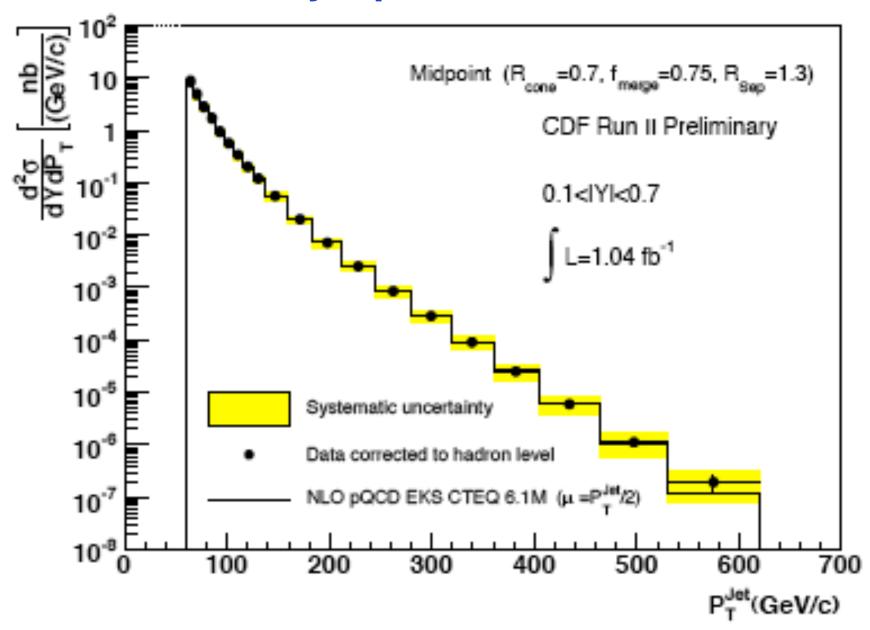
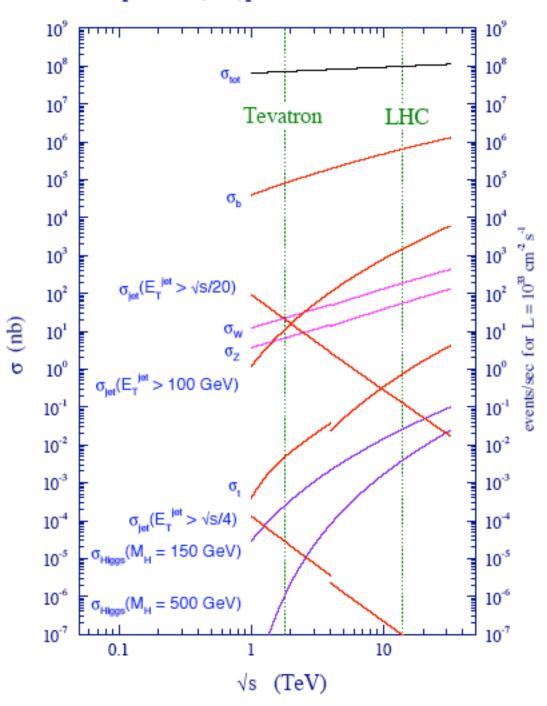
## Inclusive jet production at CDF



