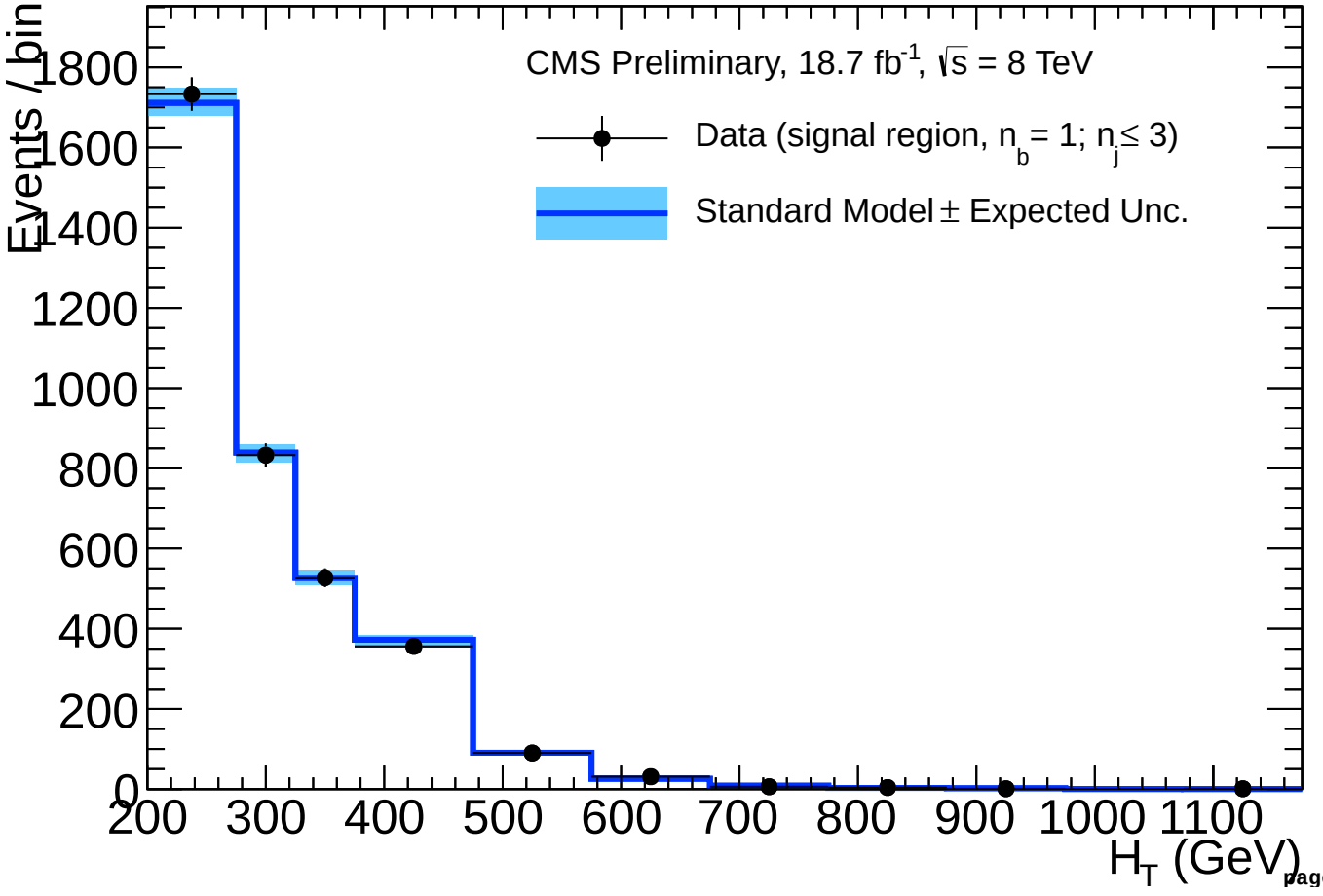
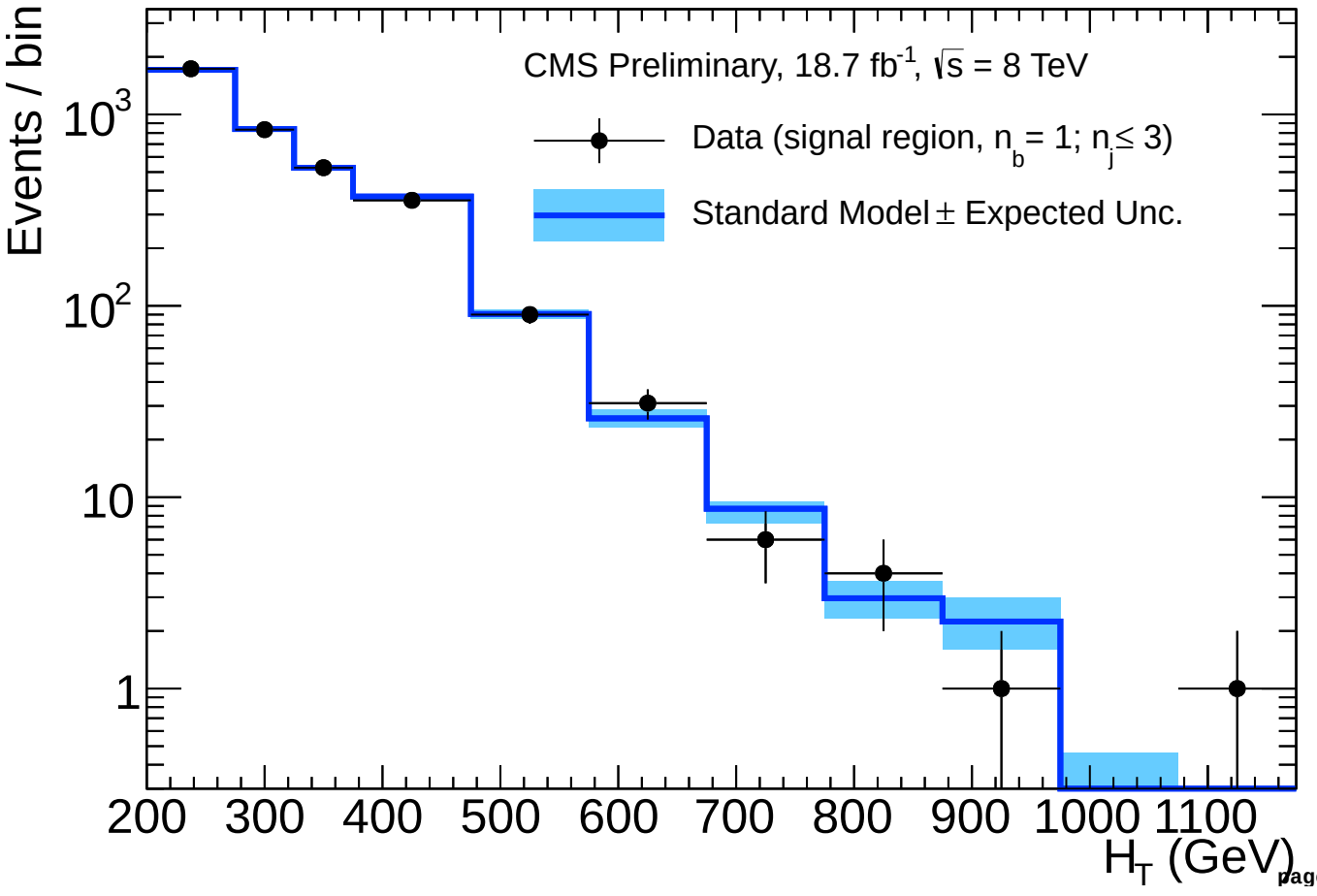
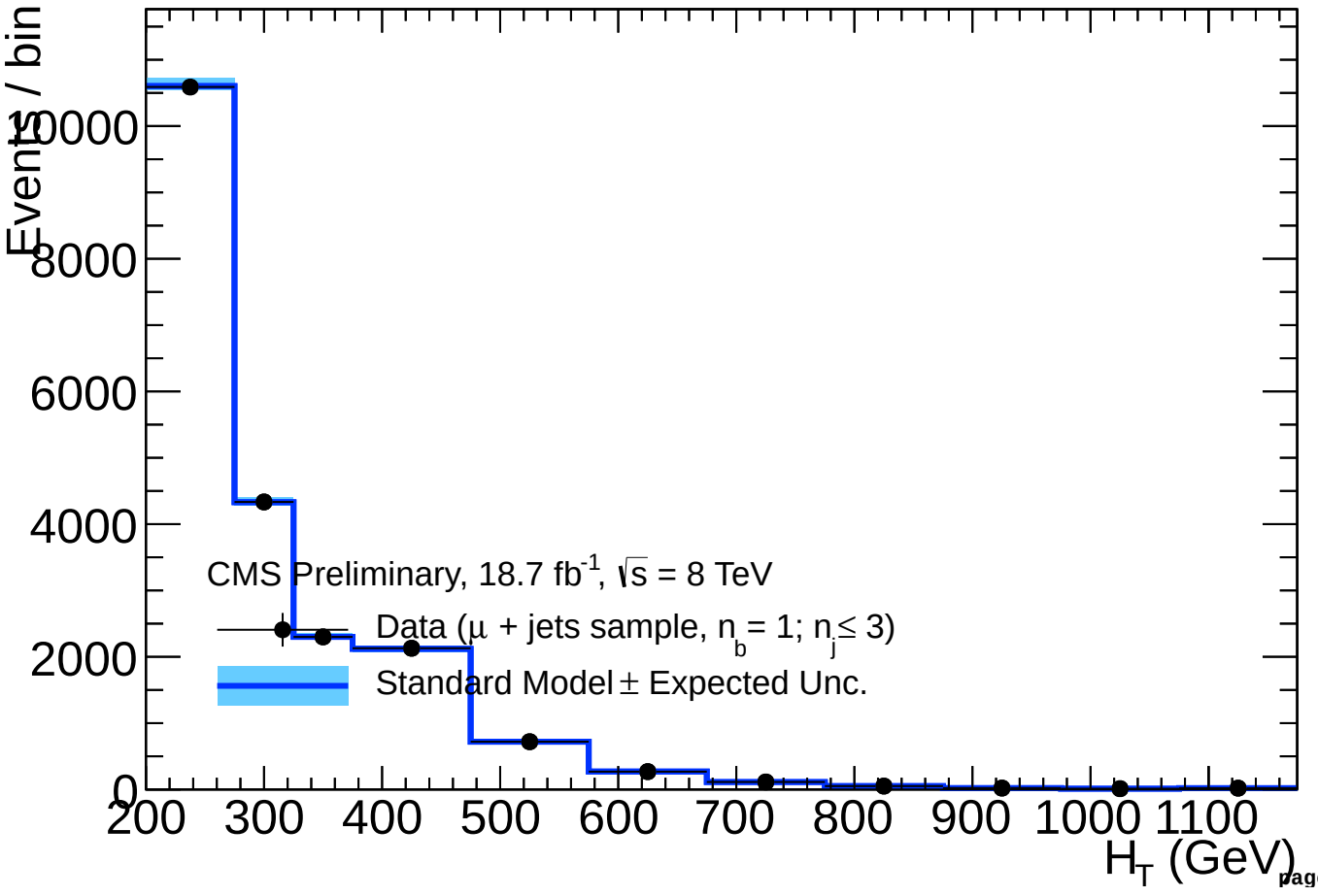
