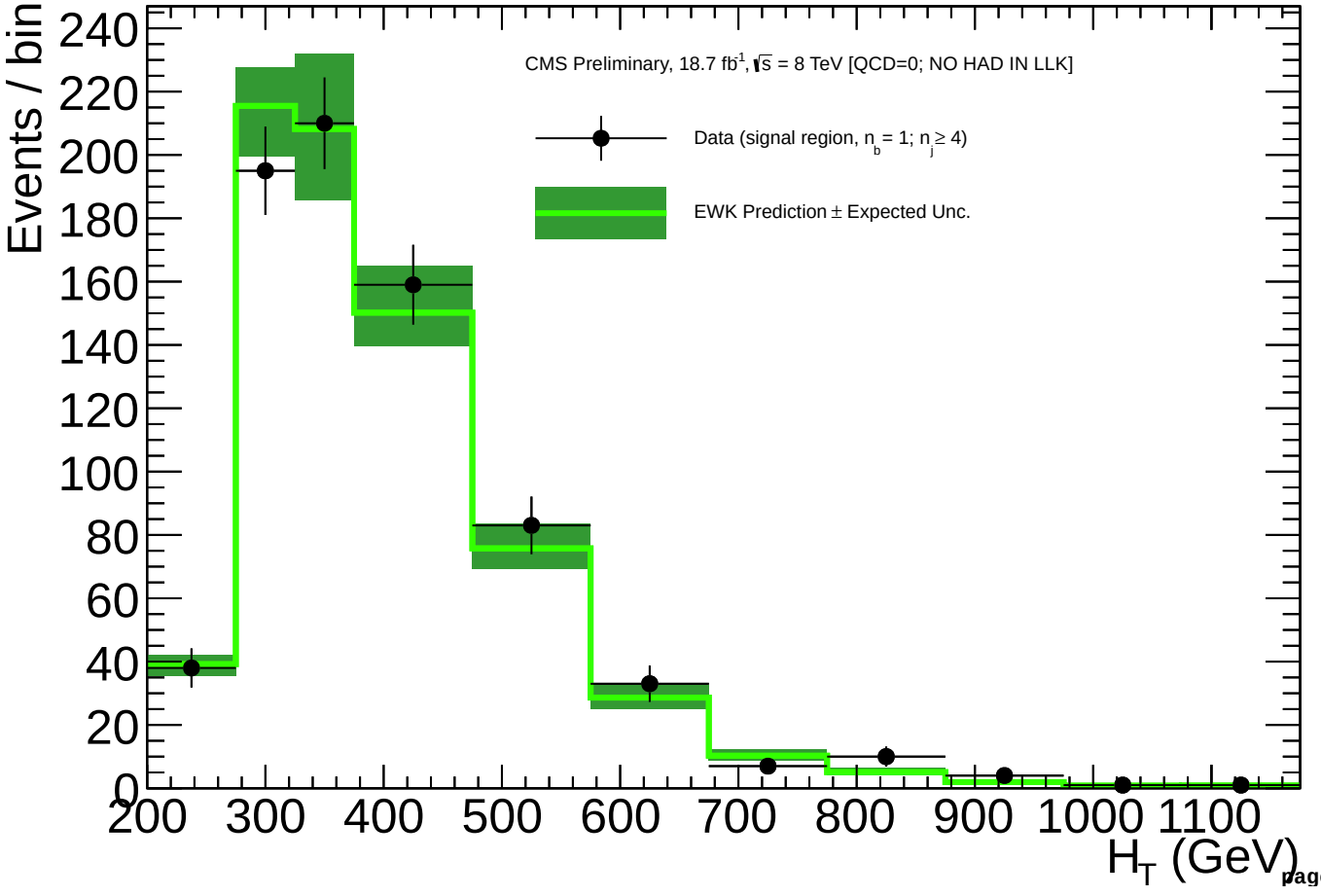
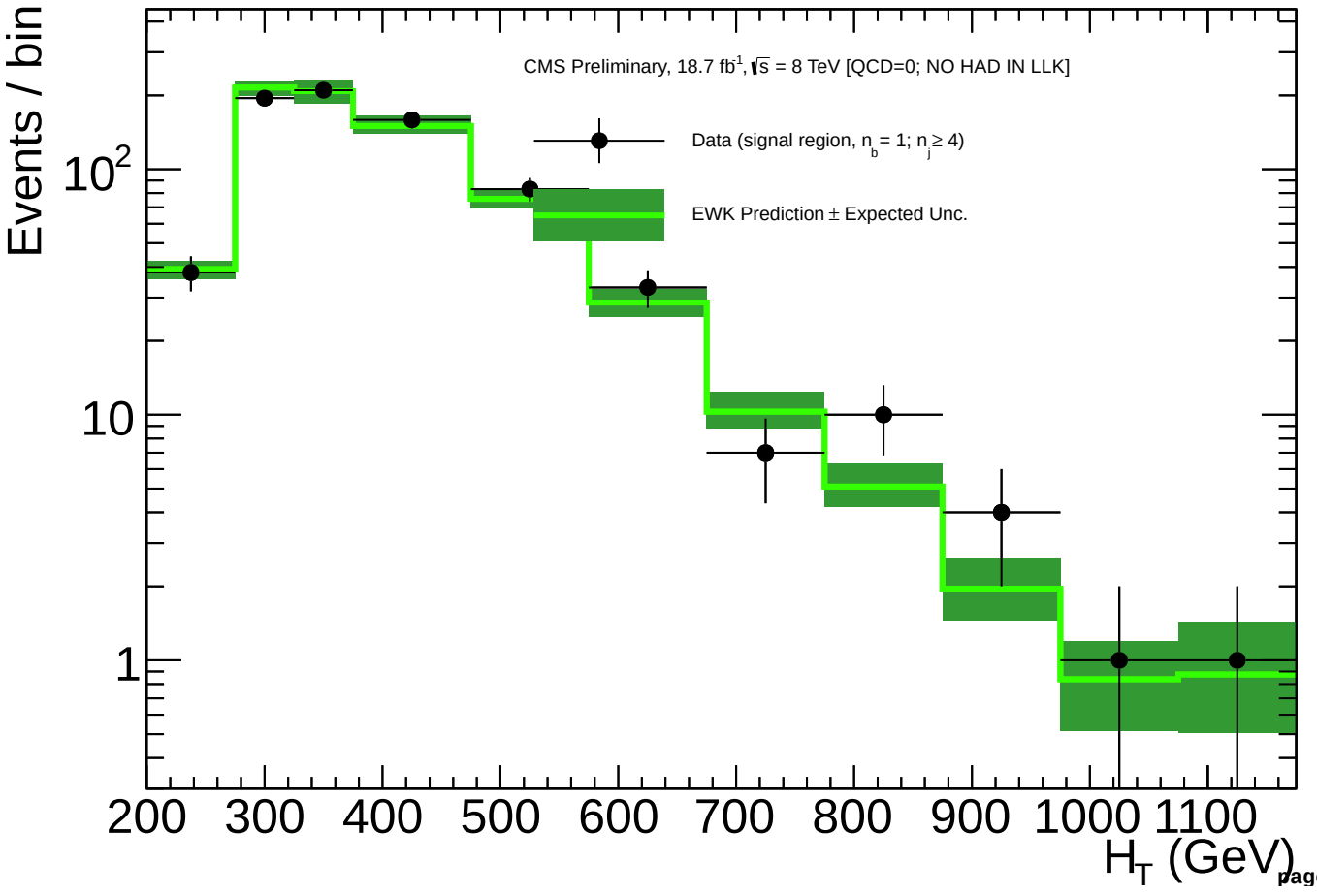
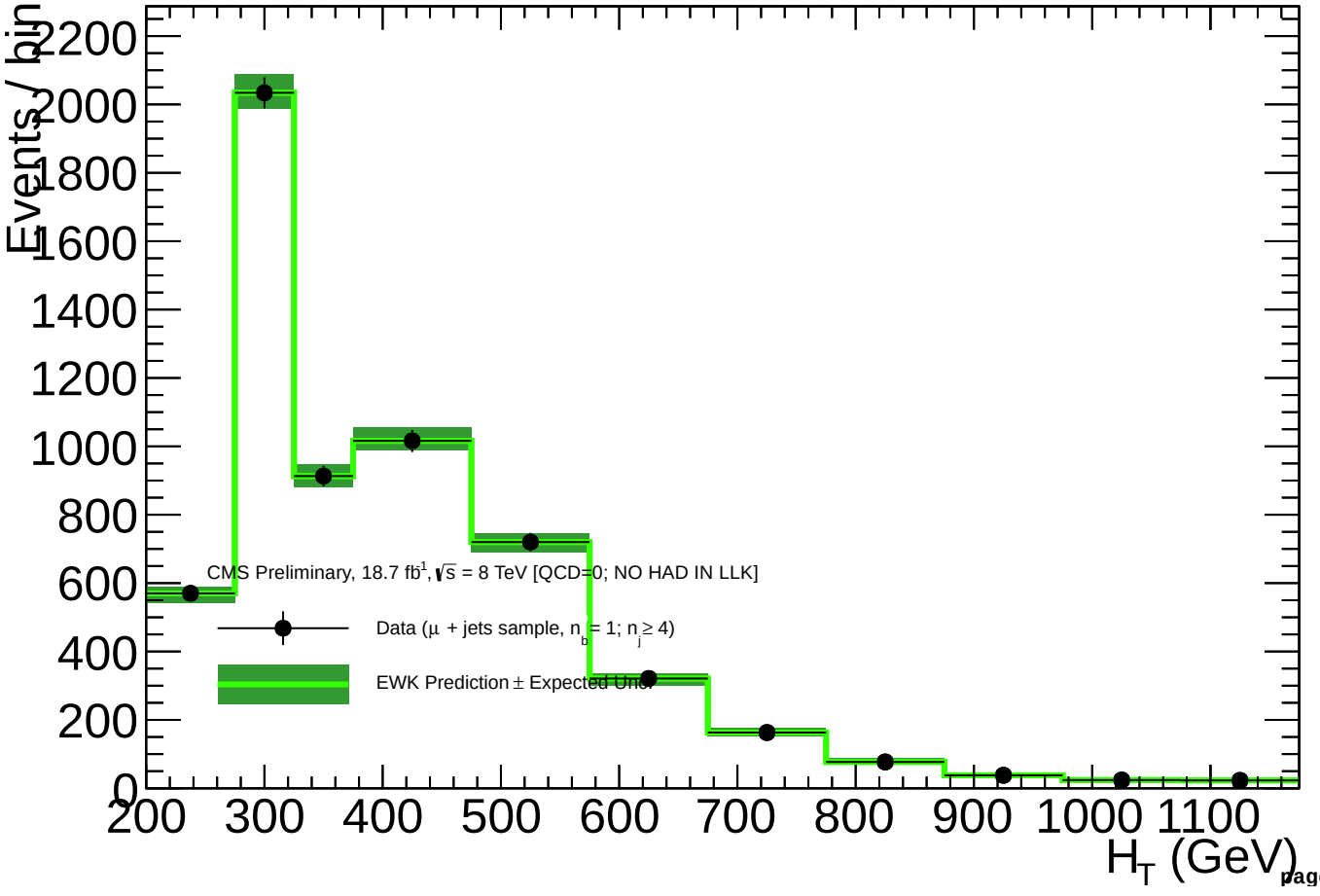
