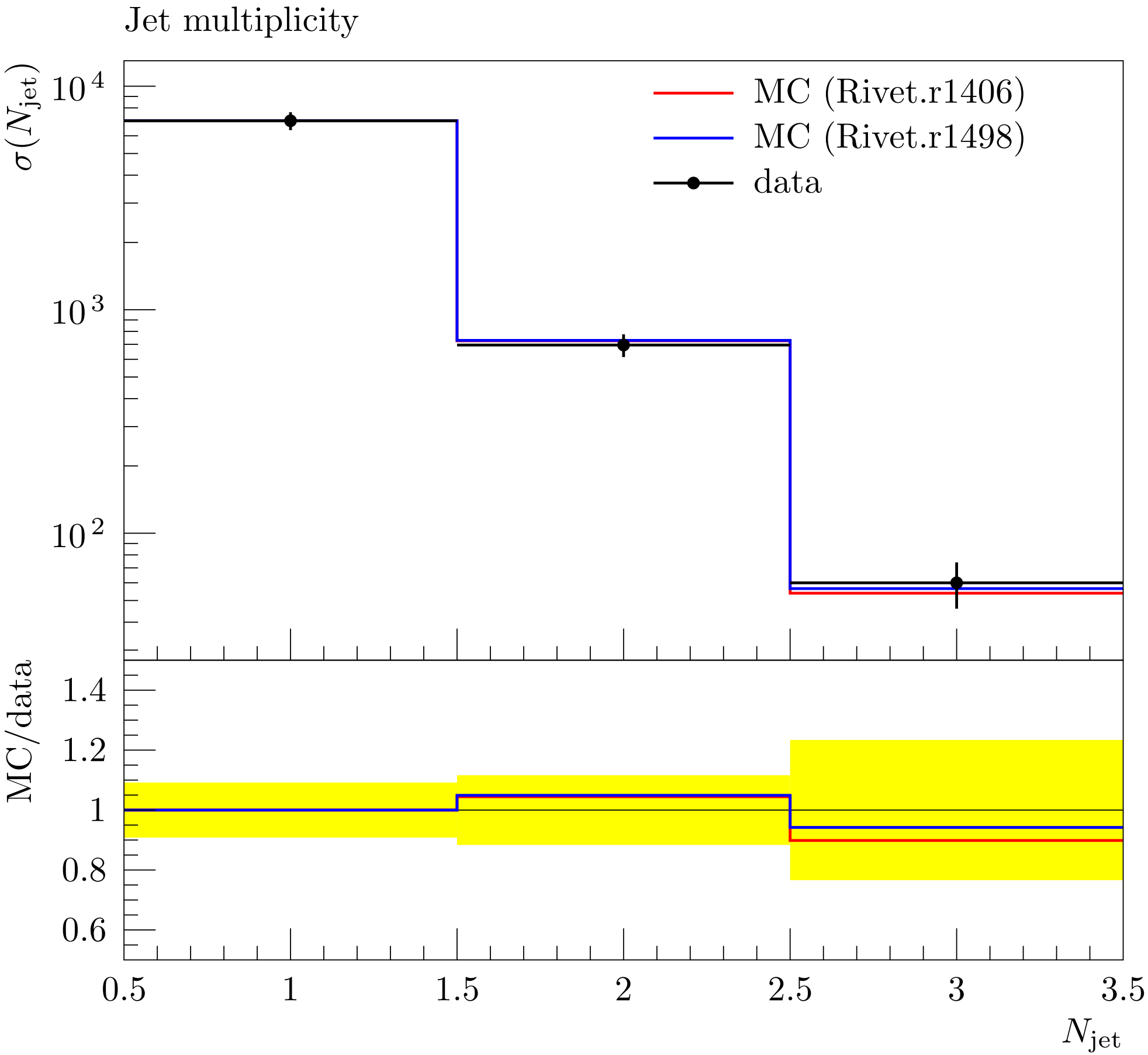
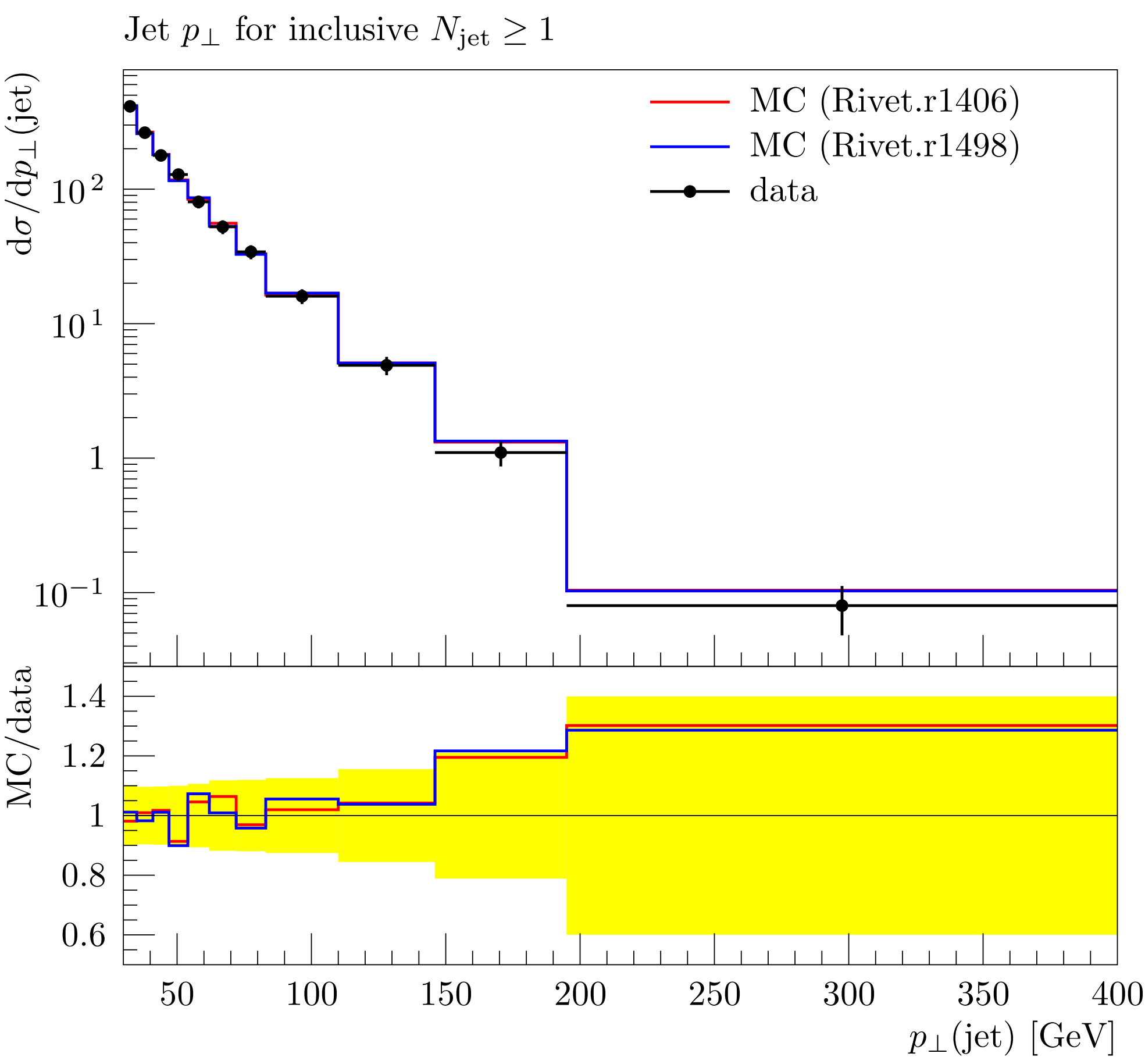
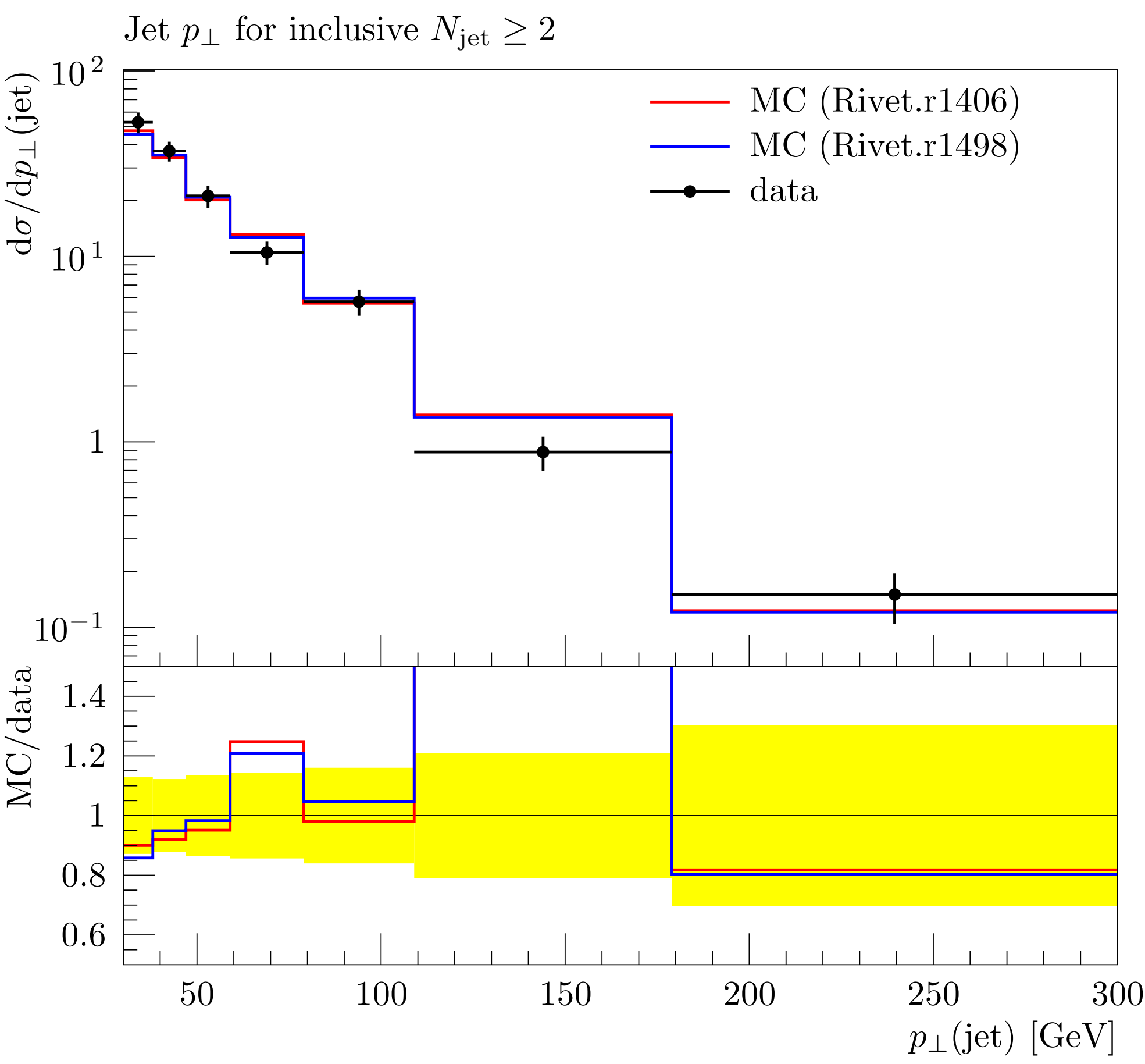
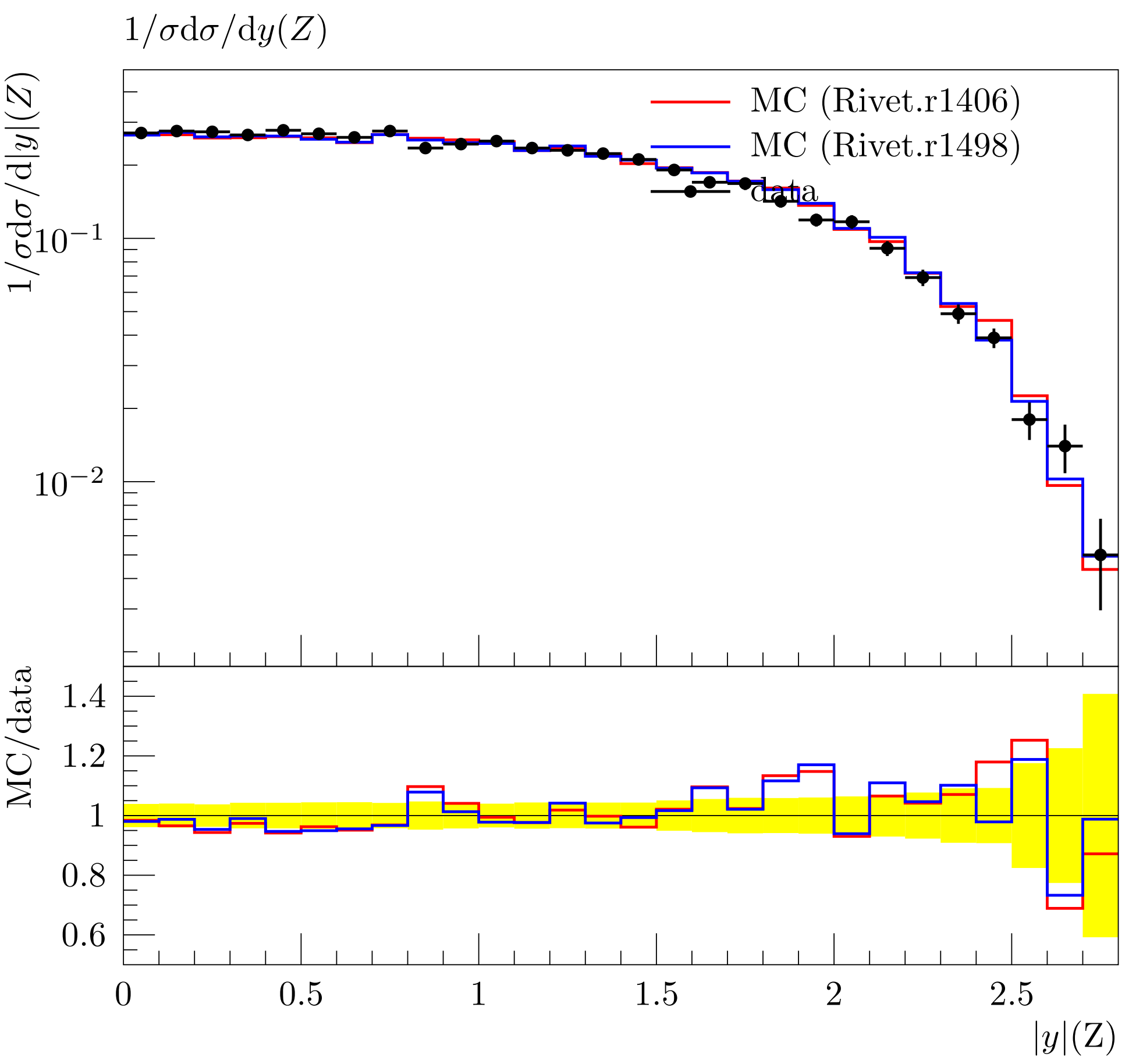
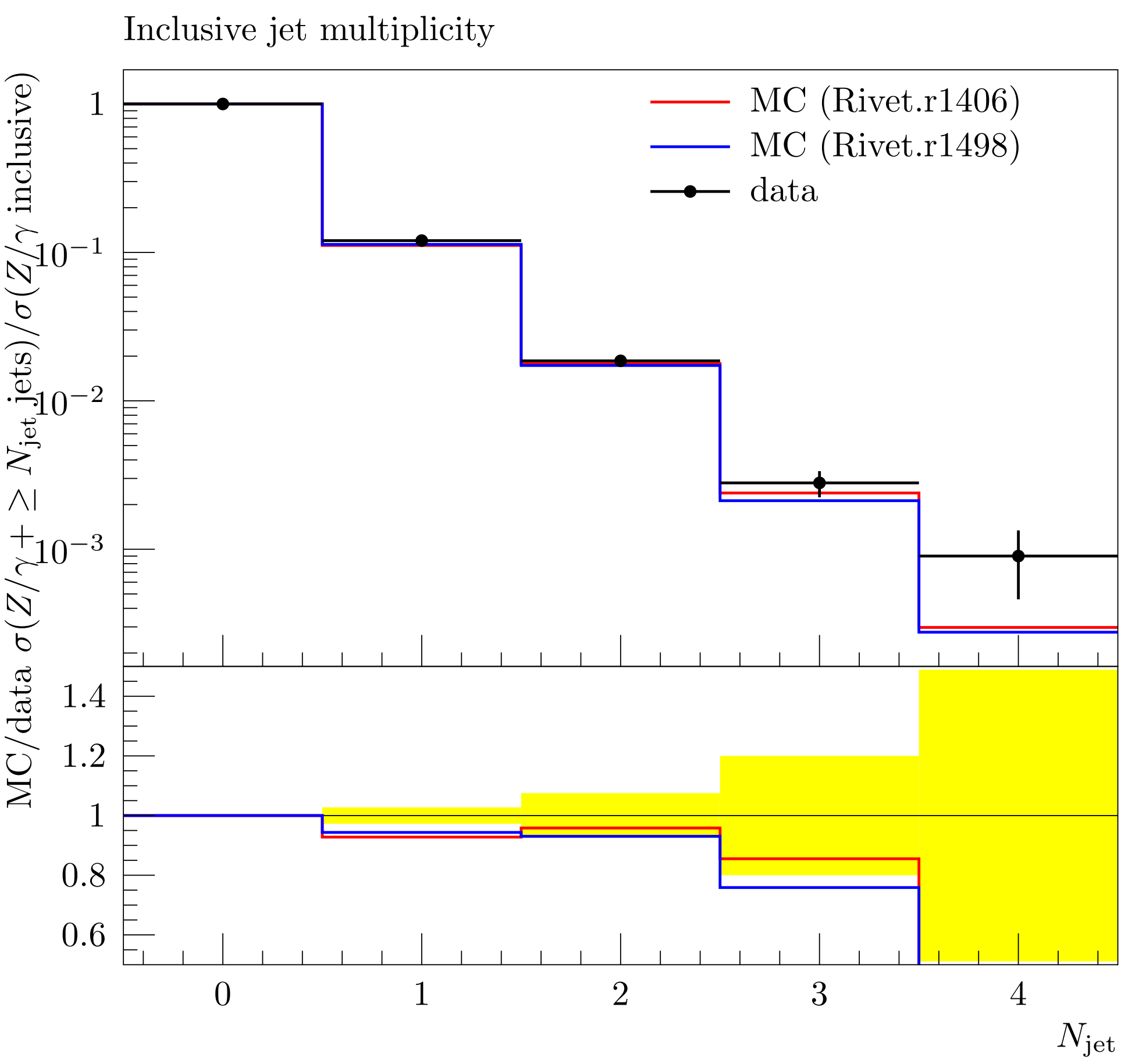
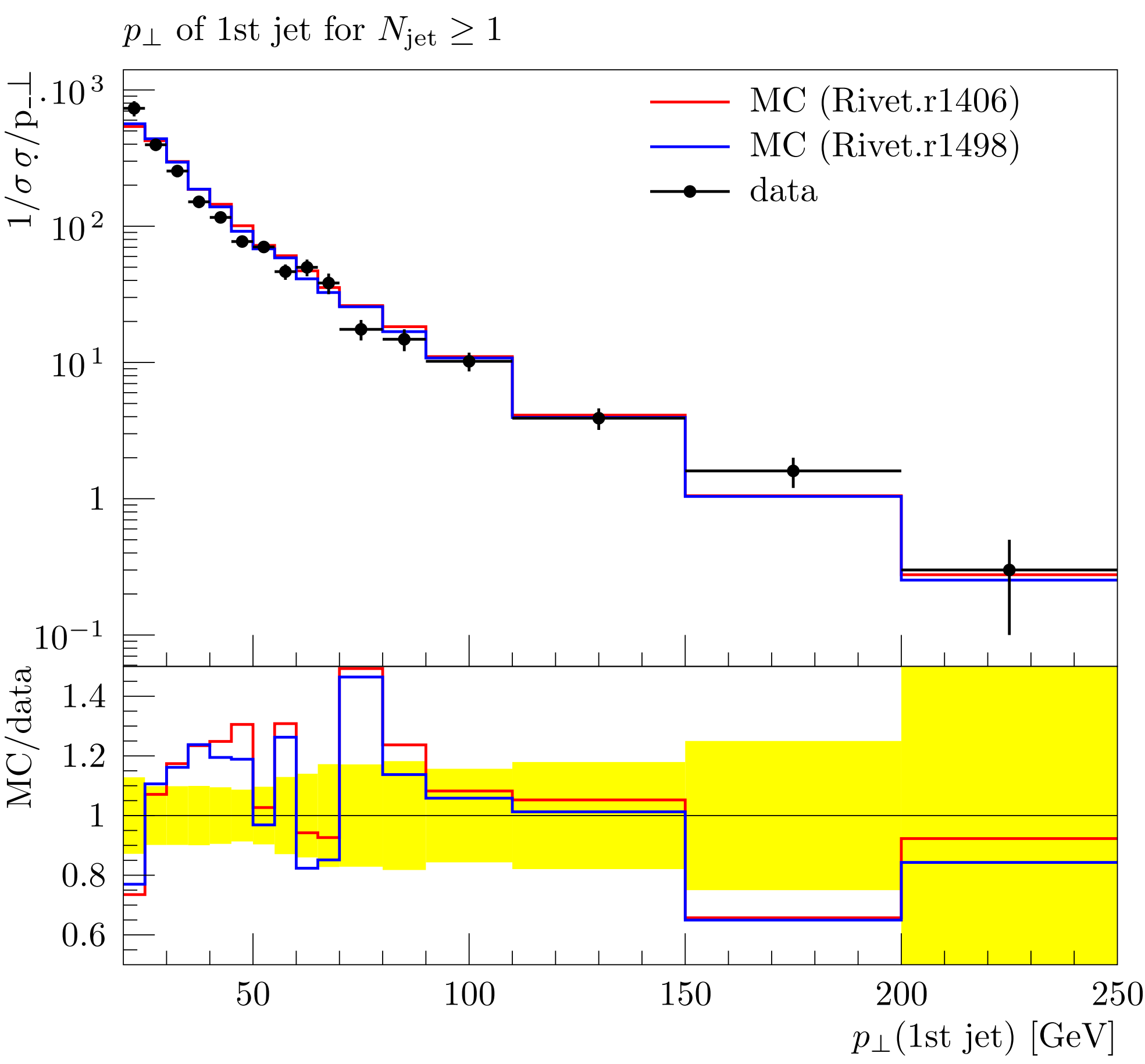

