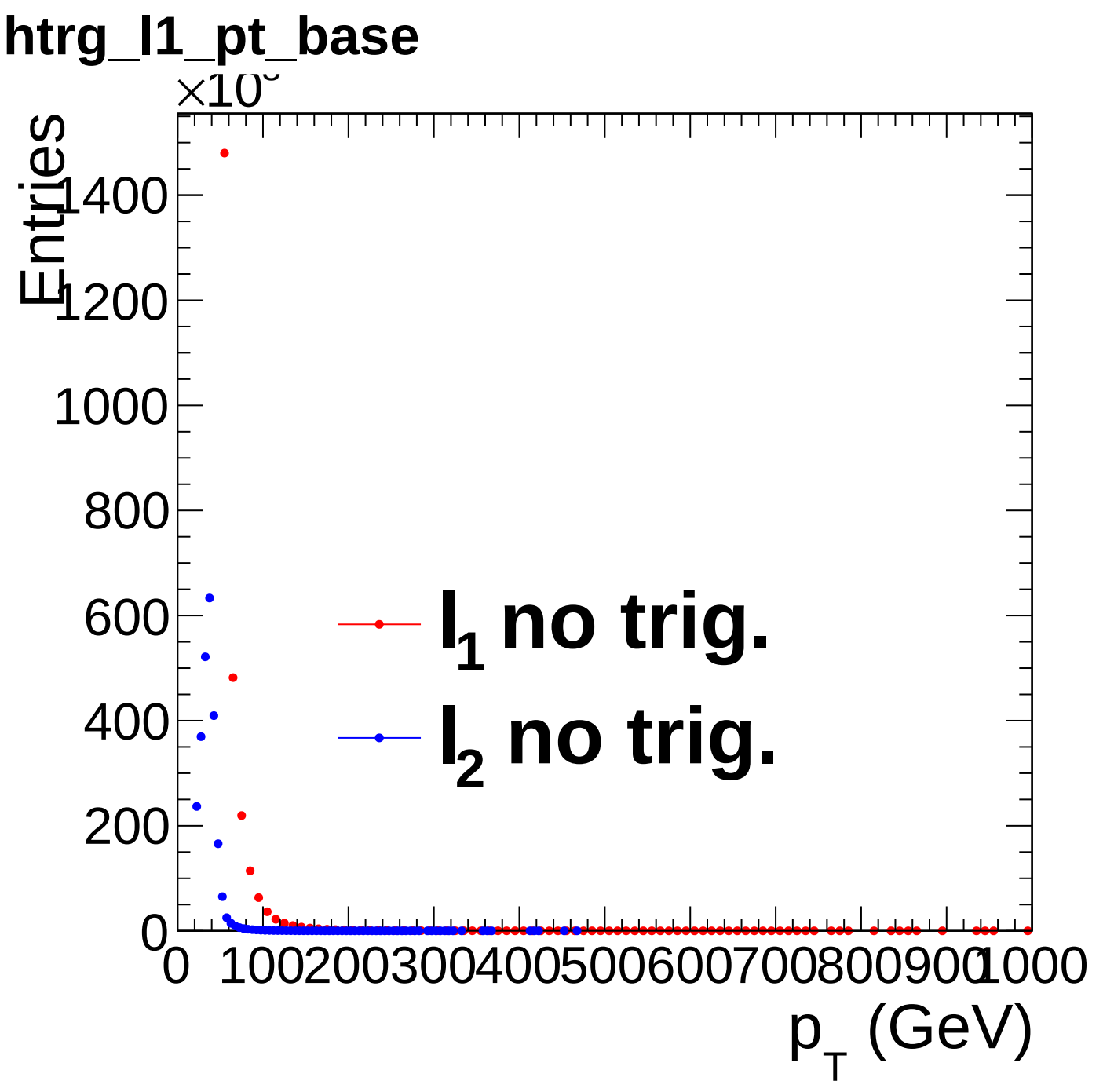
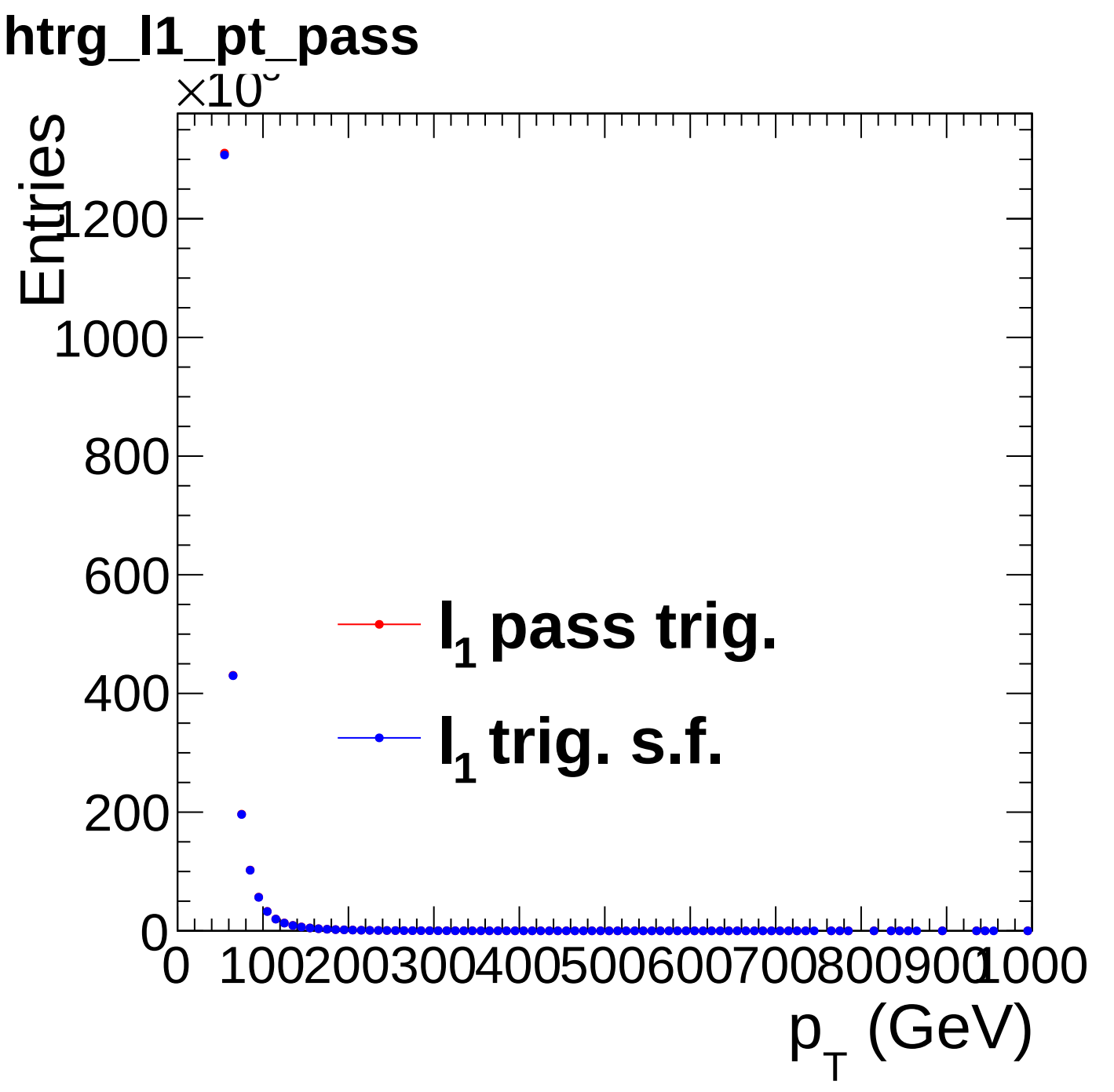
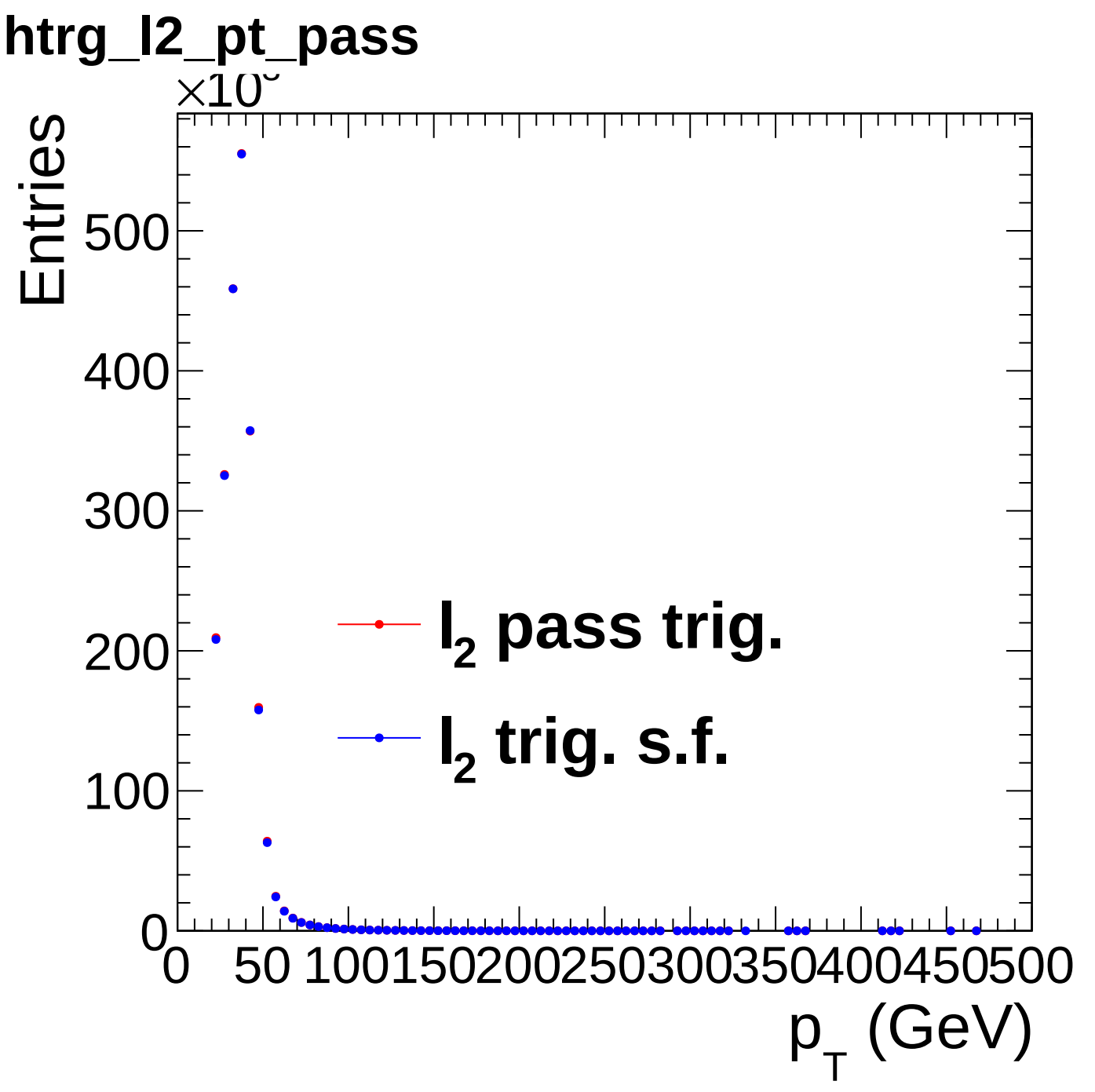
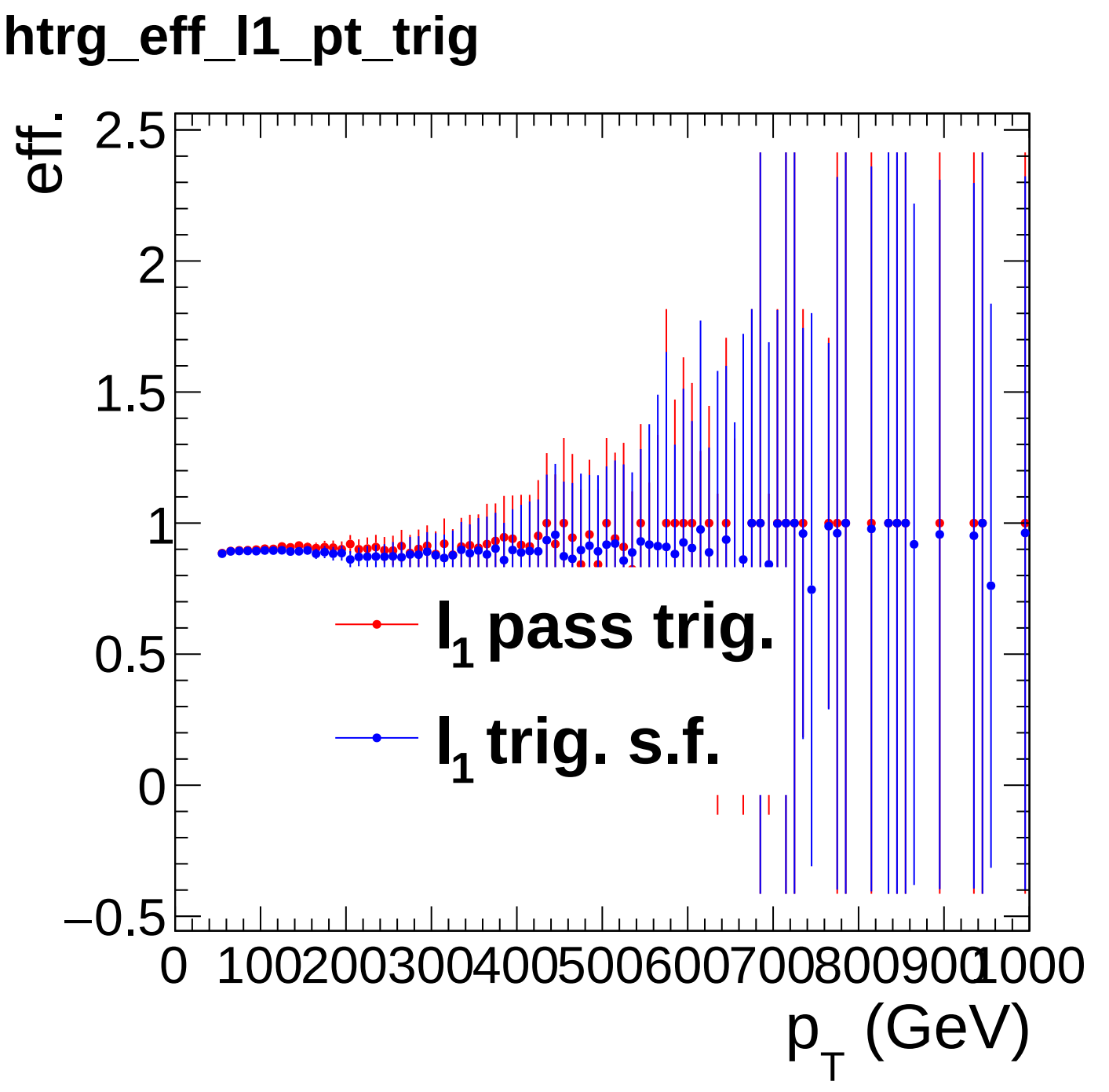
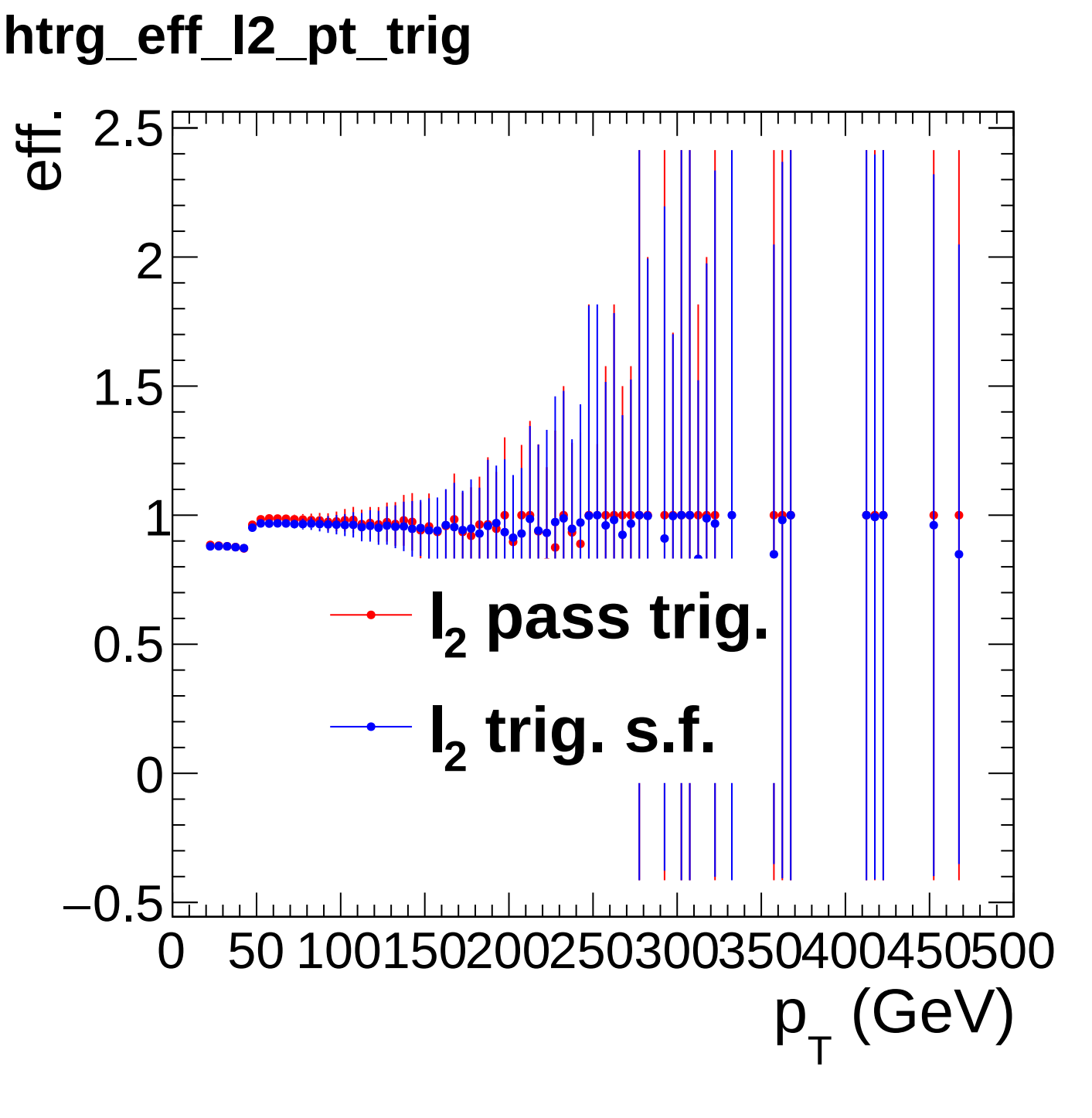
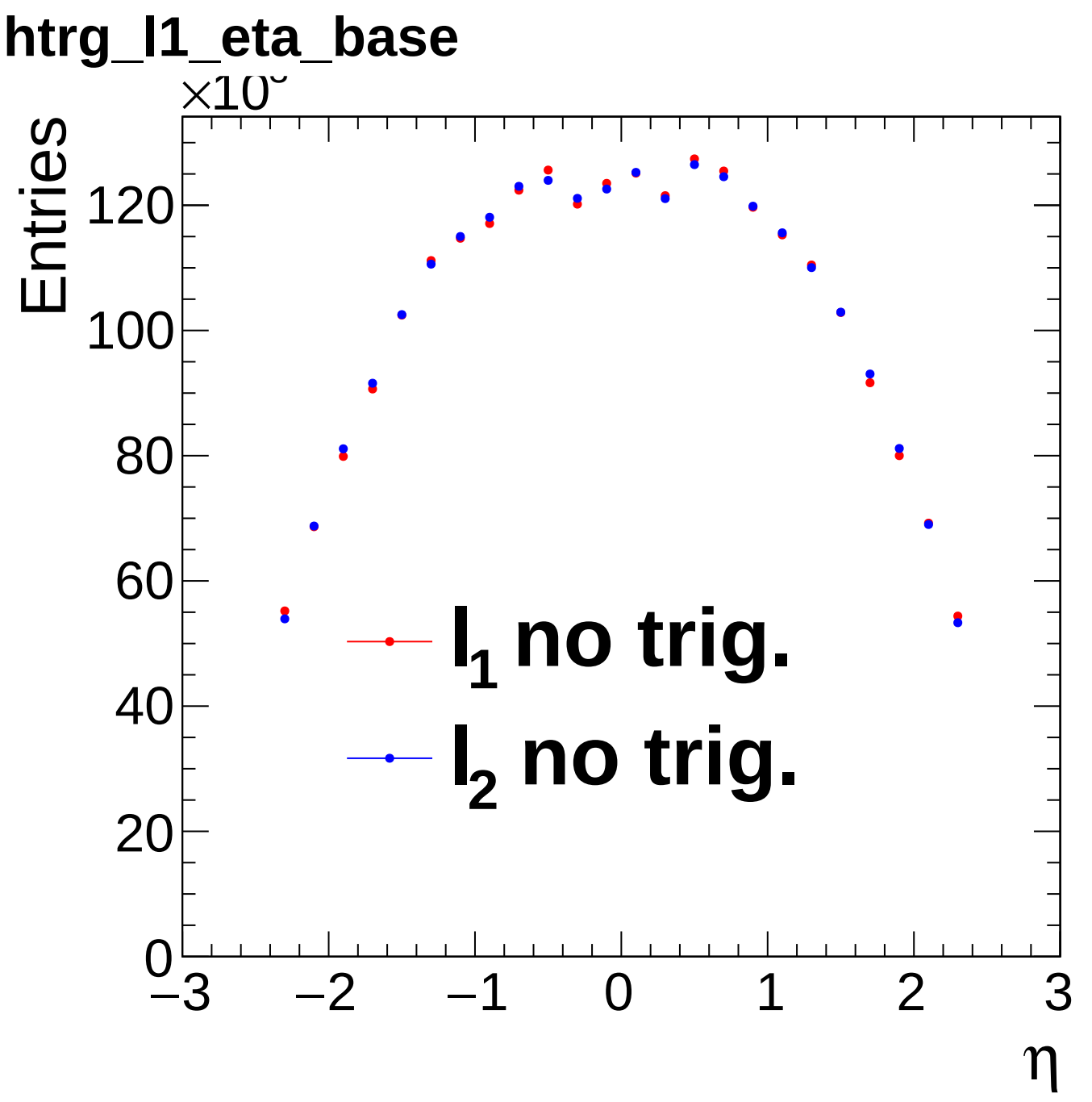

htrg_l1_pt_base
×10
Entries
1400
1200
1000
800
600
400
200
0
0
100
200
300
400
500
600
700
800
900
1000
p_T (GeV)
l_1 no trig.
l_2 no trig.

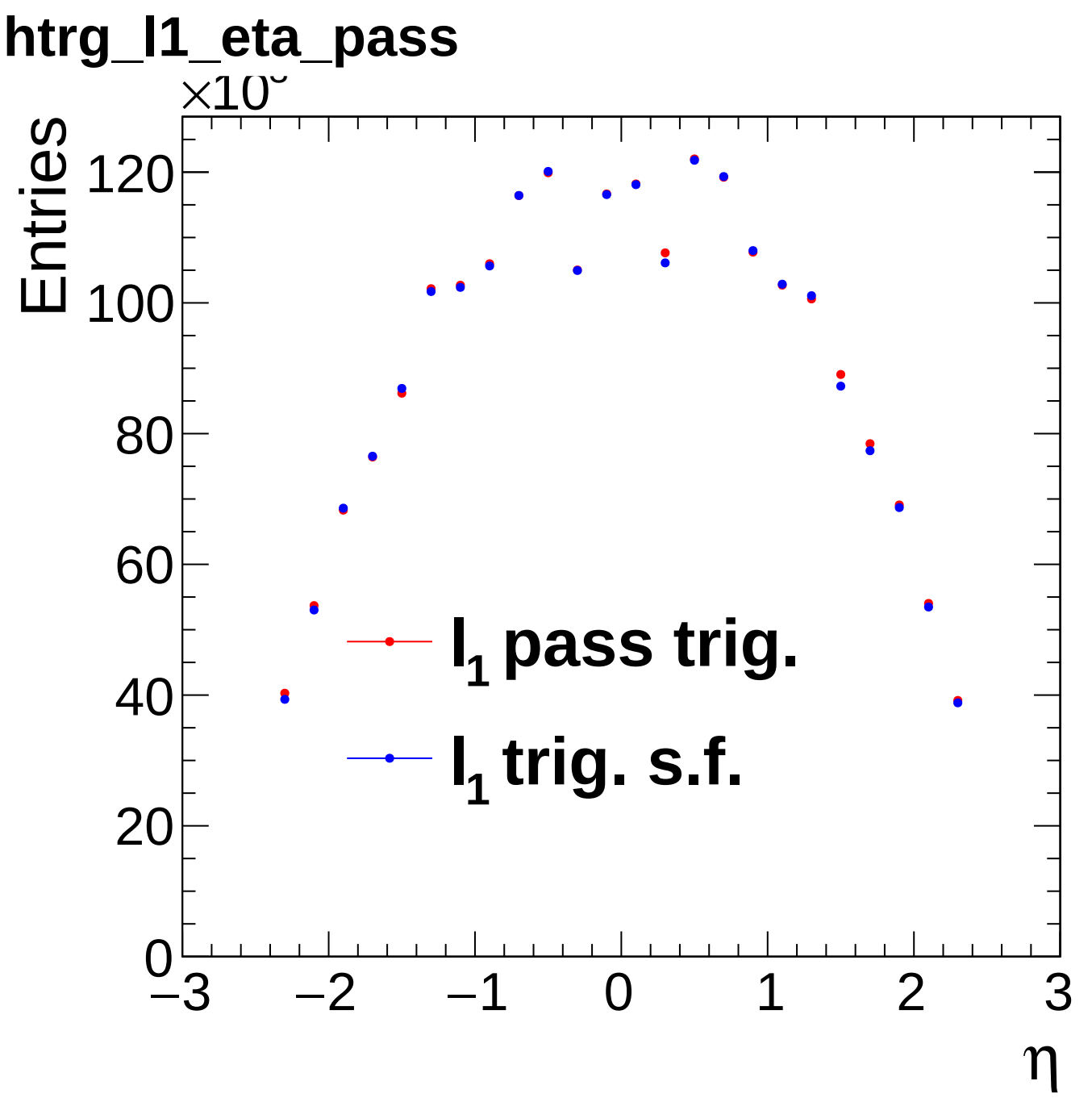

htrg_l1_pt_pass
×10
Entries
1200
1000
800
600
400
200
0
0
100
200
300
400
500
600
700
800
900
1000
p_T (GeV)
l_1 pass trig.
l_1 trig. s.f.

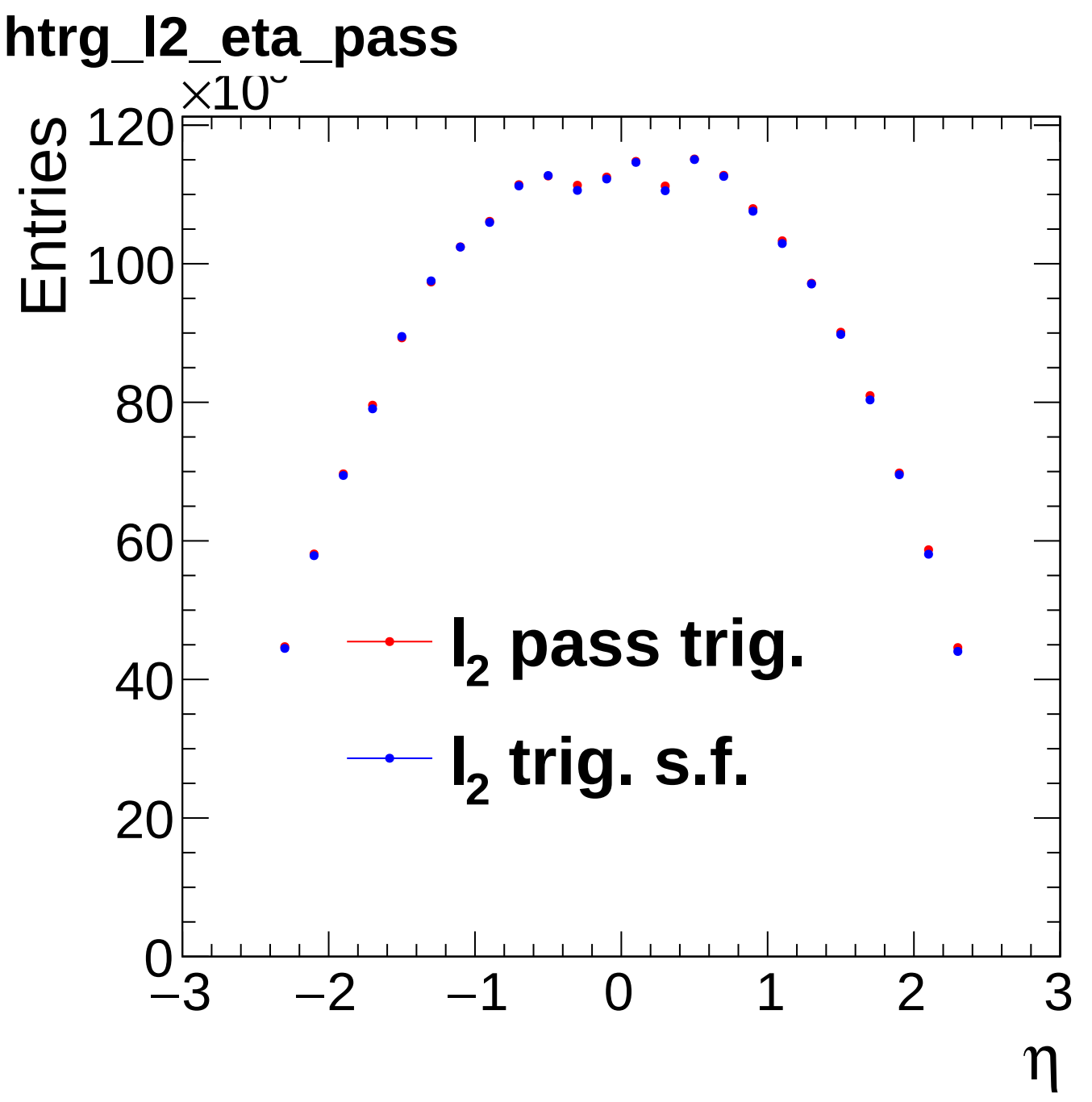

htrg_l2_pt_pass
×10
Entries
500
400
300
200
100
0
0
50
100
150
200
250
300
350
400
450
500
p_T (GeV)
l_2 pass trig.
l_2 trig. s.f.

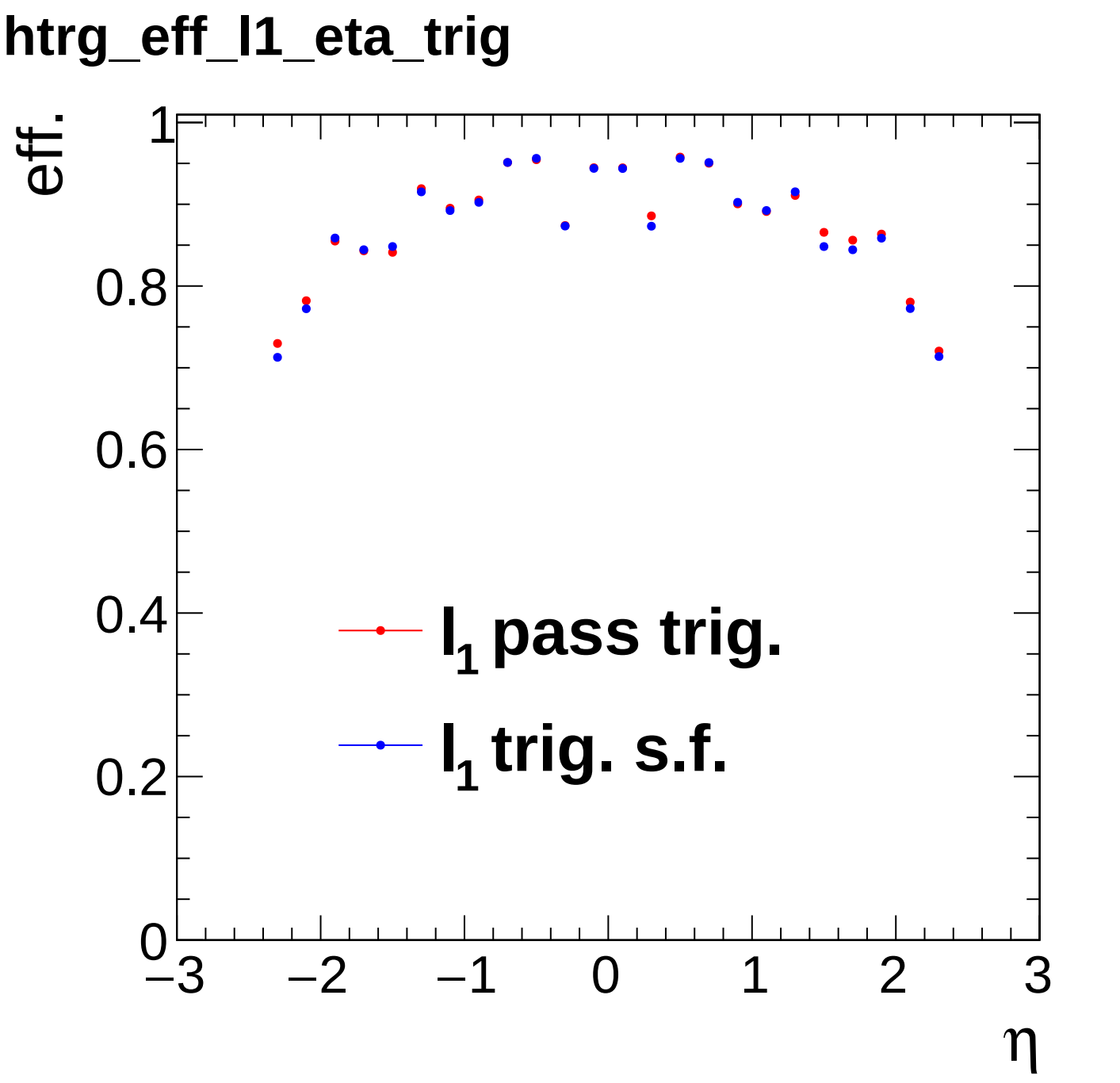

htrg_eff_l1_pt_trig
eff.
2.5
2
1.5
1
0.5
0
−0.5
0
100
200
300
400
500
600
700
800
900
1000
p_T (GeV)
l_1 pass trig.
l_1 trig. s.f.

