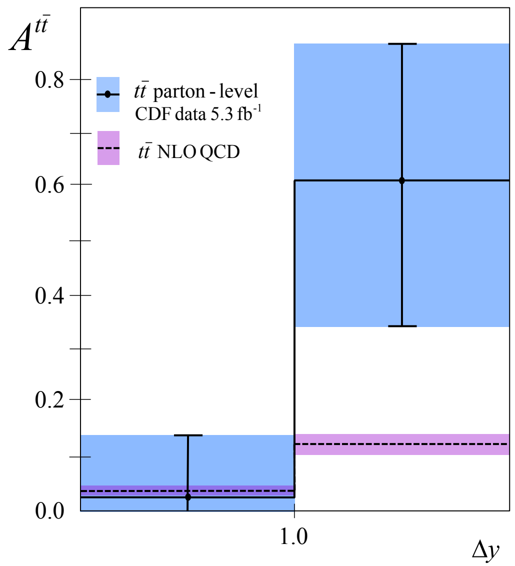
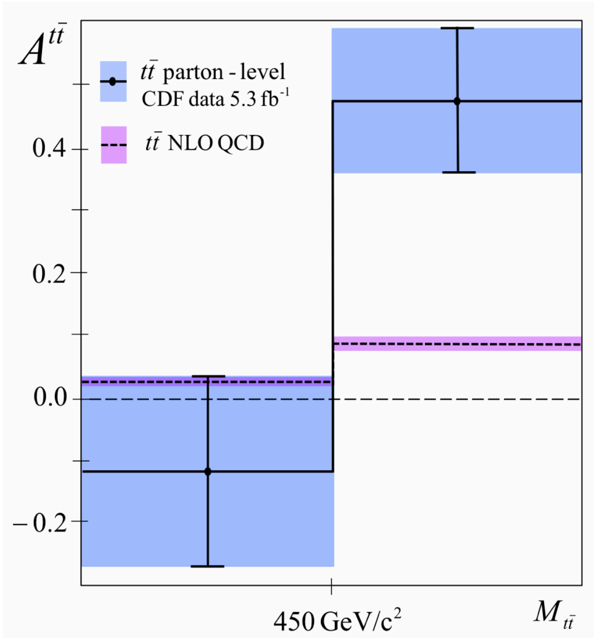
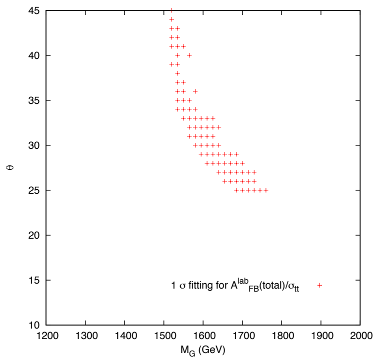
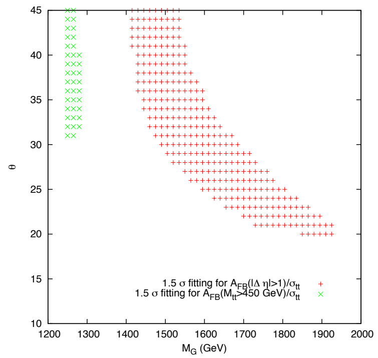


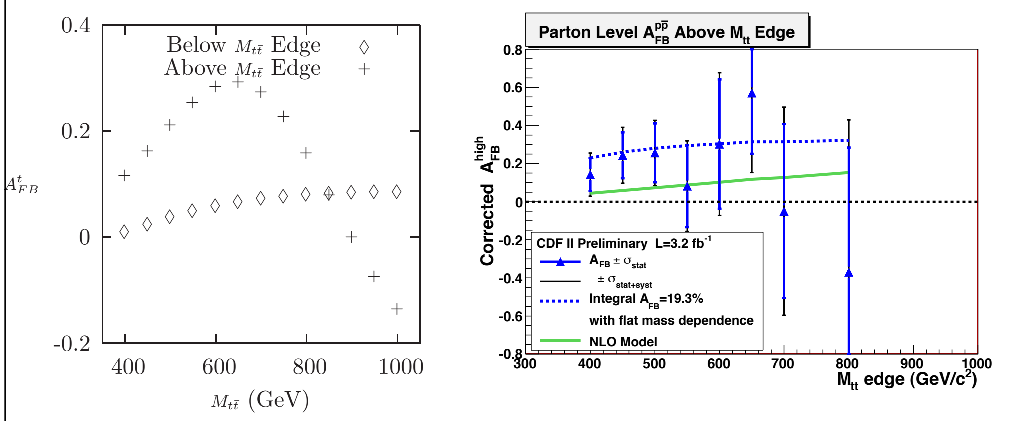
$A^{t\bar{t}}$
0.8
0.6
0.4
0.2
0.0
1.0
Δy
$t\bar{t}$ parton - level
CDF data 5.3 fb^{-1}
$t\bar{t}$ NLO QCD



