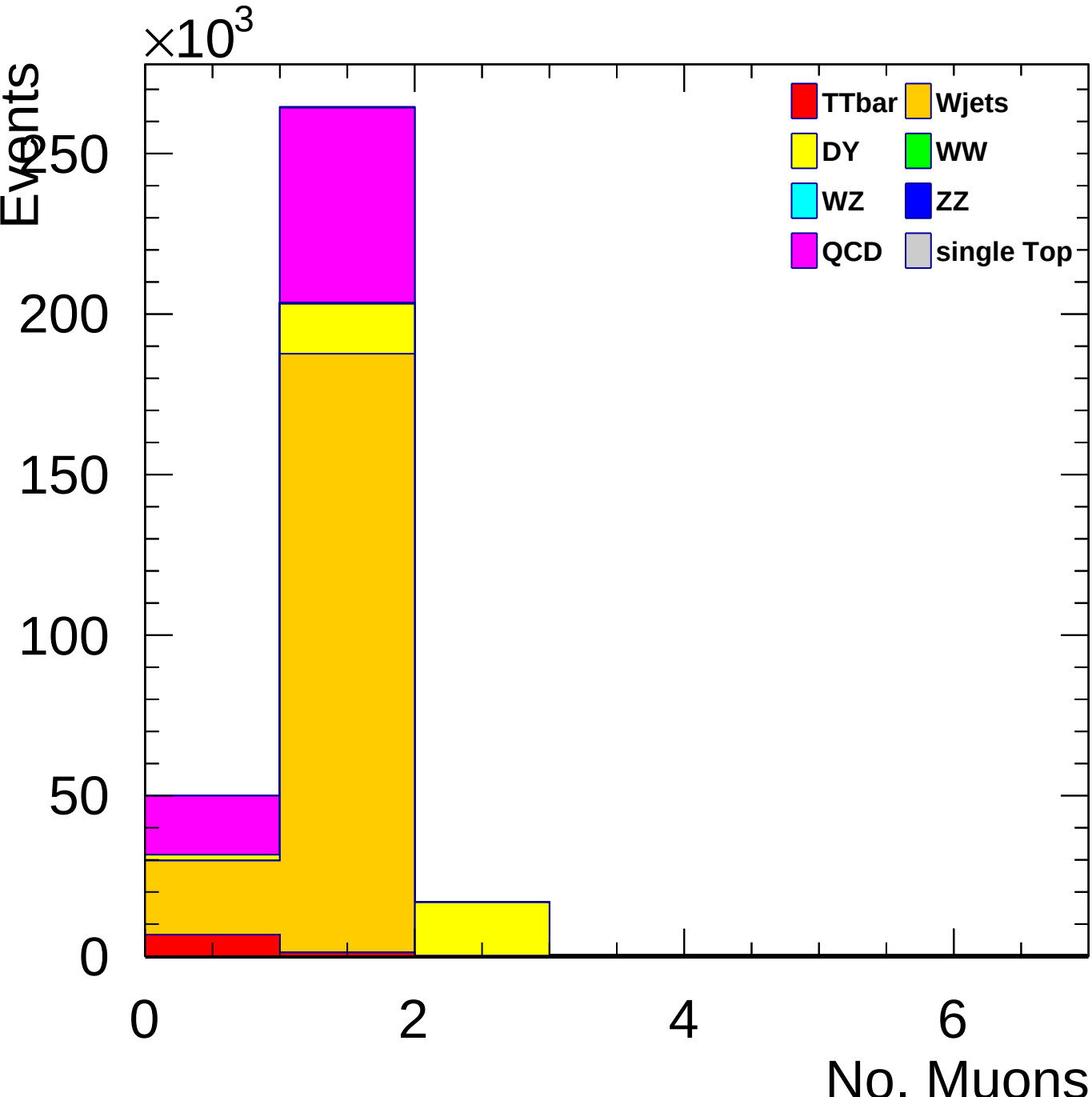
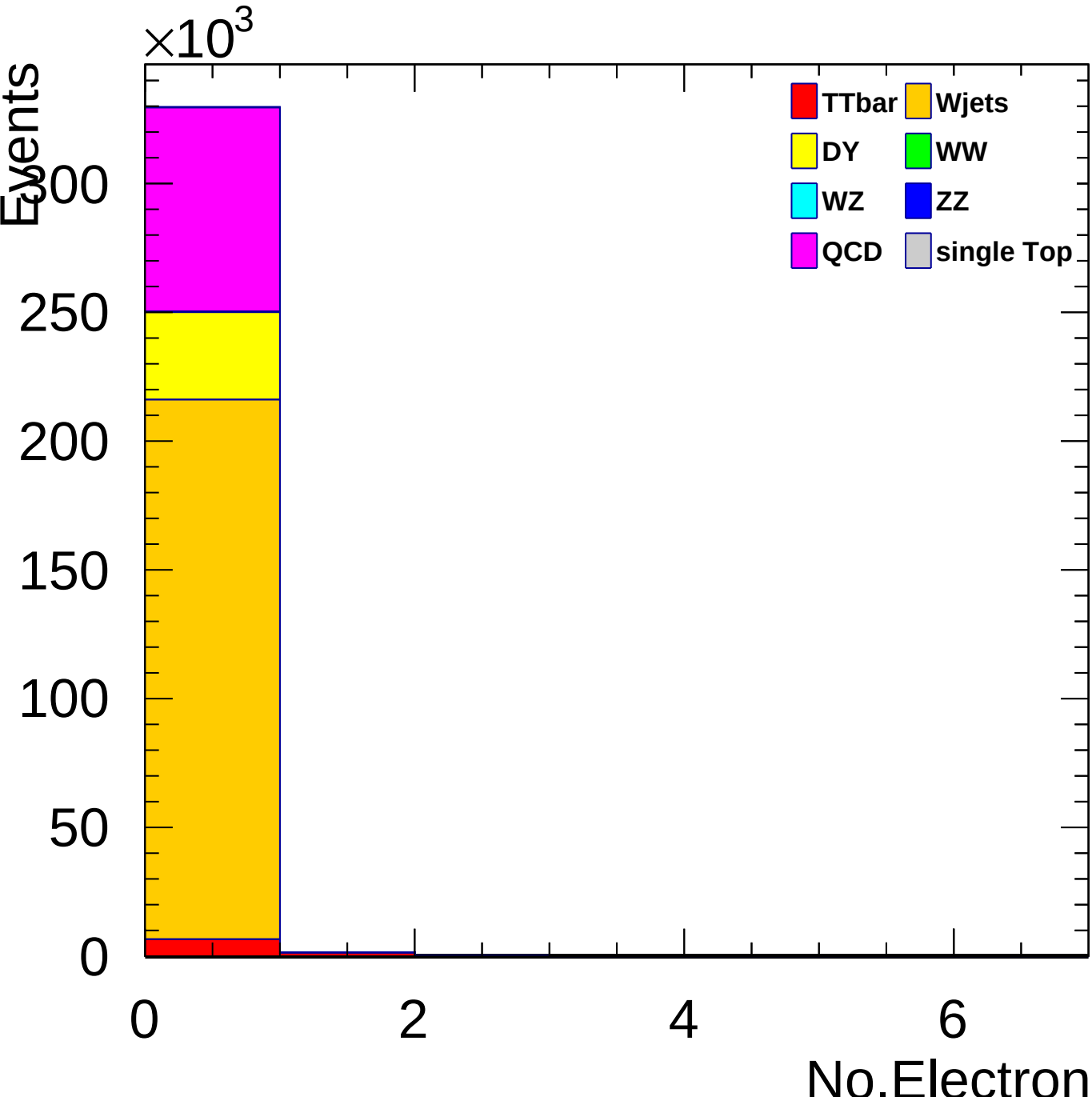
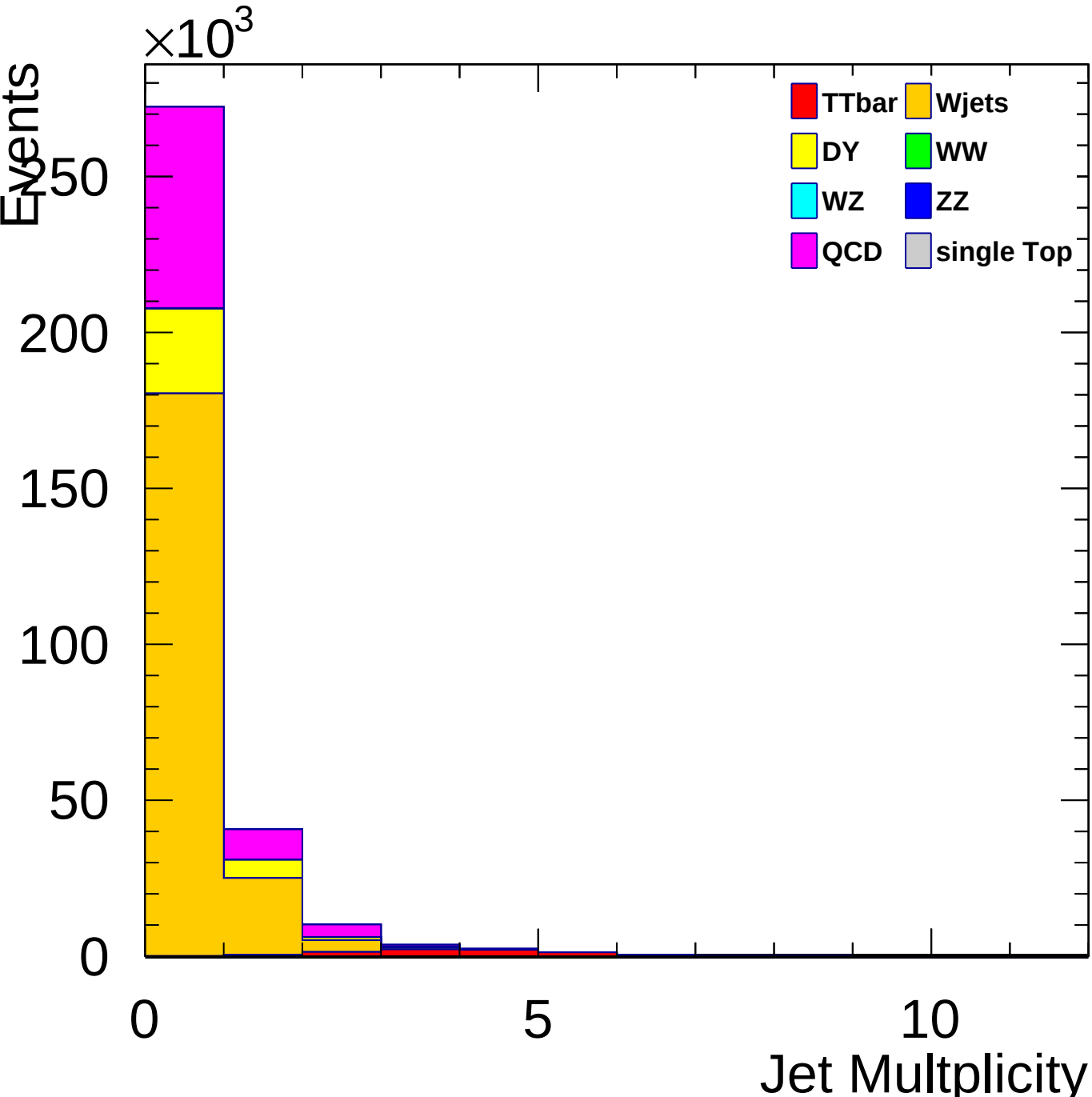
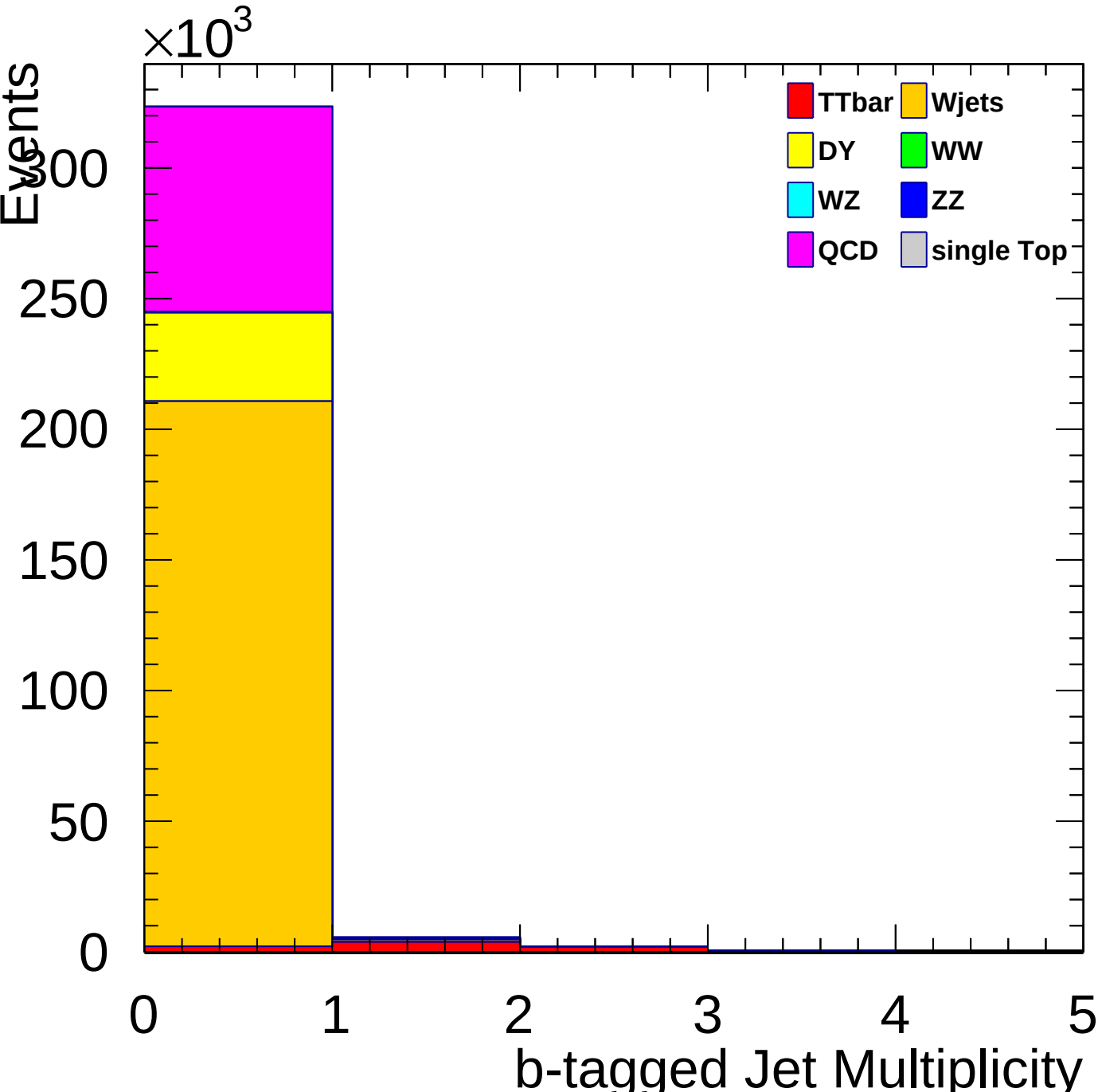
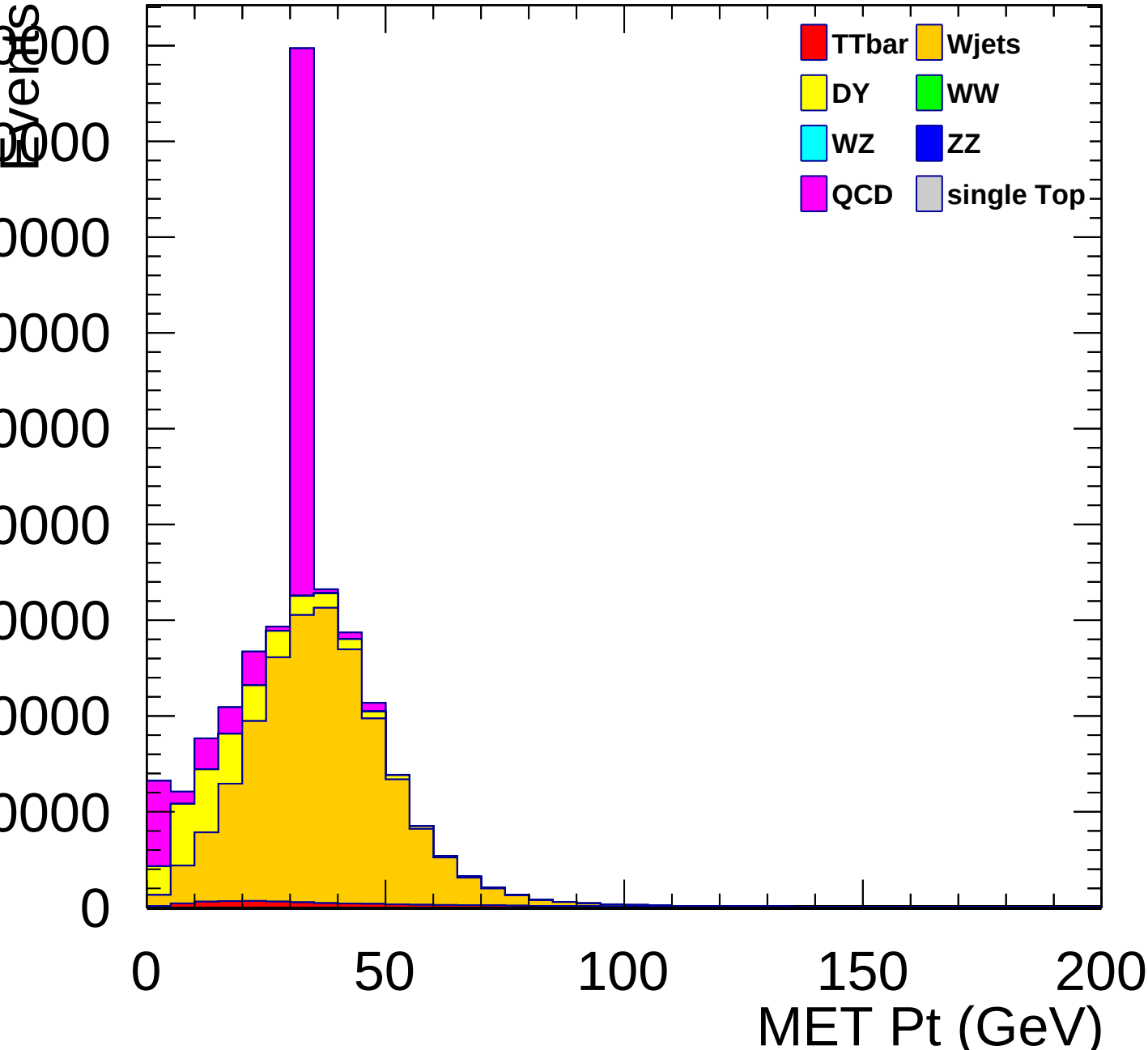
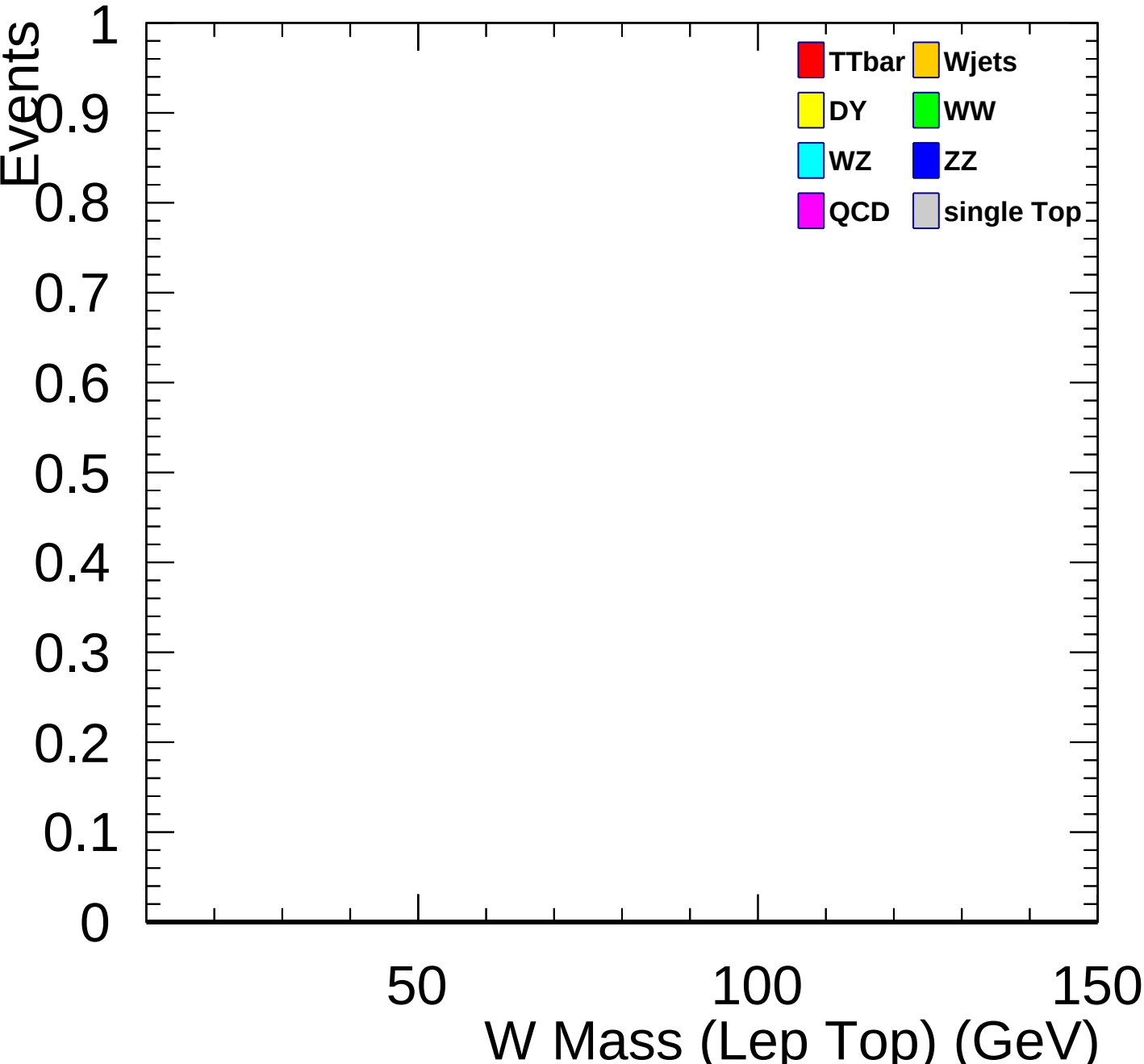

×10^3
Events
250
200
150
100
50
0
0
2
4
6
No. Muons
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

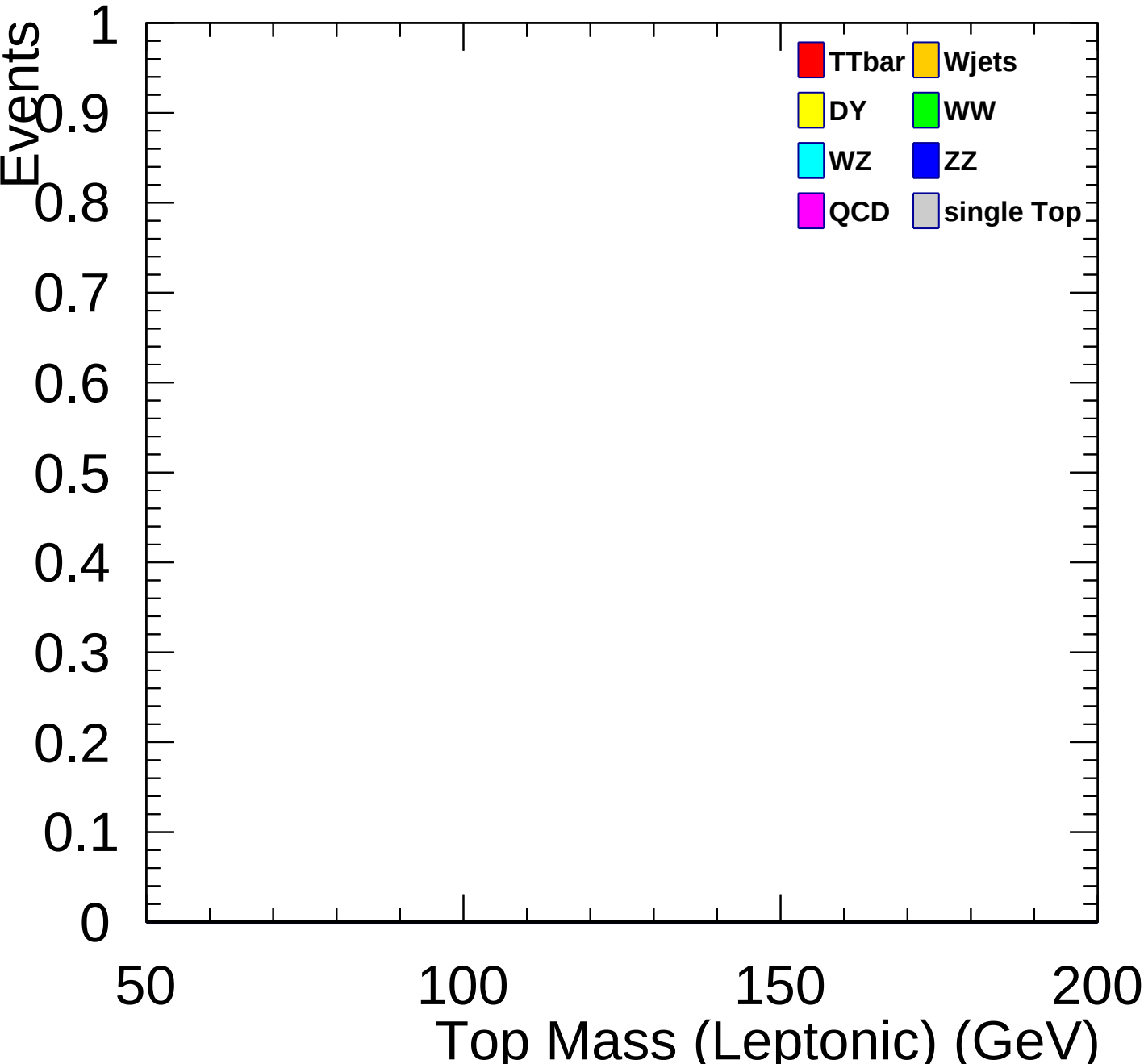

×10^3
Events
300
250
200
150
100
50
0
0
2
4
6
No.Electron
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

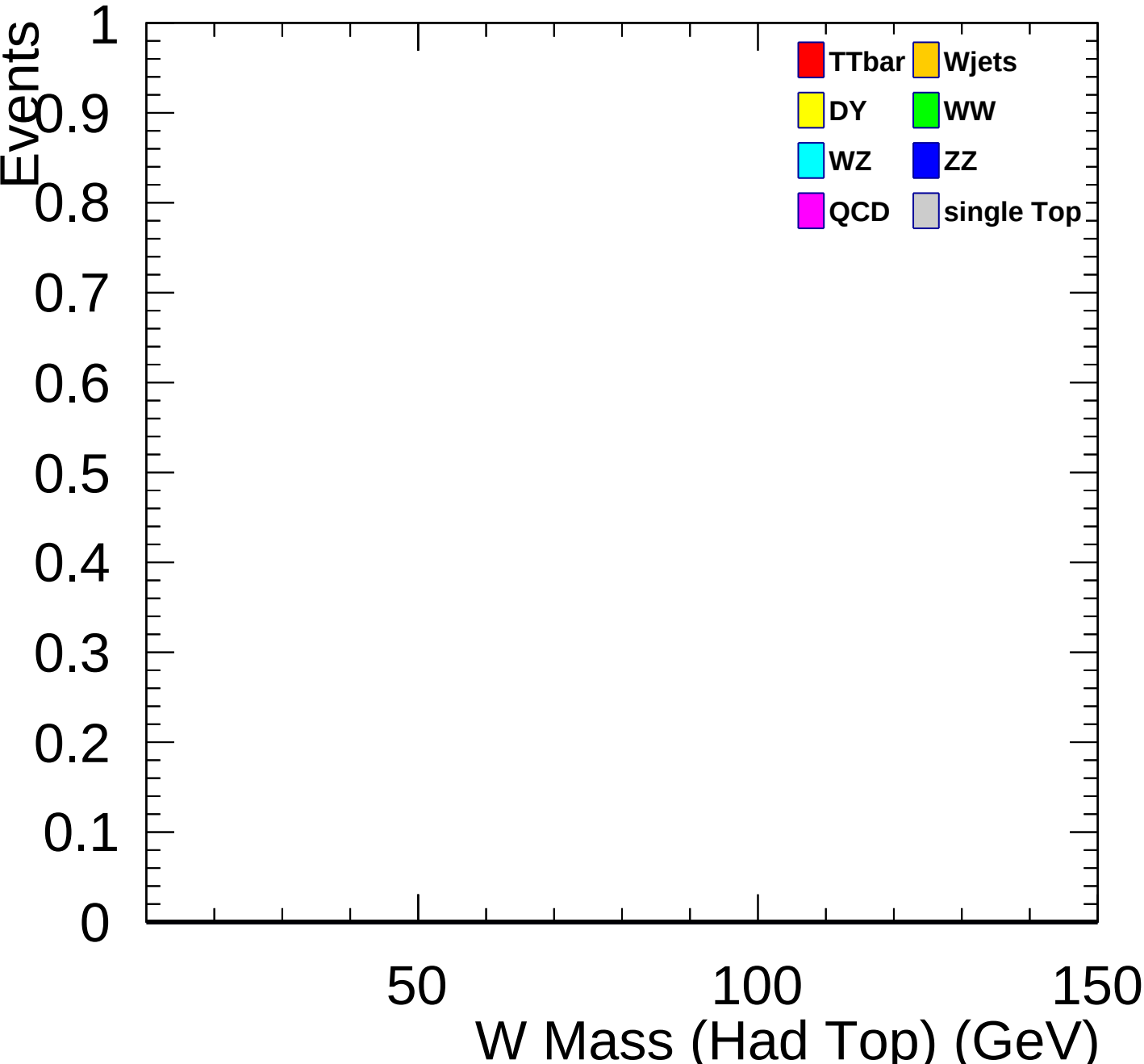

×10^3
Events
250
200
150
100
50
0
0
5
10
Jet Multplicity
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