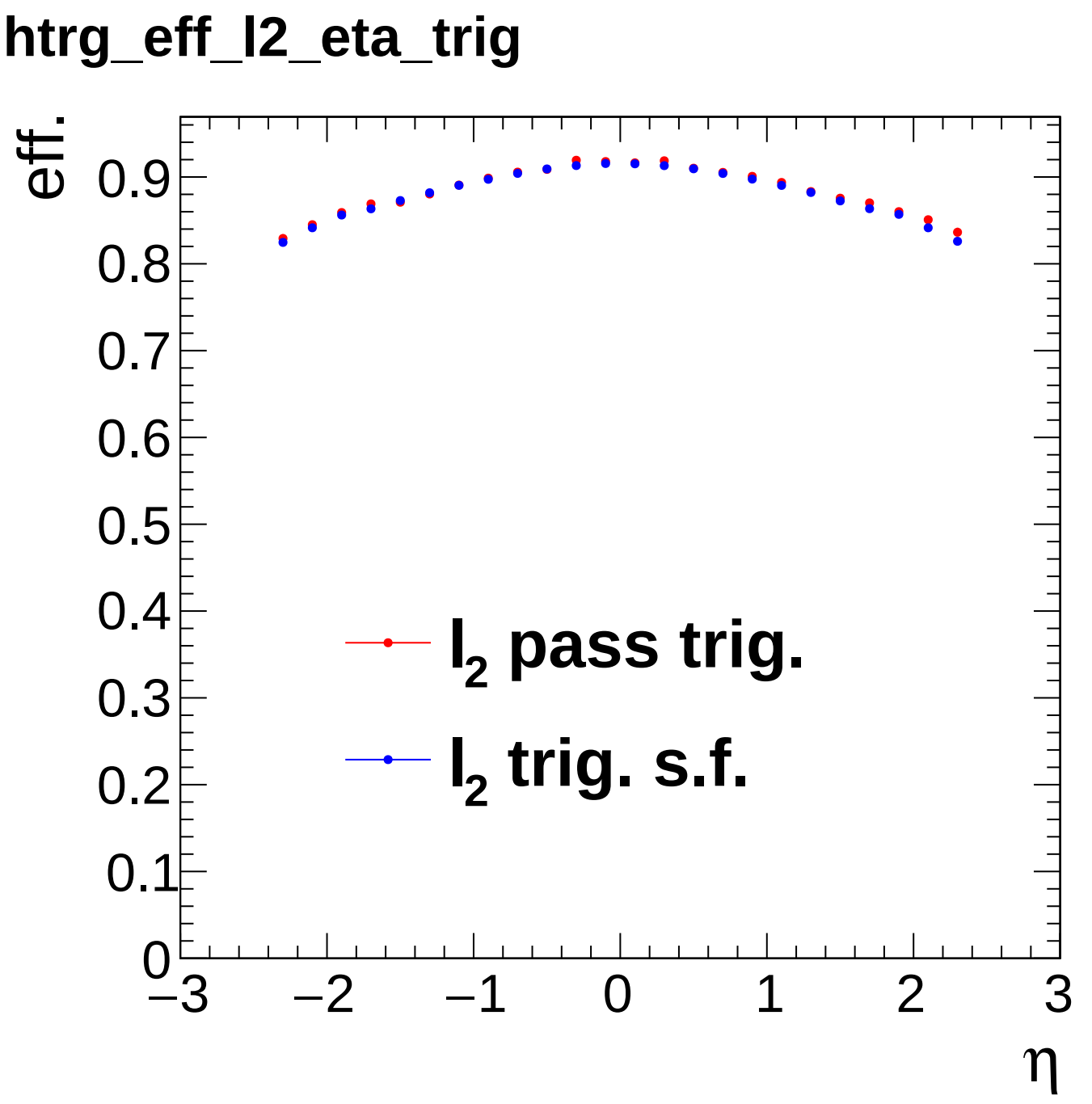

htrg_eff_l2_pt_trig
eff.
2.5
2
1.5
1
0.5
0
−0.5
0
50
100
150
200
250
300
350
400
450
500
p_T (GeV)
l_2 pass trig.
l_2 trig. s.f.

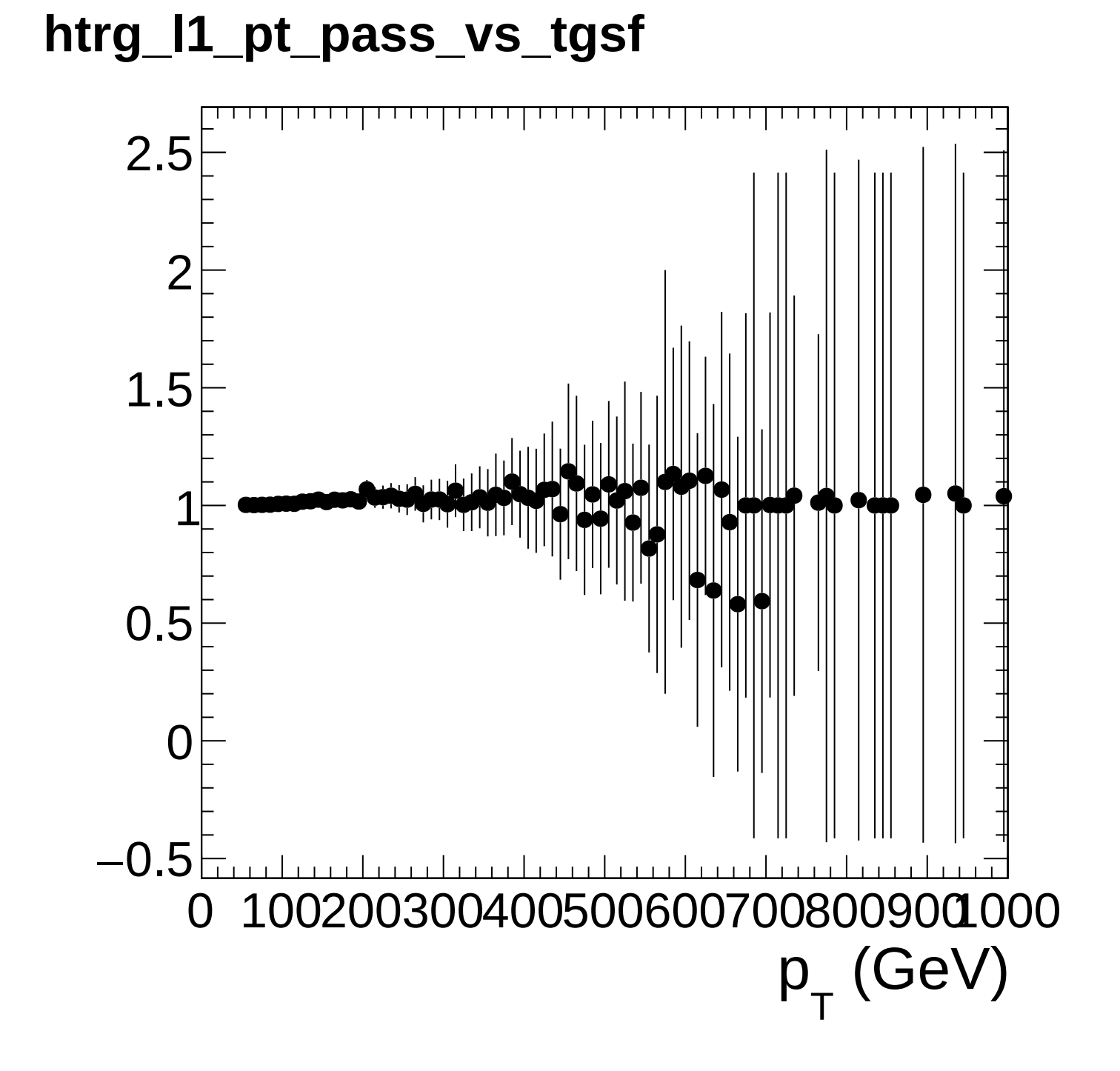

htrg_l1_eta_base
×10
Entries
120
100
80
60
40
20
0
−3
−2
−1
0
1
2
3
η
l1 no trig.
l2 no trig.

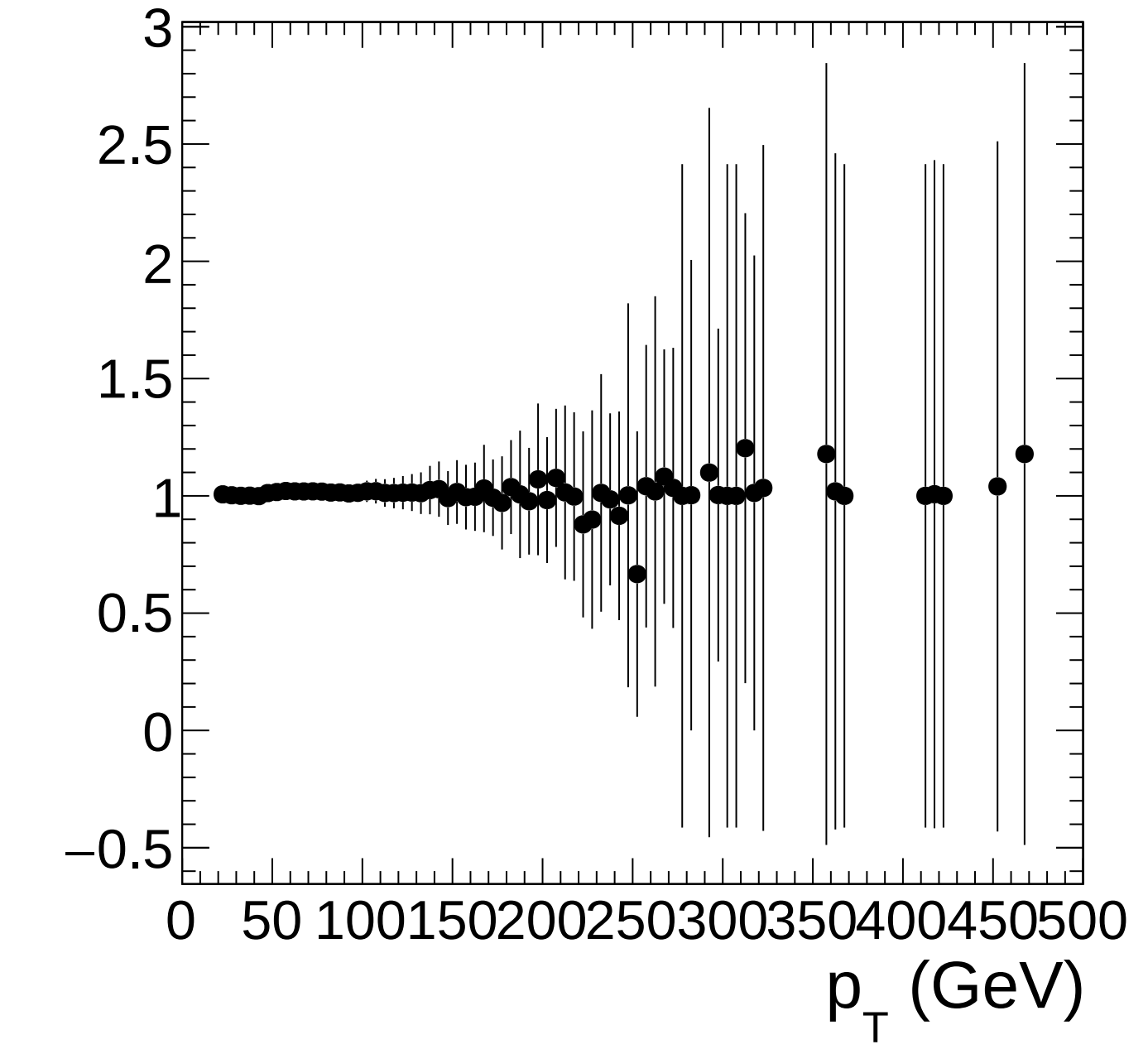

htrg_l1_eta_pass
×10
Entries
120
100
80
60
40
20
0
−3
−2
−1
0
1
2
3
η
l1 pass trig.
l1 trig. s.f.

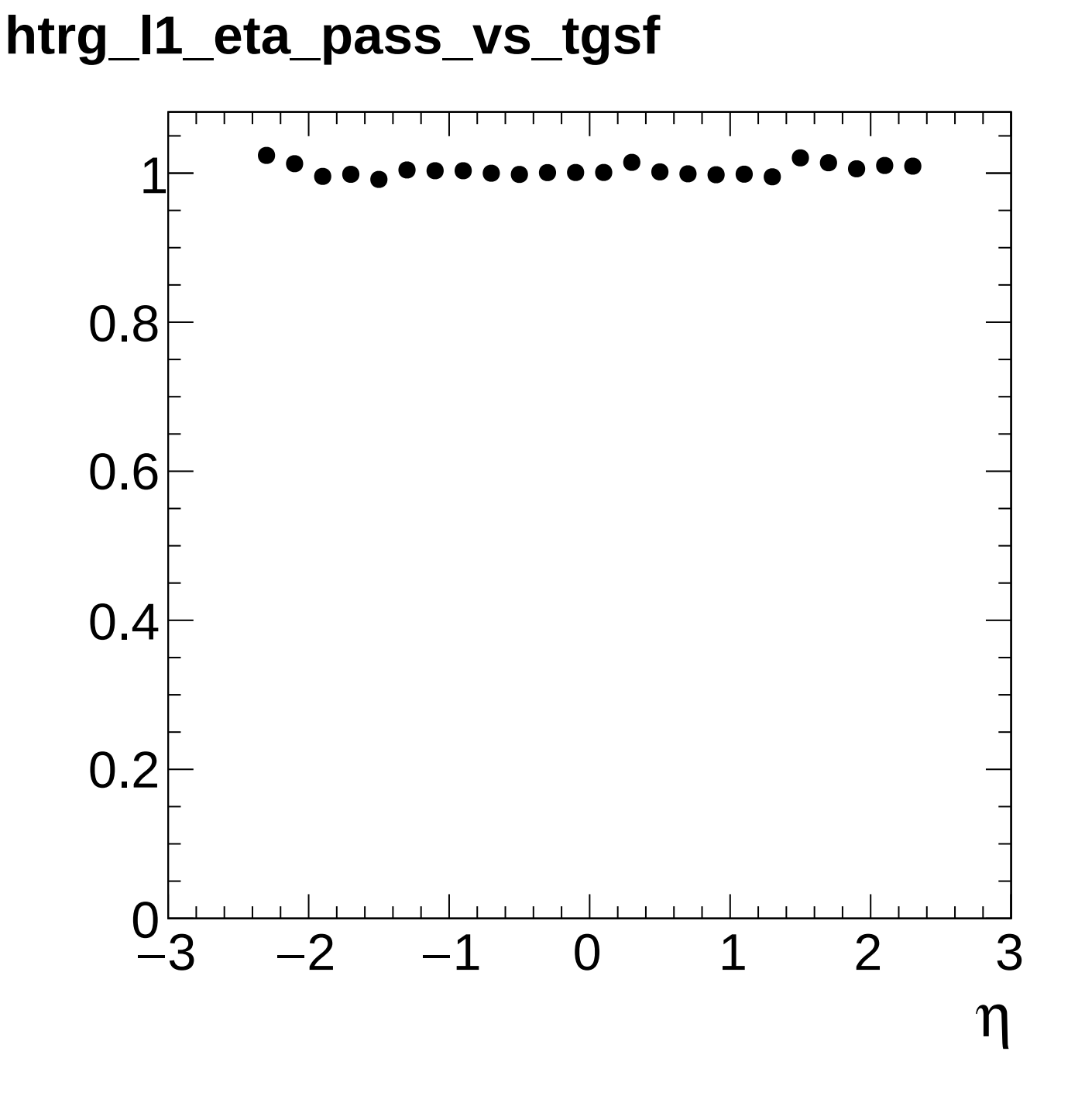

htrg_l2_eta_pass
×10
Entries
120
100
80
60
40
20
0
−3
−2
−1
0
1
2
3
η
l2 pass trig.
l2 trig. s.f.

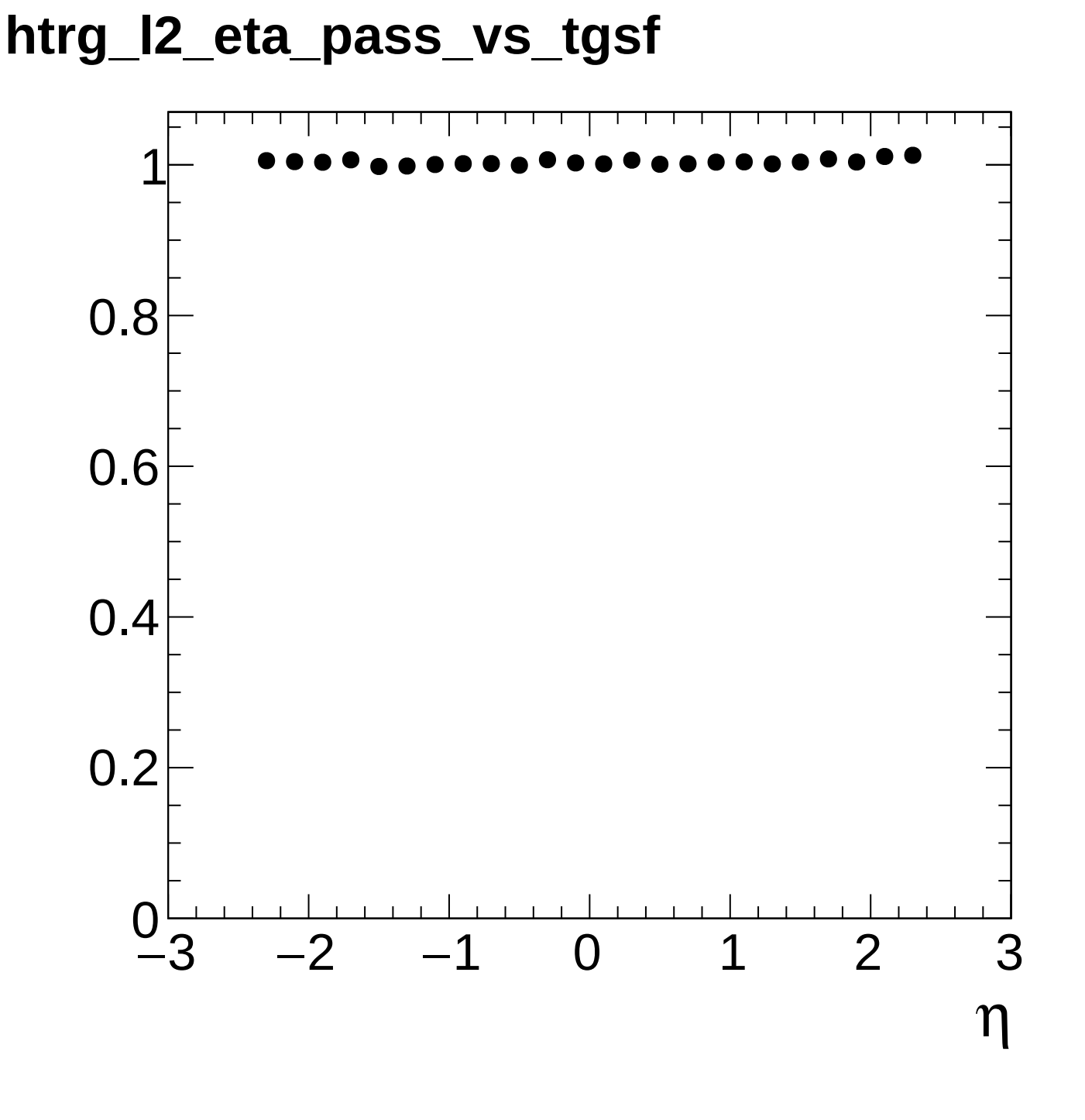

htrg_eff_l1_eta_trig
eff.
1
0.8
0.6
0.4
0.2
0
−3
−2
−1
0
1
2
3
η
l1 pass trig.
l1 trig. s.f.

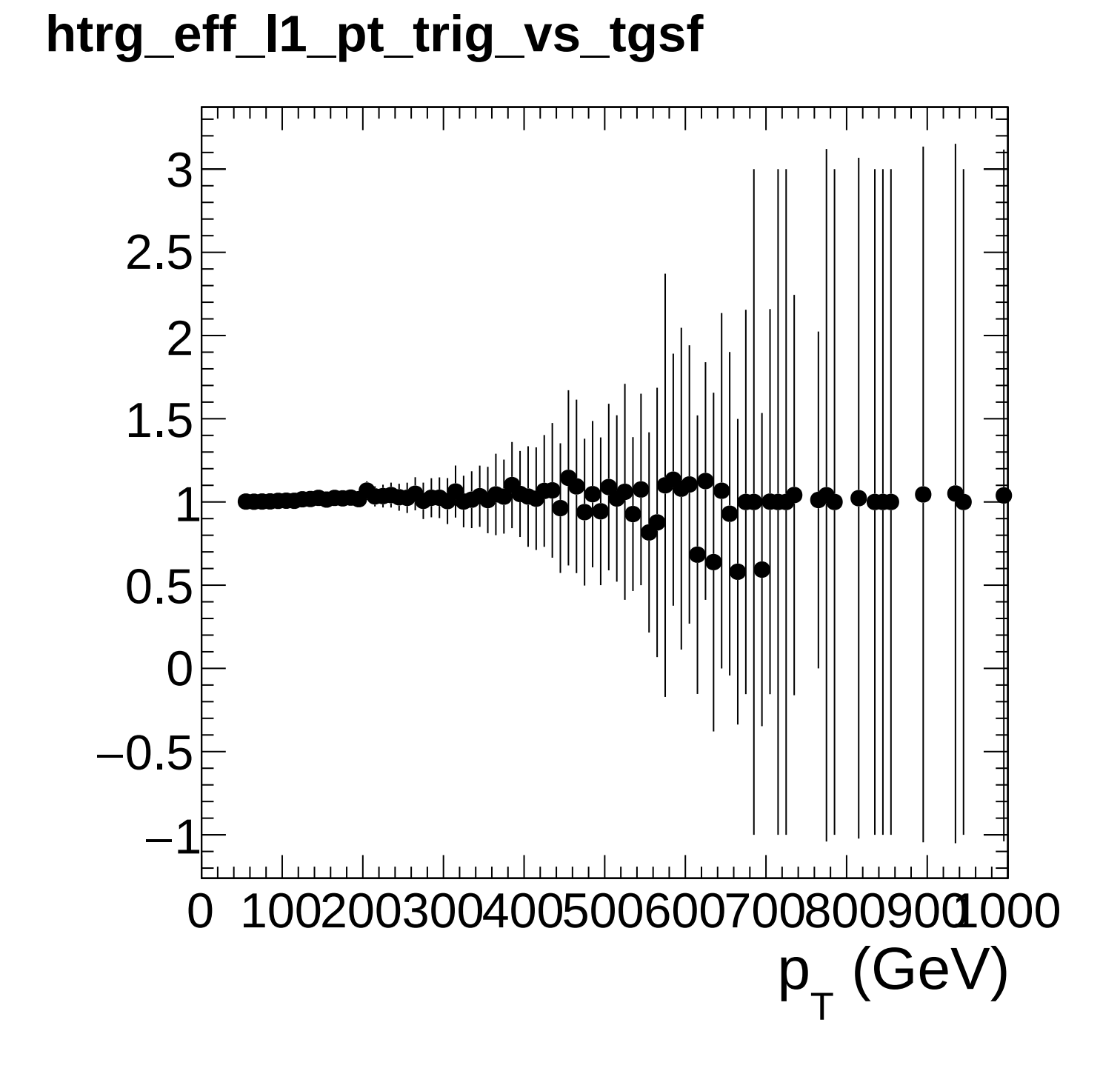

htrg_eff_l2_eta_trig
eff.
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
−3
−2
−1
0
1
2
3
η
l2 pass trig.
l2 trig. s.f.

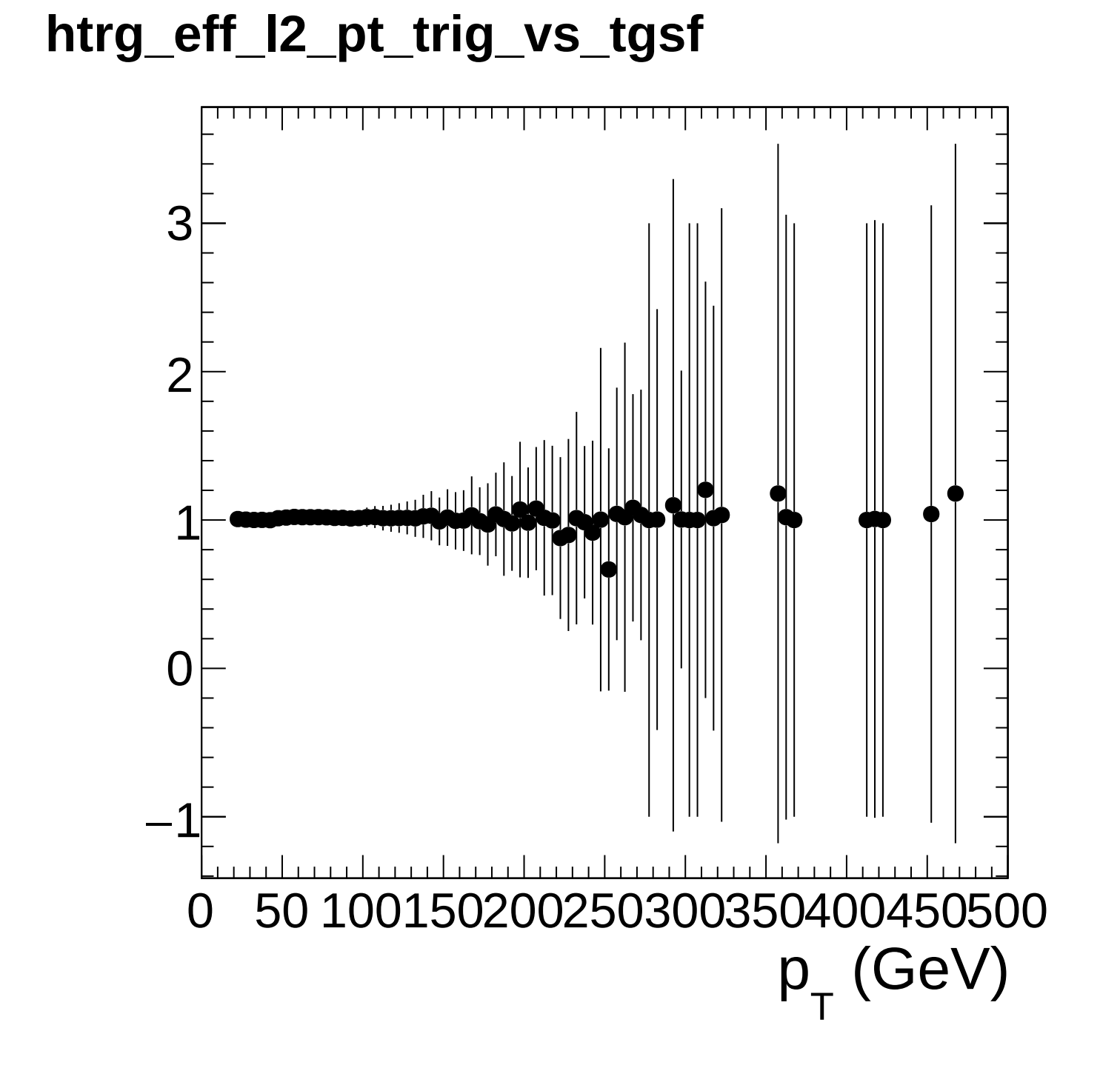

htrg_l1_pt_pass_vs_tgsf
2.5
2
1.5
1
0.5
0
–0.5
0
100
200
300
400
500
600
700
800
900
1000
p_T (GeV)

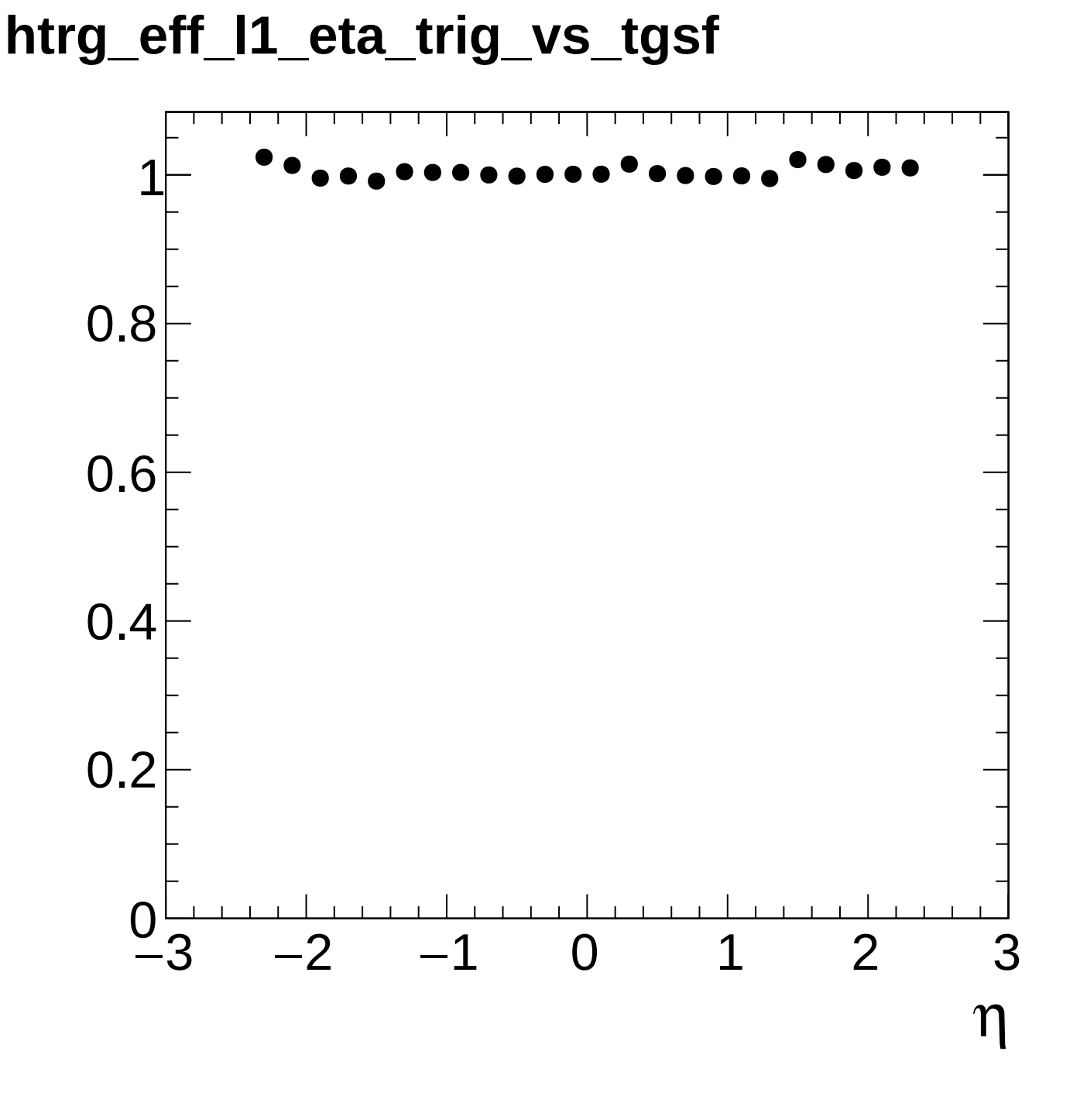

htrg_l2_pt_pass_vs_tgsf
3
2.5
2
1.5
1
0.5
0
−0.5
0
50
100
150
200
250
300
350
400
450
500
p_T (GeV)

