

source	magnitude	effect on yield	induces SR migration
luminosity	4.6%	4.6% *	-
jet ES	2 – 8%	1 – 20% *	✓
b-tag efficiency	5 – 10%	1 – 20% *	-
pileup	5%	3% *	-
lepton efficiencies	2%	2% *	-
HLT efficiencies	3%	3% *	-
HLT lepton effic.	3 – 10%	3 – 10% FastSim signals	-
HLT FastSim	5%	5% FastSim signals	-
FO CR stat.	1 – 100%	1 – 100% (fake bkg. only)	-
FR extrapolation	30%	30% (fake bkg. only)	-
EWK subtraction in FR	100% (ewk. SF)	1 – 5% (fake bkg. only)	-
WZ CR stat. and norm.	15%	15 % (WZ only)	-
MonteCarlo stat.	1 – 100%	1 – 100% *	-
QCD scales	$\times 0.5 / \times 2$	11 – 13%( $\sigma$ ) / 3 – 18%( $\mathcal{A}$ ) ( $t\bar{t}W, t\bar{t}Z, t\bar{t}H$ )	-
PDFs	-	2–3% ( $t\bar{t}W, t\bar{t}Z, t\bar{t}H$ )	-
other bkgds.	50%	50% (rare processes, tribosons, etc.)	-

\*  $t\bar{t}W, t\bar{t}Z, t\bar{t}H$ , rare processes and signals only