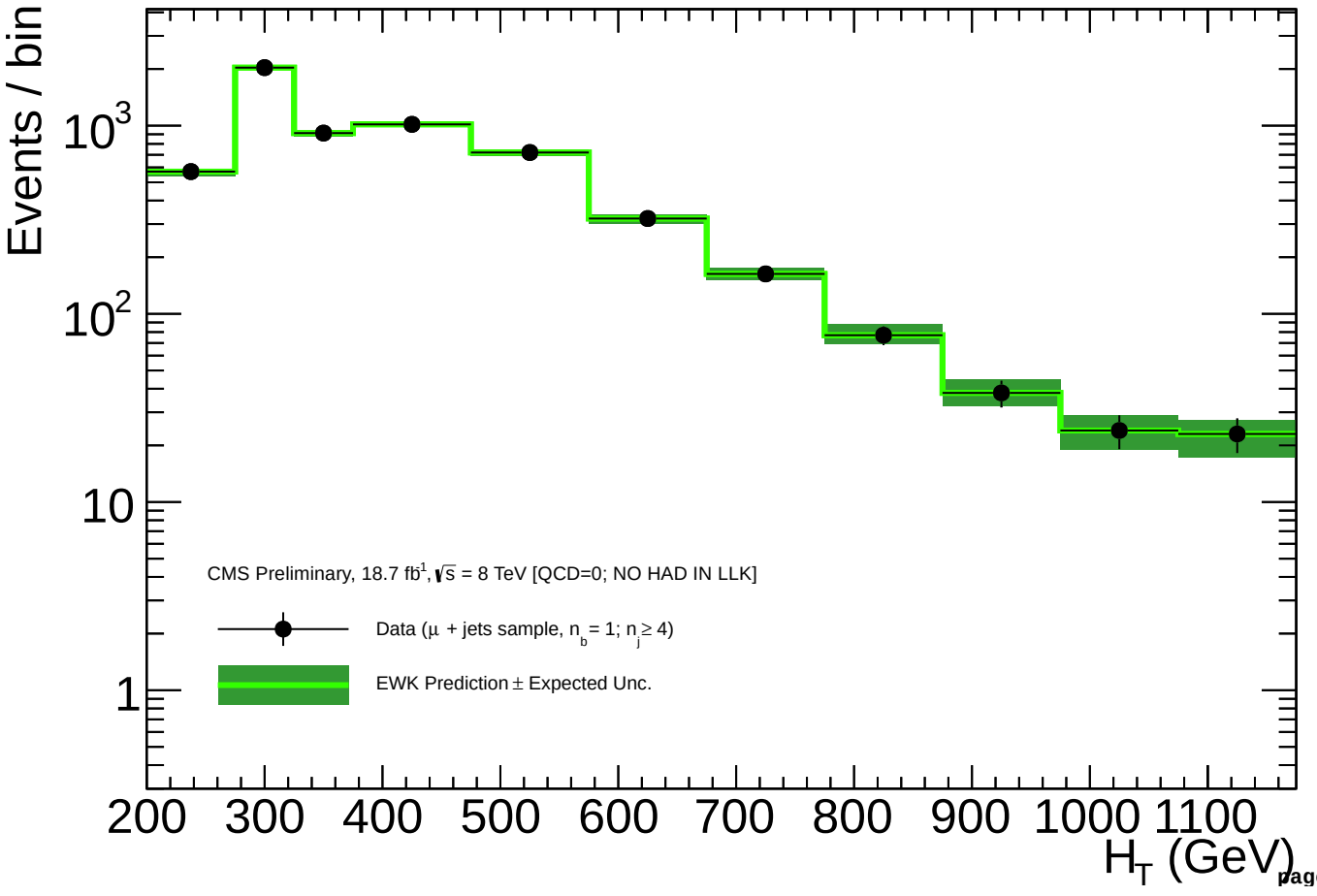
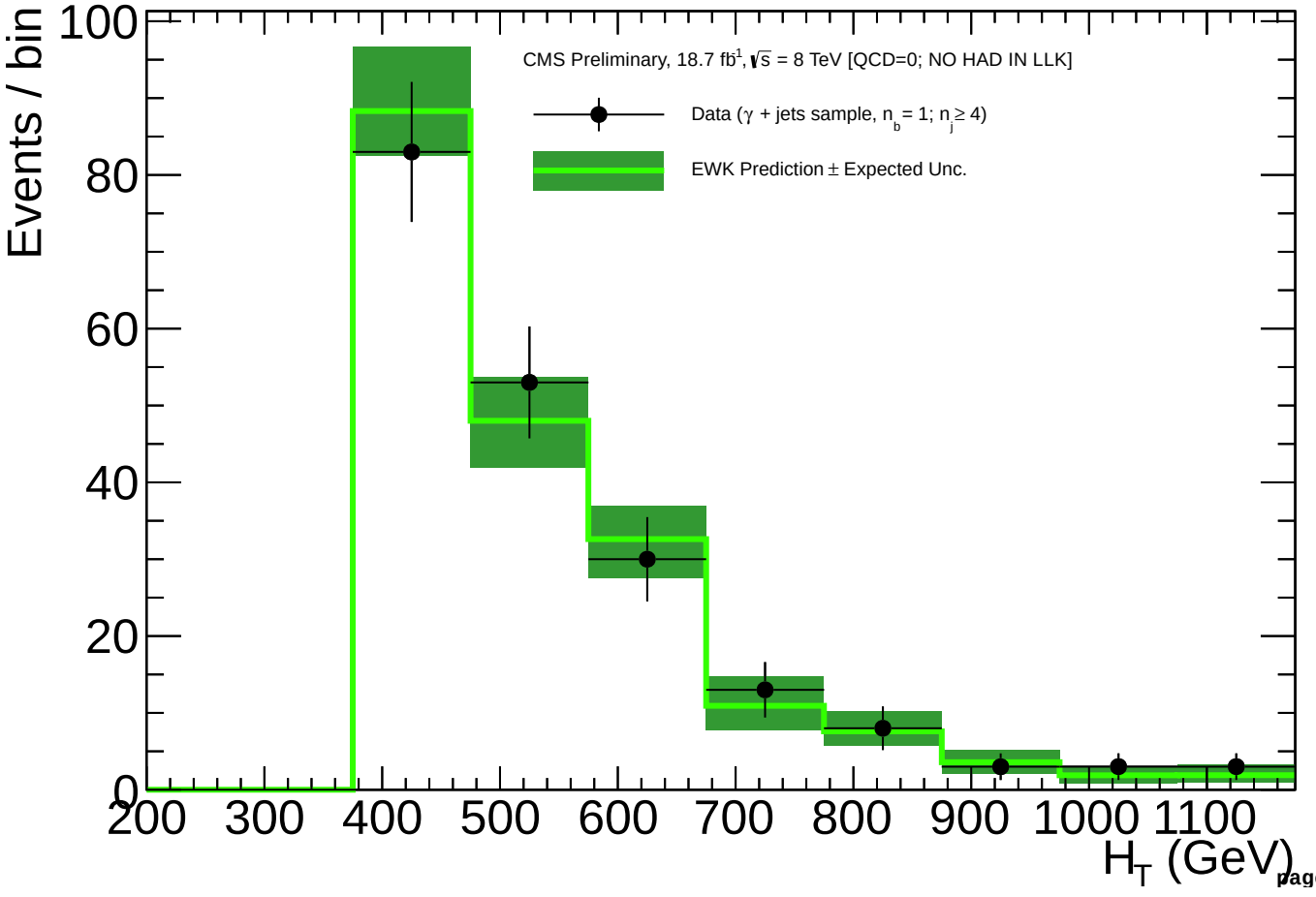
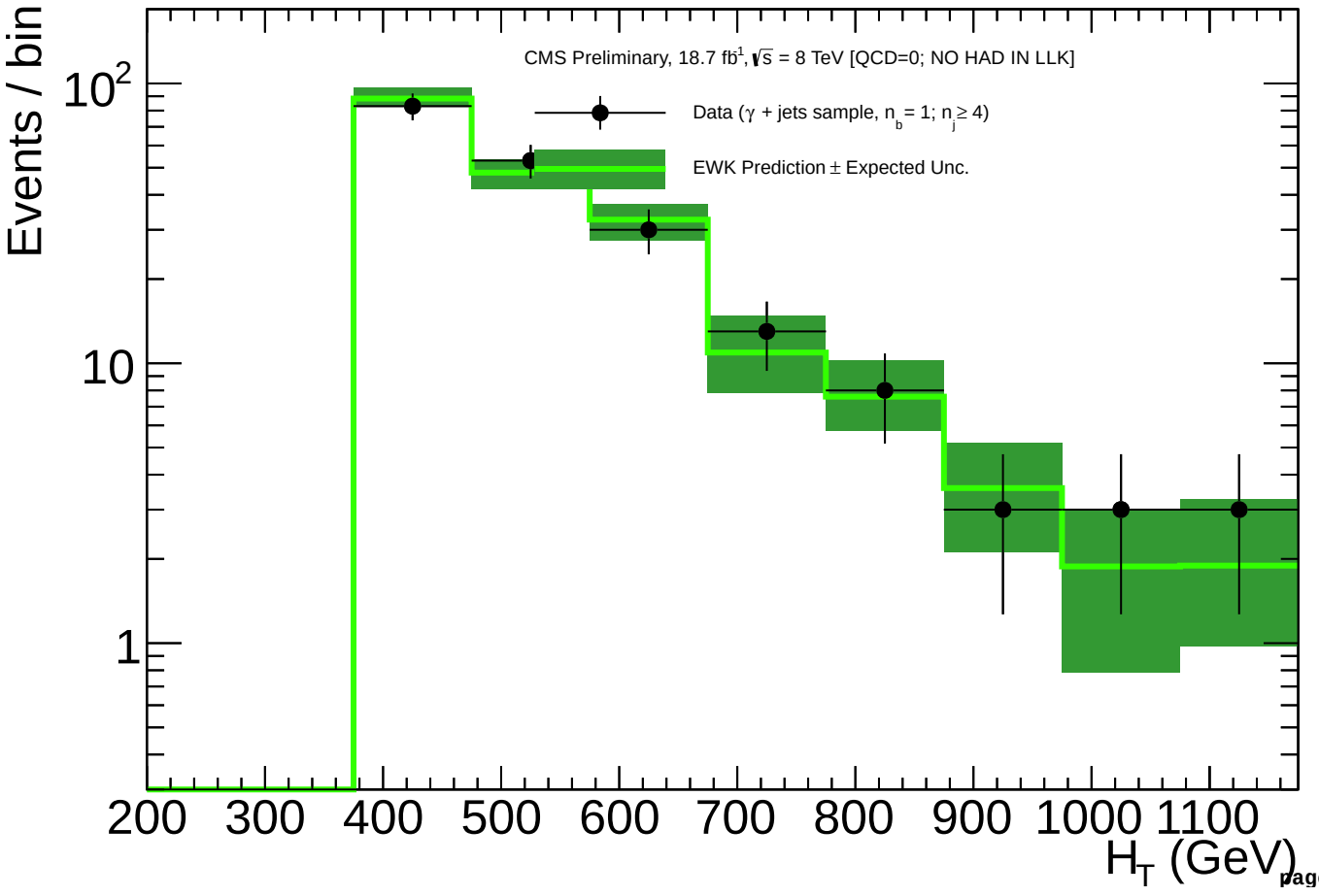