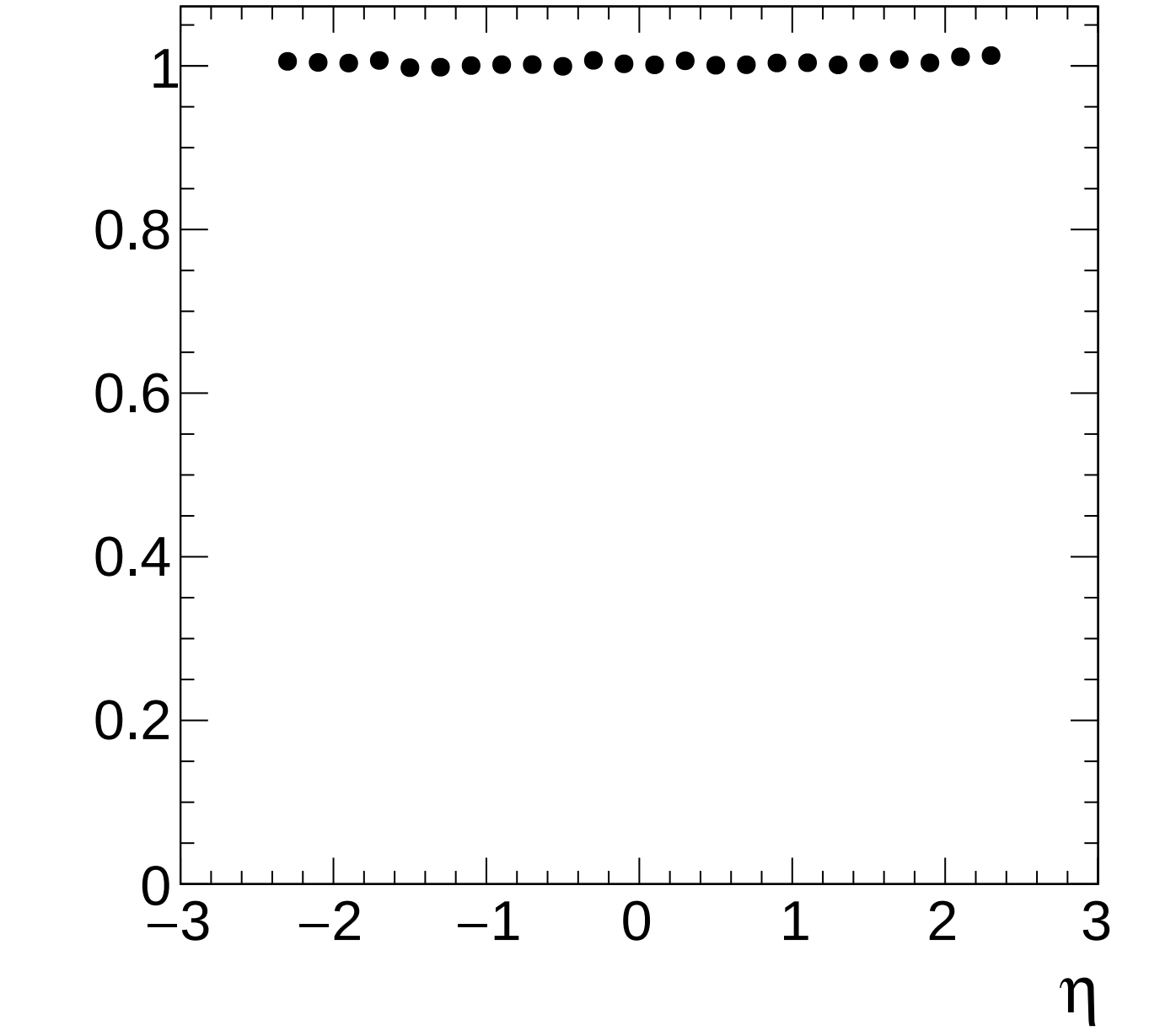

htrg_l1_eta_pass_vs_tgsf
1
0.8
0.6
0.4
0.2
0
−3
−2
−1
0
1
2
3
η

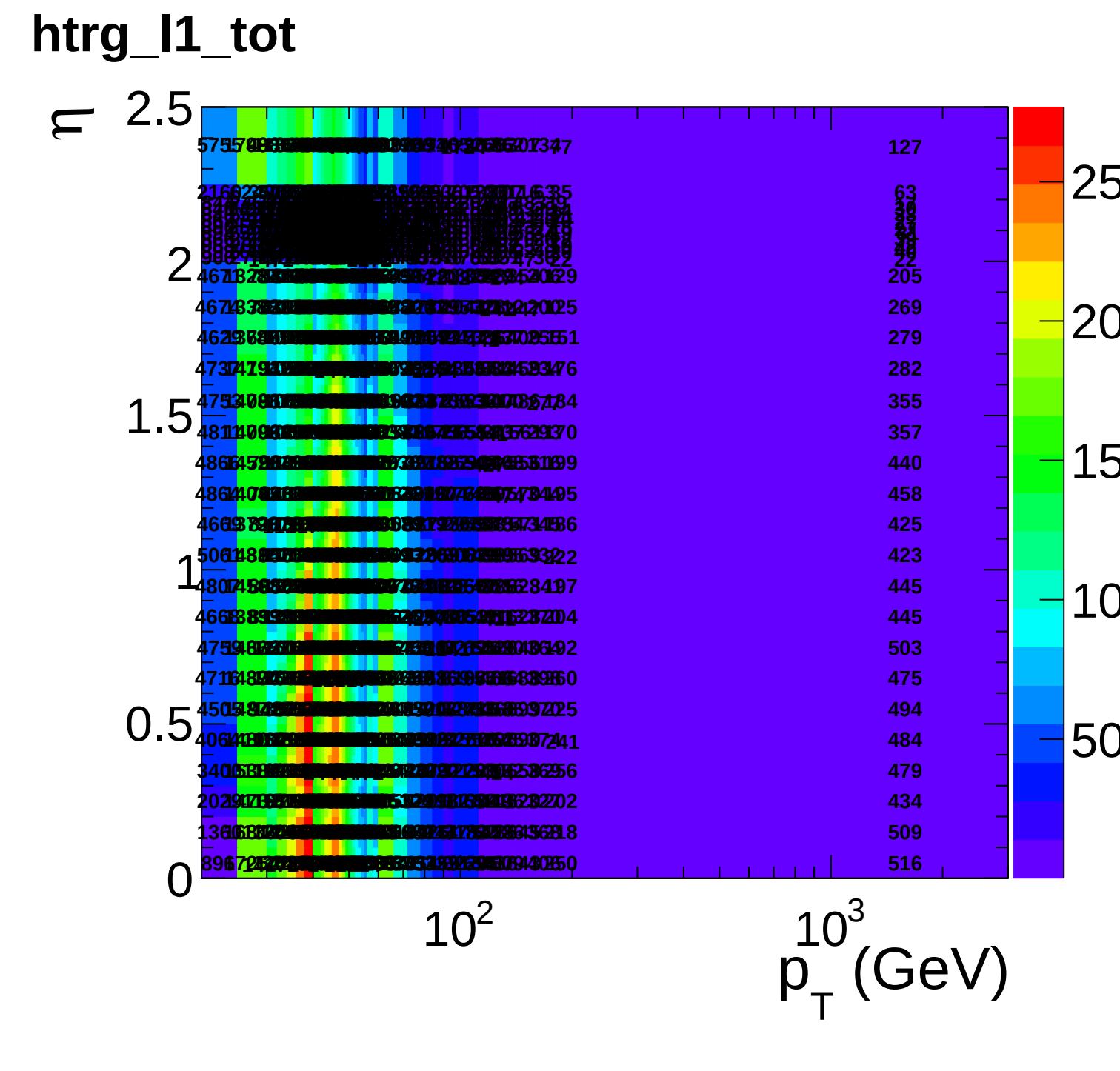

htrg_l2_eta_pass_vs_tgsf
1
0.8
0.6
0.4
0.2
0
−3
−2
−1
0
1
2
3
η

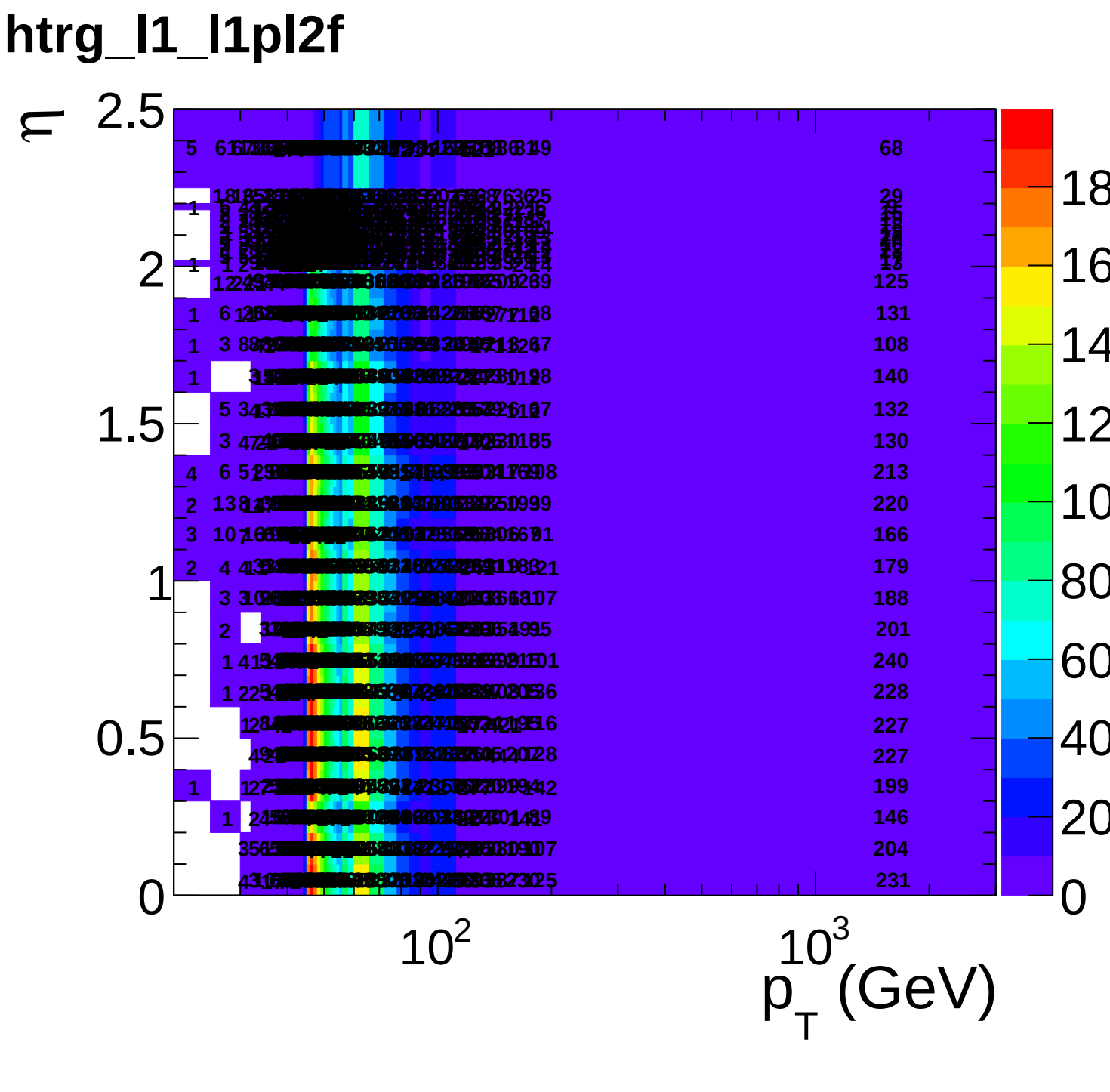

htrg_eff_l1_pt_trig_vs_tgsf
3
2.5
2
1.5
1
0.5
0
−0.5
−1
0
100
200
300
400
500
600
700
800
900
1000
p_T (GeV)

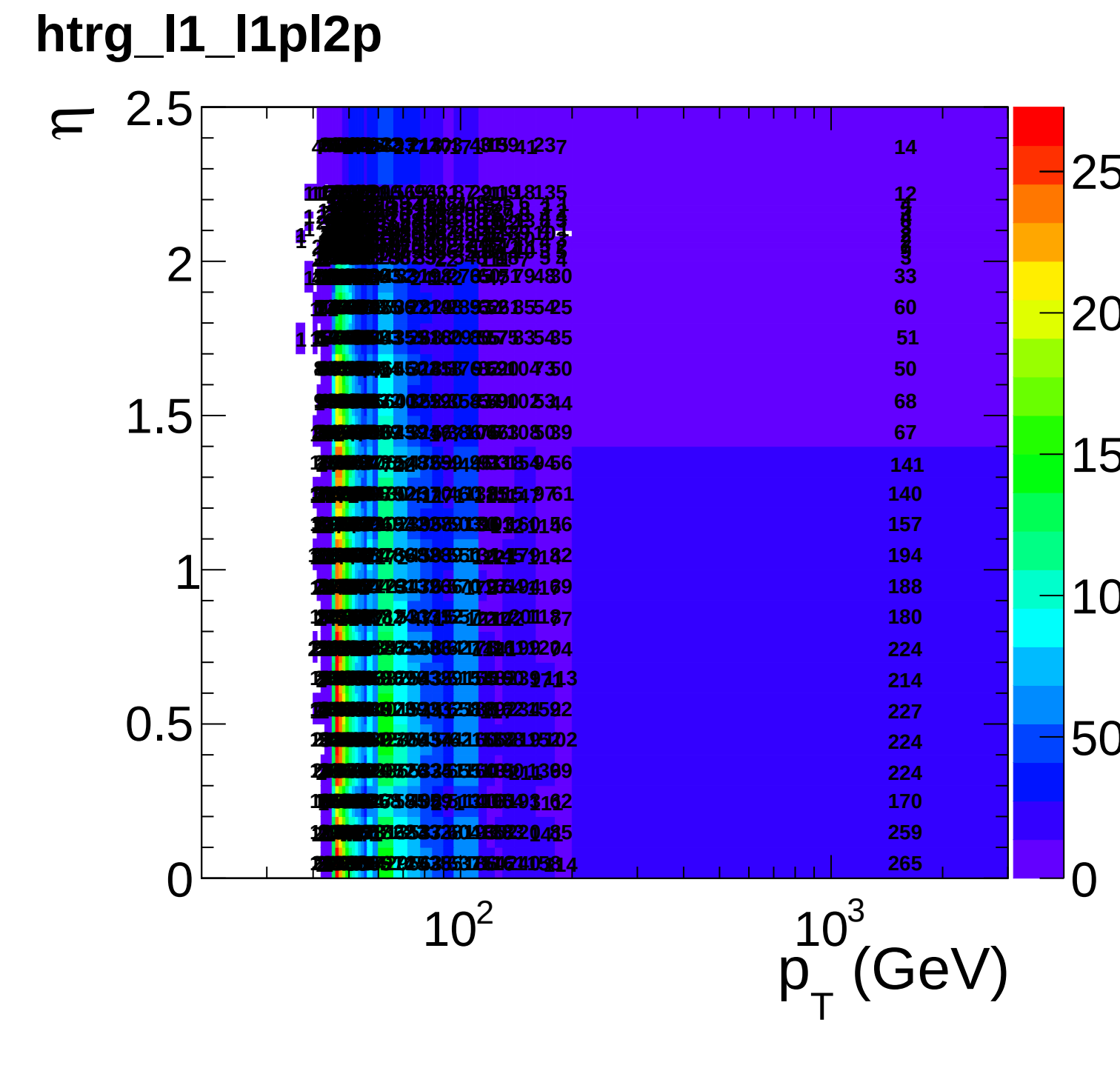

htrg_eff_l2_pt_trig_vs_tgsf
3
2
1
0
−1
0
50
100
150
200
250
300
350
400
450
500
p_T (GeV)

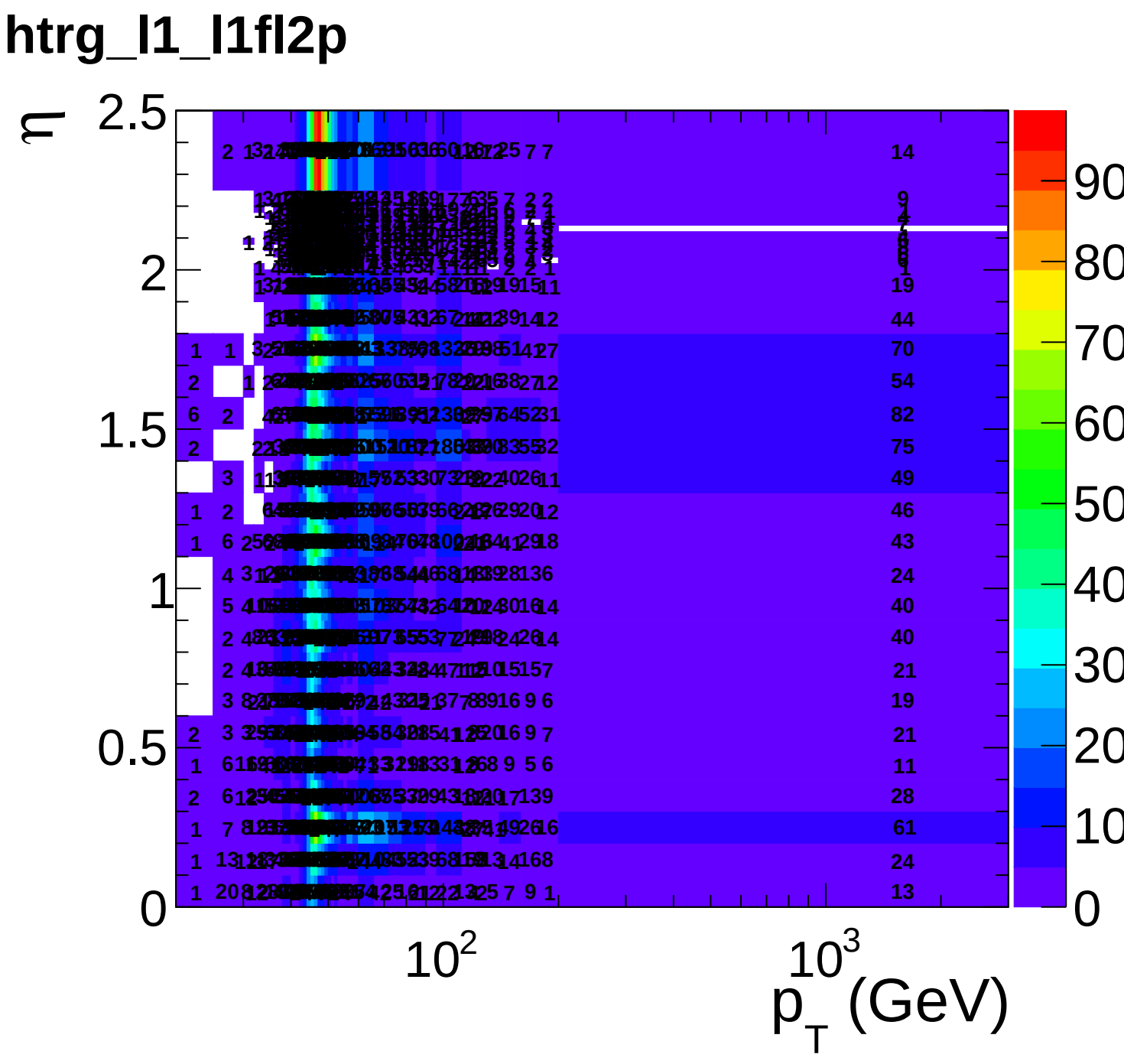

htrg_eff_l1_eta_trig_vs_tgsf
1
0.8
0.6
0.4
0.2
0
−3
−2
−1
0
1
2
3
η

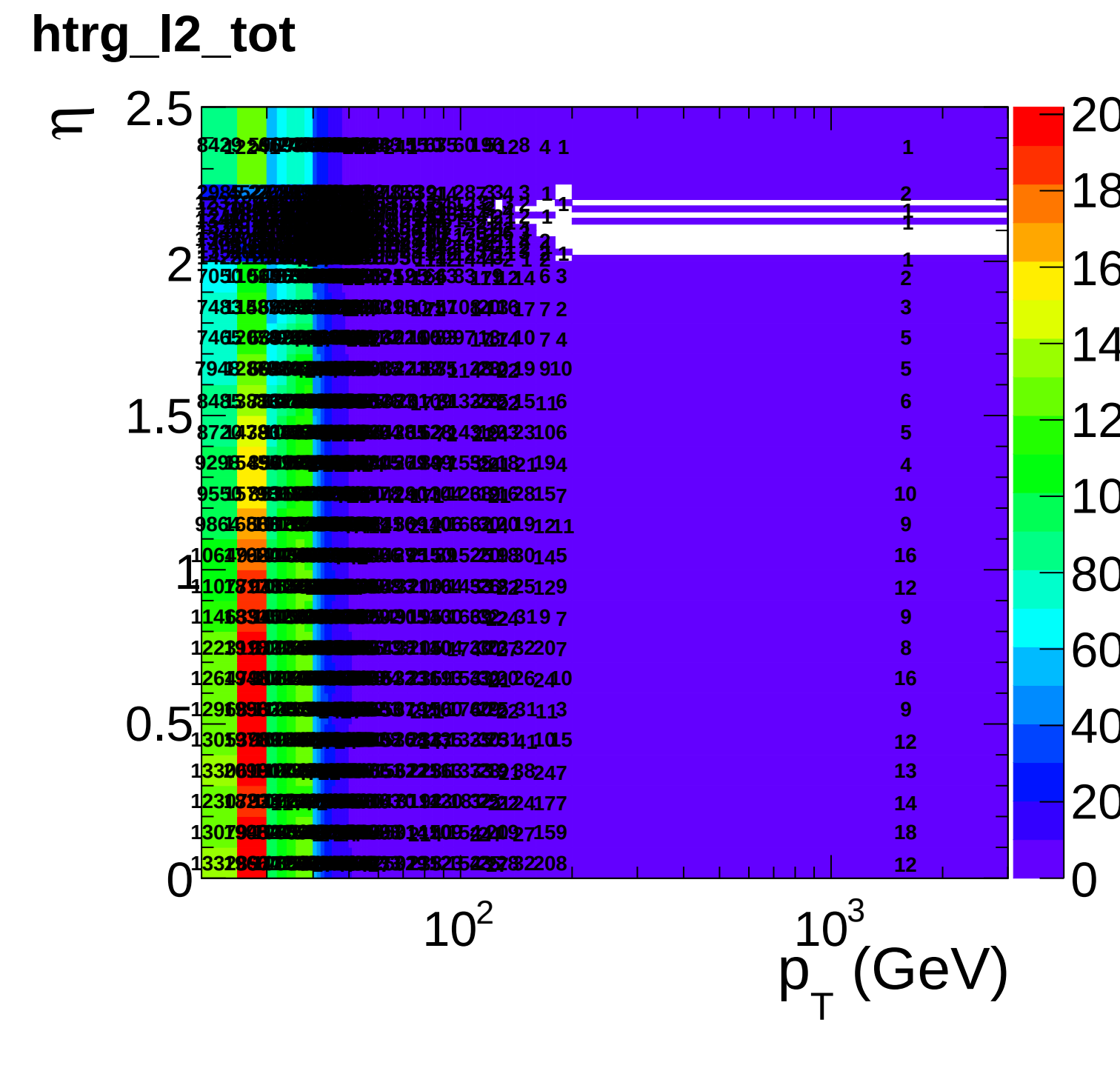

htrg_eff_l2_eta_trig_vs_tgsf
1
0.8
0.6
0.4
0.2
0
−3
−2
−1
0
1
2
3
η


htrg_l1_tot
η
2.5
2
1.5
1
0.5
0
10^2
10^3
p_T (GeV)
127
63
22
205
269
279
282
355
357
440
458
425
423
445
445
503
475
494
484
479
434
509
516
25
20
15
10
50

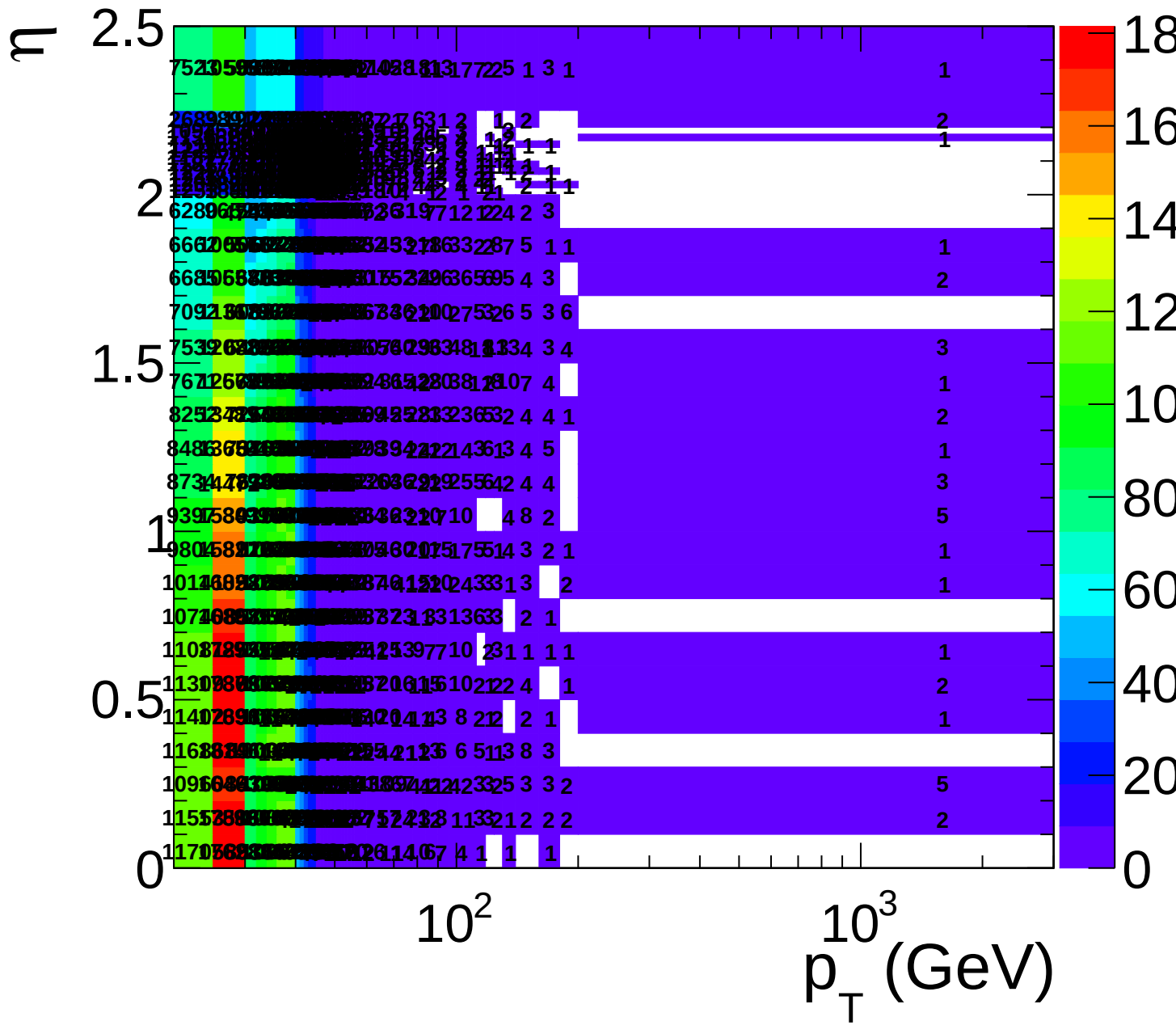

htrg_l1_l1pl2f
η
2.5
2
1.5
1
0.5
0
10^2
10^3
p_T (GeV)
18
16
14
12
10
80
60
40
20
0

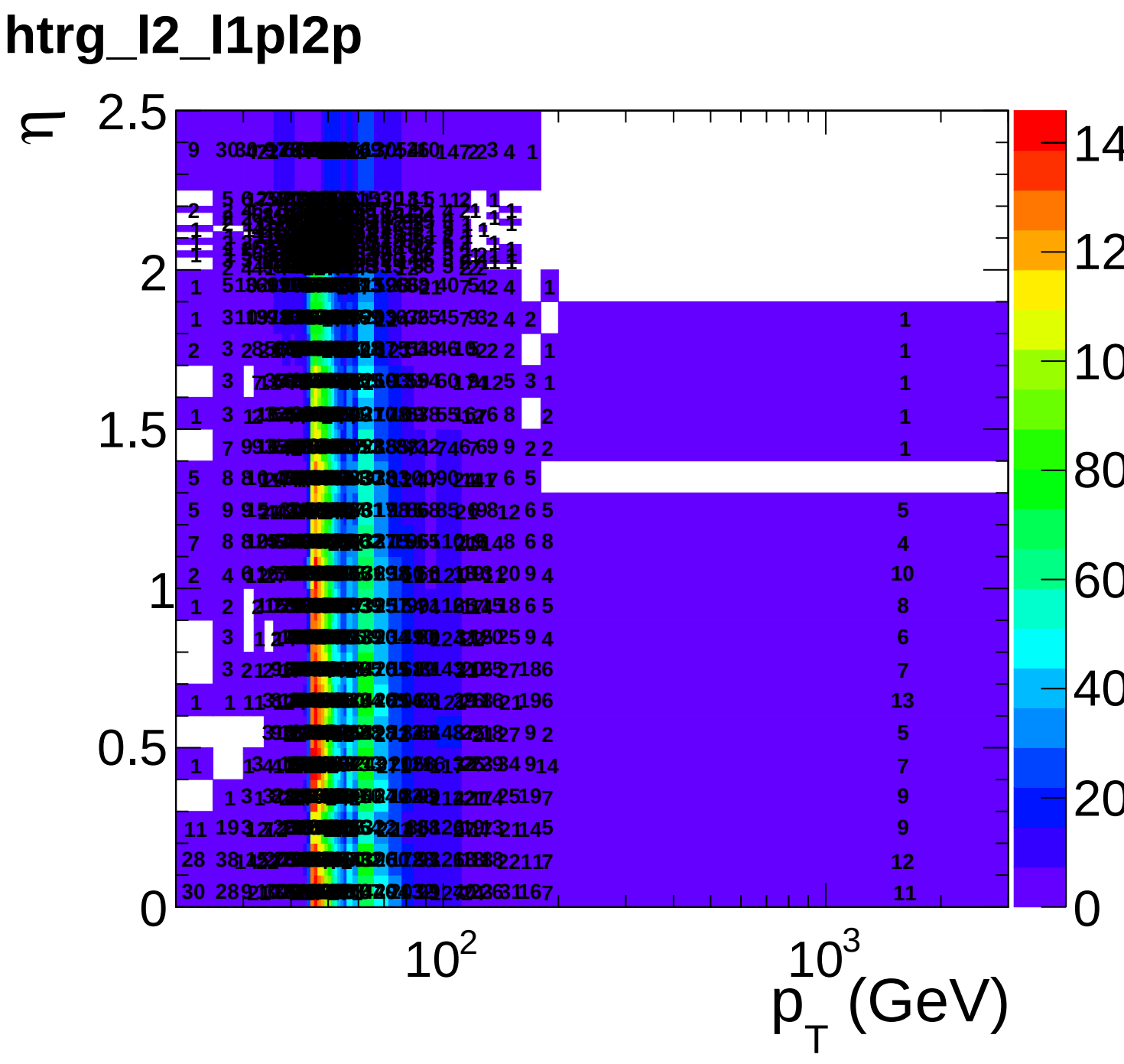

htrg_l1_l1pl2p
η
2.5
2
1.5
1
0.5
0
14
12
33
60
51
50
68
67
141
140
157
194
188
180
224
214
227
224
224
170
259
265
25
20
15
10
50
0
10^2
10^3
p_T (GeV)

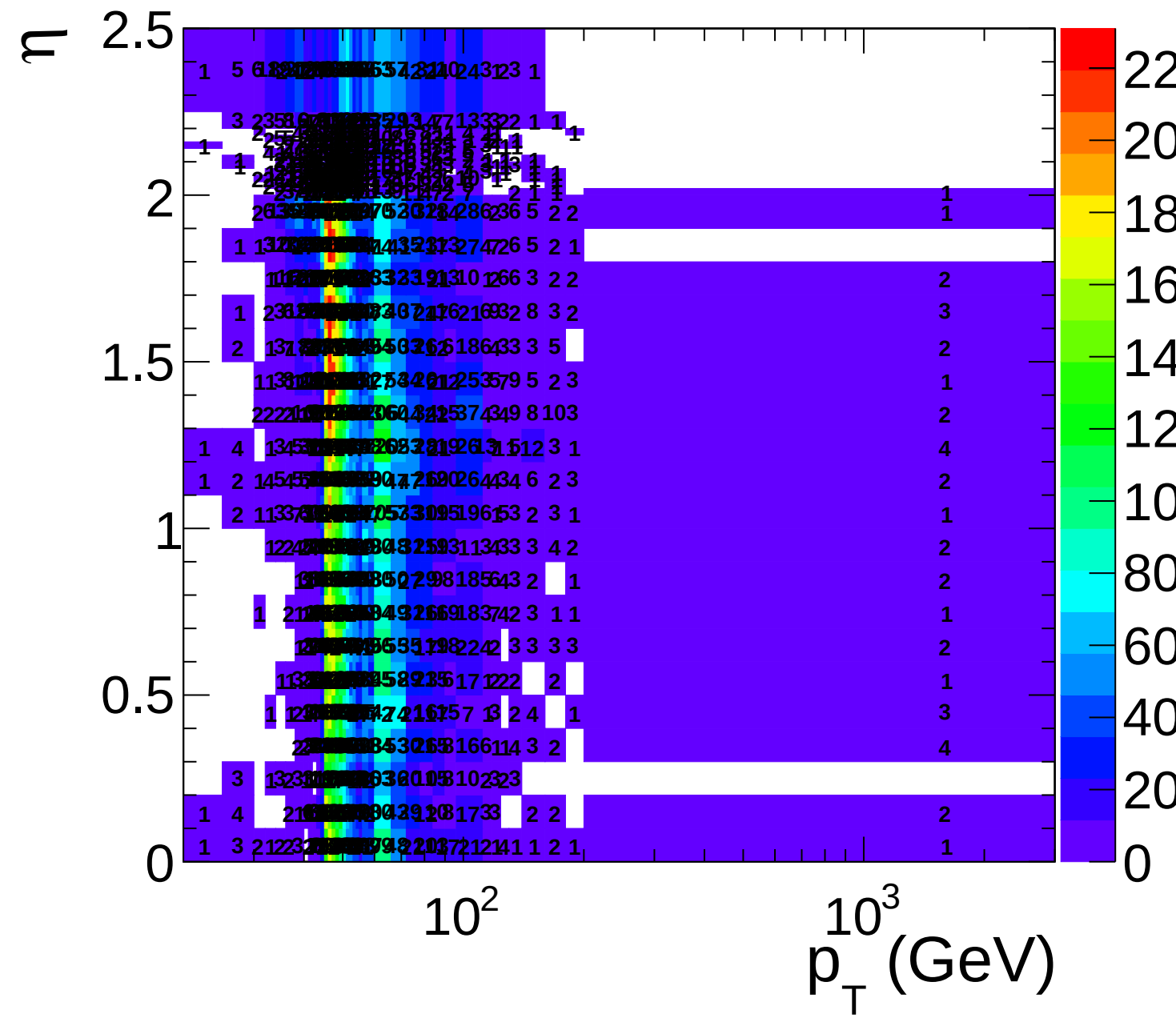

htrg_l1_l1fl2p
η
2.5
2
1.5
1
0.5
0
10^2
10^3
p_T (GeV)
90
80
70
60
50
40
30
20
10
0