Jet multiplicity
$\sigma(N_{\text{jet}})$
10^4
10^3
10^2
MC (Rivet.r1406)
MC (Rivet.r1498)
data
MC/data
1.4
1.2
1
0.8
0.6
0.5
1
1.5
2
2.5
3
3.5
N_{jet}

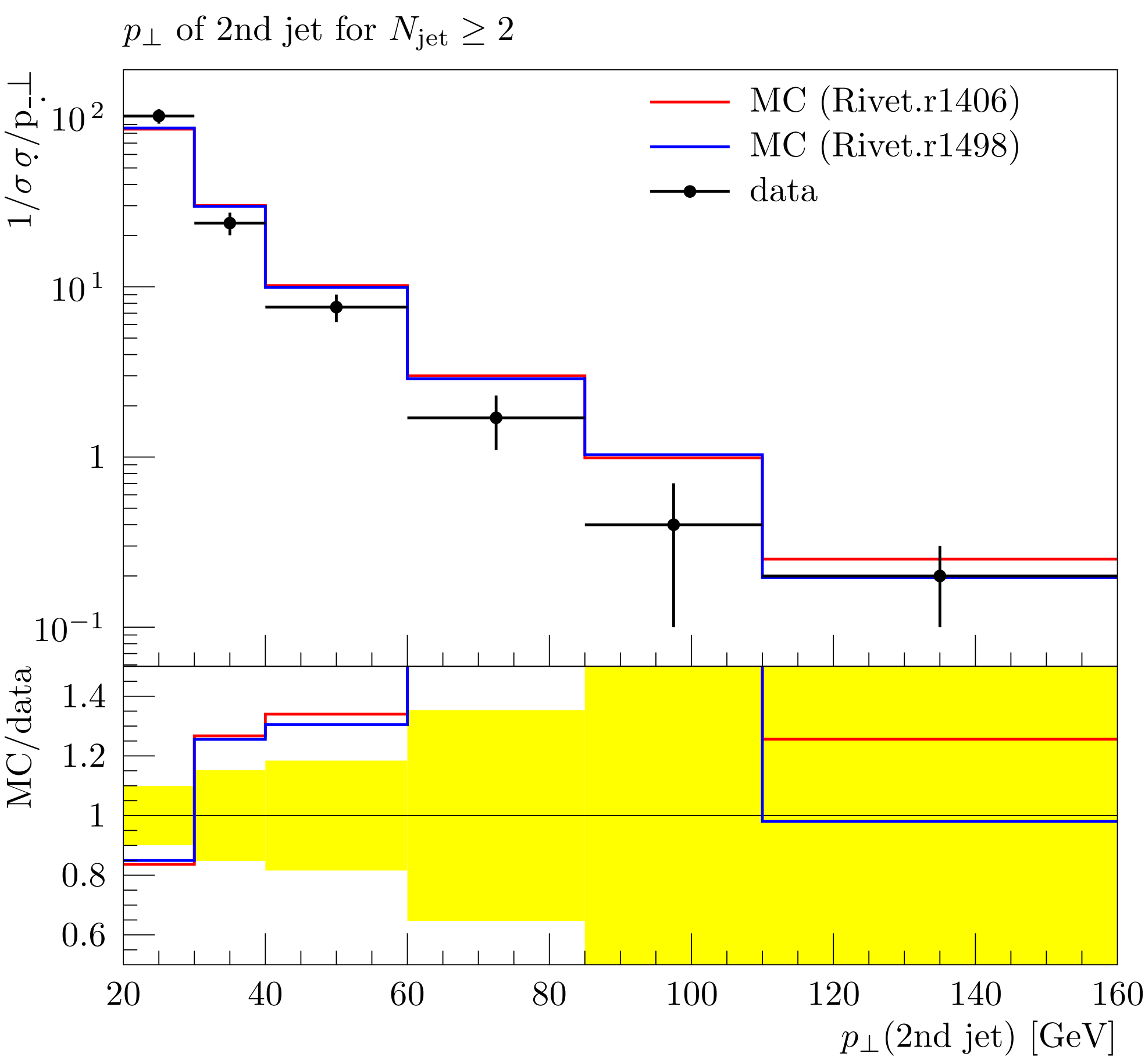

Jet $p_\perp$ for inclusive $N_{\text{jet}} \geq 1$
MC (Rivet.r1406)
MC (Rivet.r1498)
data
$\mathrm{d}\sigma/\mathrm{d}p_\perp(\text{jet})$
10^2
10^1
1
10^{-1}
MC/data
1.4
1.2
1
0.8
0.6
50
100
150
200
250
300
350
400
$p_\perp(\text{jet})$ [GeV]

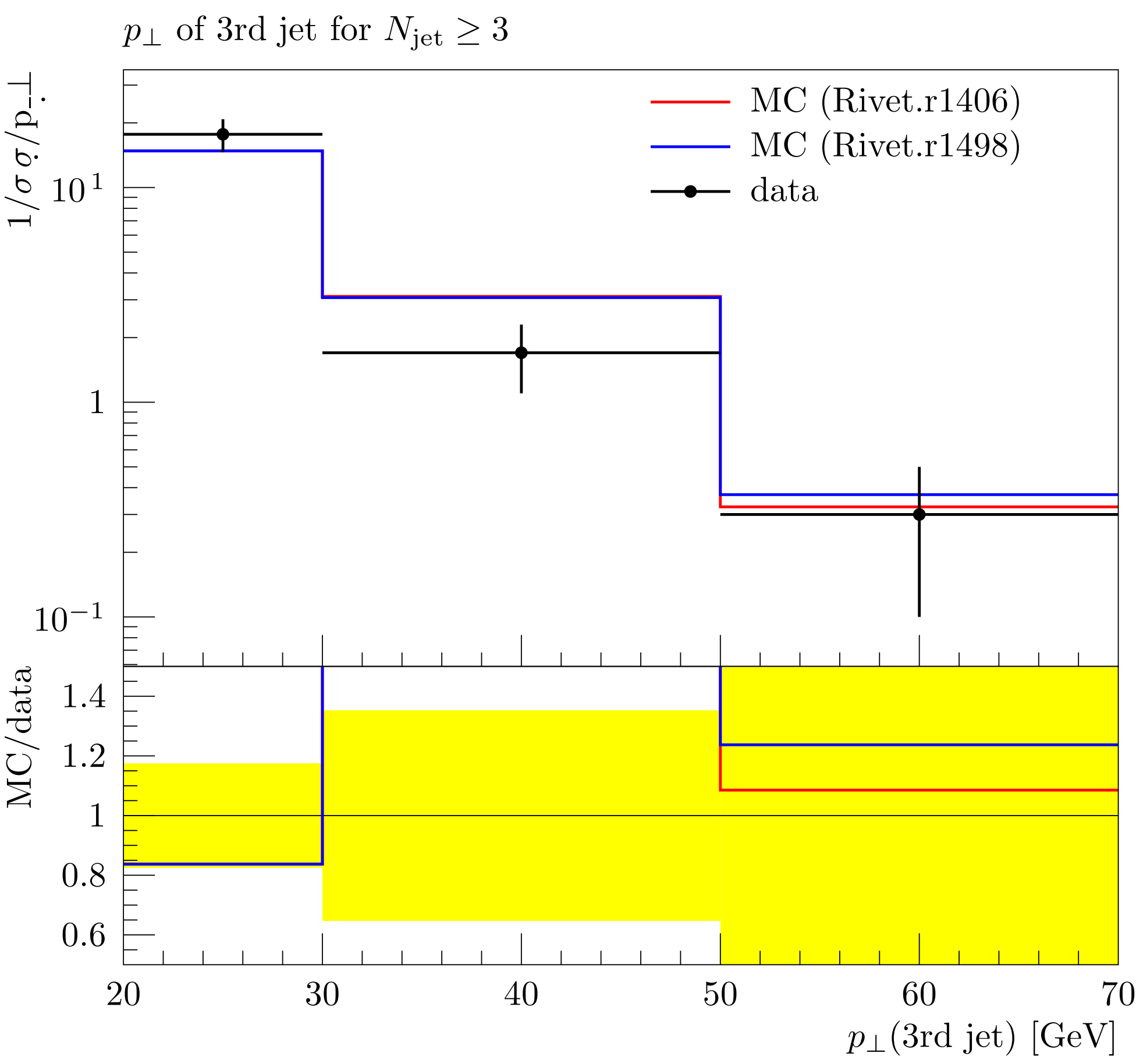

Jet $p_\perp$ for inclusive $N_{\text{jet}} \geq 2$
10^2
10^1
1
10^{-1}
$\mathrm{d}\sigma/\mathrm{d}p_\perp(\text{jet})$
MC (Rivet.r1406)
MC (Rivet.r1498)
data
MC/data
1.4
1.2
1
0.8
0.6
50
100
150
200
250
300
$p_\perp(\text{jet})$ [GeV]

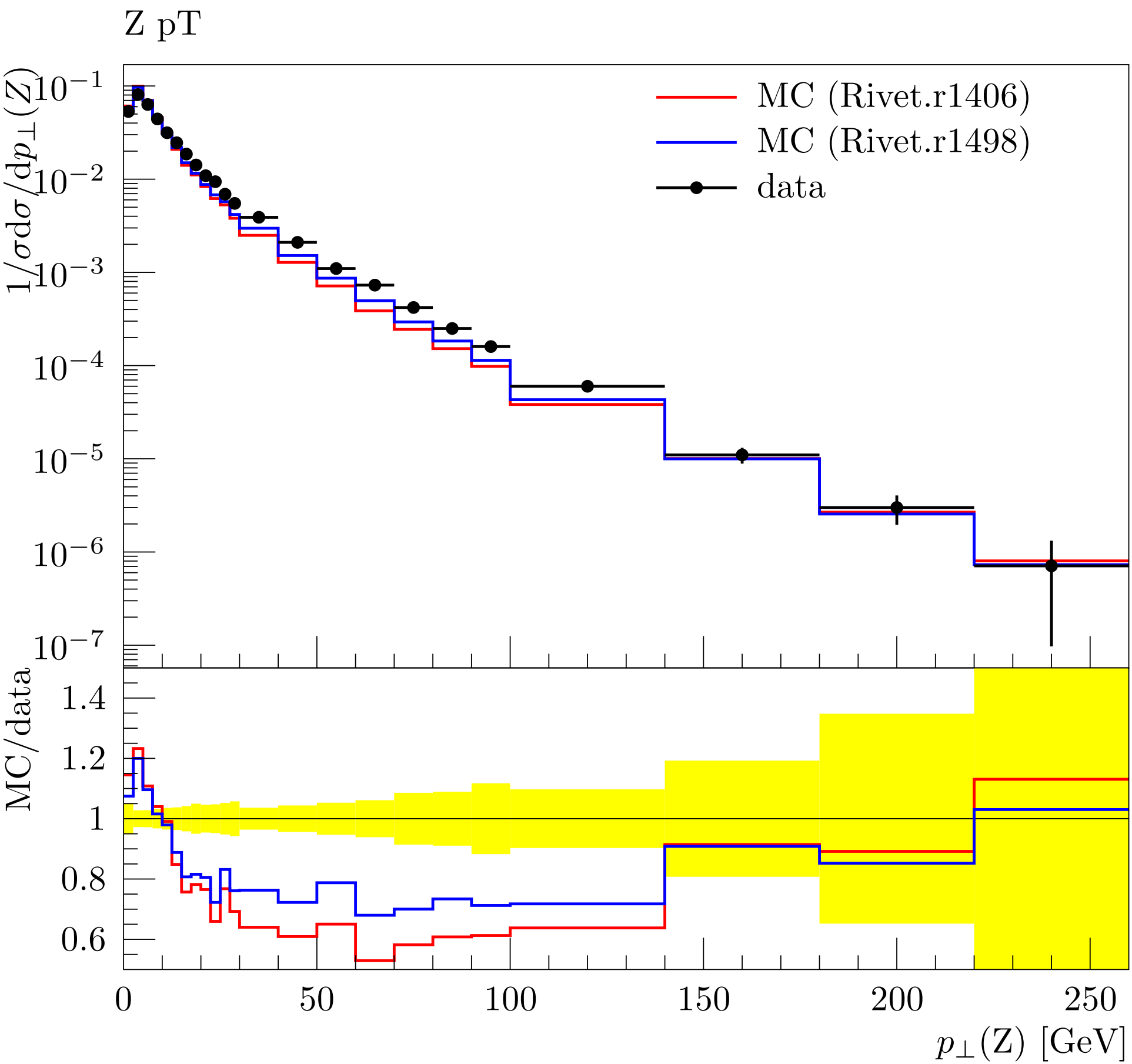

$1/\sigma \mathrm{d}\sigma/\mathrm{d}y(Z)$
MC (Rivet.r1406)
MC (Rivet.r1498)
data
$1/\sigma \mathrm{d}\sigma/\mathrm{d}|y|(Z)$
10^{-1}
10^{-2}
MC/data
1.4
1.2
1
0.8
0.6
0
0.5
1
1.5
2
2.5
$|y|$(Z)

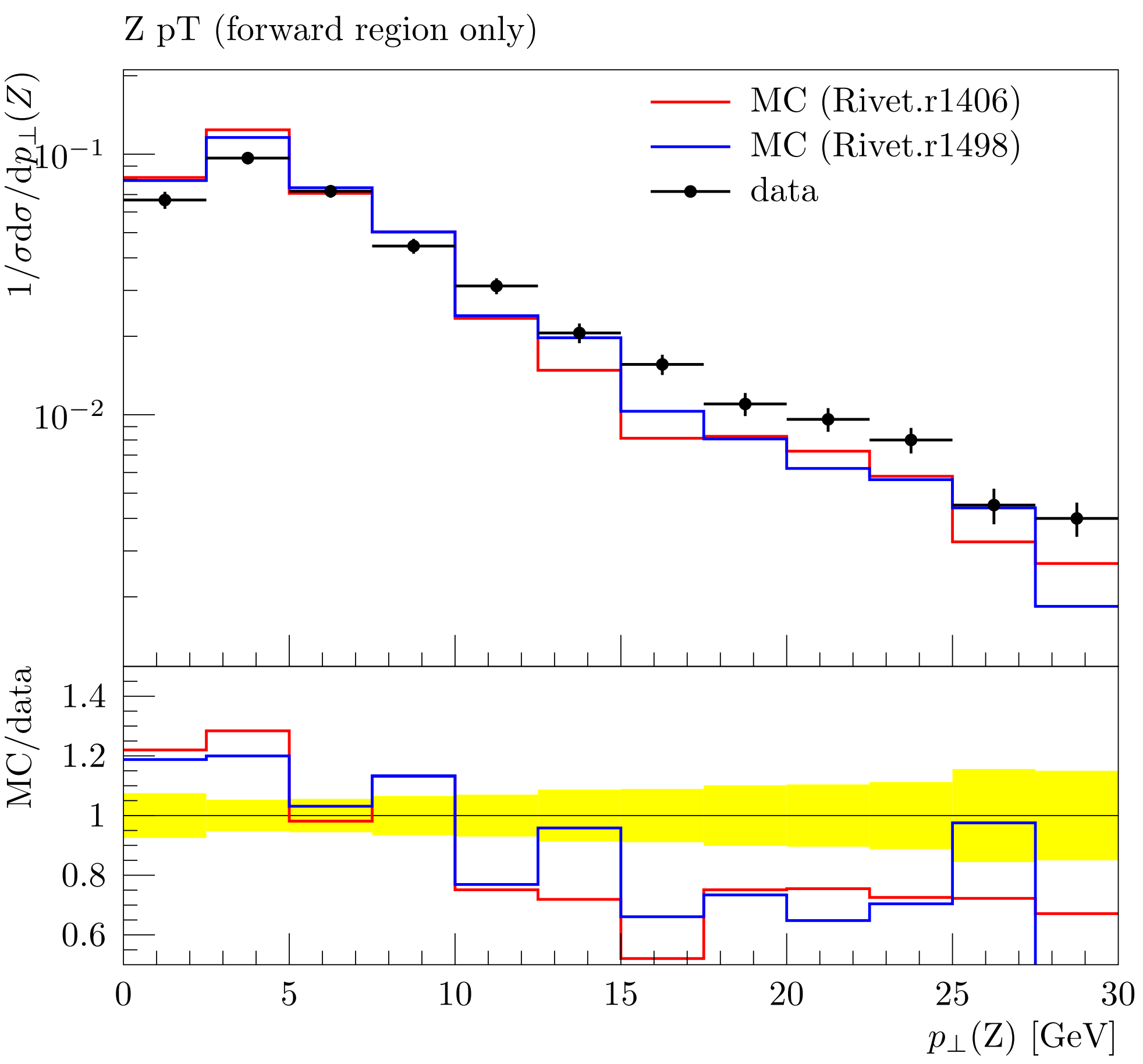

Inclusive jet multiplicity
MC (Rivet.r1406)
MC (Rivet.r1498)
data
$\sigma(Z/\gamma + \geq N_{\text{jet}}\text{ jets})/\sigma(Z/\gamma\text{ inclusive})$
MC/data
1
10^{-1}
10^{-2}
10^{-3}
1.4
1.2
1
0.8
0.6
0
1
2
3
4
N_{jet}

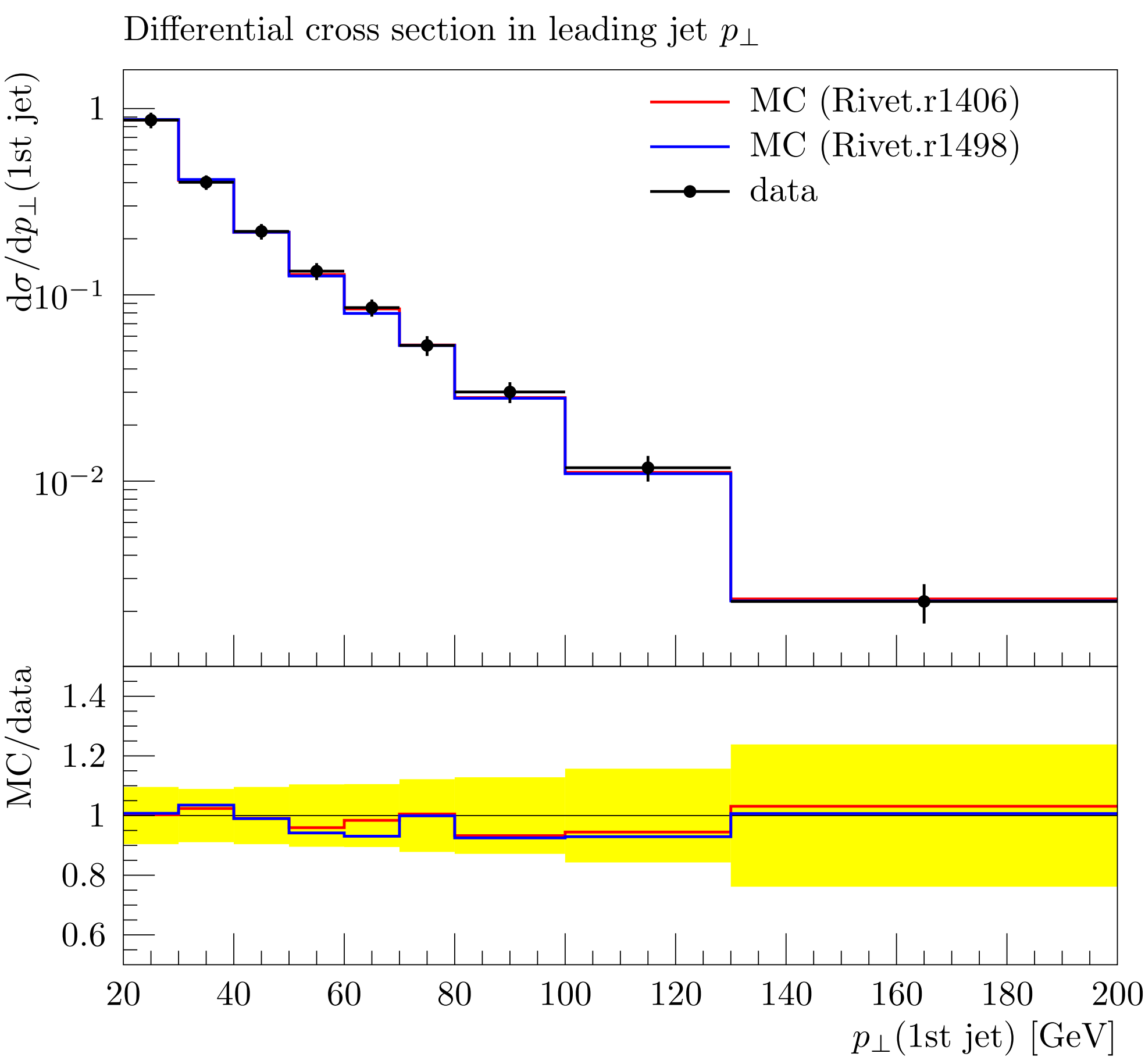

$p_\perp$ of 1st jet for $N_{\text{jet}} \geq 1$
$1/\sigma\, \sigma/p_\perp$
$\cdot 10^3$
10^2
10^1
1
10^{-1}
MC (Rivet.r1406)
MC (Rivet.r1498)
data
MC/data
1.4
1.2
1
0.8
0.6
50
100
150
200
250
$p_\perp$(1st jet) [GeV]