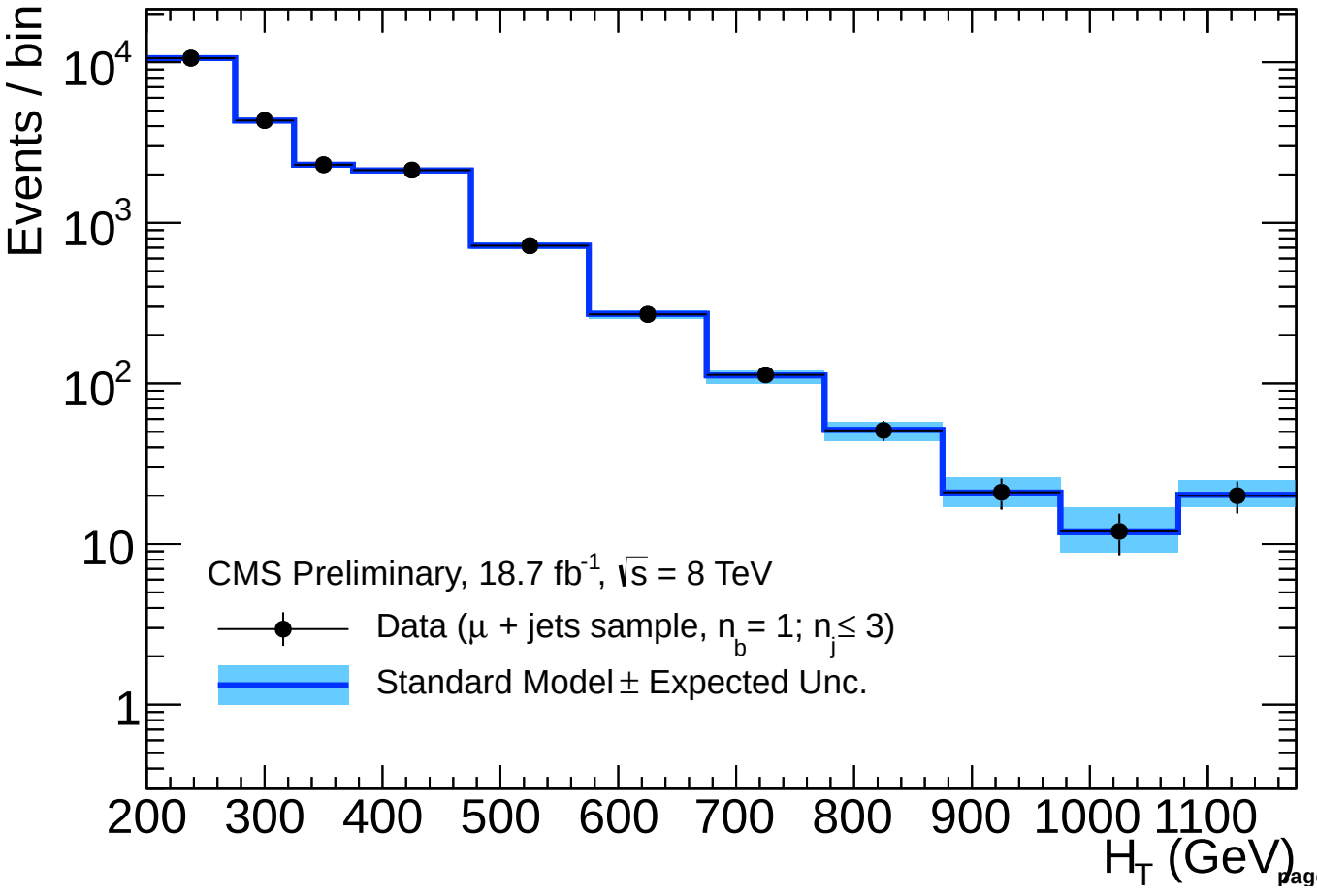
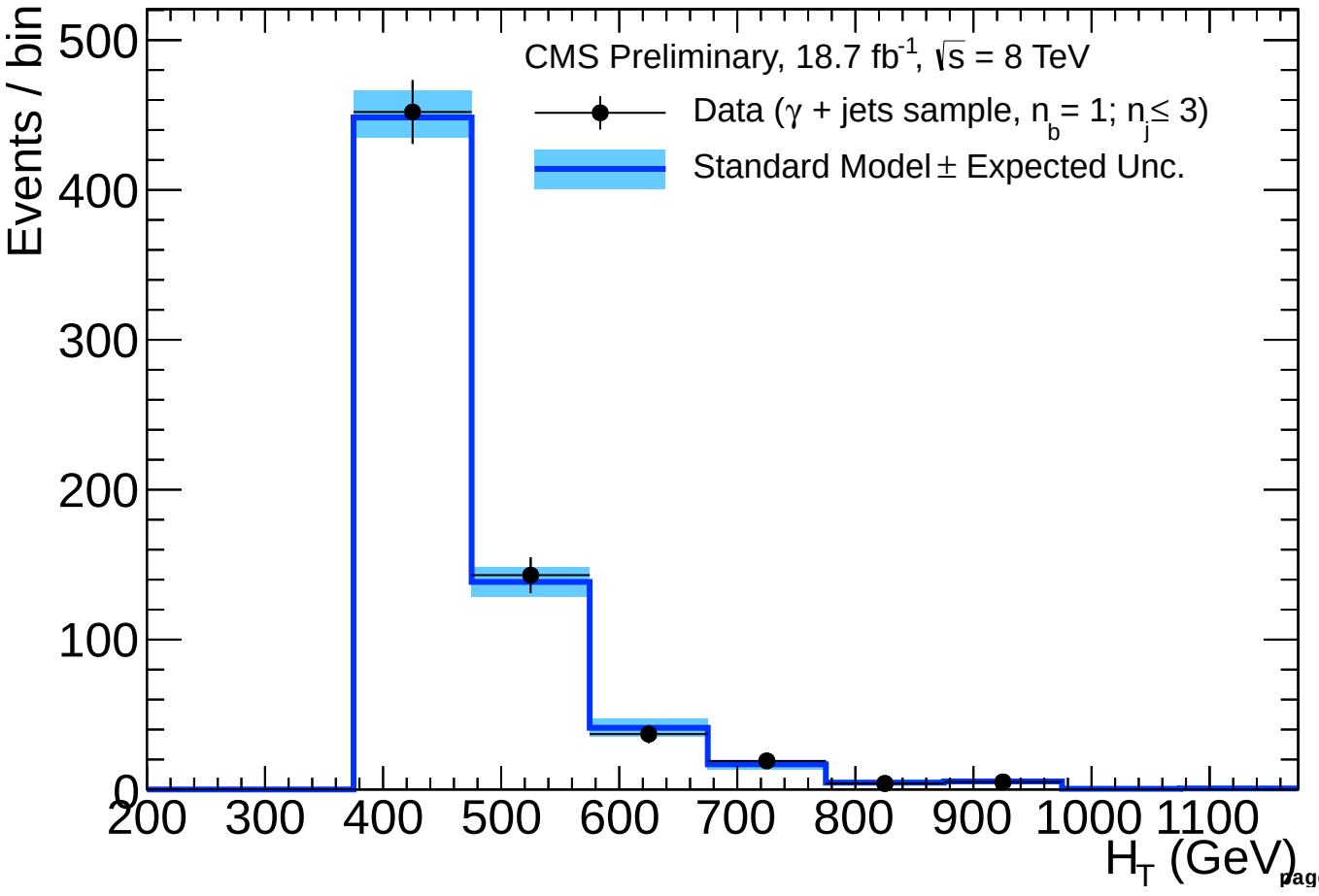
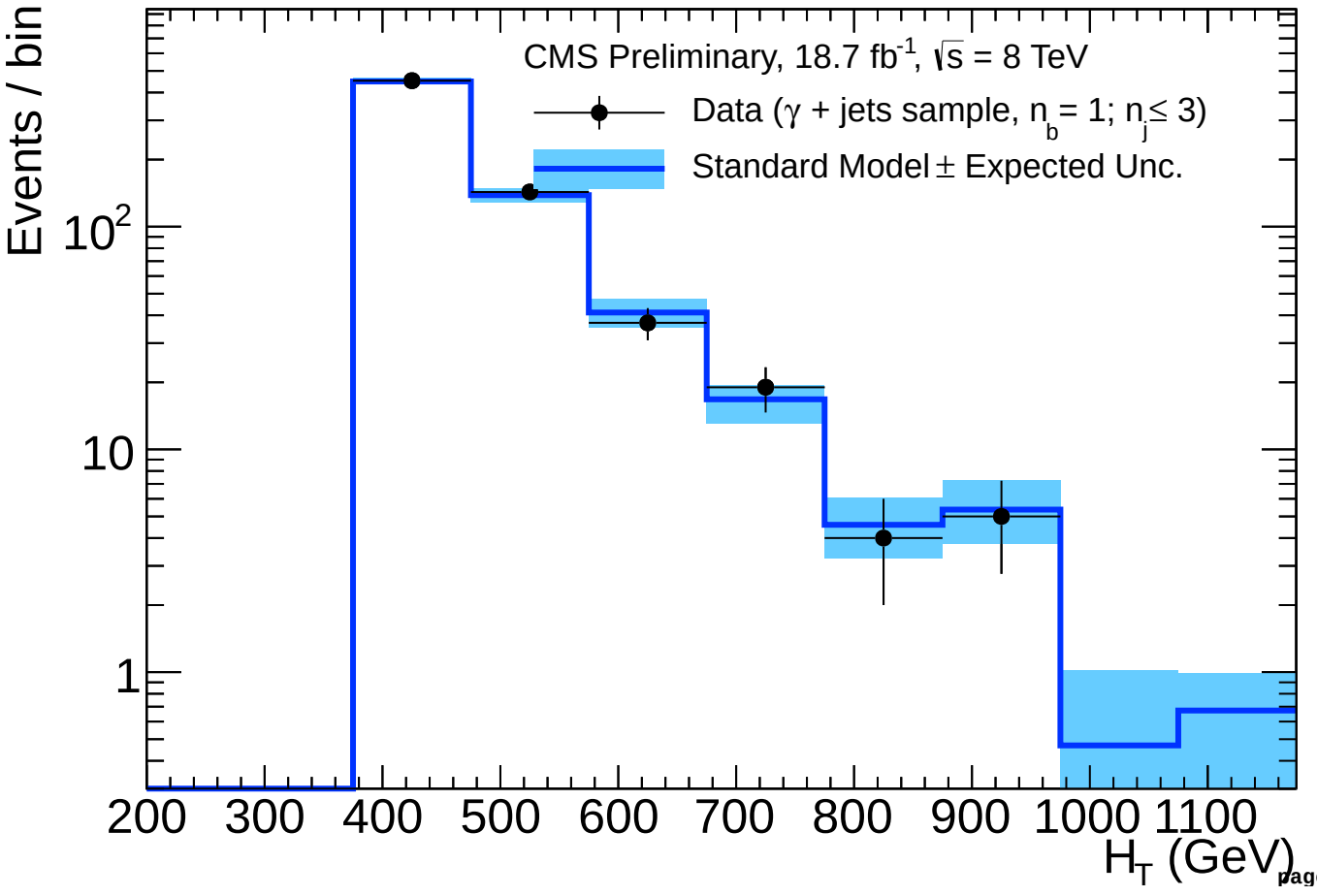