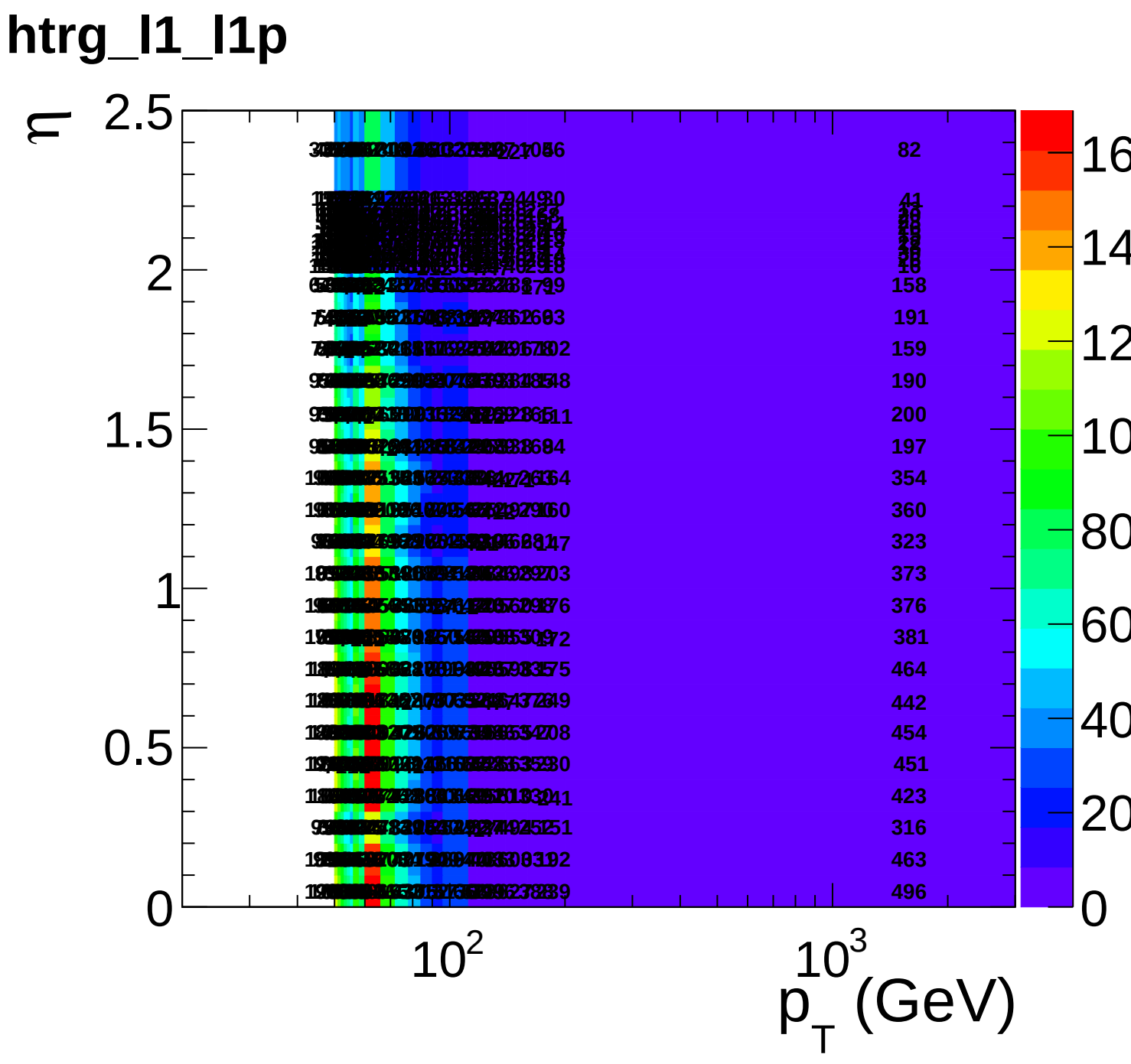

htrg_l2_tot
η
2.5
2
1.5
1
0.5
0
10^2
10^3
p_T (GeV)
20
18
16
14
12
10
80
60
40
20
0

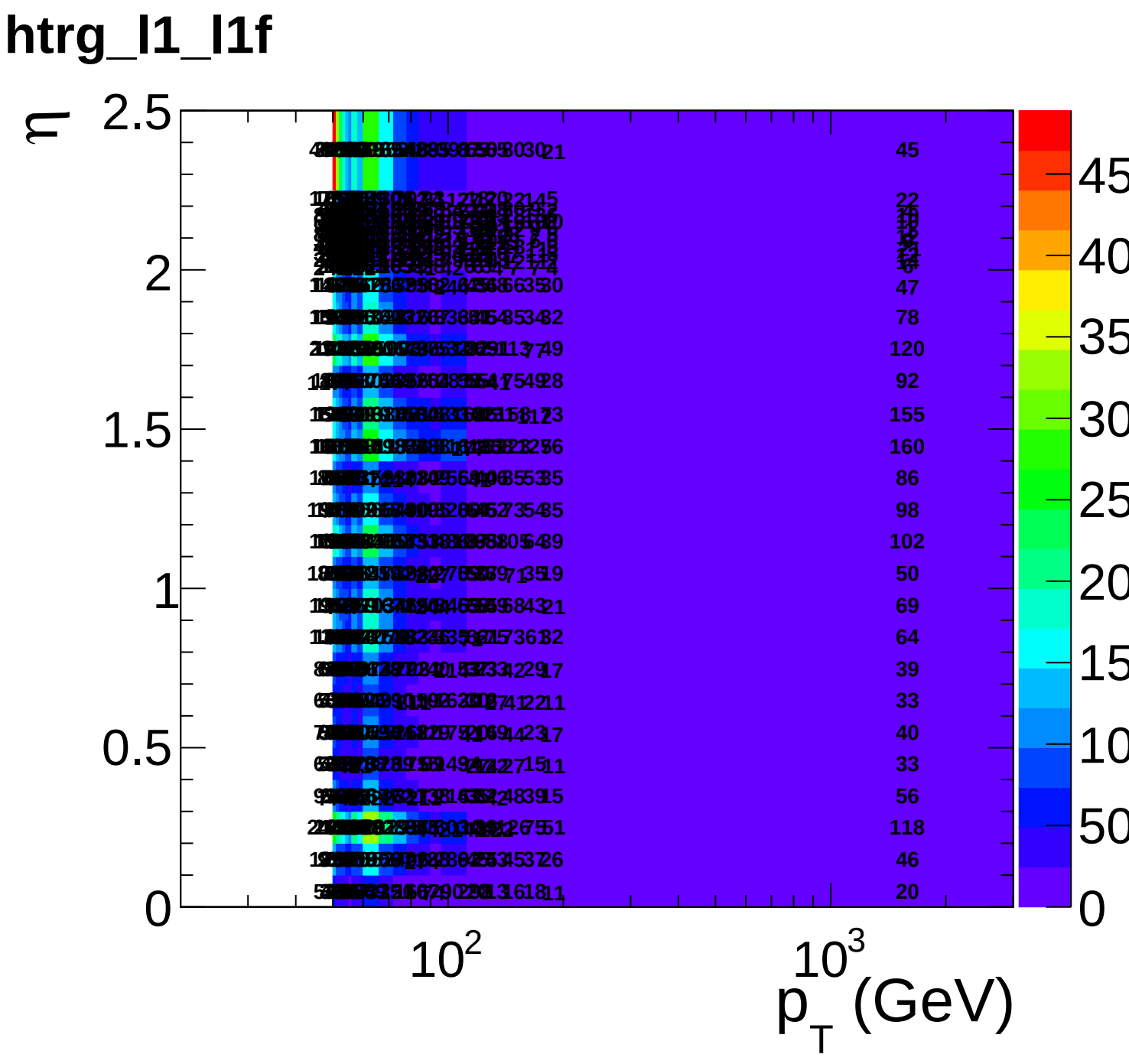
htrg_l2_l1pl2f

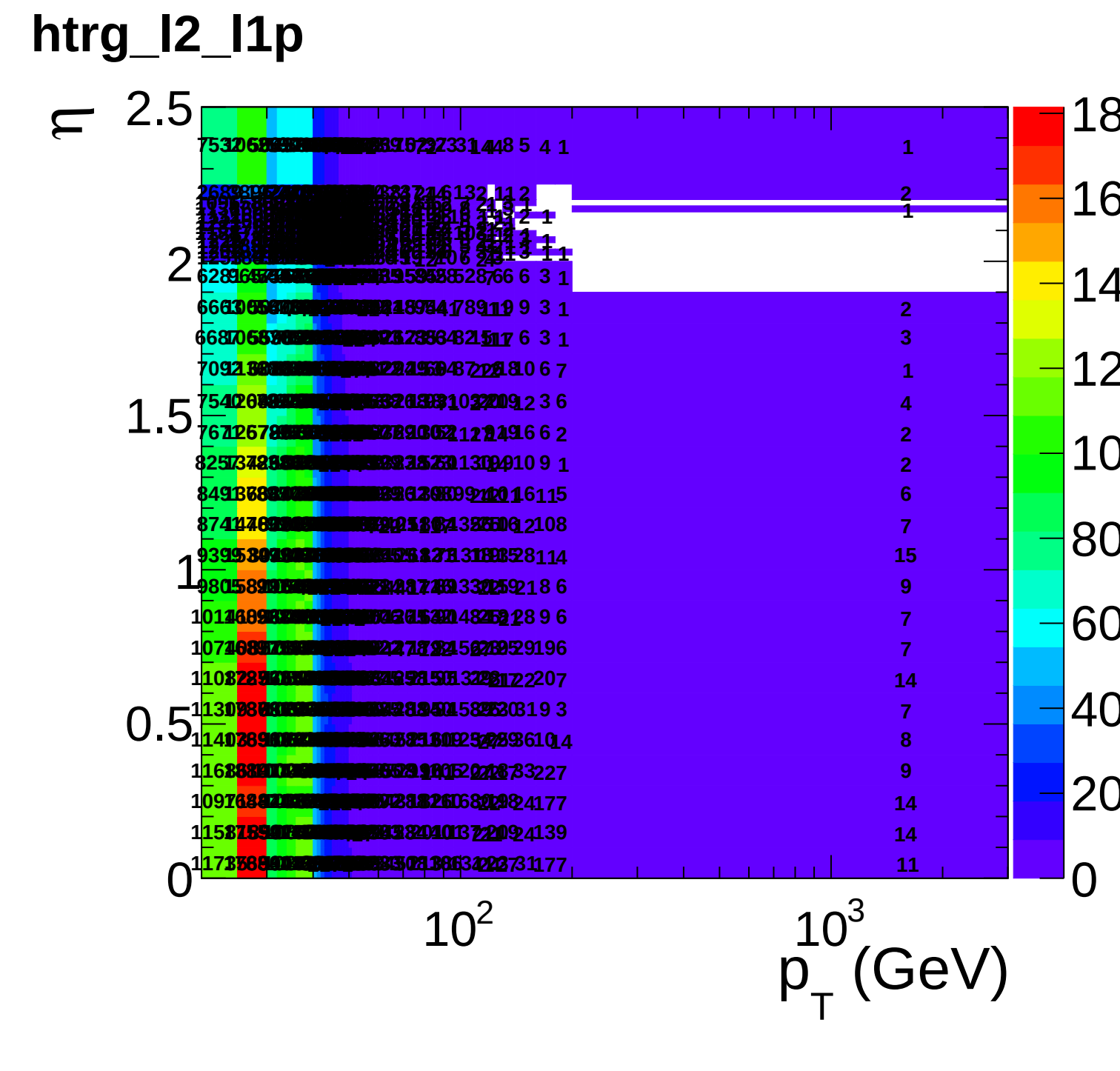


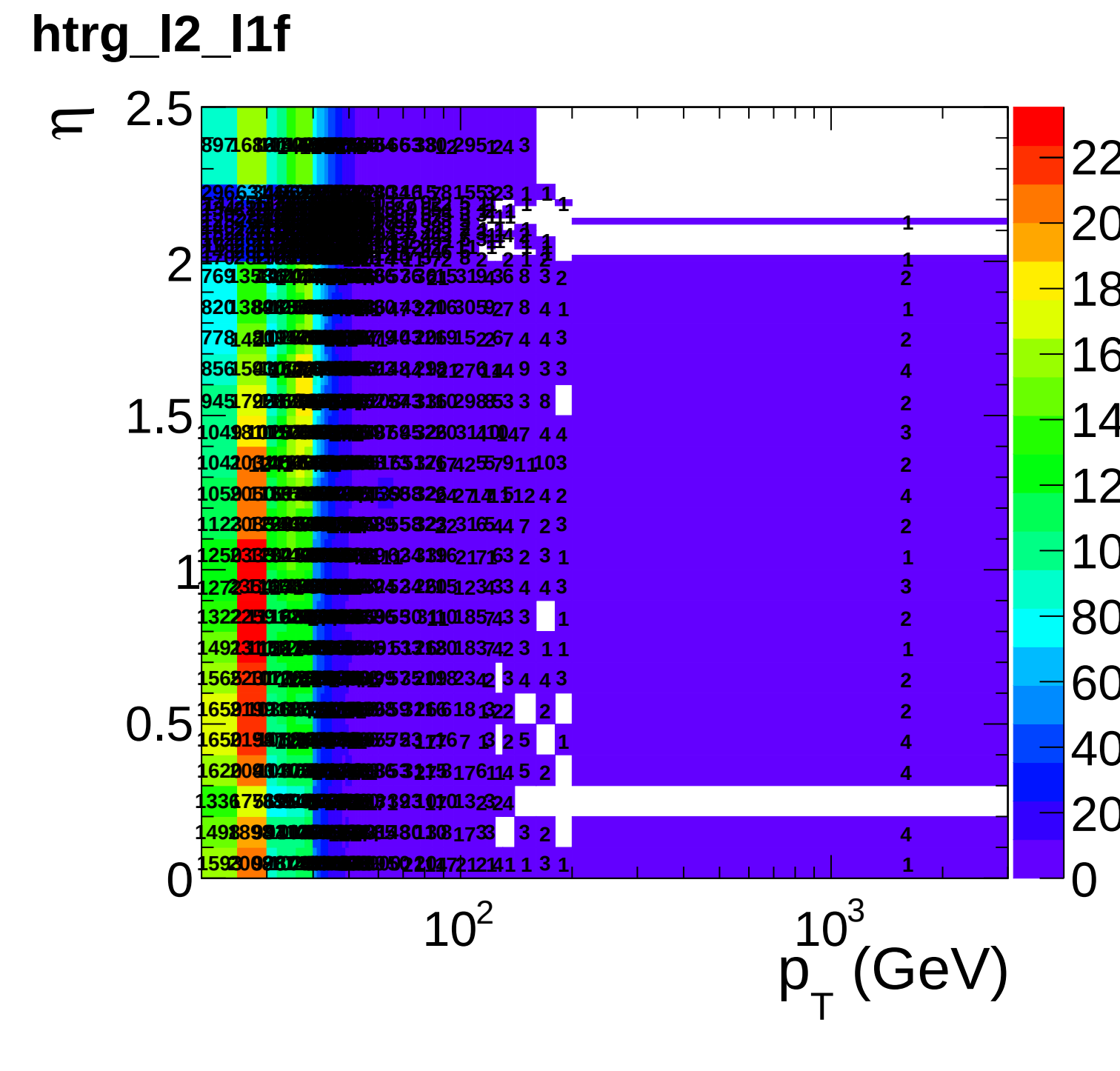

htrg_l2_l1pl2p
η
2.5
2
1.5
1
0.5
0
10^2
10^3
p_T (GeV)
14
12
10
80
60
40
20
0


htrg_l2_l1fl2p
η
2.5
2
1.5
1
0.5
0
10^2
10^3
p_T (GeV)
22
20
18
16
14
12
10
80
60
40
20
0

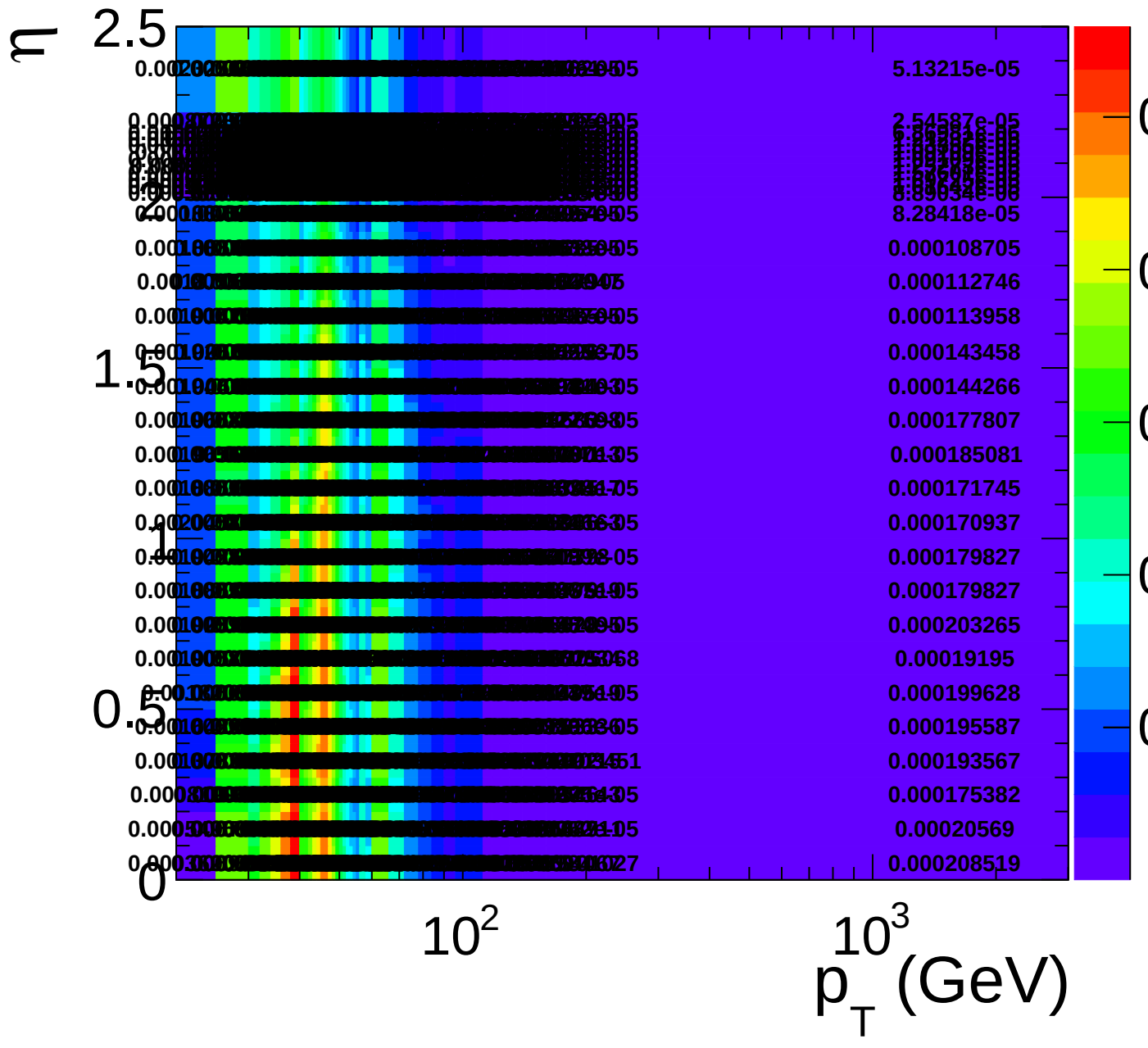

htrg_l1_l1p
η
2.5
2
1.5
1
0.5
0
10^2
10^3
p_T (GeV)
82
41
158
191
159
190
200
197
354
360
323
373
376
381
464
442
454
451
423
316
463
496
16
14
12
10
80
60
40
20
0


htrg_l1_l1f
η
2.5
2
1.5
1
0.5
0
10^2
10^3
p_T (GeV)
45
40
35
30
25
20
15
10
50
0

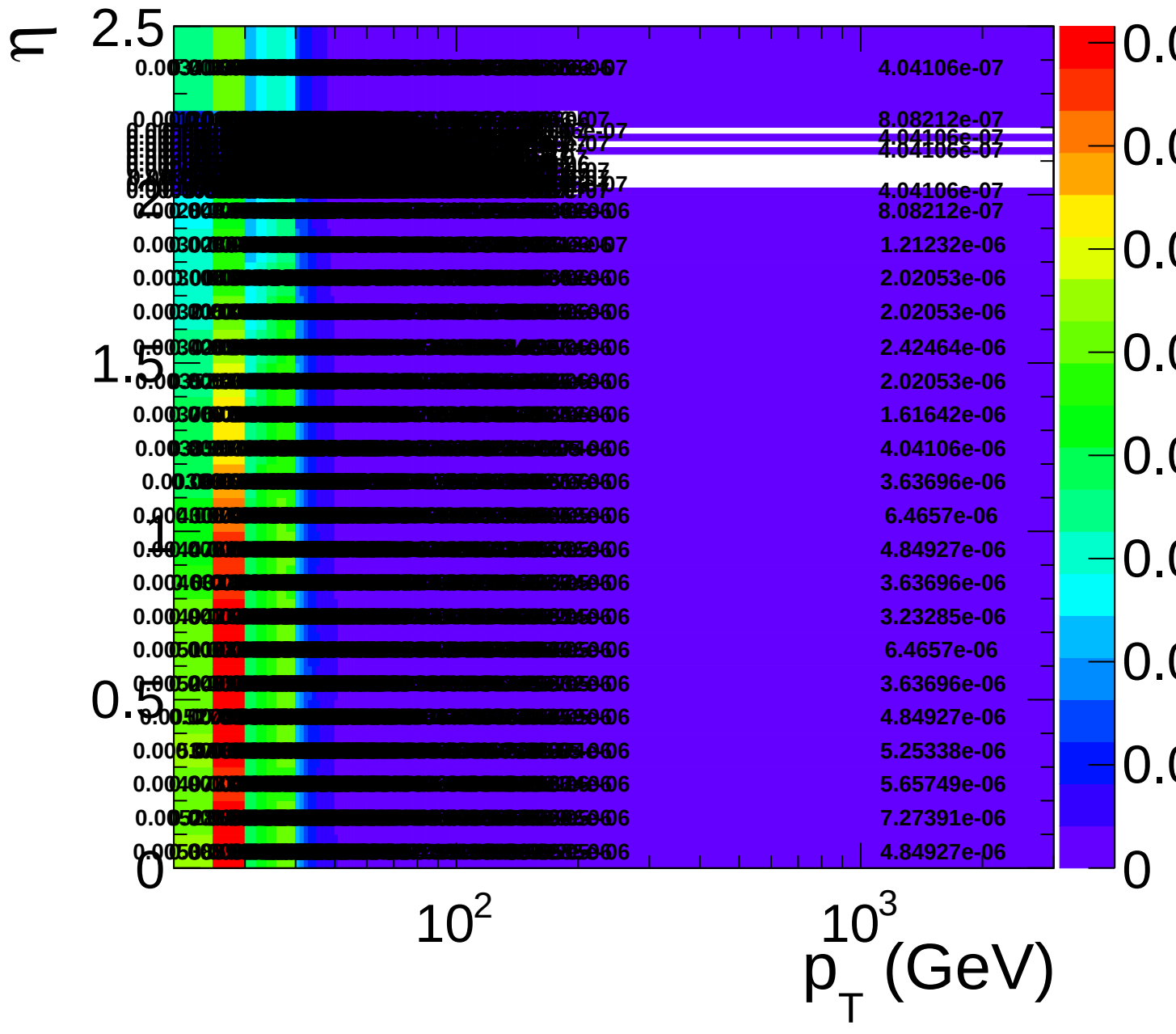

htrg_l2_l1p
η
2.5
2
1.5
1
0.5
0
10^2
10^3
p_T (GeV)
18
16
14
12
10
80
60
40
20
0

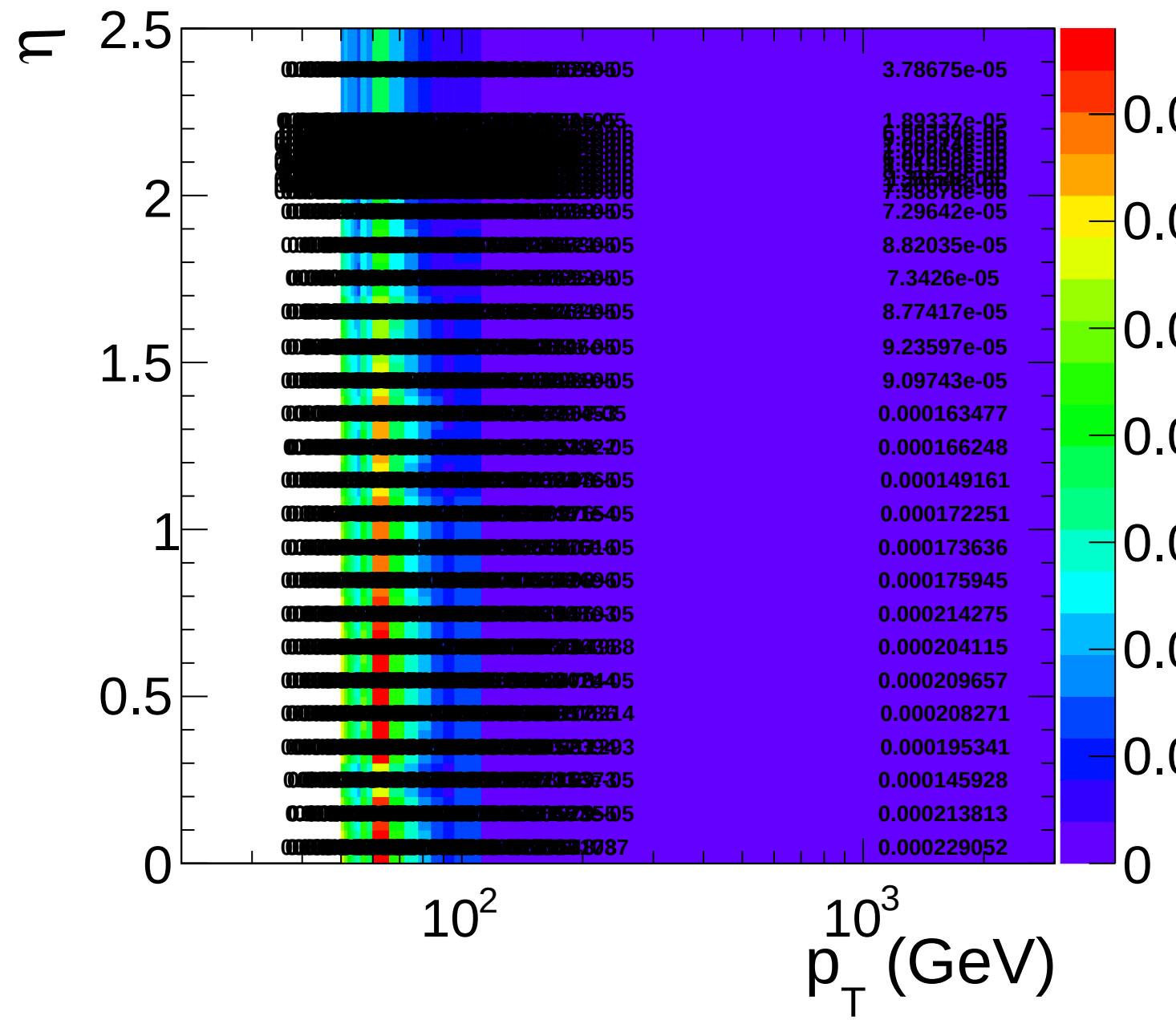

htrg_l2_l1f
η
2.5
2
1.5
1
0.5
0
10^2
10^3
p_T (GeV)
22
20
18
16
14
12
10
80
60
40
20
0

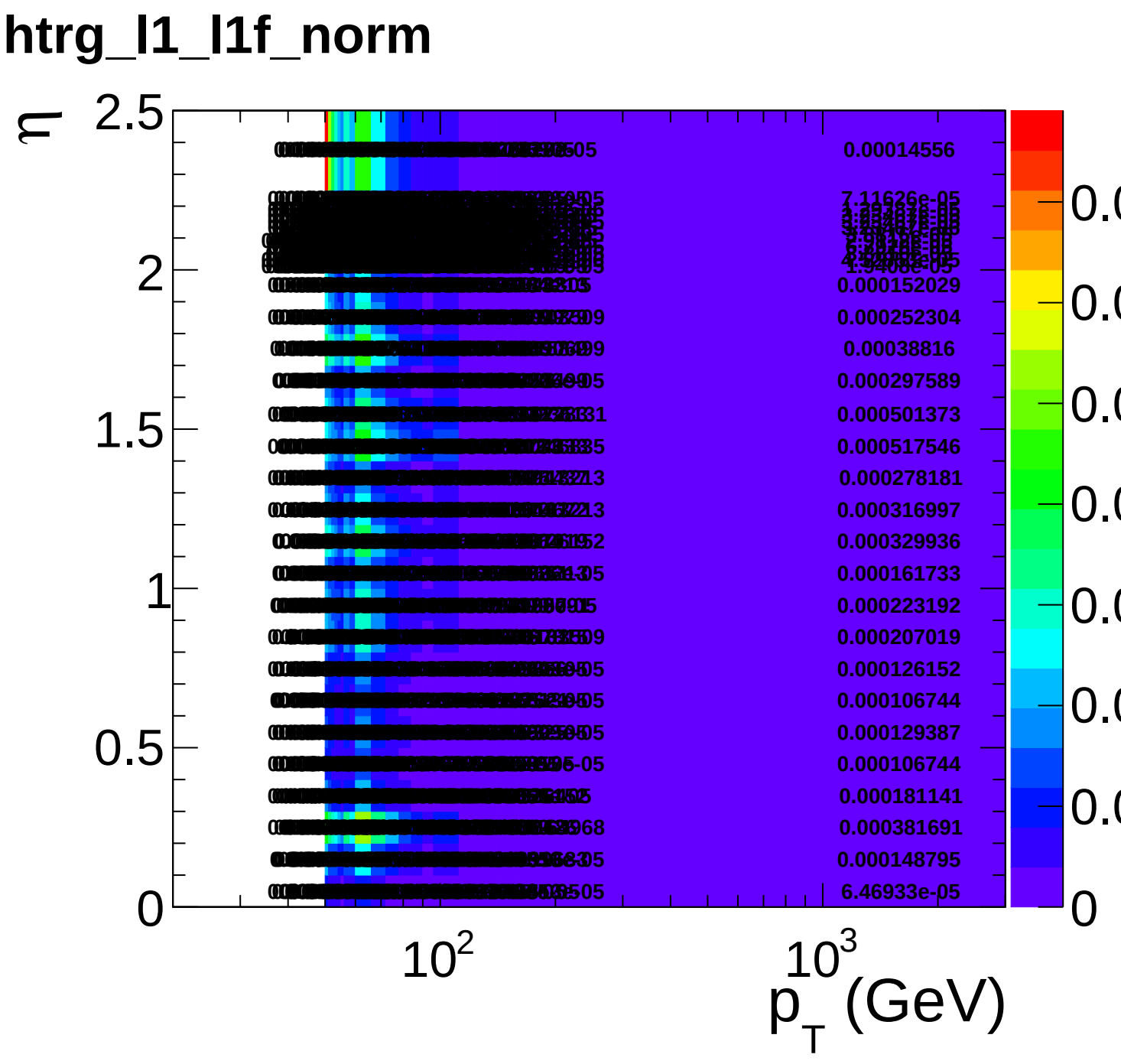
htrg_l1_tot_norm



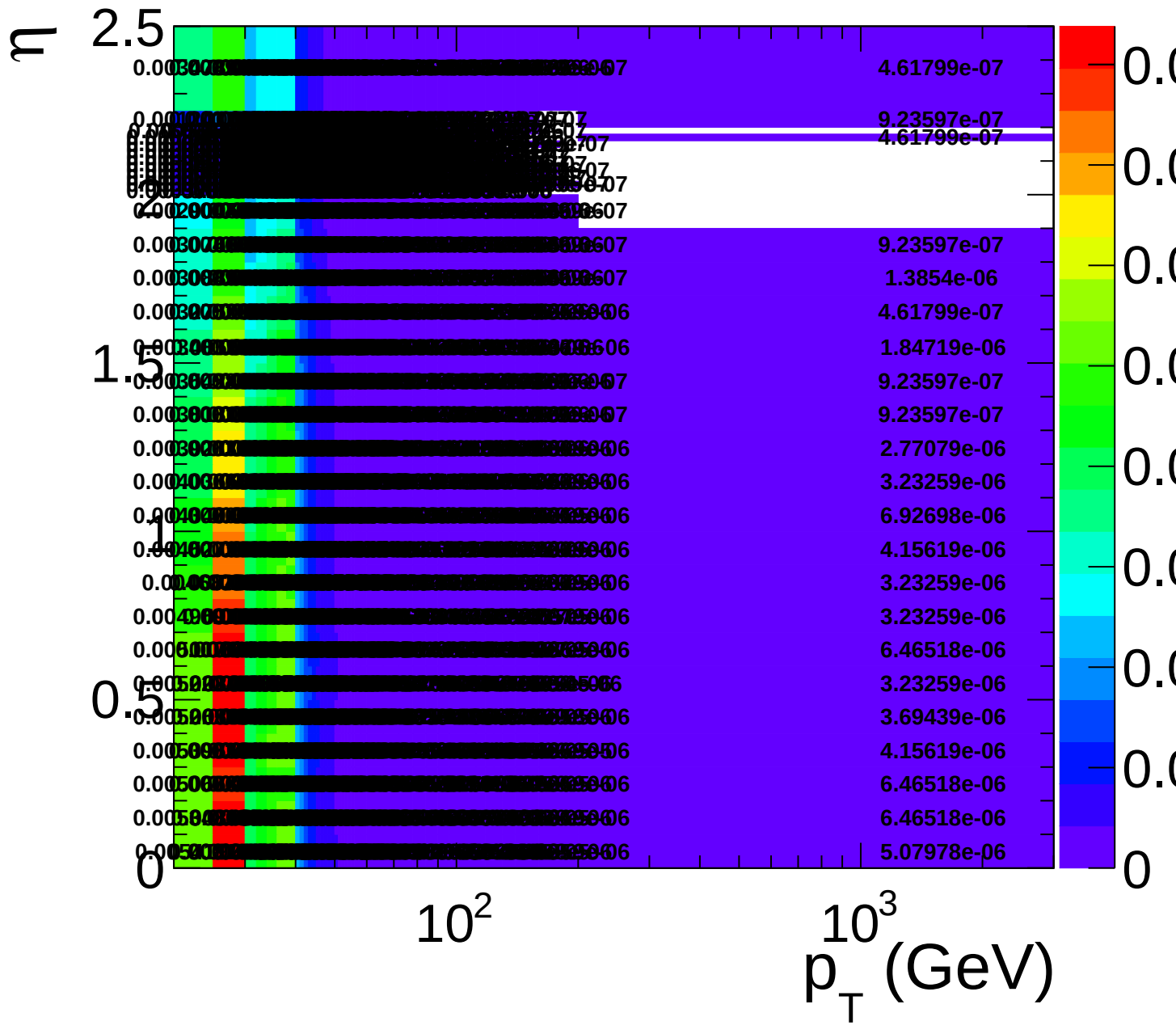
htrg_l2_tot_norm



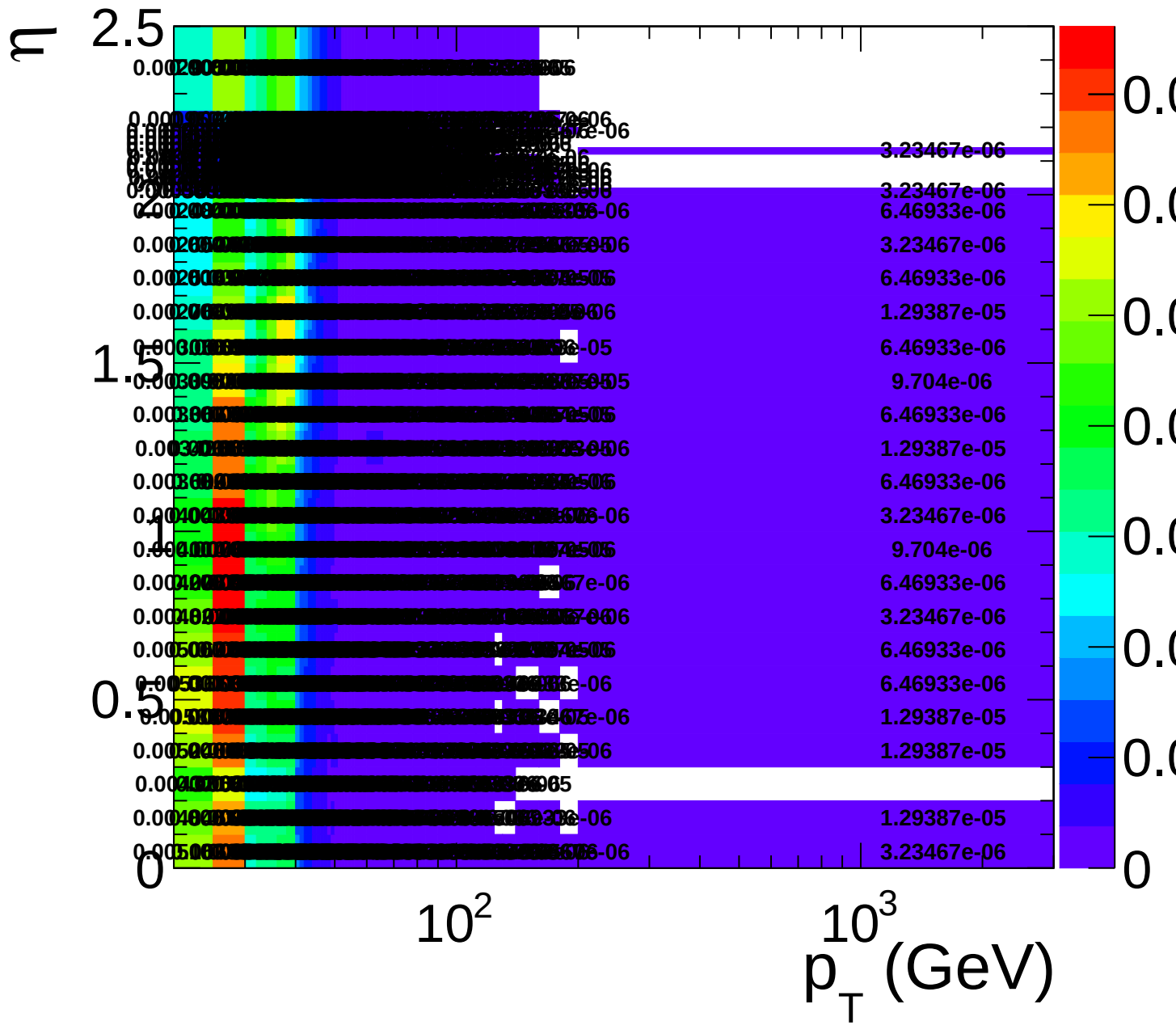

htrg_l1_l1p_norm
η
2.5
2
1.5
1
0.5
0
3.78675e-05
7.29642e-05
8.82035e-05
7.3426e-05
8.77417e-05
9.23597e-05
9.09743e-05
0.000163477
0.000166248
0.000149161
0.000172251
0.000173636
0.000175945
0.000214275
0.000204115
0.000209657
0.000208271
0.000195341
0.000145928
0.000213813
0.000229052
0.0
0
10^2
10^3
p_T (GeV)


htrg_l1_l1f_norm
η
2.5
2
1.5
1
0.5
0
10^2
10^3
p_T (GeV)
0.00014556
7.11626e-05
1.9408e-05
0.000152029
0.000252304
0.00038816
0.000297589
0.000501373
0.000517546
0.000278181
0.000316997
0.000329936
0.000161733
0.000223192
0.000207019
0.000126152
0.000106744
0.000129387
0.000106744
0.000181141
0.000381691
0.000148795
6.46933e-05
0.0
0.0
0.0
0.0
0.0
0.0
0