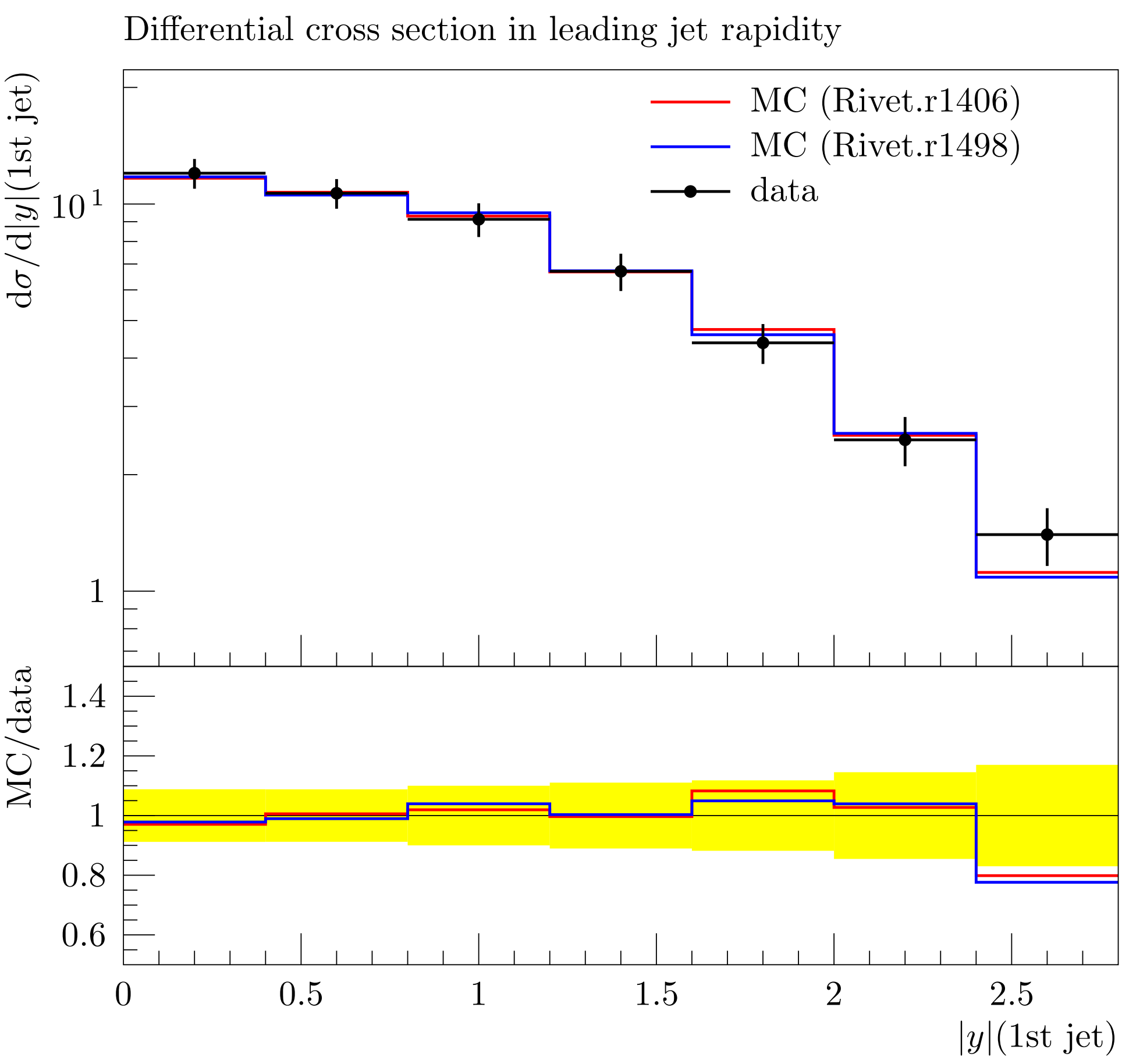

$p_\perp$ of 2nd jet for $N_{\text{jet}} \geq 2$
$1/\sigma\, \sigma/\mathrm{p\_\perp}$
10^2
10^1
1
10^{-1}
MC (Rivet.r1406)
MC (Rivet.r1498)
data
MC/data
1.4
1.2
1
0.8
0.6
20
40
60
80
100
120
140
160
$p_\perp$(2nd jet) [GeV]

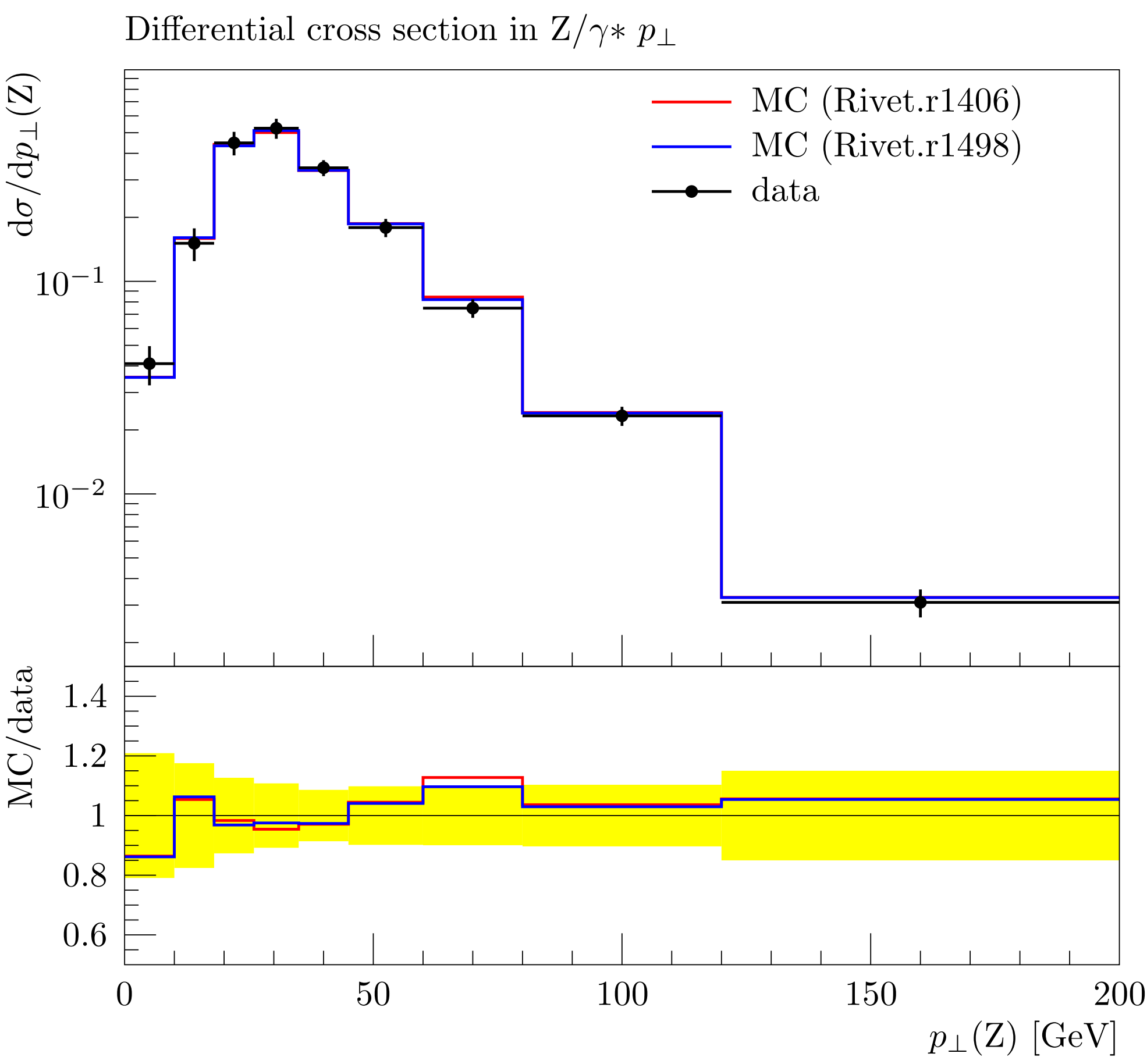

$p_\perp$ of 3rd jet for $N_{\text{jet}} \geq 3$
$1/\sigma\, \sigma/p_\perp$
MC (Rivet.r1406)
MC (Rivet.r1498)
data
10^1
1
10^{-1}
MC/data
1.4
1.2
1
0.8
0.6
20
30
40
50
60
70
$p_\perp$(3rd jet) [GeV]

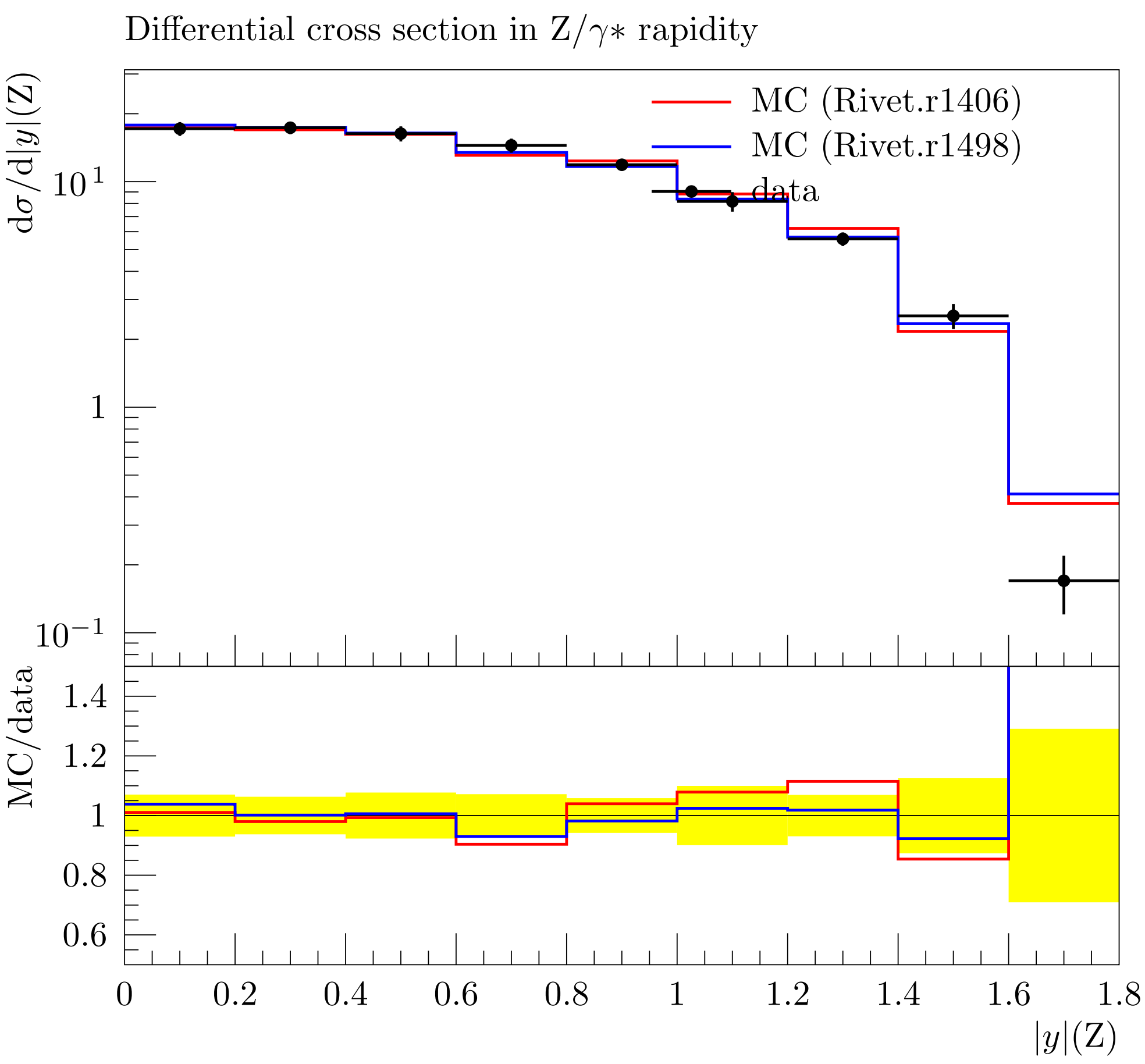

Z pT
MC (Rivet.r1406)
MC (Rivet.r1498)
data
$1/\sigma d\sigma/dp_\perp(Z)$
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
10^{-7}
MC/data
1.4
1.2
1
0.8
0.6
0
50
100
150
200
250
$p_\perp(Z)$ [GeV]

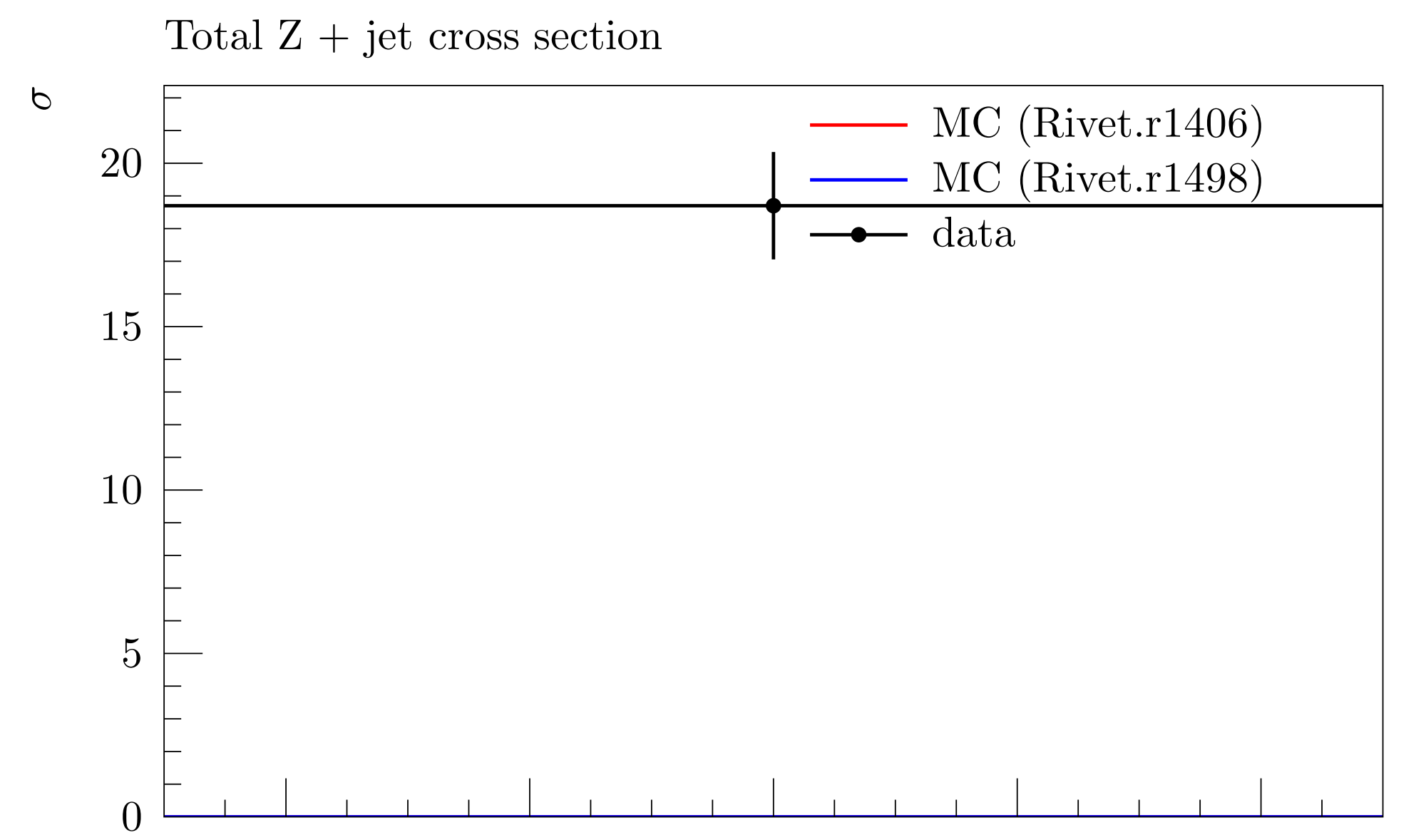

Z pT (forward region only)
MC (Rivet.r1406)
MC (Rivet.r1498)
data
$1/\sigma d\sigma/dp_\perp(Z)$
10^{-1}
10^{-2}
MC/data
1.4
1.2
1
0.8
0.6
0
5
10
15
20
25
30
$p_\perp$(Z) [GeV]

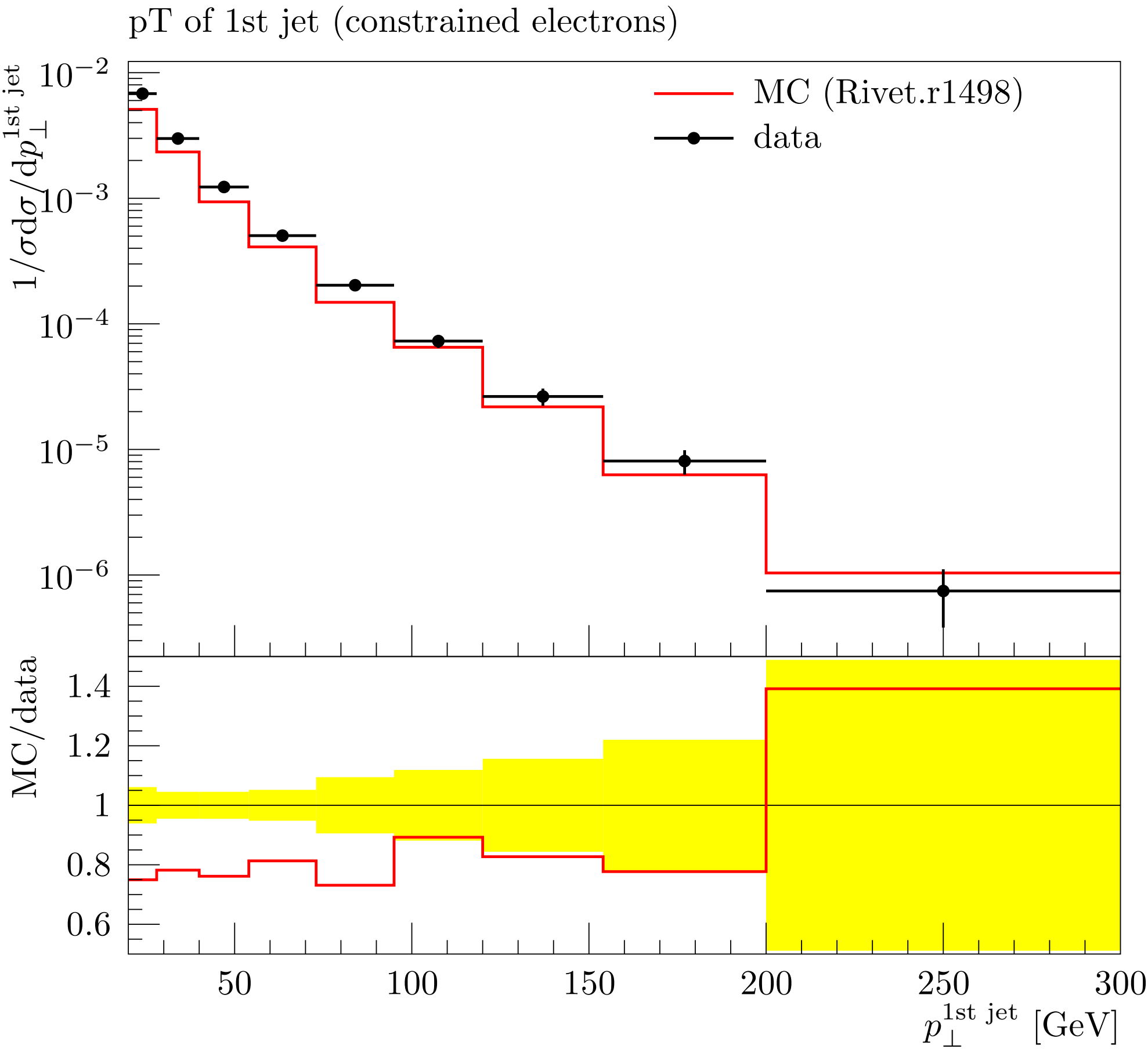

Differential cross section in leading jet $p_\perp$
MC (Rivet.r1406)
MC (Rivet.r1498)
data
$d\sigma/dp_\perp$(1st jet)
1
10^{-1}
10^{-2}
MC/data
1.4
1.2
1
0.8
0.6
20
40
60
80
100
120
140
160
180
200
$p_\perp$(1st jet) [GeV]