CMS Preliminary, 18.7 fb-1, √s = 8 TeV
Data (signal region, nb = 1; nj ≤ 3)
Standard Model ± Expected Unc.
Events / bin
0
200
400
600
800
1000
1200
1400
1600
1800
200
300
400
500
600
700
800
900
1000
1100
HT (GeV)

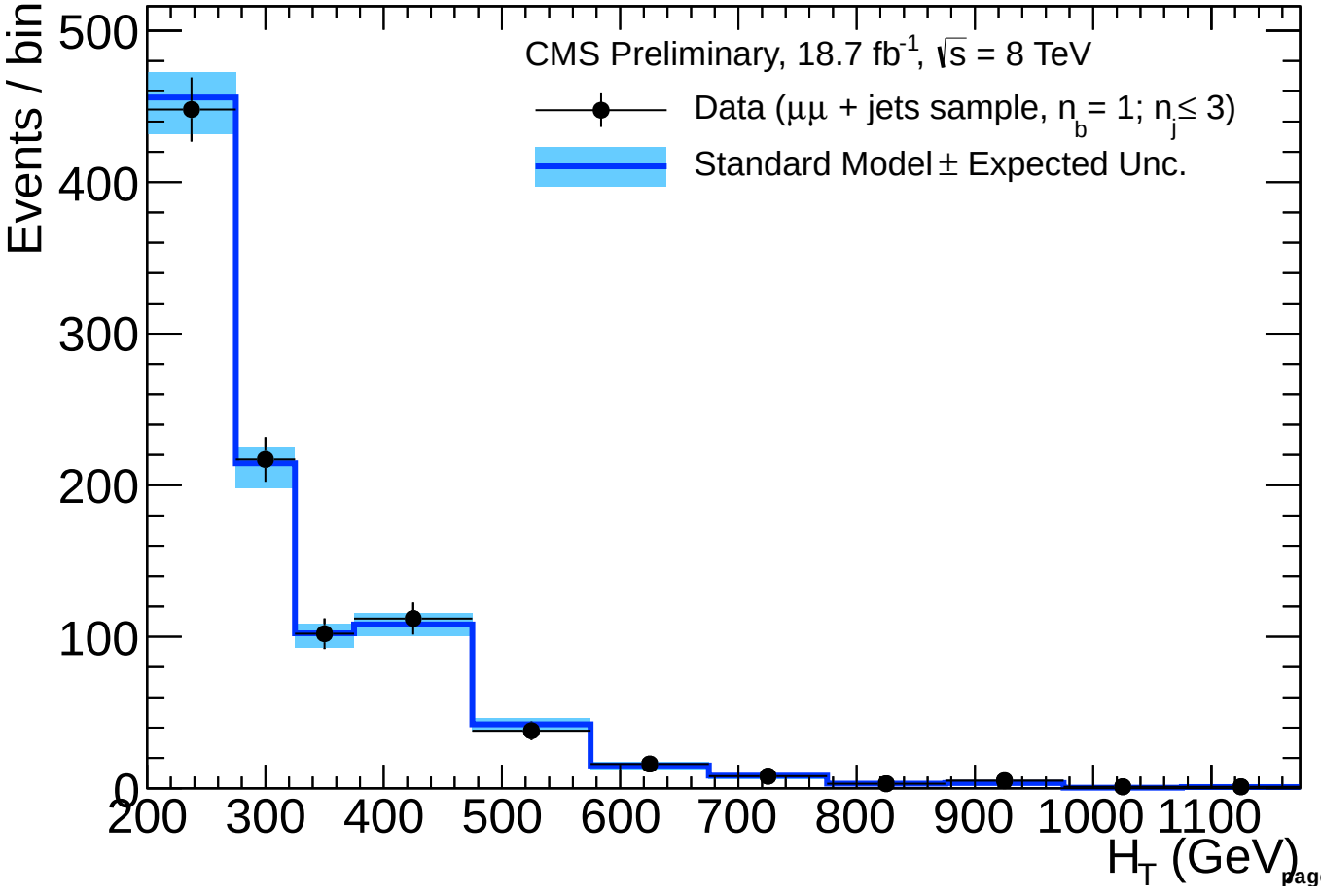

CMS Preliminary, 18.7 fb-1, √s = 8 TeV
Data (signal region, nb = 1; nj ≤ 3)
Standard Model ± Expected Unc.
Events / bin
10^3
10^2
10
1
200
300
400
500
600
700
800
900
1000
1100
HT (GeV)

