

Source	Magnitude (%)	Effect on yield (%)
Integrated luminosity [?]	2.7	2.7 *
Limited MC sample sizes	1–100	1–100 *
Jet energy scale	2–8	1–20 *
b tagging efficiency	5–10	1–20 *
Pileup	5	3 *
Renormalization and factorization scales	−50 / +100	11–13 (cross-section) / 3–18 (acceptance) ($t\bar{t}W, t\bar{t}Z, t\bar{t}H$)
PDF	—	2–3 ($t\bar{t}W, t\bar{t}Z, t\bar{t}H$)
Other backgrounds	50	50 (rare processes, tribosons, etc.)
Lepton efficiencies	2	6 *
Trigger efficiencies	3	3 *
FastSim lepton efficiencies	3–10	3–10 FastSim signals
FastSim trigger efficiencies	5	5 FastSim signals
Tight-to-loose ratio control region statistical uncertainty	1–100	1–100 (nonprompt bkg. only)
Tight-to-loose ratio systematic uncertainty	30	30 (nonprompt bkg. only)
EW subtraction in tight-to-loose ratio	100 (ewk. SF)	1–5 (nonprompt bkg. only)
WZ control region normalization	15	15 (WZ only)
WZ extrapolation	10–30	2–30 (WZ only)

* Applied to both signal and background simulation samples.