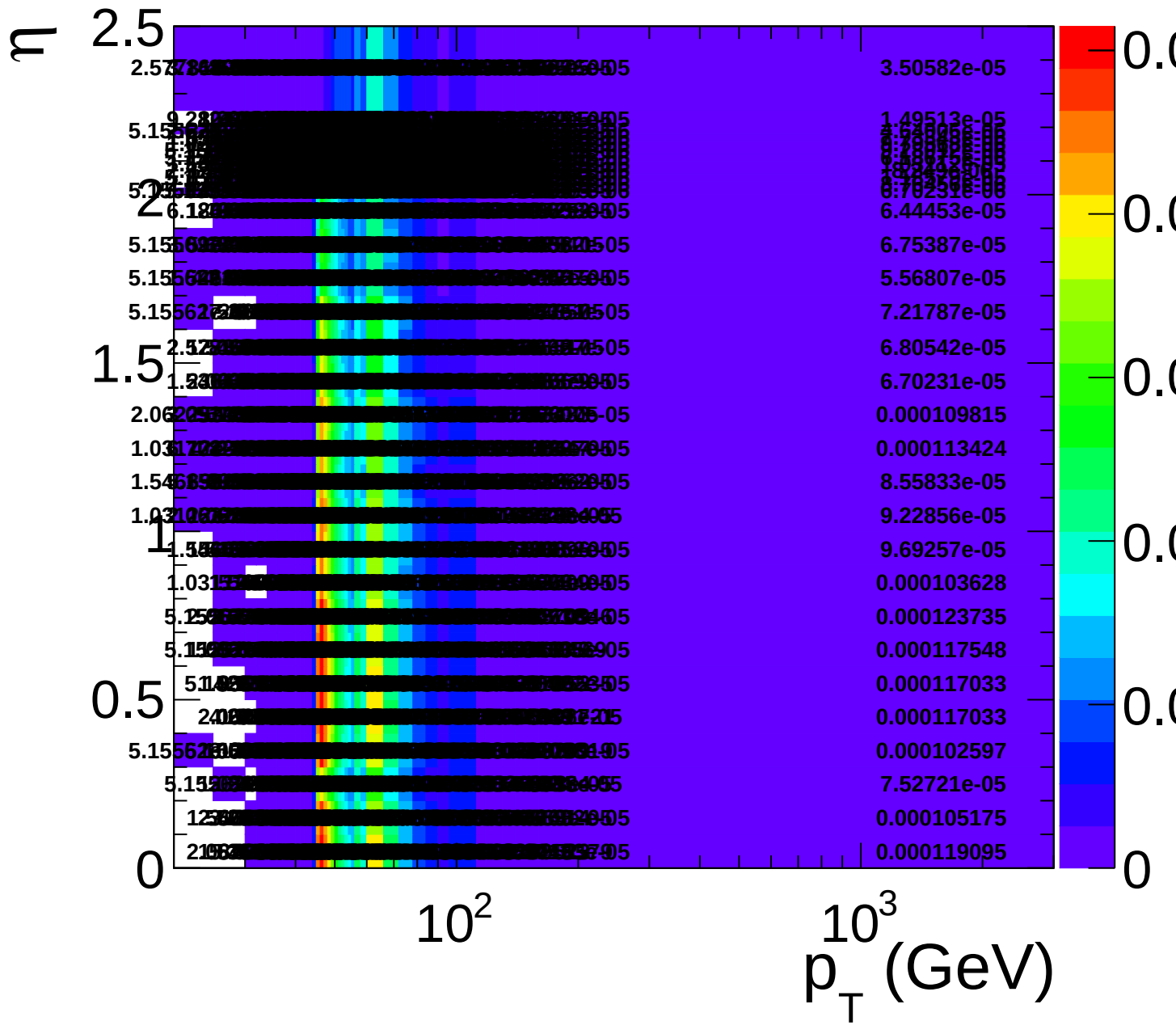
htrg_l2_l1p_norm

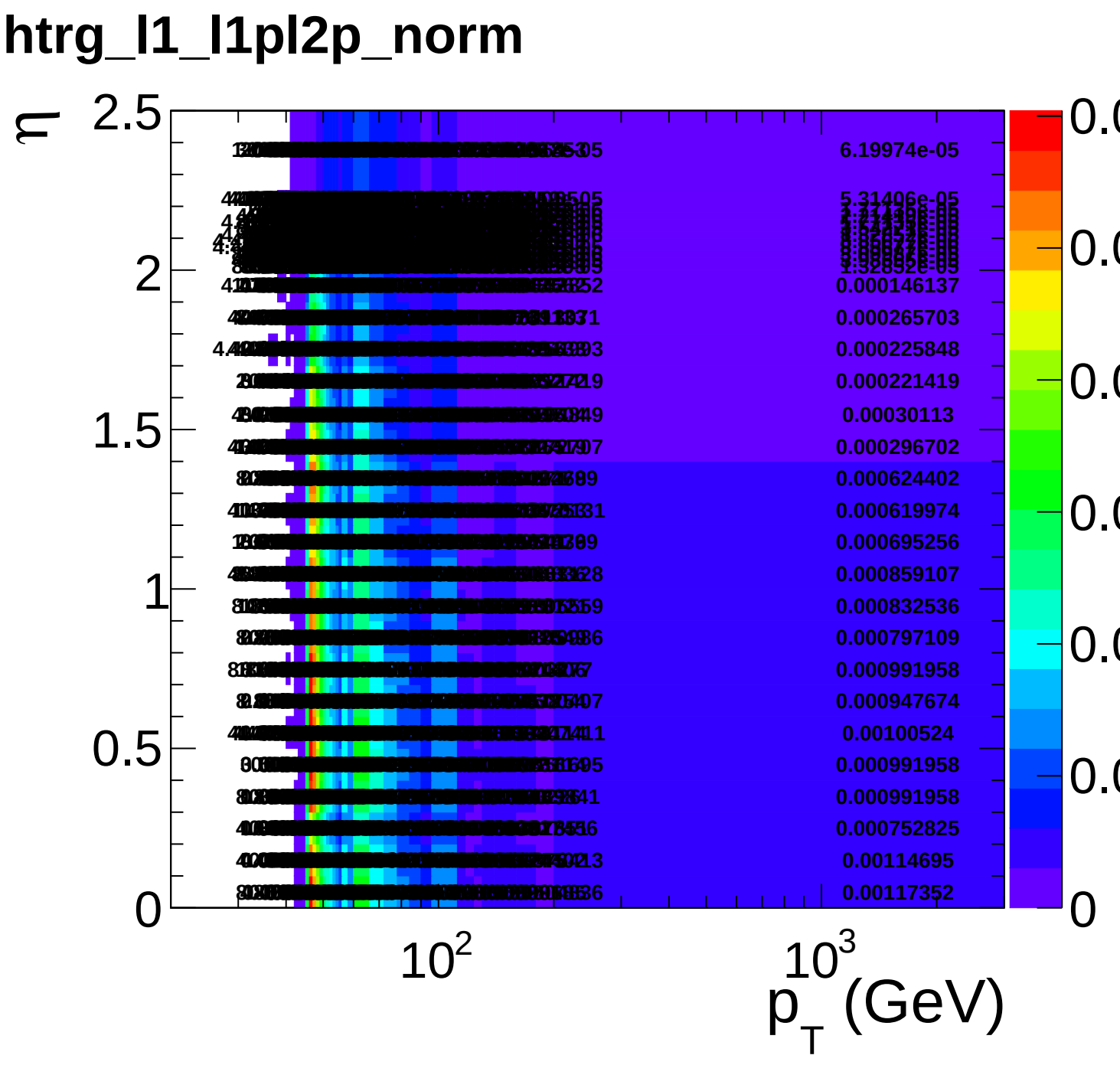


htrg_l2_l1f_norm

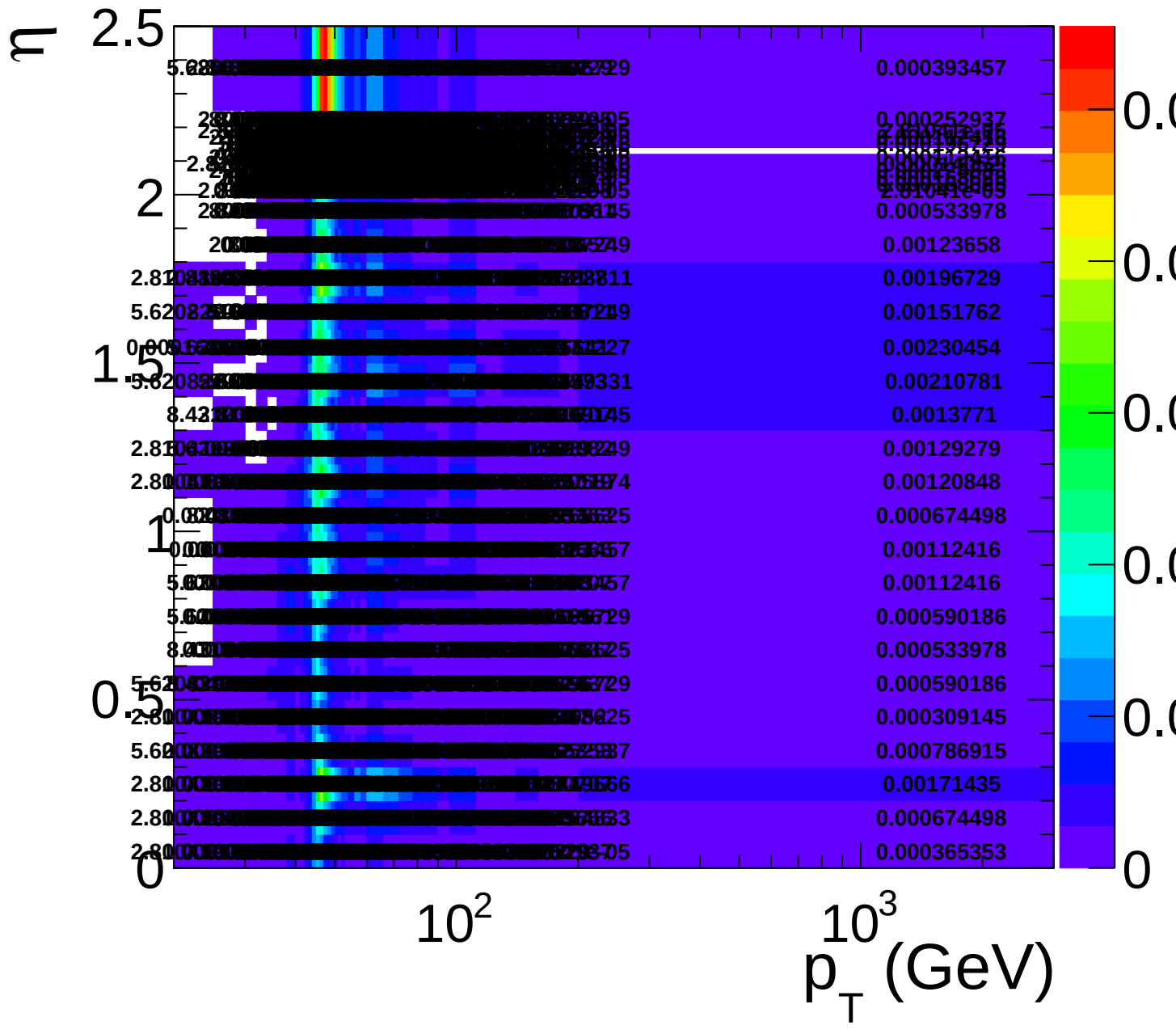


htrg_l1_l1pl2f_norm

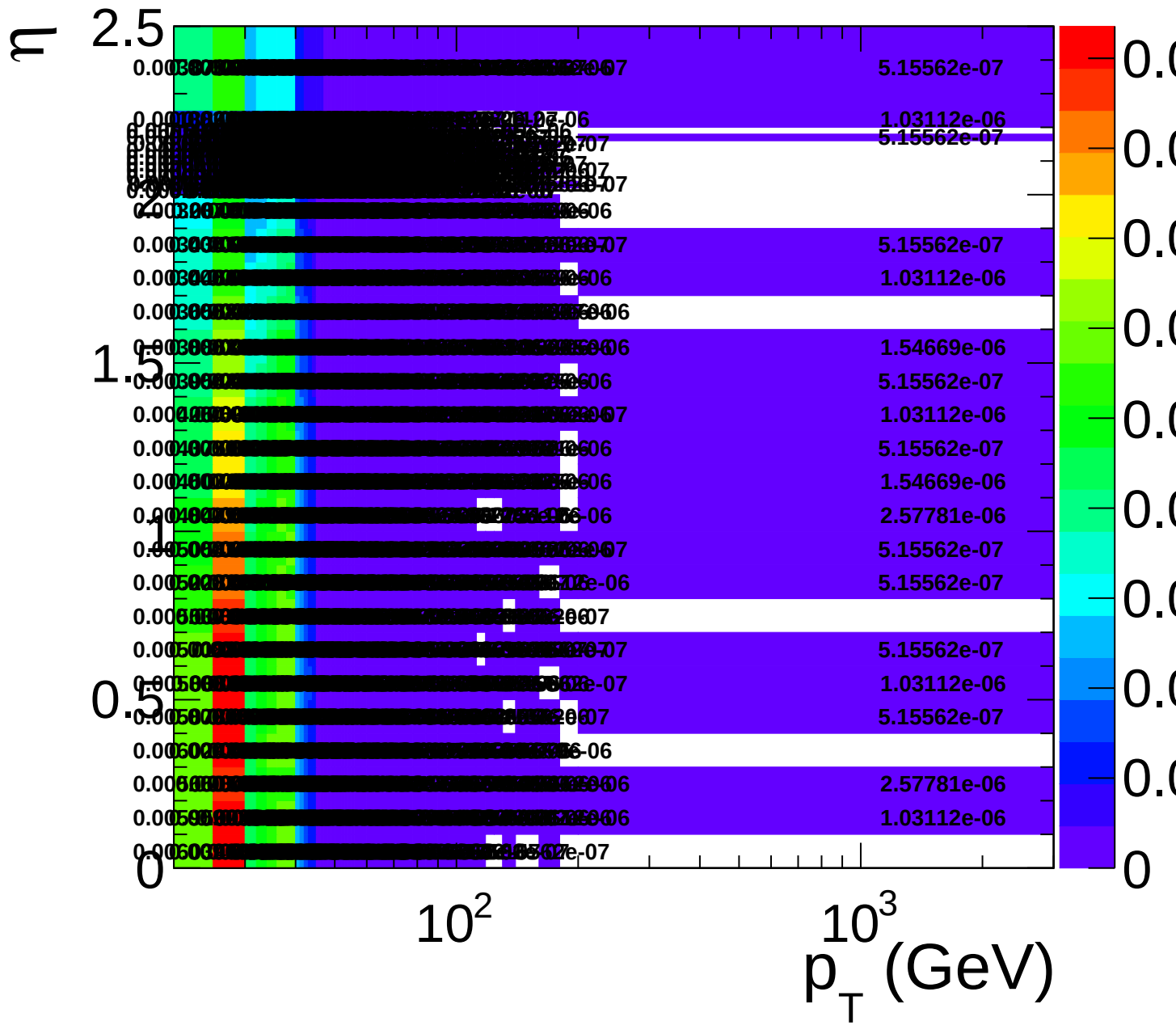



htrg_l1_l1pl2p_norm
η
2.5
2
1.5
1
0.5
0
6.19974e-05
5.31406e-05
0.000146137
0.000265703
0.000225848
0.000221419
0.00030113
0.000296702
0.000624402
0.000619974
0.000695256
0.000859107
0.000832536
0.000797109
0.000991958
0.000947674
0.00100524
0.000991958
0.000991958
0.000752825
0.00114695
0.00117352
0.0
0.0
0.0
0.0
0.0
0.0
0
10^2
10^3
p_T (GeV)