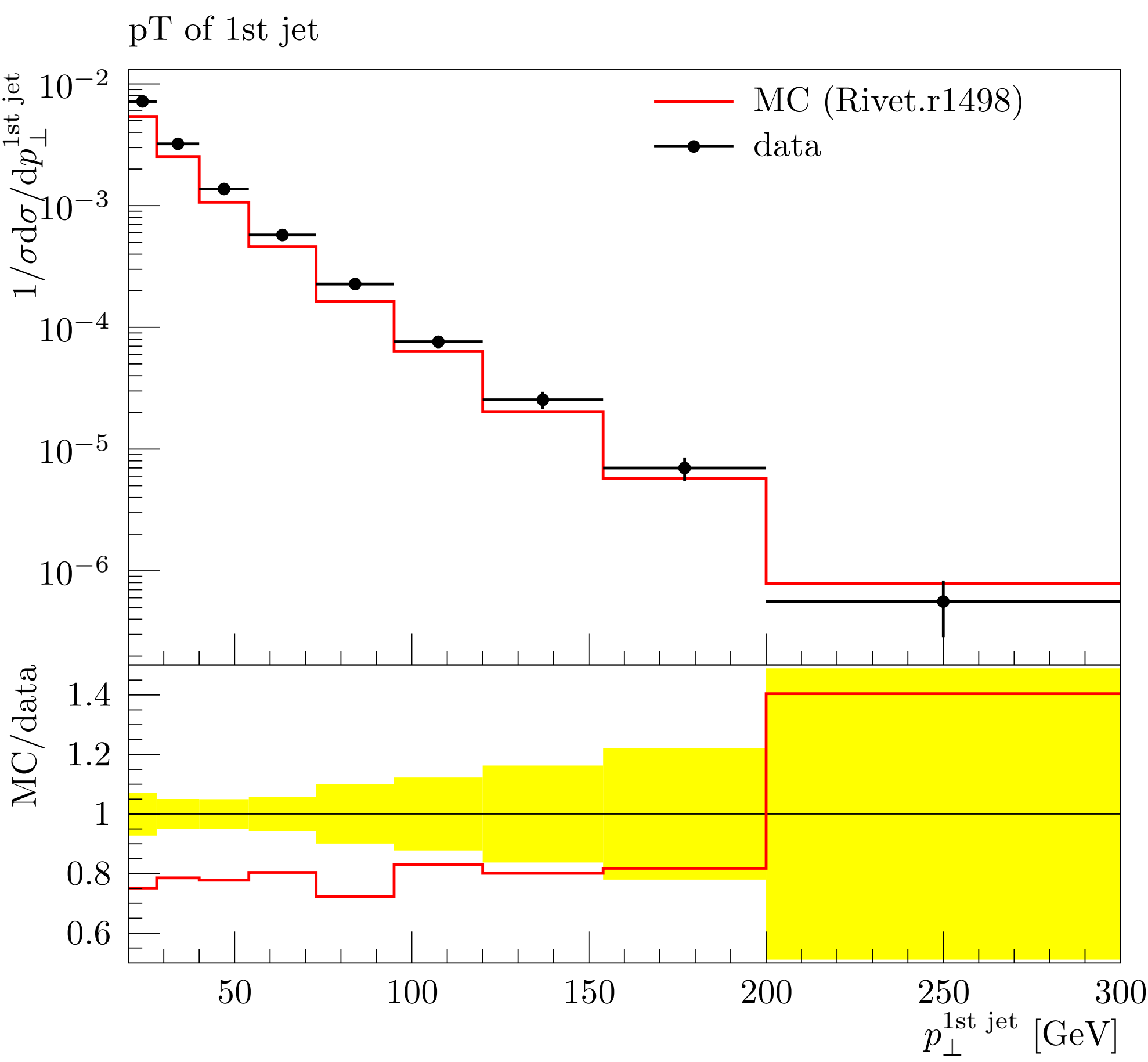

Differential cross section in leading jet rapidity
MC (Rivet.r1406)
MC (Rivet.r1498)
data
dσ/d|y|(1st jet)
10^1
1
MC/data
1.4
1.2
1
0.8
0.6
0
0.5
1
1.5
2
2.5
|y|(1st jet)

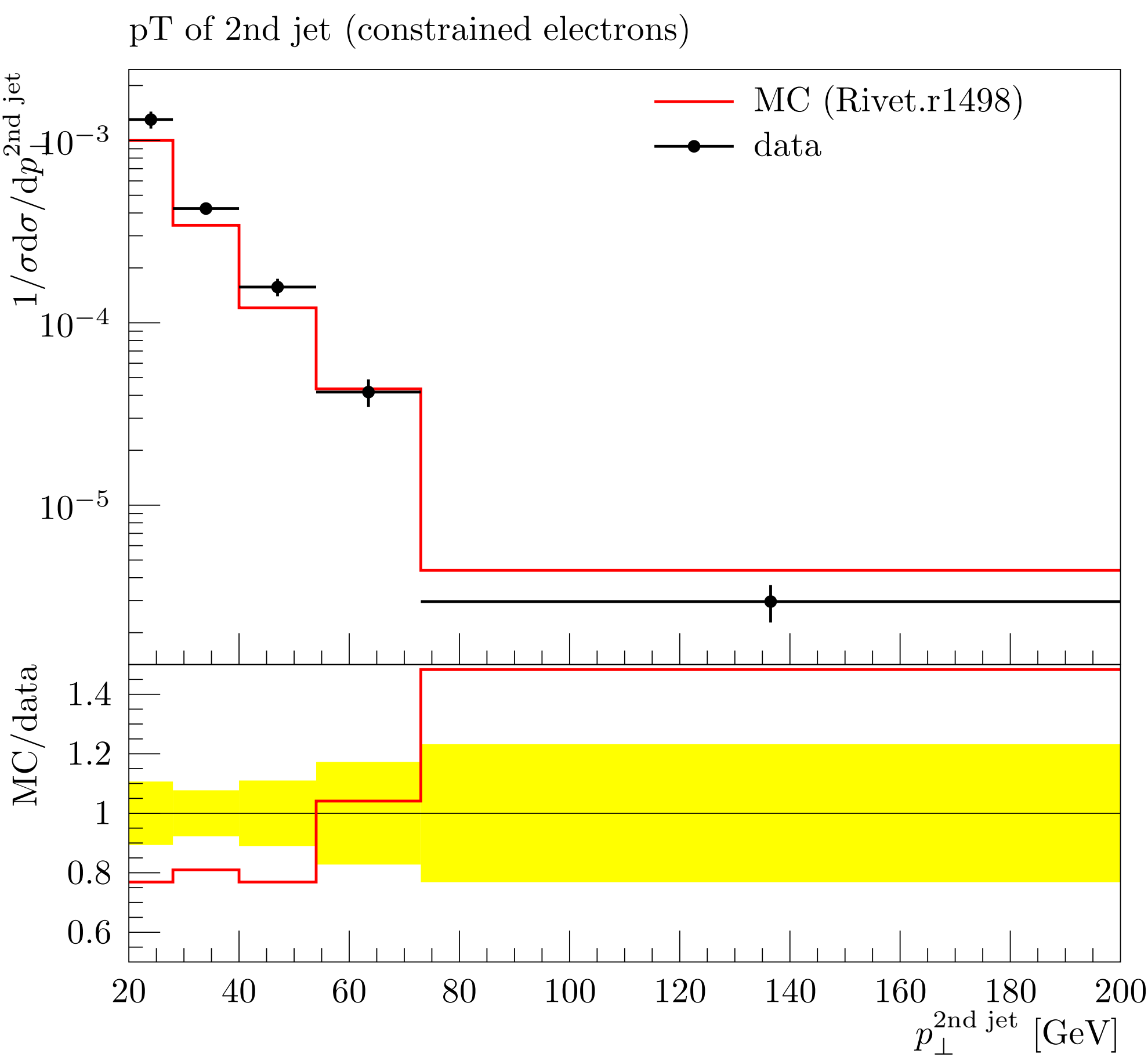

Differential cross section in Z/γ* $p_\perp$
MC (Rivet.r1406)
MC (Rivet.r1498)
data
$d\sigma/dp_\perp(Z)$
10^{-1}
10^{-2}
MC/data
1.4
1.2
1
0.8
0.6
0
50
100
150
200
$p_\perp(Z)$ [GeV]

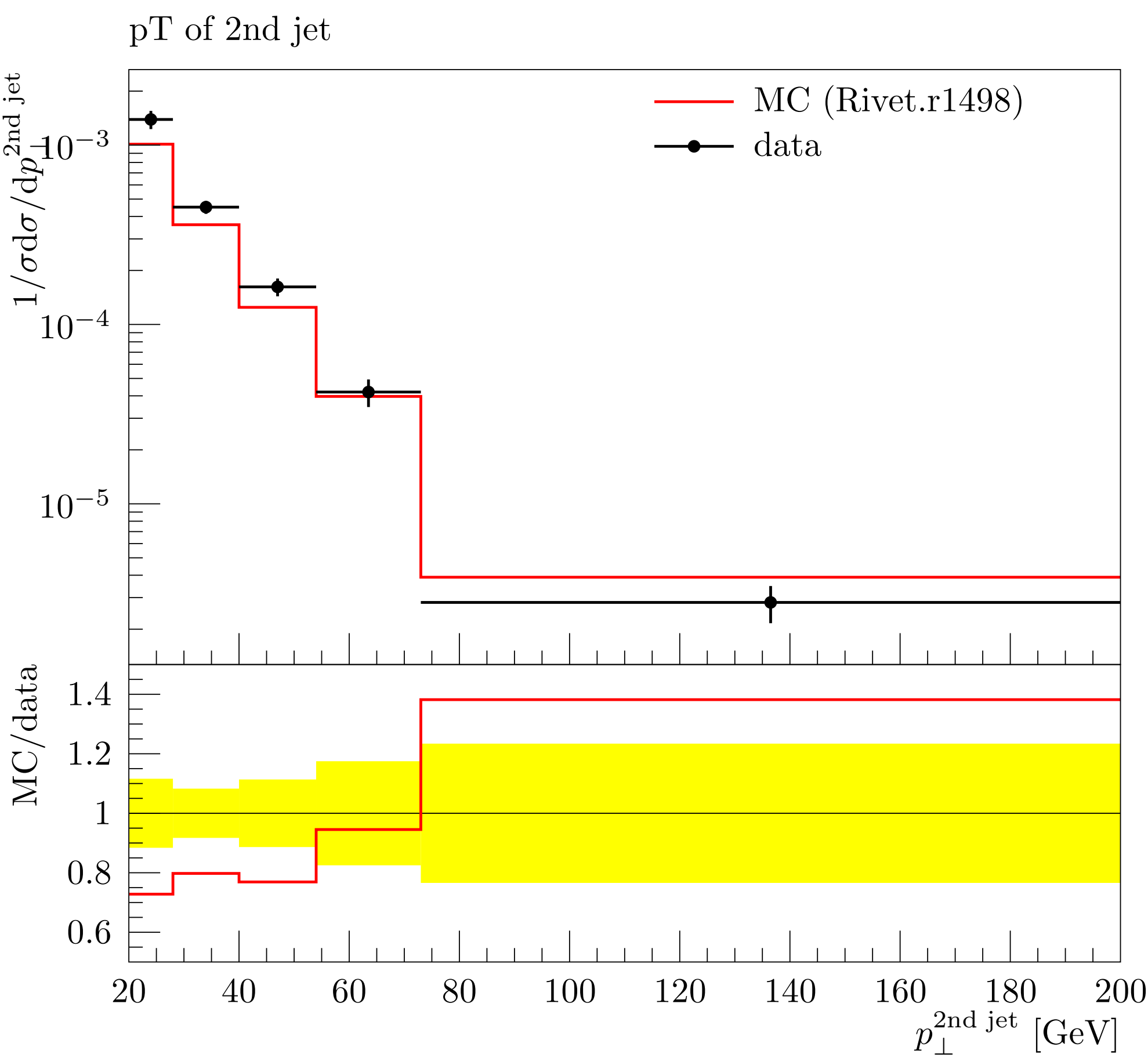

Differential cross section in Z/γ* rapidity
MC (Rivet.r1406)
MC (Rivet.r1498)
data
dσ/d|y|(Z)
10^1
1
10^−1
MC/data
1.4
1.2
1
0.8
0.6
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
|y|(Z)

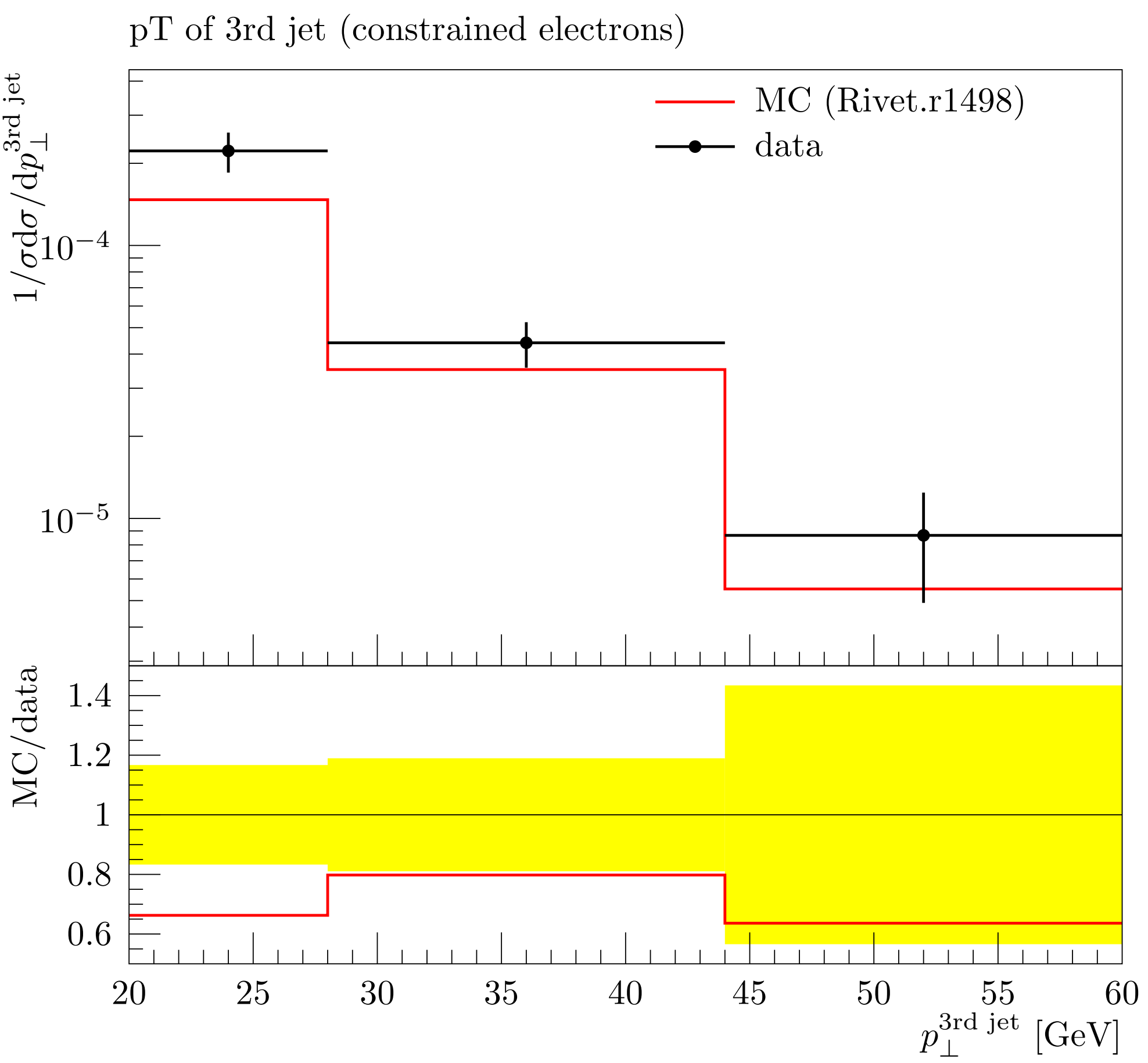

Total Z + jet cross section
σ
20
15
10
5
0
MC (Rivet.r1406)
MC (Rivet.r1498)
data

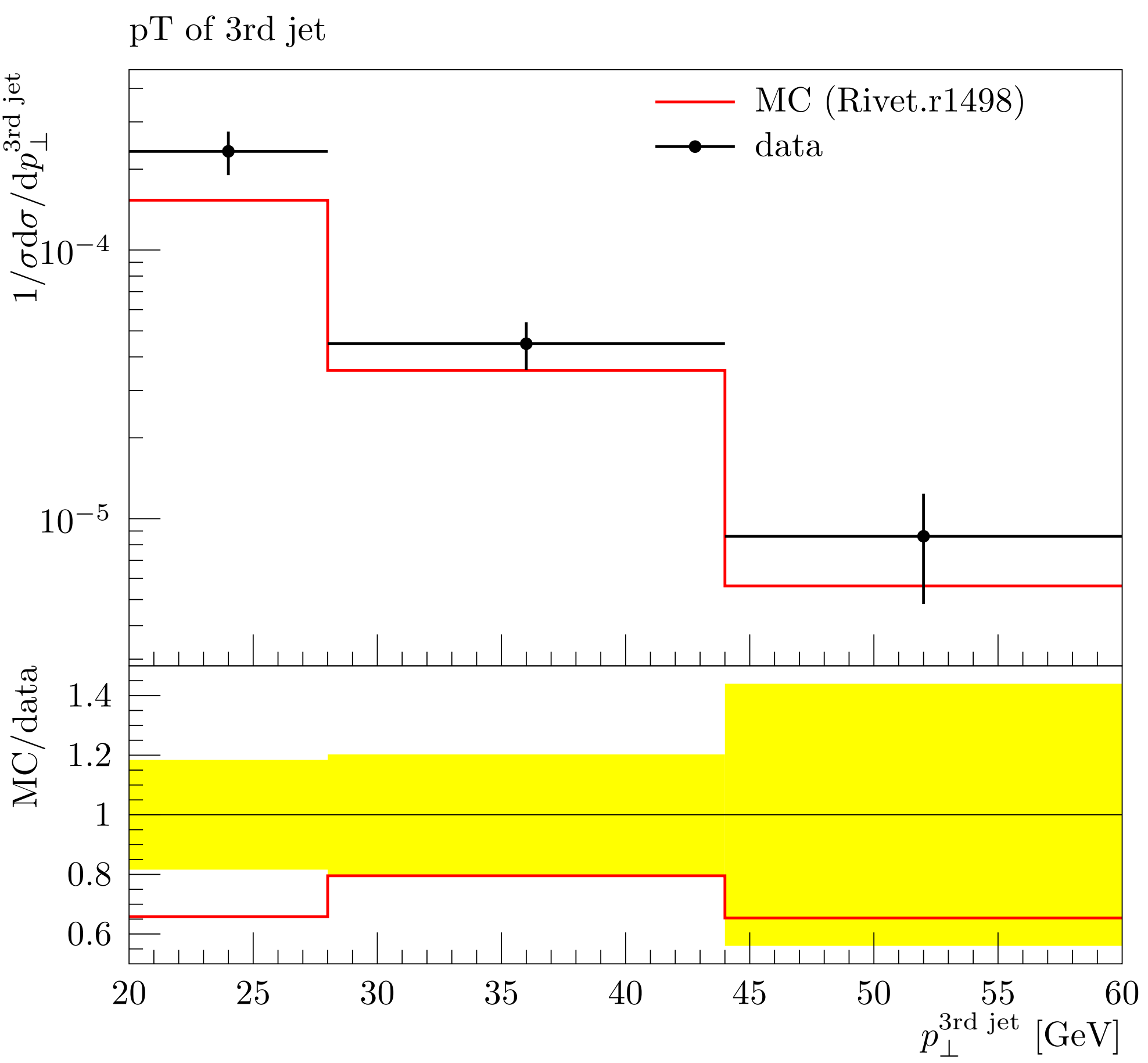

pT of 1st jet (constrained electrons)
MC (Rivet.r1498)
data
$1/\sigma \mathrm{d}\sigma/\mathrm{d}p_\perp^{\text{1st jet}}$
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
MC/data
1.4
1.2
1
0.8
0.6
50
100
150
200
250
300
$p_\perp^{\text{1st jet}}$ [GeV]

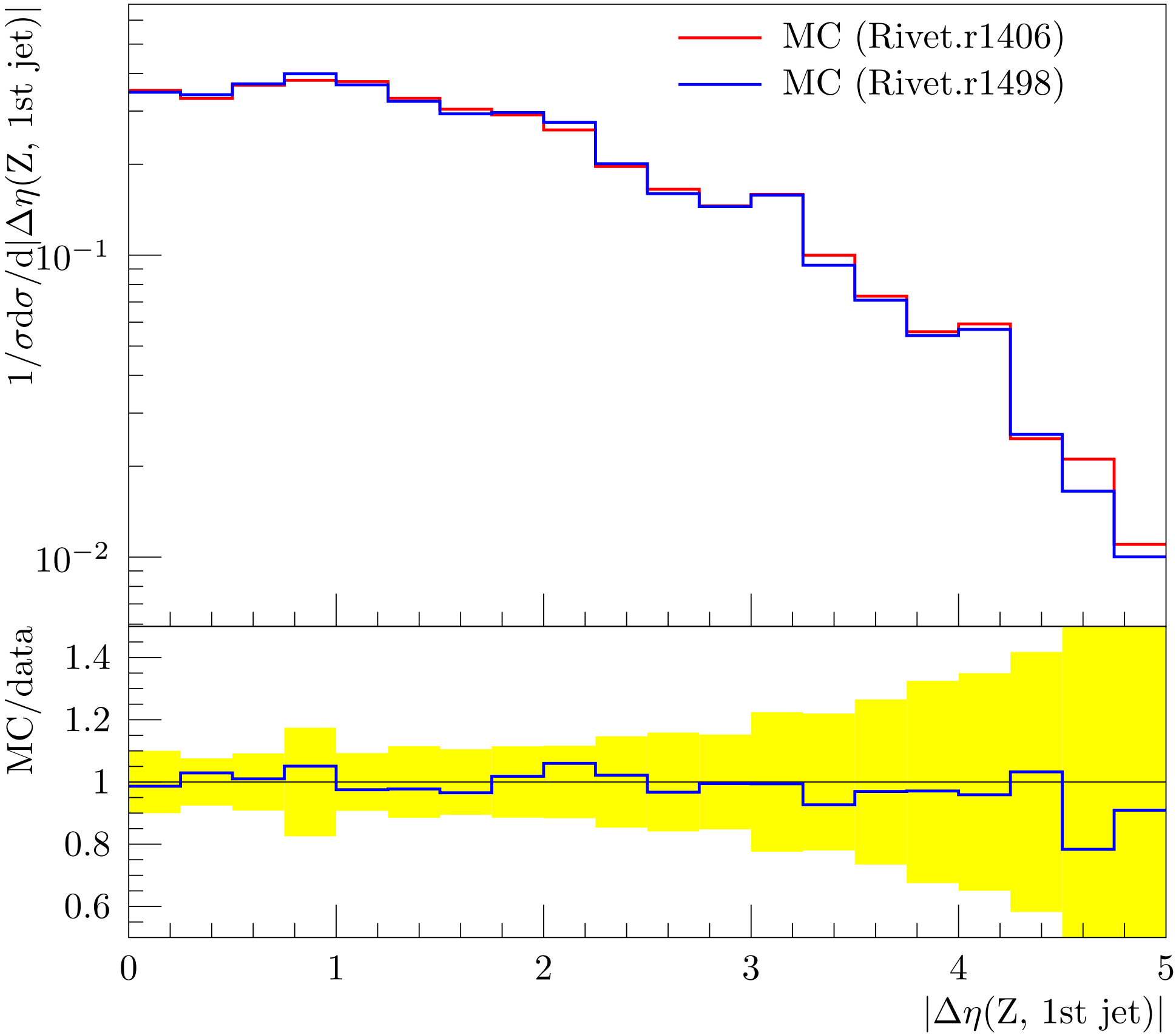

pT of 1st jet
MC (Rivet.r1498)
data
$1/\sigma \mathrm{d}\sigma/\mathrm{d}p_\perp^{\text{1st jet}}$
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
MC/data
1.4
1.2
1
0.8
0.6
50
100
150
200
250
300
$p_\perp^{\text{1st jet}}$ [GeV]