CMS Preliminary, 18.7 fb-1, √s = 8 TeV [QCD=0; NO HAD IN LLK]
Data (signal region, nb = 1; nj ≥ 4)
EWK Prediction ± Expected Unc.
Events / bin
0
20
40
60
80
100
120
140
160
180
200
220
240
200
300
400
500
600
700
800
900
1000
1100
HT (GeV)

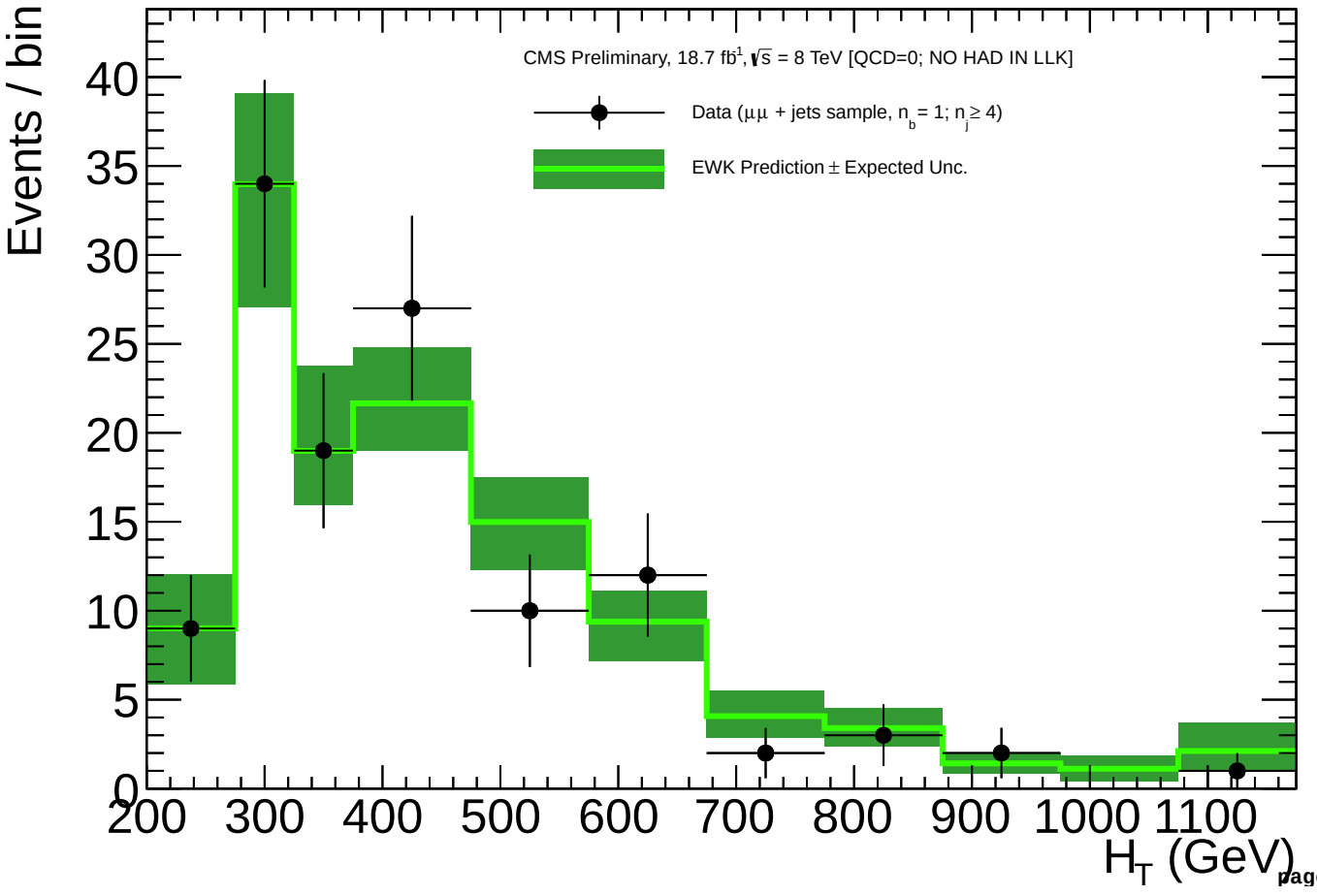

CMS Preliminary, 18.7 fb-1, √s = 8 TeV [QCD=0; NO HAD IN LLK]
Data (signal region, nb = 1; nj ≥ 4)
EWK Prediction ± Expected Unc.
Events / bin
10²
10
1
200 300 400 500 600 700 800 900 1000 1100
HT (GeV)