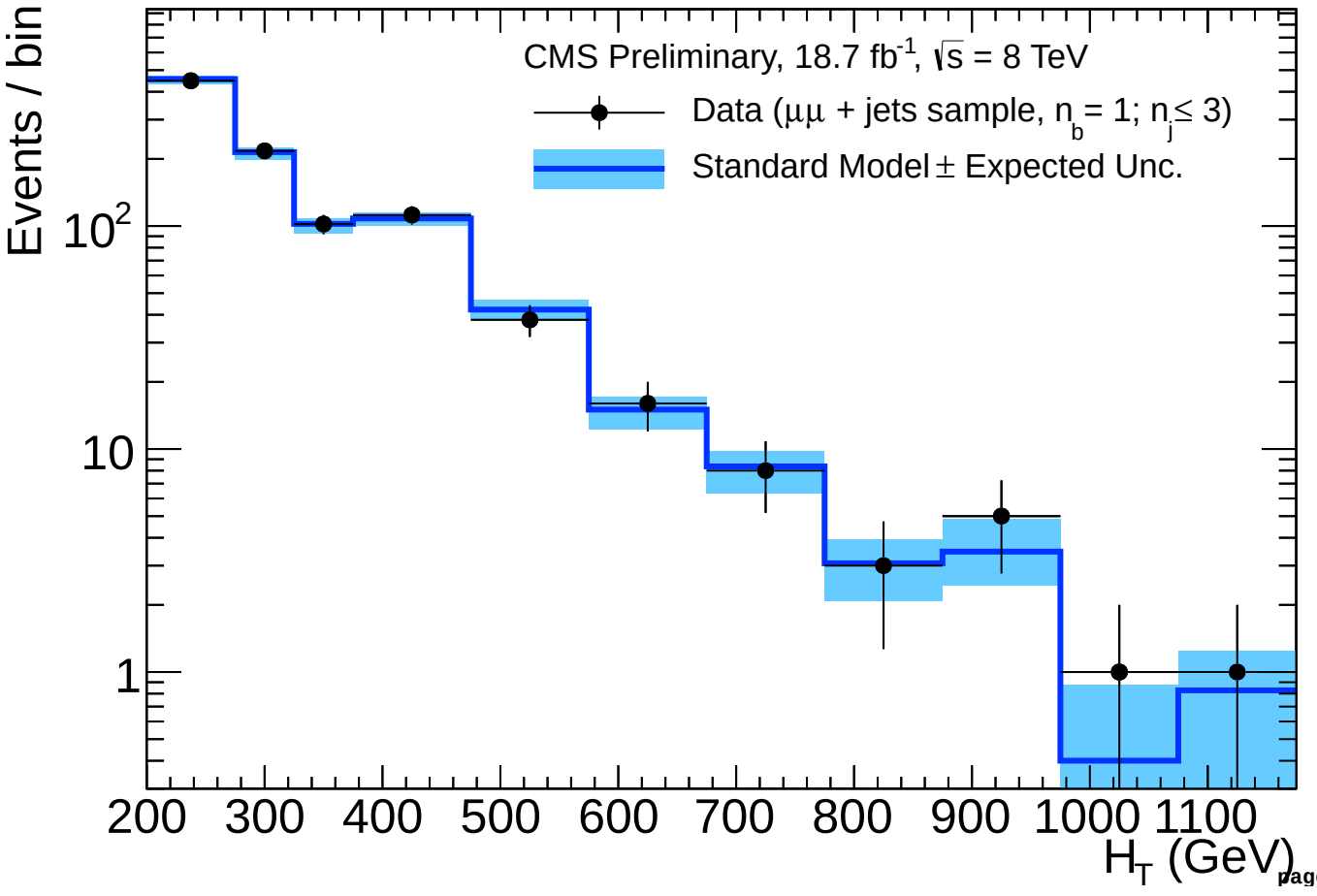

Events / bin
10000
8000
6000
4000
2000
0
200
300
400
500
600
700
800
900
1000
1100
H_T (GeV)
CMS Preliminary, 18.7 fb^{-1}, $\sqrt{s}$ = 8 TeV
Data (μ + jets sample, n_b = 1; $n_j \leq$ 3)
Standard Model ± Expected Unc.


Events / bin
10^4
10^3
10^2
10
1
CMS Preliminary, 18.7 fb^{-1}, $\sqrt{s}$ = 8 TeV
Data (μ + jets sample, n_b = 1; $n_j \leq$ 3)
Standard Model ± Expected Unc.
200 300 400 500 600 700 800 900 1000 1100
H_T (GeV)

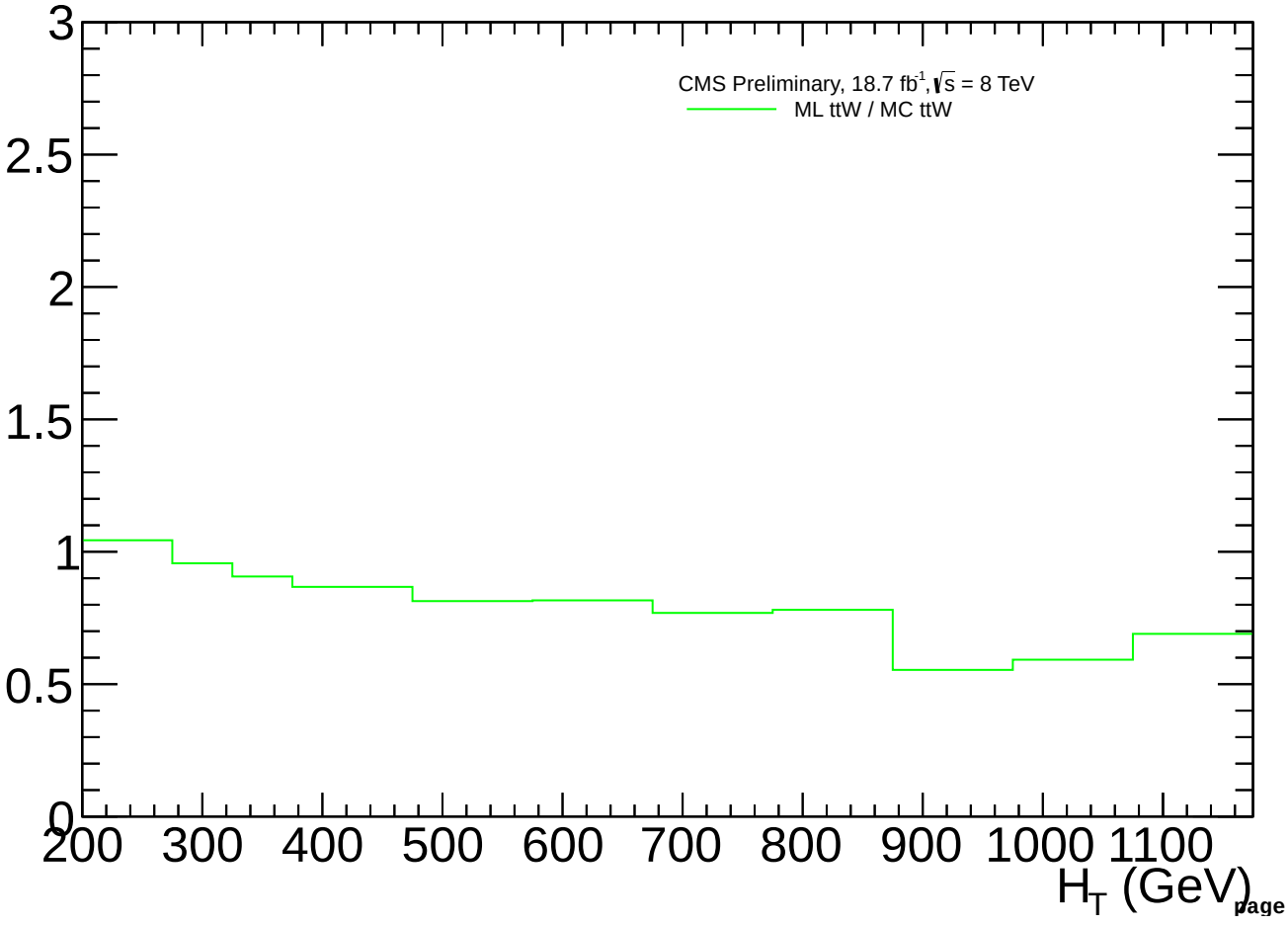

CMS Preliminary, 18.7 fb-1, √s = 8 TeV
Data (γ + jets sample, nb = 1; nj ≤ 3)
Standard Model ± Expected Unc.
Events / bin
0
100
200
300
400
500
200
300
400
500
600
700
800
900
1000
1100
HT (GeV)