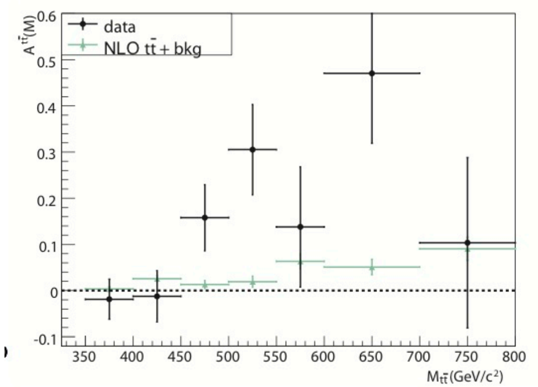
$A^{t\bar{t}}$
$t\bar{t}$ parton - level
CDF data 5.3 fb^{-1}
$t\bar{t}$ NLO QCD
0.4
0.2
0.0
− 0.2
450 GeV/c^2
$M_{t\bar{t}}$


45
40
35
30
25
20
15
10
θ
1200 1300 1400 1500 1600 1700 1800 1900 2000
M_G (GeV)
1 σ fitting for A^{lab}_{FB}(total)/σ_{tt}

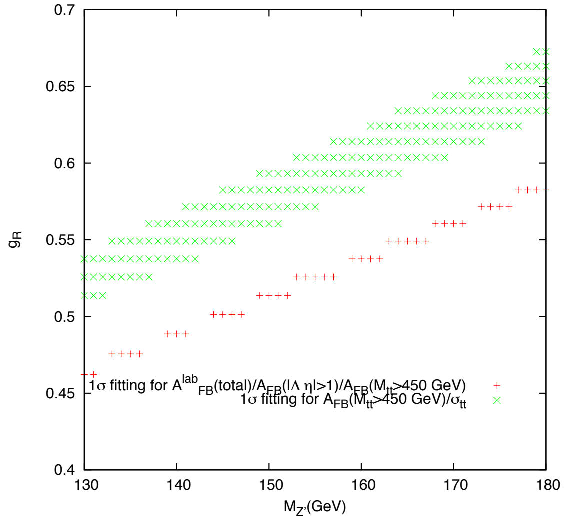

45
40
35
30
25
20
15
10
θ
1200 1300 1400 1500 1600 1700 1800 1900 2000
M_G (GeV)
1.5 σ fitting for $A_{FB}(|\Delta\,\eta|>1)/\sigma_{tt}$
1.5 σ fitting for $A_{FB}(M_{tt}>450\ \mathrm{GeV})/\sigma_{tt}$



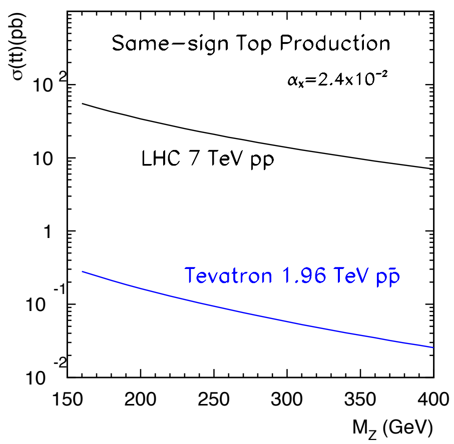
Below $M_{t\bar{t}}$ Edge
Above $M_{t\bar{t}}$ Edge
A^t_{FB}
$M_{t\bar{t}}$ (GeV)
Parton Level $A_{FB}^{p\bar{p}}$ Above M_{tt} Edge
Corrected A_{FB}^{high}
CDF II Preliminary L=3.2 fb^{-1}
$A_{FB} \pm \sigma_{stat}$
$\pm \sigma_{stat+syst}$
Integral A_{FB}=19.3%
with flat mass dependence
NLO Model
M_{tt} edge (GeV/c^2)



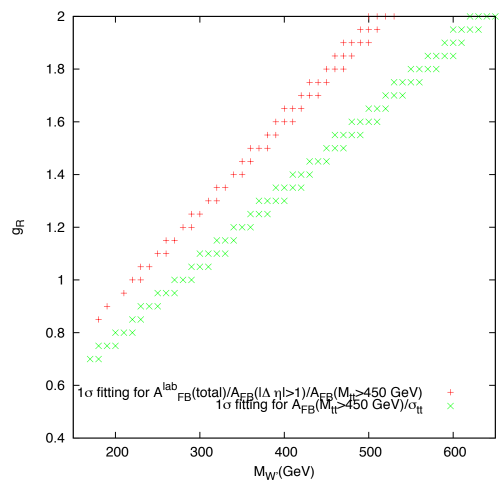
data
NLO tt̄ + bkg
$A^{t\bar{t}}(M)$
0.6
0.5
0.4
0.3
0.2
0.1
0
-0.1
350
400
450
500
550
600
650
700
750
800
$M_{t\bar{t}}$(GeV/c²)