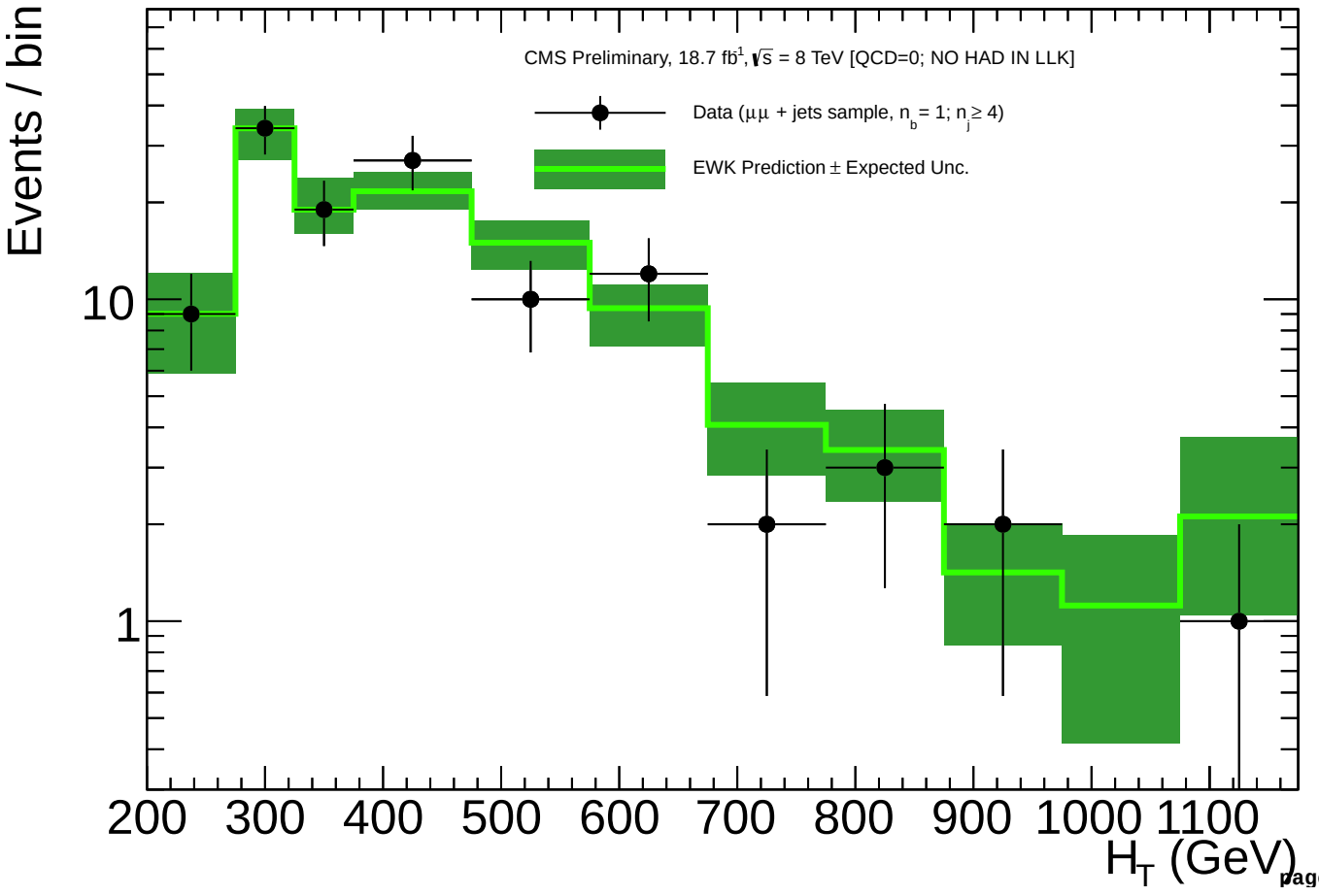

Events / bin
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
CMS Preliminary, 18.7 fb^{-1}, $\sqrt{s}$ = 8 TeV [QCD=0; NO HAD IN LLK]
Data (μ + jets sample, n_b = 1; $n_j \geq$ 4)
EWK Prediction ± Expected Unc.
200
300
400
500
600
700
800
900
1000
1100
H_T (GeV)


Events / bin
10^3
10^2
10
1
CMS Preliminary, 18.7 fb^{-1}, $\sqrt{s}$ = 8 TeV [QCD=0; NO HAD IN LLK]
Data (μ + jets sample, $n_b = 1$; $n_j \geq 4$)
EWK Prediction $\pm$ Expected Unc.
200 300 400 500 600 700 800 900 1000 1100
H_T (GeV)

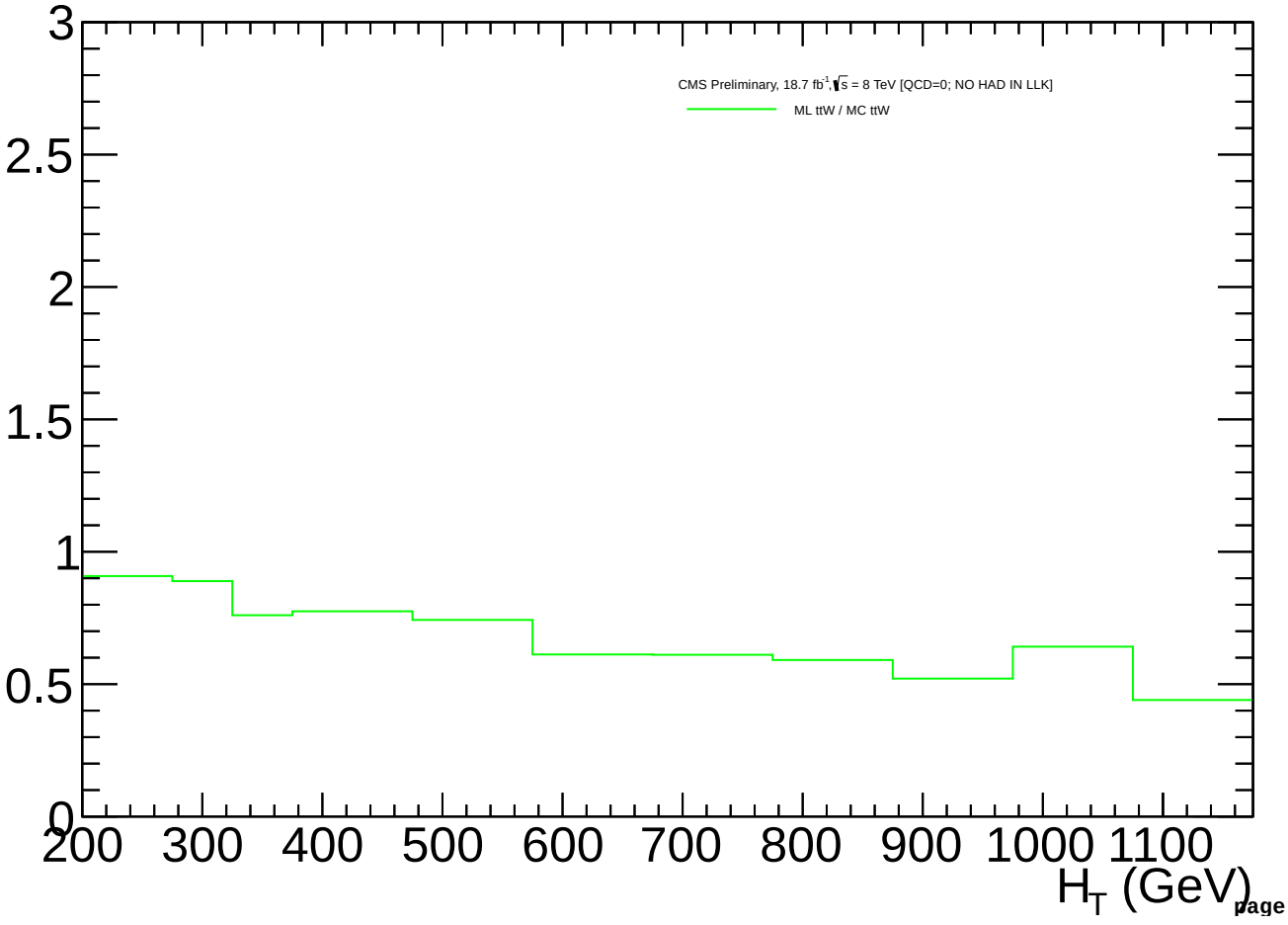

CMS Preliminary, 18.7 fb^{-1}, $\sqrt{s}$ = 8 TeV [QCD=0; NO HAD IN LLK]
Data (γ + jets sample, $n_b = 1$; $n_j \geq 4$)
EWK Prediction ± Expected Unc.
Events / bin
H_T (GeV)
0
20
40
60
80
100
200
300
400
500
600
700
800
900
1000
1100