CMS Preliminary, 18.7 fb-1, √s = 8 TeV
Data (γ + jets sample, nb = 1; nj ≤ 3)
Standard Model ± Expected Unc.
Events / bin
10²
10
1
200
300
400
500
600
700
800
900
1000
1100
HT (GeV)

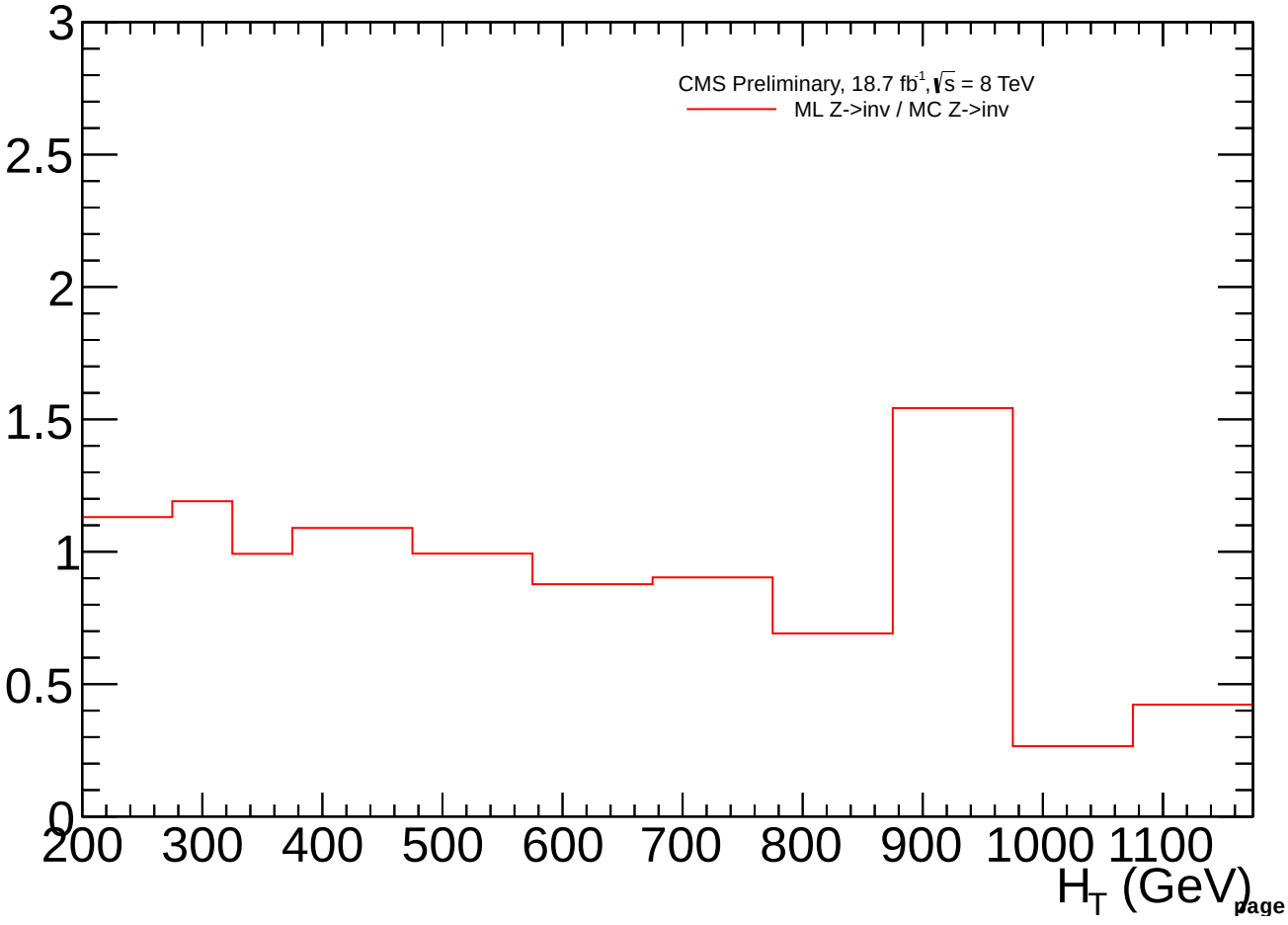

CMS Preliminary, 18.7 fb-1, √s = 8 TeV
Data (μμ + jets sample, nb = 1; nj ≤ 3)
Standard Model ± Expected Unc.
Events / bin
0
100
200
300
400
500
200
300
400
500
600
700
800
900
1000
1100
HT (GeV)


CMS Preliminary, 18.7 fb-1, √s = 8 TeV
Data (μμ + jets sample, nb = 1; nj ≤ 3)
Standard Model ± Expected Unc.
Events / bin
10²
10
1
200
300
400
500
600
700
800
900
1000
1100
HT (GeV)

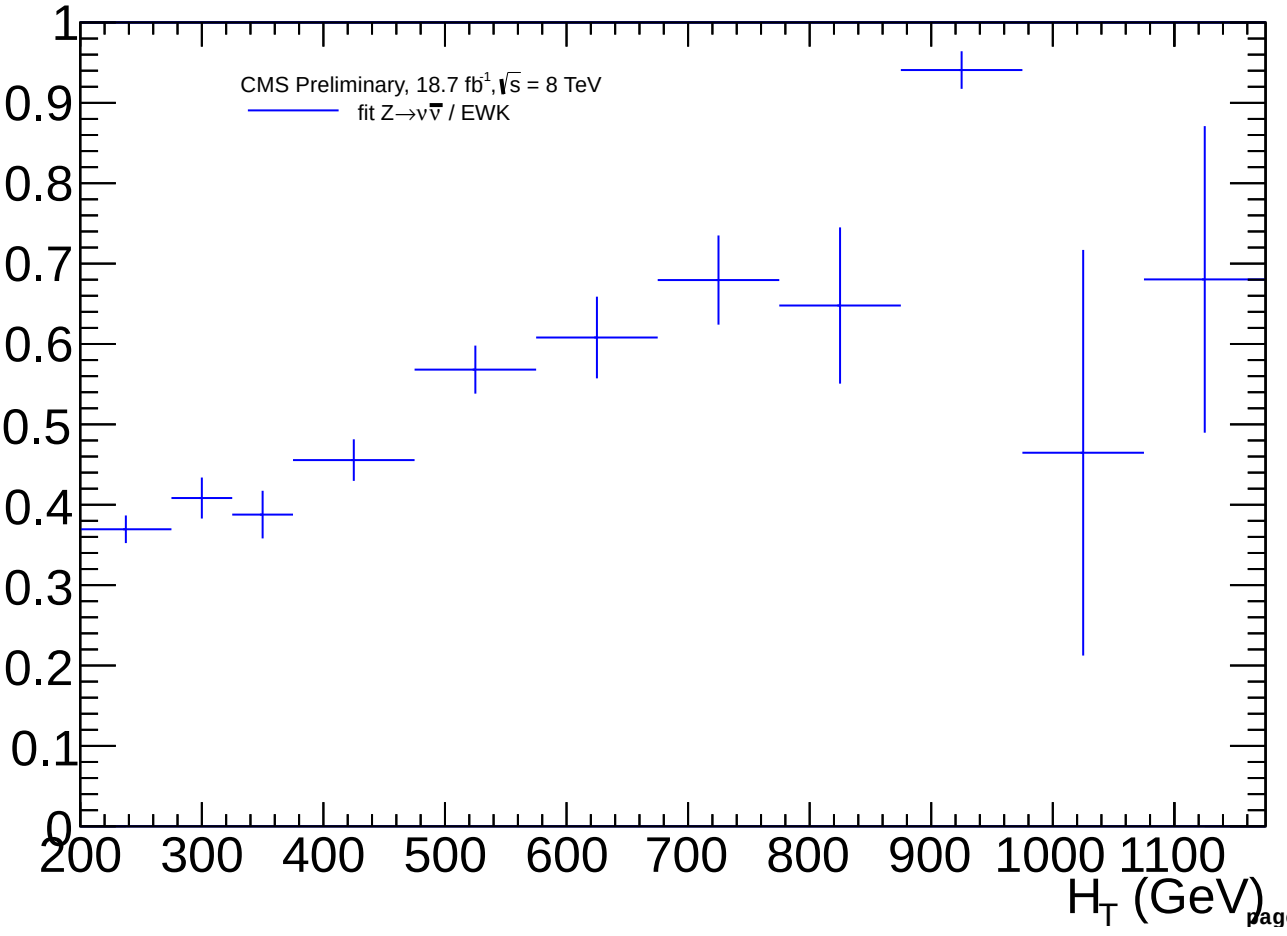
ttW scale factor (result of fit)