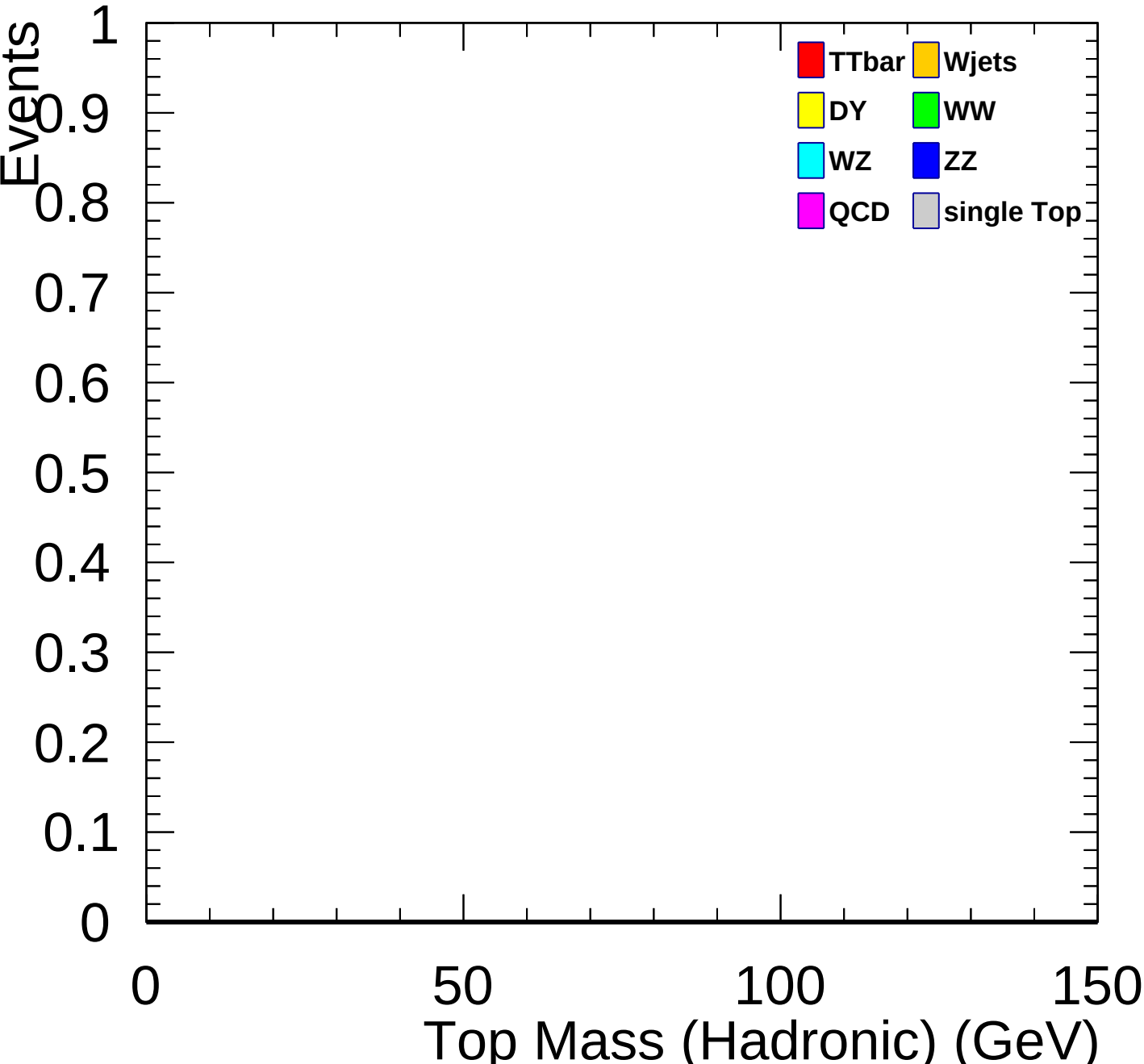

×10^3
Events
300
250
200
150
100
50
0
0
1
2
3
4
5
b-tagged Jet Multiplicity
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

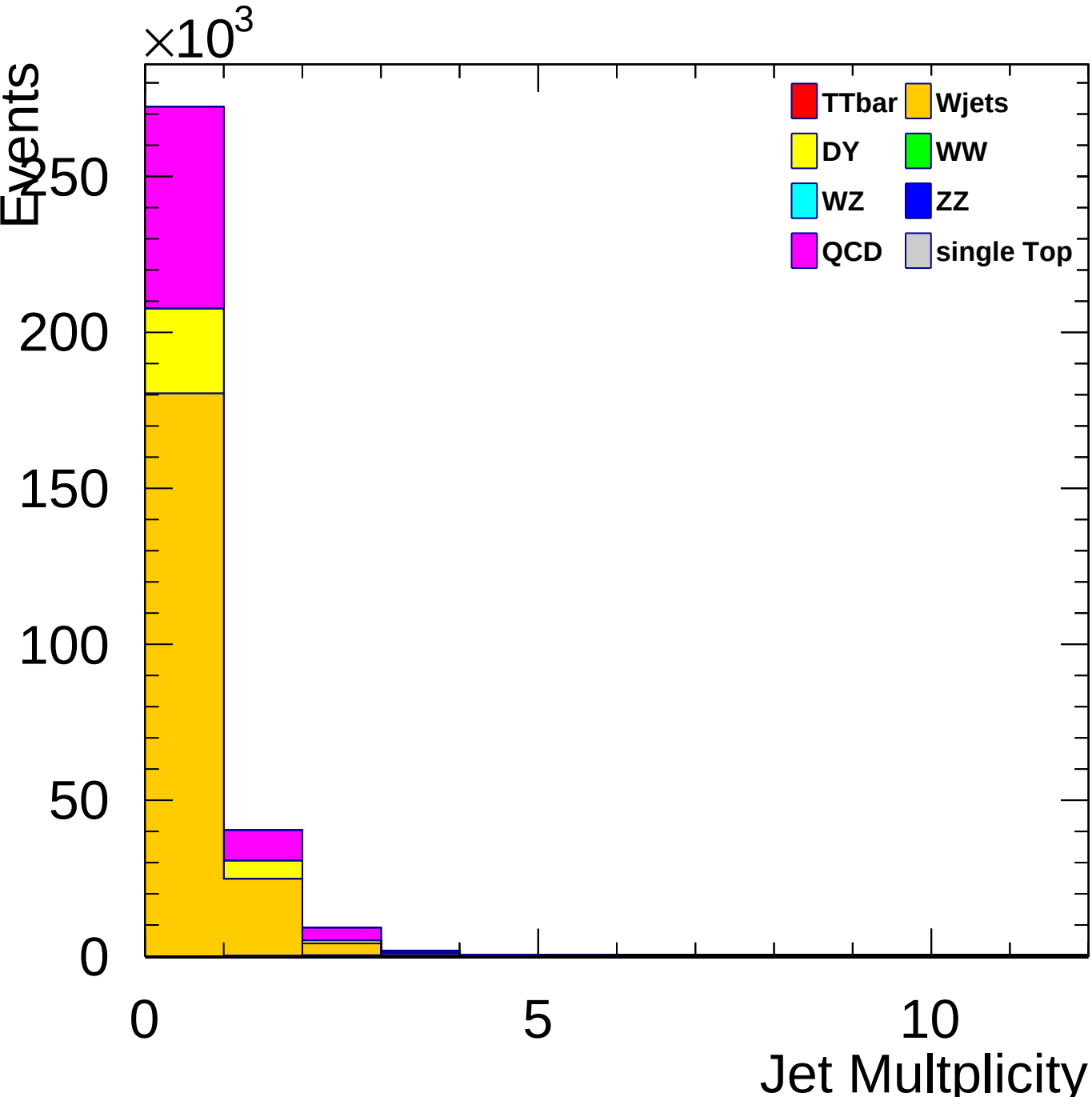

Events
0000
0000
0000
0000
0000
0000
0000
0000
0
0
50
100
150
200
MET Pt (GeV)
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

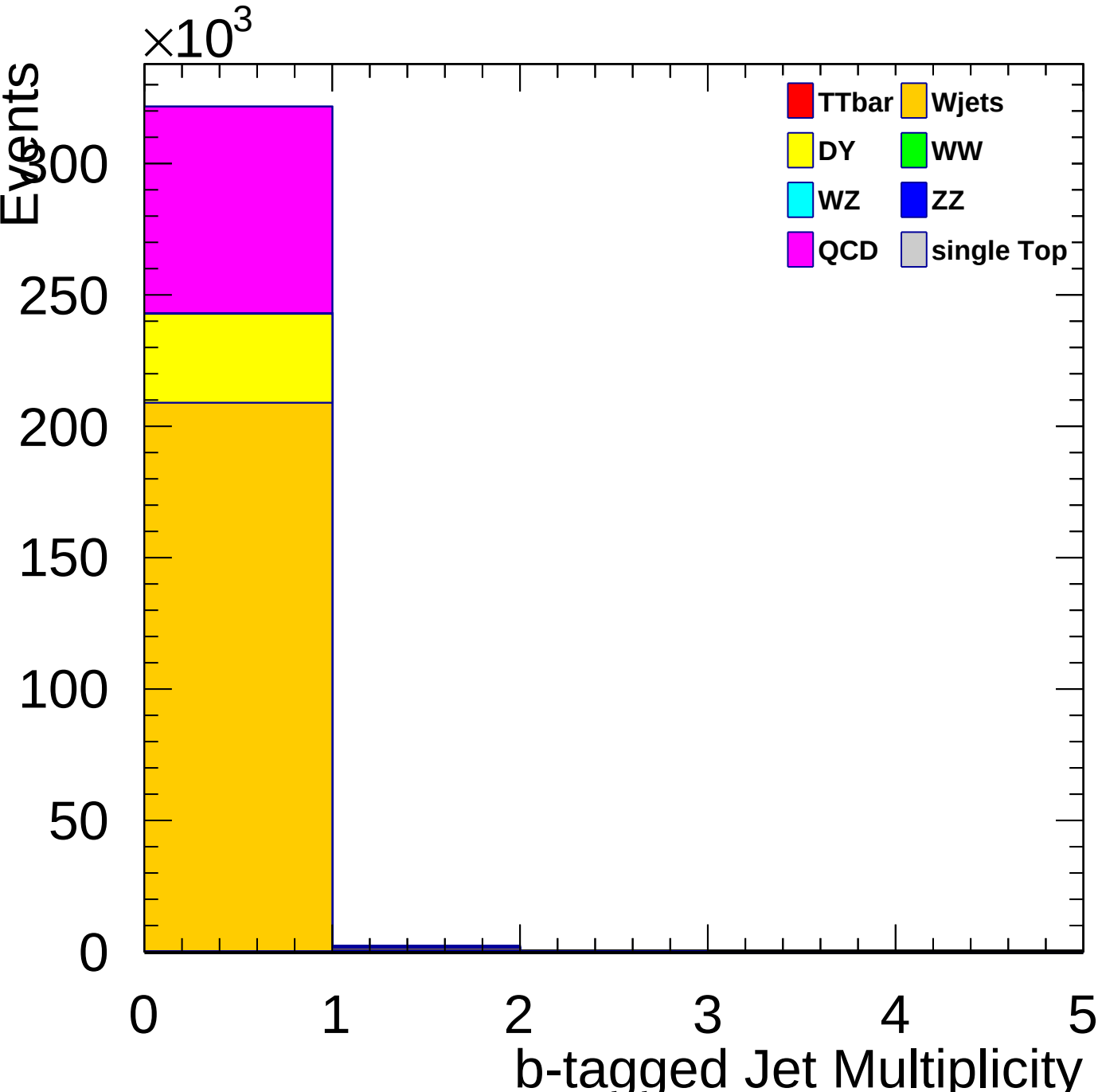

Events
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
50
100
150
W Mass (Lep Top) (GeV)
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

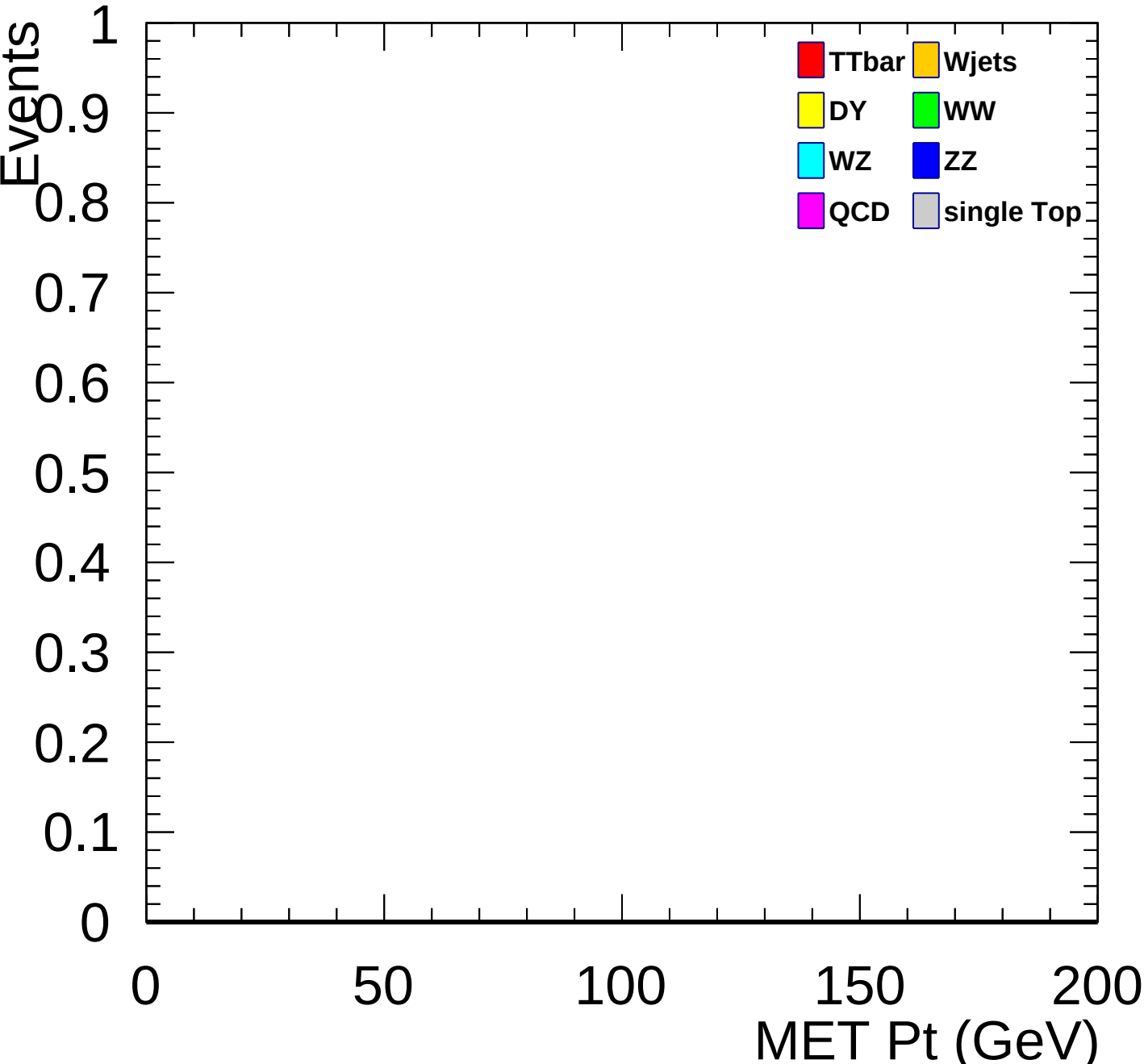

Events
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
50
100
150
200
Top Mass (Leptonic) (GeV)
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

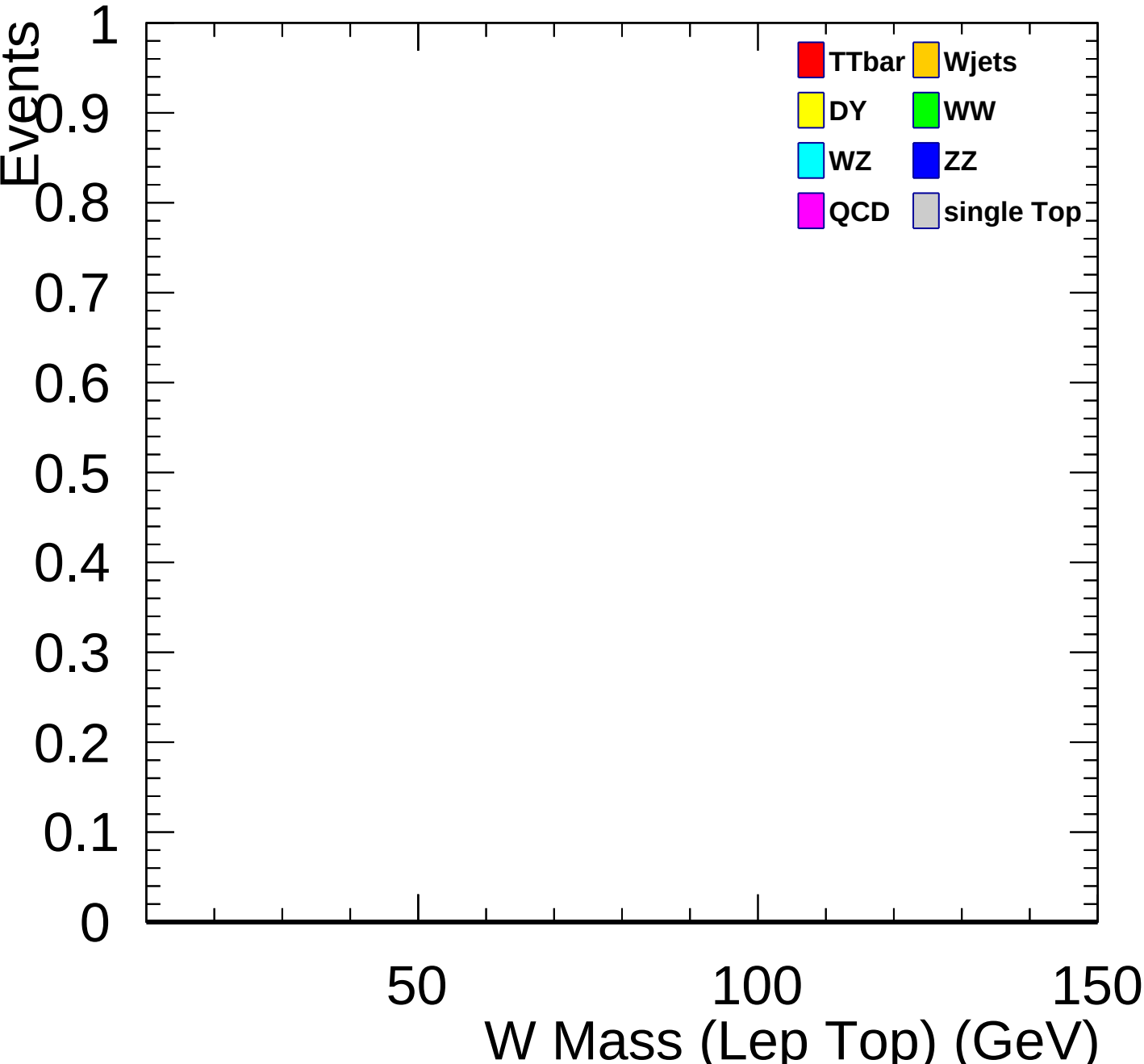

Events
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top
50
100
150
W Mass (Had Top) (GeV)

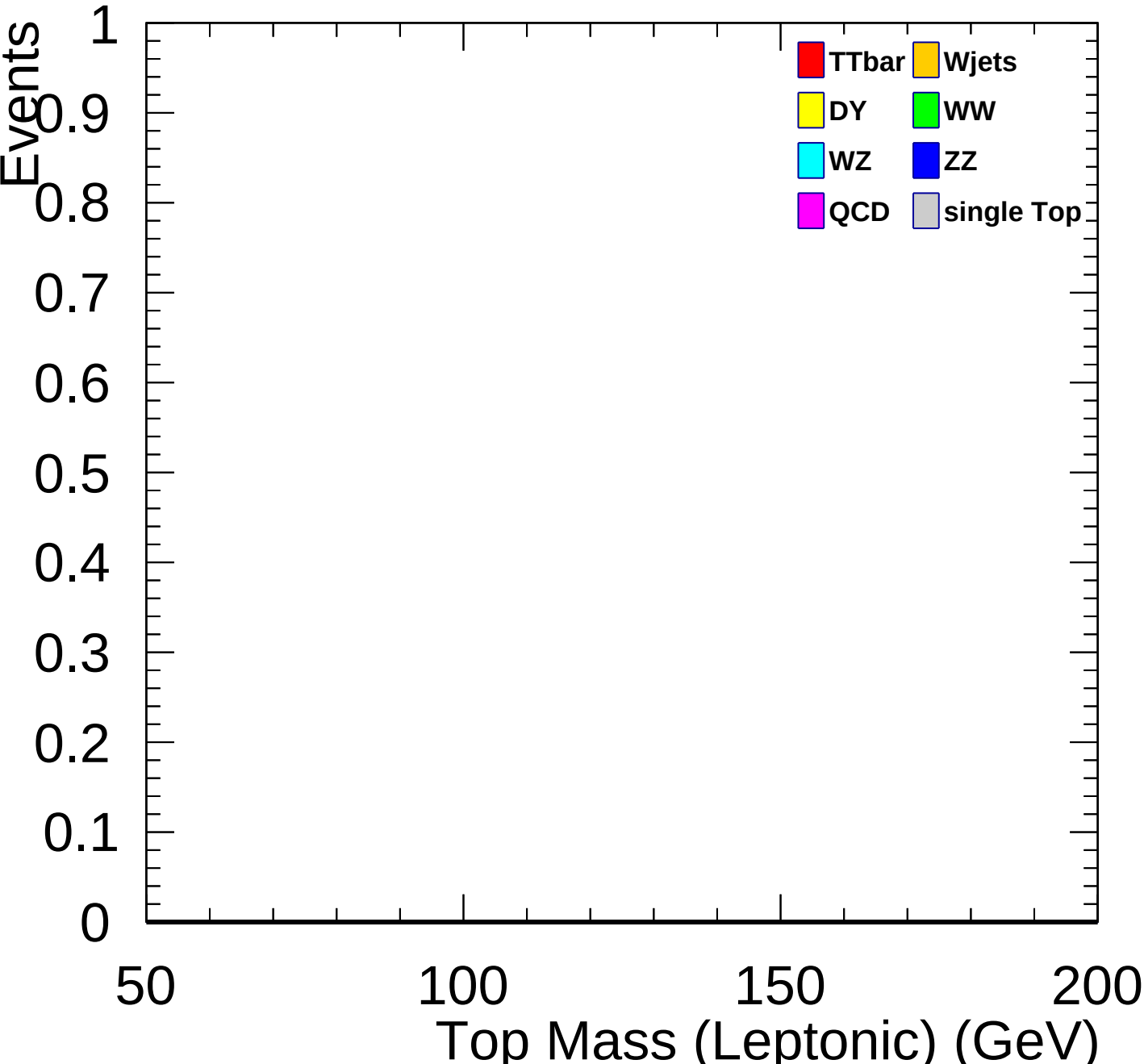

Events
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
50
100
150
Top Mass (Hadronic) (GeV)
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

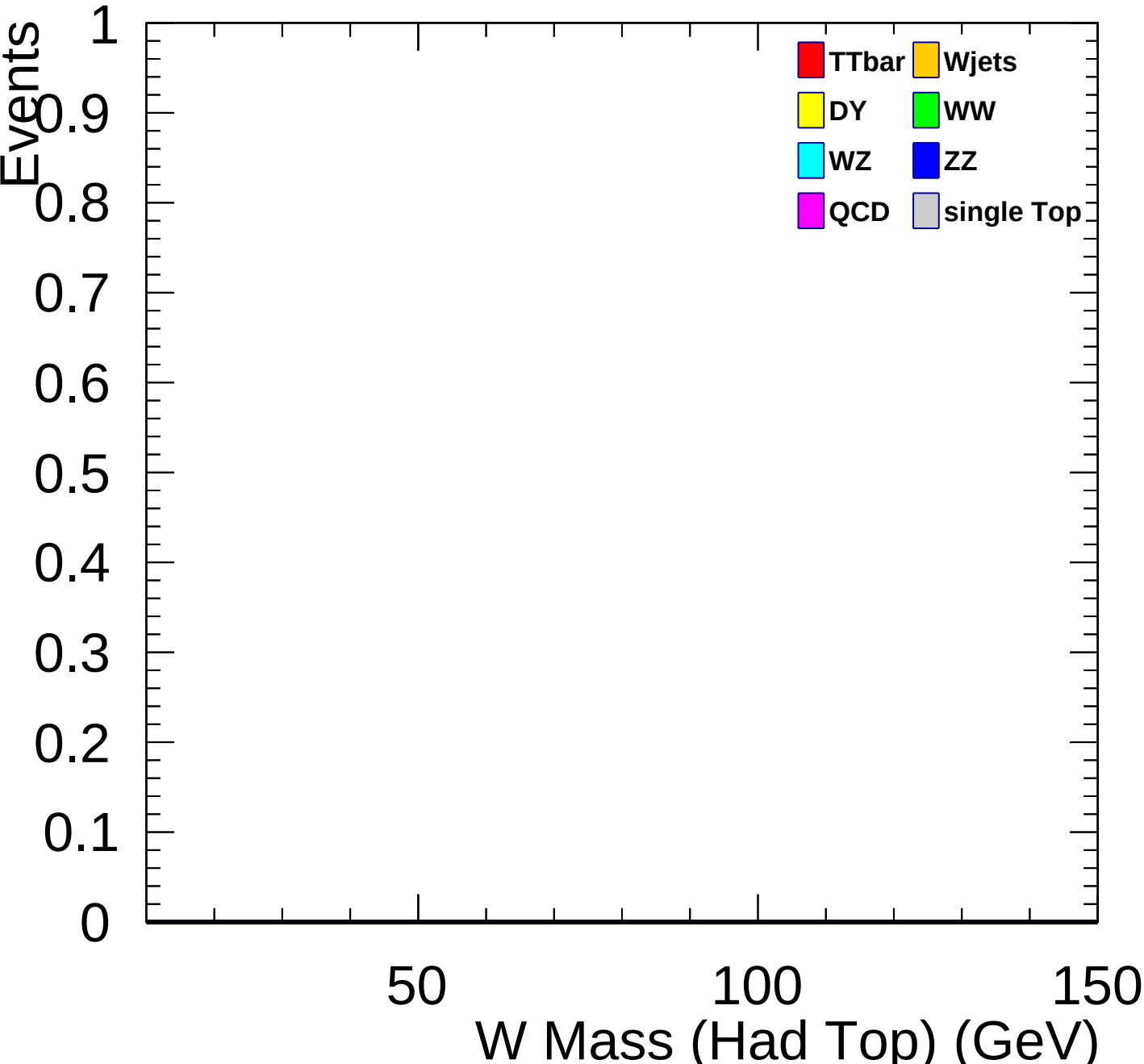

×10^3
Events
250
200
150
100
50
0
0
5
10
Jet Multplicity
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

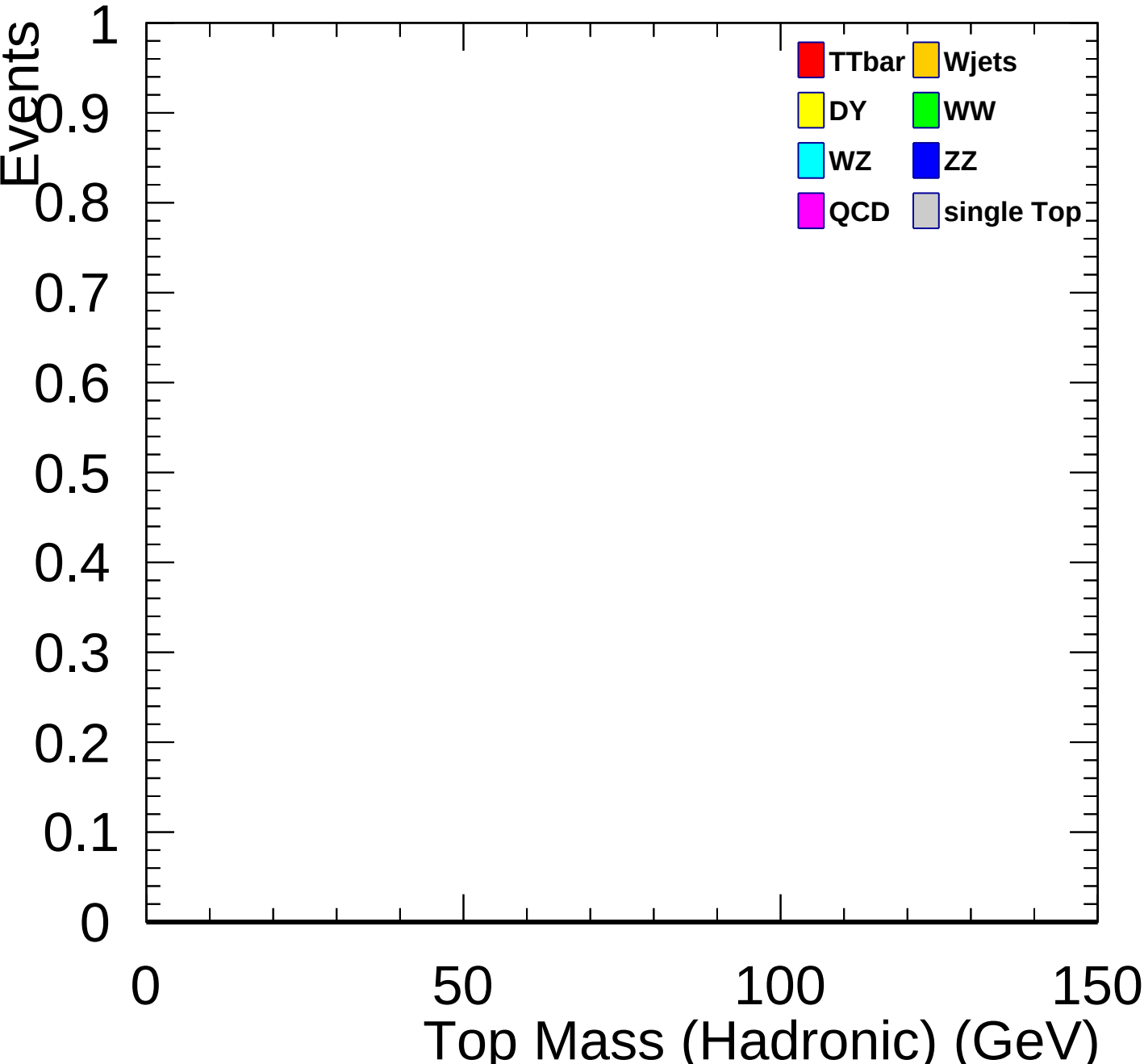

×10^3
Events
300
250
200
150
100
50
0
0
1
2
3
4
5
b-tagged Jet Multiplicity
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