CMS Preliminary, 18.7 fb-1, √s = 8 TeV [QCD=0; NO HAD IN LLK]
Data (γ + jets sample, nb = 1; nj ≥ 4)
EWK Prediction ± Expected Unc.
Events / bin
10²
10
1
200 300 400 500 600 700 800 900 1000 1100
HT (GeV)

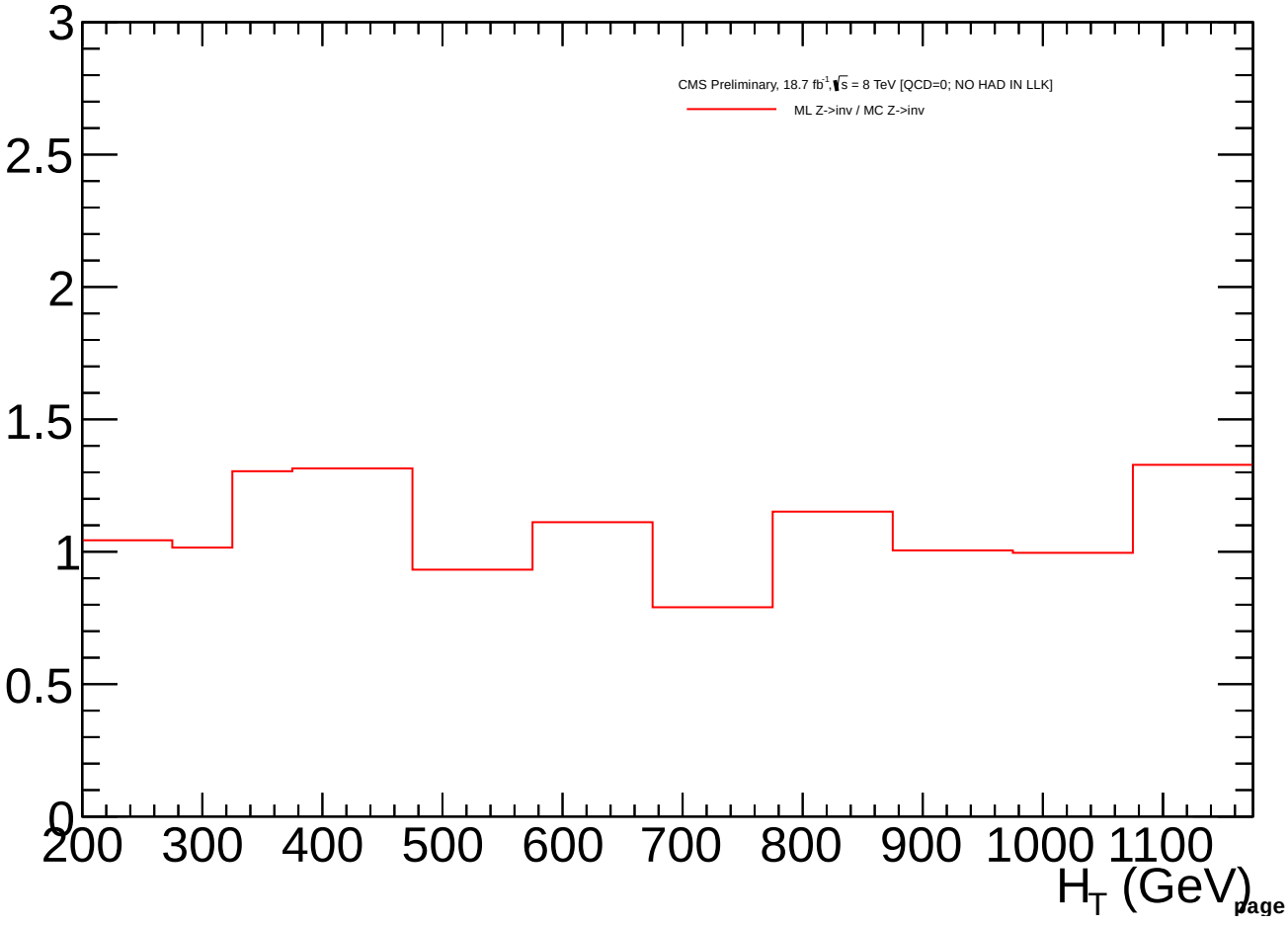

CMS Preliminary, 18.7 fb^{-1}, $\sqrt{s}$ = 8 TeV [QCD=0; NO HAD IN LLK]
Data ($\mu\mu$ + jets sample, $n_b = 1$; $n_j \geq 4$)
EWK Prediction ± Expected Unc.
Events / bin
H_T (GeV)
0
5
10
15
20
25
30
35
40
200
300
400
500
600
700
800
900
1000
1100


CMS Preliminary, 18.7 fb^{-1}, $\sqrt{s}$ = 8 TeV [QCD=0; NO HAD IN LLK]
Data ($\mu\mu$ + jets sample, $n_b = 1$; $n_j \geq 4$)
EWK Prediction ± Expected Unc.
Events / bin
10
1
200
300
400
500
600
700
800
900
1000
1100
H_T (GeV)

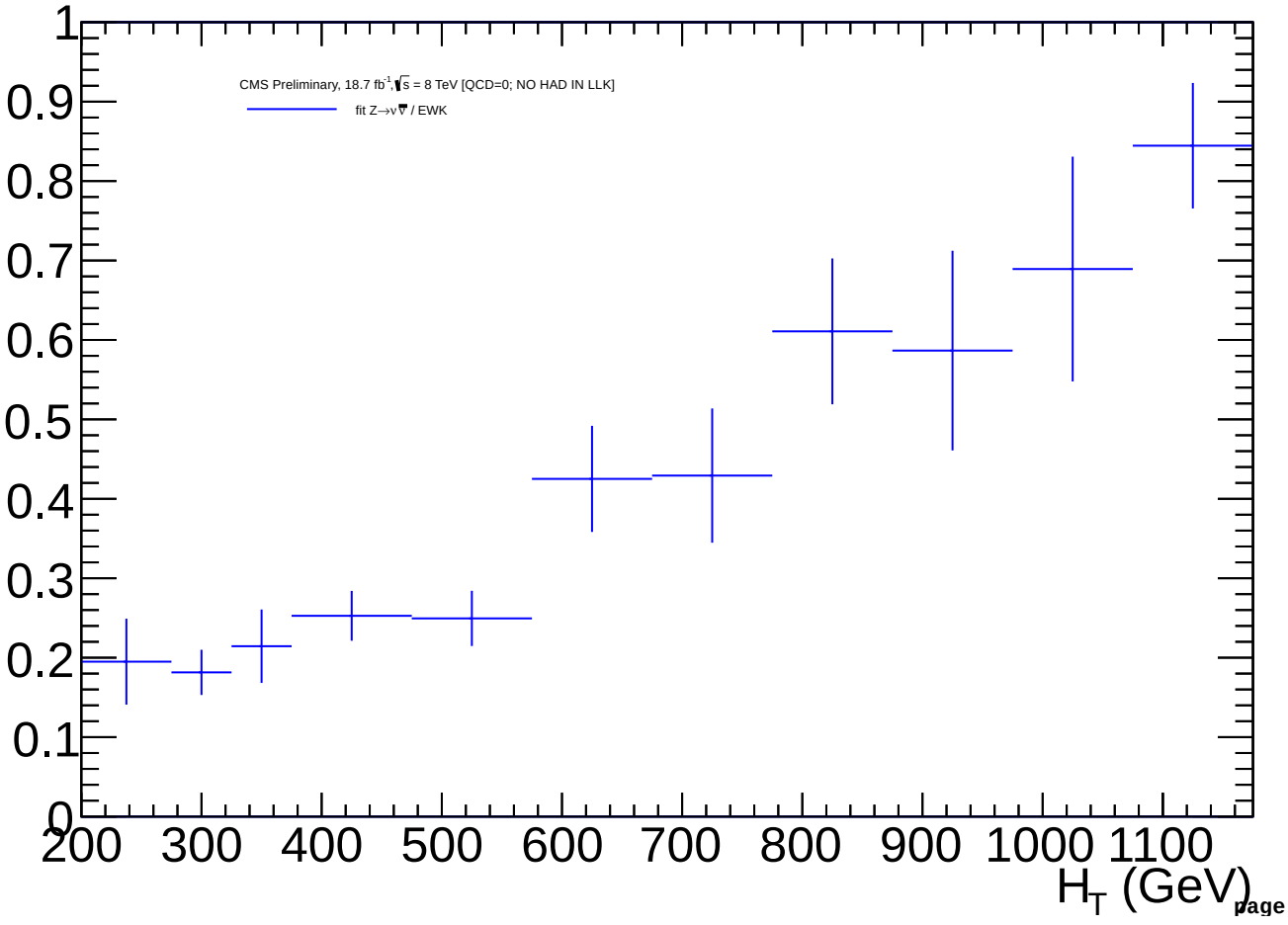
ttW scale factor (result of fit)