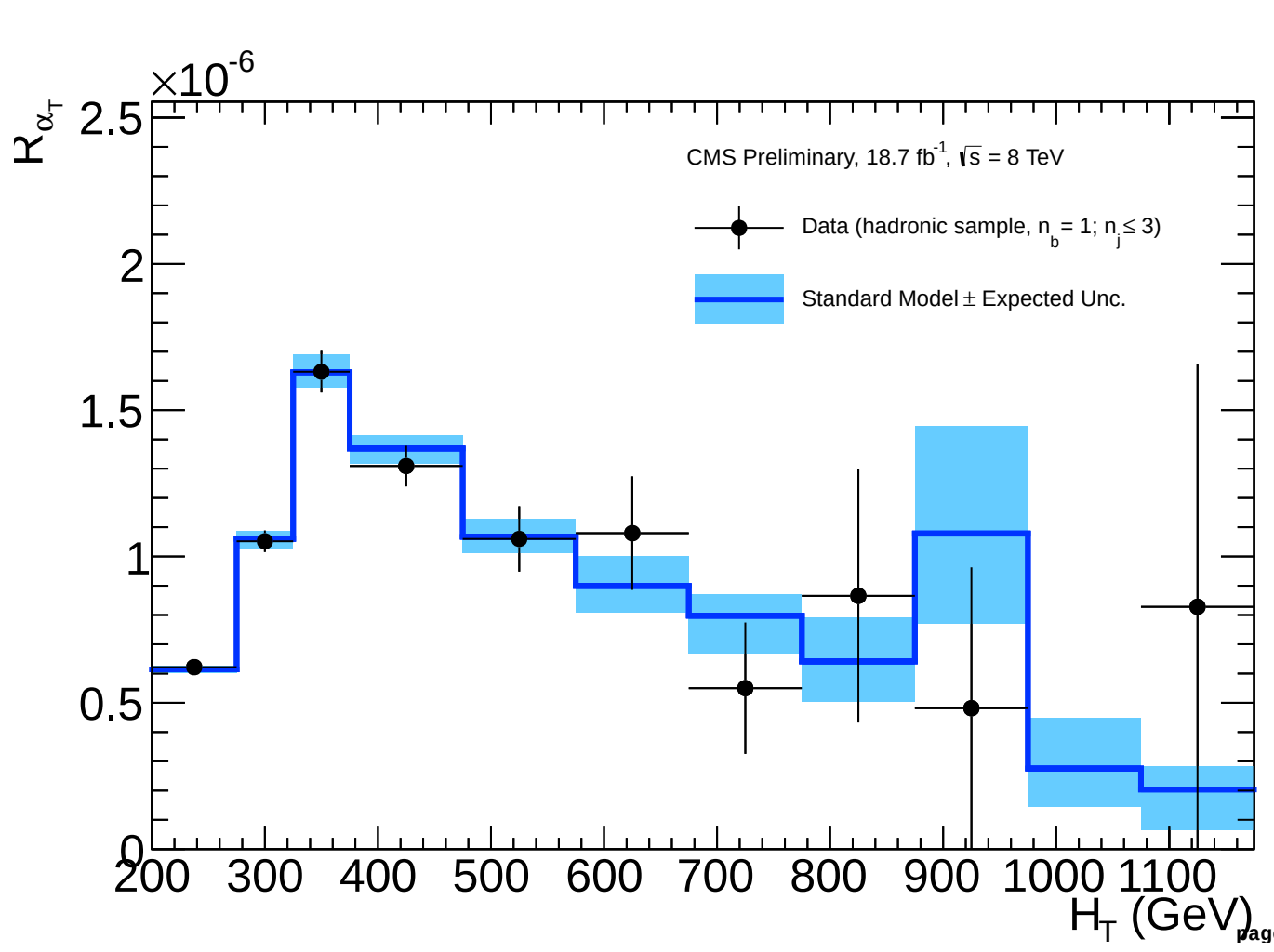


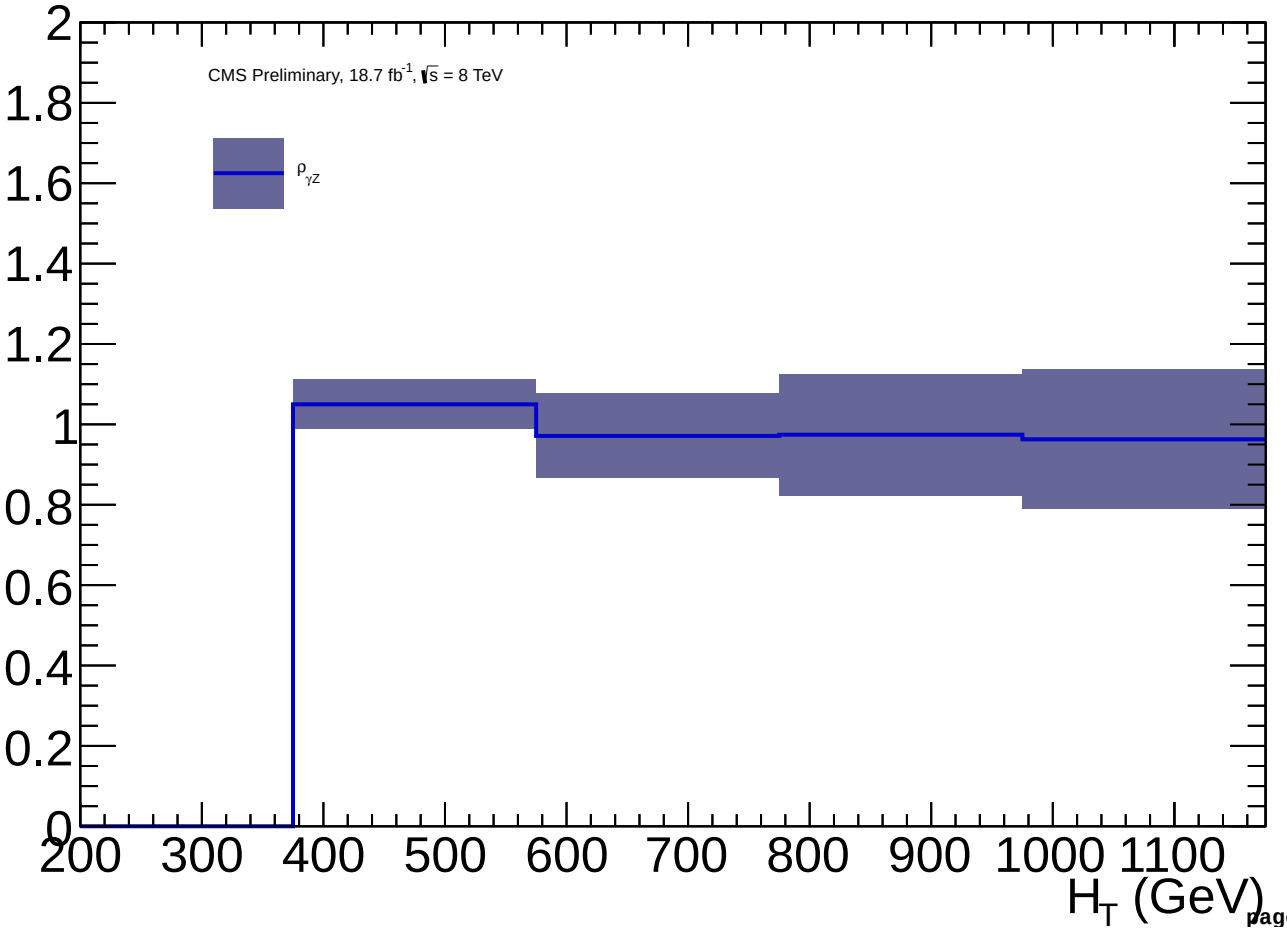
Zinv scale factor (result of fit)