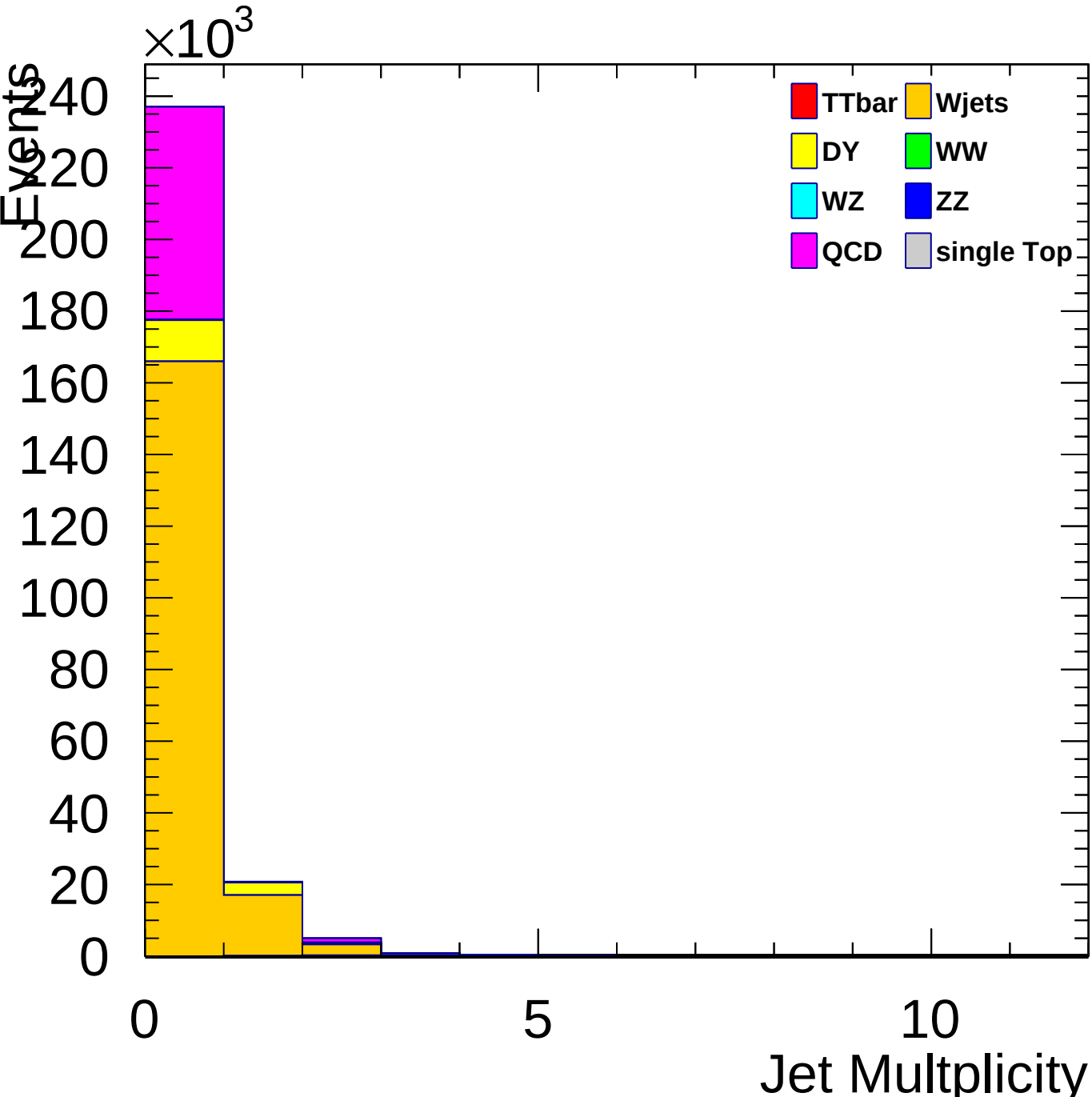

Events
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
50
100
150
200
MET Pt (GeV)
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

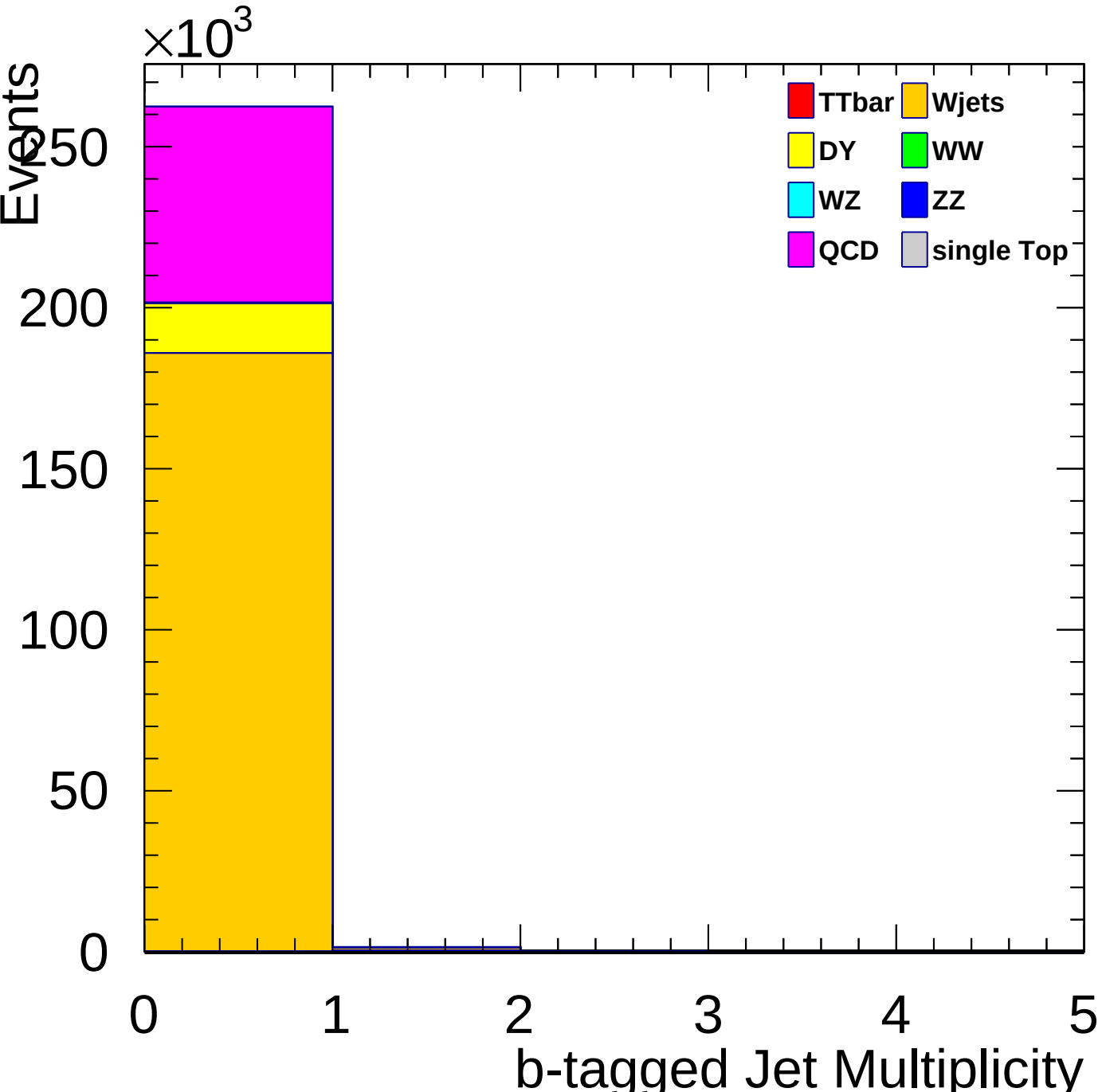

Events
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
50
100
150
W Mass (Lep Top) (GeV)
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

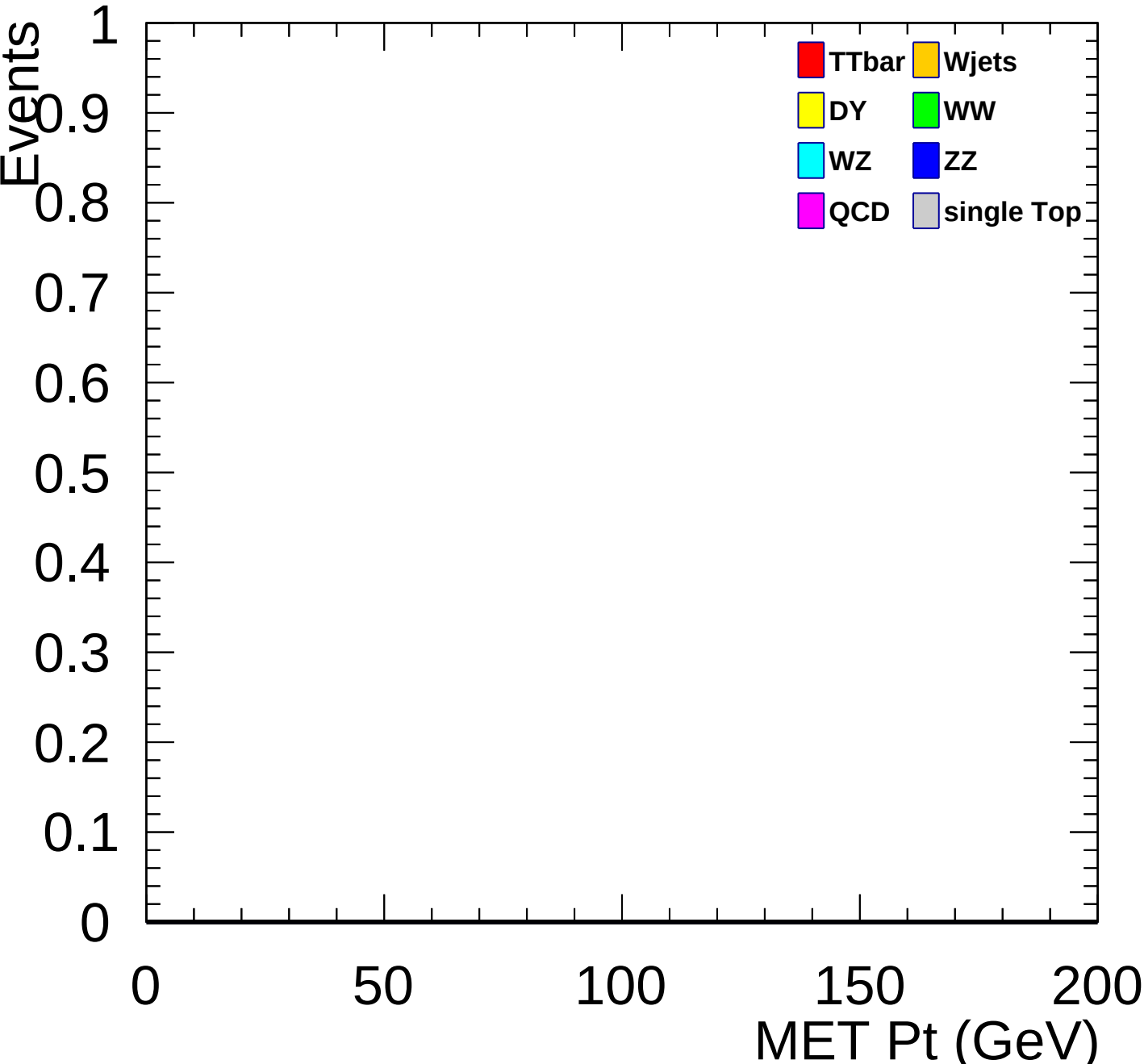

Events
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
50
100
150
200
Top Mass (Leptonic) (GeV)
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

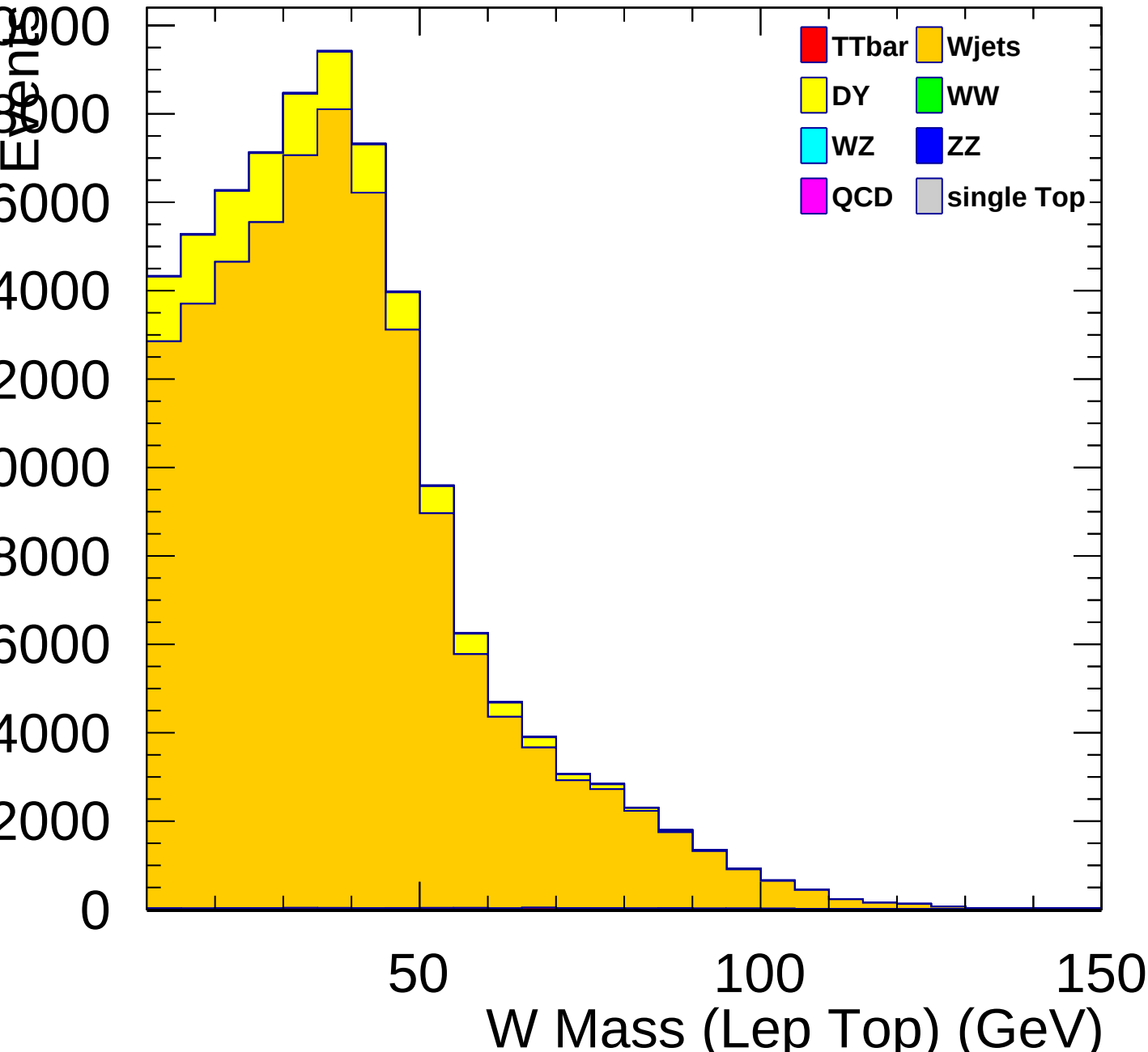

Events
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top
50
100
150
W Mass (Had Top) (GeV)

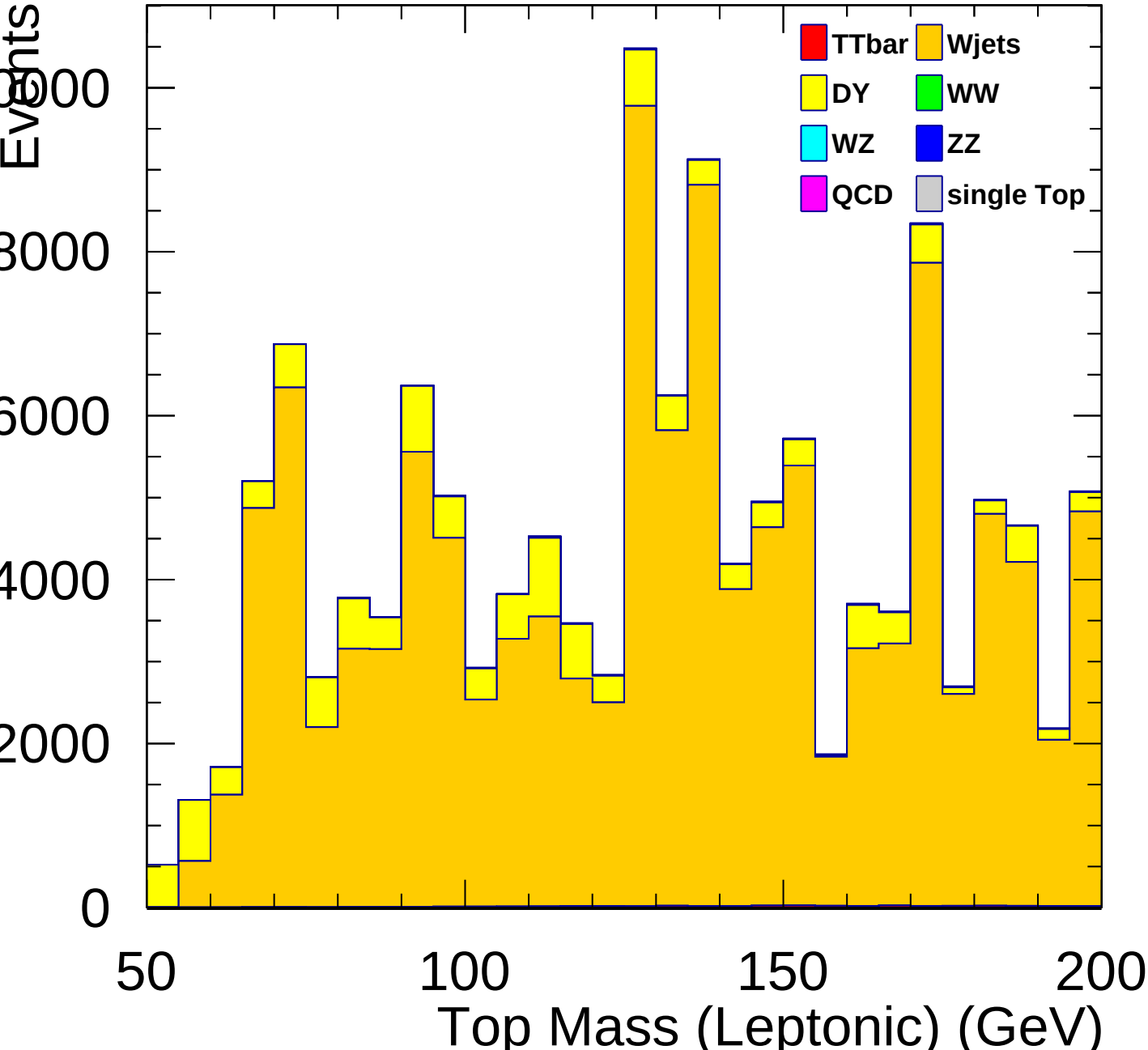

Events
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
50
100
150
Top Mass (Hadronic) (GeV)
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

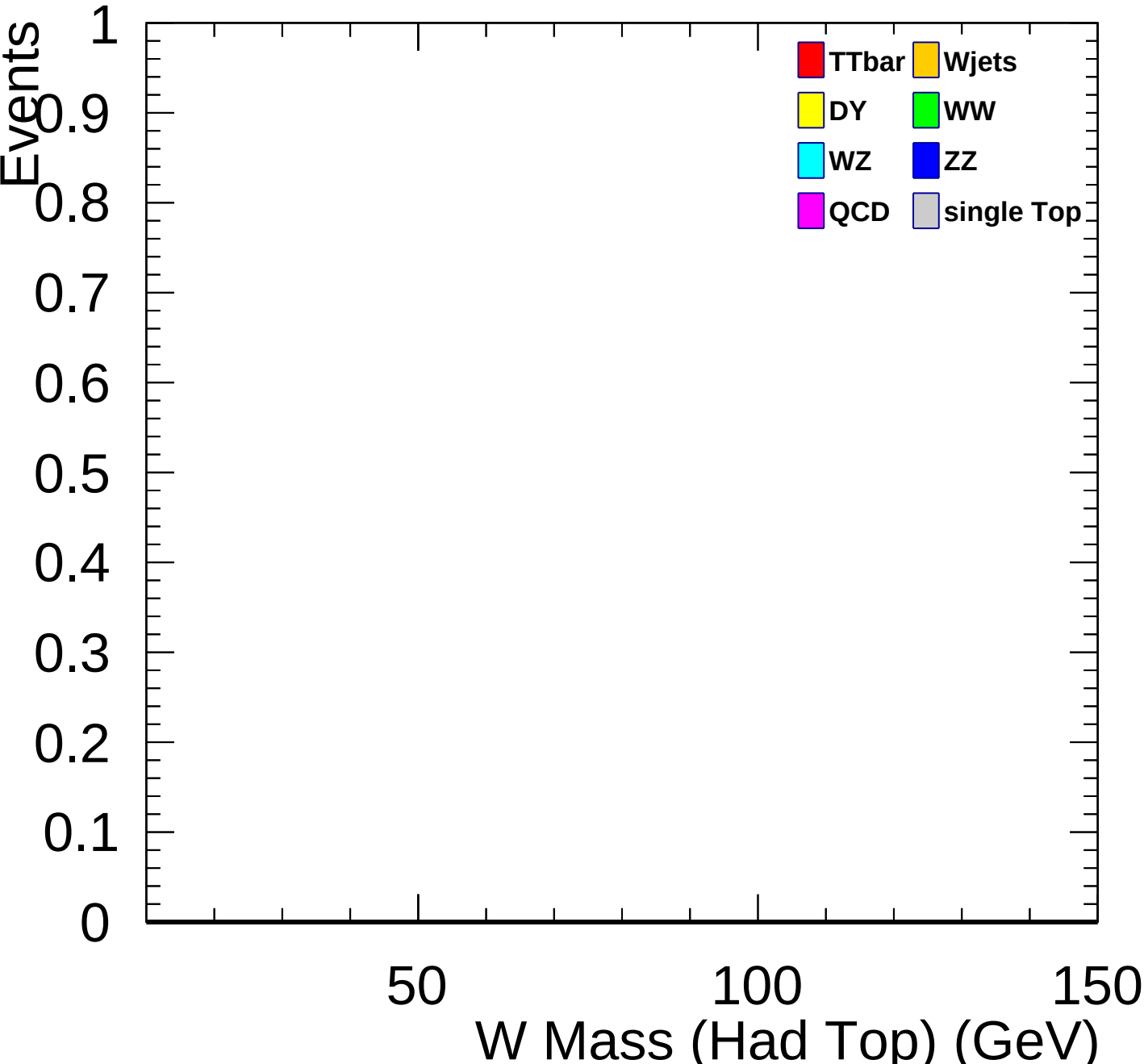

×10^3
Events
240
220
200
180
160
140
120
100
80
60
40
20
0
0
5
10
Jet Multplicity
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

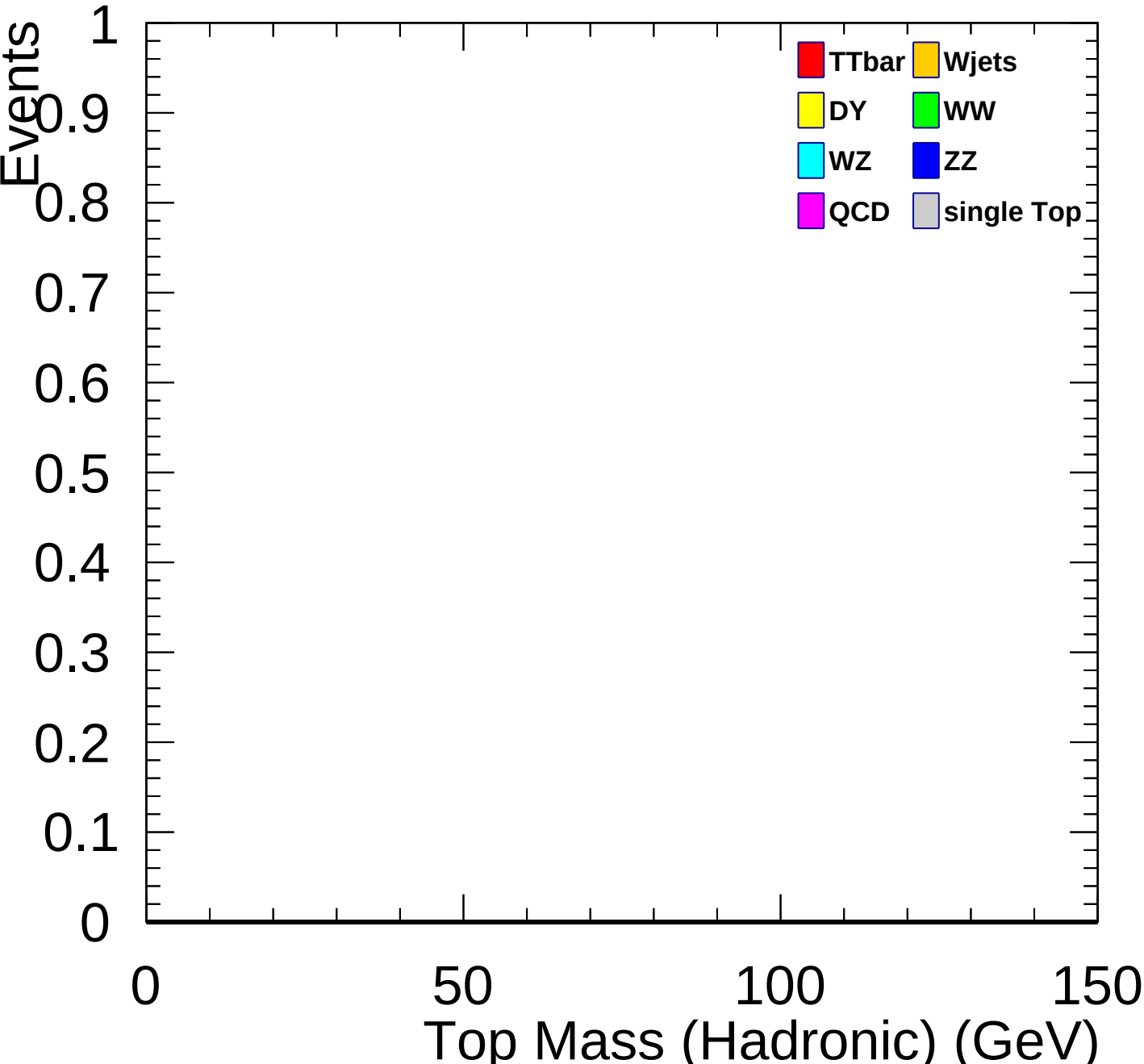

×10^3
Events
250
200
150
100
50
0
0
1
2
3
4
5
b-tagged Jet Multiplicity
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

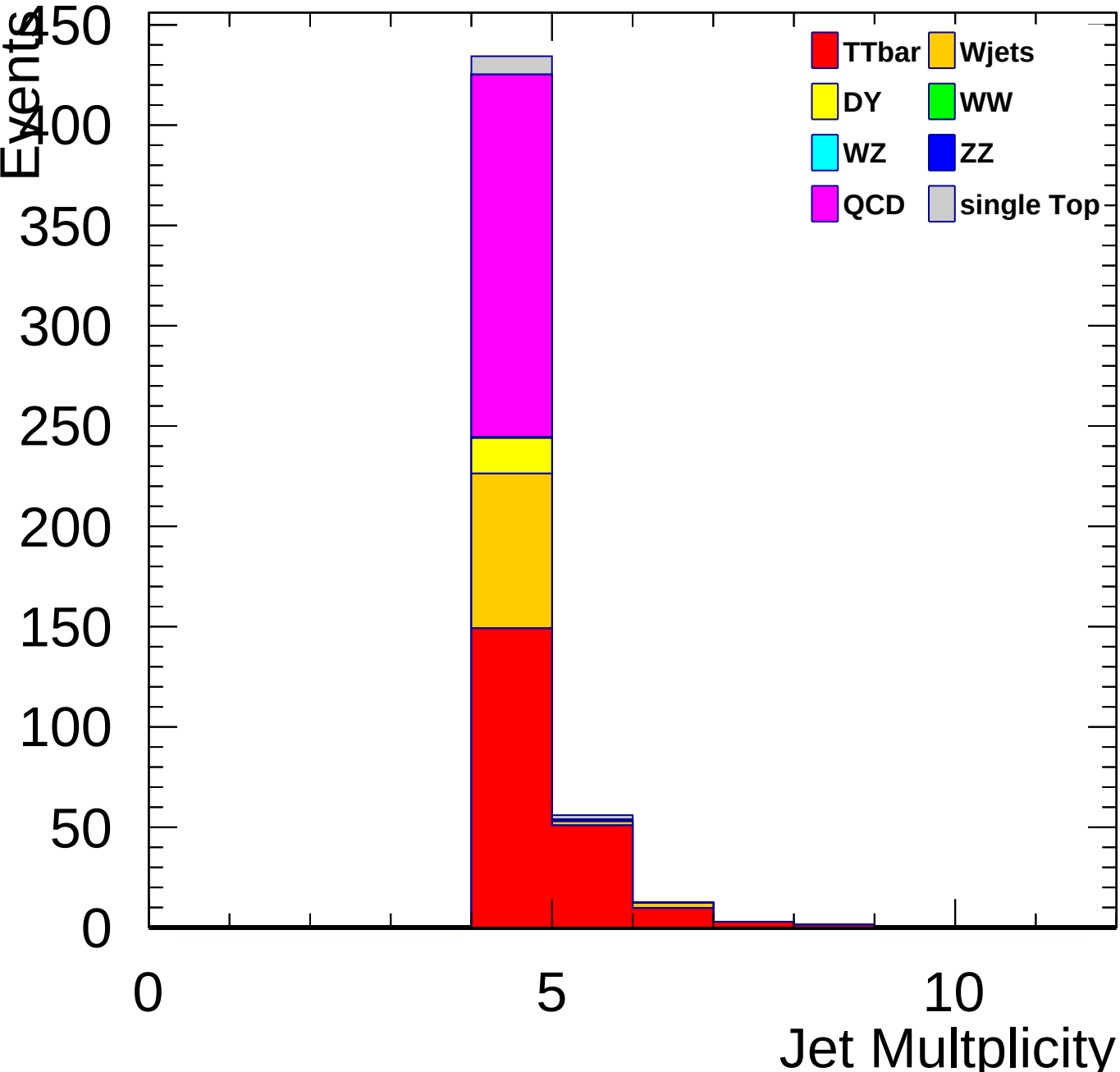

Events
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
50
100
150
200
MET Pt (GeV)
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