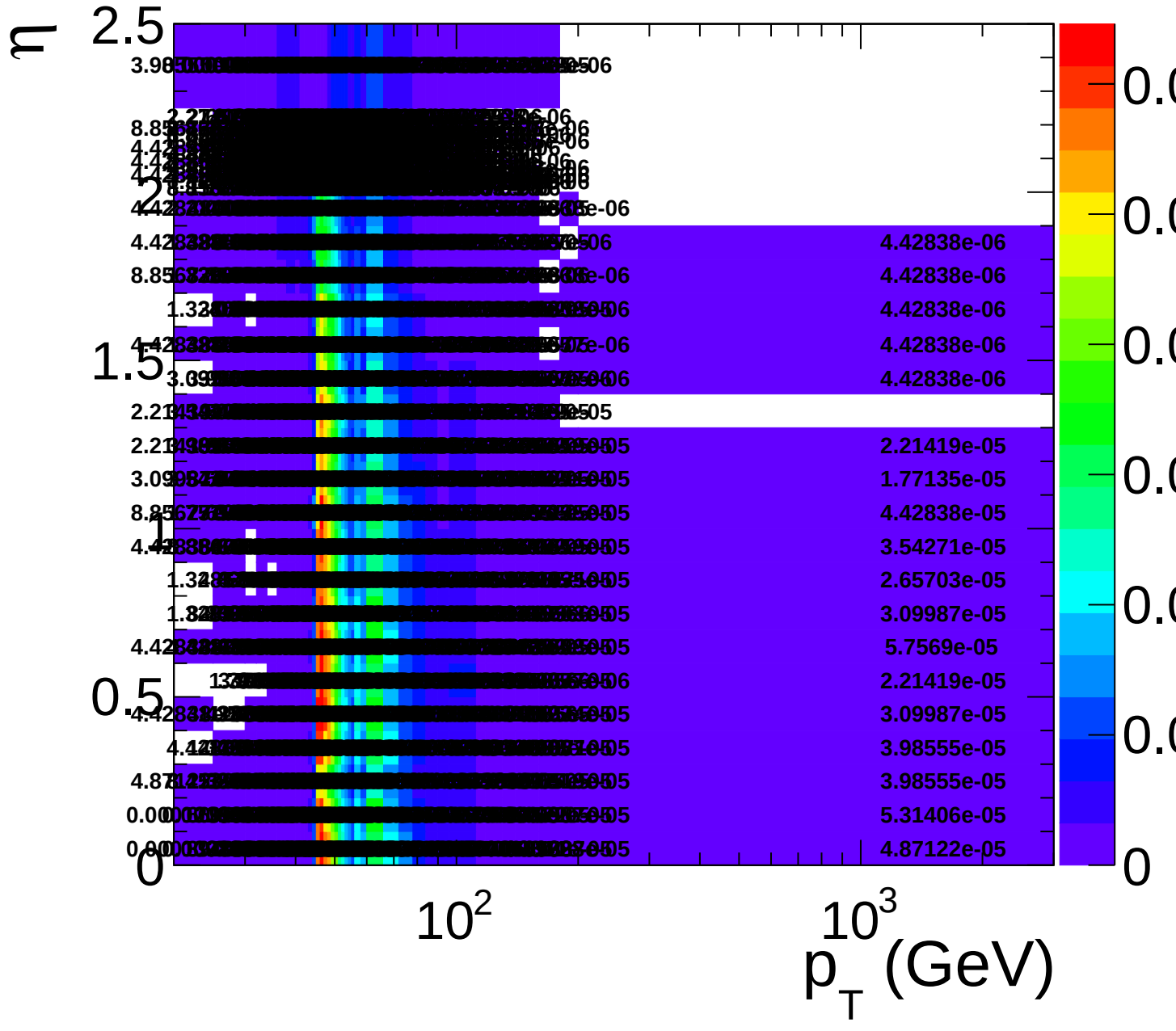
htrg_l1_l1fl2p_norm



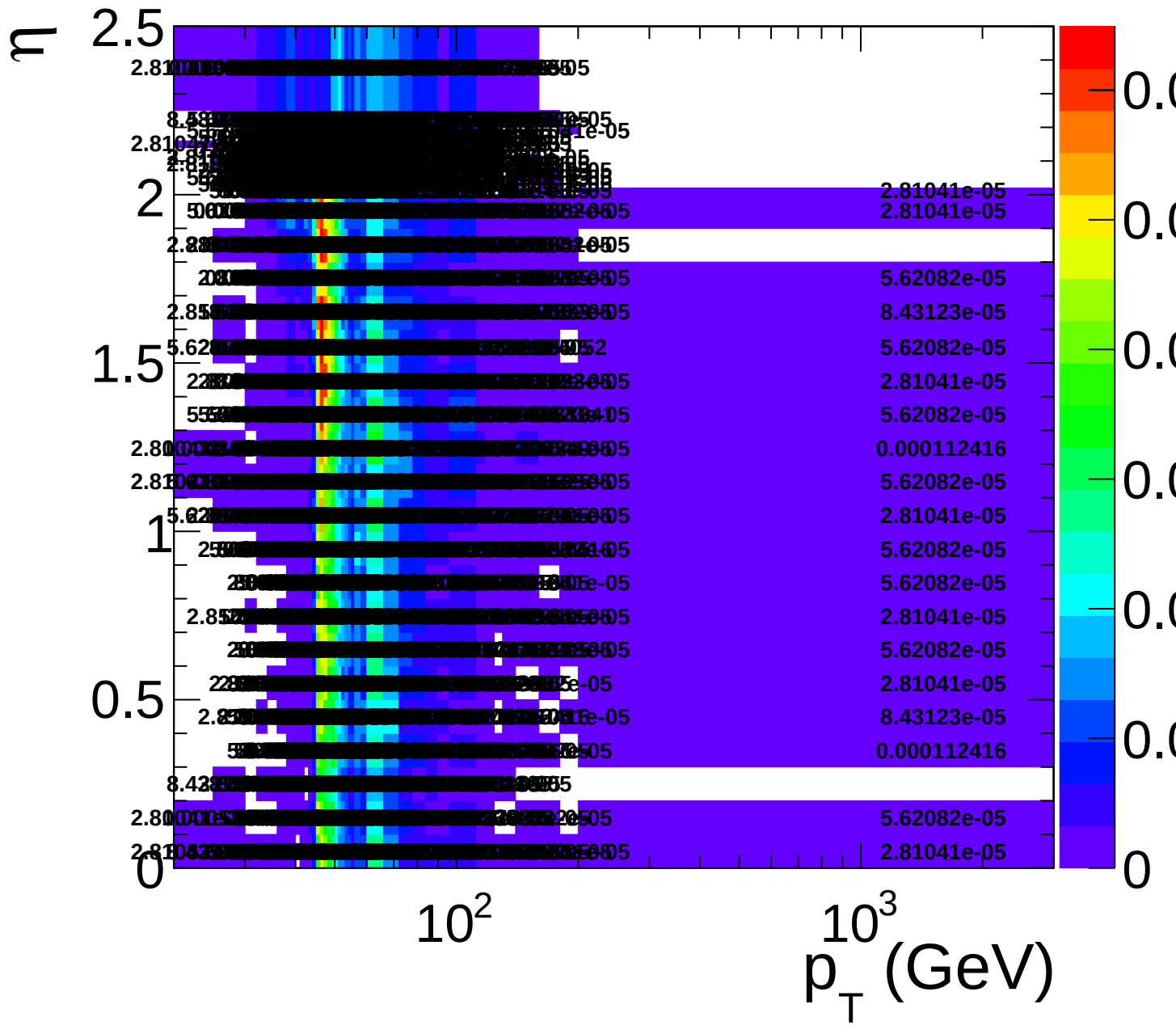
htrg_l2_l1pl2f_norm



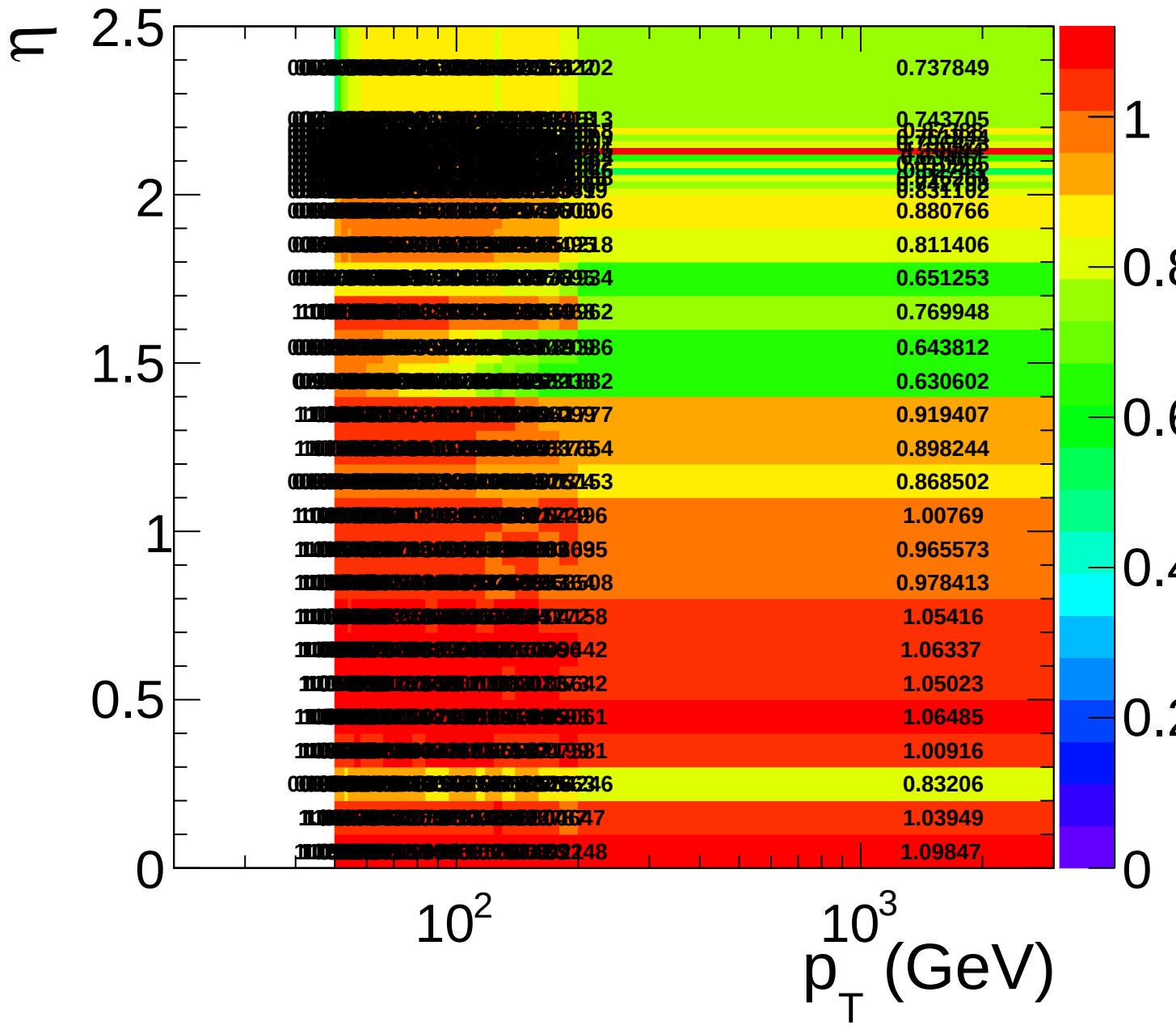
htrg_l2_l1pl2p_norm



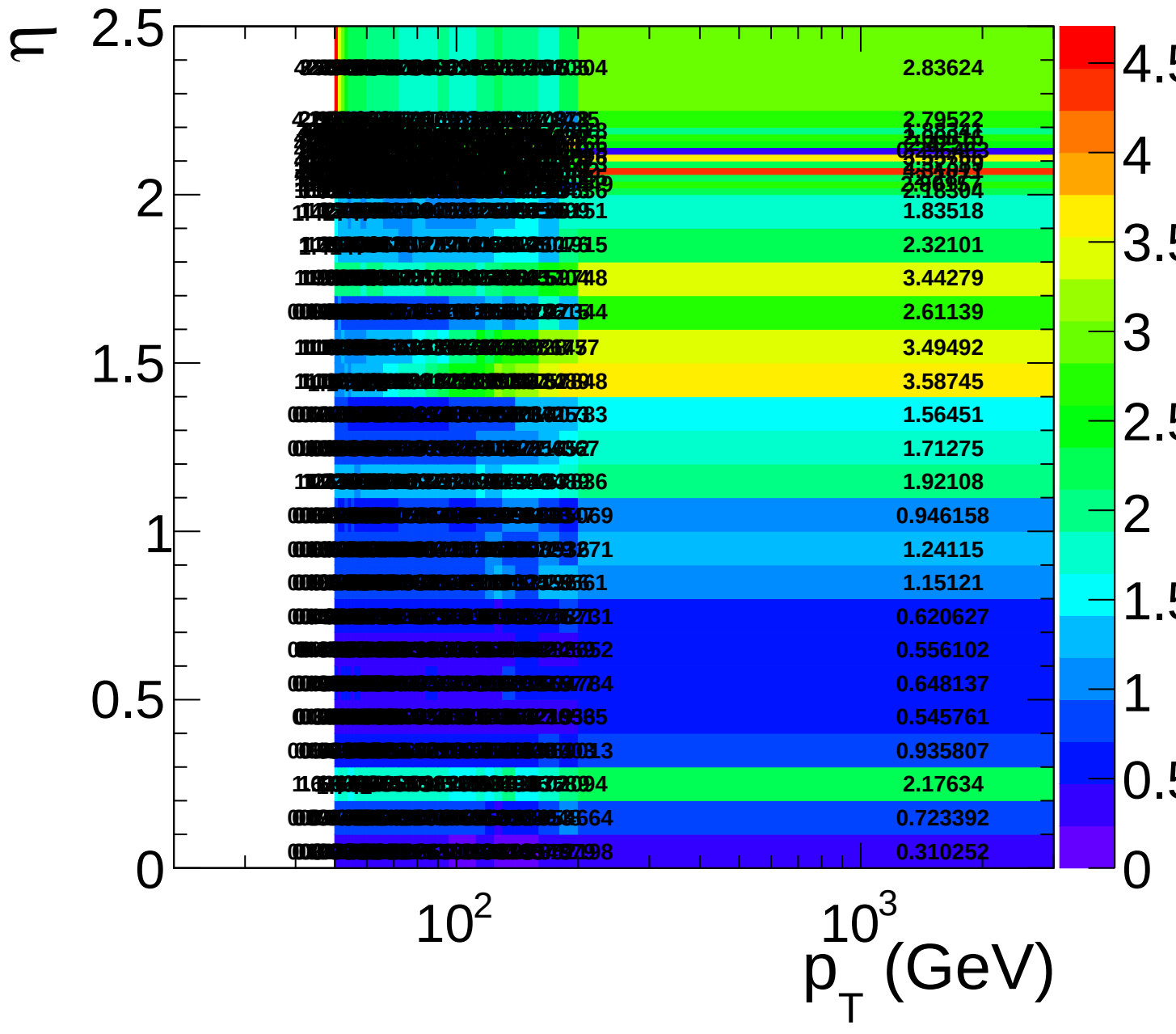
htrg_l2_l1fl2p_norm



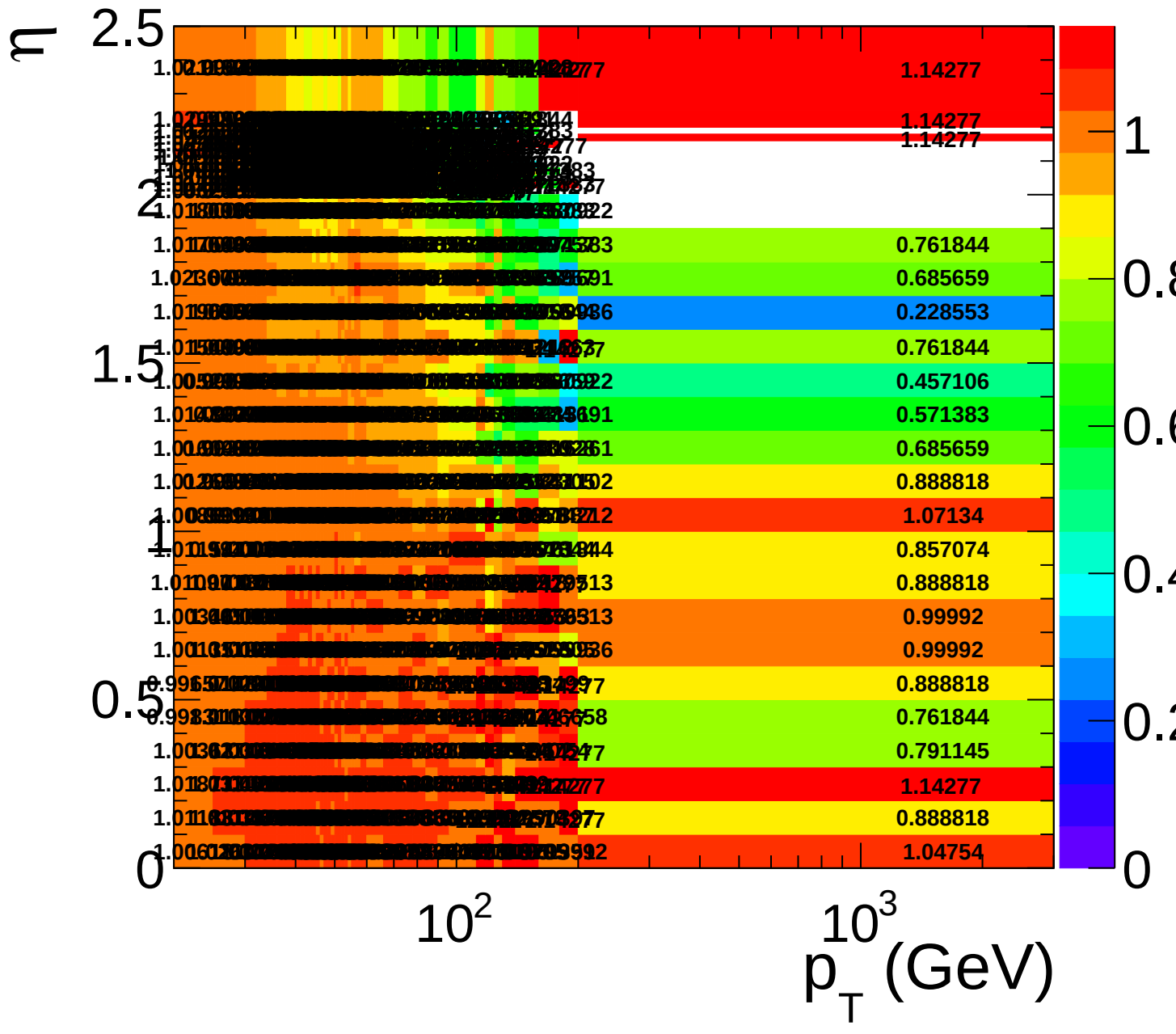
htrg_l1_l1p_norm_vs_tot



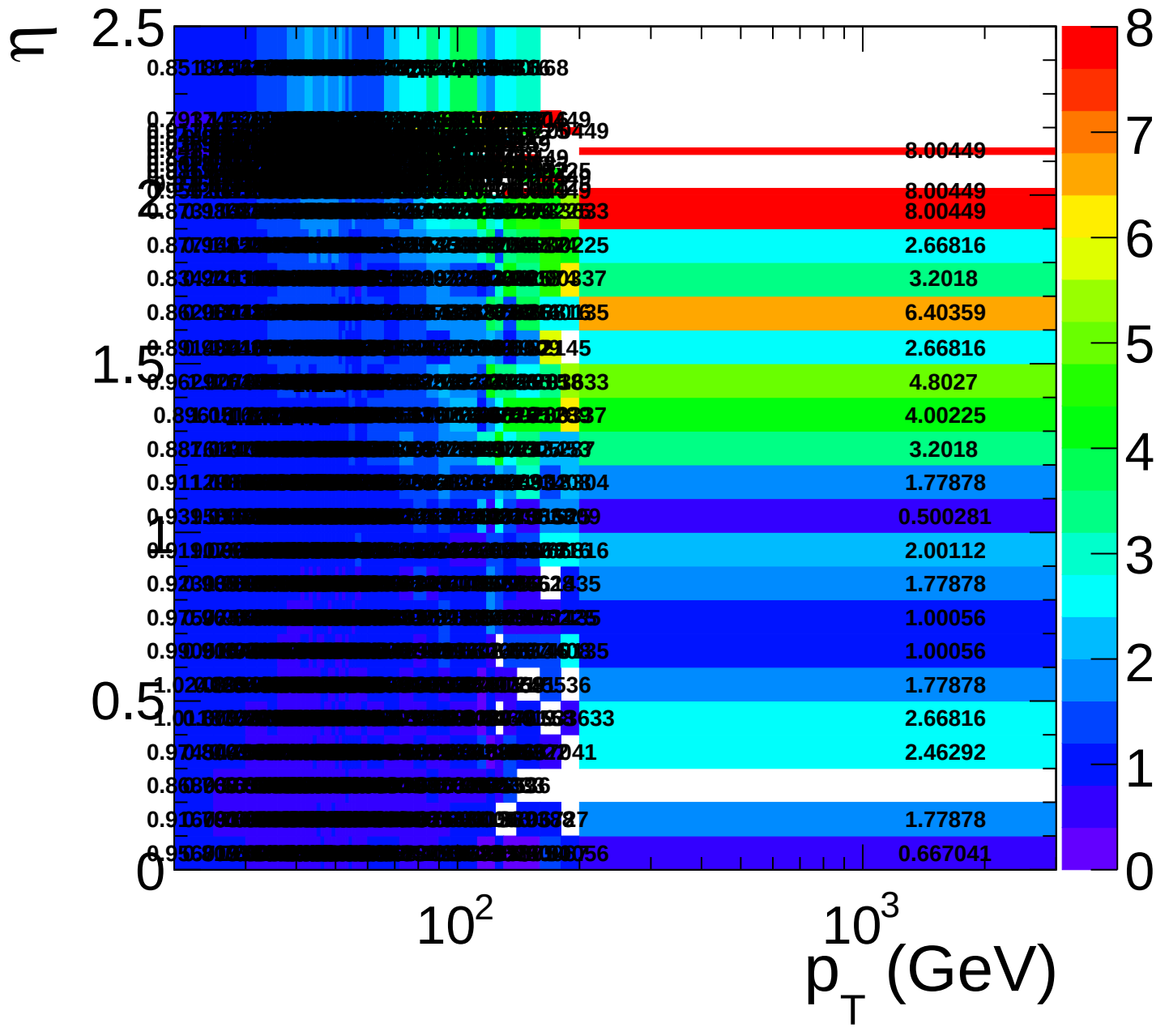
htrg_l1_l1f_norm_vs_tot



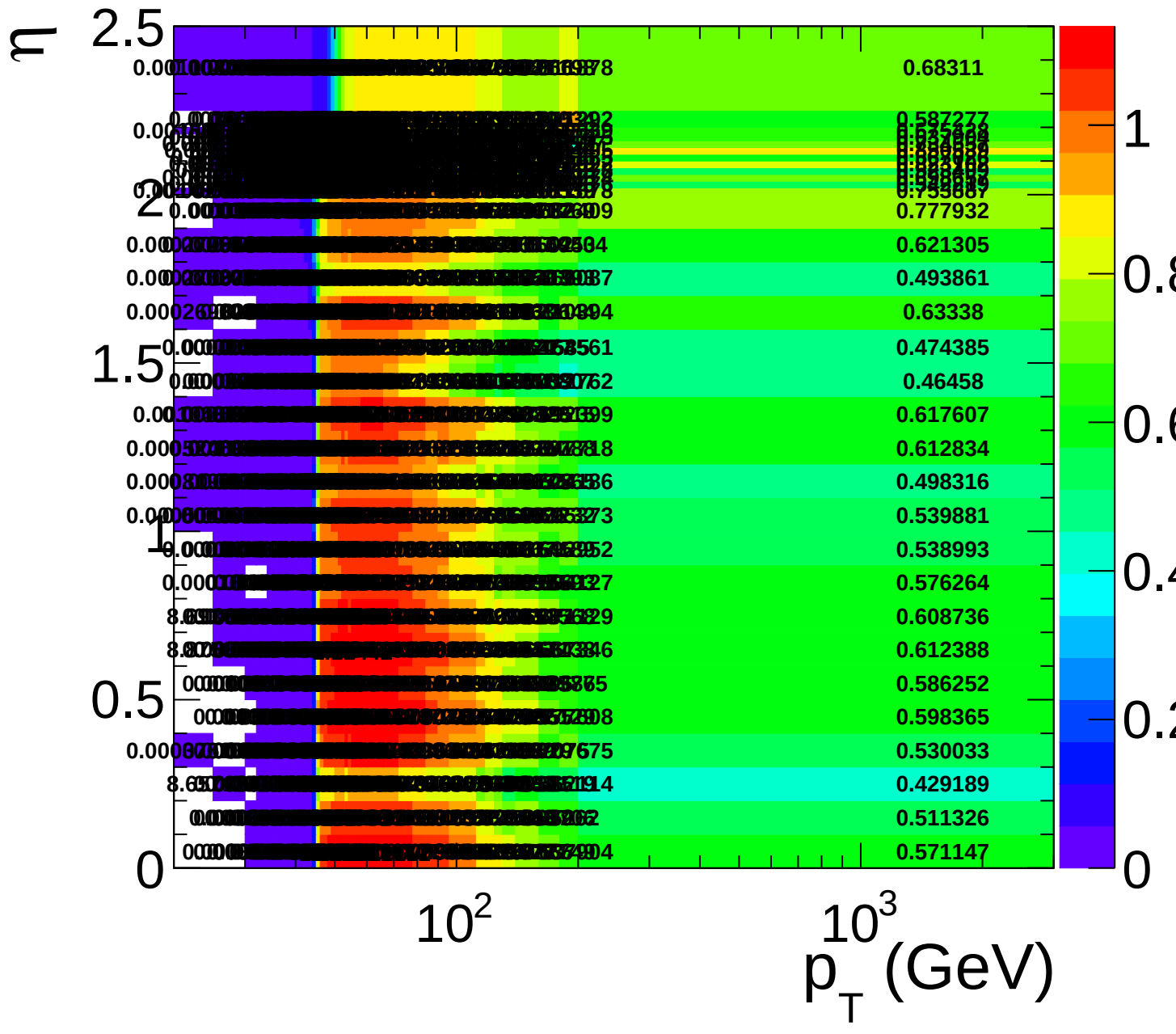
htrg_l2_l1p_norm_vs_tot

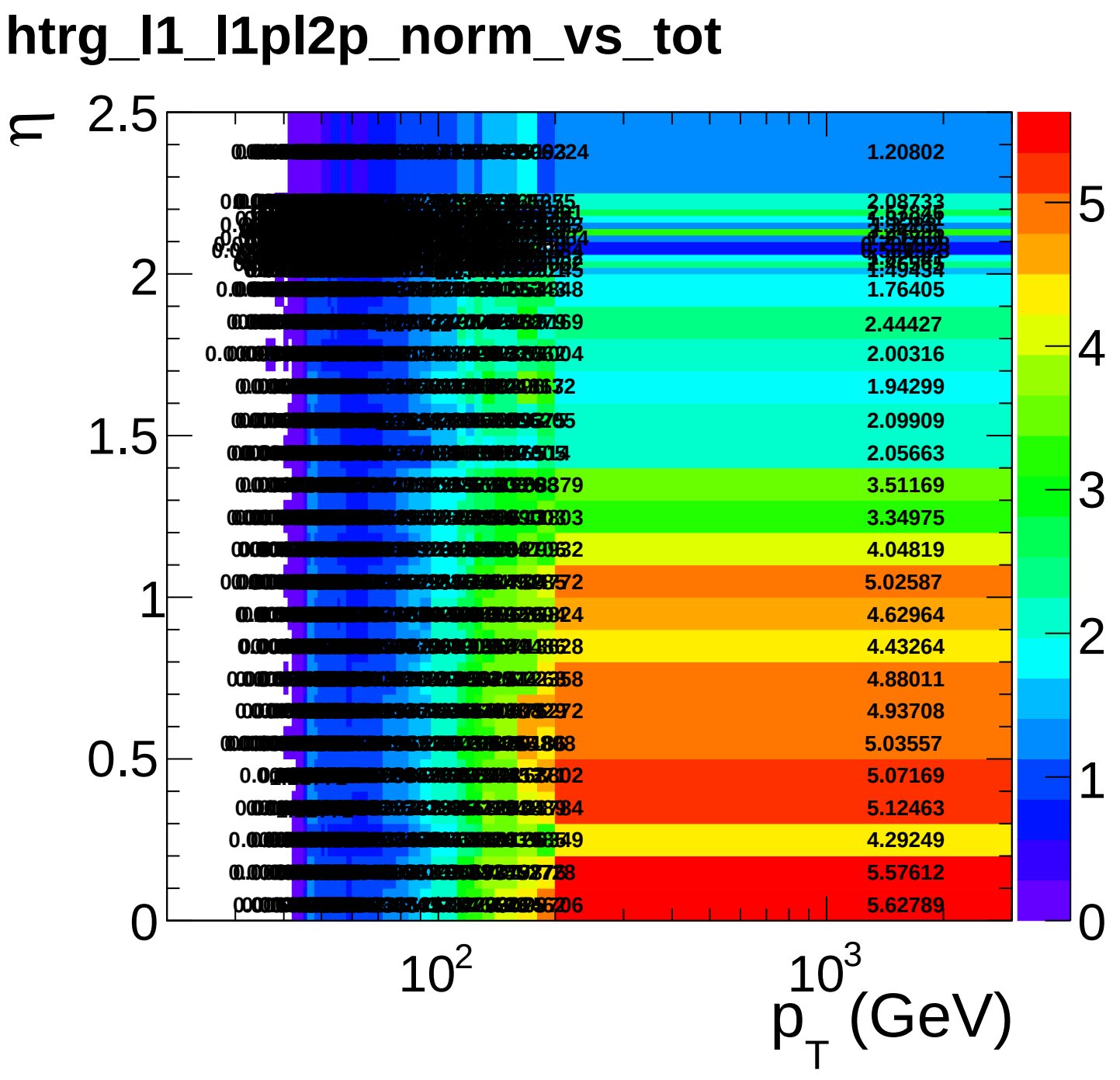


htrg_l2_l1f_norm_vs_tot

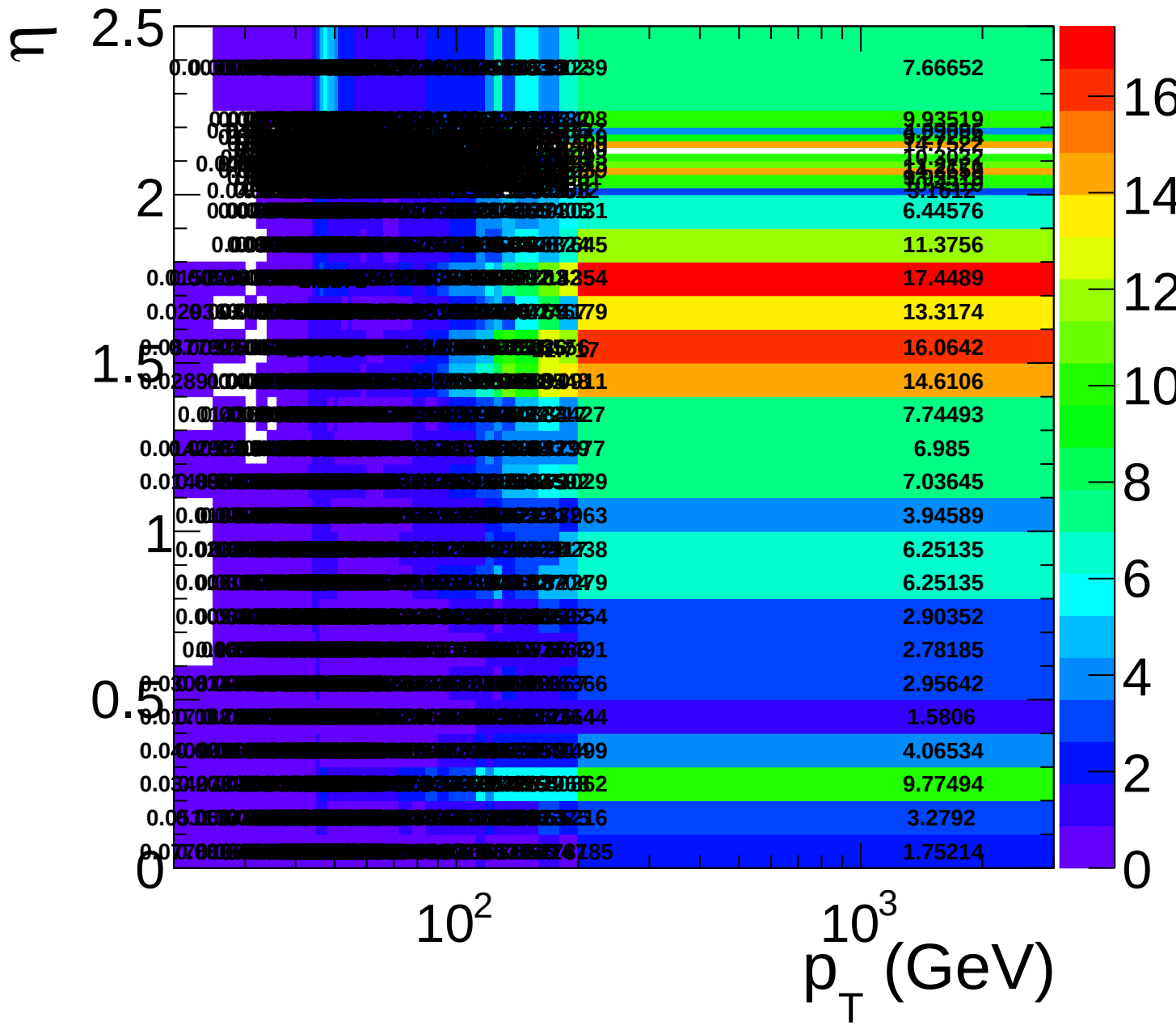


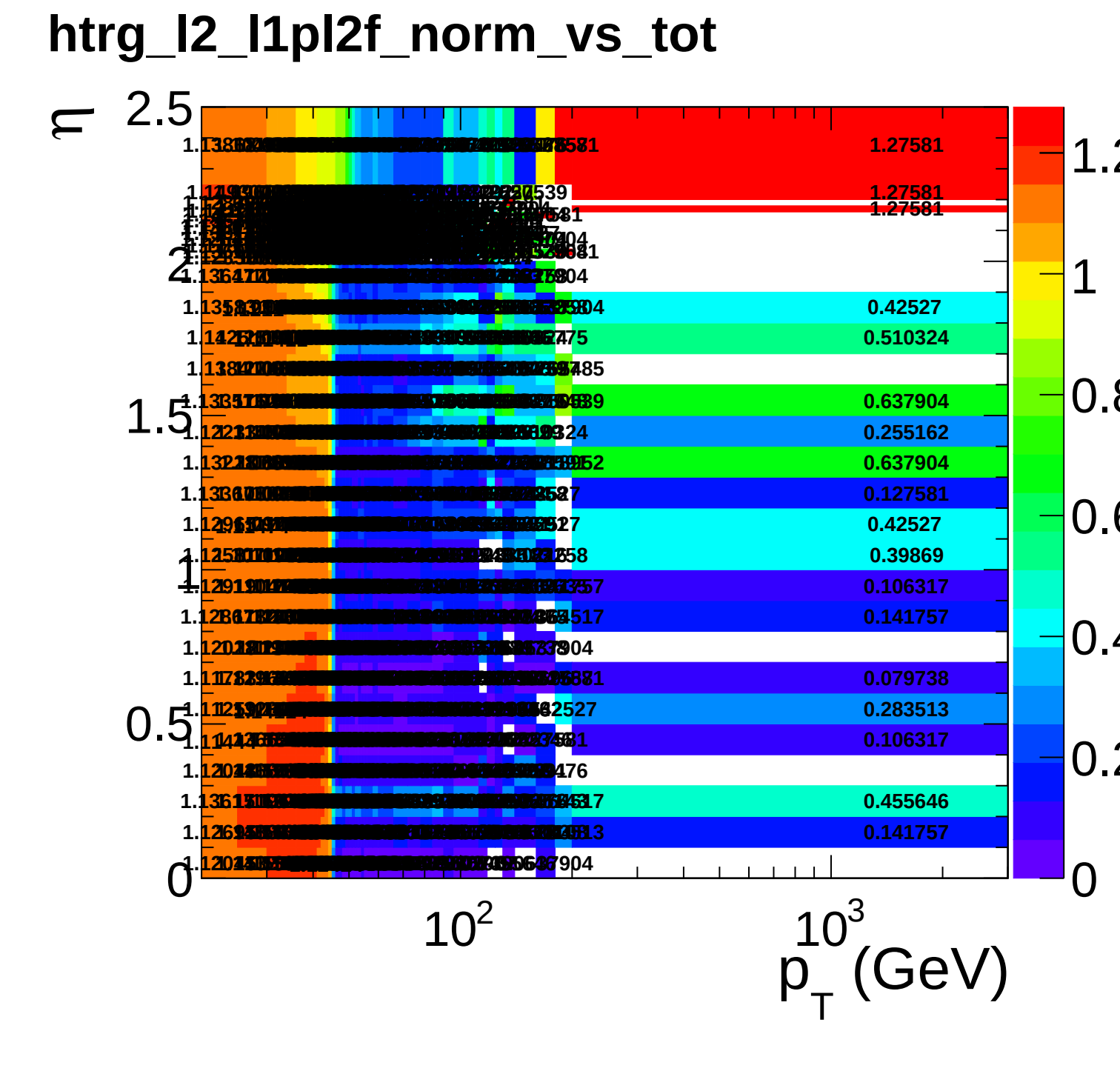
htrg_l1_l1pl2f_norm_vs_tot



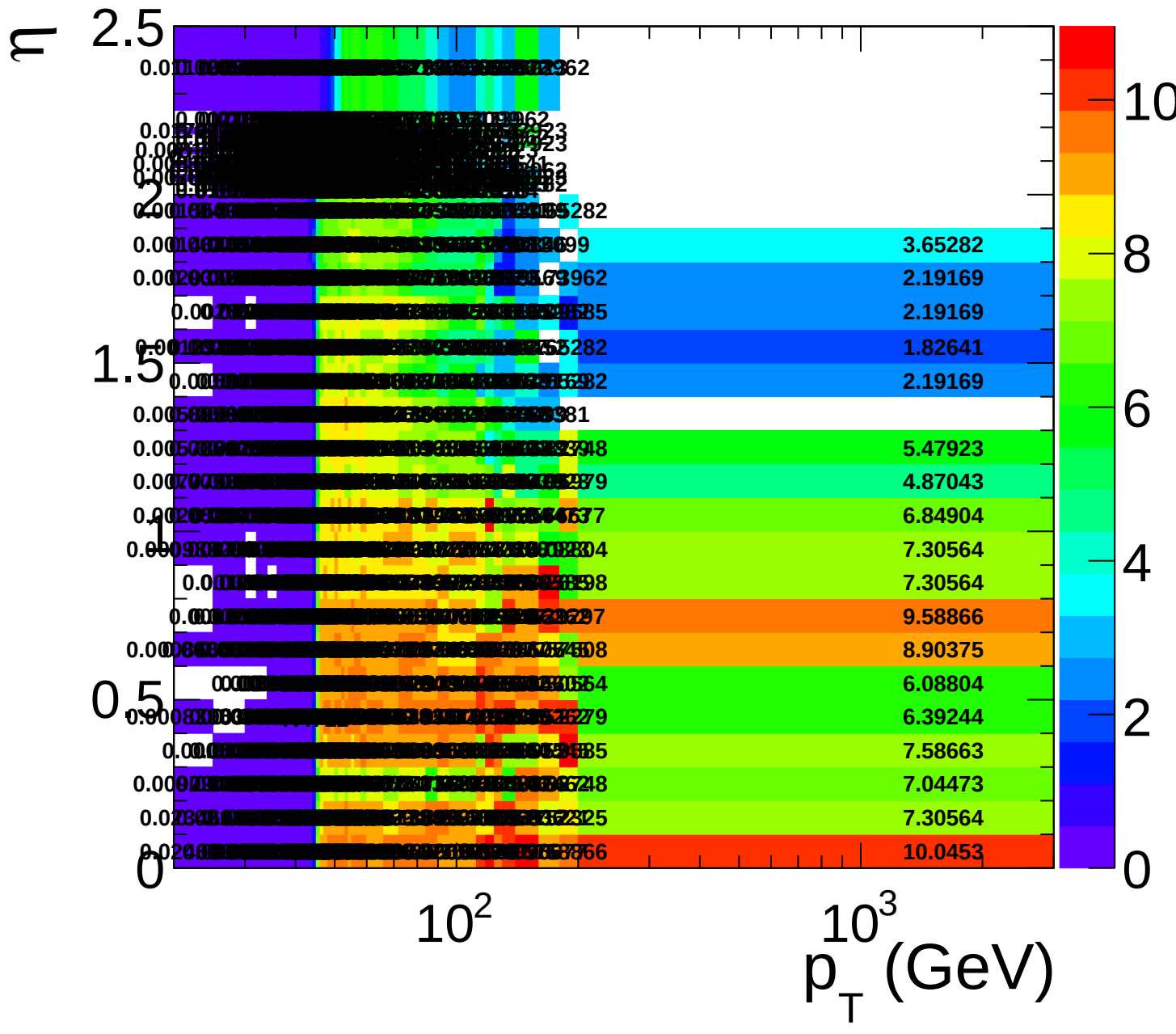

htrg_l1_l1pl2p_norm_vs_tot
η
2.5
2
1.5
1
0.5
0
1.20802
2.08733
1.76405
2.44427
2.00316
1.94299
2.09909
2.05663
3.51169
3.34975
4.04819
5.02587
4.62964
4.43264
4.88011
4.93708
5.03557
5.07169
5.12463
4.29249
5.57612
5.62789
5
4
3
2
1
0
10^2
10^3
p_T (GeV)

htrg_l1_l1fl2p_norm_vs_tot

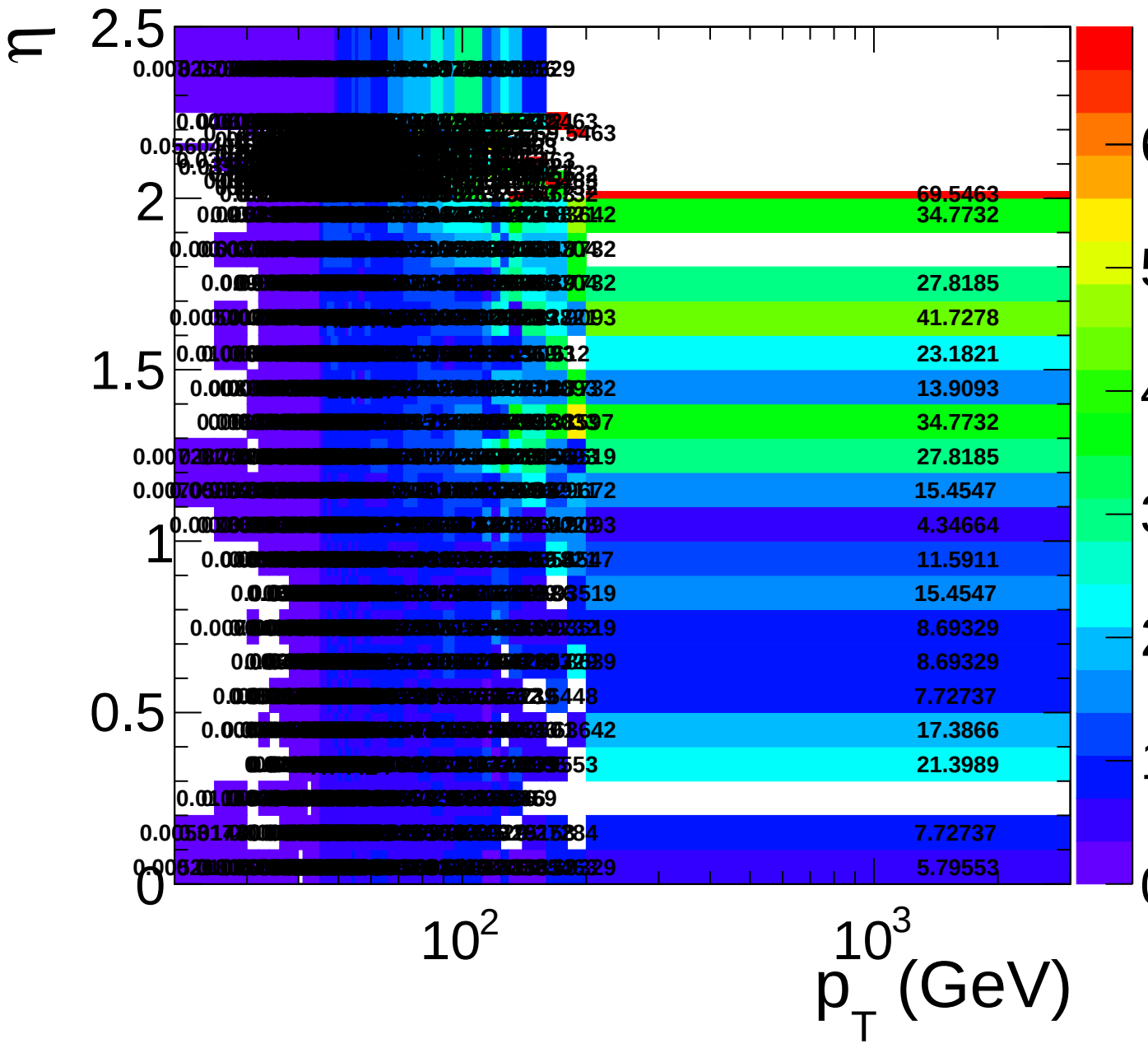



htrg_l2_l1pl2f_norm_vs_tot
η
2.5
2
1.5
1
0.5
0
1.27581
1.27581
1.27581
0.42527
0.510324
0.637904
0.255162
0.637904
0.127581
0.42527
0.39869
0.106317
0.141757
0.079738
0.283513
0.106317
0.455646
0.141757
1.2
1
0.8
0.6
0.4
0.2
0
10^2
10^3
p_T (GeV)