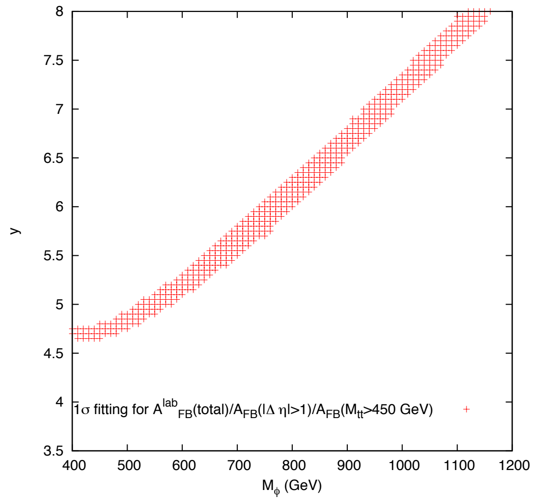
g_R
$M_{Z'}$(GeV)
1σ fitting for A^{lab}_{FB}(total)/A_{FB}(|Δ η|>1)/A_{FB}(M_{tt}>450 GeV)
1σ fitting for A_{FB}(M_{tt}>450 GeV)/σ_{tt}



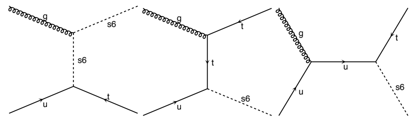
Same−sign Top Production
α_x=2.4x10^{-2}
LHC 7 TeV pp
Tevatron 1.96 TeV p$\bar{p}$
σ(tt)(pb)
10^{2}
10
1
10^{-1}
10^{-2}
150
200
250
300
350
400
M$_Z$ (GeV)



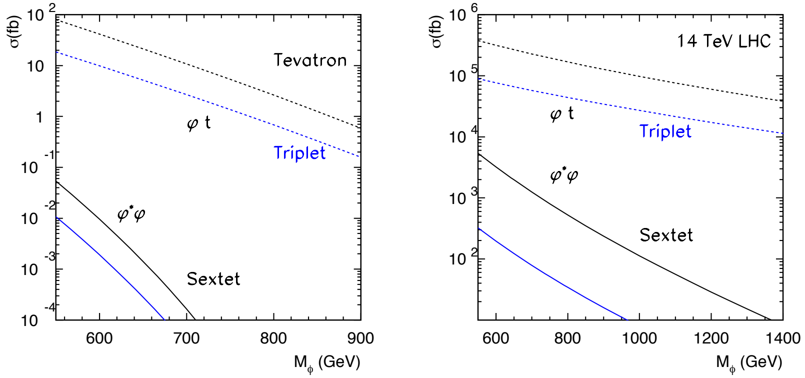
1σ fitting for A^{lab}_{FB}(total)/A_{FB}($|\Delta\eta|>1$)/A_{FB}($M_{tt}>450$ GeV)
1σ fitting for A_{FB}($M_{tt}>450$ GeV)/σ_{tt}
g_R
$M_{W'}$(GeV)



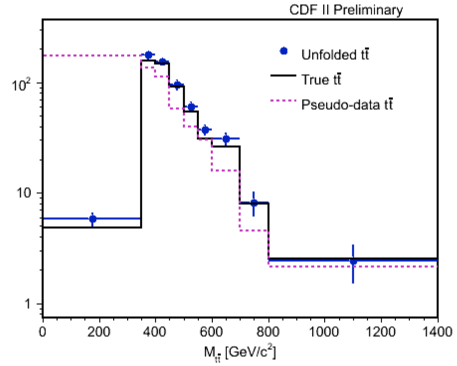
8
7.5
7
6.5
6
5.5
5
4.5
4
3.5
y
400
500
600
700
800
900
1000
1100
1200
M_φ (GeV)
1σ fitting for A^lab_FB(total)/A_FB(|Δ η|>1)/A_FB(M_tt>450 GeV)