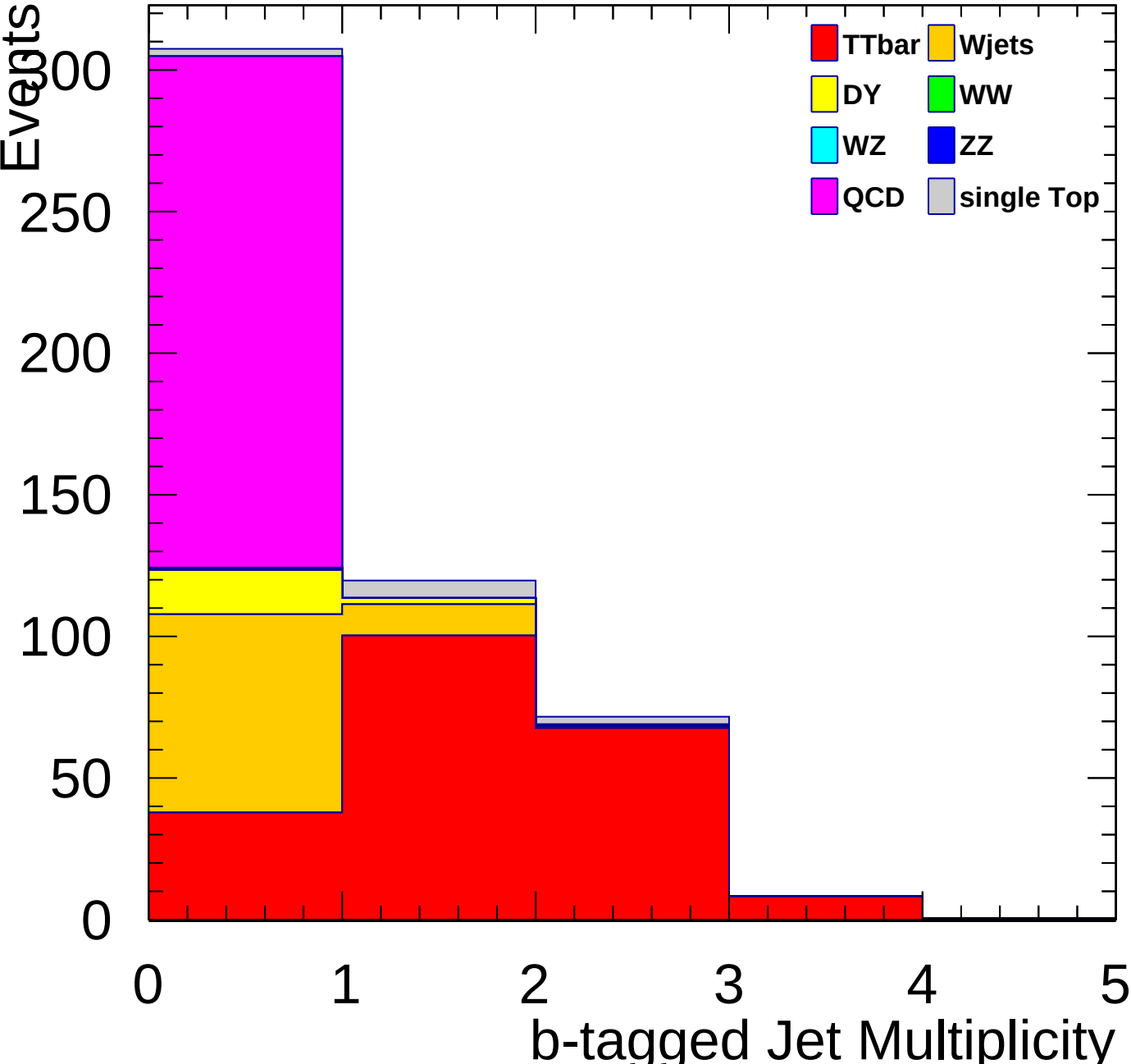

TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top
Events
0
2000
4000
6000
8000
10000
12000
14000
16000
18000
20000
22000
24000
26000
28000
30000
32000
34000
36000
38000
40000
50
100
150
W Mass (Lep Top) (GeV)

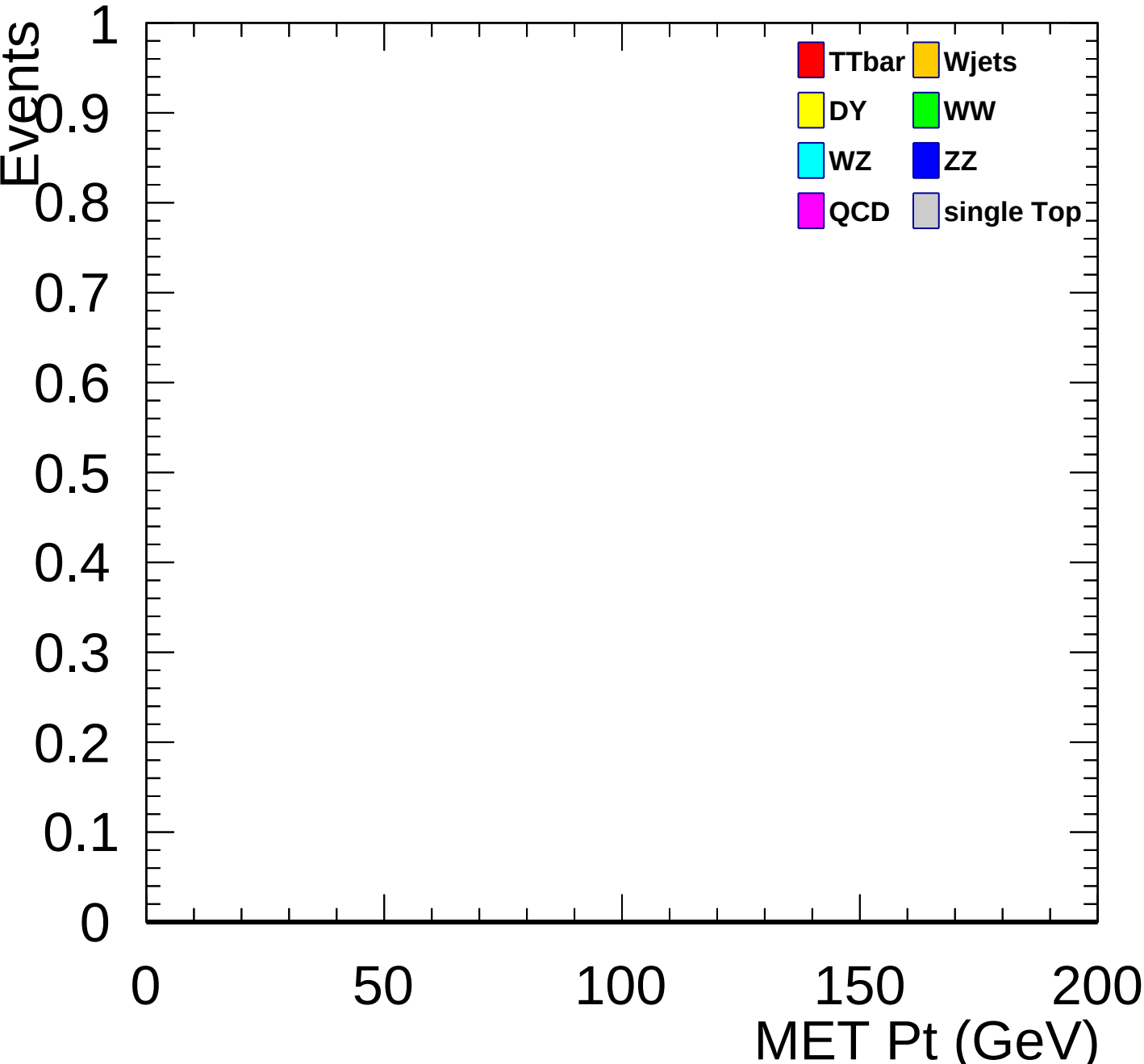

Events
8000
6000
4000
2000
0
50
100
150
200
Top Mass (Leptonic) (GeV)
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

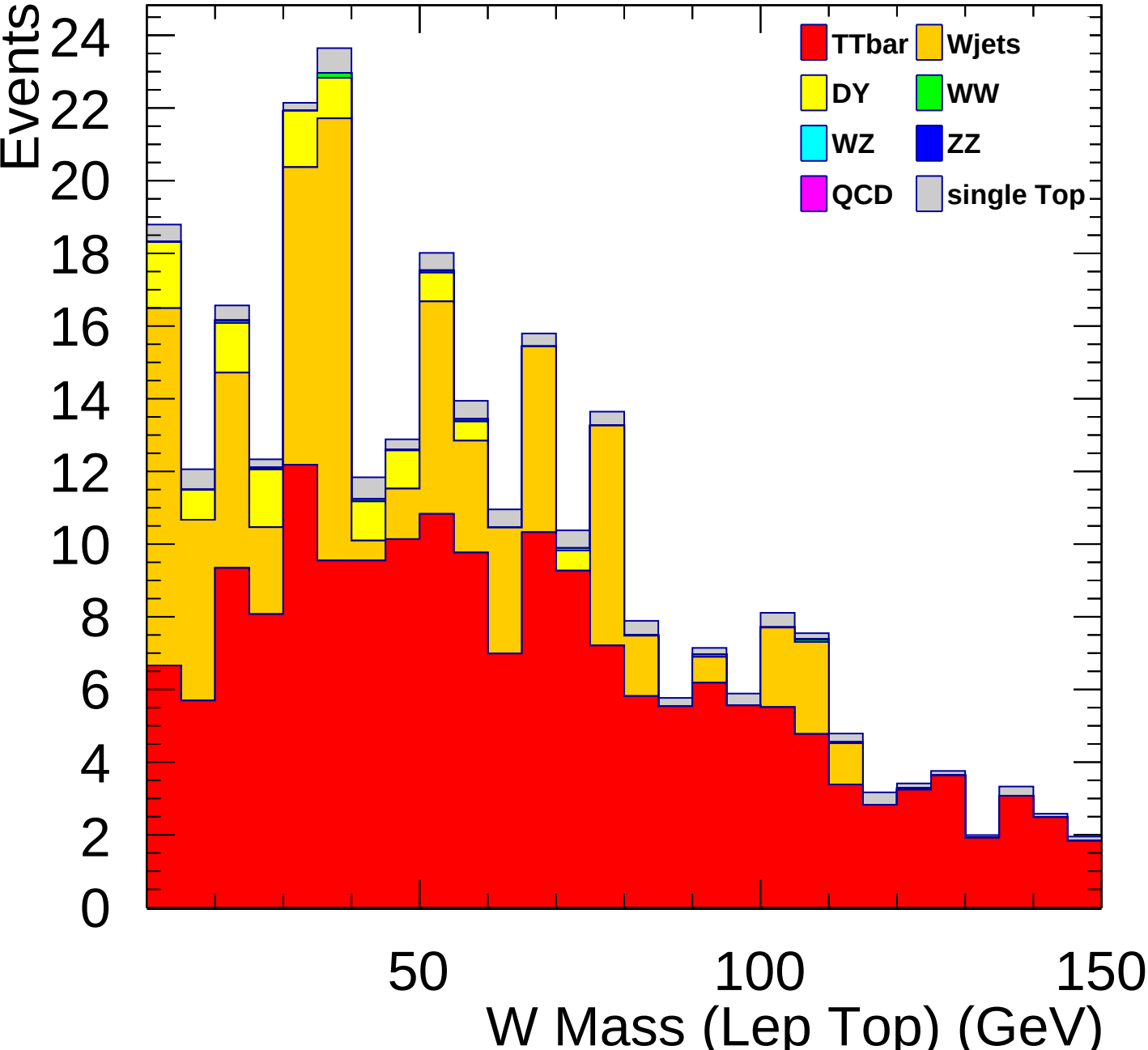

Events
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top
50
100
150
W Mass (Had Top) (GeV)

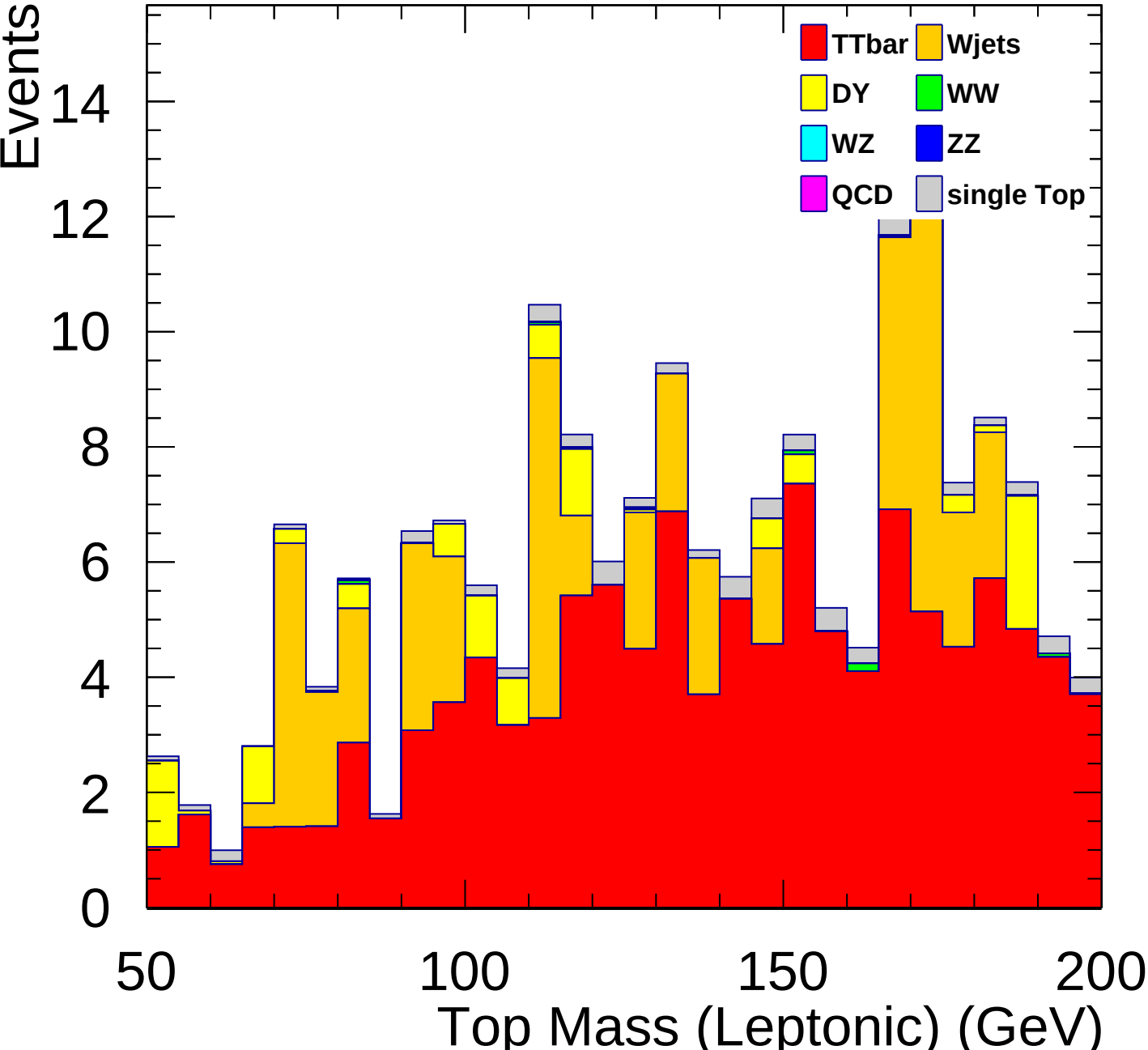

Events
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
50
100
150
Top Mass (Hadronic) (GeV)
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

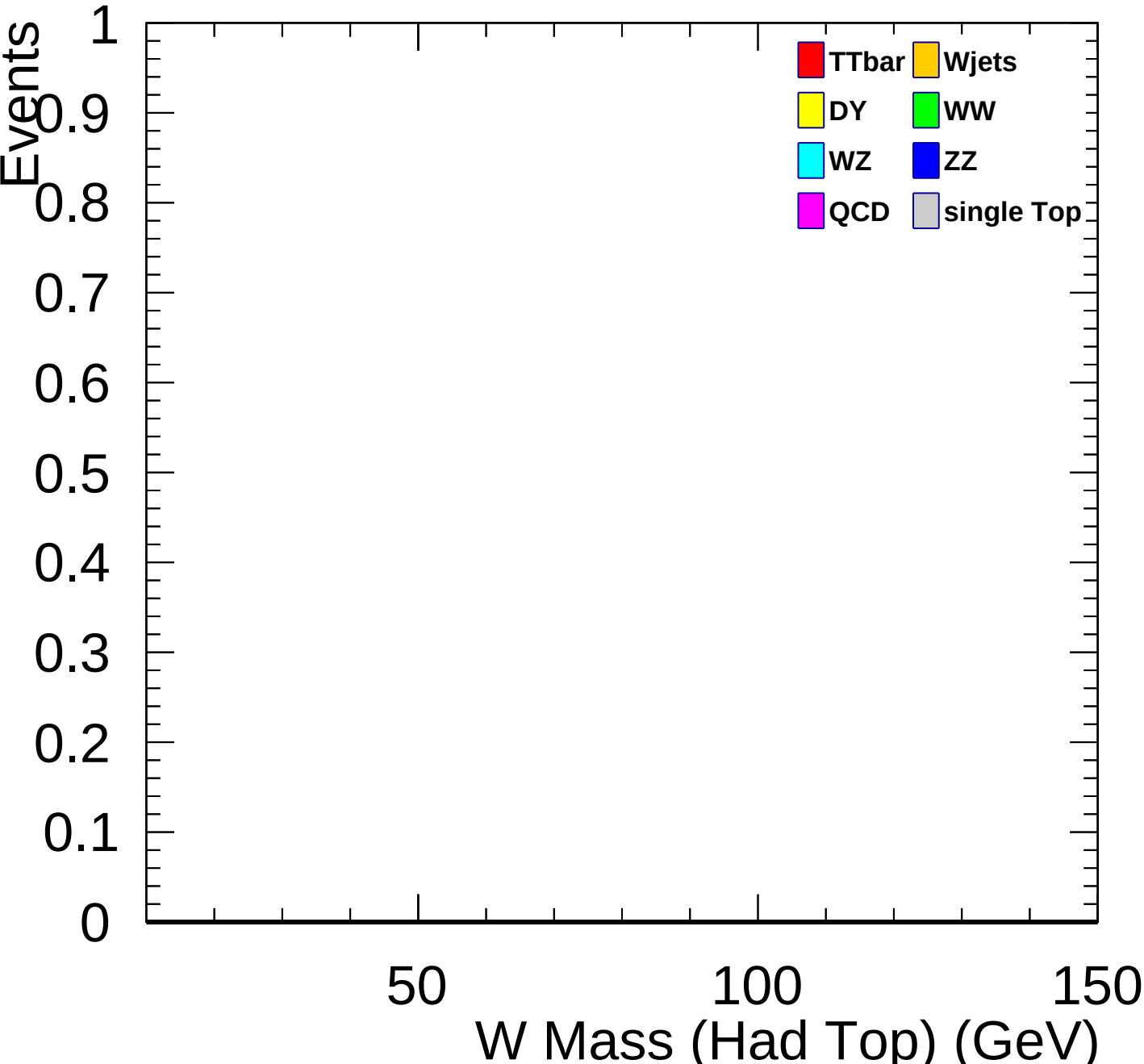

Events
450
400
350
300
250
200
150
100
50
0
0
5
10
Jet Multplicity
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

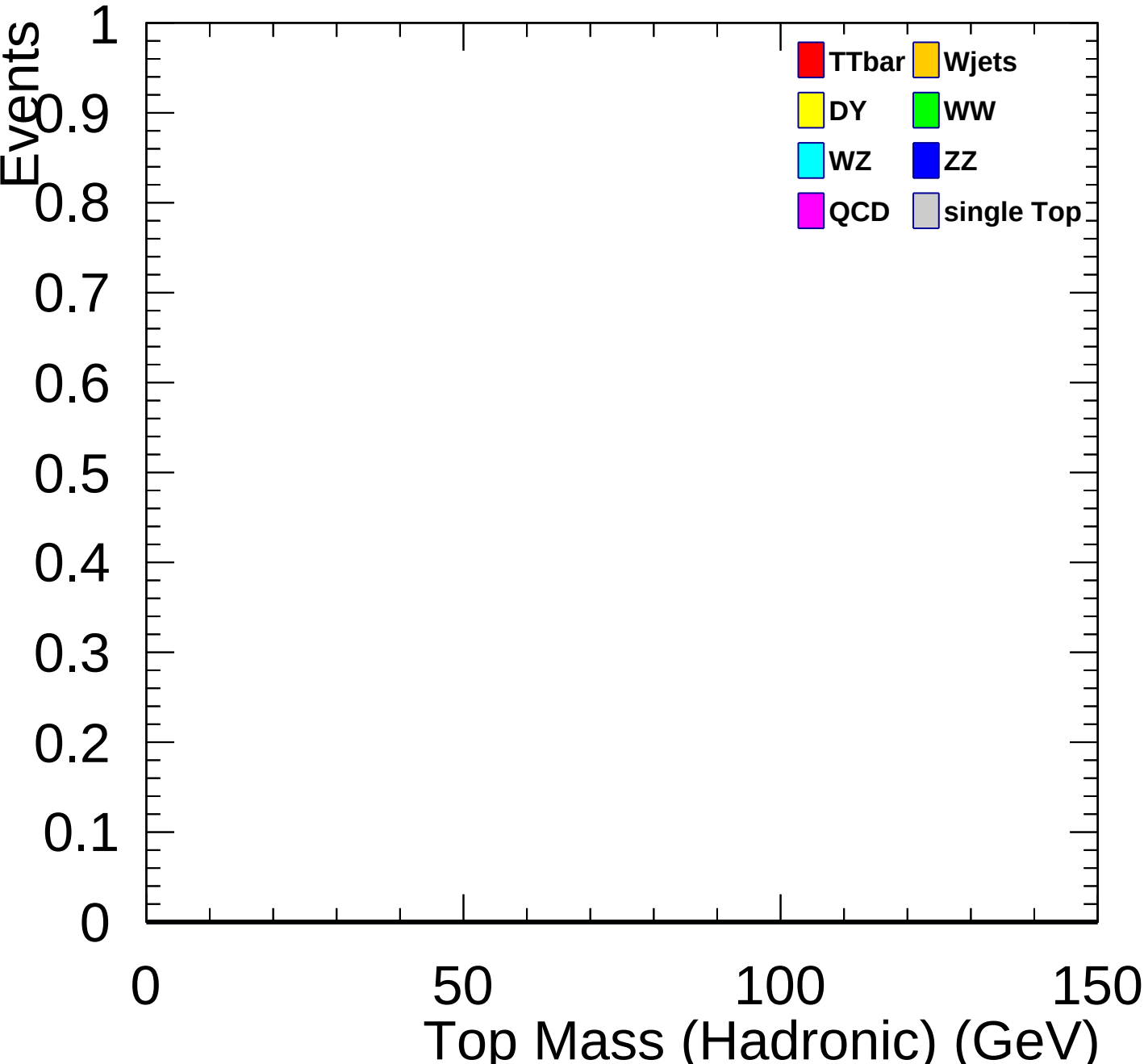

Events
300
250
200
150
100
50
0
0
1
2
3
4
5
b-tagged Jet Multiplicity
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

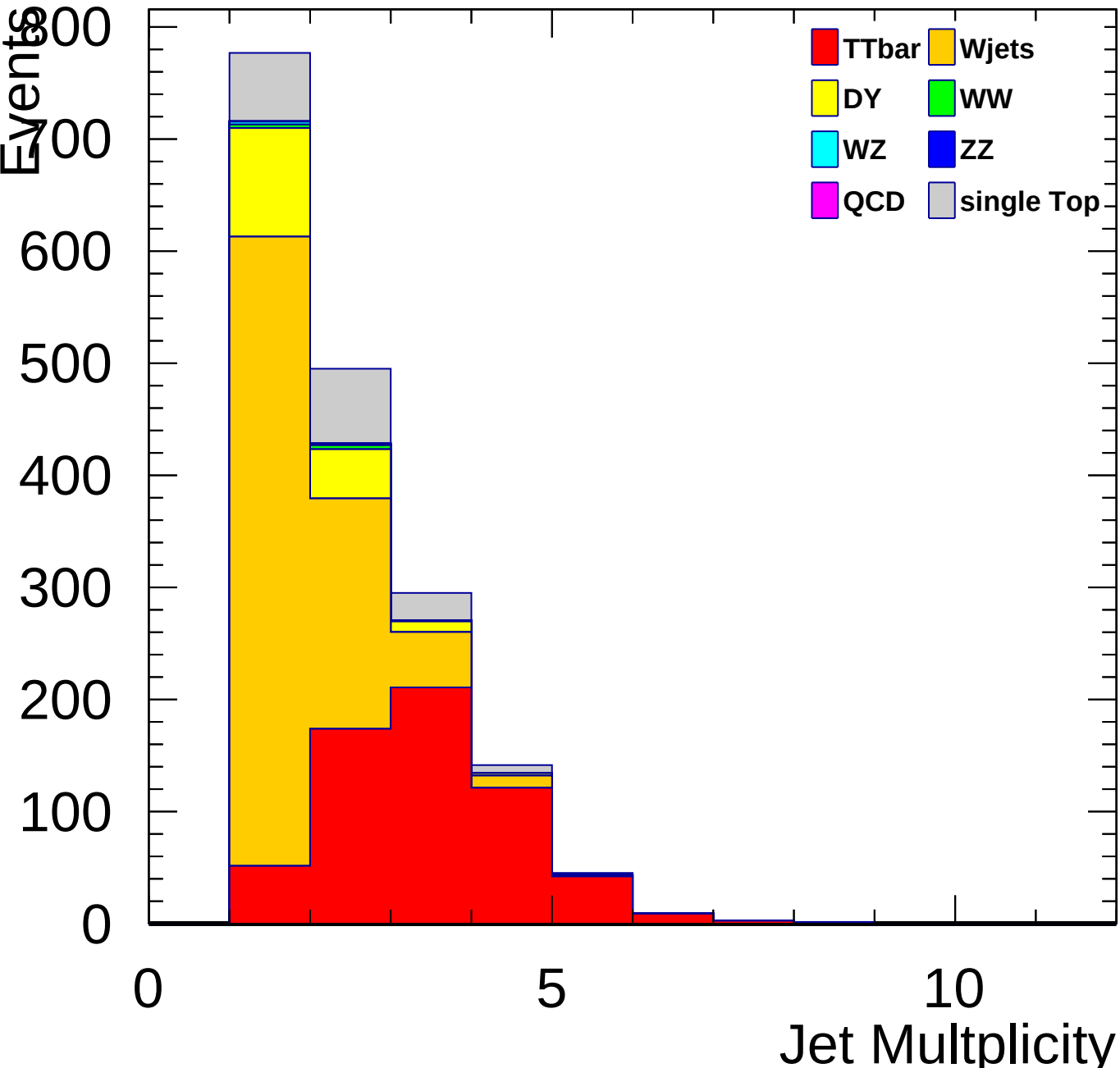

Events
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
50
100
150
200
MET Pt (GeV)
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

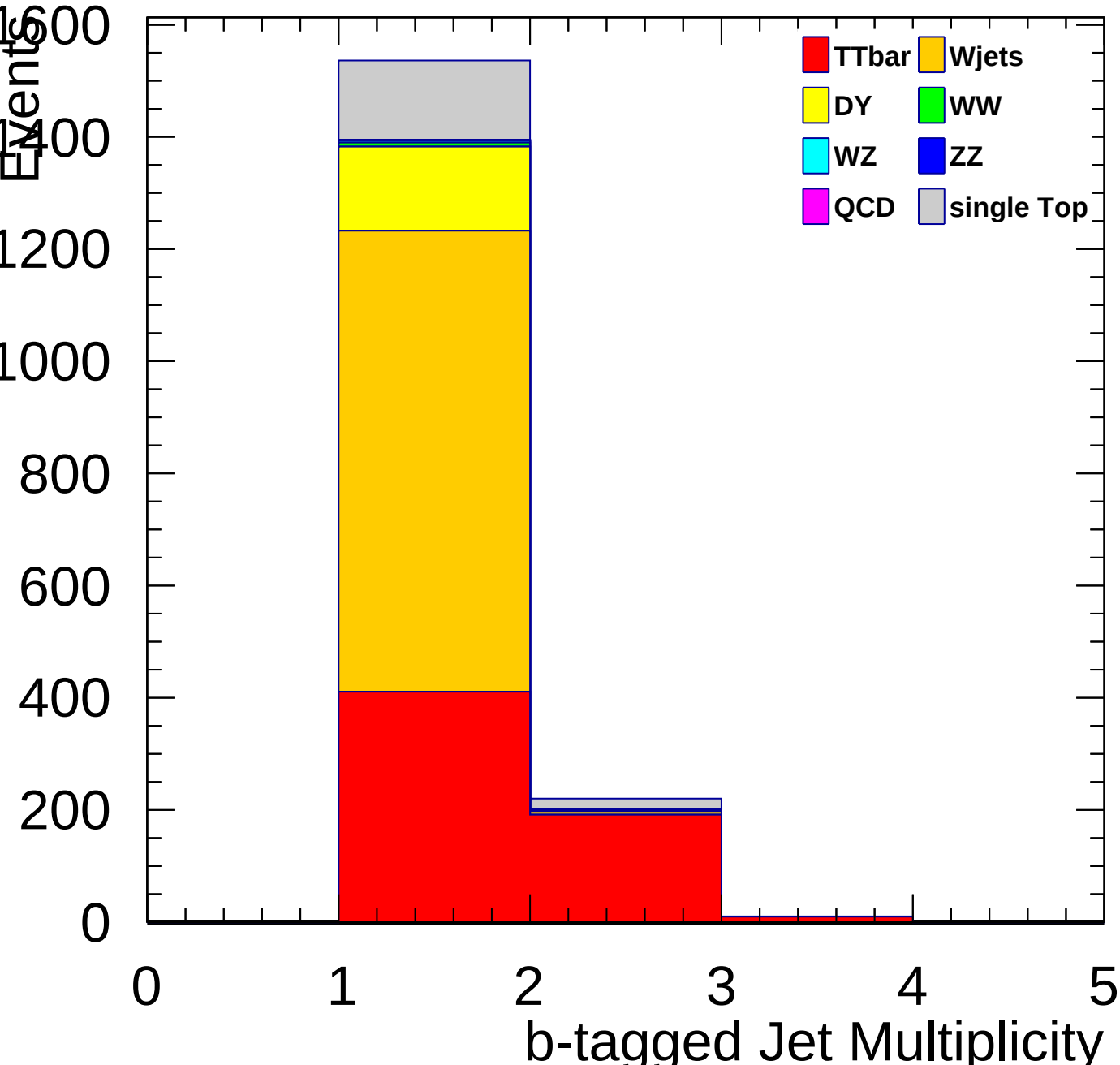

Events
24
22
20
18
16
14
12
10
8
6
4
2
0
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top
50
100
150
W Mass (Lep Top) (GeV)

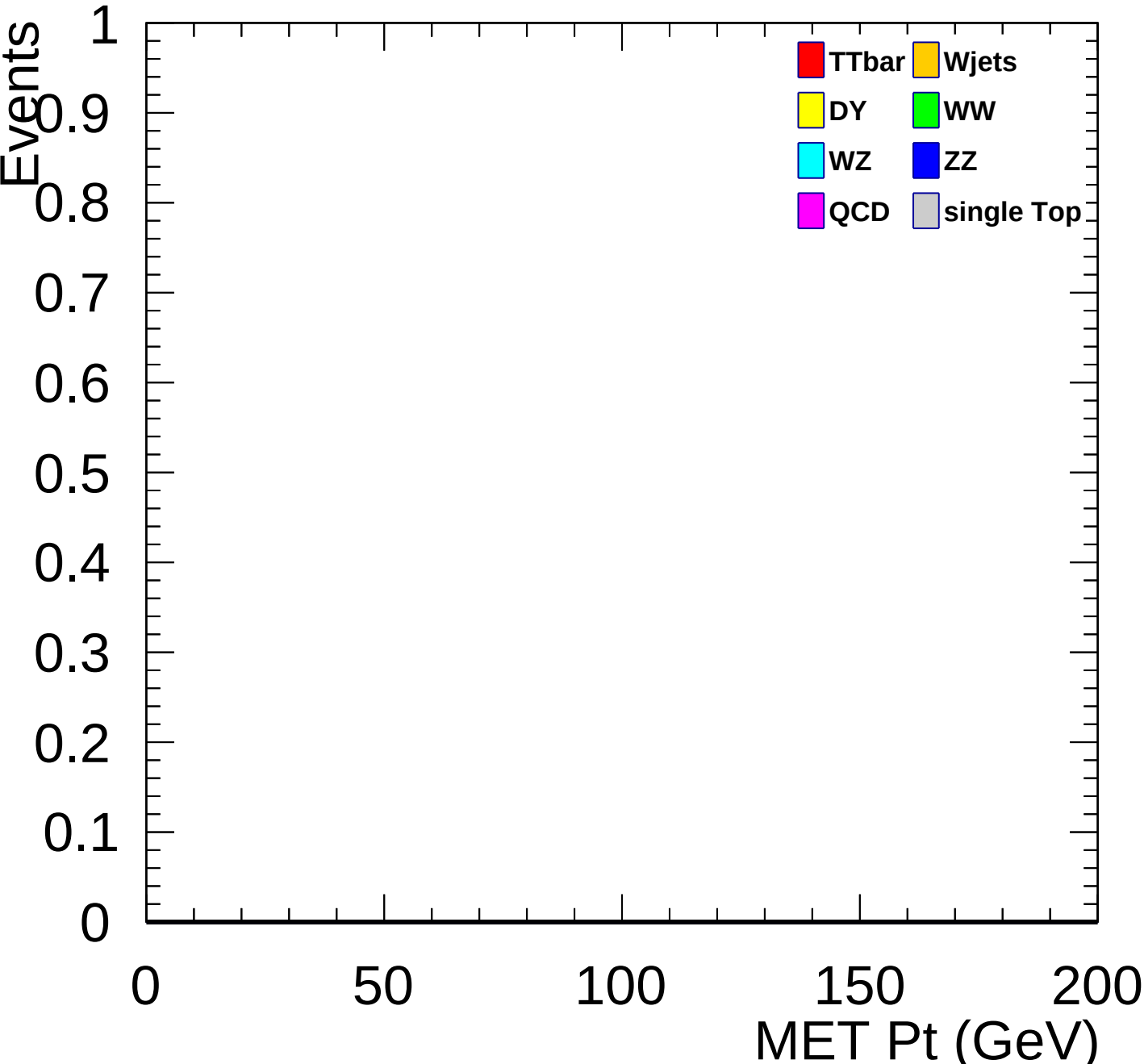

Events
0
2
4
6
8
10
12
14
50
100
150
200
Top Mass (Leptonic) (GeV)
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