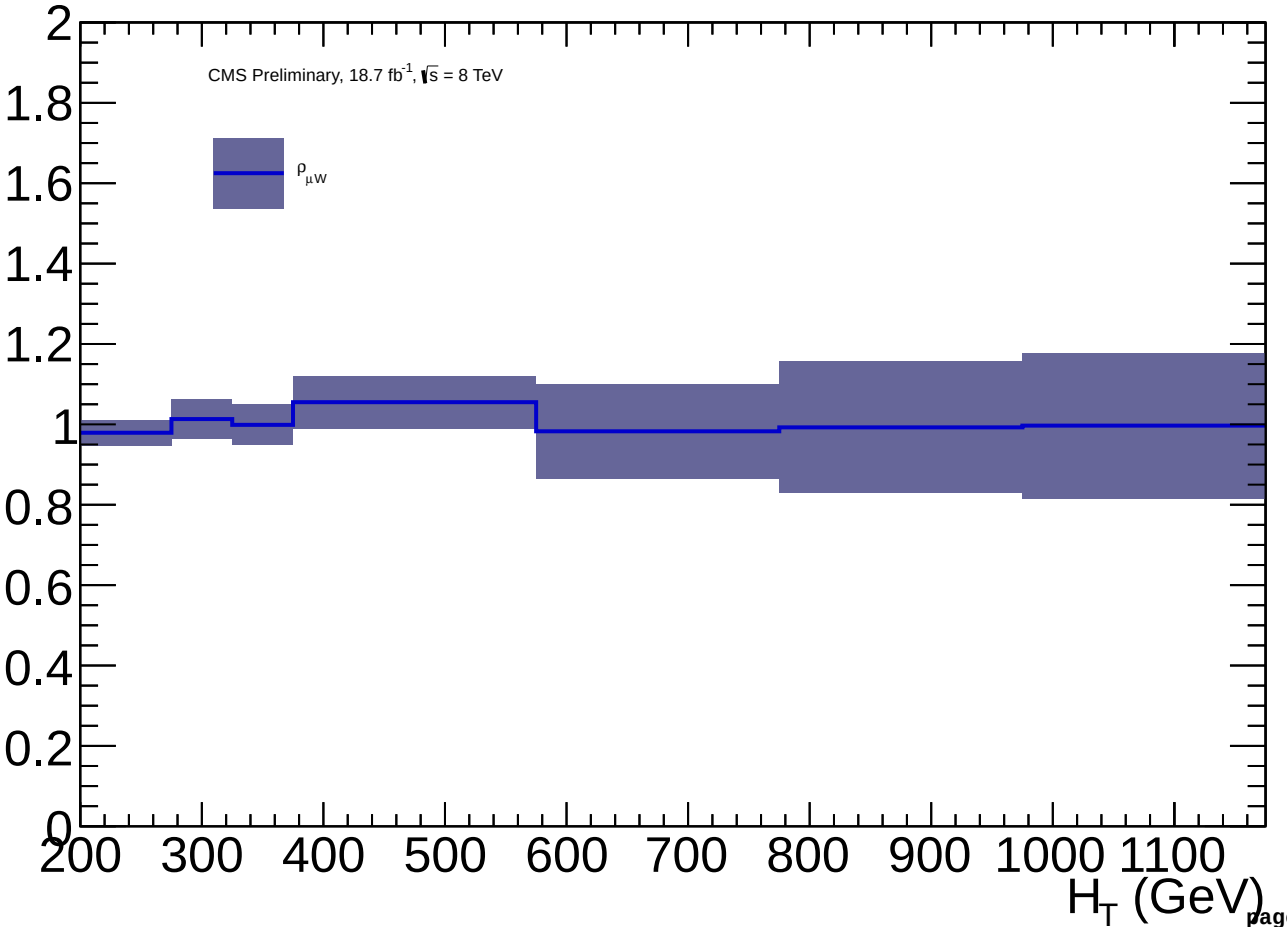


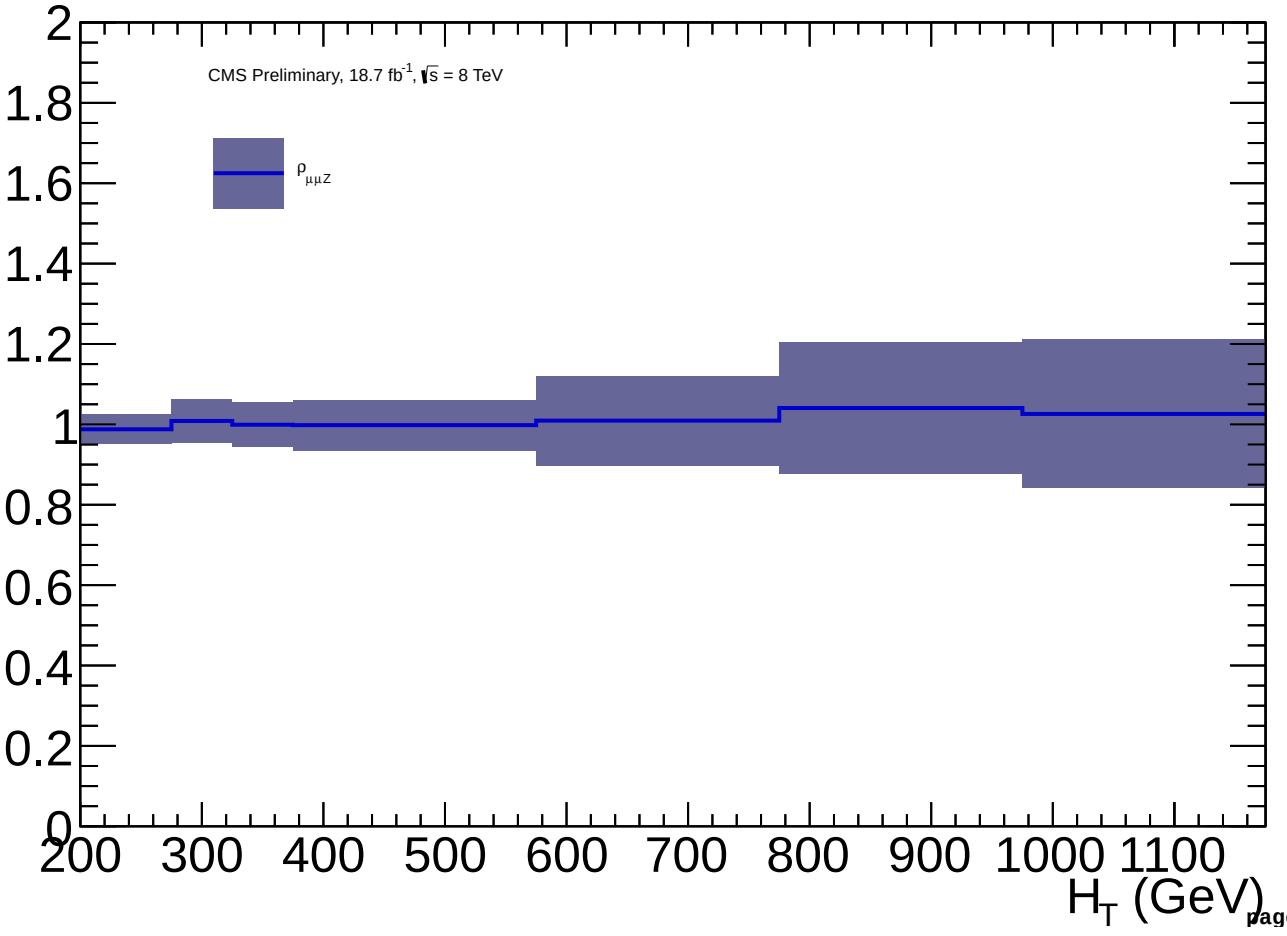
fraction of EWK background which is Zinv (result of fit)

