

Source of uncertainty	Signal ($M_{H^+} = 120 \text{ GeV}$) (%)		$t\bar{t}$ (%)		Non- $t\bar{t}$ (%)	
	2 b tags	≥ 3 b tags	2 b tags	≥ 3 b tags	2 b tags	≥ 3 b tags
Jet energy scale (JES)*	4.6–5.3	5.0–5.8	3.1–3.3	3.1	10.2–14.5	1.9–3.4
Flavour-dependent JES (b quark)*	0.4	0.5	0.1	0.1	0.2	0.5–3.4
Flavour-dependent JES (udsc quark or gluon)*	1.0	0.4	0.9	0.8	2.8–4.6	2.7–9.0
Jet energy resolution*	0.2	0.8	0.3	0.3	1.0–1.3	1.3–4.9
b tagging scale factor for b/c-quark jets*	1.2	5.7	3.6	5.7	0.6–0.8	2.0–3.8
Mistag scale factor for light quark jets*	0.2	0.3	0.2	2.7	0.9–1.5	0.9–2.0
$t\bar{t}$ p_T reweighting*	0.2	1.0	1.4–1.7	1.6–1.9	—	—
NLO-vs.-LO shape*	7.5–8.4	7.2–7.7	7.0–8.2	6.8–7.6	—	—
ME-PS matching*	0.8	0.9	1.1	1.8–2.4	—	—
Renormalization and factorization scales*	0.3	1.3–1.8	0.8–1.8	1.3–1.6	—	—
Top quark mass*	1.1–1.4	1.1–1.5	0.4–1.2	0.9	—	—
$t\bar{t}b\bar{b}$ production rescaling*	—	—	3.7–3.9	10.2–10.9	—	—
PYTHIA–MADGRAPH $p_T(t\bar{t})$ difference*	0.1	0.1	—	—	—	—
$t\bar{t}$ cross section	6.5	6.5	6.5	6.5	—	—
Integrated luminosity			2.6			
Muon scale factor (μ +jets)			3.0			
Electron scale factor (e+jets)			3.0			
Pileup reweighting			0.1–1.3			
Multijet background prediction from data*		—			0.3–2.3	5.2–10.7