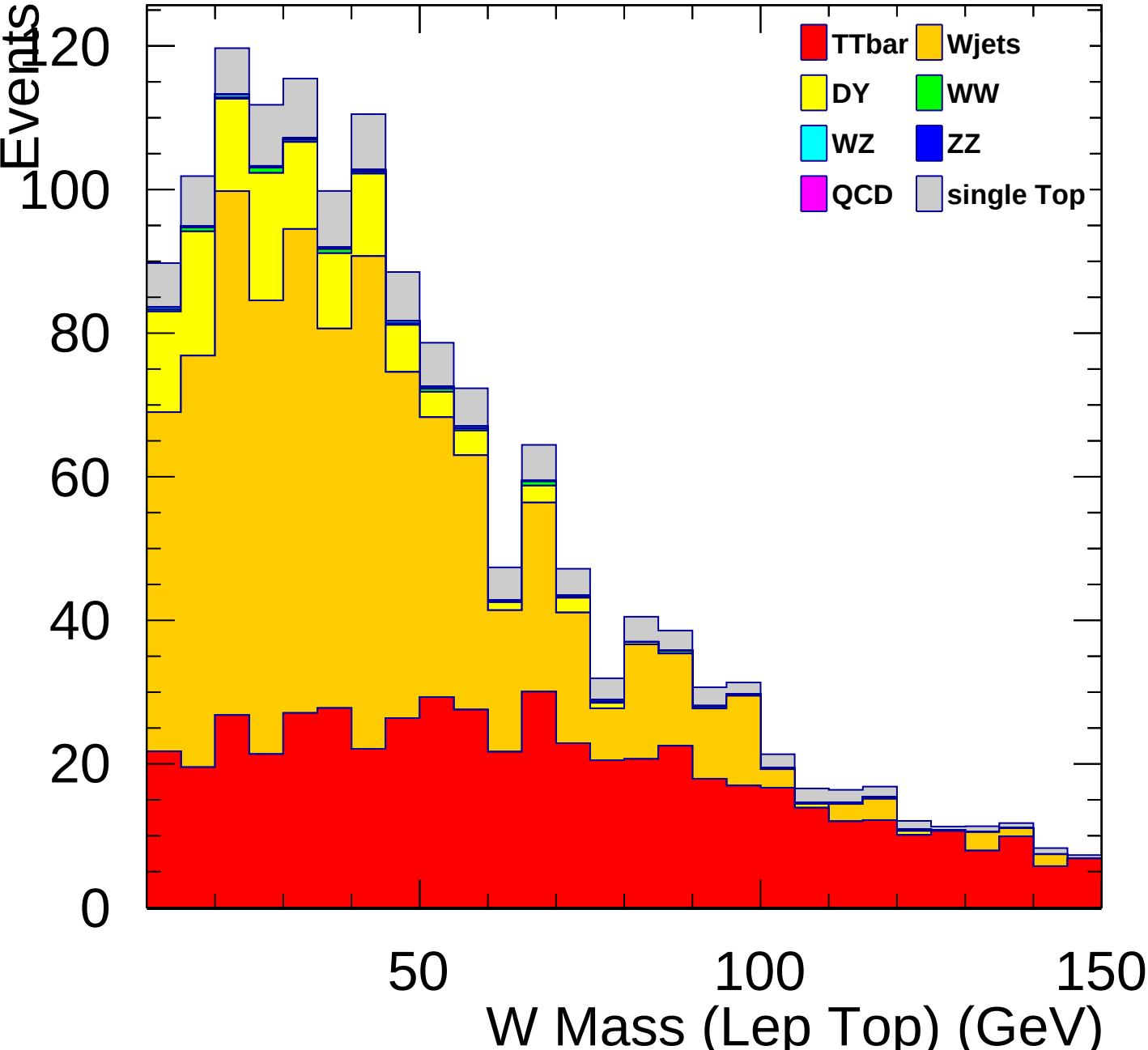

Events
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top
50
100
150
W Mass (Had Top) (GeV)

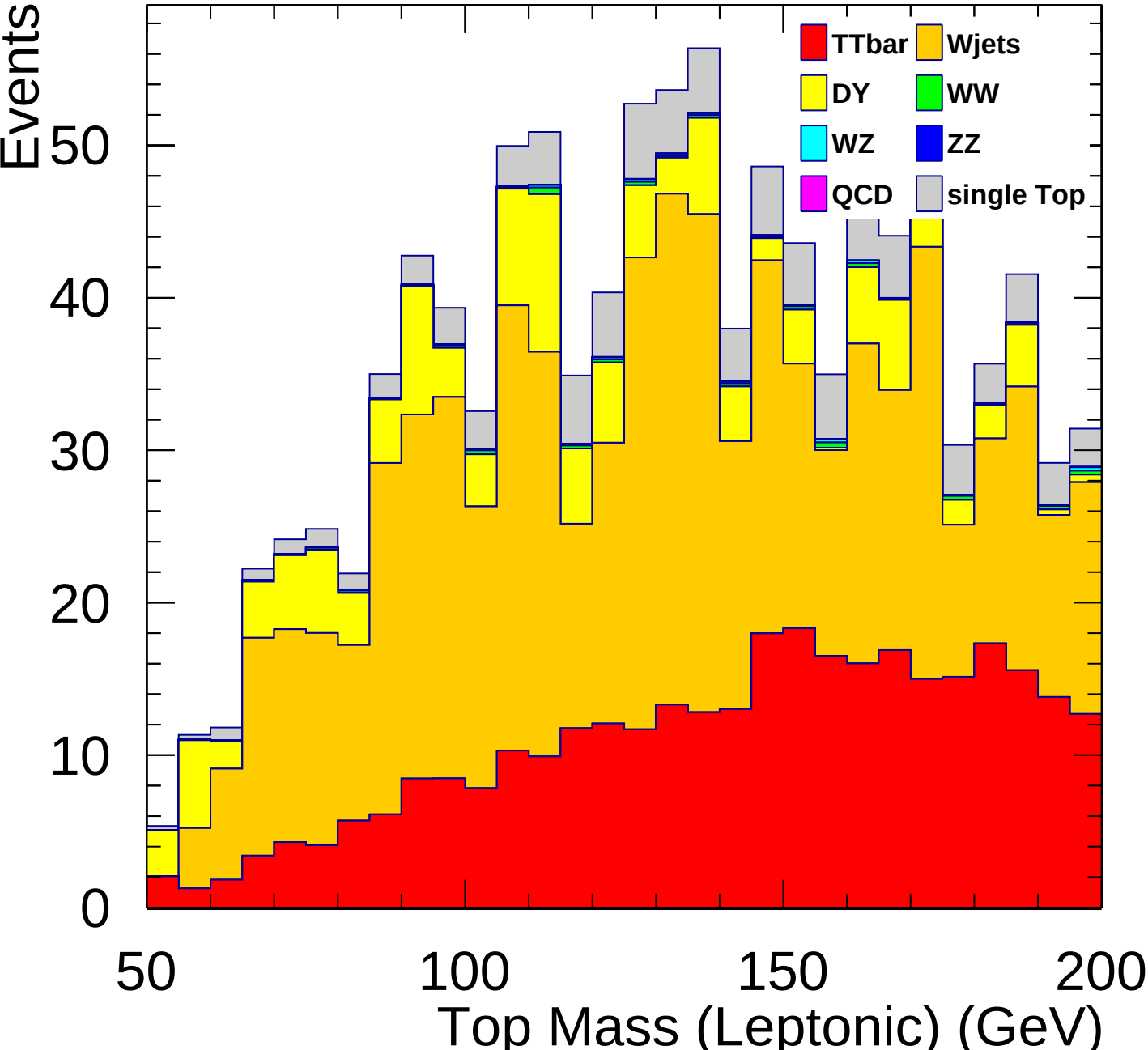

Events
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
50
100
150
Top Mass (Hadronic) (GeV)
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

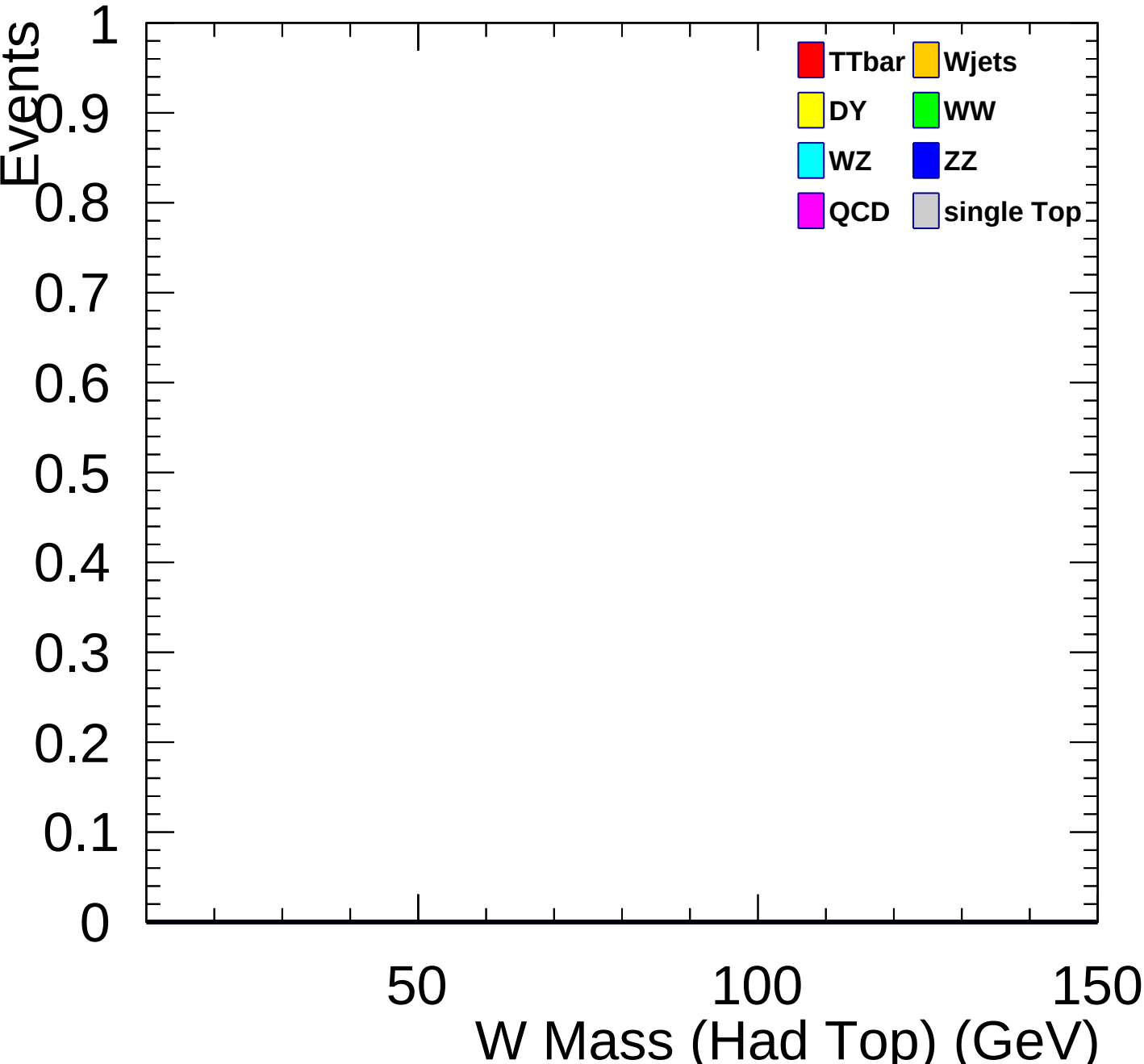

Events
800
700
600
500
400
300
200
100
0
0
5
10
Jet Multplicity
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

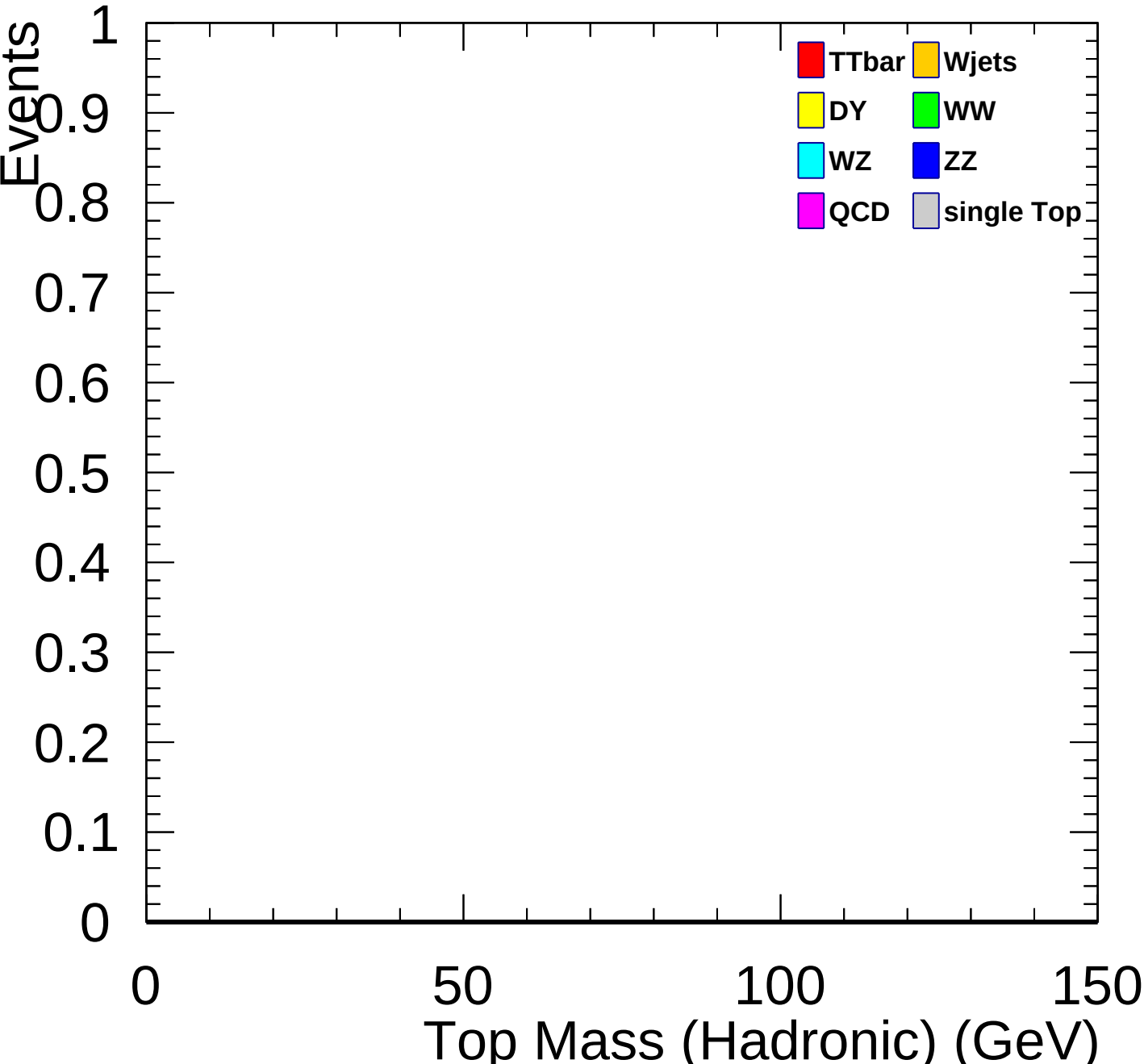

Events
1600
1400
1200
1000
800
600
400
200
0
0
1
2
3
4
5
b-tagged Jet Multiplicity
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

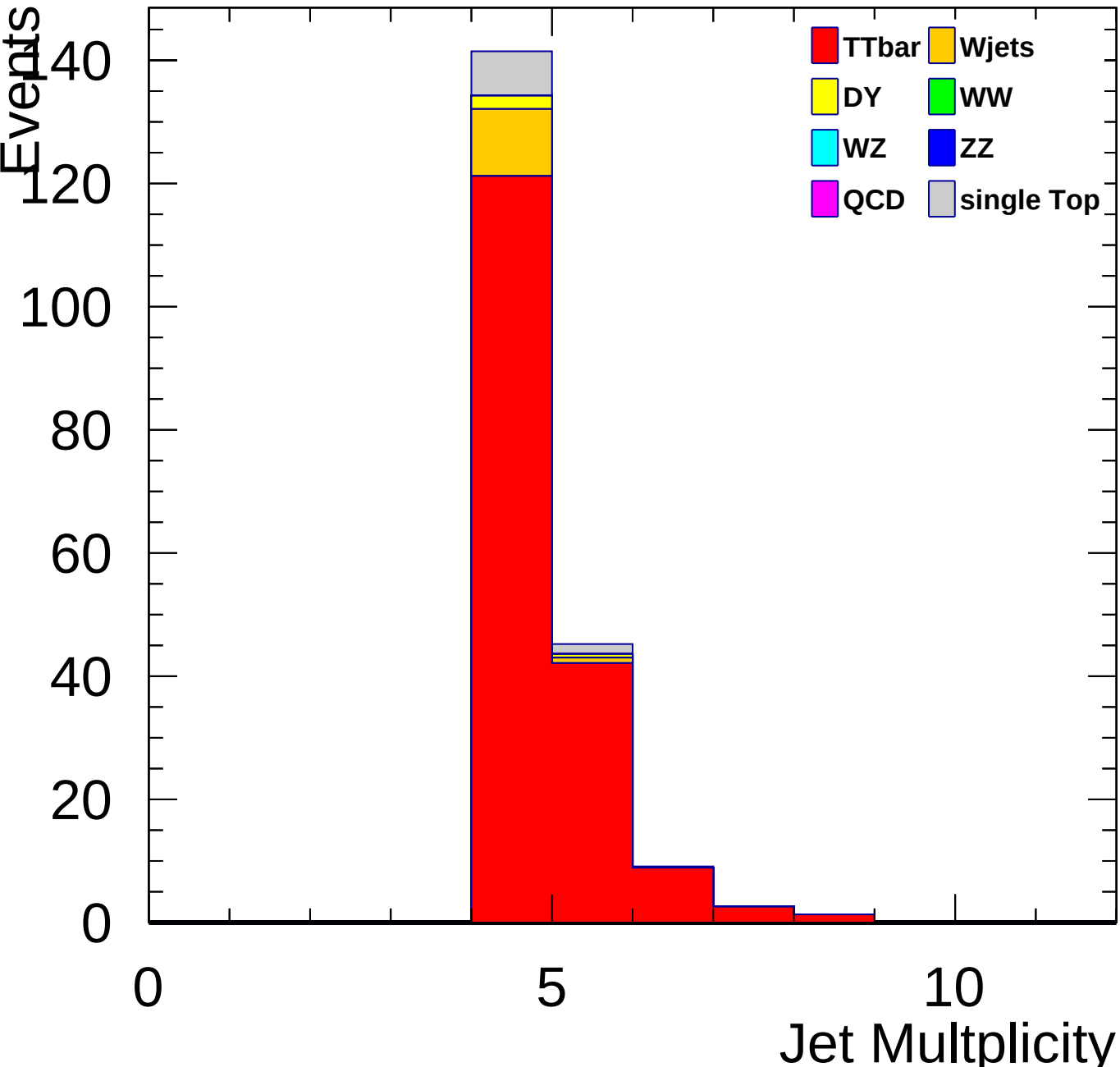

Events
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
50
100
150
200
MET Pt (GeV)
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

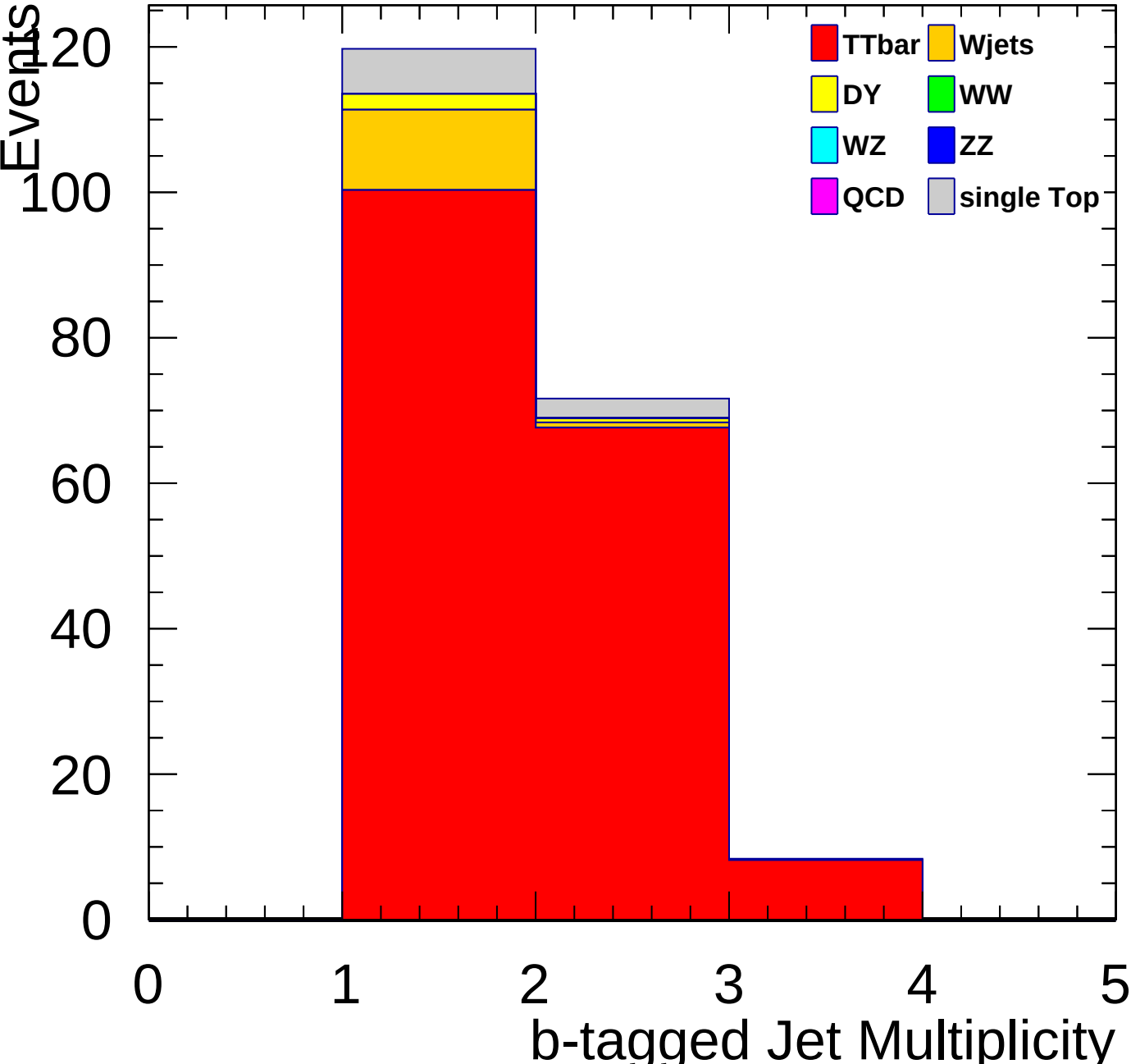

Events
120
100
80
60
40
20
0
50
100
150
W Mass (Lep Top) (GeV)
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

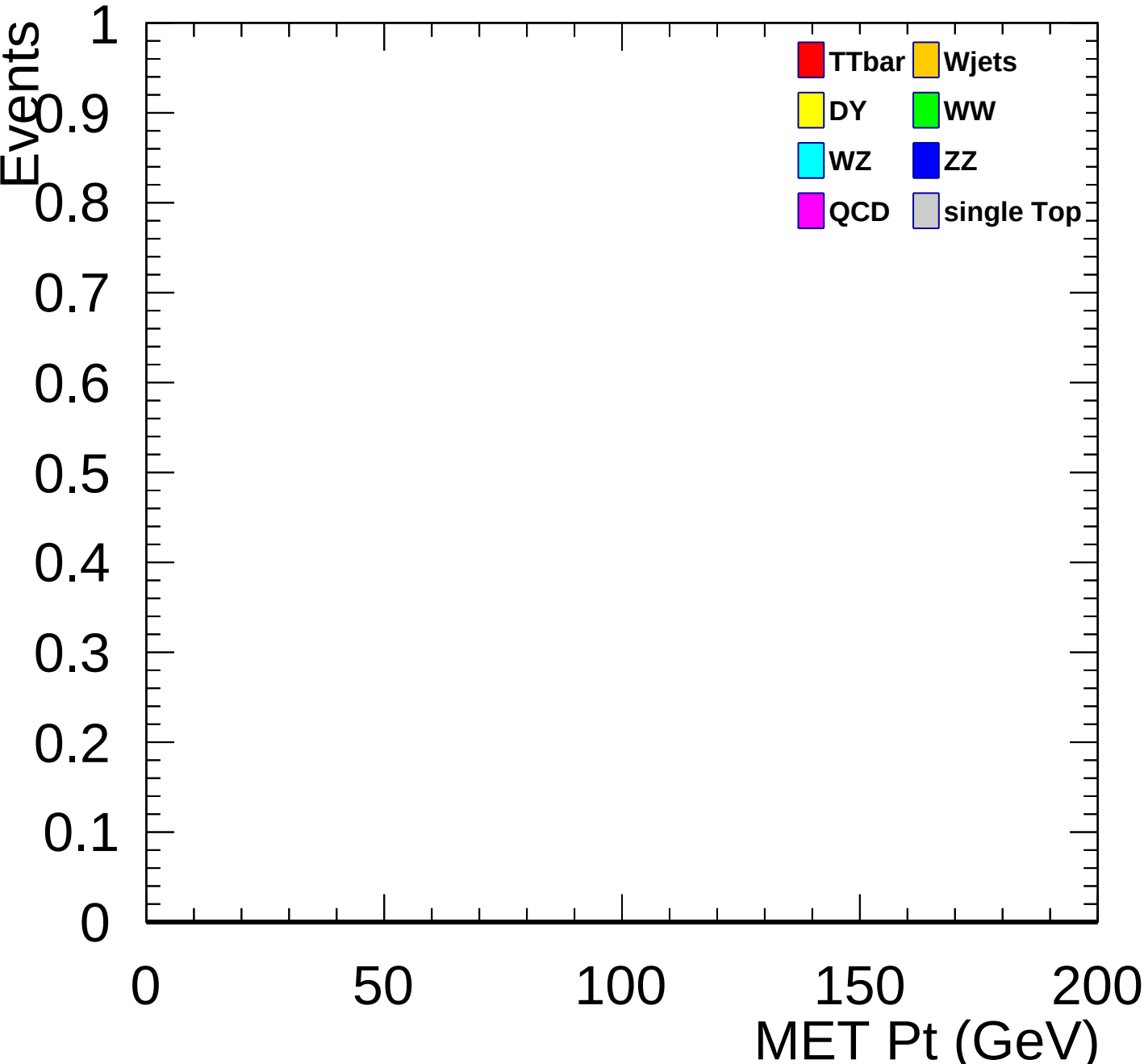

Events
0
10
20
30
40
50
50
100
150
200
Top Mass (Leptonic) (GeV)
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

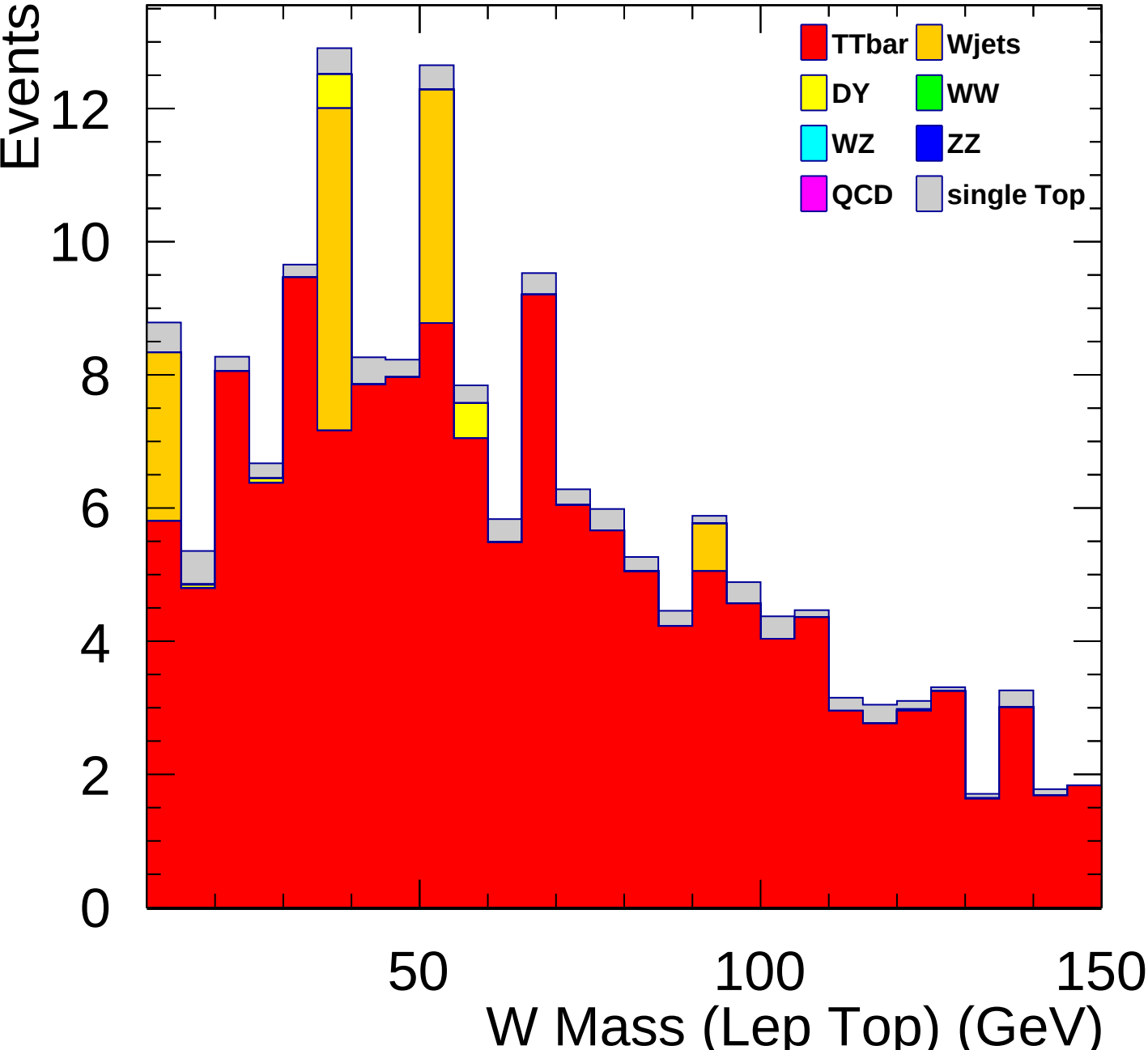

Events
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top
50
100
150
W Mass (Had Top) (GeV)