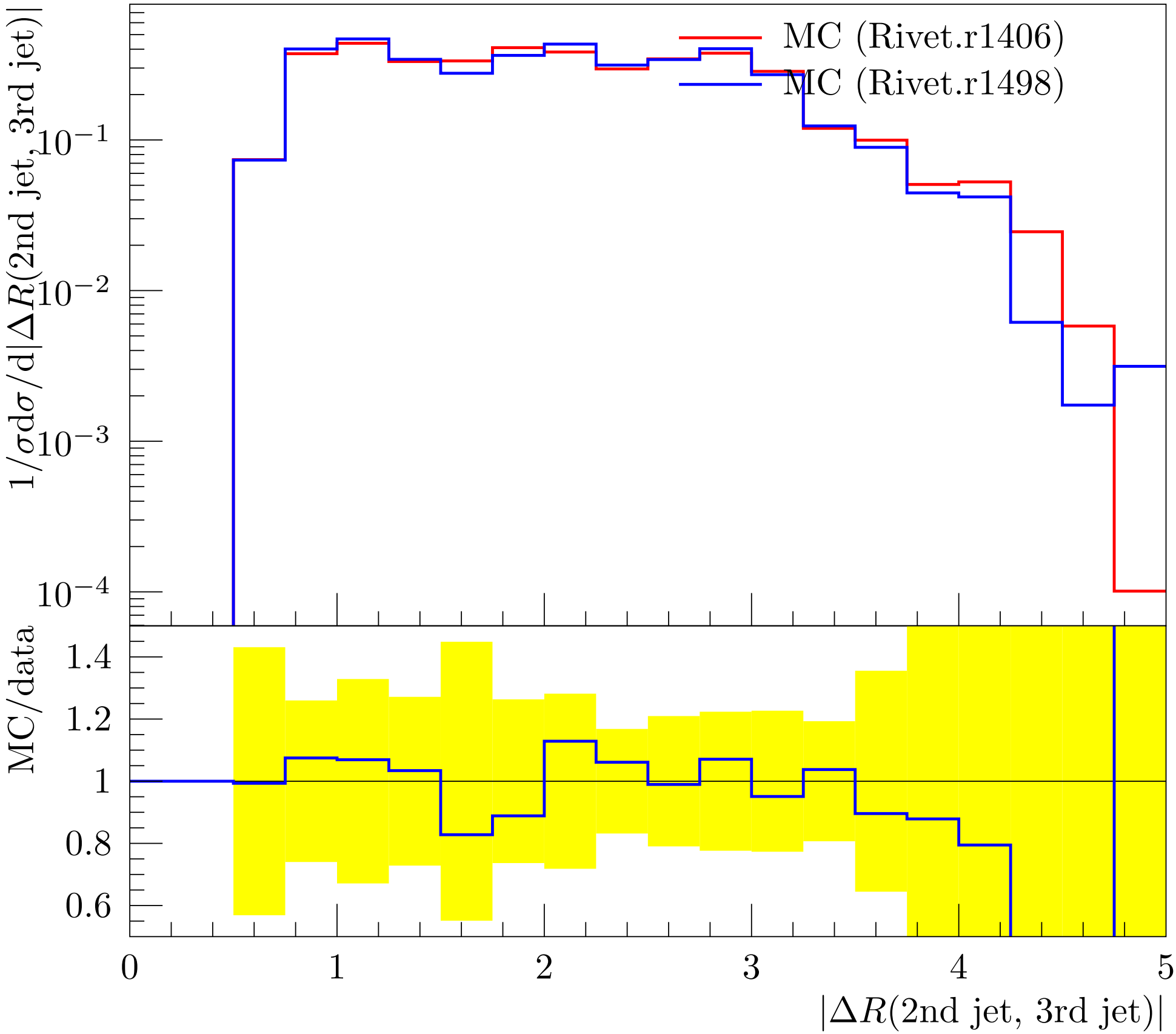

pT of 2nd jet (constrained electrons)
MC (Rivet.r1498)
data
$1/\sigma d\sigma/dp_\perp^{\text{2nd jet}}$
10^{-3}
10^{-4}
10^{-5}
MC/data
1.4
1.2
1
0.8
0.6
20
40
60
80
100
120
140
160
180
200
$p_\perp^{\text{2nd jet}}$ [GeV]

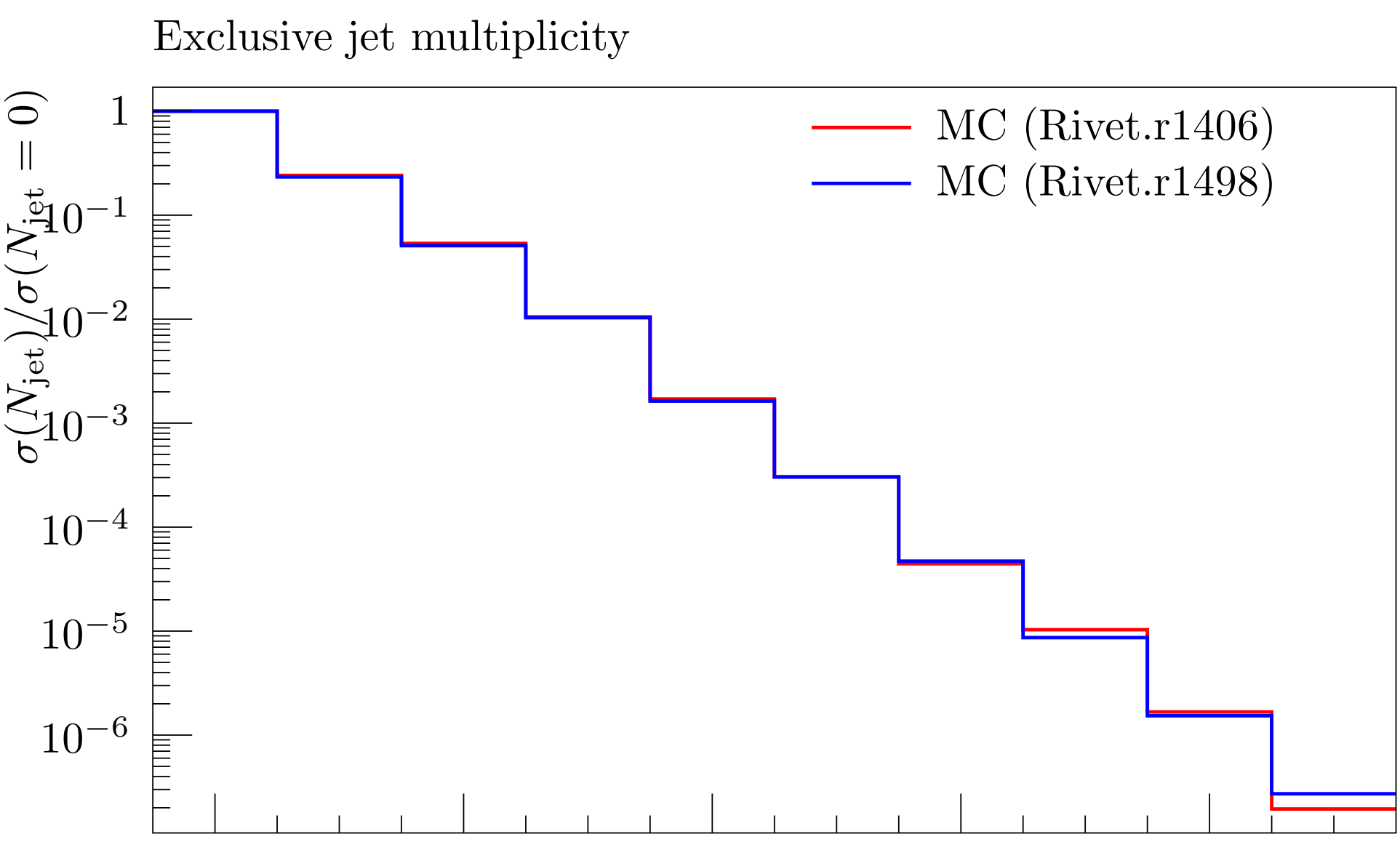

pT of 2nd jet
MC (Rivet.r1498)
data
$1/\sigma d\sigma/dp_\perp^{\text{2nd jet}}$
10^{-3}
10^{-4}
10^{-5}
MC/data
1.4
1.2
1
0.8
0.6
20
40
60
80
100
120
140
160
180
200
$p_\perp^{\text{2nd jet}}$ [GeV]

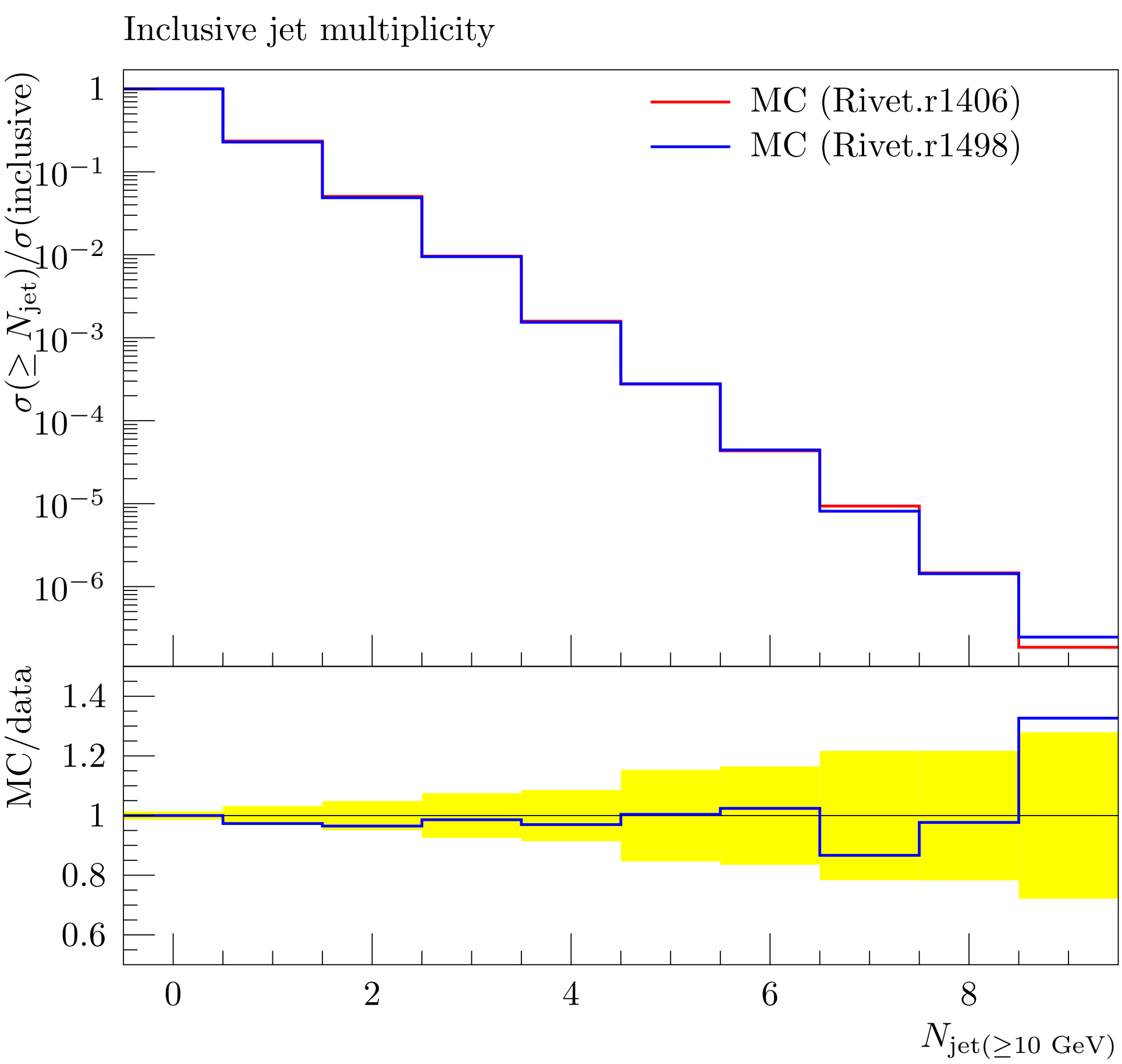

pT of 3rd jet (constrained electrons)
MC (Rivet.r1498)
data
$1/\sigma \mathrm{d}\sigma/\mathrm{d}p_\perp^{\text{3rd jet}}$
10^{-4}
10^{-5}
MC/data
1.4
1.2
1
0.8
0.6
20
25
30
35
40
45
50
55
60
$p_\perp^{\text{3rd jet}}$ [GeV]

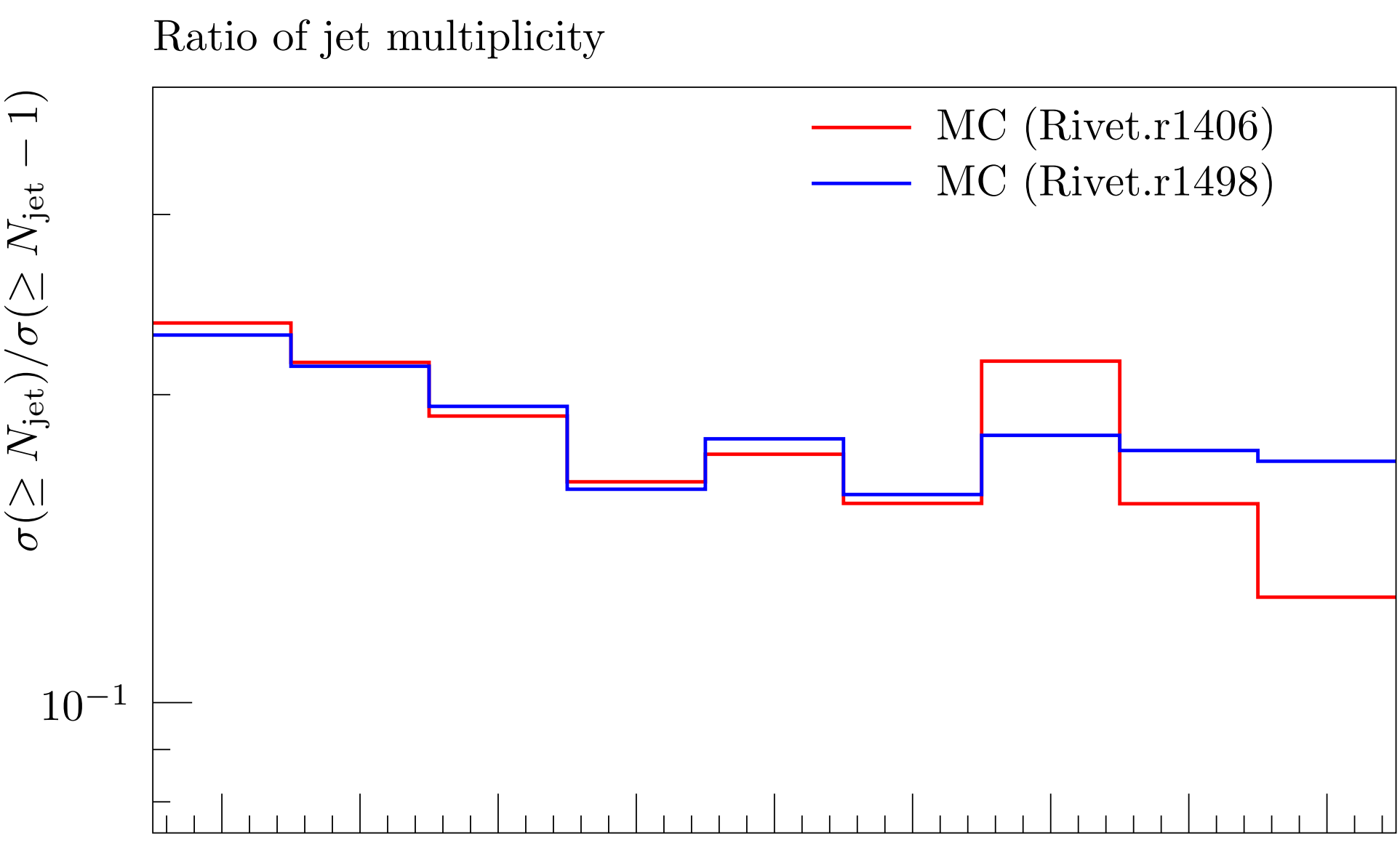

pT of 3rd jet
MC (Rivet.r1498)
data
$1/\sigma \mathrm{d}\sigma/\mathrm{d}p_\perp^{\text{3rd jet}}$
10^{-4}
10^{-5}
MC/data
1.4
1.2
1
0.8
0.6
20
25
30
35
40
45
50
55
60
$p_\perp^{\text{3rd jet}}$ [GeV]

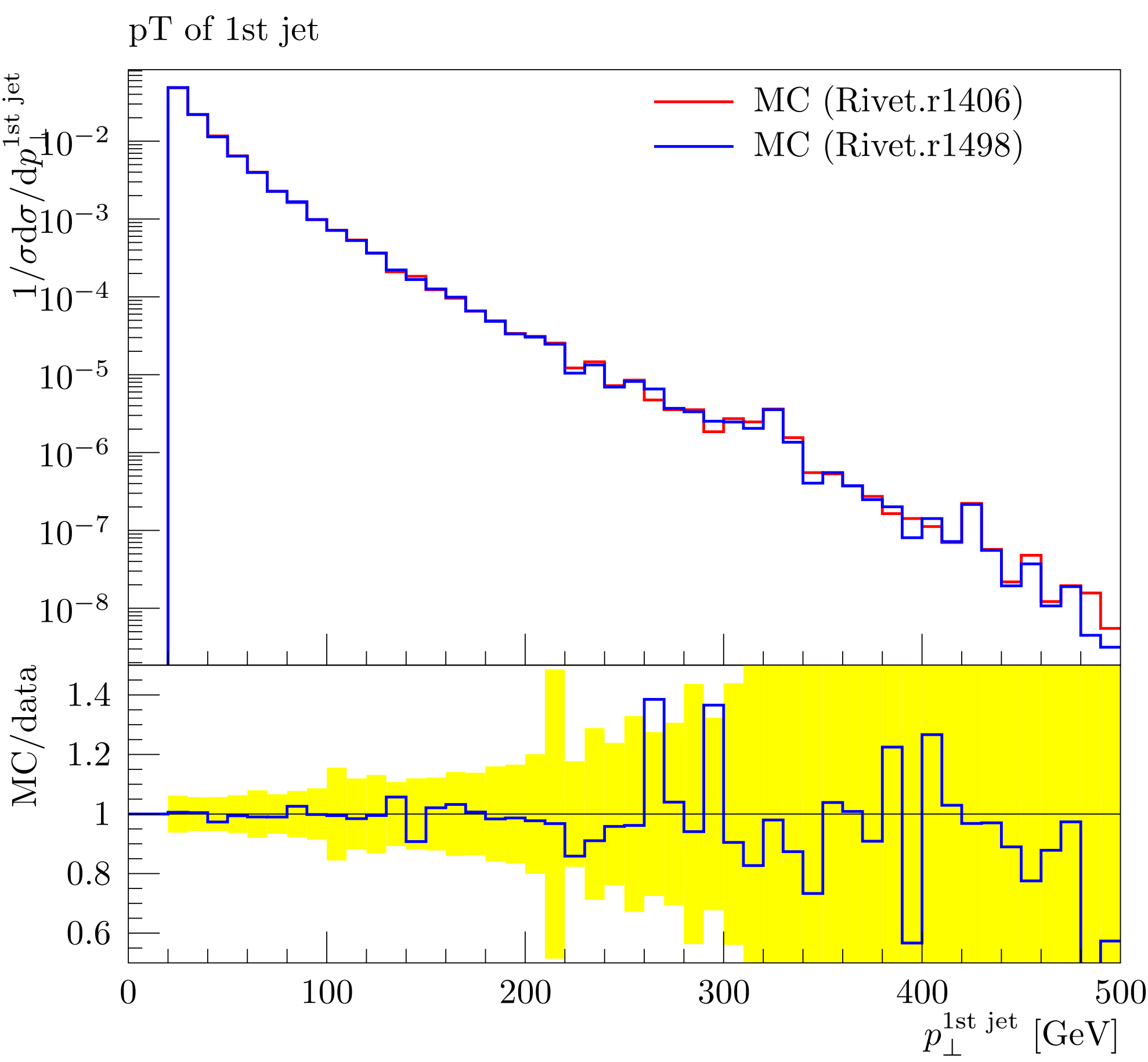

MC (Rivet.r1406)
MC (Rivet.r1498)
$1/\sigma \mathrm{d}\sigma/\mathrm{d}|\Delta\eta(\mathrm{Z},\ \mathrm{1st\ jet})|$
10^{-1}
10^{-2}
MC/data
1.4
1.2
1
0.8
0.6
0
1
2
3
4
5
$|\Delta\eta(\mathrm{Z},\ \mathrm{1st\ jet})|$

