

| Process | $t\bar{t}$ rate up/down [%] | $t\bar{t}H$ rate up/down [%] |
|---|-----------------------------|------------------------------|
| Jet energy scale | +12.6/ − 11.8 | +8.4/ − 8.0 |
| Jet energy resolution | +0.2/ − 0.3 | −0.0/ − 0.1 |
| Pile-up | +0.1/ − 0.1 | −0.2/ + 0.1 |
| Electron efficiency | +0.5/ − 0.5 | +0.5/ − 0.5 |
| Muon efficiency | +0.4/ − 0.4 | +0.4/ − 0.4 |
| Electron trigger efficiency | +1.2/ − 1.2 | +1.3/ − 1.3 |
| Muon trigger efficiency | +0.8/ − 0.8 | +0.9/ − 0.9 |
| b-Tag HF contamination | −9.4/ + 9.8 | −2.6/ + 2.8 |
| b-Tag HF stats (linear) | −3.1/ + 3.3 | −2.5/ + 2.7 |
| b-Tag HF stats (quadratic) | +2.6/ − 2.4 | +2.4/ − 2.2 |
| b-Tag LF contamination | +7.1/ − 5.2 | +5.8/ − 4.5 |
| b-Tag LF stats (linear) | −2.0/ + 4.4 | +0.5/ + 1.5 |
| b-Tag LF stats (quadratic) | +2.1/ + 0.2 | +1.5/ + 0.5 |
| b-Tag charm Uncertainty (linear) | −11.1/ + 14.9 | −3.1/ + 4.1 |
| b-Tag charm Uncertainty (quadratic) | +0.5/ − 0.5 | −0.0/ + 0.0 |
| Q^2 scale ($t\bar{t}$ +LF) | −6.2/ + 7.5 | − |
| Q^2 scale ($t\bar{t}$ +b) | −1.7/ + 2.0 | − |
| Q^2 scale ($t\bar{t}$ +2b) | −1.1/ + 1.4 | − |
| Q^2 scale ($t\bar{t}$ + $b\bar{b}$) | −2.0/ + 2.5 | − |
| Q^2 scale ($t\bar{t}$ + $c\bar{c}$) | −4.3/ + 5.4 | − |
| PS scale ($t\bar{t}$ +LF) | +4.8/ − 9.0 | − |
| PS scale ($t\bar{t}$ +b) | −0.9/ + 0.7 | − |
| PS scale ($t\bar{t}$ +2b) | −0.8/ + 0.9 | − |
| PS scale ($t\bar{t}$ + $b\bar{b}$) | −1.5/ + 2.7 | − |
| PS scale ($t\bar{t}$ + $c\bar{c}$) | −3.9/ + 3.0 | − |