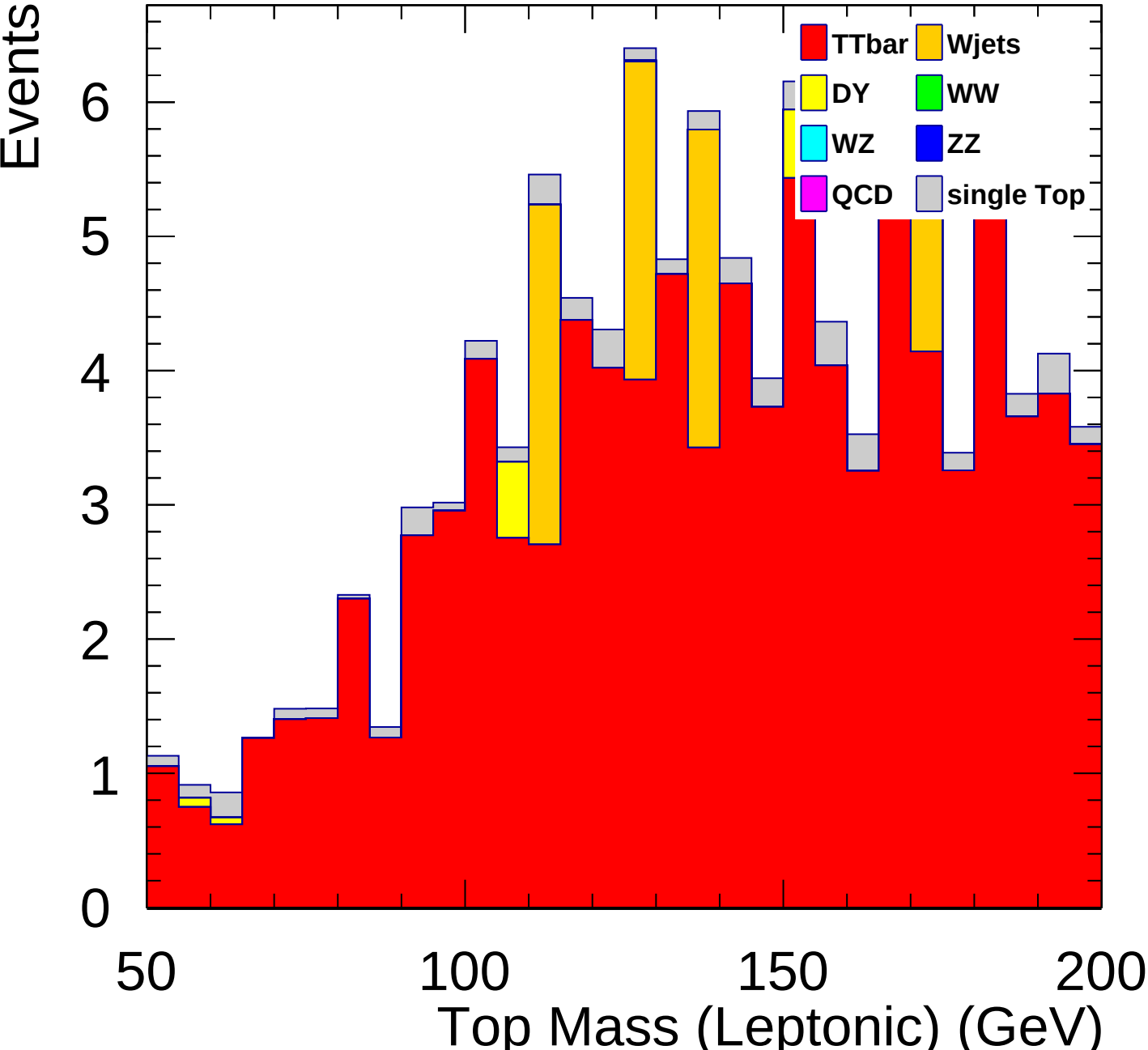

Events
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
50
100
150
Top Mass (Hadronic) (GeV)
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

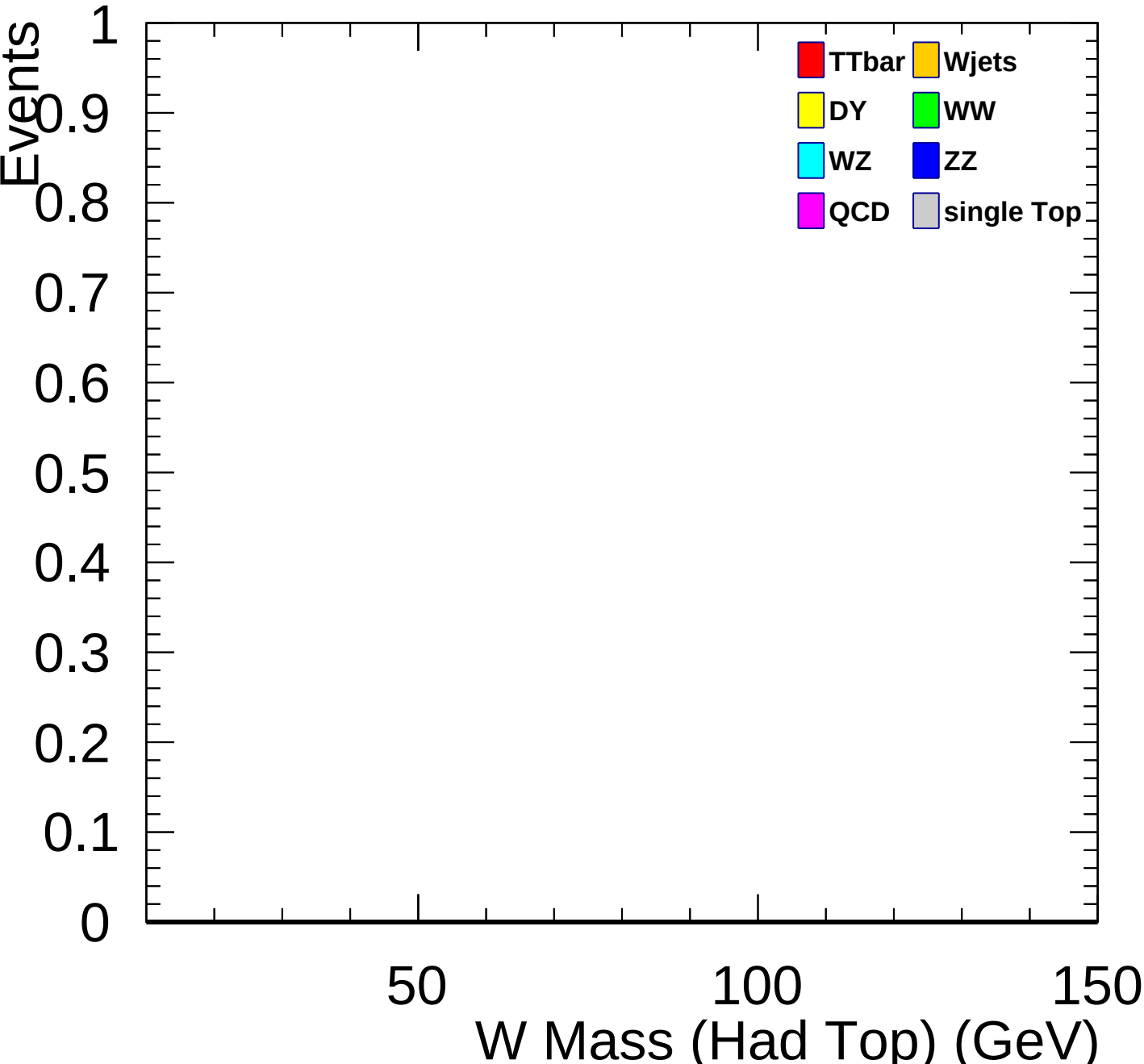

Events
140
120
100
80
60
40
20
0
0
5
10
Jet Multplicity
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

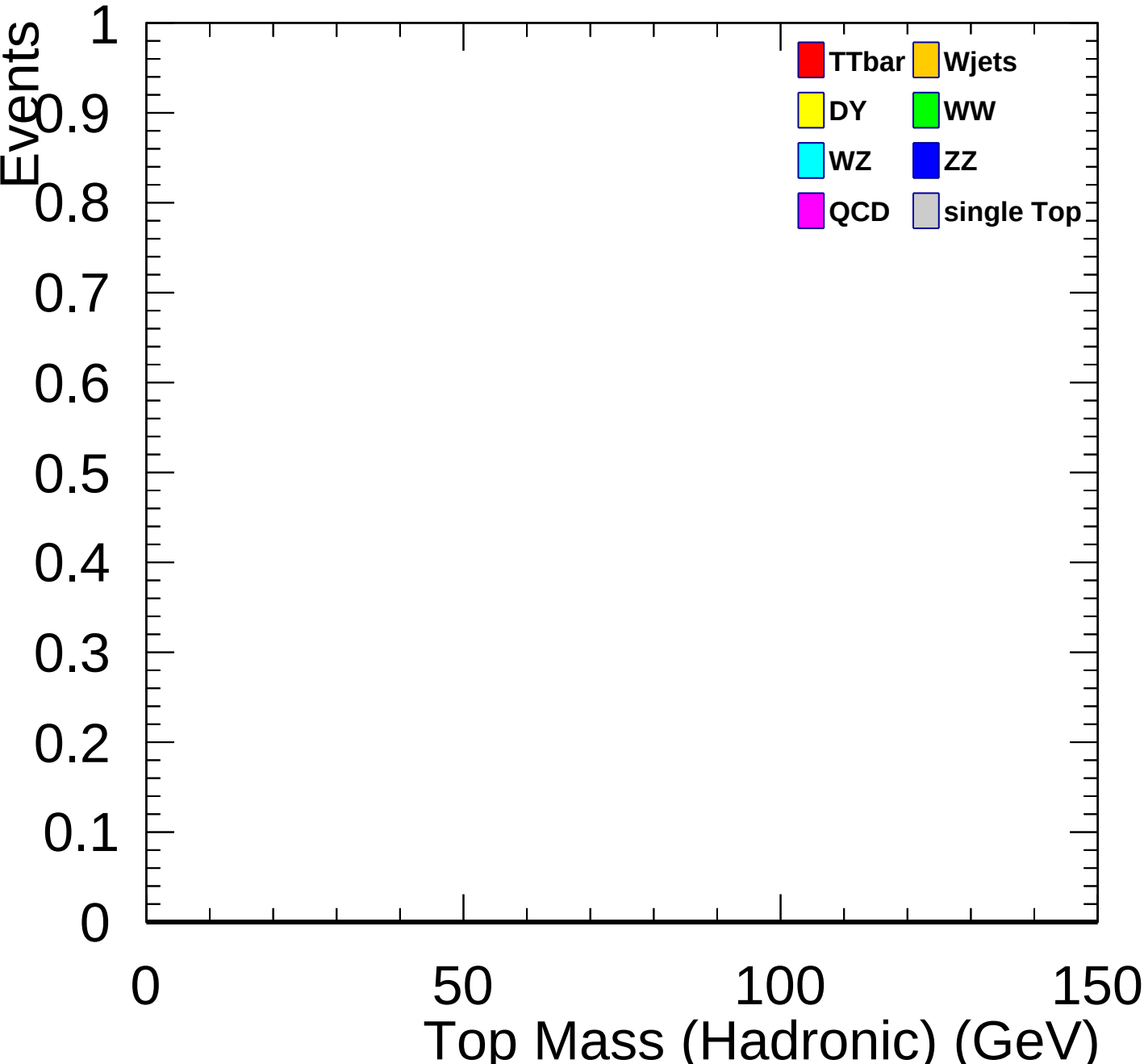

Events
120
100
80
60
40
20
0
0
1
2
3
4
5
b-tagged Jet Multiplicity
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

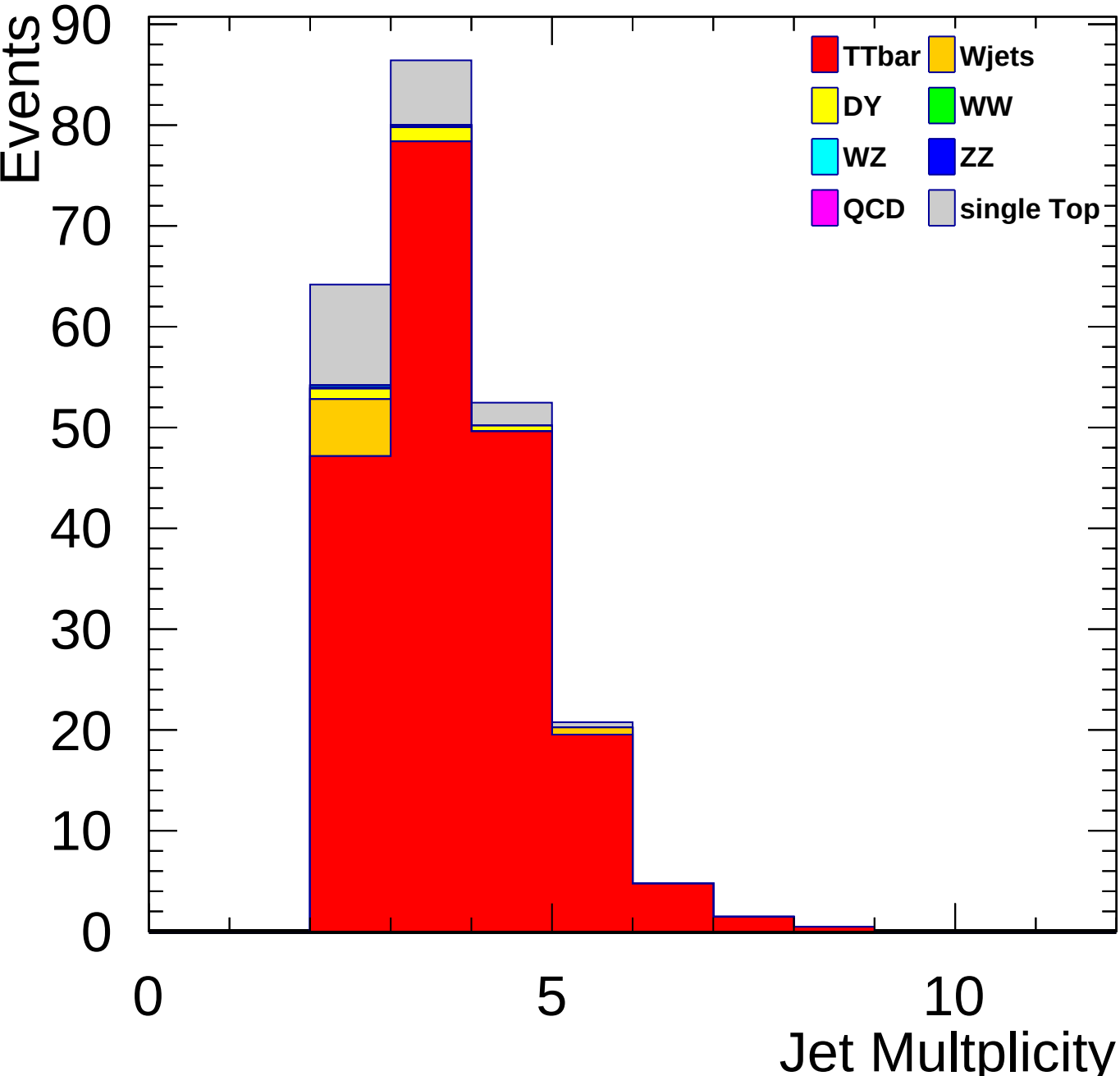

Events
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
50
100
150
200
MET Pt (GeV)
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

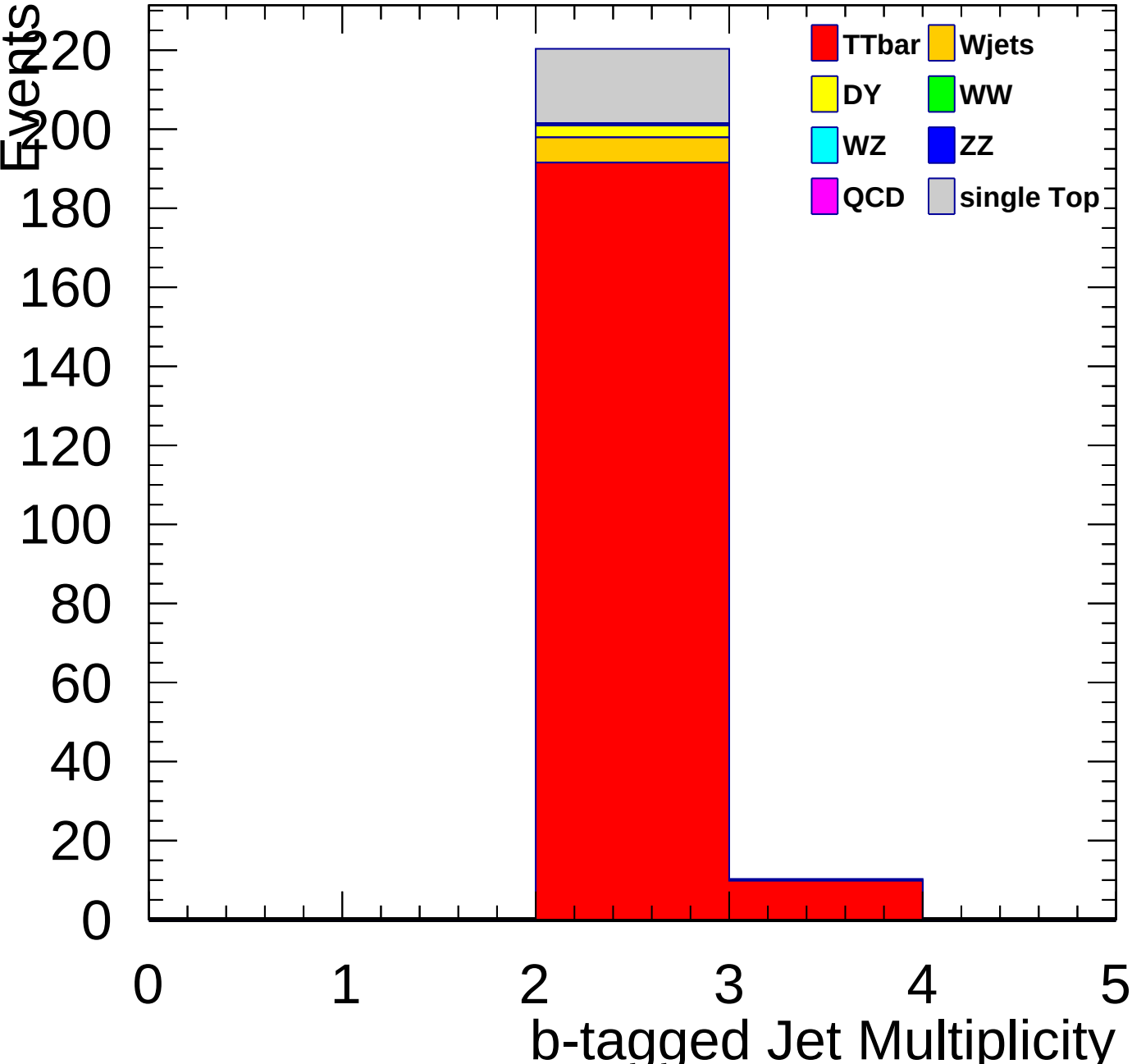

Events
0
2
4
6
8
10
12
50
100
150
W Mass (Lep Top) (GeV)
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

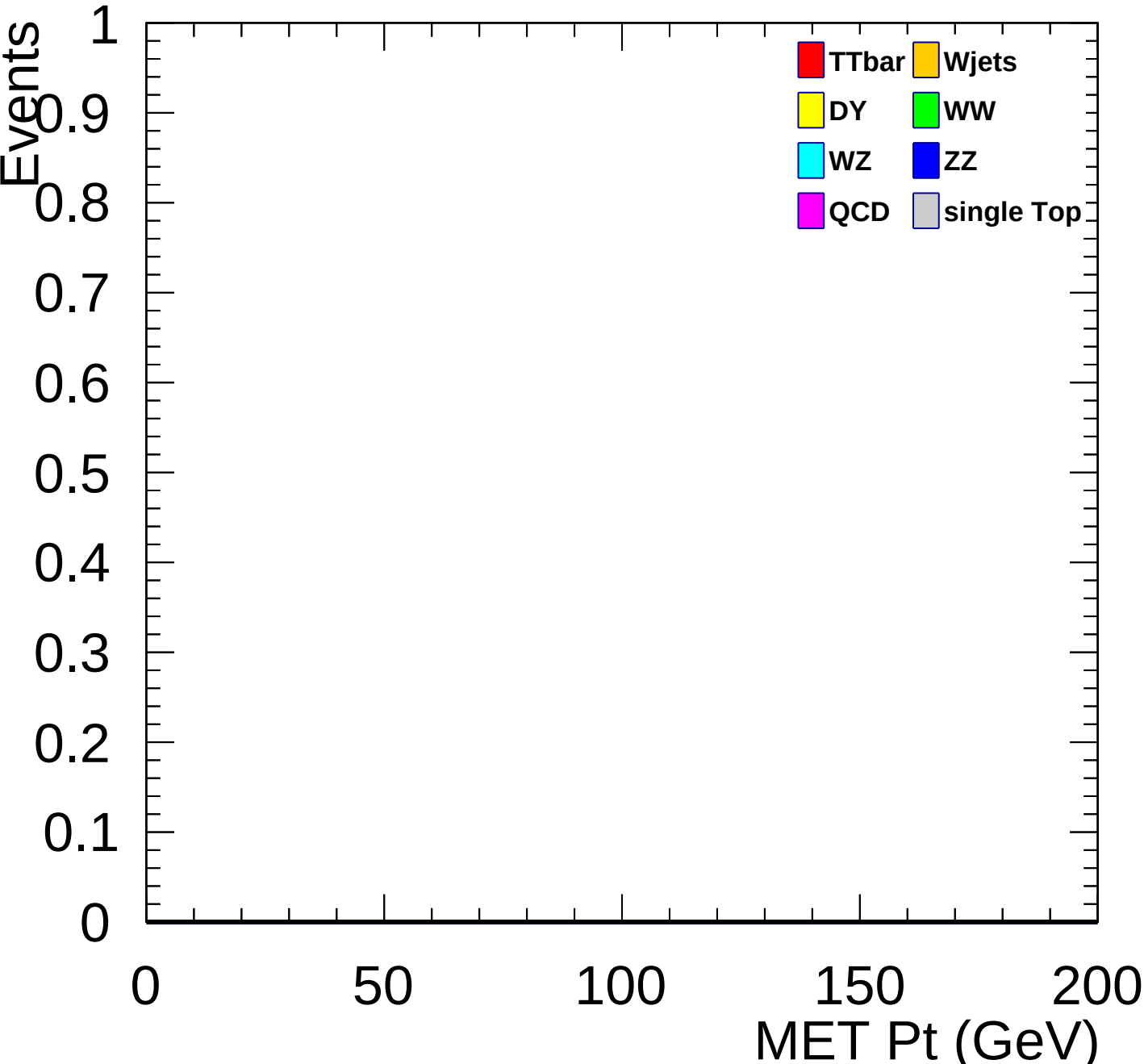

Events
0
1
2
3
4
5
6
50
100
150
200
Top Mass (Leptonic) (GeV)
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

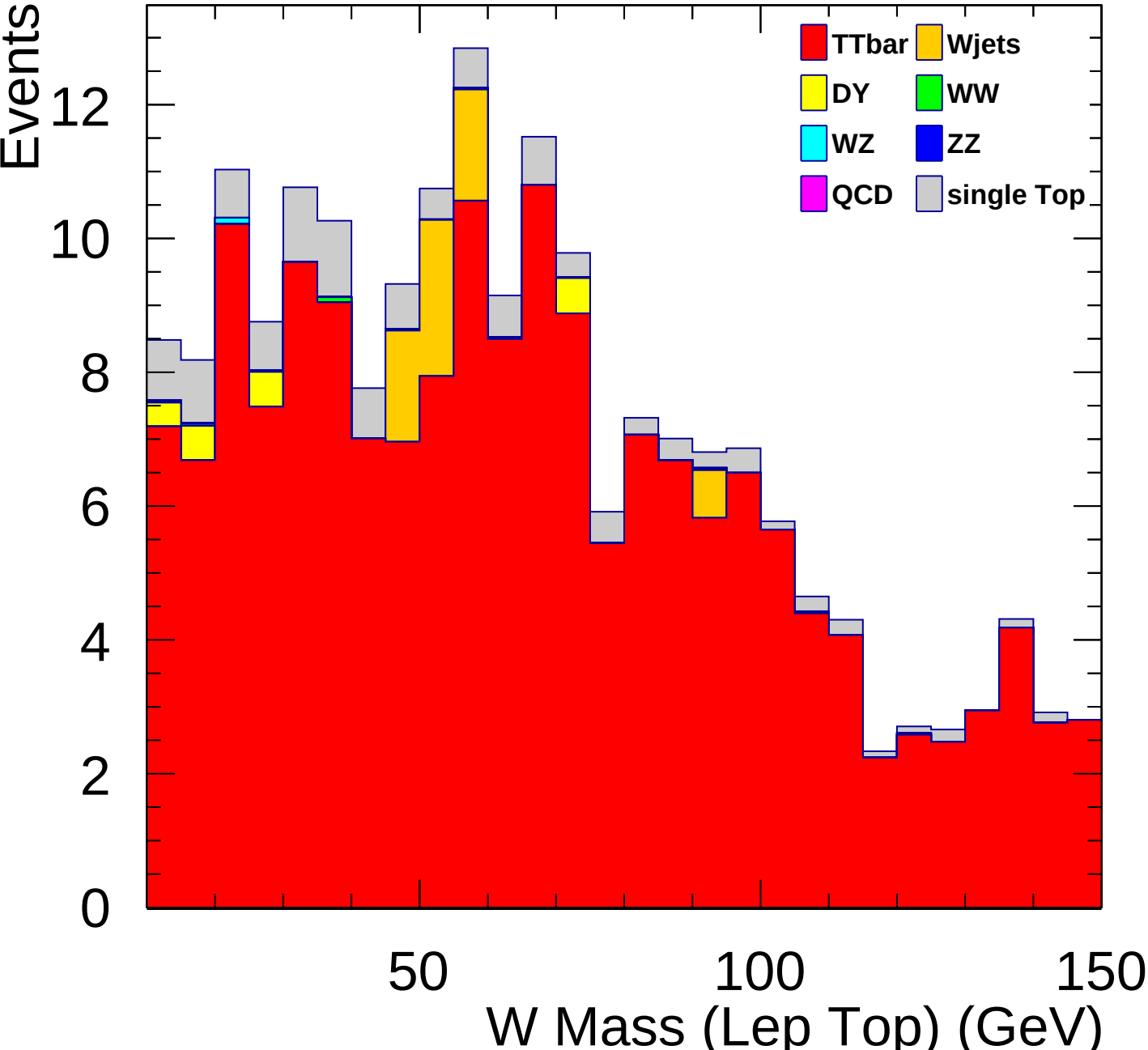

Events
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top
50
100
150
W Mass (Had Top) (GeV)

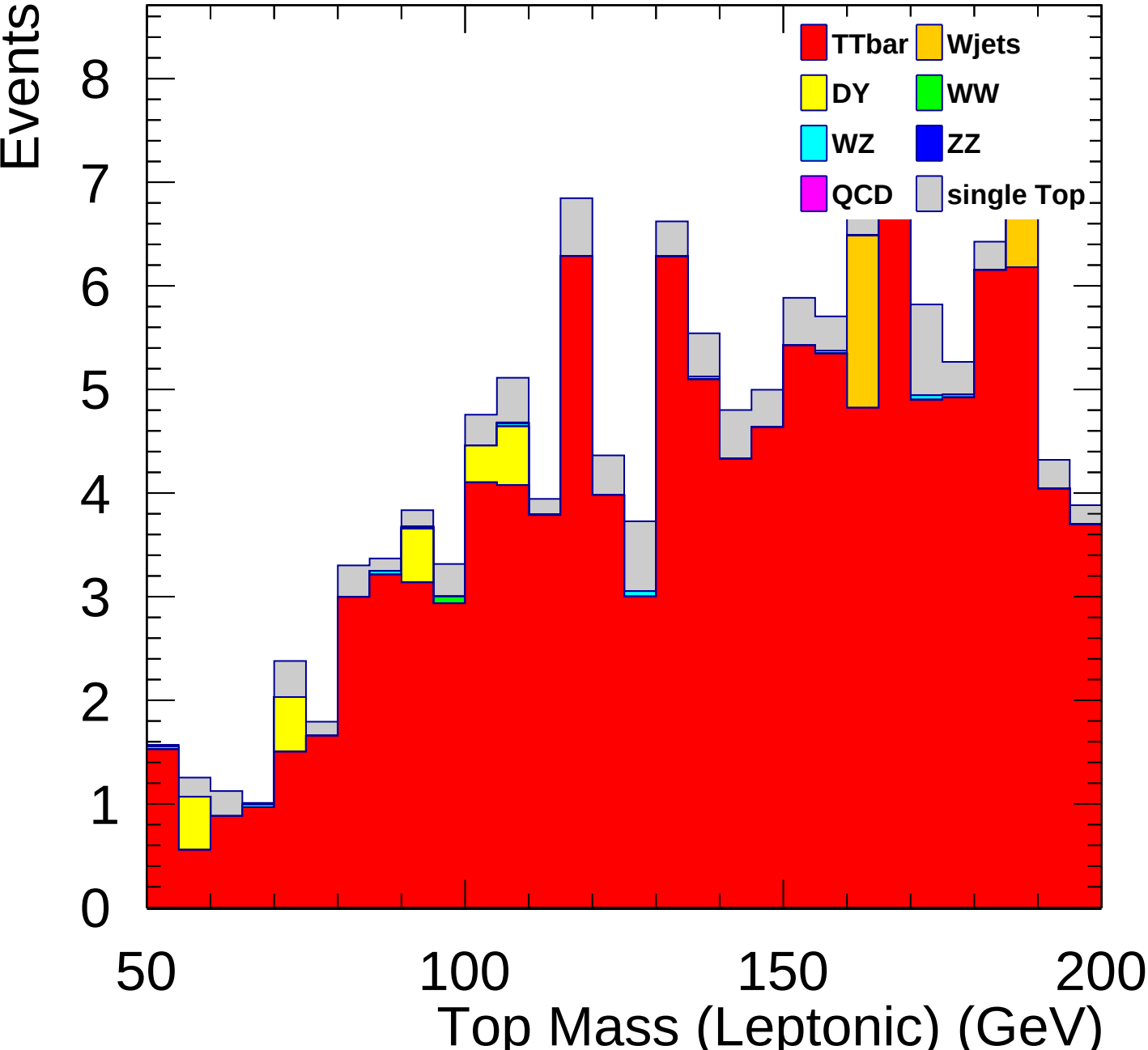

Events
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
50
100
150
Top Mass (Hadronic) (GeV)
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