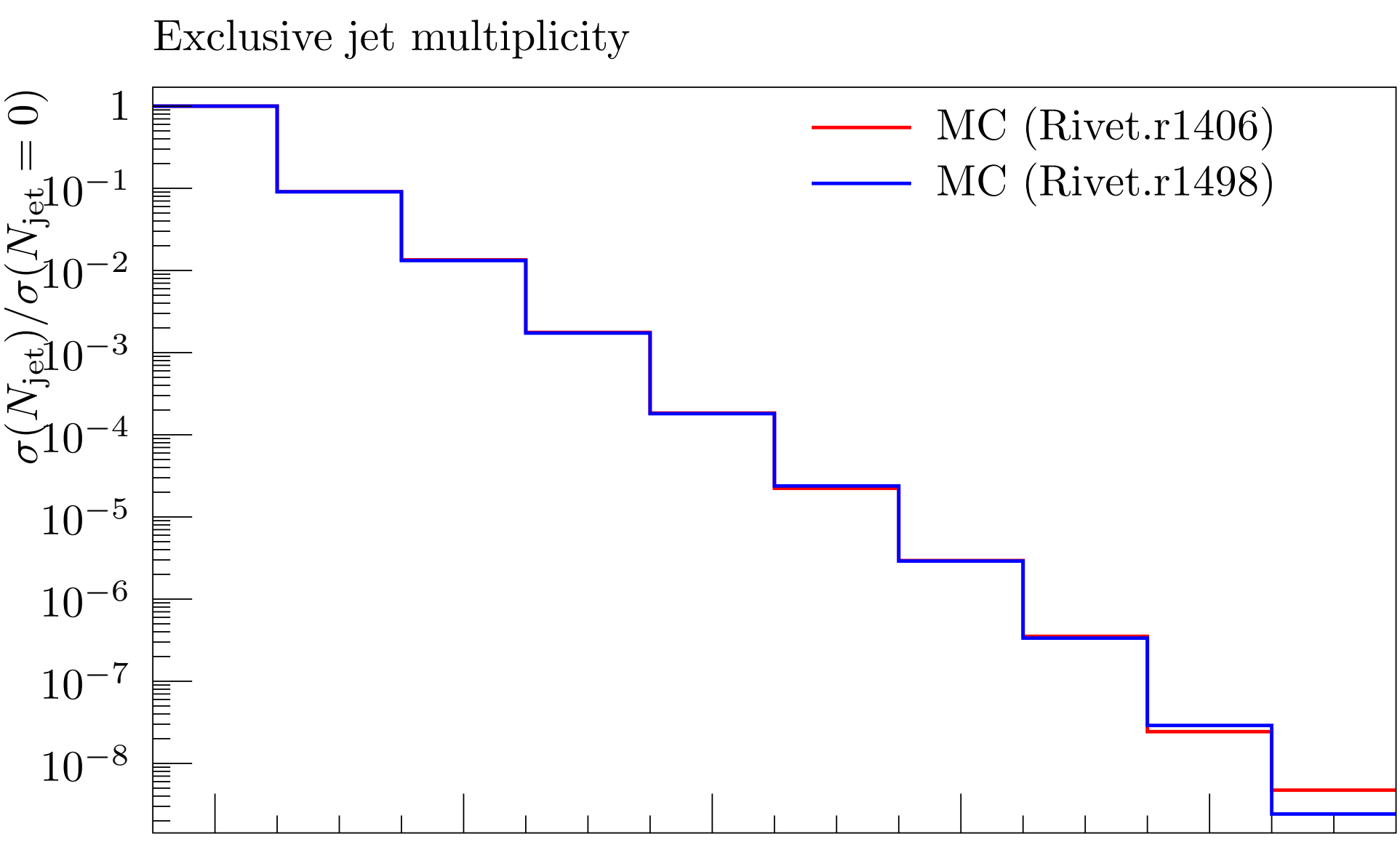

MC (Rivet.r1406)
MC (Rivet.r1498)
$1/\sigma \mathrm{d}\sigma/\mathrm{d}|\Delta R(\text{2nd jet, 3rd jet})|$
10^{-1}
10^{-2}
10^{-3}
10^{-4}
MC/data
1.4
1.2
1
0.8
0.6
0
1
2
3
4
5
$|\Delta R(\text{2nd jet, 3rd jet})|$

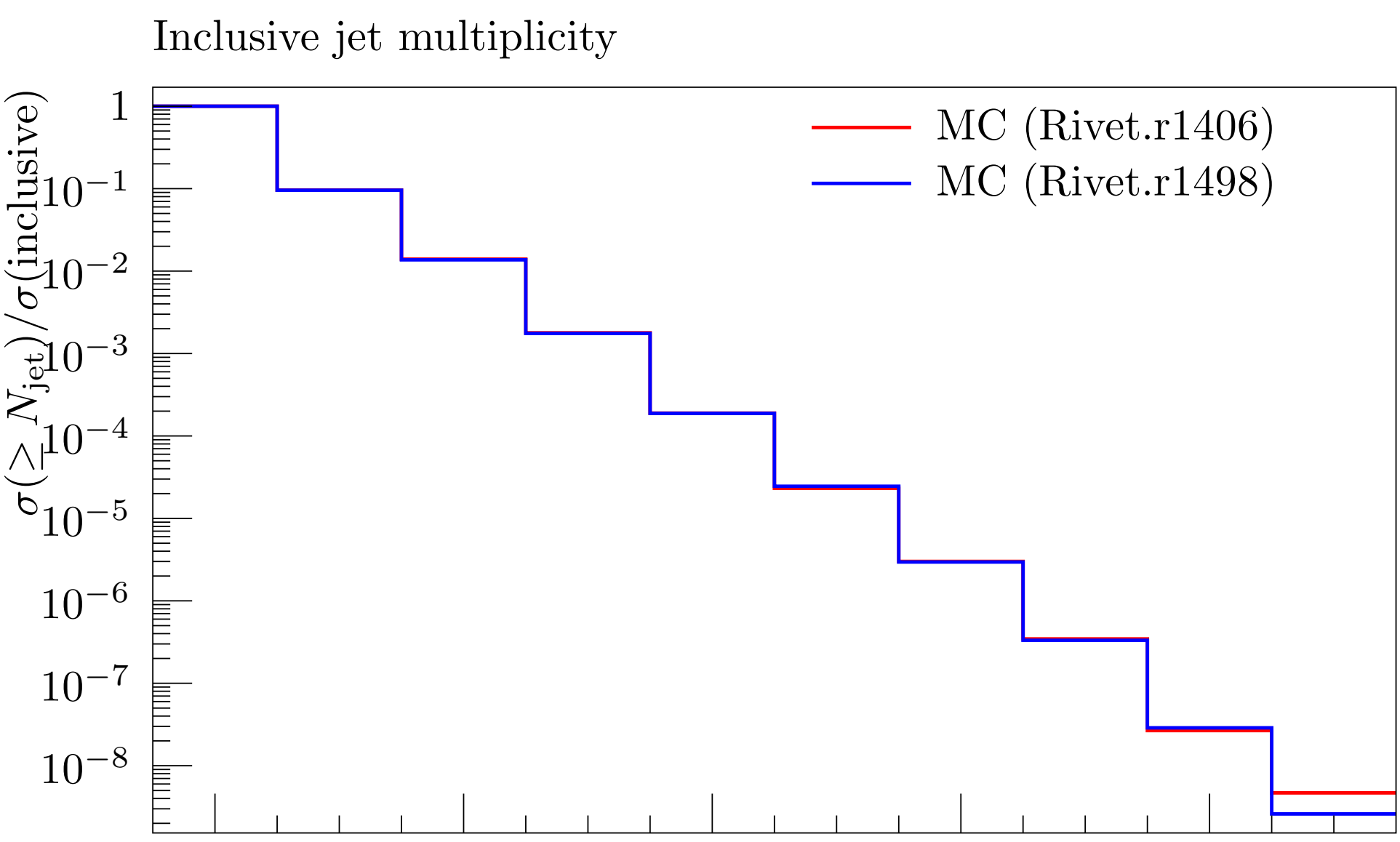

Exclusive jet multiplicity
$\sigma(N_{\text{jet}})/\sigma(N_{\text{jet}} = 0)$
1
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
MC (Rivet.r1406)
MC (Rivet.r1498)

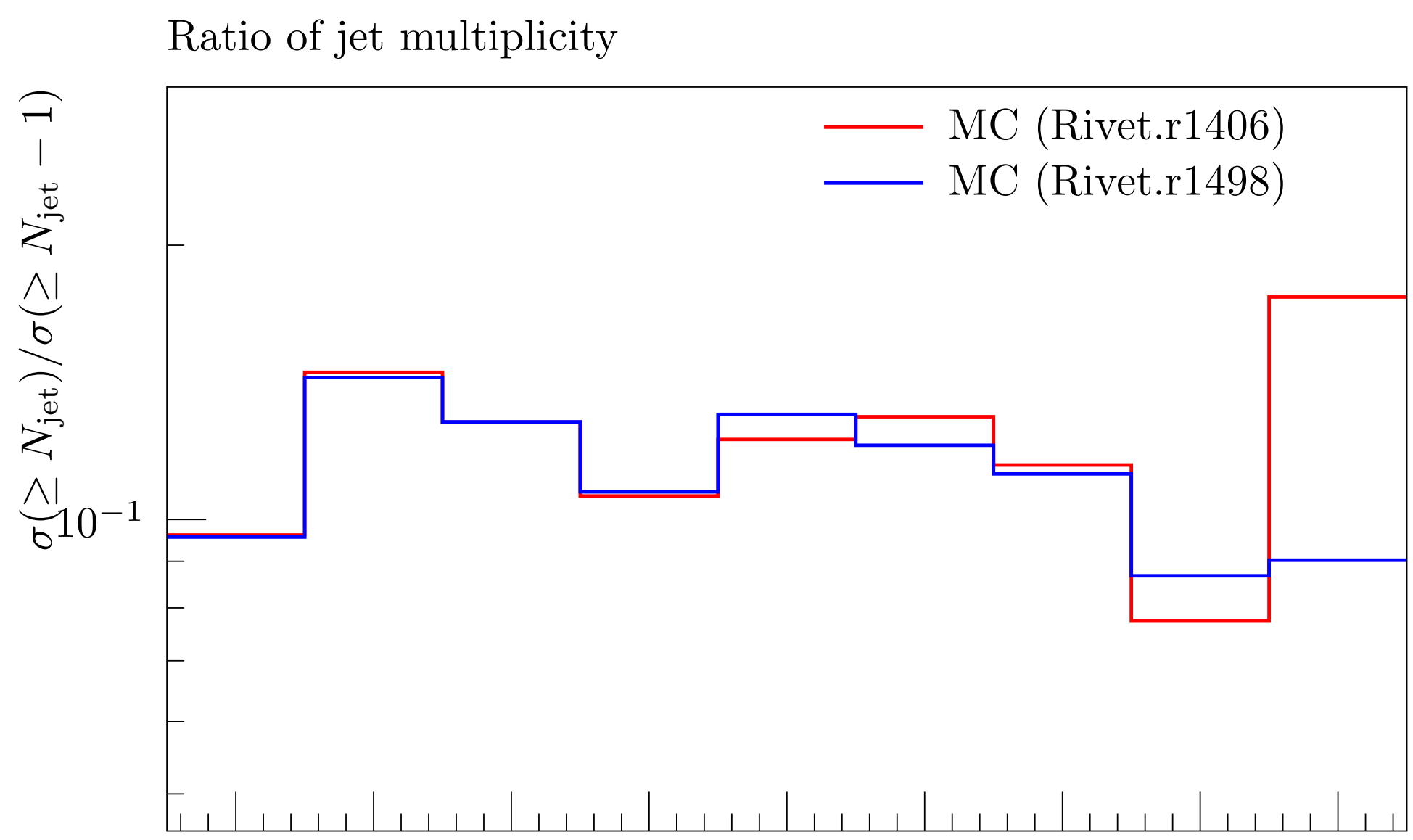

Inclusive jet multiplicity
MC (Rivet.r1406)
MC (Rivet.r1498)
$\sigma(\geq N_{\text{jet}})/\sigma(\text{inclusive})$
1
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
MC/data
1.4
1.2
1
0.8
0.6
0
2
4
6
8
$N_{\text{jet}(\geq 10\ \text{GeV})}$

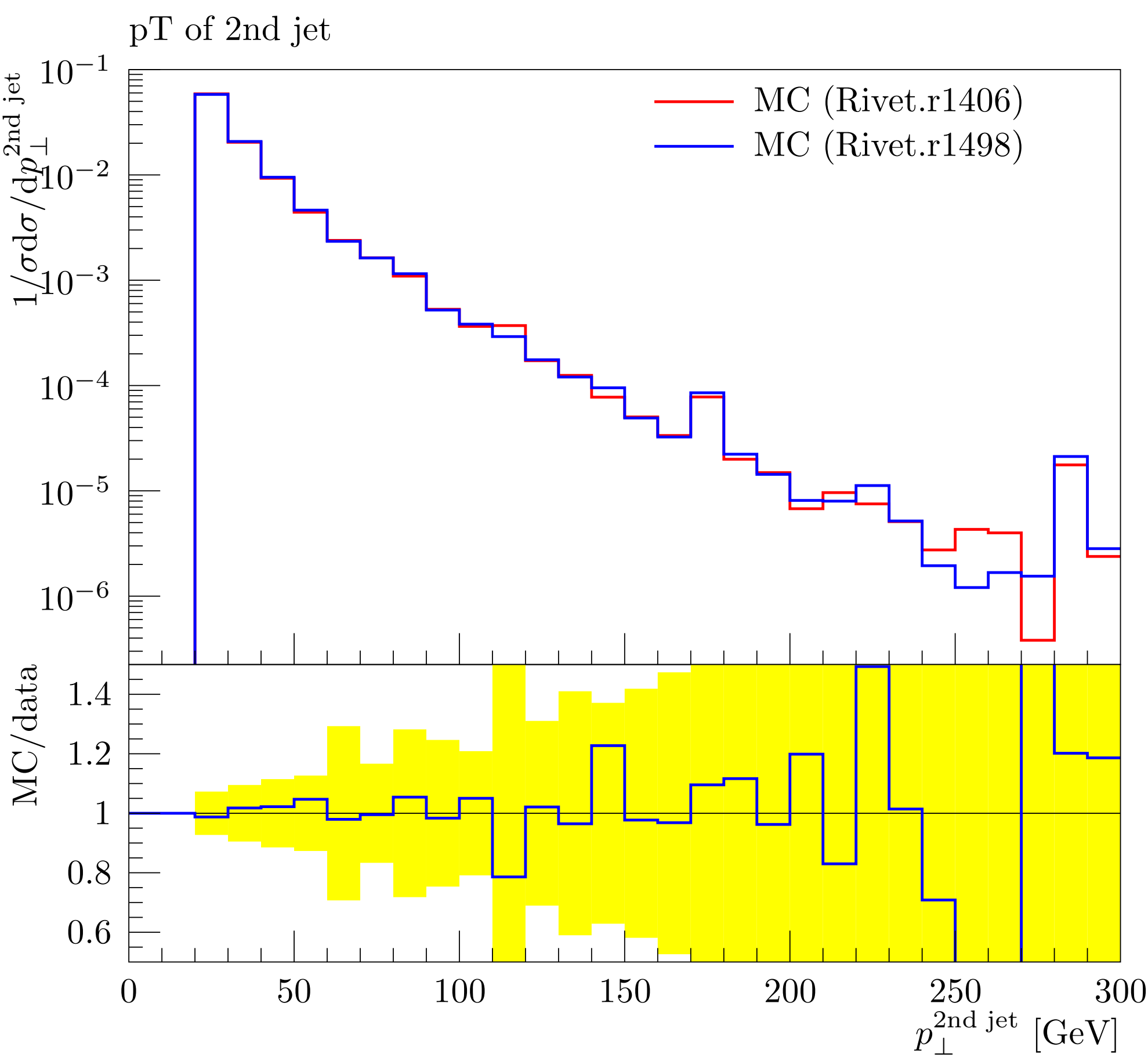

Ratio of jet multiplicity
MC (Rivet.r1406)
MC (Rivet.r1498)
$\sigma(\geq N_{\mathrm{jet}})/\sigma(\geq N_{\mathrm{jet}}-1)$
10^{-1}

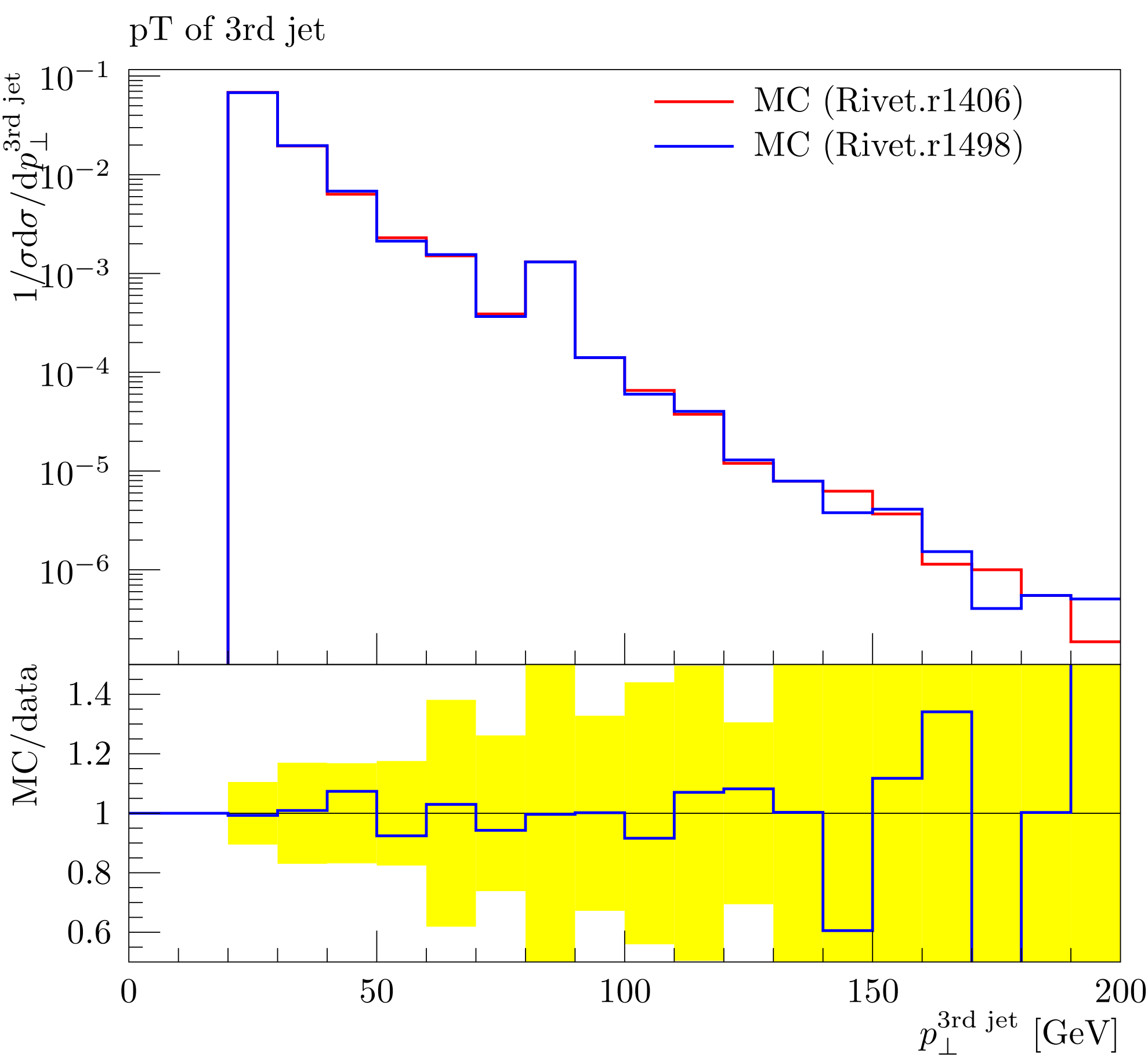

pT of 1st jet
MC (Rivet.r1406)
MC (Rivet.r1498)
$1/\sigma d\sigma/dp_\perp^{\text{1st jet}}$
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
10^{-7}
10^{-8}
MC/data
1.4
1.2
1
0.8
0.6
0
100
200
300
400
500
$p_\perp^{\text{1st jet}}$ [GeV]

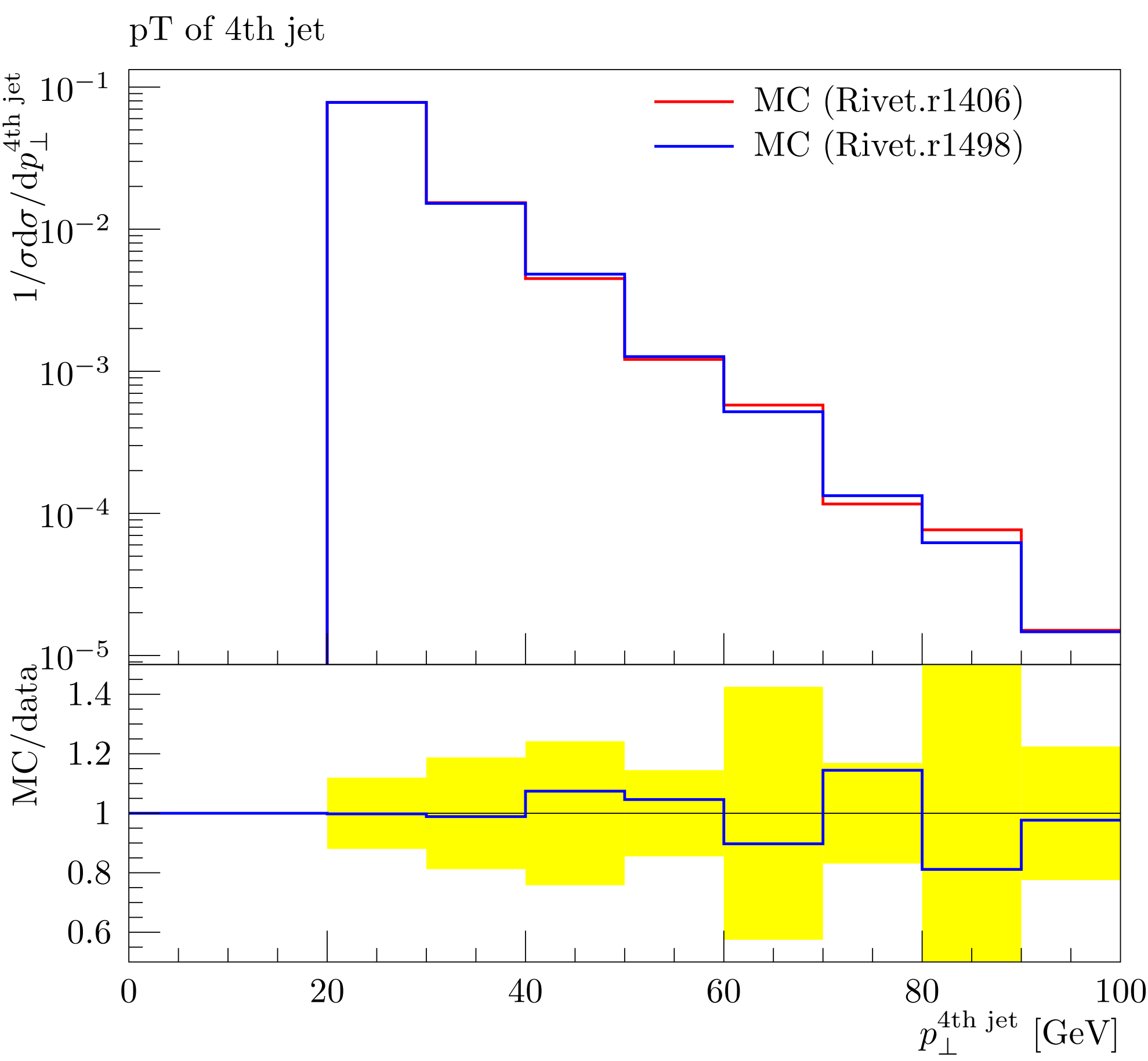

Exclusive jet multiplicity
$\sigma(N_{\mathrm{jet}})/\sigma(N_{\mathrm{jet}}=0)$
1
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
10^{-7}
10^{-8}
MC (Rivet.r1406)
MC (Rivet.r1498)