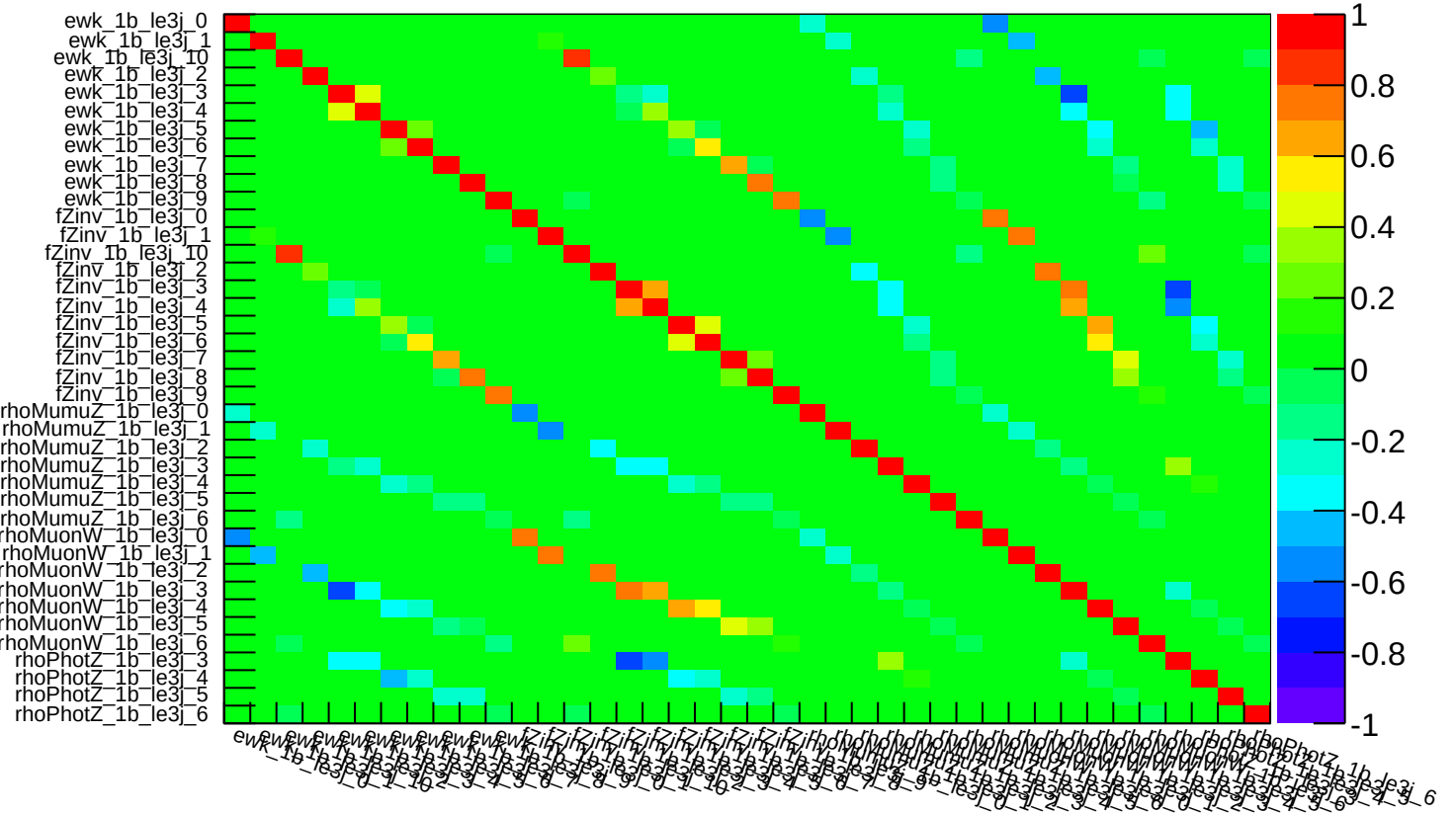



$\times 10^{-6}$
R_{α_T}
2.5
2
1.5
1
0.5
0
CMS Preliminary, 18.7 fb^{-1}, $\sqrt{s}$ = 8 TeV
Data (hadronic sample, n_b = 1; $n_j \leq$ 3)
Standard Model ± Expected Unc.
200
300
400
500
600
700
800
900
1000
1100
H_T (GeV)


CMS Preliminary, 18.7 fb-1, √s = 8 TeV
ργZ
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
200
300
400
500
600
700
800
900
1000
1100
HT (GeV)


CMS Preliminary, 18.7 fb-1, √s = 8 TeV
ρμw
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
200
300
400
500
600
700
800
900
1000
1100
HT (GeV)


CMS Preliminary, 18.7 fb-1, √s = 8 TeV
ρμμZ
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
200
300
400
500
600
700
800
900
1000
1100
HT (GeV)

par name:	value	+/- error	[min - max]
ewk_1b_le3j_0:	1.71e+03	+/- 3.4e+01	[0.0e+00 - 1.7e+04]
fZinv_1b_le3j_0:	3.69e-01	+/- 1.7e-02	[0.0e+00 - 1.0e+00]
ewk_1b_le3j_1:	8.39e+02	+/- 2.4e+01	[0.0e+00 - 8.3e+03]
fZinv_1b_le3j_1:	4.08e-01	+/- 2.6e-02	[0.0e+00 - 1.0e+00]
ewk_1b_le3j_2:	5.26e+02	+/- 1.8e+01	[0.0e+00 - 5.3e+03]
fZinv_1b_le3j_2:	3.88e-01	+/- 3.0e-02	[0.0e+00 - 1.0e+00]
ewk_1b_le3j_3:	3.72e+02	+/- 1.4e+01	[0.0e+00 - 3.6e+03]
fZinv_1b_le3j_3:	4.56e-01	+/- 2.6e-02	[0.0e+00 - 1.0e+00]
ewk_1b_le3j_4:	9.06e+01	+/- 4.6e+00	[0.0e+00 - 9.0e+02]
fZinv_1b_le3j_4:	5.68e-01	+/- 3.0e-02	[0.0e+00 - 1.0e+00]
ewk_1b_le3j_5:	2.58e+01	+/- 2.5e+00	[0.0e+00 - 3.1e+02]
fZinv_1b_le3j_5:	6.08e-01	+/- 5.1e-02	[0.0e+00 - 1.0e+00]
ewk_1b_le3j_6:	8.70e+00	+/- 1.2e+00	[0.0e+00 - 6.0e+01]
fZinv_1b_le3j_6:	6.80e-01	+/- 5.5e-02	[0.0e+00 - 1.0e+00]
ewk_1b_le3j_7:	2.96e+00	+/- 7.0e-01	[0.0e+00 - 4.0e+01]
fZinv_1b_le3j_7:	6.48e-01	+/- 9.7e-02	[0.0e+00 - 1.0e+00]
ewk_1b_le3j_8:	2.24e+00	+/- 6.7e-01	[0.0e+00 - 1.0e+01]
fZinv_1b_le3j_8:	9.41e-01	+/- 2.3e-02	[0.0e+00 - 1.0e+00]
ewk_1b_le3j_9:	2.84e-01	+/- 1.4e-01	[0.0e+00 - 1.0e+01]
fZinv_1b_le3j_9:	4.65e-01	+/- 2.5e-01	[0.0e+00 - 1.0e+00]
ewk_1b_le3j_10:	2.46e-01	+/- 1.4e-01	[0.0e+00 - 1.0e+01]
fZinv_1b_le3j_10:	6.80e-01	+/- 1.9e-01	[0.0e+00 - 1.0e+00]
rhoPhotZ_1b_le3j_3:	1.05e+00	+/- 6.2e-02	[0.0e+00 - 3.0e+00]
rhoPhotZ_1b_le3j_4:	9.71e-01	+/- 1.0e-01	[0.0e+00 - 3.0e+00]
rhoPhotZ_1b_le3j_5:	9.74e-01	+/- 1.5e-01	[0.0e+00 - 3.0e+00]
rhoPhotZ_1b_le3j_6:	9.63e-01	+/- 1.7e-01	[0.0e+00 - 3.0e+00]
rhoMuonW_1b_le3j_0:	9.79e-01	+/- 3.1e-02	[0.0e+00 - 3.0e+00]
rhoMuonW_1b_le3j_1:	1.01e+00	+/- 4.9e-02	[0.0e+00 - 3.0e+00]
rhoMuonW_1b_le3j_2:	9.99e-01	+/- 5.1e-02	[0.0e+00 - 3.0e+00]
rhoMuonW_1b_le3j_3:	1.06e+00	+/- 6.6e-02	[0.0e+00 - 3.0e+00]
rhoMuonW_1b_le3j_4:	9.83e-01	+/- 1.2e-01	[0.0e+00 - 3.0e+00]
rhoMuonW_1b_le3j_5:	9.93e-01	+/- 1.6e-01	[0.0e+00 - 3.0e+00]
rhoMuonW_1b_le3j_6:	9.97e-01	+/- 1.8e-01	[0.0e+00 - 3.0e+00]
rhoMumuZ_1b_le3j_0:	9.88e-01	+/- 3.6e-02	[0.0e+00 - 3.0e+00]
rhoMumuZ_1b_le3j_1:	1.01e+00	+/- 5.4e-02	[0.0e+00 - 3.0e+00]
rhoMumuZ_1b_le3j_2:	9.99e-01	+/- 5.5e-02	[0.0e+00 - 3.0e+00]
rhoMumuZ_1b_le3j_3:	9.98e-01	+/- 6.3e-02	[0.0e+00 - 3.0e+00]
rhoMumuZ_1b_le3j_4:	1.01e+00	+/- 1.1e-01	[0.0e+00 - 3.0e+00]
rhoMumuZ_1b_le3j_5:	1.04e+00	+/- 1.6e-01	[0.0e+00 - 3.0e+00]
rhoMumuZ_1b_le3j_6:	1.03e+00	+/- 1.8e-01	[0.0e+00 - 3.0e+00]

correlation_matrix