

Uncertainty Source	$\Delta\sigma_{\text{t}\bar{\text{t}}+\text{jet}}^1$ [%]	$\Delta\sigma_{\text{t}\bar{\text{t}}+\text{jet}}^2$ [%]	$\Delta\sigma_{\text{t}\bar{\text{t}}+\text{jet}}^3$ [%]	$\Delta\sigma_{\text{t}\bar{\text{t}}+\text{jet}}^4$ [%]
Experimental				
Muon identification	1.8	1.5	1.5	1.4
Muon energy scale and resolution	0.7	0.2	0.3	0.5
Electron identification	2.0	1.7	1.7	2.1
Electron energy scale and resolution	0.9	1.0	0.9	1.5
Jet energy scale	2.6	2.0	2.2	3.6
Jet energy resolution	0.6	0.5	0.5	0.4
Jet identification	1.1	0.8	0.8	1.3
$p_{\text{T}}^{\text{miss}}$	0.2	0.3	0.4	0.8
b jet identification	1.0	0.7	0.6	1.2
Trigger efficiency	1.8	1.2	1.1	1.8
Total	4.0	3.1	3.1	4.7
Background normalization				
t $\bar{\text{t}}$ +0 jet	2.2	2.0	1.7	0.7
Z+jets	2.4	1.9	1.7	2.6
Single top quark	0.9	0.8	0.7	0.1
Total	3.1	2.5	2.4	2.7
Modeling				
Z+jets ME scale	0.7	0.4	0.2	0.3
Single top quark ME/FSR/ISR scales	1.2	0.6	0.4	0.1
t $\bar{\text{t}}$ PDF	0.1	0.1	0.1	0.6
t $\bar{\text{t}}$ ME scale	1.0	0.5	0.6	0.4
t $\bar{\text{t}}$ ISR scale	1.2	0.8	0.6	1.6
t $\bar{\text{t}}$ FSR scale	1.3	0.8	0.6	1.7
t $\bar{\text{t}}$ top quark p_{T}	2.0	1.3	0.1	1.2
b fragmentation	0.9	0.7	0.8	0.8
Color reconnection	0.5	0.6	0.2	0.7
t $\bar{\text{t}}$ matching scale	0.6	0.5	0.6	≤ 0.1
Underlying-event tune	0.2	0.5	0.2	0.5
Total	3.2	1.9	1.8	3.1
Integrated luminosity				
m_{t}^{MC}	1.7	1.0	0.4	2.3
Finite size of simulated samples	2.0	1.4	1.3	2.2
Total systematic	5.0	3.4	3.2	5.6
Statistical	1.6	1.0	0.8	2.4
Total	5.2	3.6	3.3	6.1