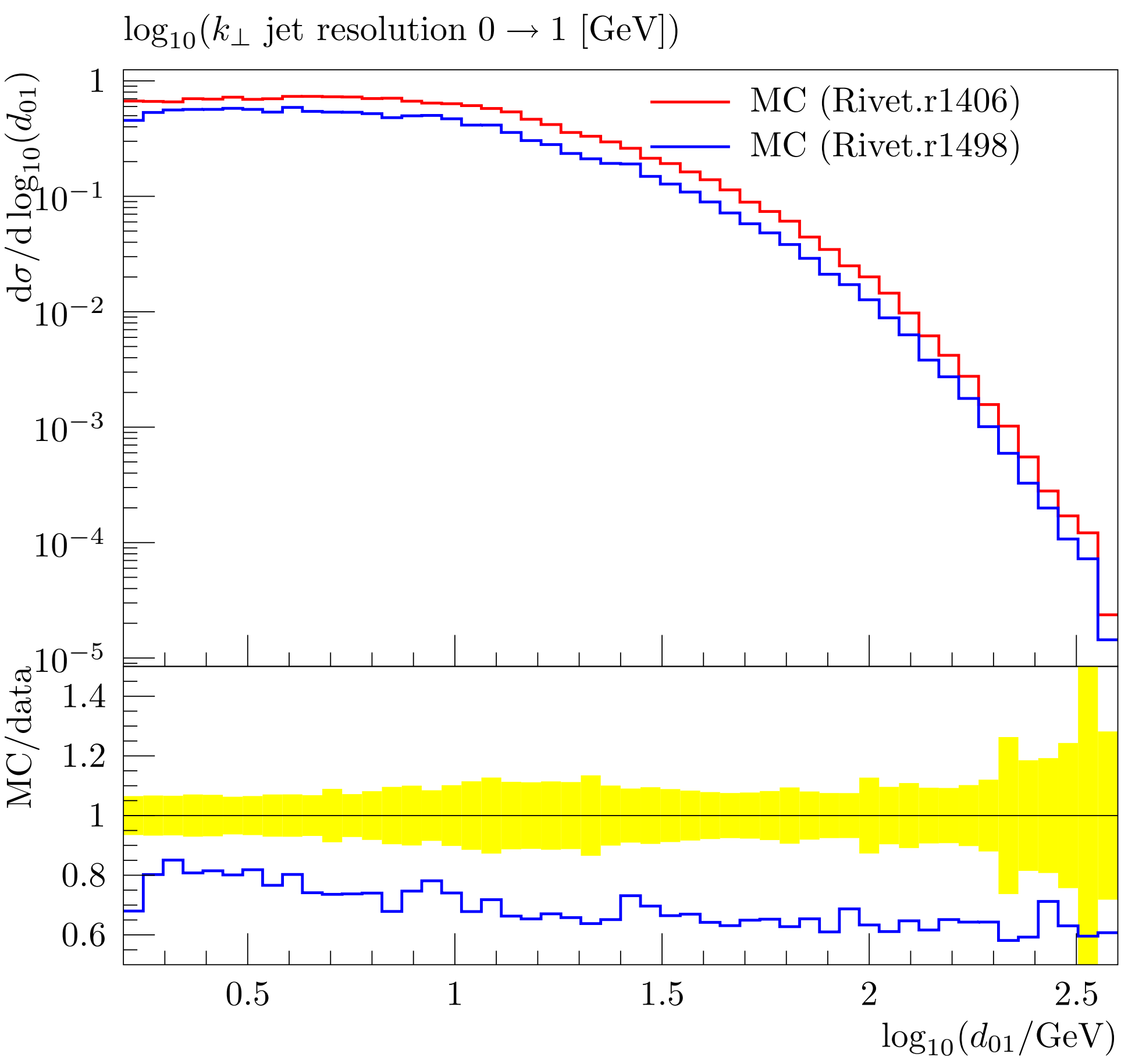

Inclusive jet multiplicity
$\sigma(\geq N_{\mathrm{jet}})/\sigma(\mathrm{inclusive})$
1
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
10^{-7}
10^{-8}
MC (Rivet.r1406)
MC (Rivet.r1498)

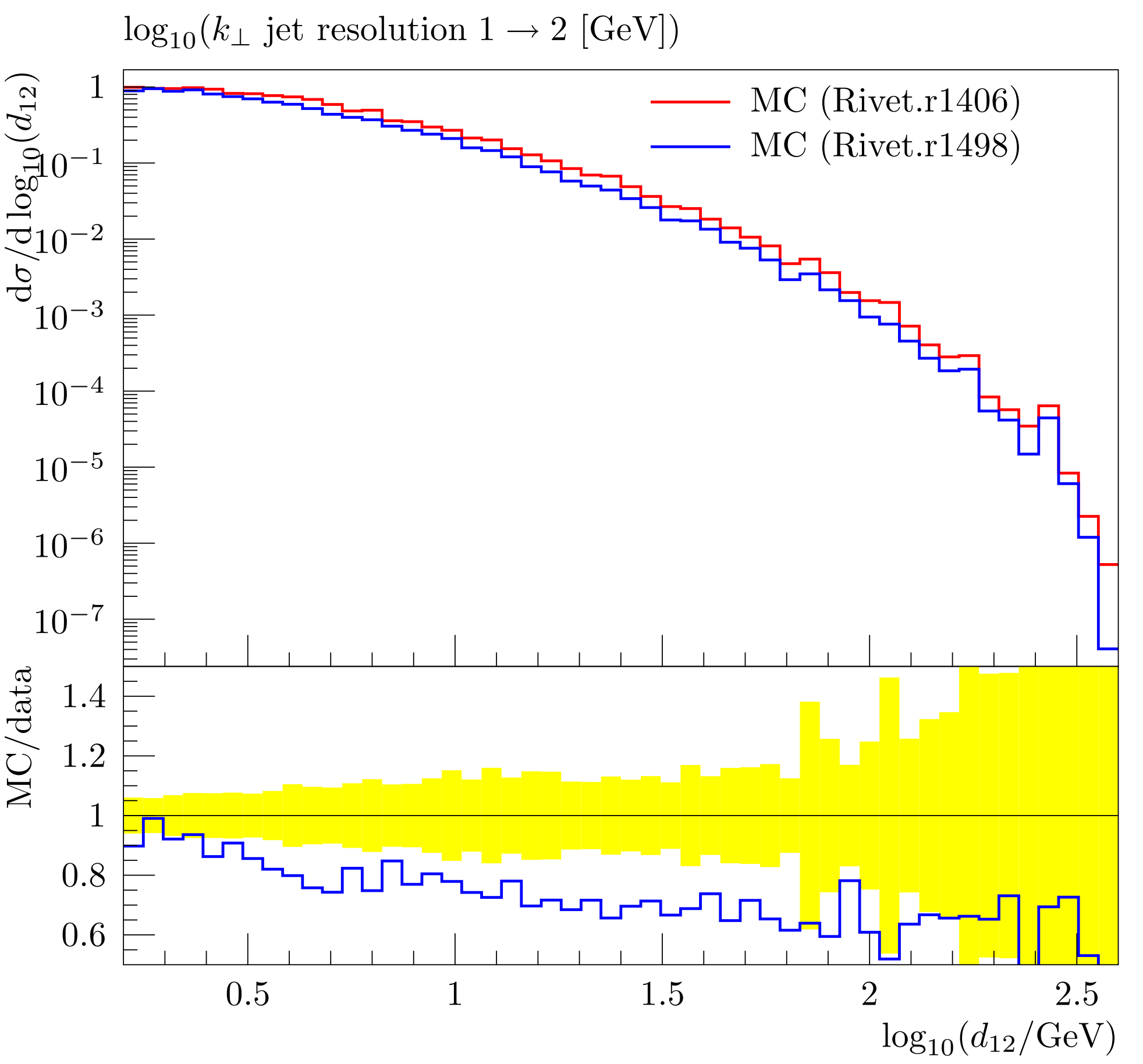

Ratio of jet multiplicity
MC (Rivet.r1406)
MC (Rivet.r1498)
$\sigma(\geq N_{\mathrm{jet}})/\sigma(\geq N_{\mathrm{jet}}-1)$
10^{-1}

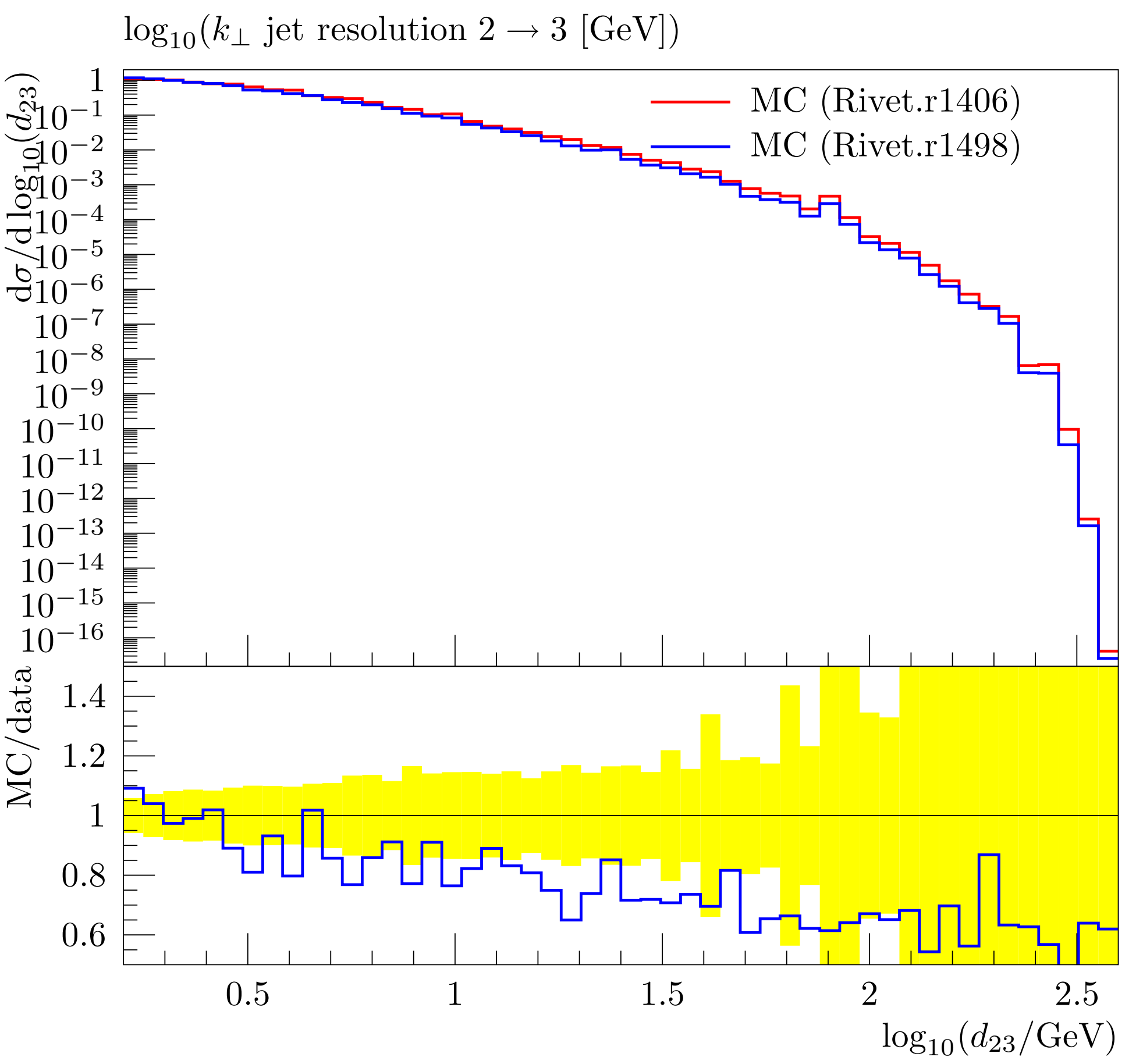

pT of 2nd jet
MC (Rivet.r1406)
MC (Rivet.r1498)
$1/\sigma d\sigma/dp_\perp^{\text{2nd jet}}$
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
MC/data
1.4
1.2
1
0.8
0.6
0
50
100
150
200
250
300
$p_\perp^{\text{2nd jet}}$ [GeV]

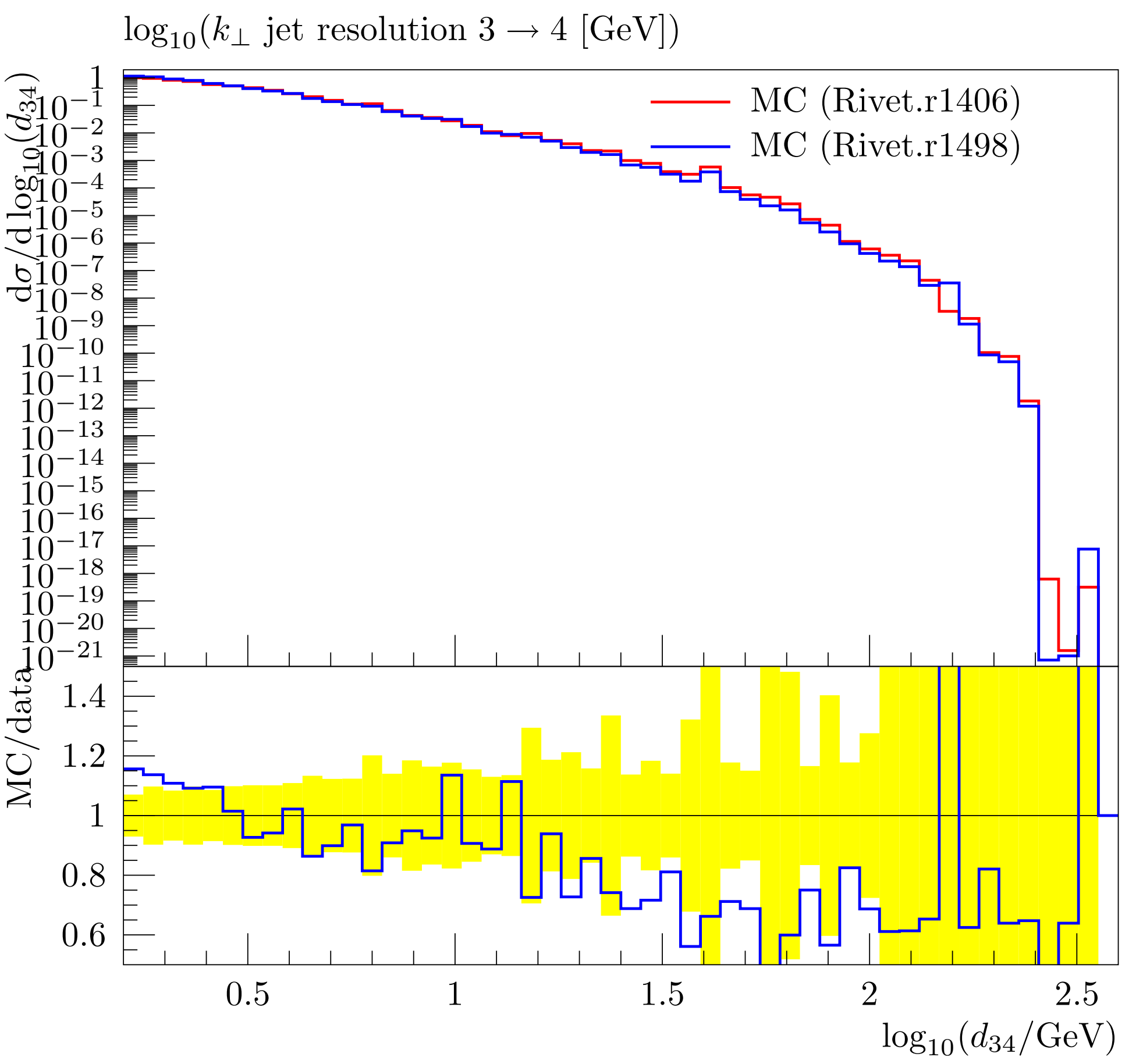

pT of 3rd jet
MC (Rivet.r1406)
MC (Rivet.r1498)
$1/\sigma \mathrm{d}\sigma/\mathrm{d}p_\perp^{\text{3rd jet}}$
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
MC/data
1.4
1.2
1
0.8
0.6
0
50
100
150
200
$p_\perp^{\text{3rd jet}}$ [GeV]

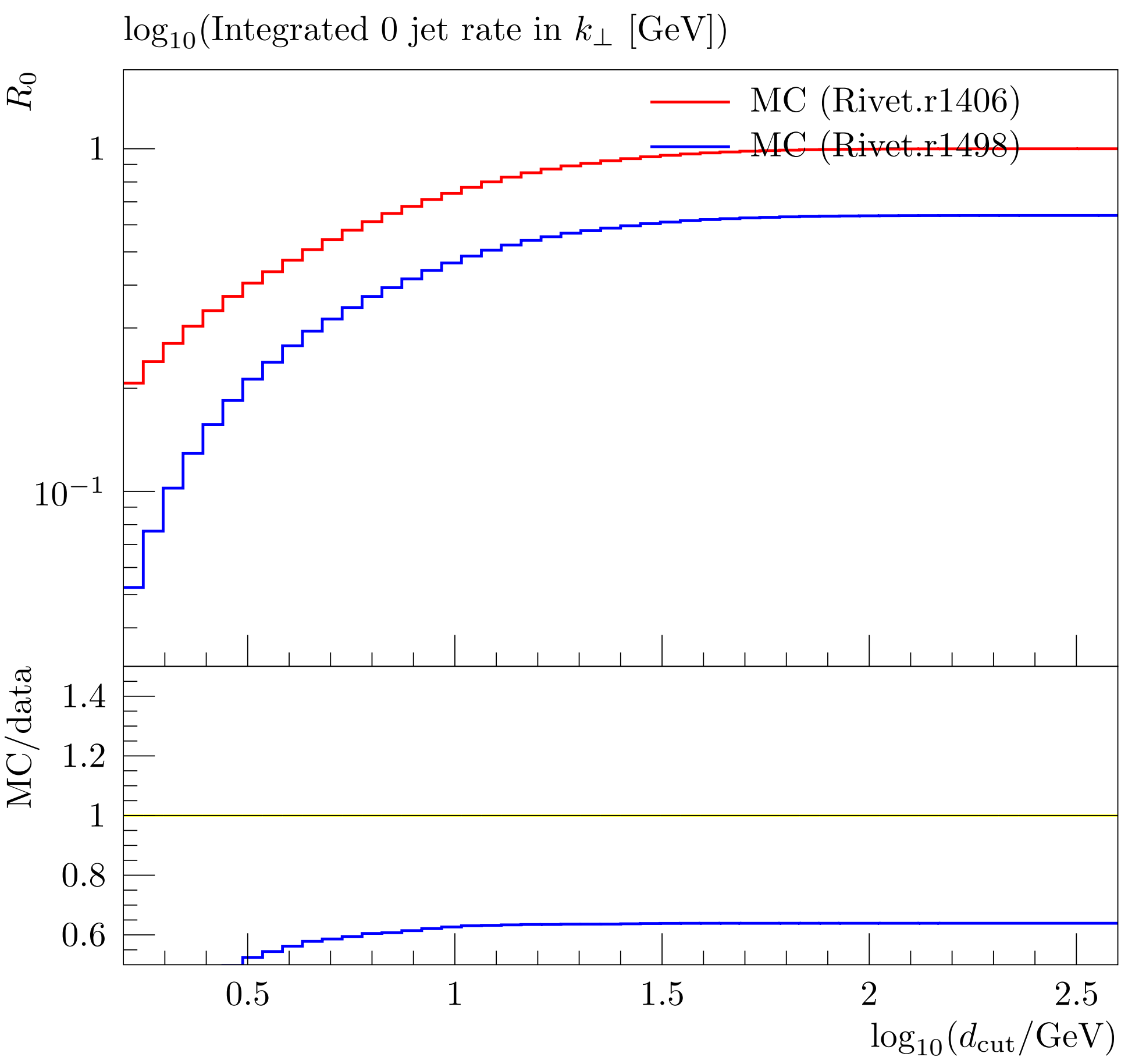

pT of 4th jet
MC (Rivet.r1406)
MC (Rivet.r1498)
$1/\sigma \mathrm{d}\sigma/\mathrm{d}p_\perp^{\text{4th jet}}$
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
MC/data
1.4
1.2
1
0.8
0.6
0
20
40
60
80
100
$p_\perp^{\text{4th jet}}$ [GeV]