#### proton - (anti)proton cross sections



#### An experimenter's wishlist

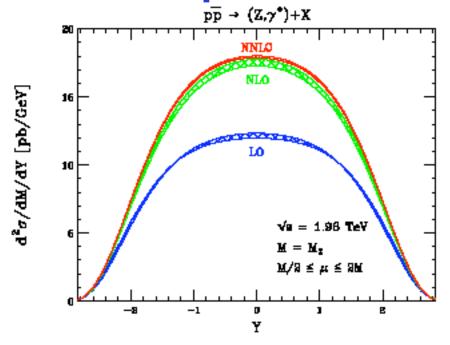
#### Run II Monte Carlo Workshop

Single Boson	Diboson	Triboson	Heavy Flavour
$W+ \leq 5j$	$WW+ \le 5j$	$WWW+ \le 3j$	$t\bar{t}+\leq 3j$
$W + b\bar{b} \le 3j$	$W + b\bar{b} + \leq 3j$	$WWW + b\bar{b} + \le 3j$	$t\bar{t} + \gamma + \leq 2j$
$W + c\bar{c} \le 3j$	$W + c\bar{c} + \leq 3j$	$WWW + \gamma\gamma + \le 3j$	$t\bar{t} + W + \le 2j$
$Z+\leq 5j$	$ZZ+\leq 5j$	$Z\gamma\gamma + \leq 3j$	$t\bar{t} + Z + \le 2j$
$Z + b\bar{b} + \leq 3j$	$Z + b\bar{b} + \leq 3j$	$ZZZ+\leq 3j$	$t\bar{t} + H + \le 2j$
$Z + c\bar{c} + \leq 3j$	$ZZ + c\bar{c} + \leq 3j$	$WZZ+ \leq 3j$	$t\bar{b} \leq 2j$
$\gamma + \leq 5j$	$\gamma\gamma + \leq 5j$	$ZZZ+ \leq 3j$	$b\bar{b}+\leq 3j$
$\gamma + b\bar{b} \le 3j$	$\gamma\gamma + b\bar{b} \le 3j$		single top
$\gamma + c\bar{c} \le 3j$	$\gamma\gamma + c\bar{c} \le 3j$		
	$WZ+ \leq 5j$		
	$WZ + b\bar{b} \le 3j$		
	$WZ + c\bar{c} \le 3j$		
	$W\gamma + \leq 3j$		
	$Z\gamma + \leq 3j$		

#### Les Houches 2005 Wish List

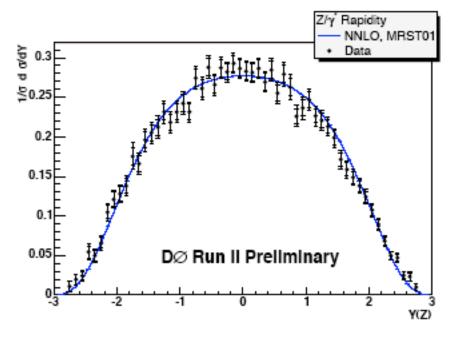
$\text{process} \\ (V \in \{Z, W, \gamma\})$	relevant for
1. $pp \rightarrow V V + \text{jet}$ 2. $pp \rightarrow H + 2 \text{ jets}$ 3. $pp \rightarrow t\bar{t} b\bar{b}$ 4. $pp \rightarrow t\bar{t} + 2 \text{ jets}$ 5. $pp \rightarrow V V b\bar{b}$ 6. $pp \rightarrow V V + 2 \text{ jets}$ 7. $pp \rightarrow V + 3 \text{ jets}$ 8. $pp \rightarrow V V V$	$t\bar{t}H$ , new physics $H$ production by vector boson fusion (VBF) $t\bar{t}H$ $t\bar{t}H$ VBF $\to H \to VV$ , $t\bar{t}H$ , new physics VBF $\to H \to VV$ various new physics signatures SUSY trilepton searches