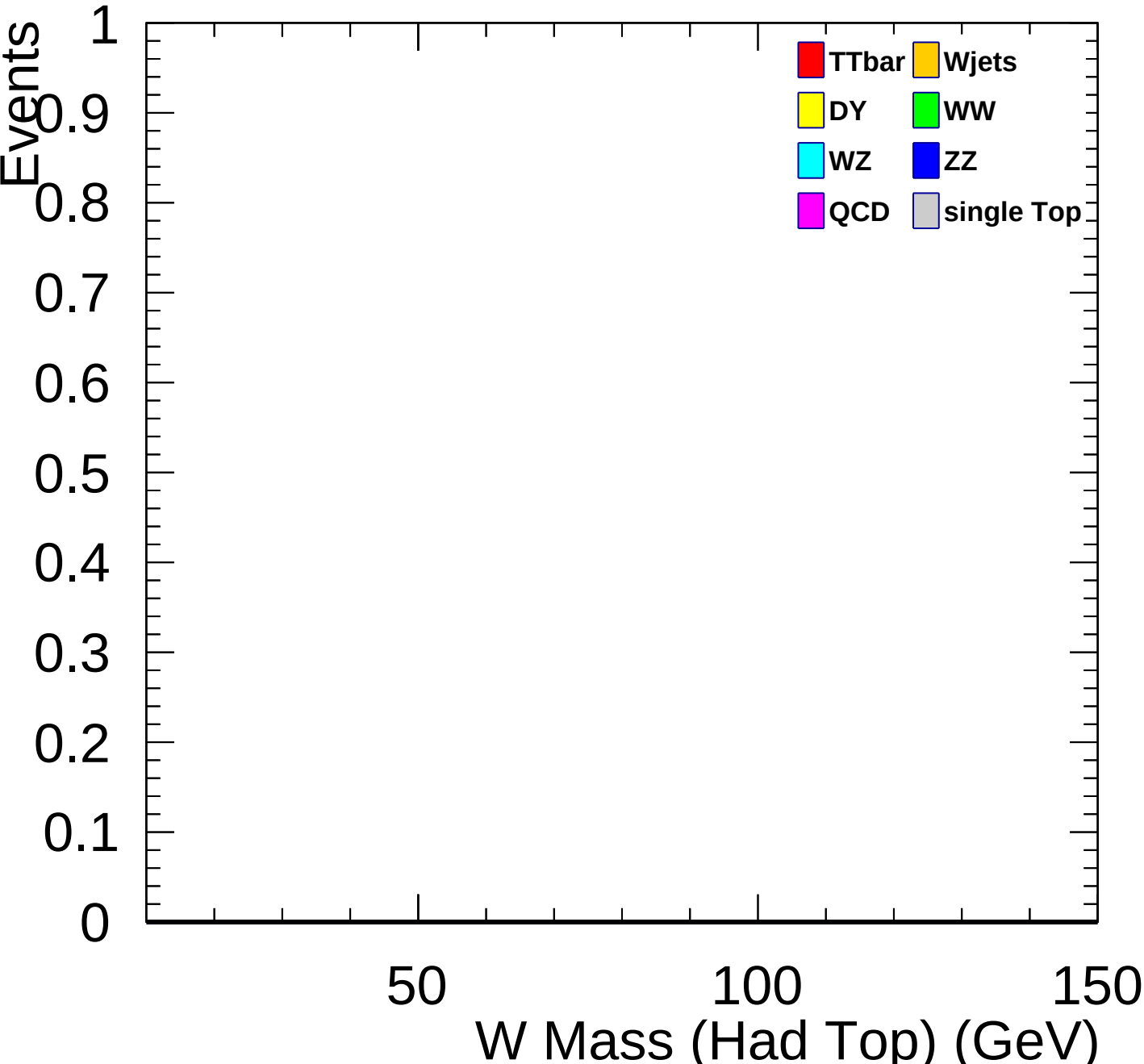

Events
90
80
70
60
50
40
30
20
10
0
0
5
10
Jet Multplicity
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

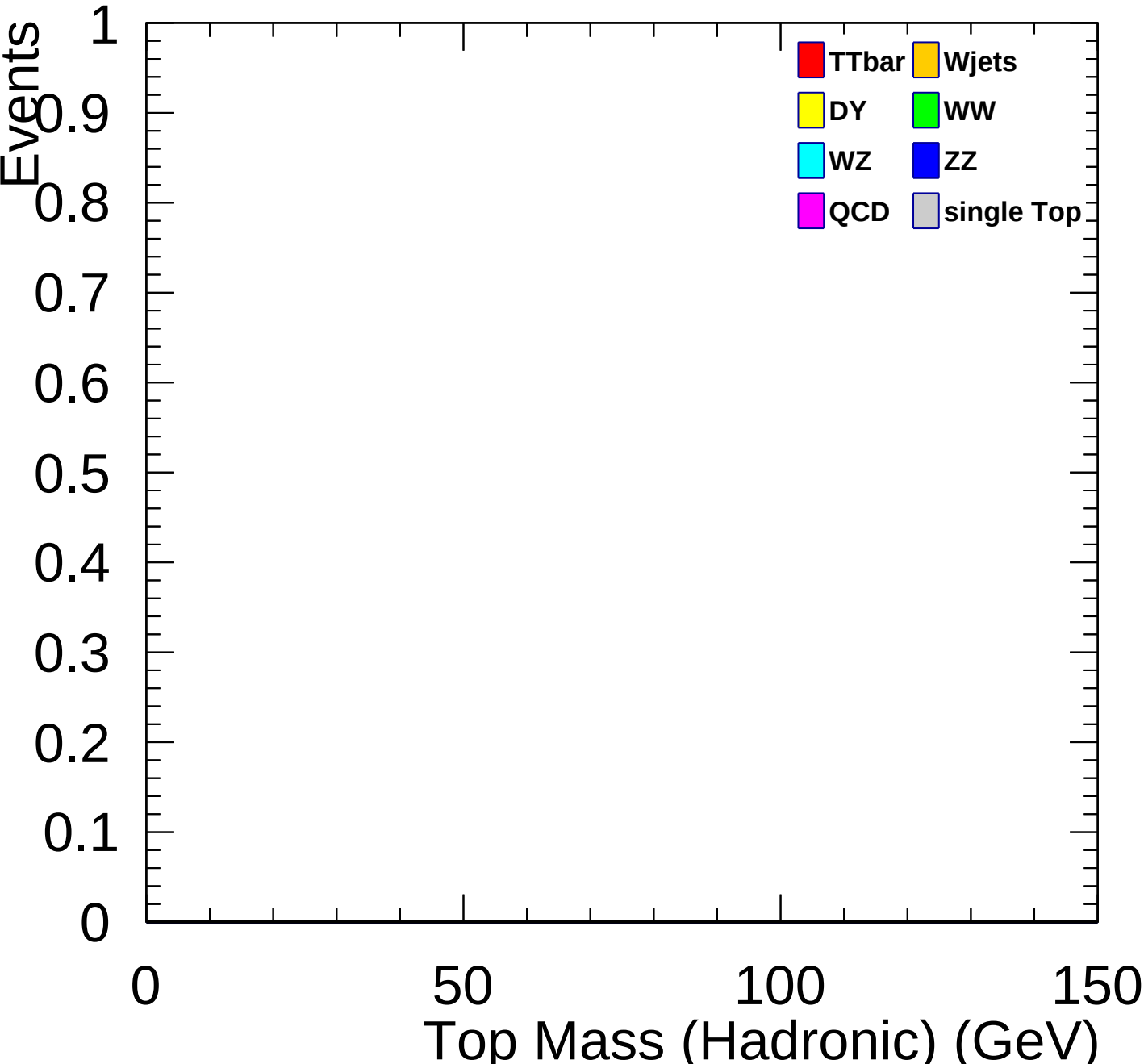

Events
220
200
180
160
140
120
100
80
60
40
20
0
0
1
2
3
4
5
b-tagged Jet Multiplicity
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

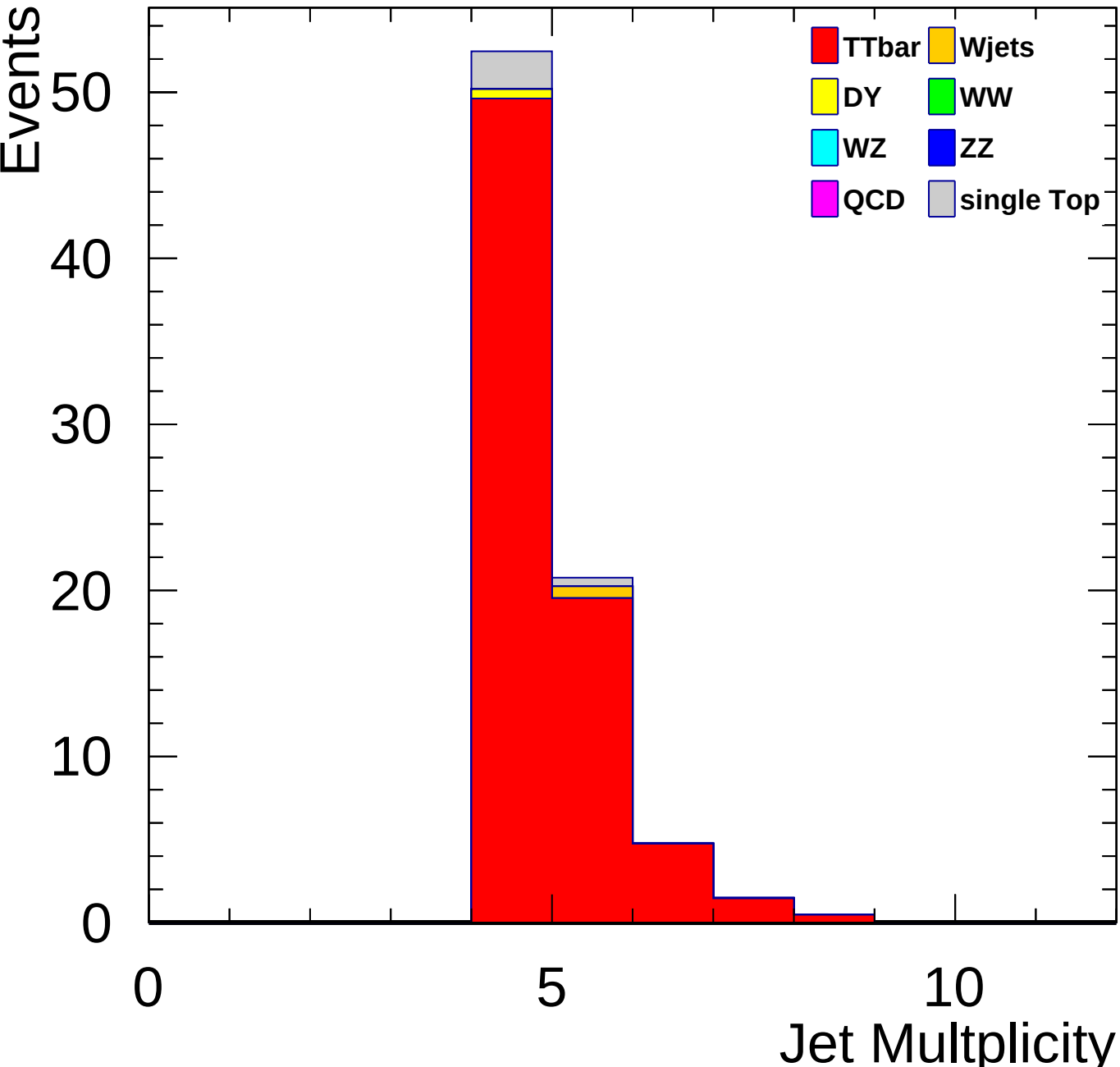

Events
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
50
100
150
200
MET Pt (GeV)
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

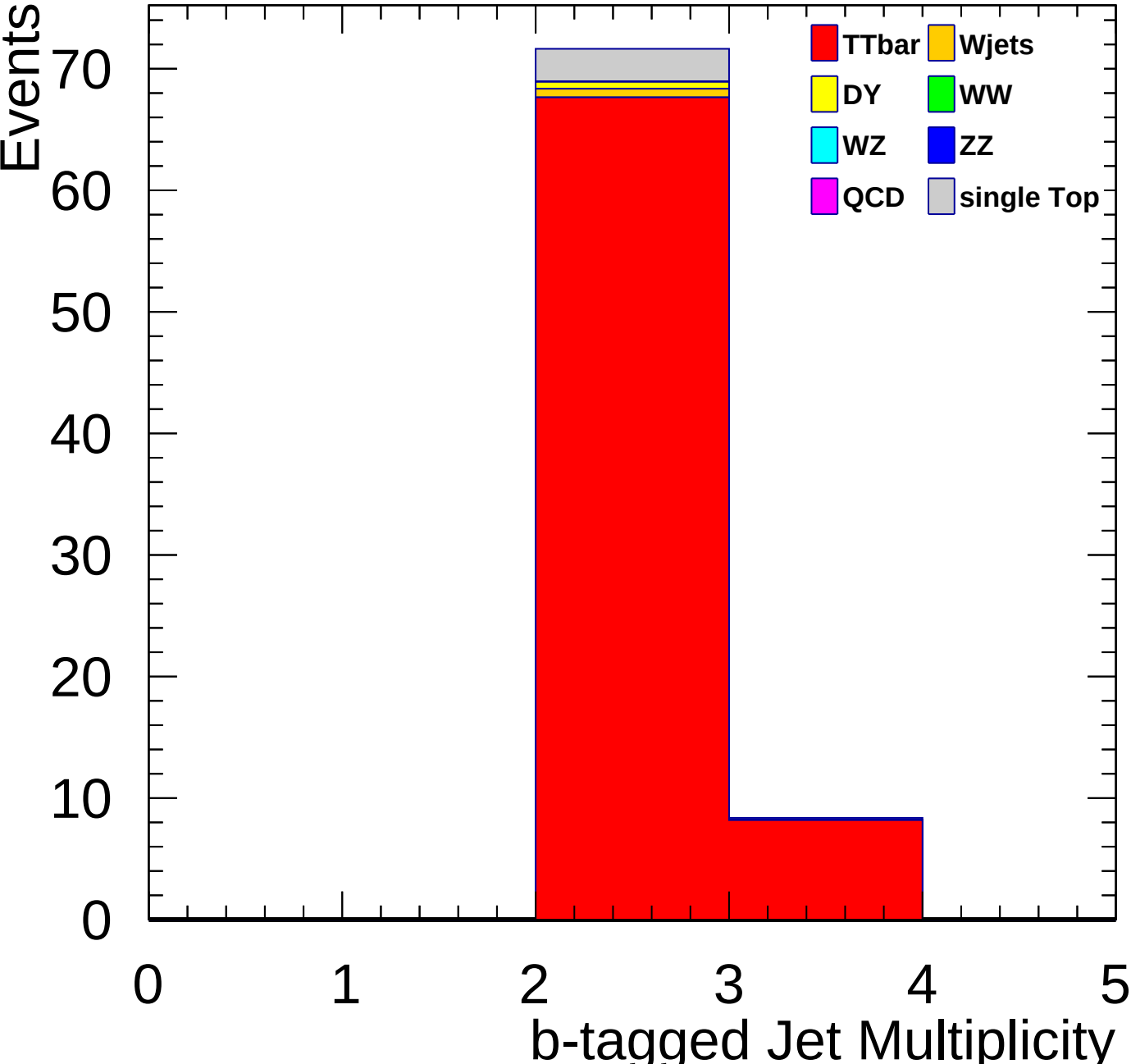

Events
0
2
4
6
8
10
12
50
100
150
W Mass (Lep Top) (GeV)
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

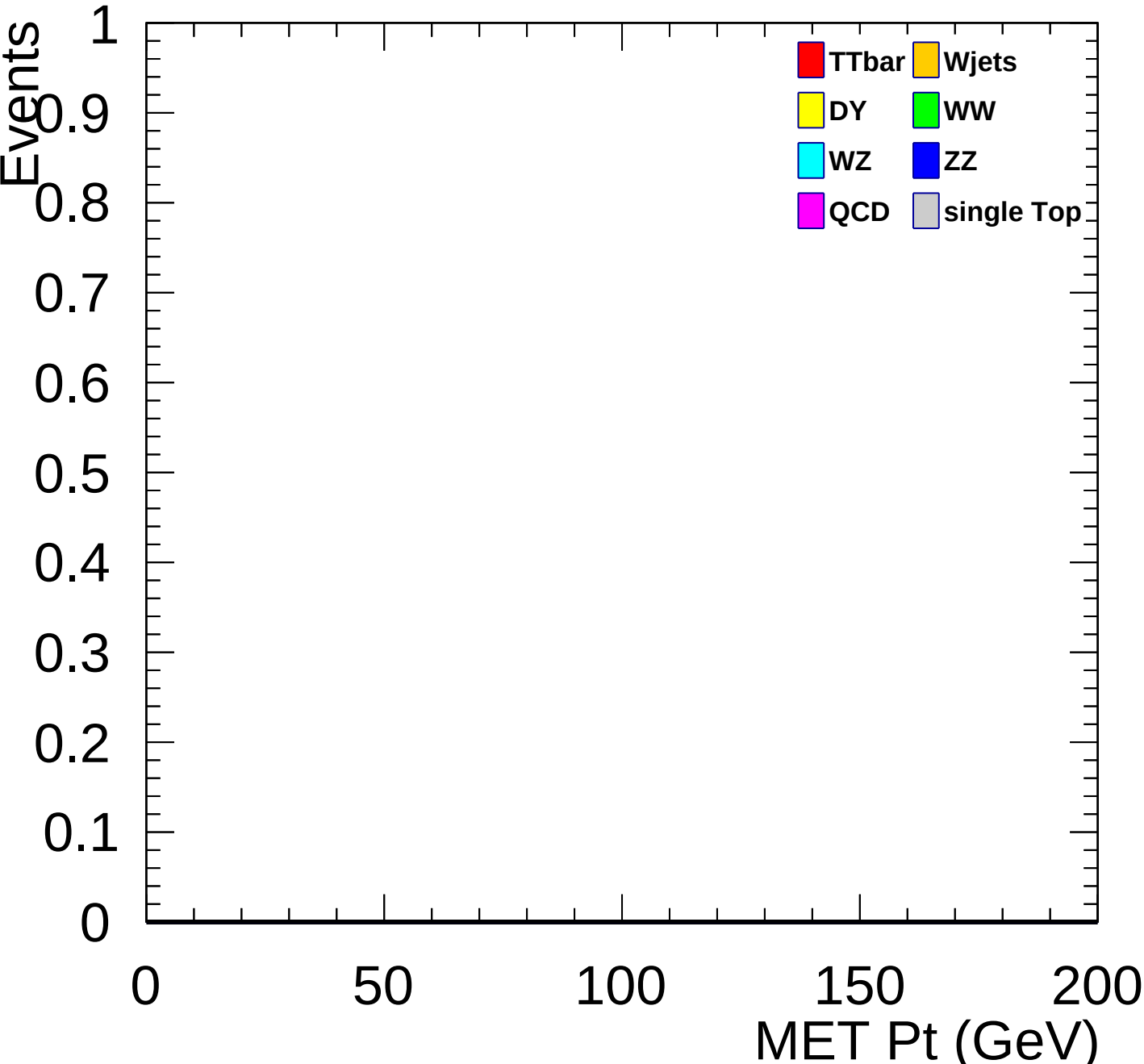

Events
0
1
2
3
4
5
6
7
8
50
100
150
200
Top Mass (Leptonic) (GeV)
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

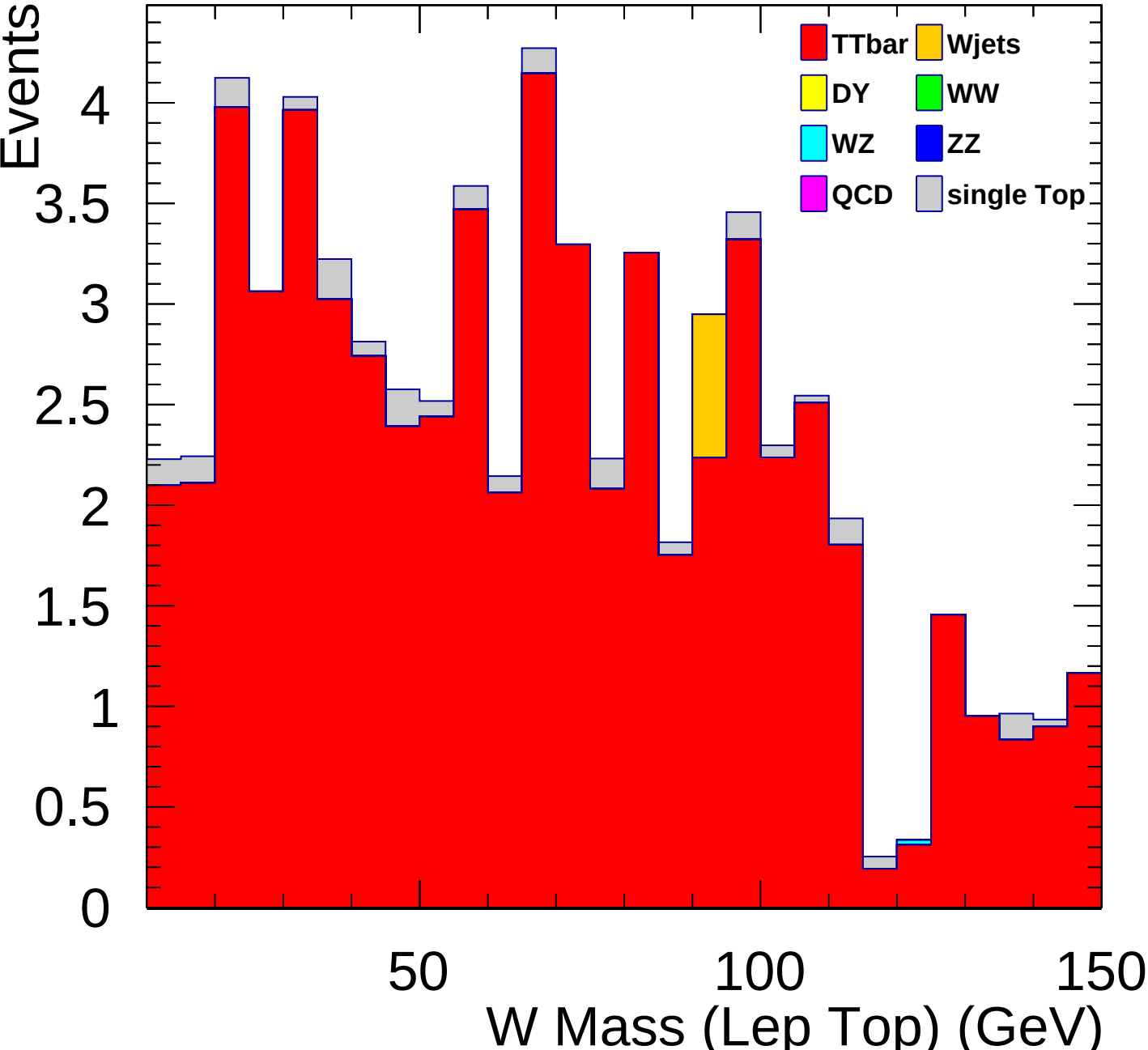

Events
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top
50
100
150
W Mass (Had Top) (GeV)

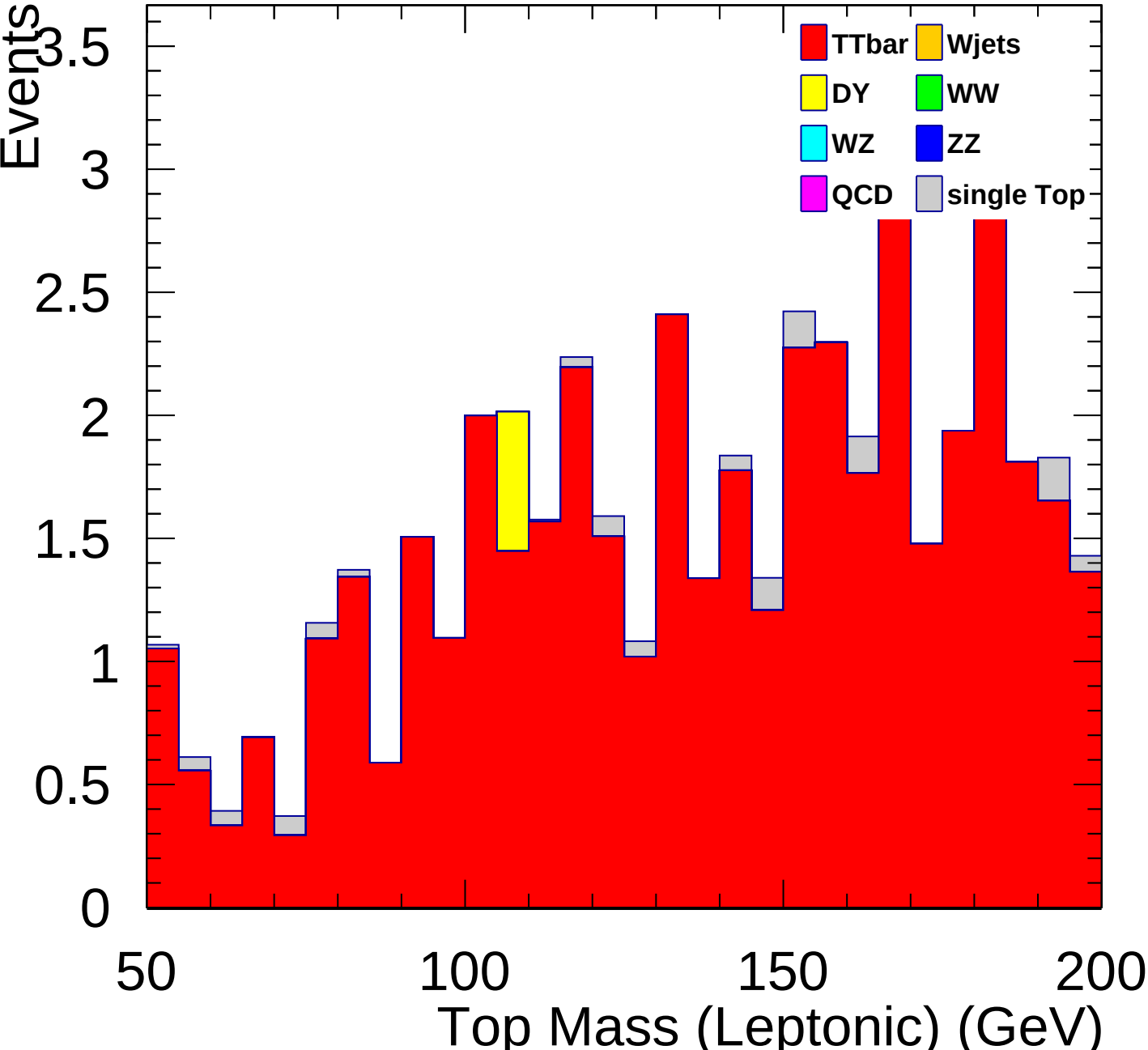

Events
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
50
100
150
Top Mass (Hadronic) (GeV)
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

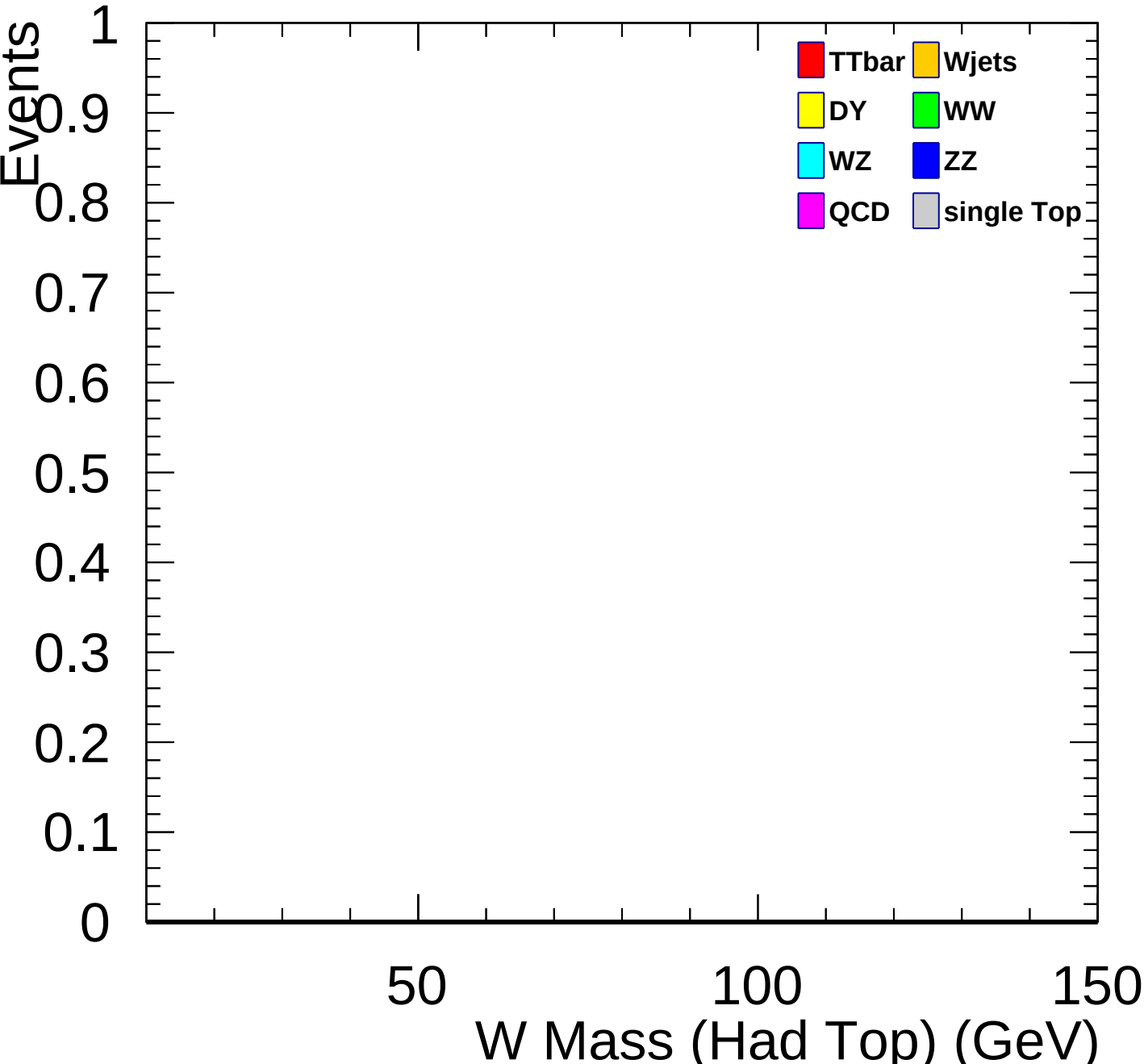

Events
50
40
30
20
10
0
0
5
10
Jet Multplicity
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

