

Uncertainty	$t\bar{t}$	single t	V+jets	QCD
Luminosity	2.5%	2.5%	2.5%	2.5%
Pileup	shape	shape	-	-
Lepton ID/trigger	shape	shape	shape	-
JEC (19 independent variations)	shape	shape	-	-
JER	shape	-	-	-
b tagging scale factor	shape	shape	shape	-
b-mistag scale factor	shape	shape	shape	-
Background normalization	-	15%	30%	30%
CSV inversion on QCD template	-	-	-	shape
Factorization & renormalization scale	shape	shape	shape	-
PDF	shape	shape	-	-
$\alpha_s(M_Z)$ in PDFs	shape	shape	-	-
Top quark mass	shape	-	-	-
Top quark $p_T$ modeling	shape	-	-	-
Parton Shower				
-NLO shower matching	shape	-	-	-
-ISR	2%/2%/3%	-	-	-
-FSR	shape	shape	-	-
-Color reconnection	shape	-	-	-
-b-jet fragmentation	shape	shape	-	-
-B hadron branching fraction	shape	shape	-	-
Weak correction $\delta_{\text{QCD}}\delta_{\text{EW}}$	shape	-	-	-