# **Z** production at the Tevatron

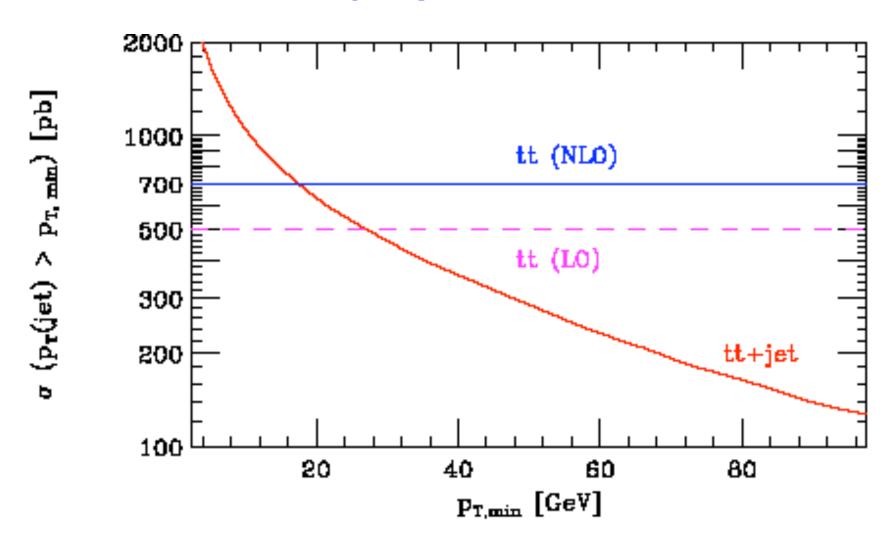


**Shape change from LO to NLO** 

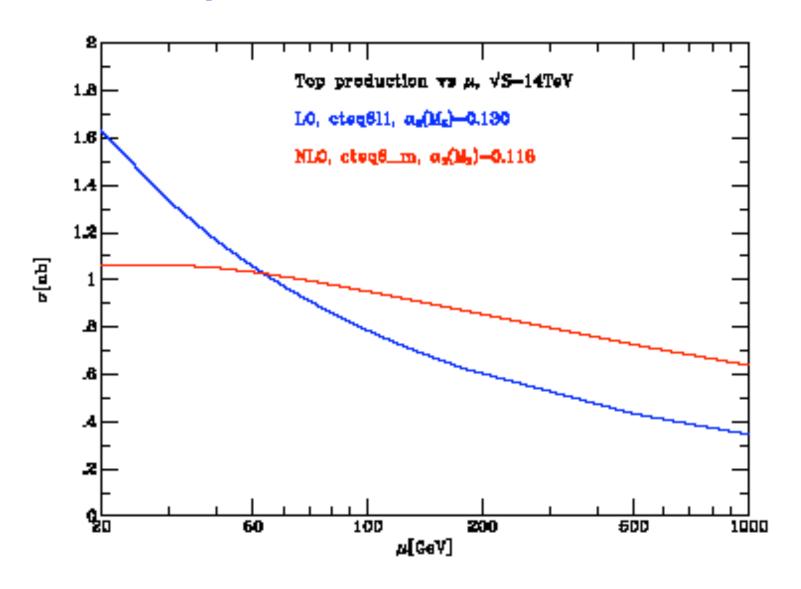
**Data match NNLO** 



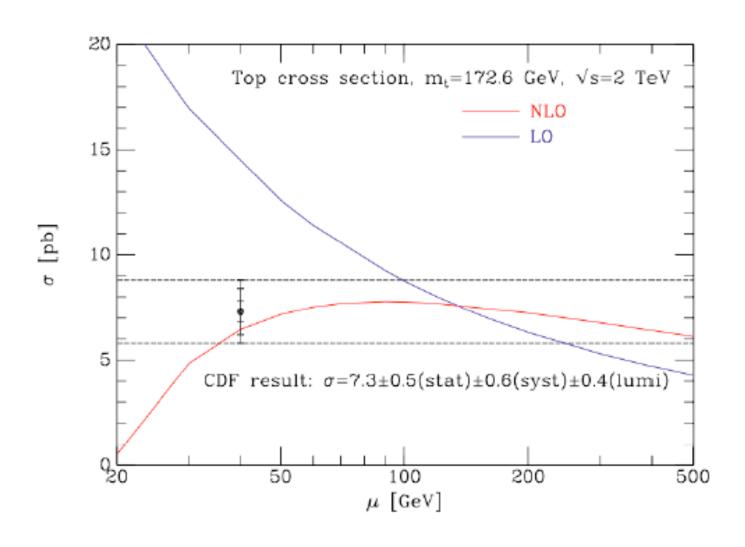
## tt and tt+jet production at the LHC



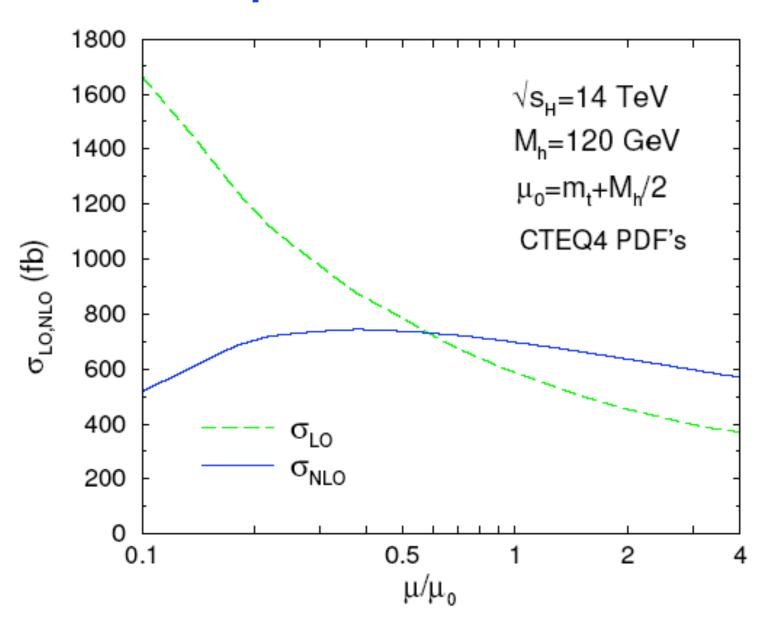
# tt production at the LHC



## tt production at the Tevatron



## ttH production at the LHC



# ttH production at the Tevatron and LHC