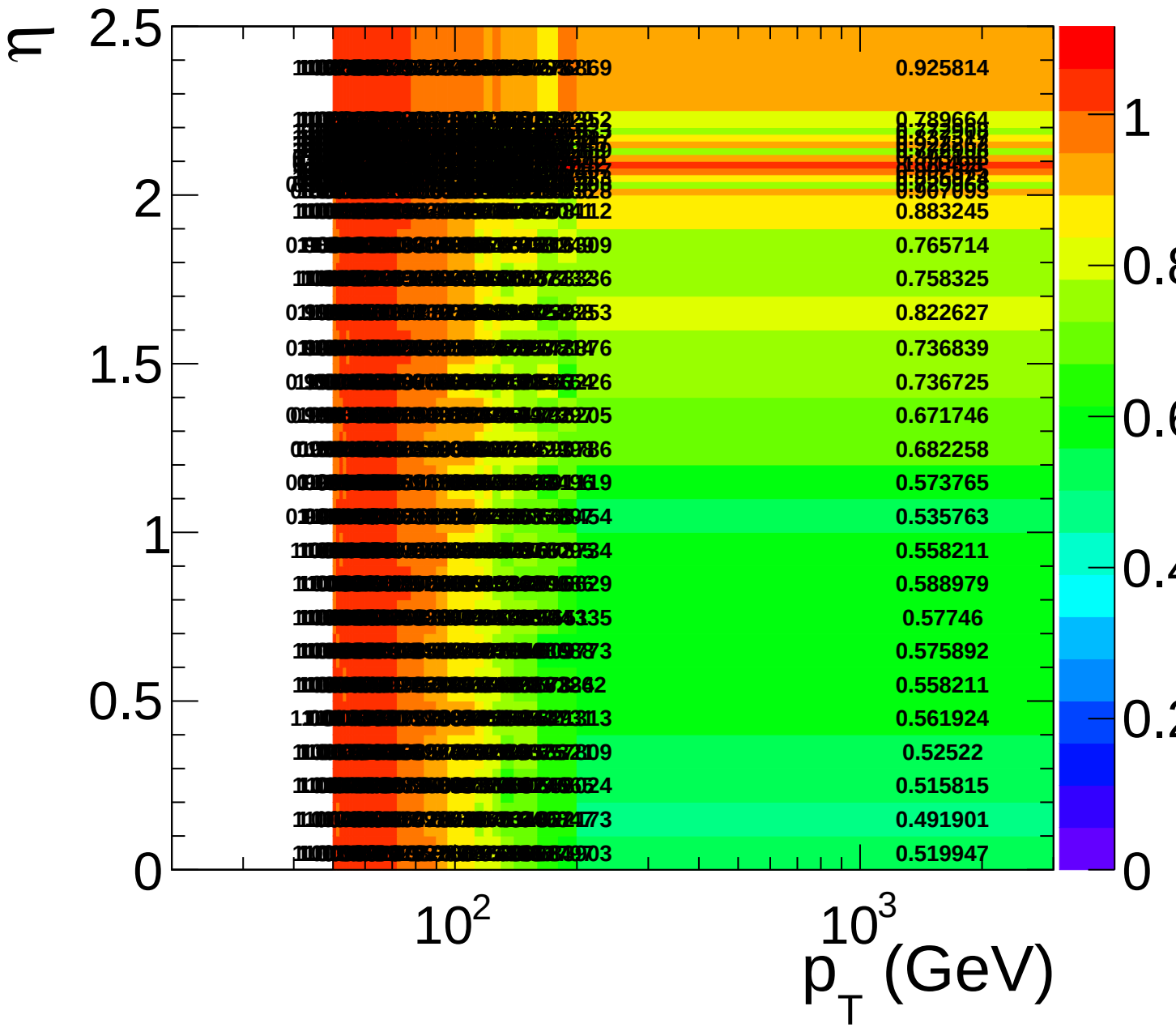
htrg_l2_l1pl2p_norm_vs_tot



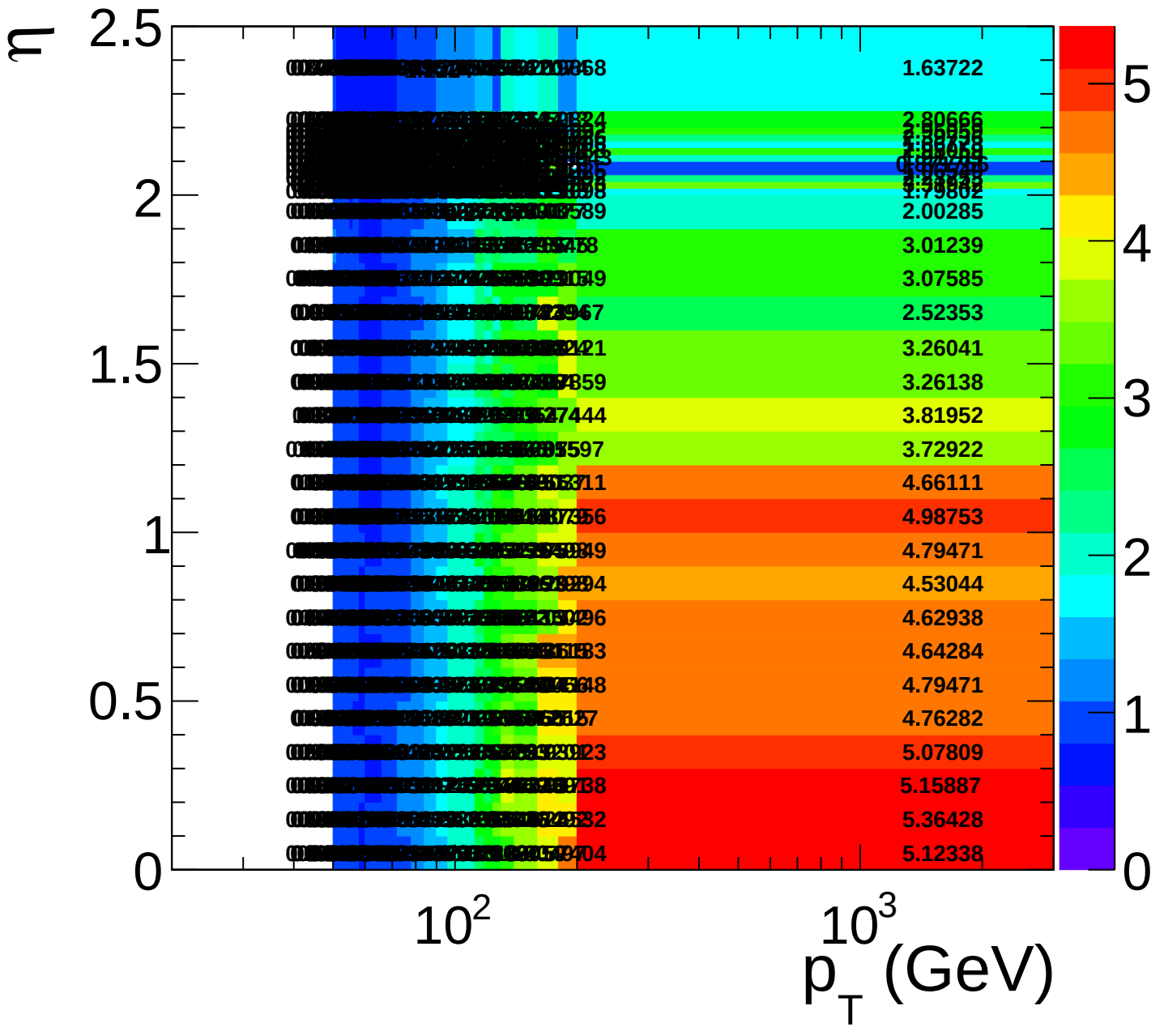
htrg_l2_l1fl2p_norm_vs_tot



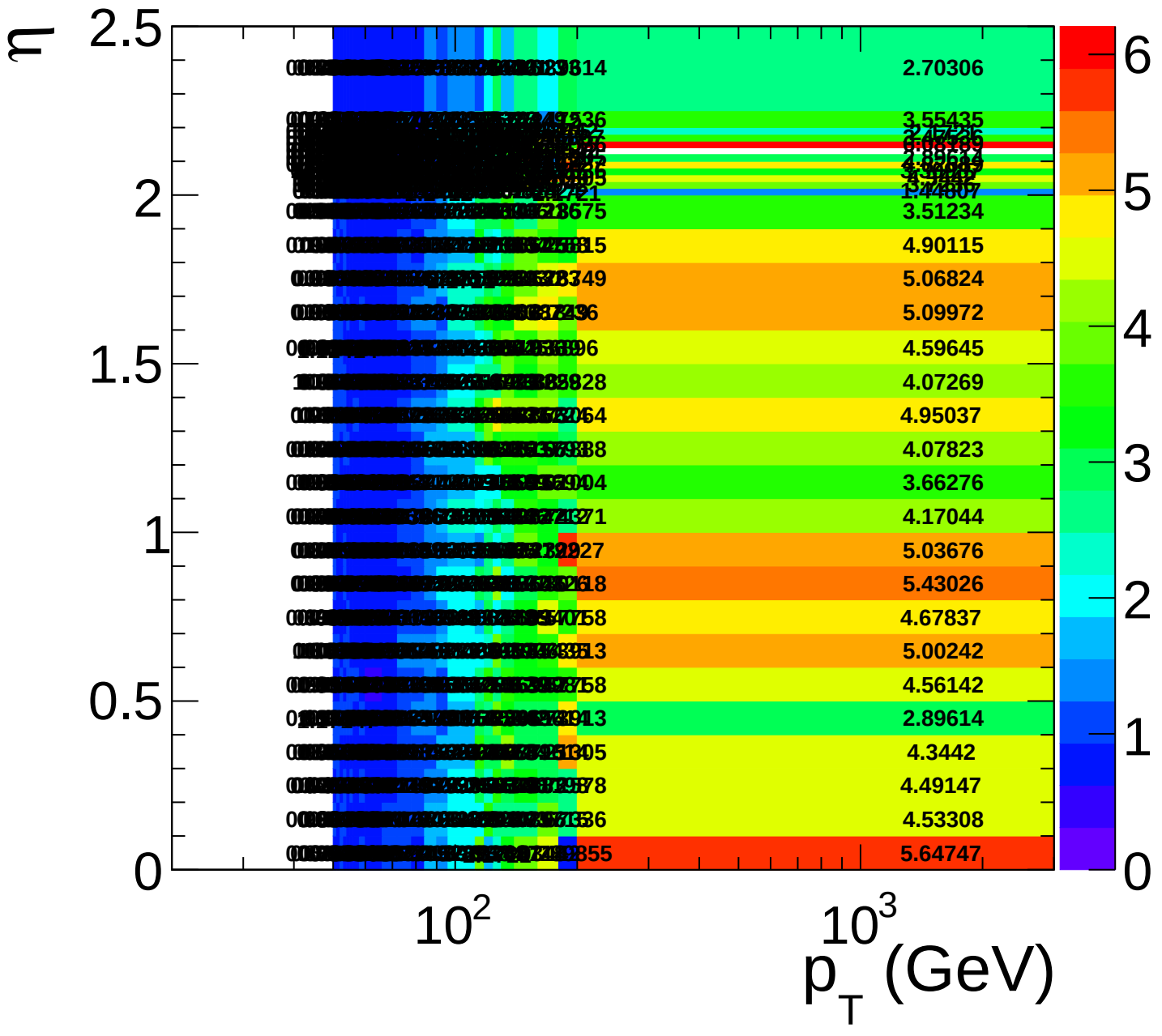
htrg_l1_l1pl2f_norm_vs_l1p



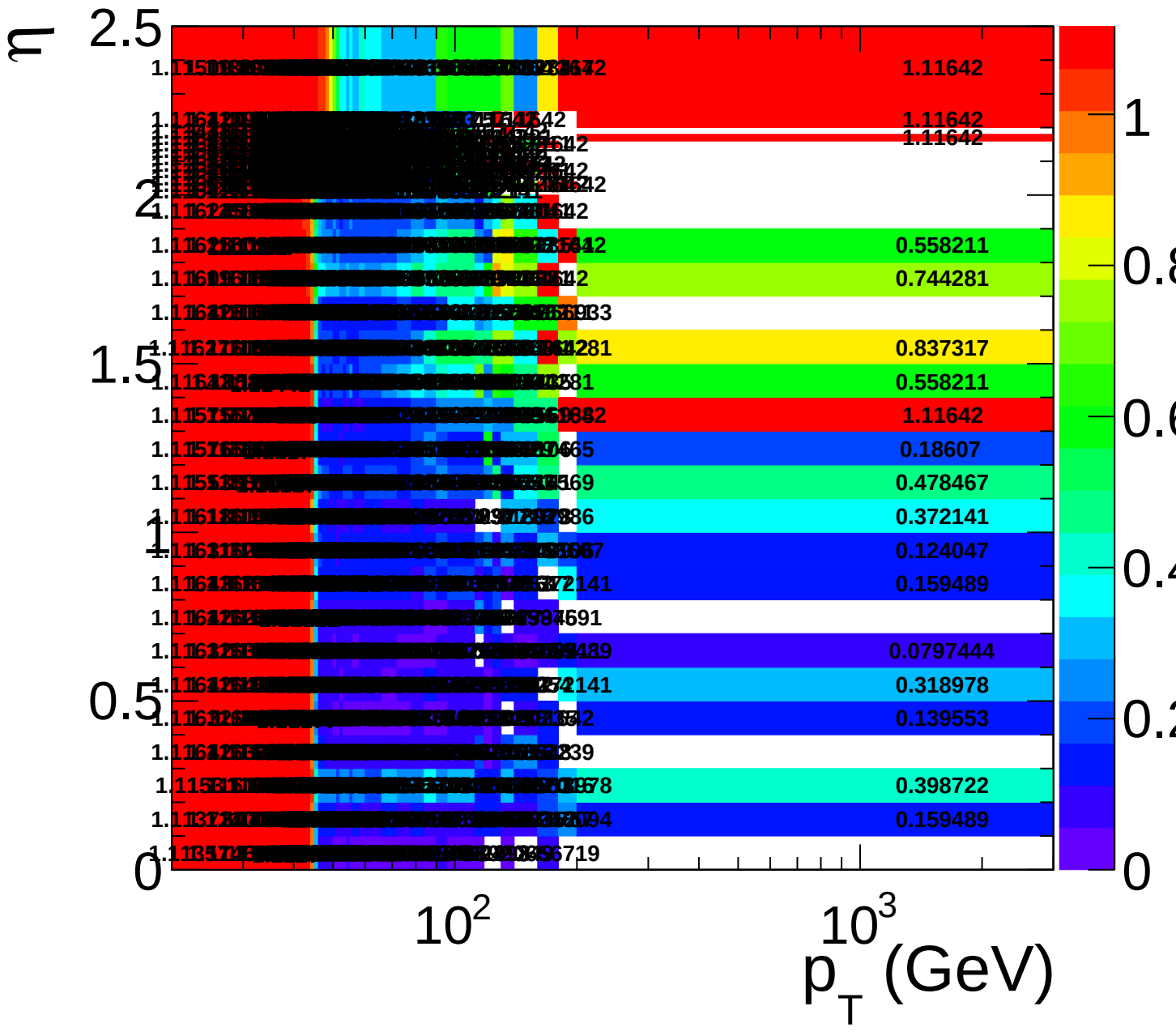
htrg_l1_l1pl2p_norm_vs_l1p



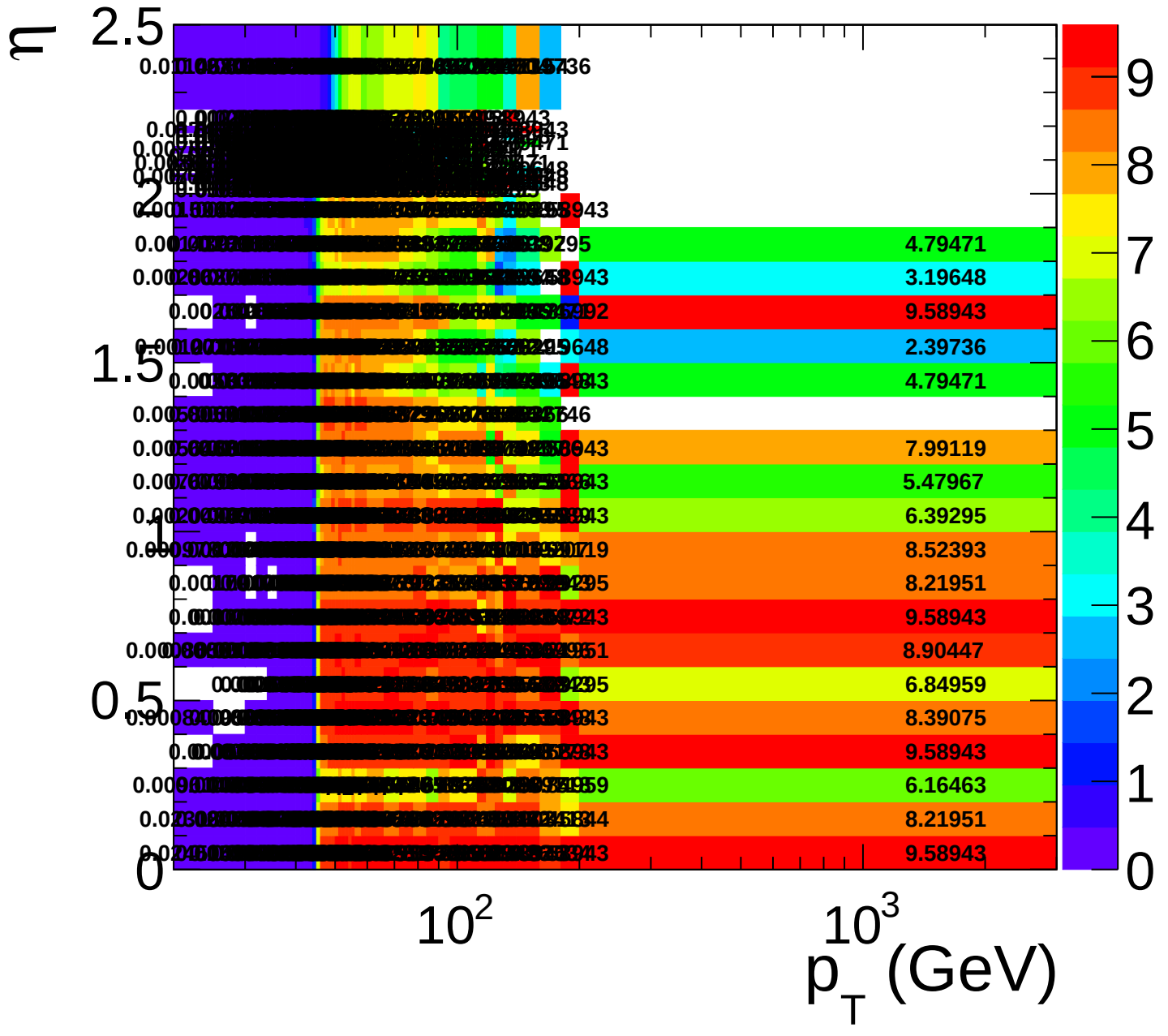
htrg_l1_l1fl2p_norm_vs_l1f



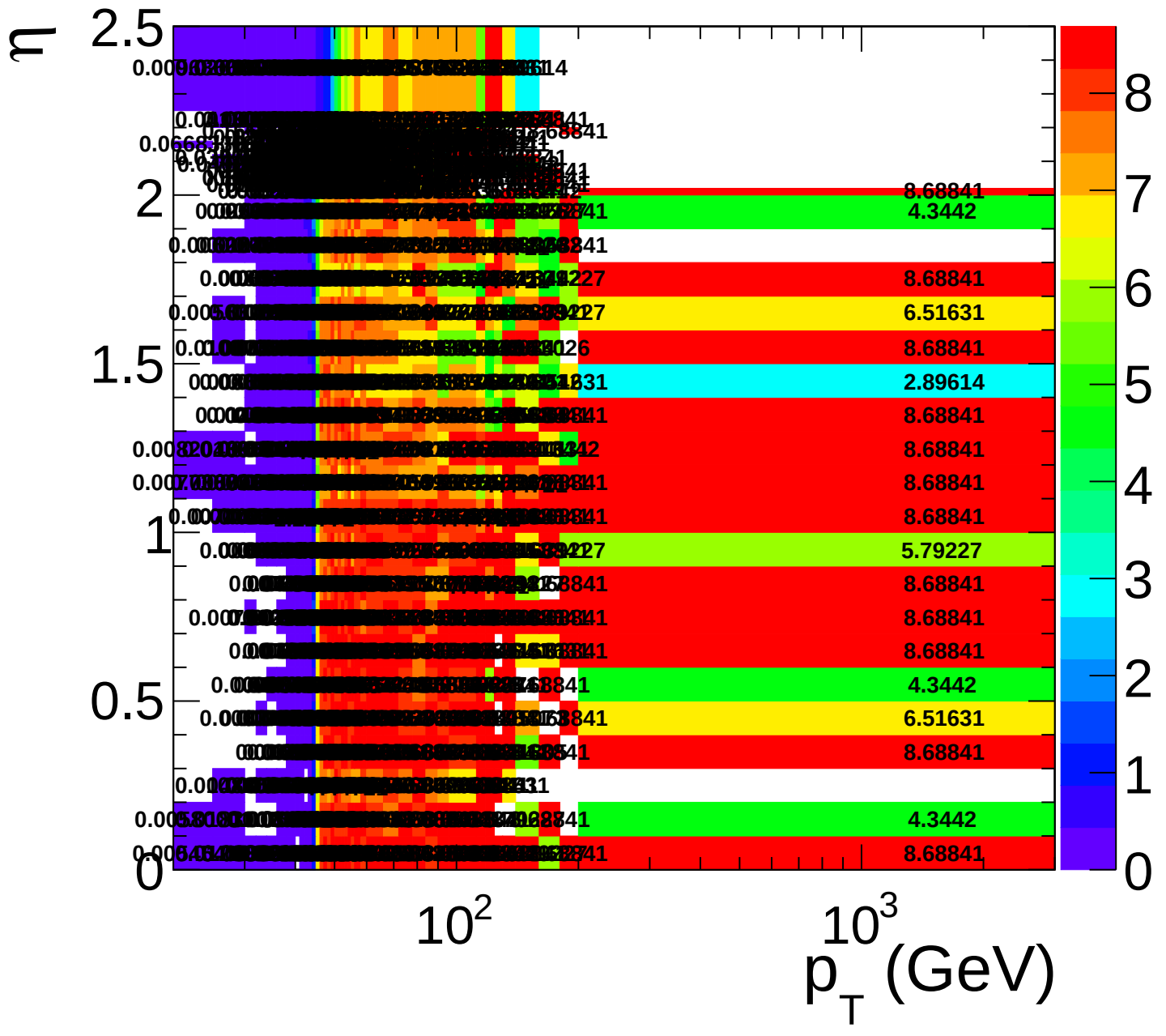
htrg_l2_l1pl2f_norm_vs_l1p

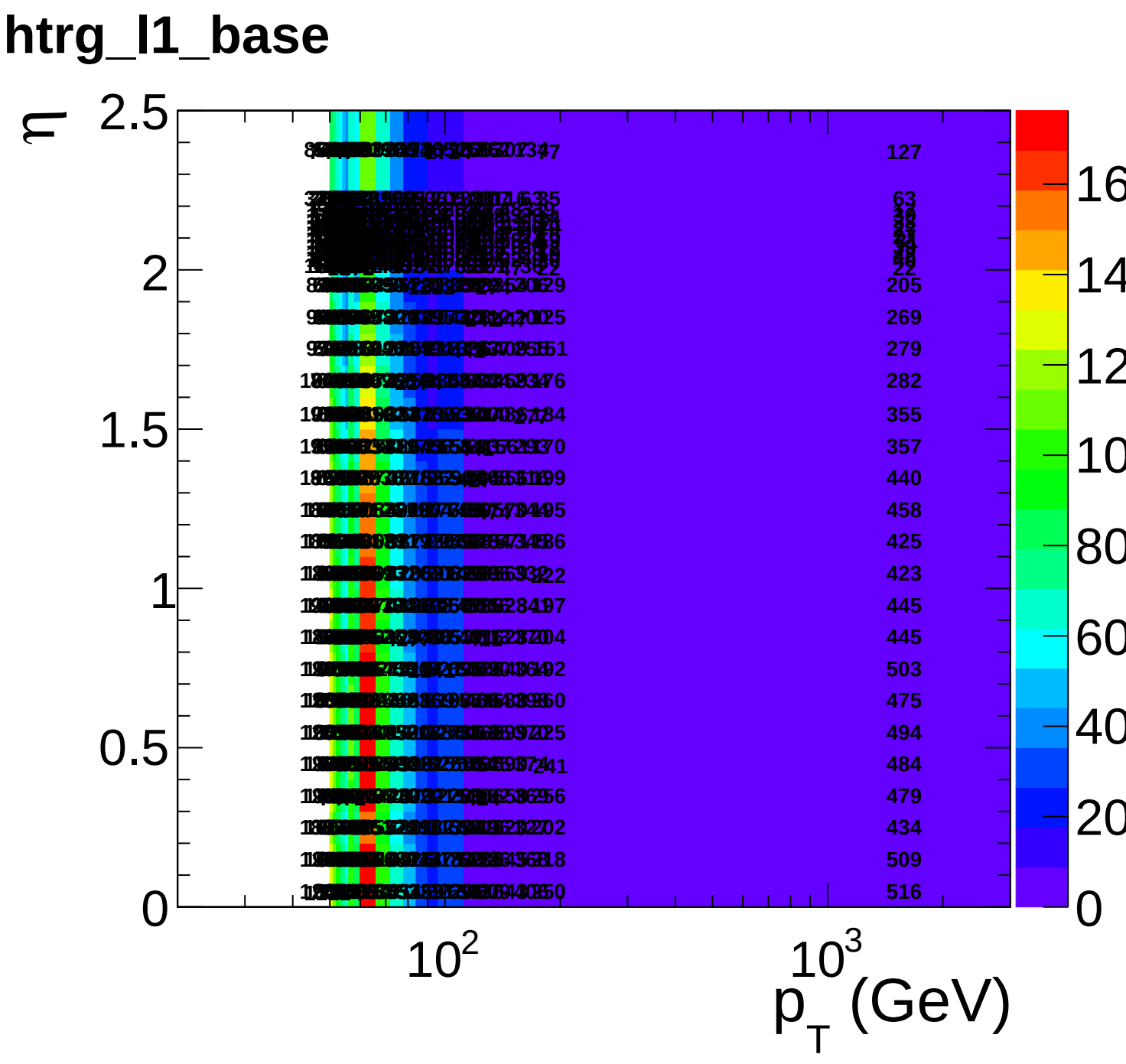


htrg_l2_l1pl2p_norm_vs_l1p

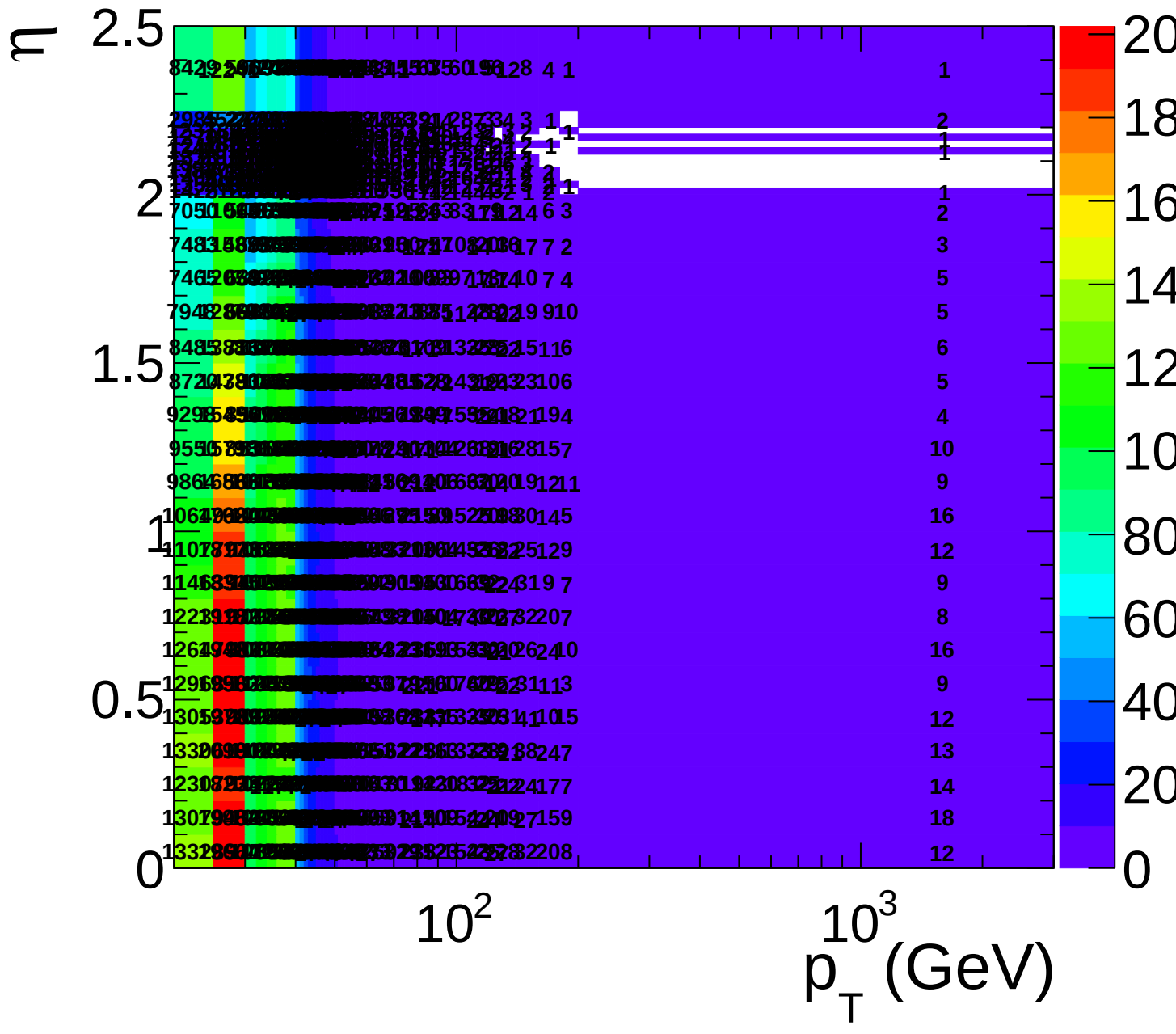


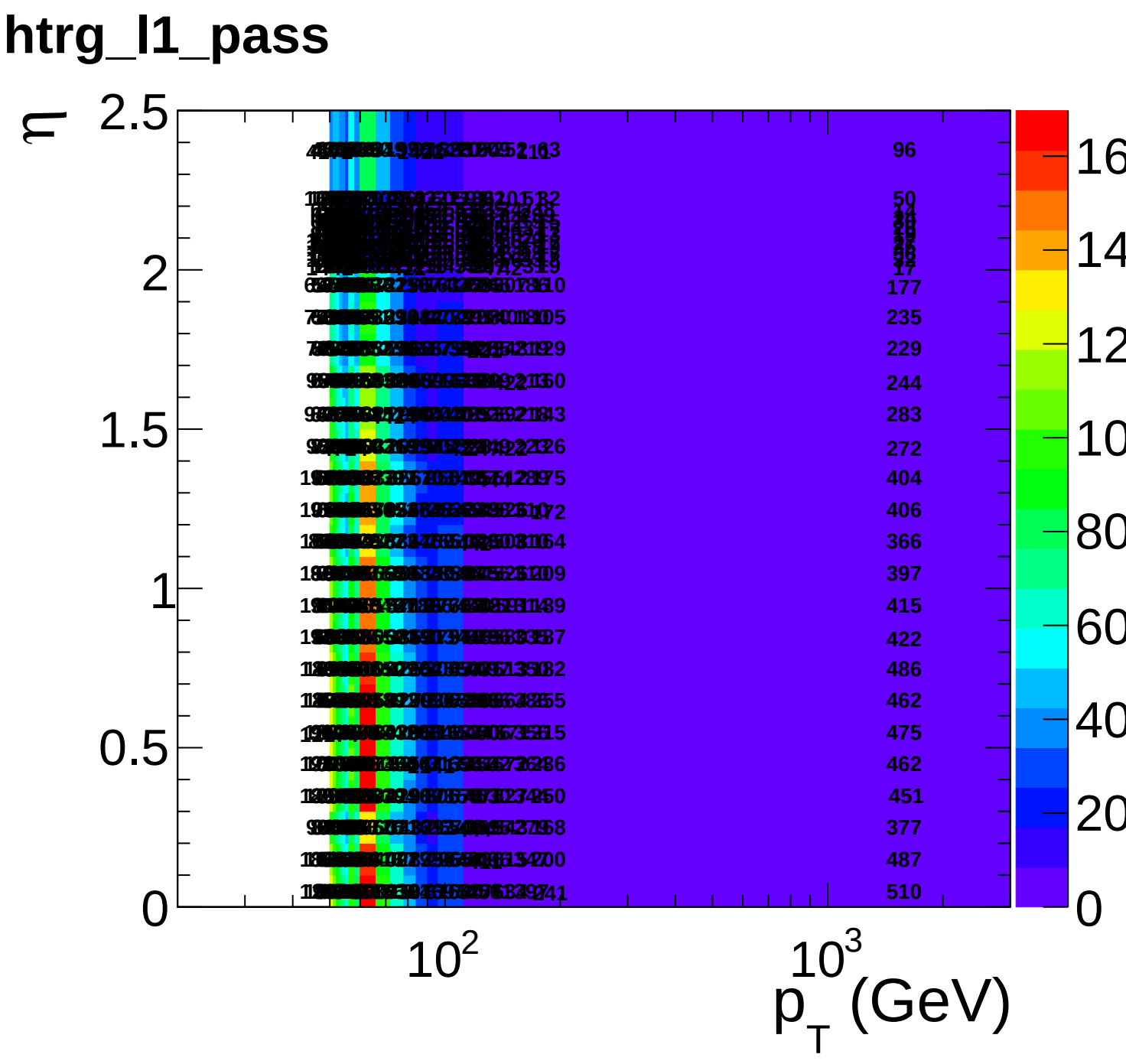
htrg_l2_l1fl2p_norm_vs_l1f



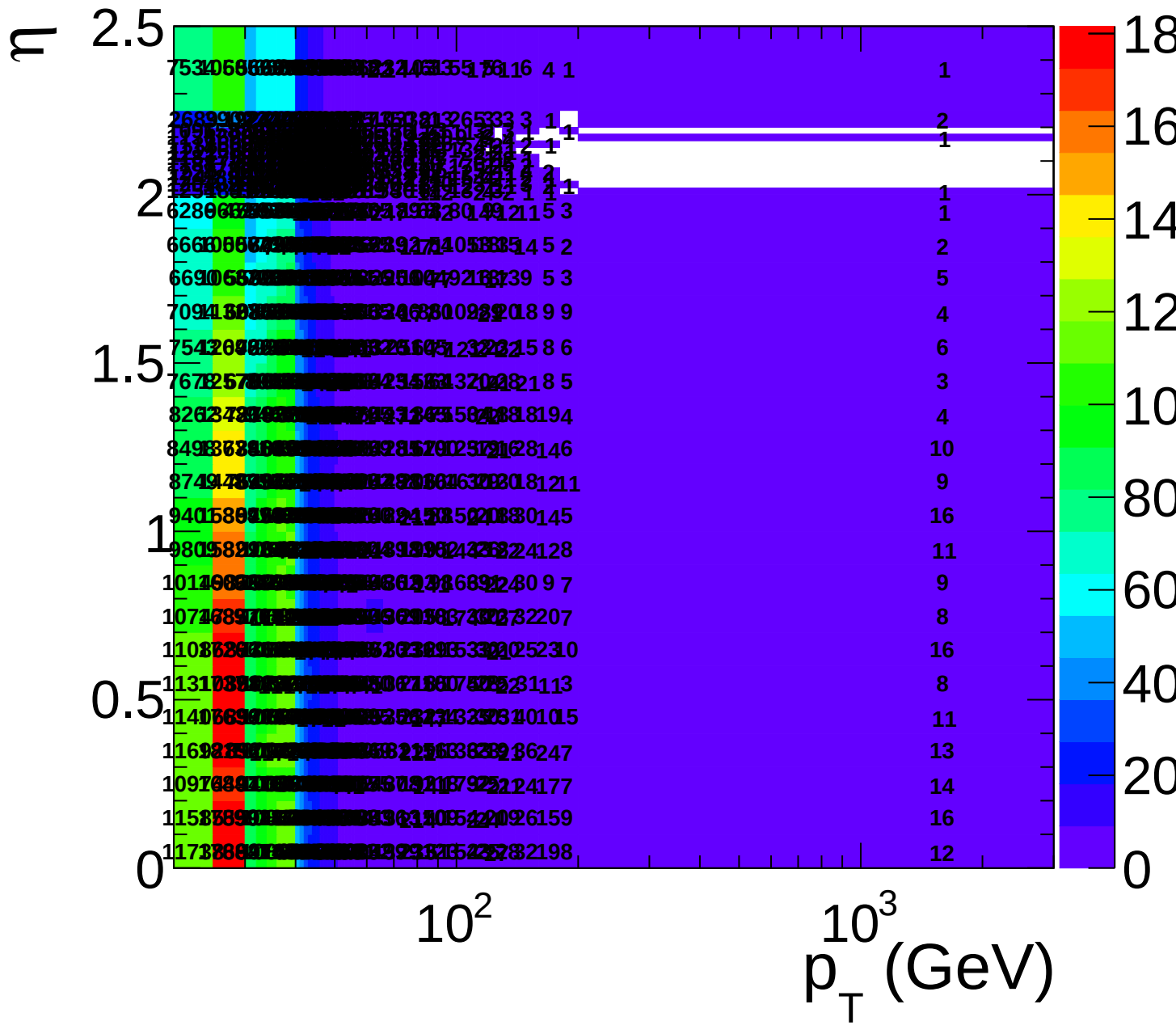

htrg_l1_base
η
2.5
2
1.5
1
0.5
0
10^2
10^3
p_T (GeV)
127
63
22
205
269
279
282
355
357
440
458
425
423
445
445
503
475
494
484
479
434
509
516
16
14
12
10
80
60
40
20
0

