

Process	$t\bar{t}$ rate up/down [%]	$t\bar{t}H$ rate up/down [%]
Jet energy Scale	+11.3/ - 10.1	+7.7/ - 7.0
Jet energy Resolution	-0.1/ + 0.1	-0.1/ + 0.1
Pile-Up	-0.1/ + 0.0	+0.1/ - 0.2
Electron Efficiency	+1.6/ - 1.6	+1.6/ - 1.6
Muon Efficiency	+1.2/ - 1.2	+1.2/ - 1.2
b-Tag HF contamination	-3.5/ + 8.4	+0.2/ + 0.6
b-Tag HF stats (linear)	-6.4/ + 6.2	-5.3/ + 4.9
b-Tag HF stats (quadratic)	+4.2/ - 4.4	+3.3/ - 3.6
b-Tag LF contamination	+7.1/ - 5.1	+5.5/ - 4.2
b-Tag LF stats (linear)	-3.2/ + 6.5	-0.6/ + 1.1
b-Tag LF stats (quadratic)	+0.5/ + 1.2	-0.8/ + 1.1
b-Tag charm Uncertainty (linear)	-12.6/ + 16.9	-0.6/ + 0.7
b-Tag charm Uncertainty (quadratic)	+1.4/ - 1.4	+0.0/ - 0.0
Q2 scale ($t\bar{t}+lf$)	-1.9/ + 2.8	-
Q2 scale ($t\bar{t}+b$)	-0.6/ + 0.9	-
Q2 scale ($t\bar{t}+2b$)	-0.5/ + 0.8	-
Q2 scale ($t\bar{t}+b\bar{b}$)	-0.9/ + 1.3	-
Q2 scale ($t\bar{t}+c\bar{c}$)	-1.6/ + 2.4	-
PS scale ($t\bar{t}+lf$)	4.4/ - 8.7	-
PS scale ($t\bar{t}+b$)	-1.3/ + 0.8	-
PS scale ($t\bar{t}+2b$)	-1.0/ + 0.4	-
PS scale ($t\bar{t}+b\bar{b}$)	-2.0/ + 1.3	-
PS scale ($t\bar{t}+c\bar{c}$)	-4.3/ + 2.3	-