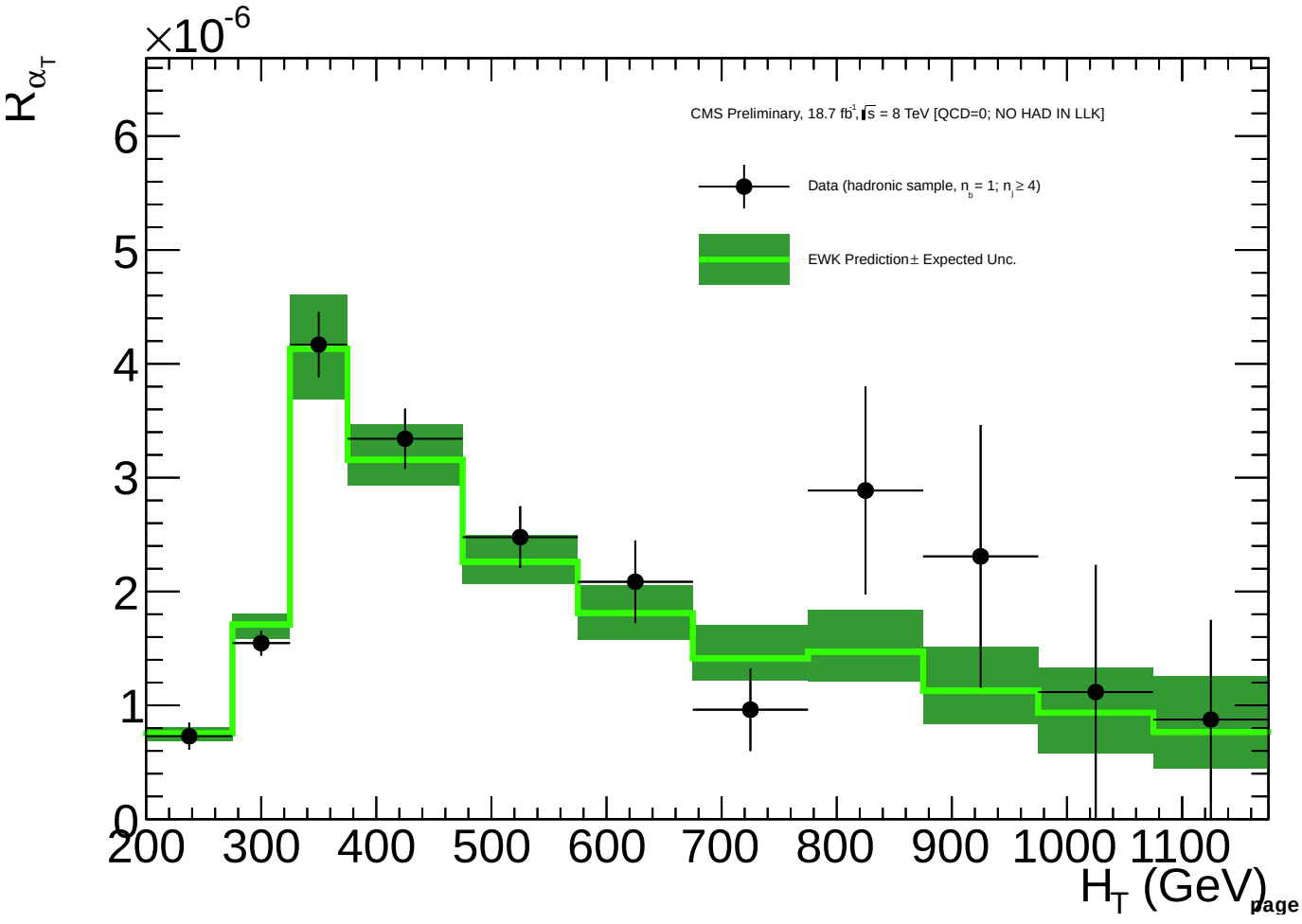


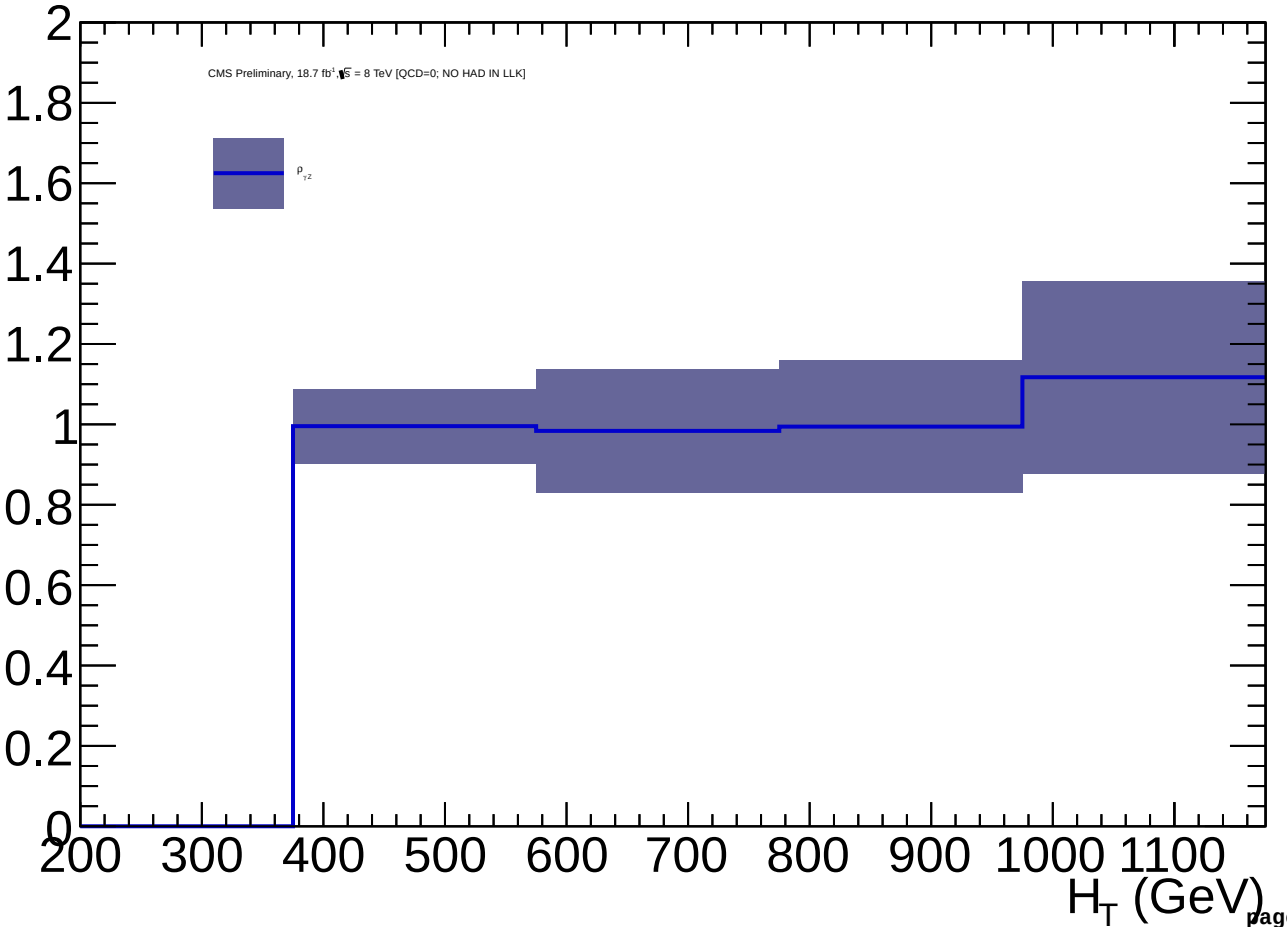
Zinv scale factor (result of fit)