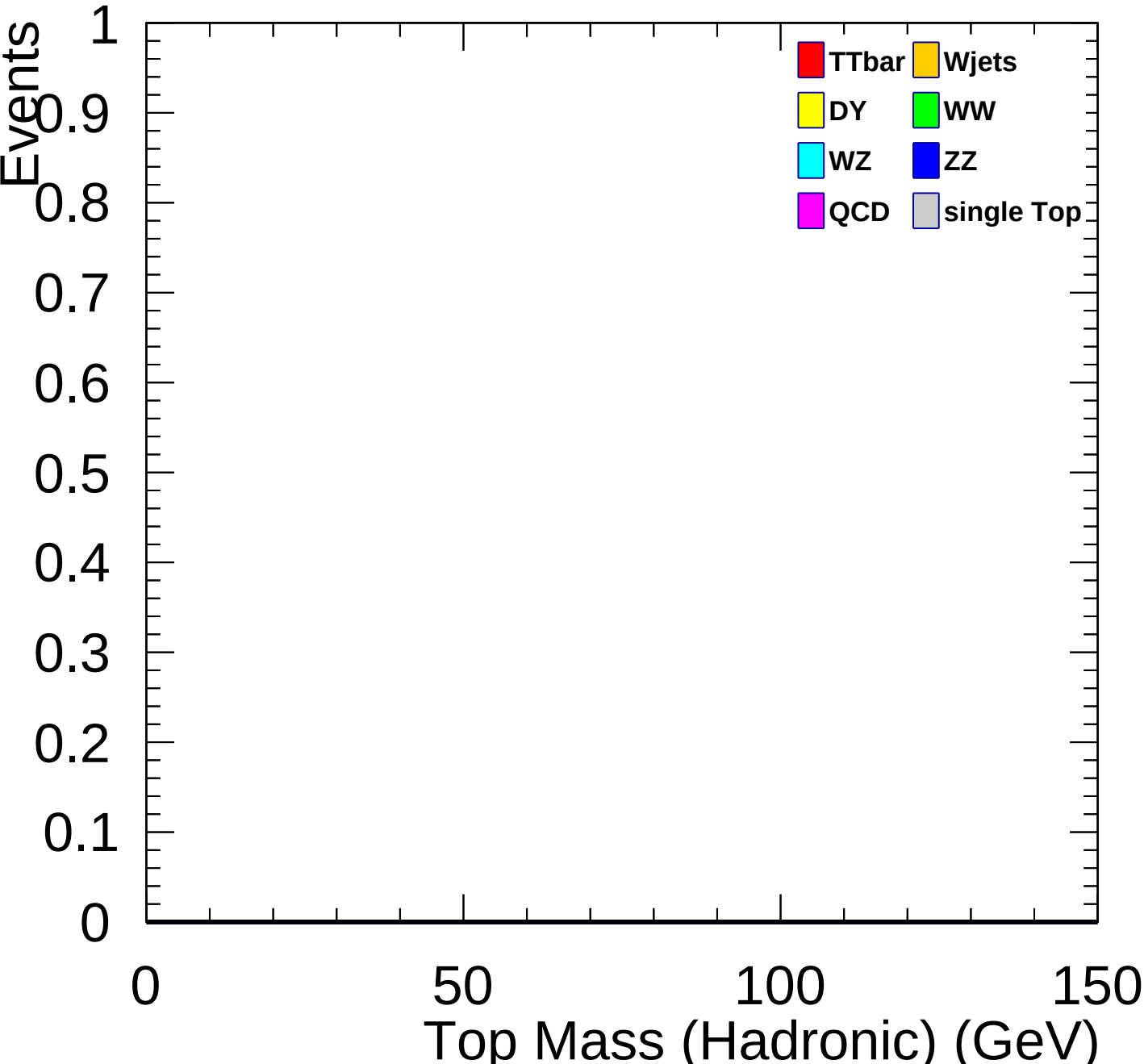

Events
70
60
50
40
30
20
10
0
0
1
2
3
4
5
b-tagged Jet Multiplicity
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

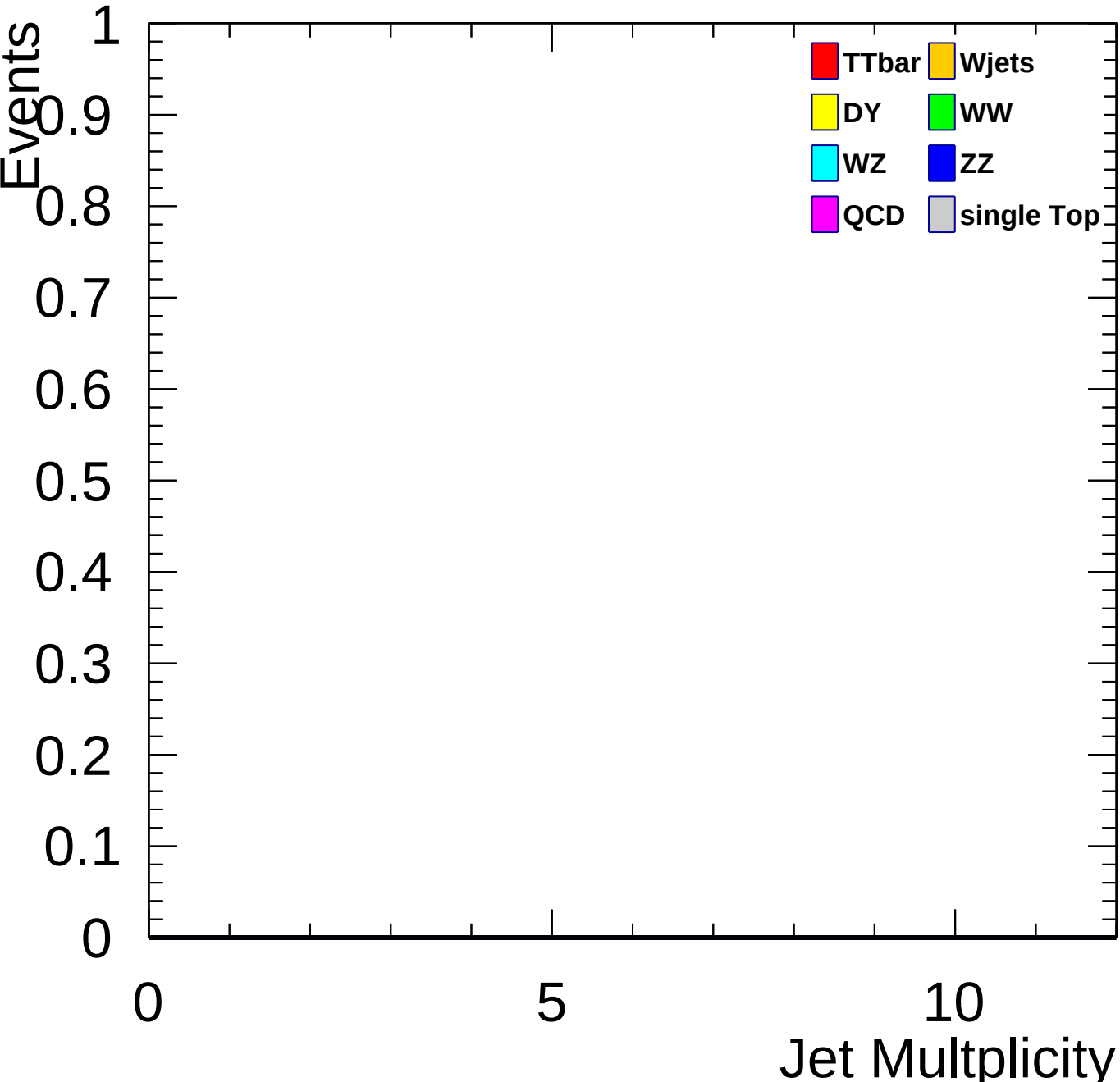

Events
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
50
100
150
200
MET Pt (GeV)
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

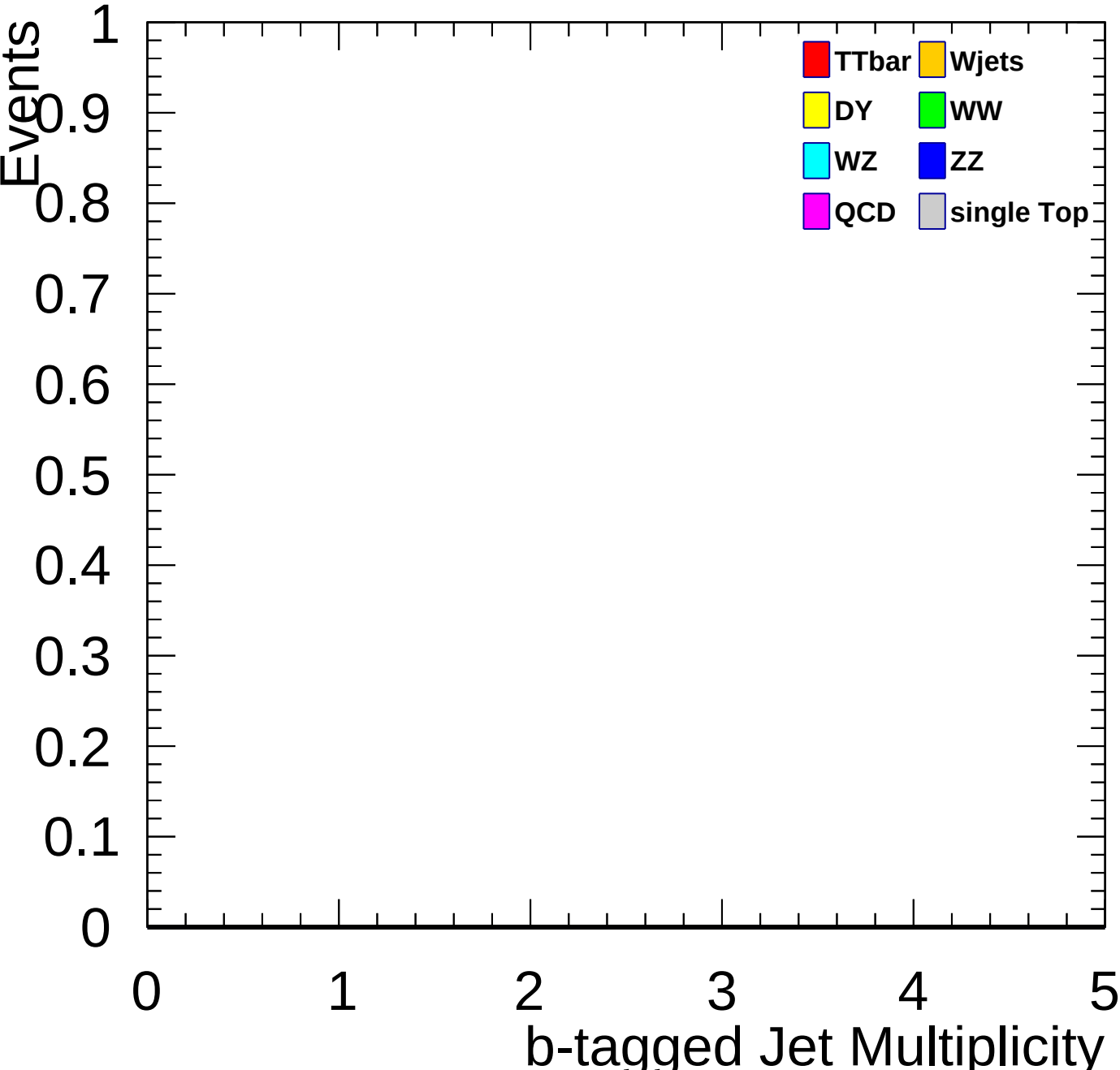

Events
4
3.5
3
2.5
2
1.5
1
0.5
0
50
100
150
W Mass (Lep Top) (GeV)
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

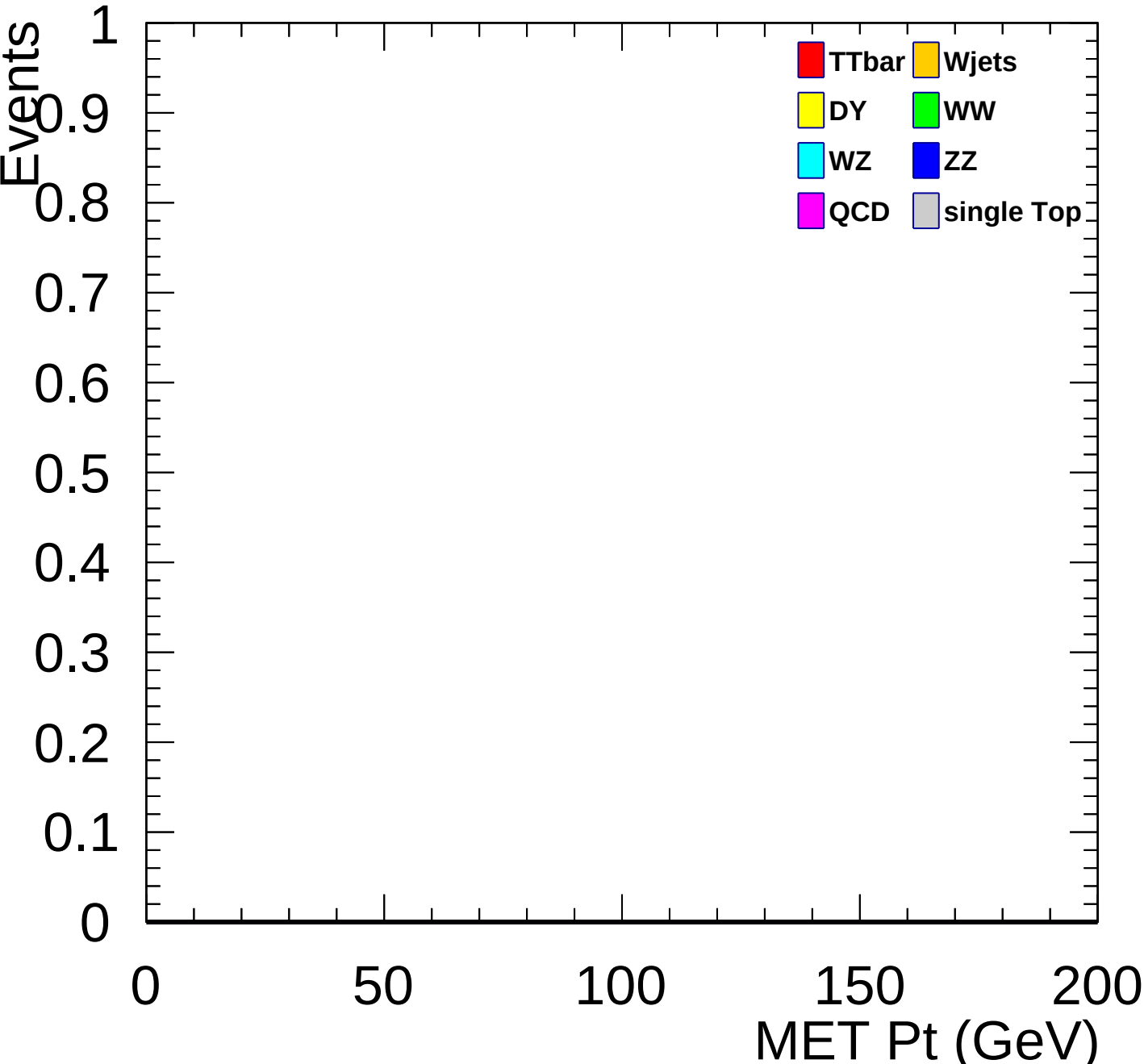

Events
3.5
3
2.5
2
1.5
1
0.5
0
50
100
150
200
Top Mass (Leptonic) (GeV)
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

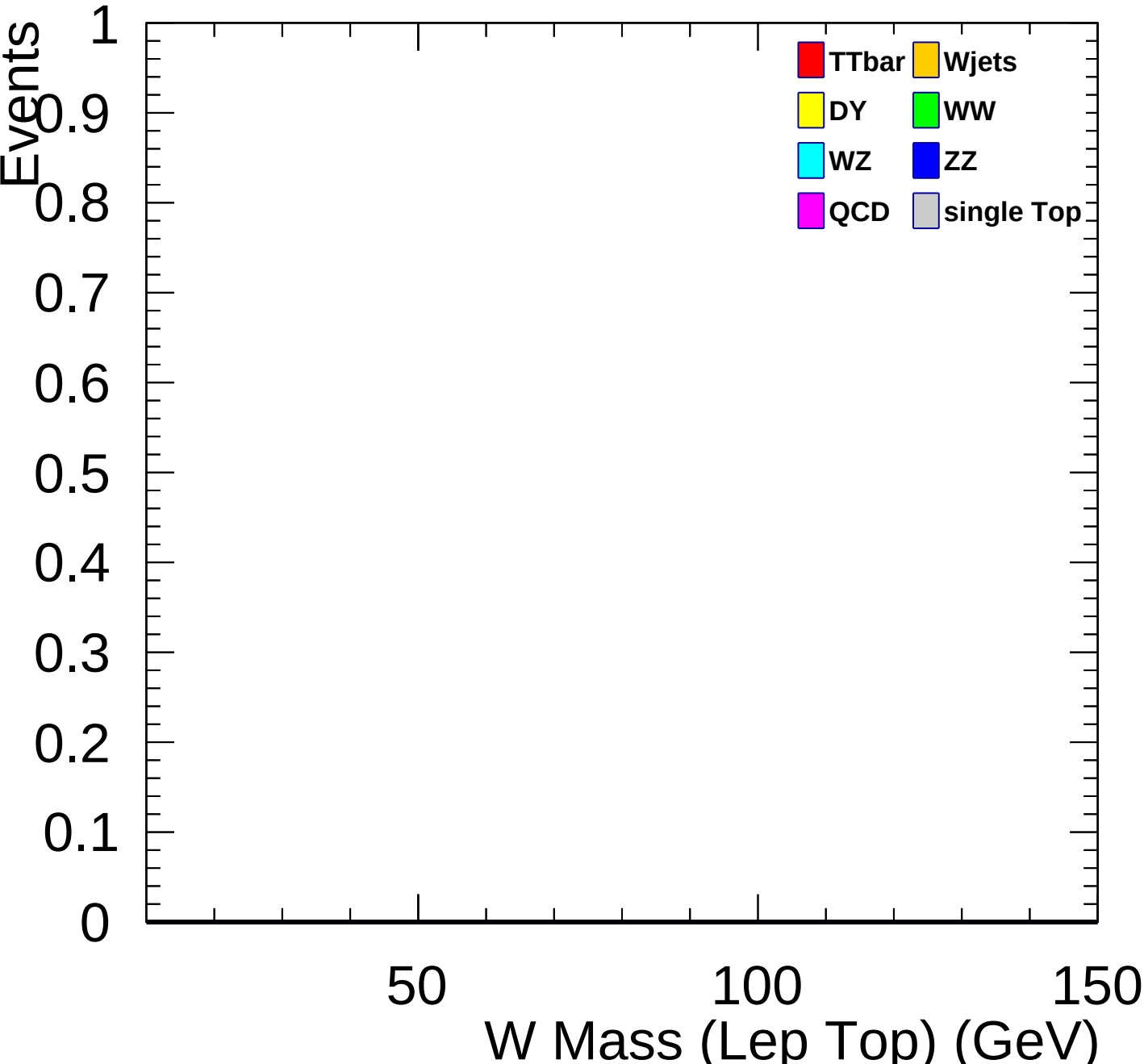

Events
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top
50
100
150
W Mass (Had Top) (GeV)

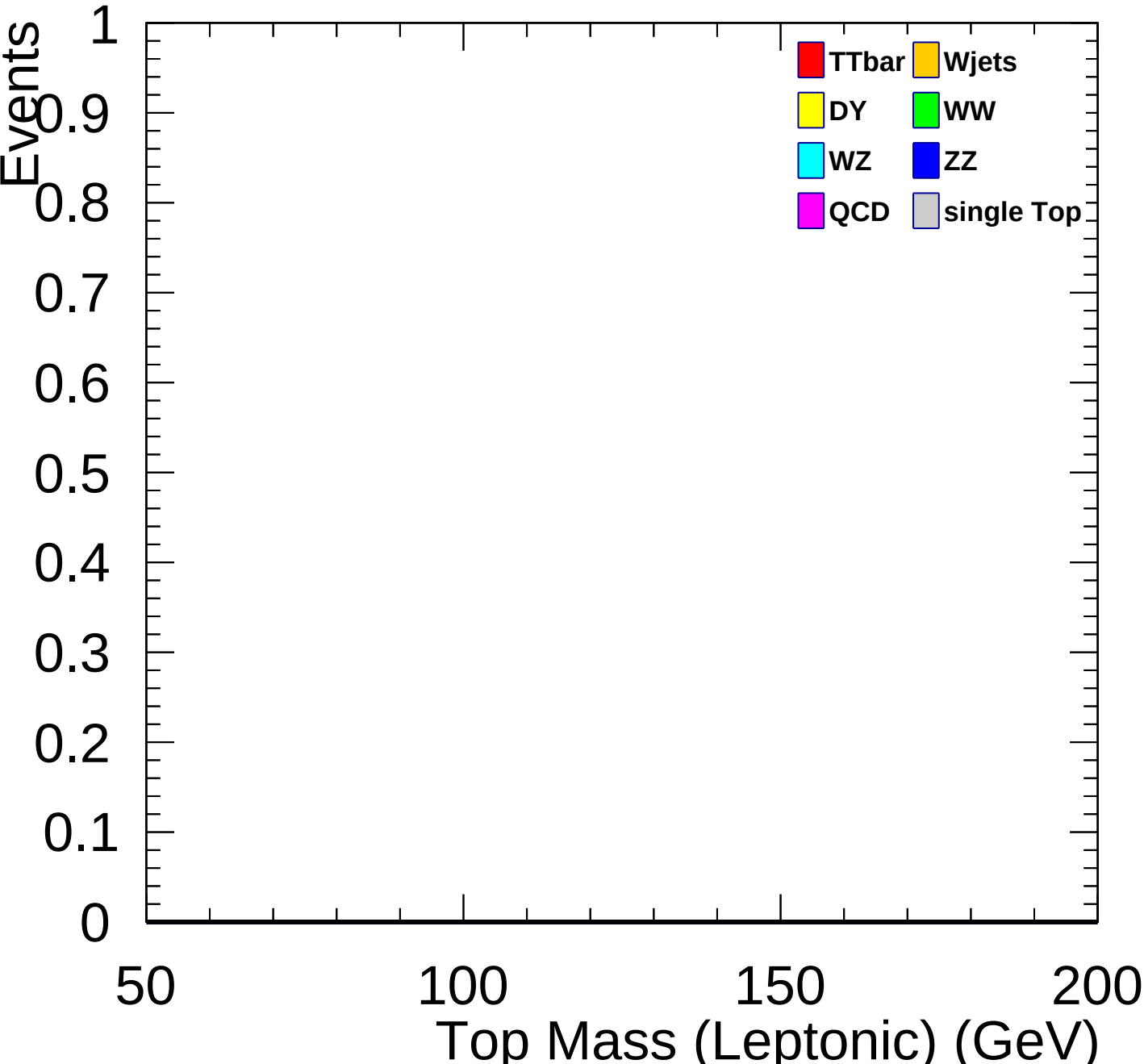

Events
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
50
100
150
Top Mass (Hadronic) (GeV)
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

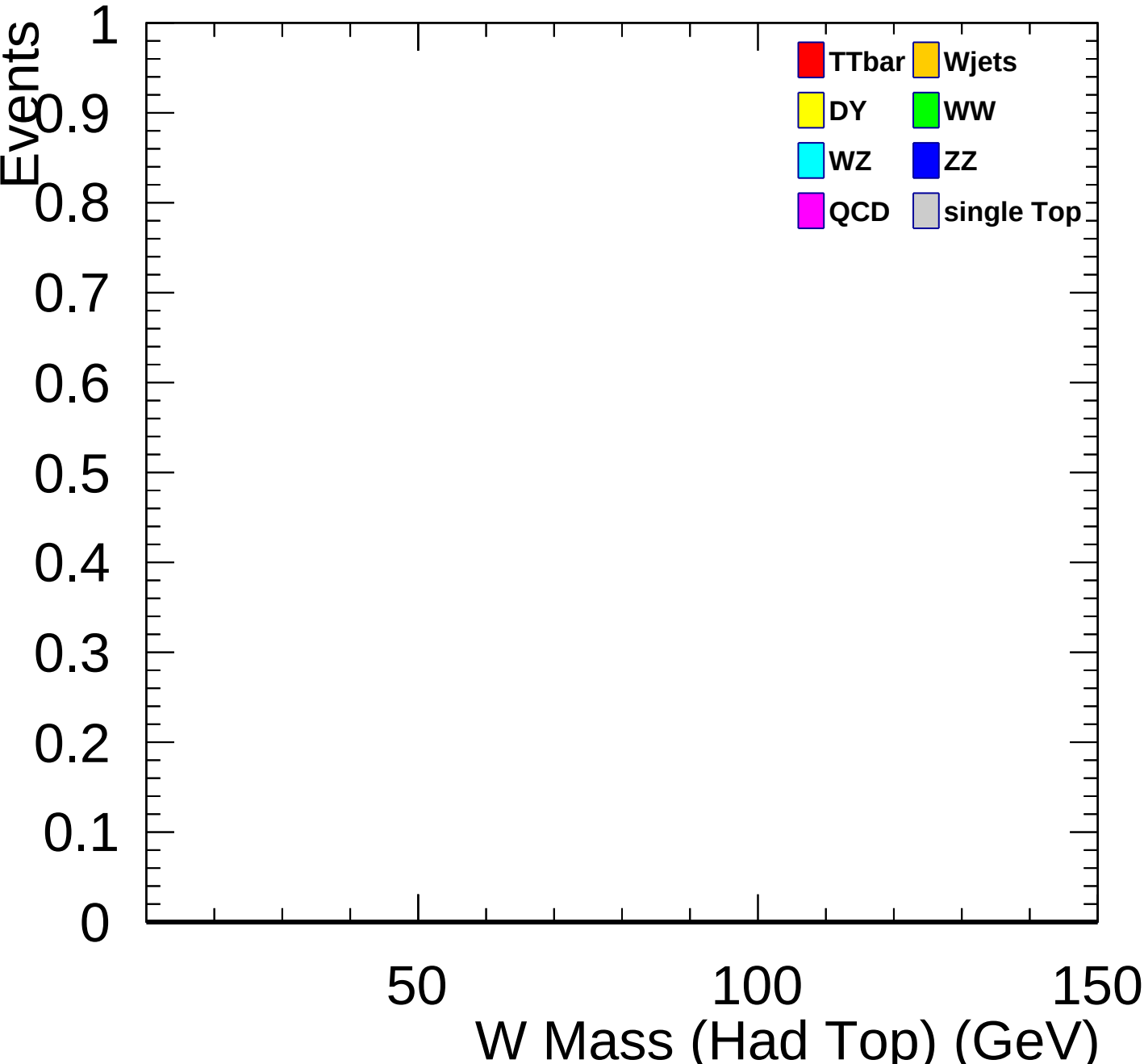

Events
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
5
10
Jet Multplicity
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top

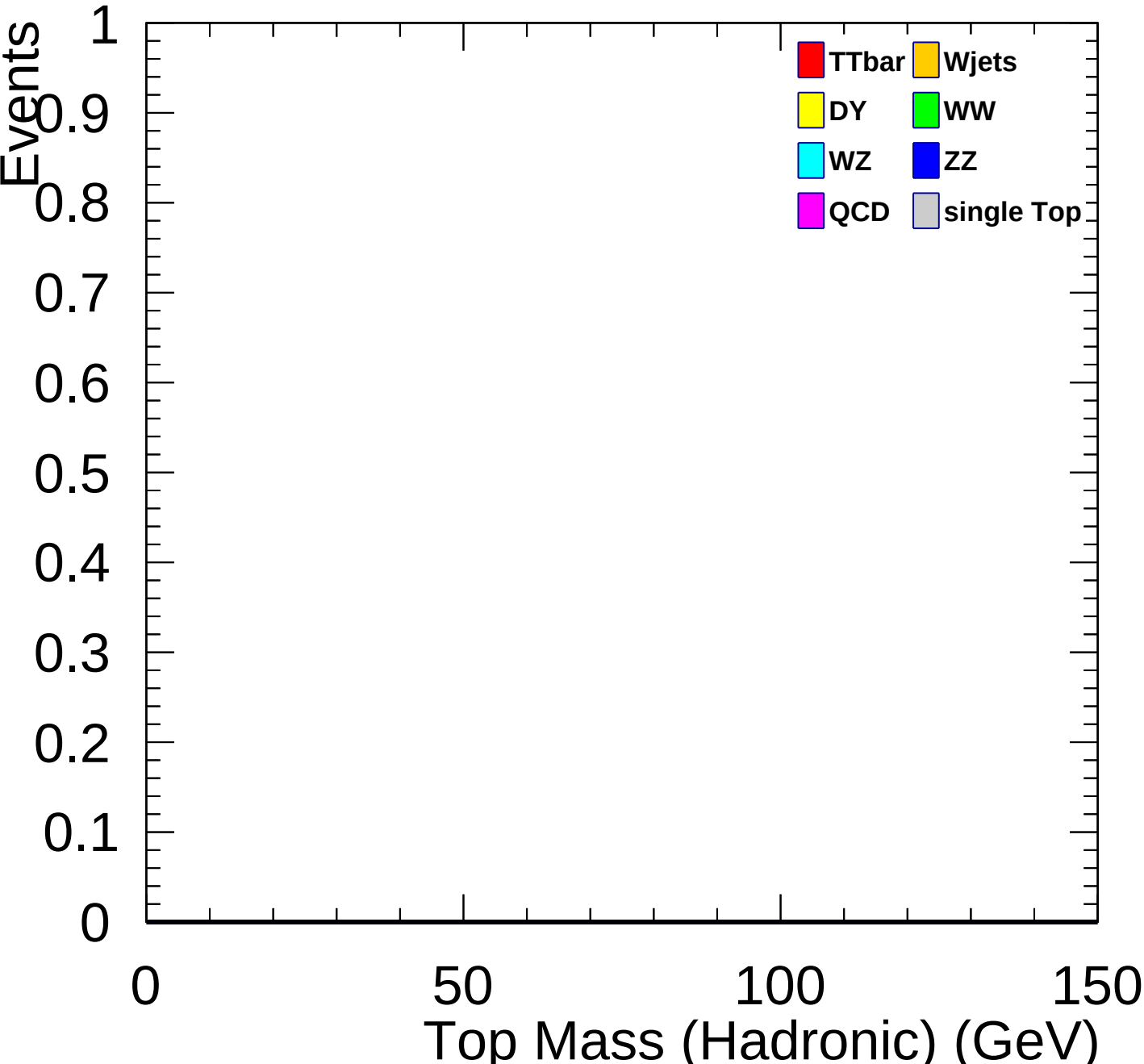

Events
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
1
2
3
4
5
b-tagged Jet Multiplicity
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top


Events
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
50
100
150
200
MET Pt (GeV)
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top


Events
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
50
100
150
W Mass (Lep Top) (GeV)
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top


Events
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
50
100
150
200
Top Mass (Leptonic) (GeV)
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top


Events
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top
50
100
150
W Mass (Had Top) (GeV)


Events
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
50
100
150
Top Mass (Hadronic) (GeV)
TTbar
Wjets
DY
WW
WZ
ZZ
QCD
single Top