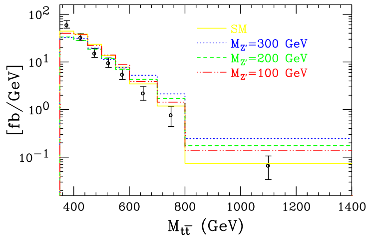


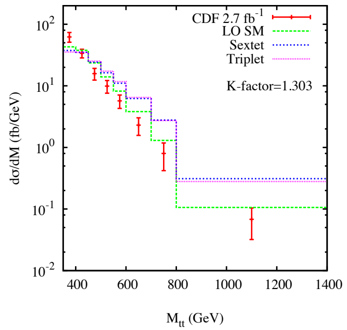
g
s6
u
t



σ(fb)
Tevatron
φ t
Triplet
φ*φ
Sextet
M_φ (GeV)
14 TeV LHC


CDF II Preliminary
Unfolded $t\bar{t}$
True $t\bar{t}$
Pseudo-data $t\bar{t}$
$M_{t\bar{t}}$ [GeV/c^2]


SM
$M_{Z'}$=300 GeV
$M_{Z'}$=200 GeV
$M_{Z'}$=100 GeV
[fb/GeV]
$M_{t\bar{t}}$ (GeV)


CDF 2.7 fb^{-1}
LO SM
Sextet
Triplet
K-factor=1.303
dσ/dM (fb/GeV)
M_{tt} (GeV)

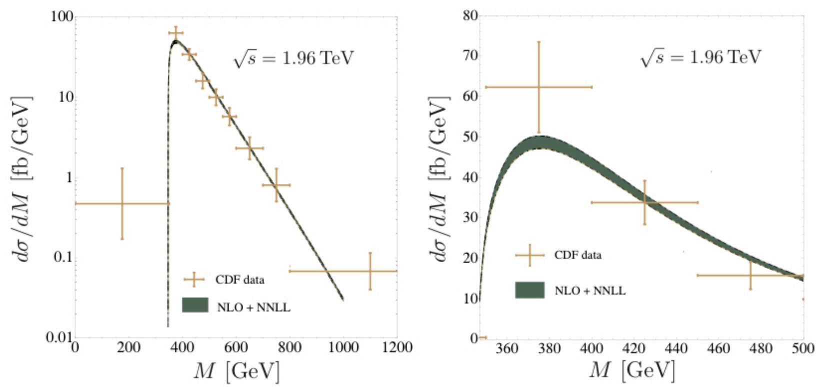
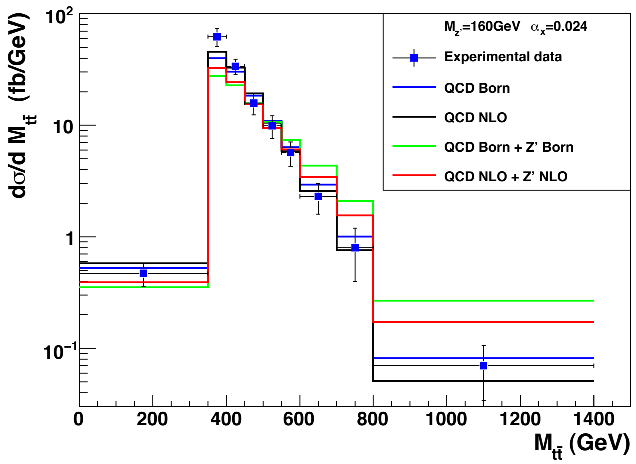


Figure 12. Comparison of the RG-improved predictions for the invariant mass spectrum with CDF data [9]. The value $m_t = 173.1\,\mathrm{GeV}$ has been used. No fit to the data has been performed.


$M_{z'}$=160GeV α_x=0.024
Experimental data
QCD Born
QCD NLO
QCD Born + Z' Born
QCD NLO + Z' NLO
$d\sigma/d\,M_{t\bar{t}}$ (fb/GeV)
$M_{t\bar{t}}$ (GeV)
10^2
10
1
10^{-1}
0
200
400
600
800
1000
1200
1400

selection	N events	all $M_{t\bar{t}}$	$M_{t\bar{t}} < 450$ GeV/c^2	$M_{t\bar{t}} \geq 450$ GeV/c^2
standard	1260	0.057±0.028	-0.016±0.034	0.212±0.049
electrons	735	0.026±0.037	-0.020±0.045	0.120±0.063
muons	525	0.105±0.043	-0.012±0.054	0.348±0.080
data $\chi^2 < 3.0$	338	0.030±0.054	-0.033 ± 0.065	0.180 ± 0.099
data no-b-fit	1260	0.062±0.028	0.006 ± 0.034	0.190 ± 0.050
data single b-tag	979	0.058±0.031	-0.015±0.038	0.224±0.056
data double b-tag	281	0.053±0.059	-0.023±0.076	0.178±0.095
data anti-tag	3019	0.033±0.018	0.029±0.021	0.044±0.035
pred anti-tag	-	0.010±0.007	0.013±0.008	0.001±0.014
pre-tag	4279	0.040±0.015	0.017±0.018	0.100±0.029
pre-tag no-b-fit	4279	0.042±0.015	0.023±0.018	0.092±0.029