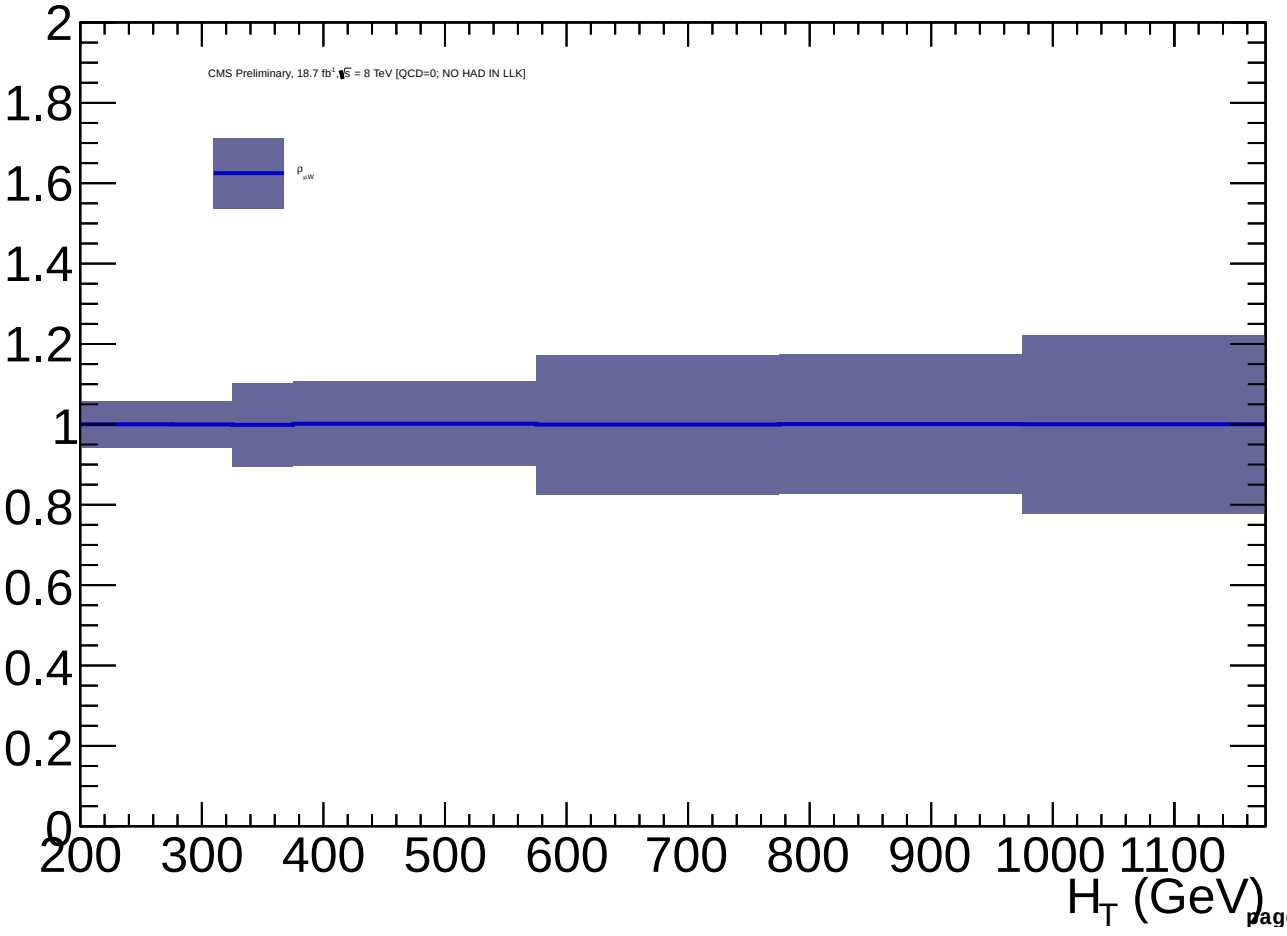


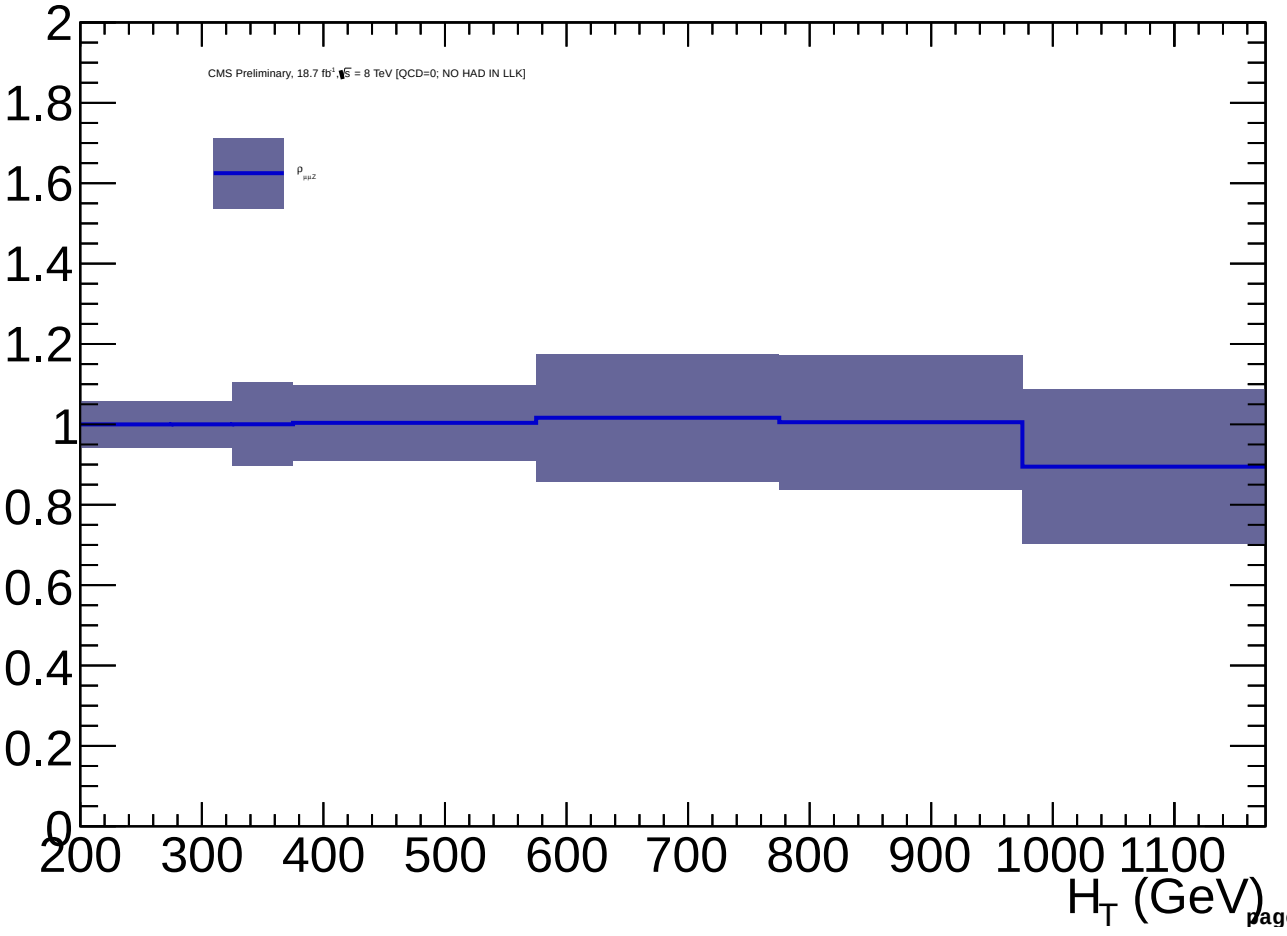
fraction of EWK background which is Zinv (result of fit)