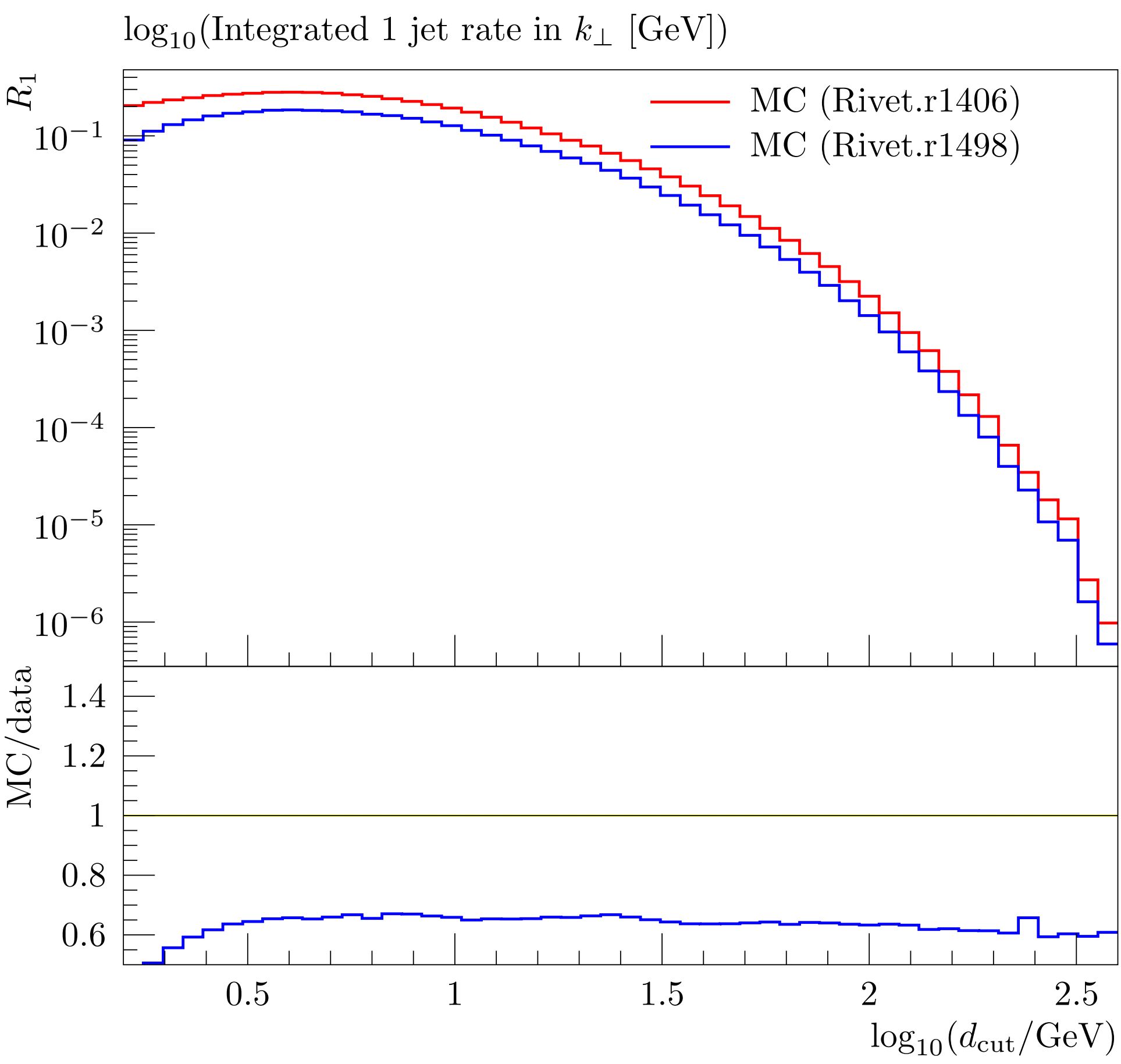

$\log_{10}(k_\perp$ jet resolution $0 \to 1$ [GeV])
$\mathrm{d}\sigma/\mathrm{d}\log_{10}(d_{01})$
MC (Rivet.r1406)
MC (Rivet.r1498)
MC/data
$\log_{10}(d_{01}/\mathrm{GeV})$

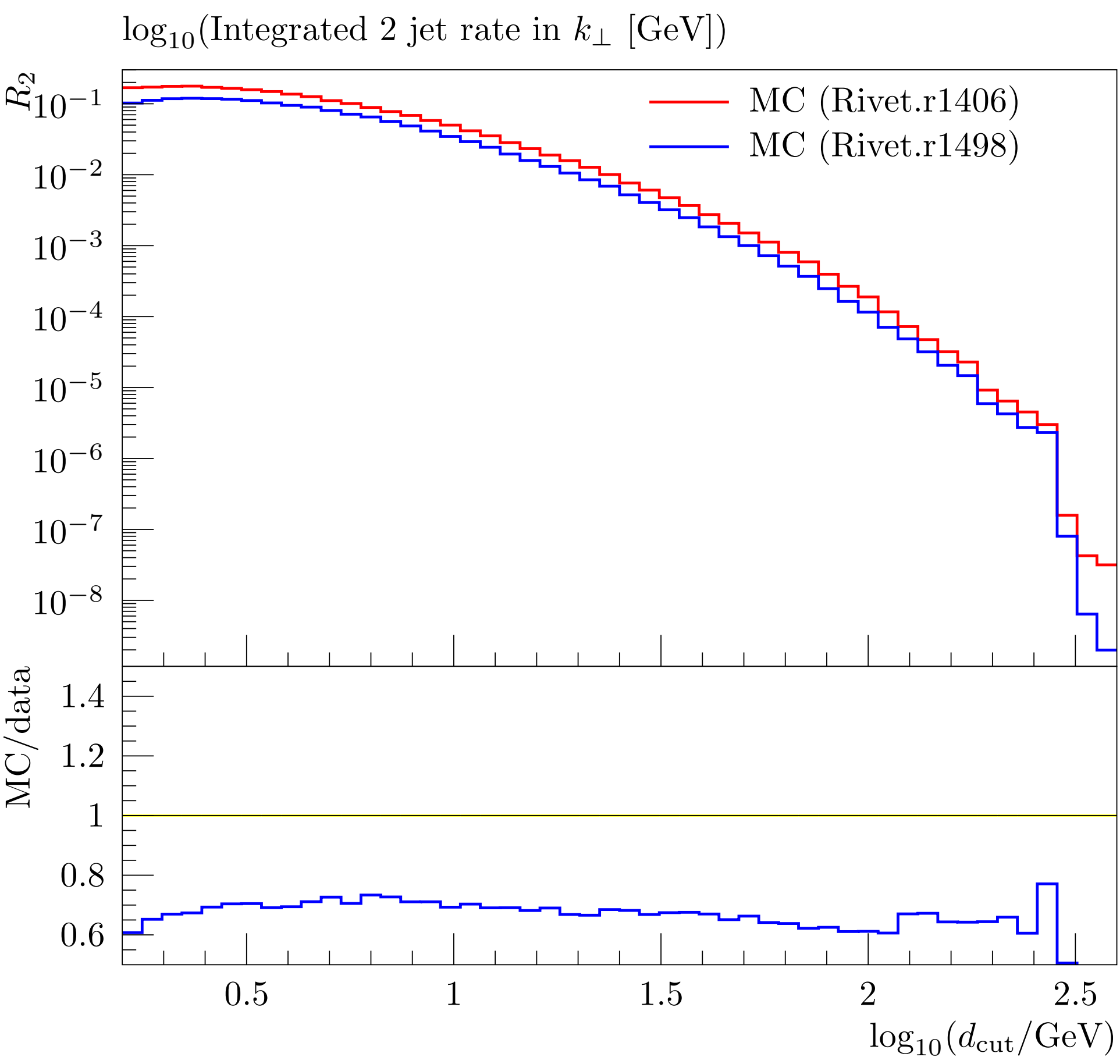

$\log_{10}(k_\perp$ jet resolution $1 \to 2$ [GeV])
MC (Rivet.r1406)
MC (Rivet.r1498)
$\mathrm{d}\sigma/\mathrm{d}\log_{10}(d_{12})$
1
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
10^{-7}
MC/data
1.4
1.2
1
0.8
0.6
0.5
1
1.5
2
2.5
$\log_{10}(d_{12}/\mathrm{GeV})$

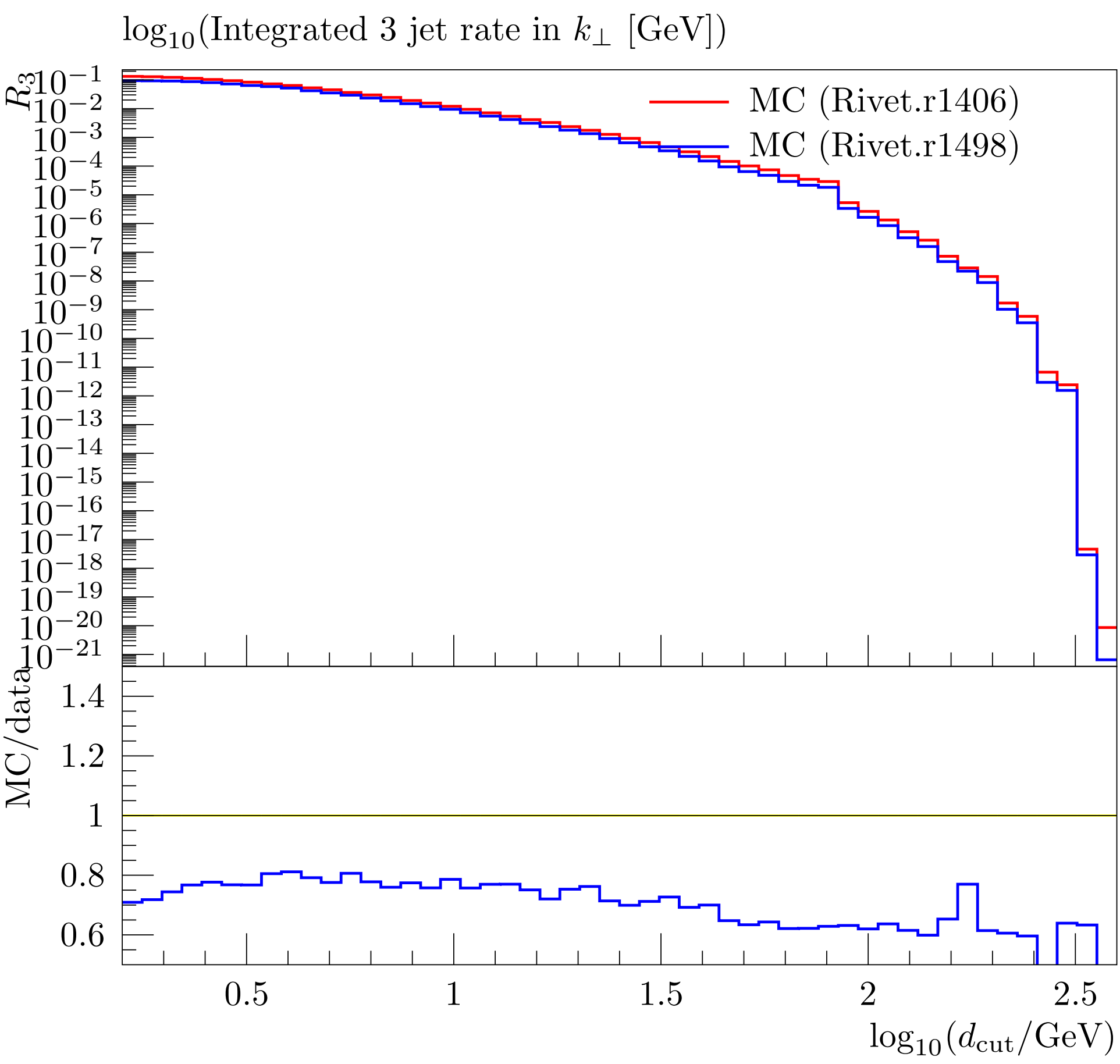

$\log_{10}(k_\perp$ jet resolution $2 \to 3$ [GeV])
MC (Rivet.r1406)
MC (Rivet.r1498)
$\mathrm{d}\sigma/\mathrm{d}\log_{10}(d_{23})$
MC/data
$\log_{10}(d_{23}/\mathrm{GeV})$

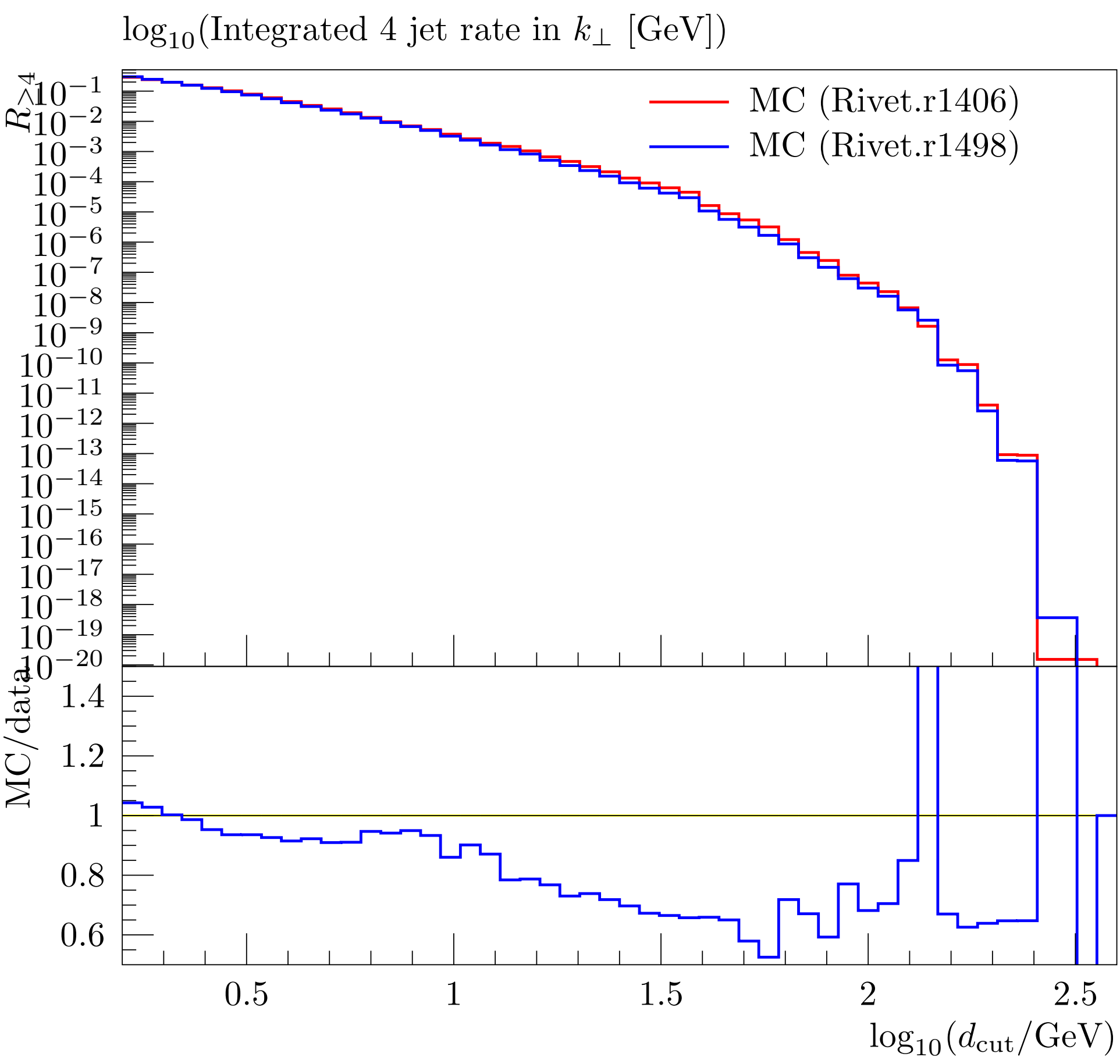

$\log_{10}(k_\perp$ jet resolution $3 \to 4$ [GeV])
MC (Rivet.r1406)
MC (Rivet.r1498)
$\mathrm{d}\sigma/\mathrm{d}\log_{10}(d_{34})$
MC/data
$\log_{10}(d_{34}/\mathrm{GeV})$

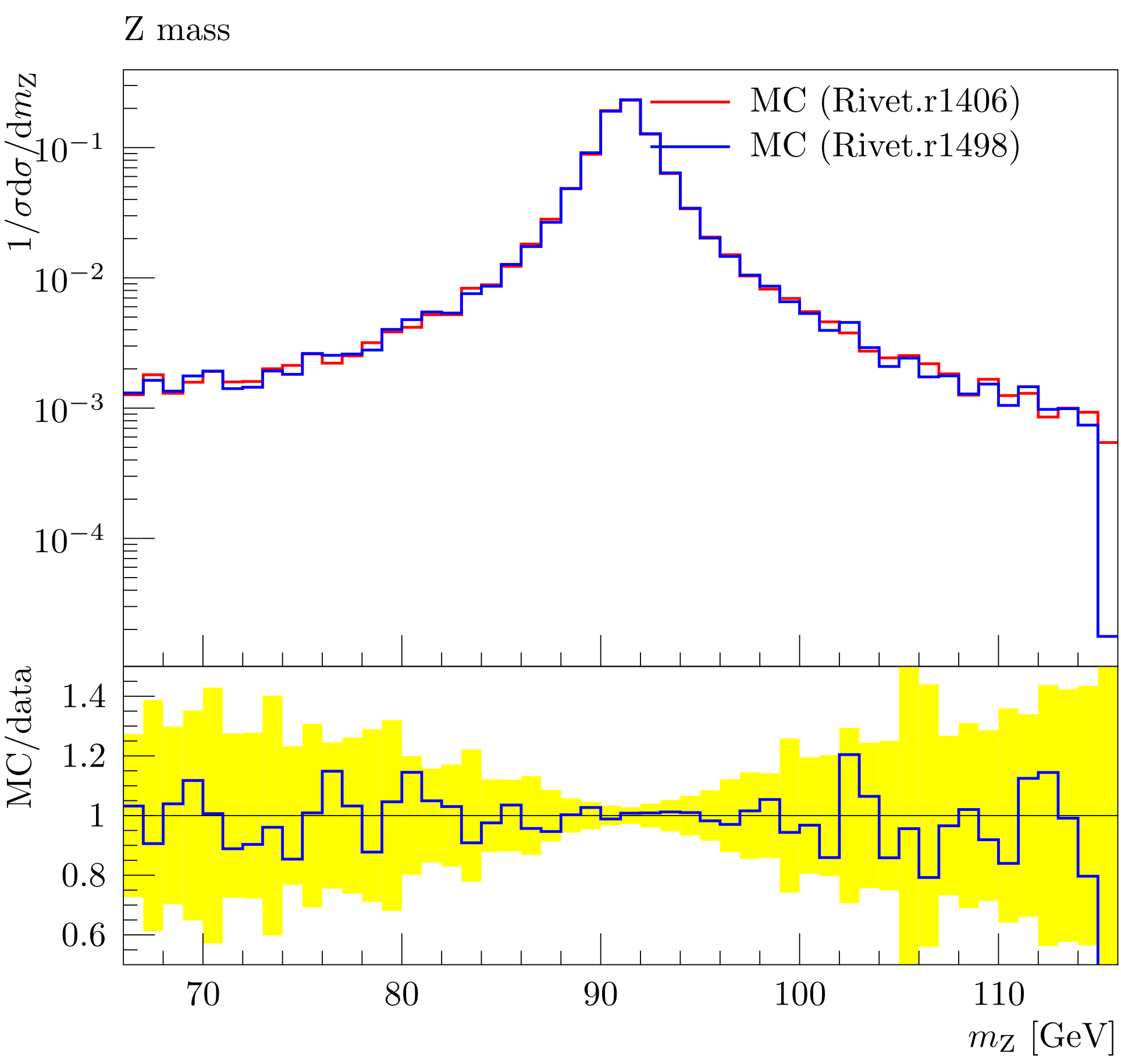

log10(Integrated 0 jet rate in k⊥ [GeV])
R0
MC (Rivet.r1406)
MC (Rivet.r1498)
1
10−1
MC/data
1.4
1.2
1
0.8
0.6
0.5
1
1.5
2
2.5
log10(dcut/GeV)


log10(Integrated 1 jet rate in k⊥ [GeV])
R1
MC (Rivet.r1406)
MC (Rivet.r1498)
10−1
10−2
10−3
10−4
10−5
10−6
MC/data
1.4
1.2
1
0.8
0.6
0.5
1
1.5
2
2.5
log10(dcut/GeV)


log10(Integrated 2 jet rate in k⊥ [GeV])
R2
10−1
10−2
10−3
10−4
10−5
10−6
10−7
10−8
MC (Rivet.r1406)
MC (Rivet.r1498)
MC/data
1.4
1.2
1
0.8
0.6
0.5
1
1.5
2
2.5
log10(dcut/GeV)


log10(Integrated 3 jet rate in k⊥ [GeV])
R3
MC (Rivet.r1406)
MC (Rivet.r1498)
MC/data
log10(dcut/GeV)


log10(Integrated 4 jet rate in k⊥ [GeV])
R≥4
MC (Rivet.r1406)
MC (Rivet.r1498)
MC/data
log10(dcut/GeV)


Z mass
MC (Rivet.r1406)
MC (Rivet.r1498)
$1/\sigma \mathrm{d}\sigma/\mathrm{d}m_Z$
10^{-1}
10^{-2}
10^{-3}
10^{-4}
MC/data
1.4
1.2
1
0.8
0.6
70
80
90
100
110
m_Z [GeV]