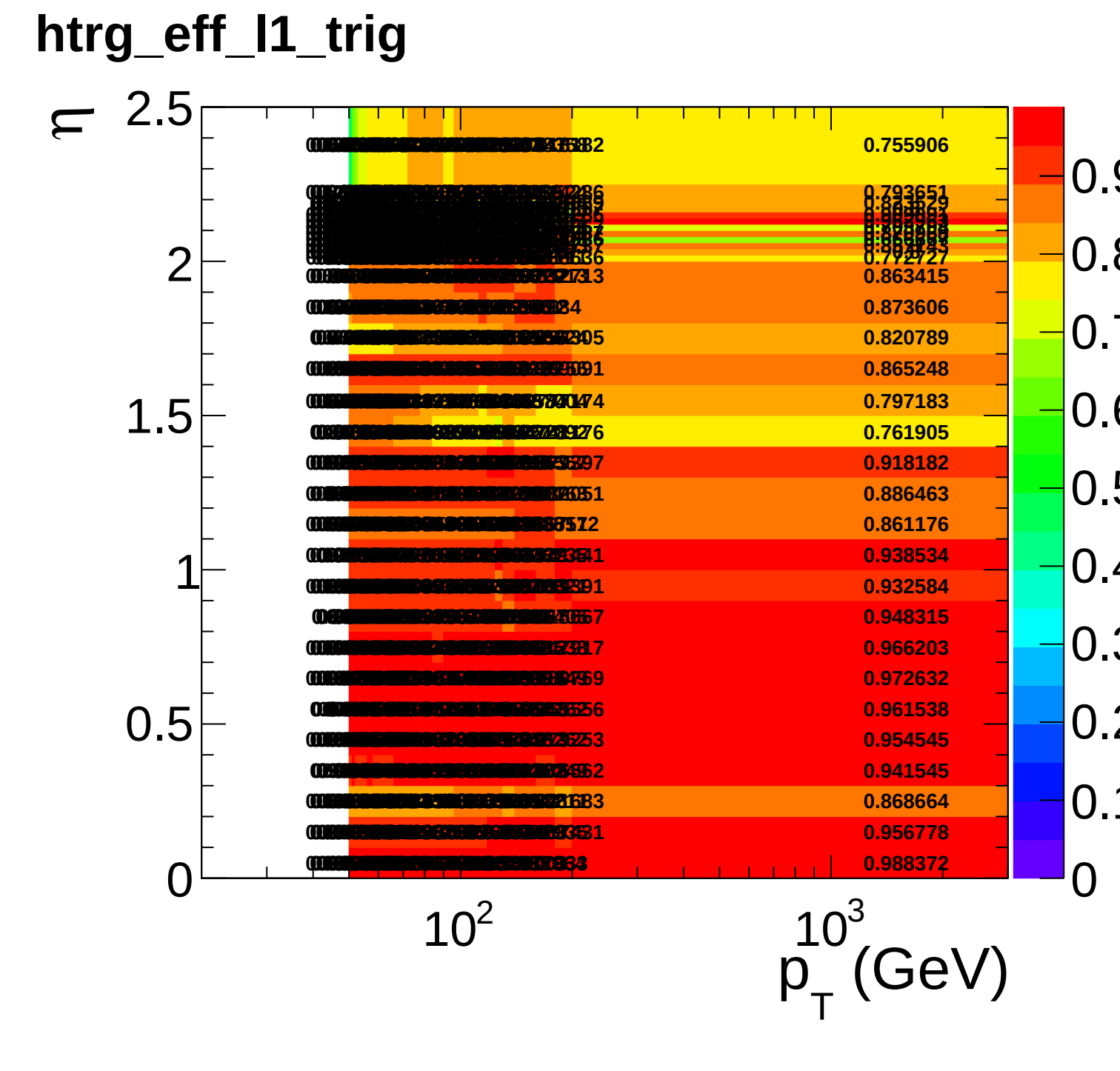
htrg_l1_base

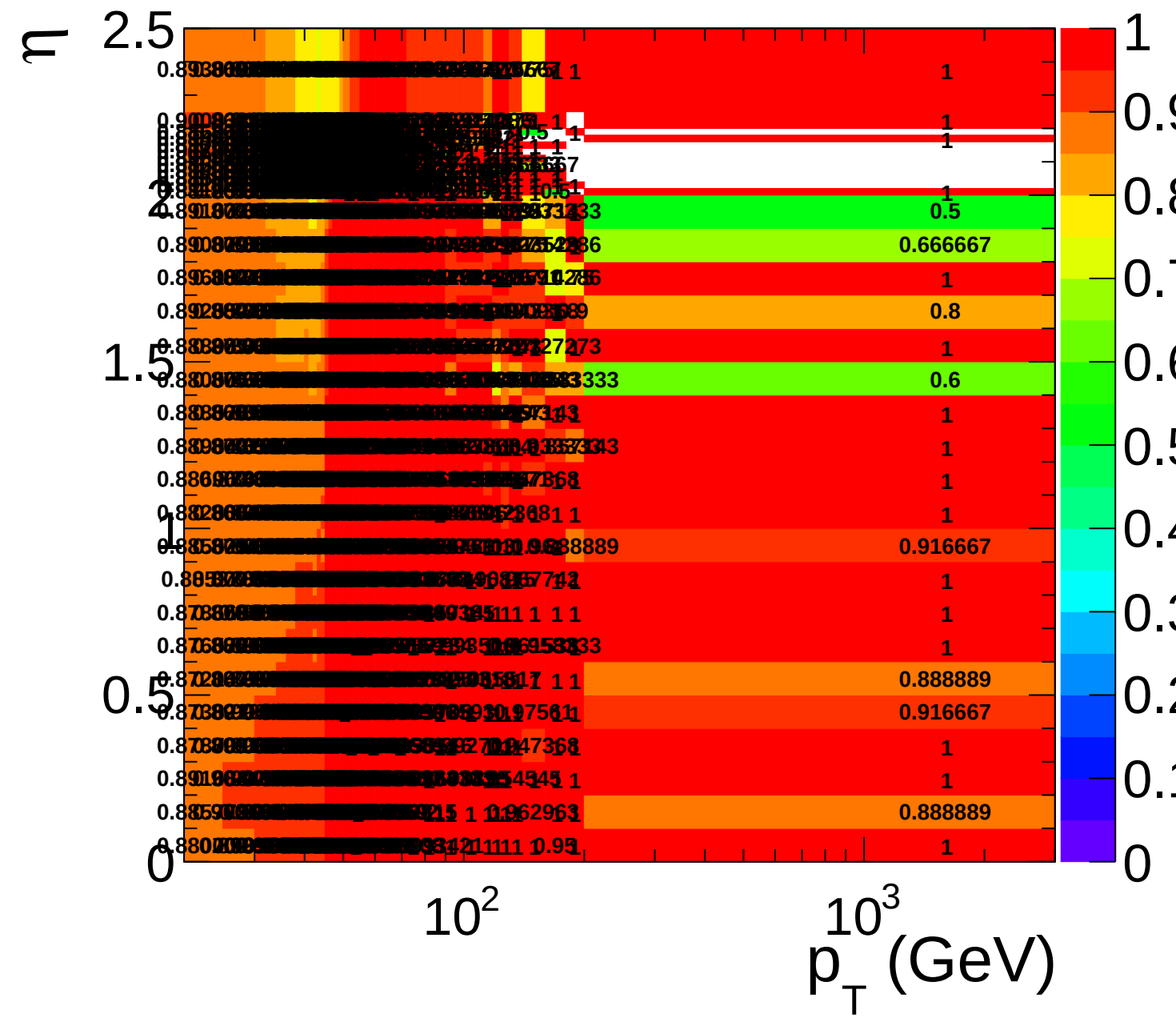



htrg_l1_pass
η
2.5
2
1.5
1
0.5
0
10^2
10^3
p_T (GeV)
96
50
17
177
235
229
244
283
272
404
406
366
397
415
422
486
462
475
462
451
377
487
510
16
14
12
10
80
60
40
20
0

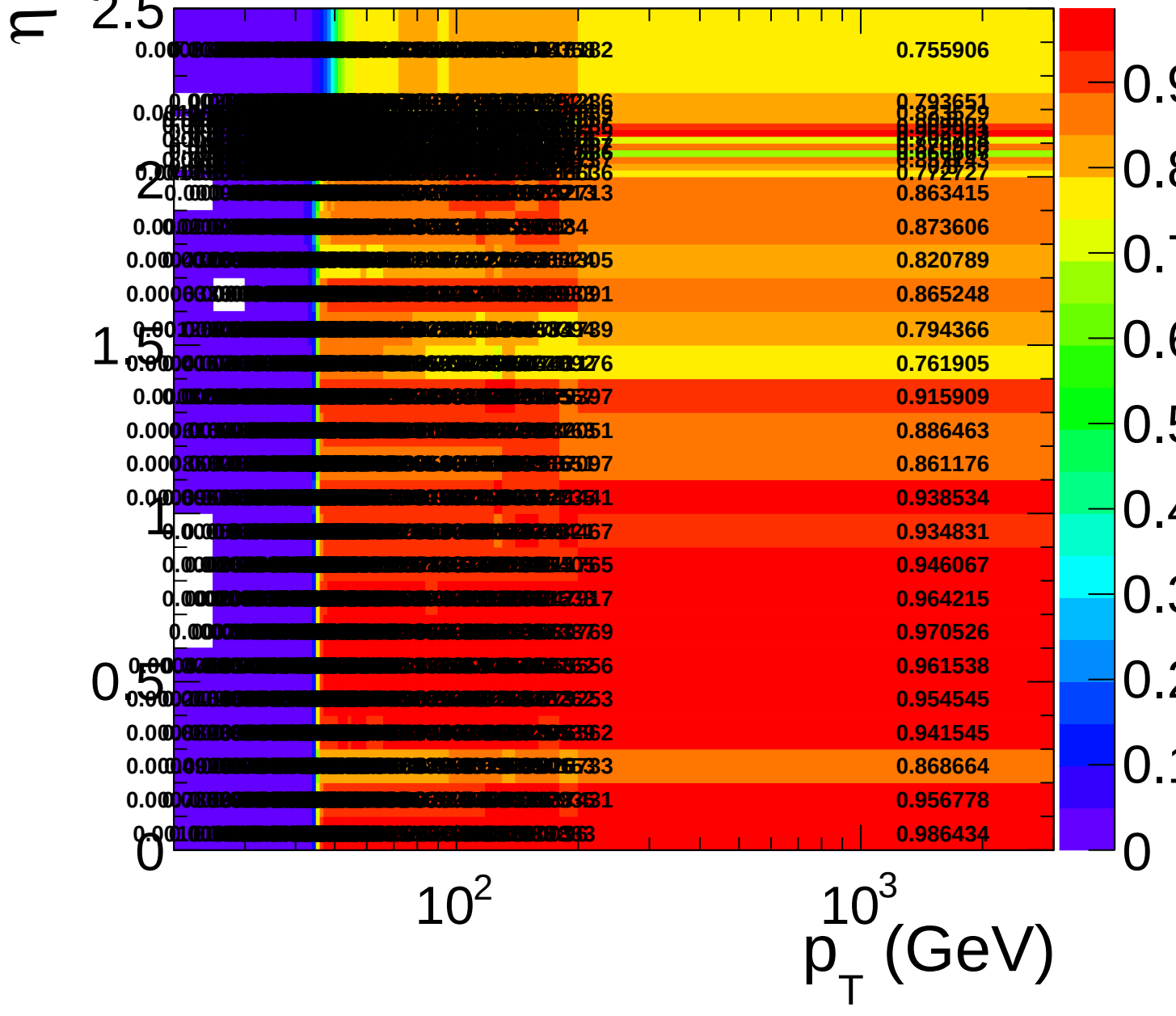
htrg_l1_pass

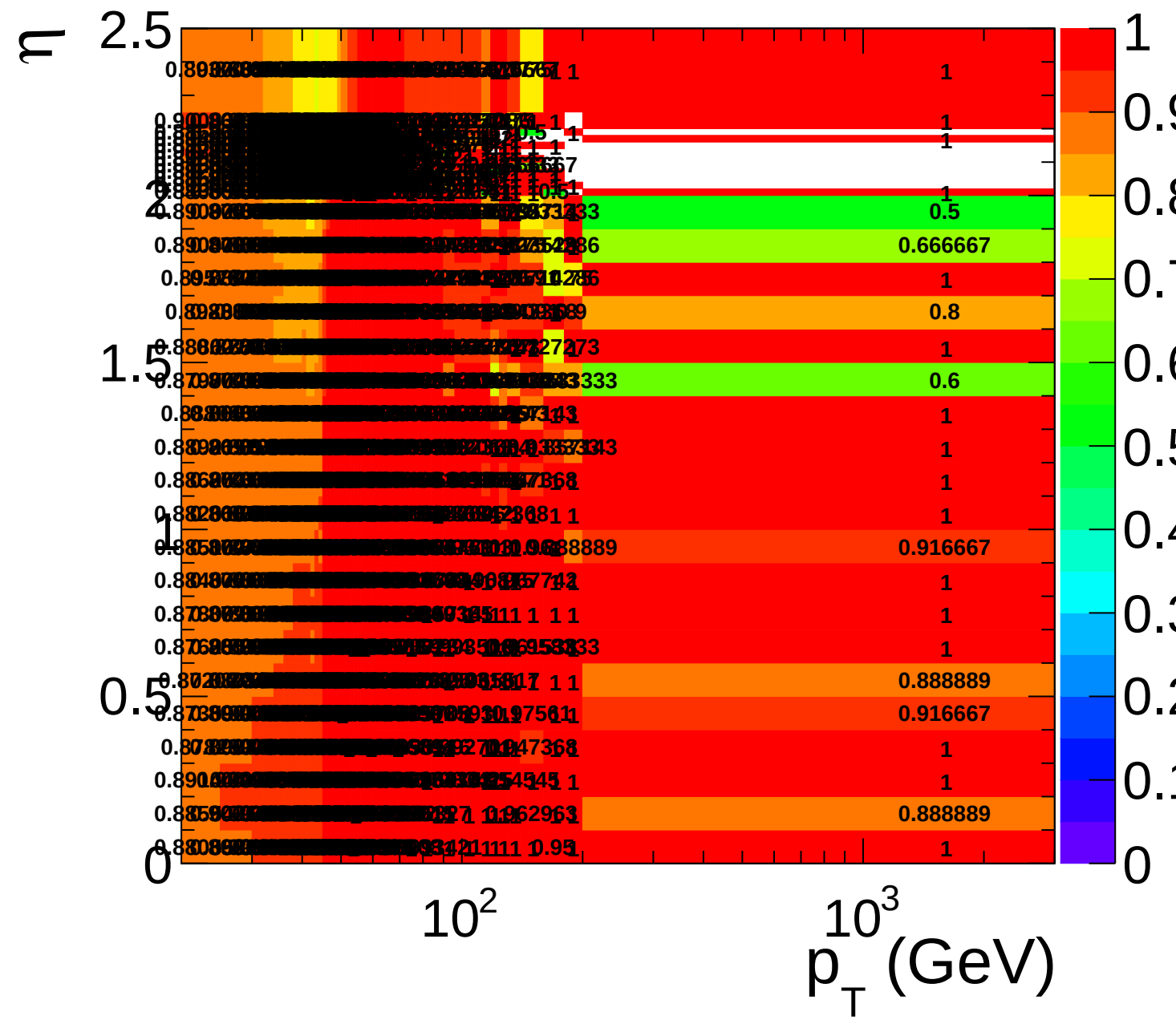


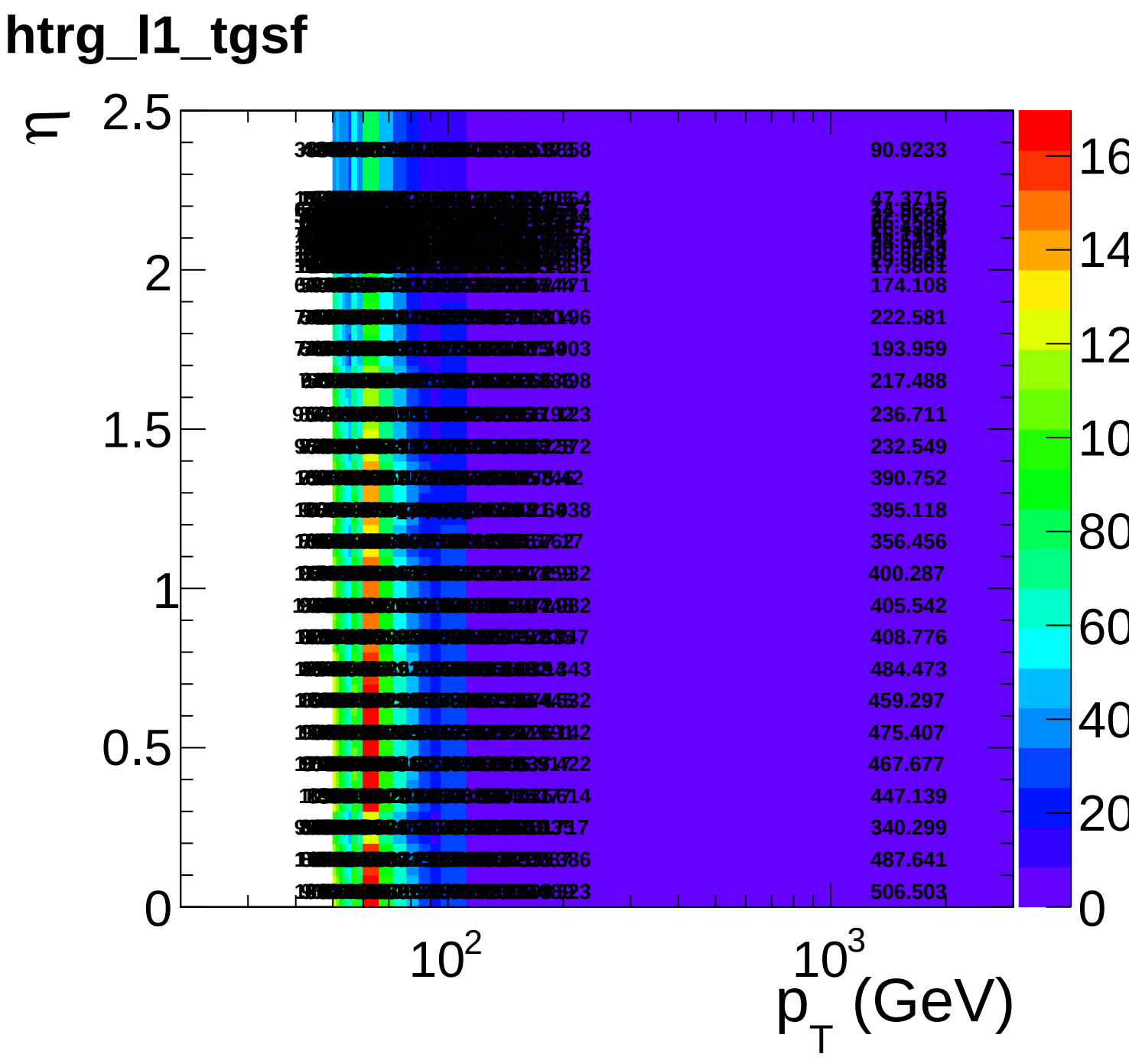

htrg_eff_l1_trig
η
2.5
2
1.5
1
0.5
0
0.755906
0.793651
0.772727
0.863415
0.873606
0.820789
0.865248
0.797183
0.761905
0.918182
0.886463
0.861176
0.938534
0.932584
0.948315
0.966203
0.972632
0.961538
0.954545
0.941545
0.868664
0.956778
0.988372
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
10^2
10^3
p_T (GeV)


htrg_eff_l2_trig
η
2.5
2
1.5
1
0.5
0
1
1
0.5
0.666667
1
0.8
1
0.6
1
1
1
1
0.916667
1
1
1
0.888889
0.916667
1
1
0.888889
1
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
10^2
10^3
p_T (GeV)

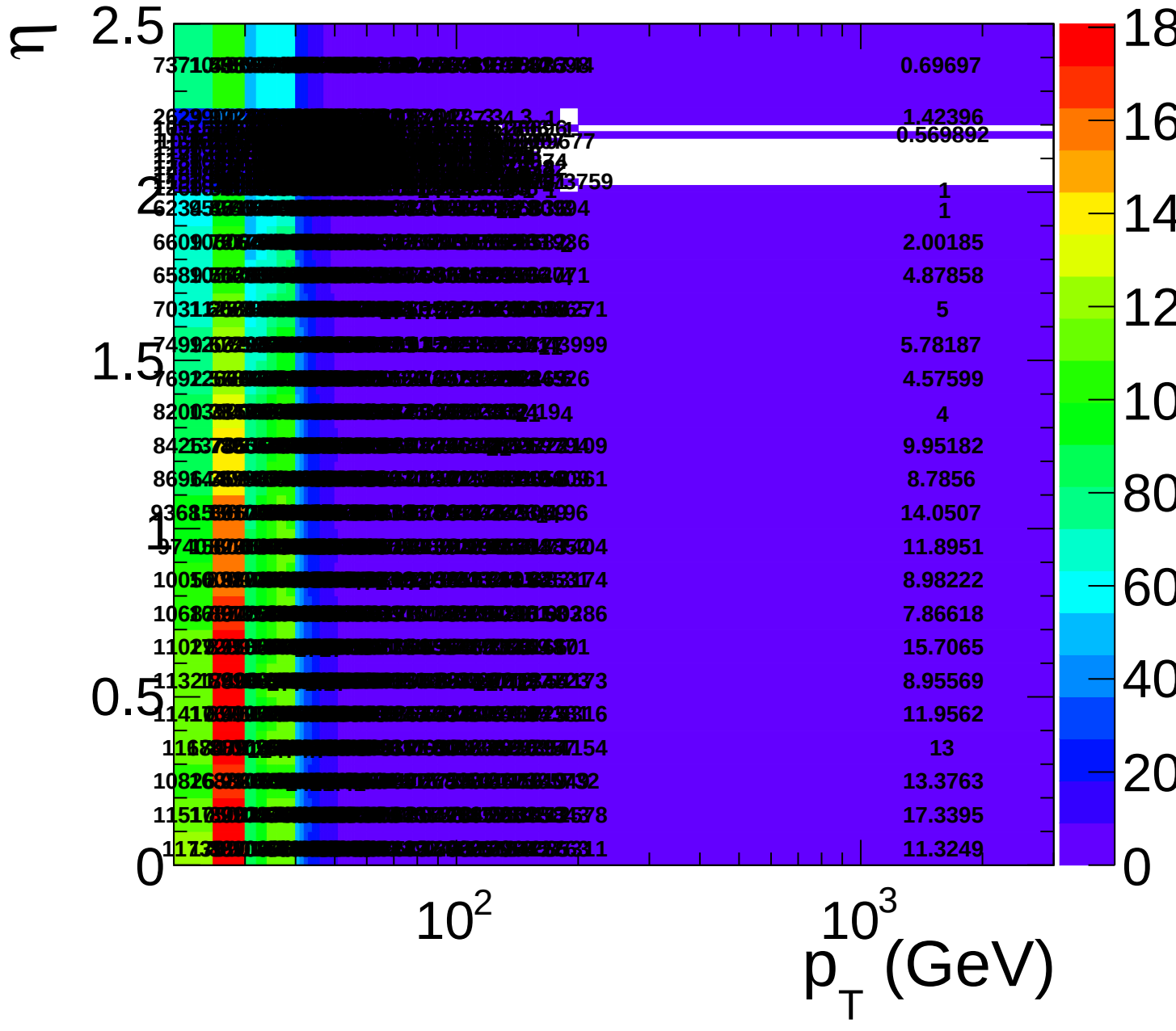
htrg_eff_l1_test

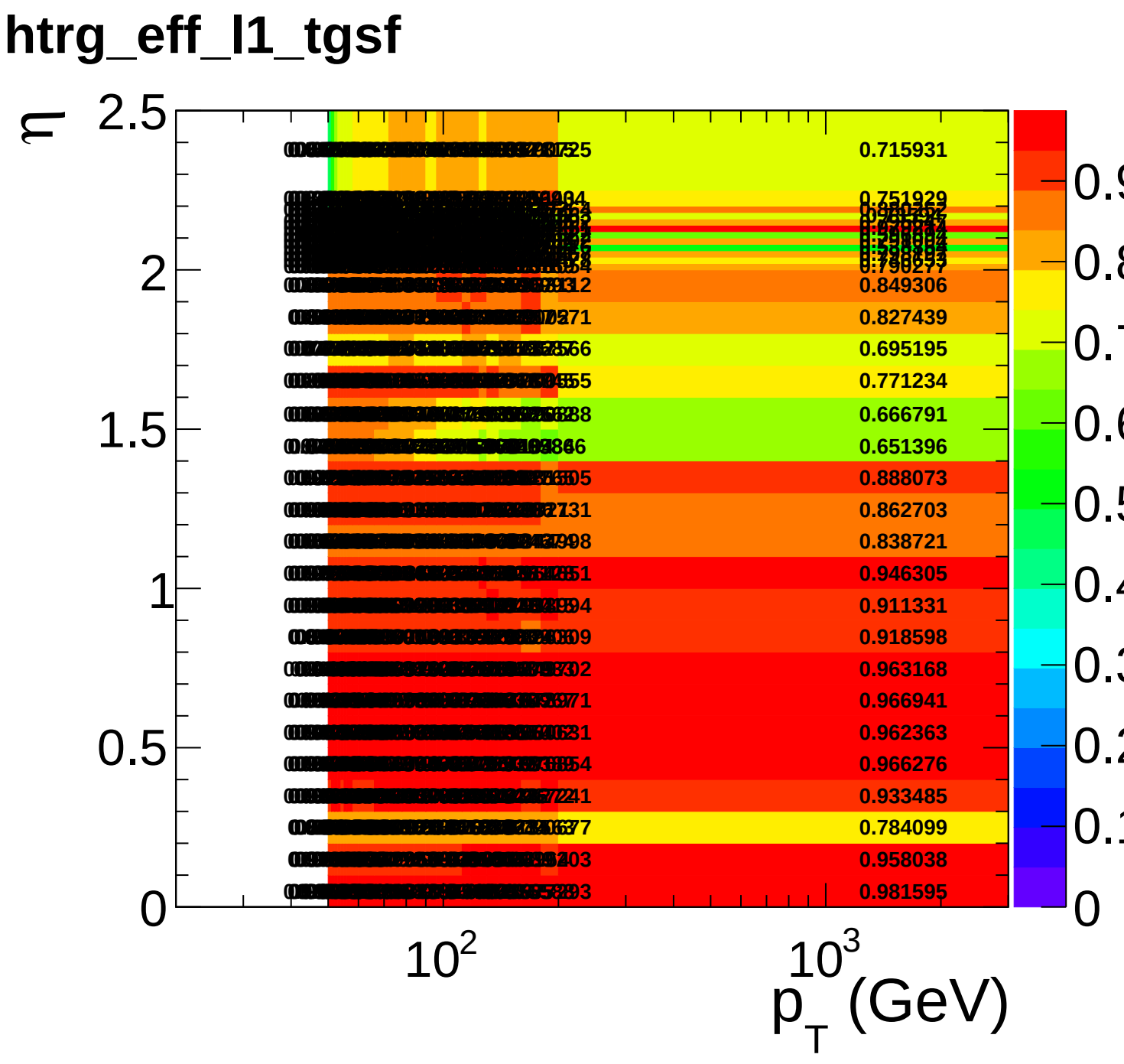


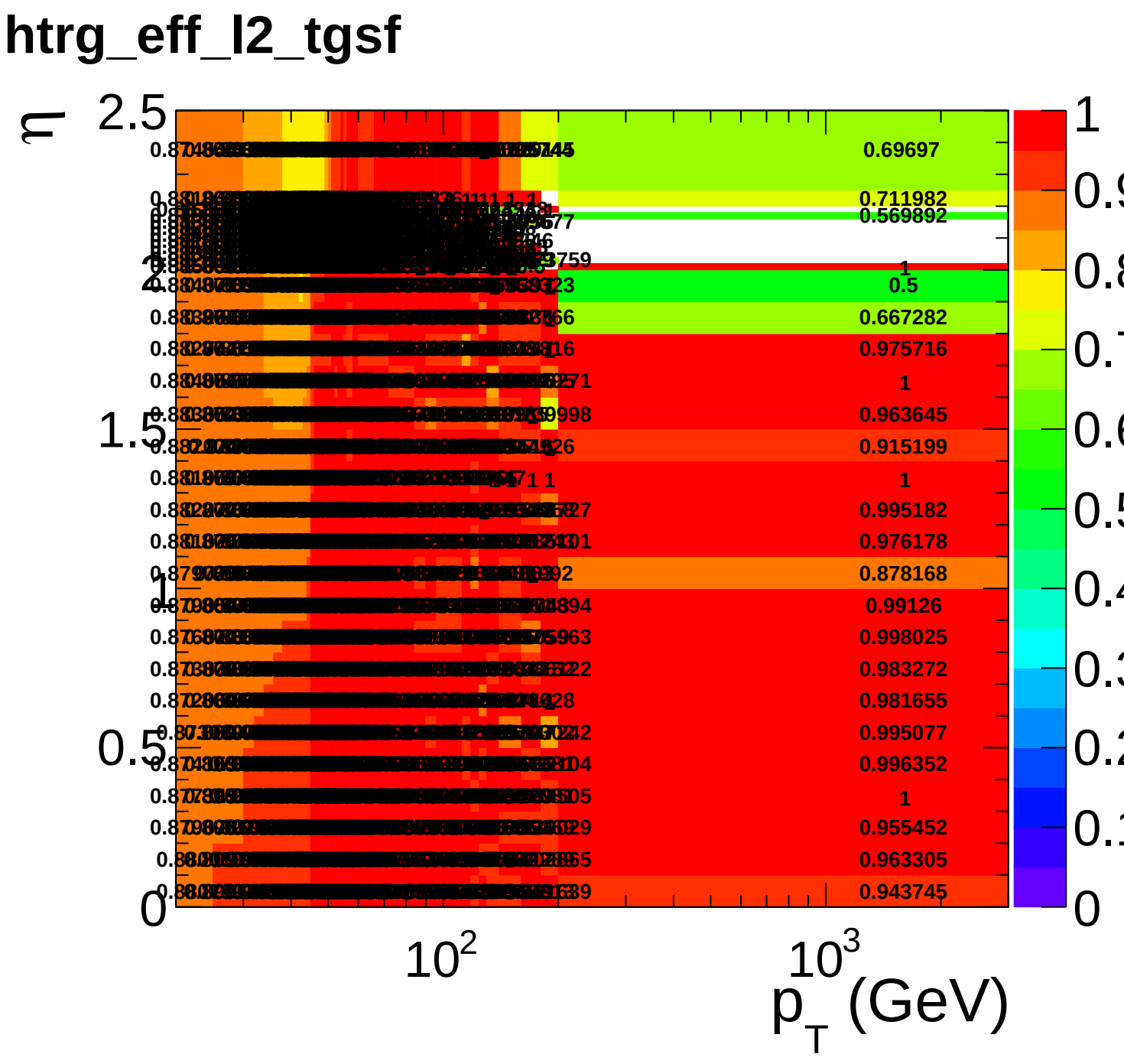

htrg_eff_l1_test
η
2.5
2
1.5
1
0.5
0
1
0.5
0.666667
1
0.8
1
0.6
1
1
1
1
0.916667
1
1
1
0.888889
0.916667
1
1
0.888889
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
10^2
10^3
p_T (GeV)


htrg_l1_tgsf
η
2.5
2
1.5
1
0.5
0
90.9233
47.3715
174.108
222.581
193.959
217.488
236.711
232.549
390.752
395.118
356.456
400.287
405.542
408.776
484.473
459.297
475.407
467.677
447.139
340.299
487.641
506.503
16
14
12
10
80
60
40
20
0
10^2
10^3
p_T (GeV)

htrg_l1_tgsf


η
2.5
2
1.5
1
0.5
0
0.69697
1.42396
0.569892
1
1
2.00185
4.87858
5
5.78187
4.57599
4
9.95182
8.7856
14.0507
11.8951
8.98222
7.86618
15.7065
8.95569
11.9562
13
13.3763
17.3395
11.3249
18
16
14
12
10
80
60
40
20
0
10^2
10^3
p_T (GeV)


htrg_eff_l1_tgsf
η
2.5
2
1.5
1
0.5
0
0.715931
0.751929
0.790277
0.849306
0.827439
0.695195
0.771234
0.666791
0.651396
0.888073
0.862703
0.838721
0.946305
0.911331
0.918598
0.963168
0.966941
0.962363
0.966276
0.933485
0.784099
0.958038
0.981595
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
10^2
10^3
p_T (GeV)


htrg_eff_l2_tgsf
η
2.5
1.5
0.5
0
10^2
10^3
p_T (GeV)
0.69697
0.711982
0.569892
1
0.5
0.667282
0.975716
1
0.963645
0.915199
1
0.995182
0.976178
0.878168
0.99126
0.998025
0.983272
0.981655
0.995077
0.996352
1
0.955452
0.963305
0.943745
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0