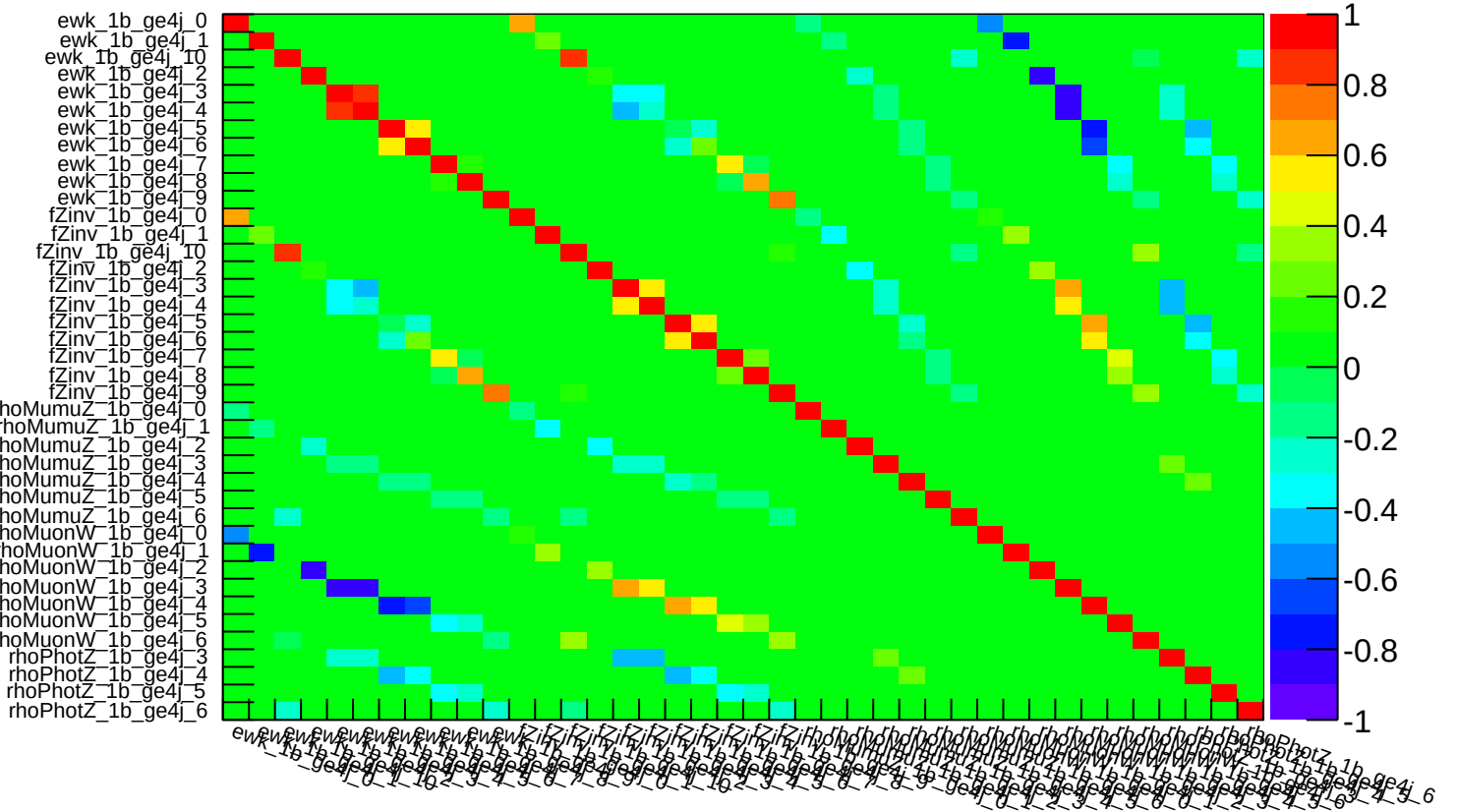



R_{α_T}
$\times 10^{-6}$
CMS Preliminary, 18.7 fb^{-1}, $\sqrt{s}$ = 8 TeV [QCD=0; NO HAD IN LLK]
Data (hadronic sample, $n_b = 1$; $n_j \geq 4$)
EWK Prediction ± Expected Unc.
0
1
2
3
4
5
6
200
300
400
500
600
700
800
900
1000
1100
H_T (GeV)


CMS Preliminary, 18.7 fb-1, √s = 8 TeV [QCD=0; NO HAD IN LLK]
ρT,Z
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 [QCD=0; NO HAD IN LLK]
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 [QCD=0; NO HAD IN LLK]
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_ge4j_0:	3.92e+01	+/-	3.4e+00	[0.0e+00	-	3.8e+02]
fZinv_1b_ge4j_0:	1.95e-01	+/-	5.4e-02	[0.0e+00	-	1.0e+00]
ewk_1b_ge4j_1:	2.15e+02	+/-	1.3e+01	[0.0e+00	-	2.0e+03]
fZinv_1b_ge4j_1:	1.82e-01	+/-	2.8e-02	[0.0e+00	-	1.0e+00]
ewk_1b_ge4j_2:	2.08e+02	+/-	2.1e+01	[0.0e+00	-	2.1e+03]
fZinv_1b_ge4j_2:	2.14e-01	+/-	4.6e-02	[0.0e+00	-	1.0e+00]
ewk_1b_ge4j_3:	1.50e+02	+/-	1.3e+01	[0.0e+00	-	1.6e+03]
fZinv_1b_ge4j_3:	2.53e-01	+/-	3.1e-02	[0.0e+00	-	1.0e+00]
ewk_1b_ge4j_4:	7.58e+01	+/-	6.9e+00	[0.0e+00	-	8.3e+02]
fZinv_1b_ge4j_4:	2.49e-01	+/-	3.5e-02	[0.0e+00	-	1.0e+00]
ewk_1b_ge4j_5:	2.86e+01	+/-	3.9e+00	[0.0e+00	-	3.3e+02]
fZinv_1b_ge4j_5:	4.25e-01	+/-	6.7e-02	[0.0e+00	-	1.0e+00]
ewk_1b_ge4j_6:	1.03e+01	+/-	1.7e+00	[0.0e+00	-	7.0e+01]
fZinv_1b_ge4j_6:	4.29e-01	+/-	8.5e-02	[0.0e+00	-	1.0e+00]
ewk_1b_ge4j_7:	5.10e+00	+/-	1.1e+00	[0.0e+00	-	1.0e+02]
fZinv_1b_ge4j_7:	6.11e-01	+/-	9.2e-02	[0.0e+00	-	1.0e+00]
ewk_1b_ge4j_8:	1.96e+00	+/-	5.7e-01	[0.0e+00	-	4.0e+01]
fZinv_1b_ge4j_8:	5.87e-01	+/-	1.3e-01	[0.0e+00	-	1.0e+00]
ewk_1b_ge4j_9:	8.37e-01	+/-	3.5e-01	[0.0e+00	-	1.0e+01]
fZinv_1b_ge4j_9:	6.89e-01	+/-	1.4e-01	[0.0e+00	-	1.0e+00]
ewk_1b_ge4j_10:	8.75e-01	+/-	3.9e-01	[0.0e+00	-	1.0e+01]
fZinv_1b_ge4j_10:	8.45e-01	+/-	7.9e-02	[0.0e+00	-	1.0e+00]
rhoPhotZ_1b_ge4j_3:	9.96e-01	+/-	9.3e-02	[0.0e+00	-	3.0e+00]
rhoPhotZ_1b_ge4j_4:	9.84e-01	+/-	1.5e-01	[0.0e+00	-	3.0e+00]
rhoPhotZ_1b_ge4j_5:	9.94e-01	+/-	1.7e-01	[0.0e+00	-	3.0e+00]
rhoPhotZ_1b_ge4j_6:	1.12e+00	+/-	2.4e-01	[0.0e+00	-	3.0e+00]
rhoMuonW_1b_ge4j_0:	1.00e+00	+/-	5.8e-02	[0.0e+00	-	3.0e+00]
rhoMuonW_1b_ge4j_1:	1.00e+00	+/-	5.8e-02	[0.0e+00	-	3.0e+00]
rhoMuonW_1b_ge4j_2:	9.99e-01	+/-	1.0e-01	[0.0e+00	-	3.0e+00]
rhoMuonW_1b_ge4j_3:	1.00e+00	+/-	1.0e-01	[0.0e+00	-	3.0e+00]
rhoMuonW_1b_ge4j_4:	1.00e+00	+/-	1.7e-01	[0.0e+00	-	3.0e+00]
rhoMuonW_1b_ge4j_5:	1.00e+00	+/-	1.7e-01	[0.0e+00	-	3.0e+00]
rhoMuonW_1b_ge4j_6:	1.00e+00	+/-	2.2e-01	[0.0e+00	-	3.0e+00]
rhoMumuZ_1b_ge4j_0:	1.00e+00	+/-	5.8e-02	[0.0e+00	-	3.0e+00]
rhoMumuZ_1b_ge4j_1:	1.00e+00	+/-	5.8e-02	[0.0e+00	-	3.0e+00]
rhoMumuZ_1b_ge4j_2:	1.00e+00	+/-	1.0e-01	[0.0e+00	-	3.0e+00]
rhoMumuZ_1b_ge4j_3:	1.00e+00	+/-	9.4e-02	[0.0e+00	-	3.0e+00]
rhoMumuZ_1b_ge4j_4:	1.02e+00	+/-	1.6e-01	[0.0e+00	-	3.0e+00]
rhoMumuZ_1b_ge4j_5:	1.01e+00	+/-	1.7e-01	[0.0e+00	-	3.0e+00]
rhoMumuZ_1b_ge4j_6:	8.95e-01	+/-	1.9e-01	[0.0e+00	-	3.0e+00]

correlation_matrix