

| Source | Type | Correlation | Remarks |
|--|------|--------------|--|
| Renorm./fact. scales | R | correlated | Scale uncertainty of (N)NLO prediction, independent for $t\bar{t}H$, tHq , tHW , $t\bar{t}$, t , V +jets, VV |
| PDF+ α_S (gg) | R | correlated | PDF uncertainty for gg initiated processes, independent for $t\bar{t}H$, tHq , tHW , and others |
| PDF+ α_S ($q\bar{q}$) | R | correlated | PDF uncertainty of $q\bar{q}$ initiated processes ($t\bar{t}W,W,Z$) except tHq |
| PDF+ α_S (qg) | R | correlated | PDF uncertainty of qg initiated processes (single t) except tHW |
| Collinear gluon splitting [†] | S | correlated | Additional 100% rate uncertainty on $t\bar{t} + 2b$ component of $t\bar{t}B$ background |
| μ_R scale | S | correlated | Renormalisation scale uncertainty of the ME generator, independent for $t\bar{t}H$, tHq , tHW , $t\bar{t}B$ ($t\bar{t}b\bar{b}$ sample), other $t\bar{t}$ ($t\bar{t}$ sample) |
| μ_F scale | S | correlated | Factorisation scale uncertainty of the ME generator, independent for $t\bar{t}H$, tHq , tHW , $t\bar{t}B$ ($t\bar{t}b\bar{b}$ sample), other $t\bar{t}$ ($t\bar{t}$ sample) |
| PDF shape | S | correlated | From NNPDF variations, independent for tHq , tHW , $t\bar{t}B$ ($t\bar{t}b\bar{b}$ sample), other $t\bar{t}$ ($t\bar{t}$ sample) and $t\bar{t}H$ |
| PS scale ISR [†] | S | correlated | Initial state radiation uncertainty of the PS (PYTHIA), independent for $t\bar{t}H$, $t\bar{t}B$ ($t\bar{t}b\bar{b}$ sample), other $t\bar{t}$ ($t\bar{t}$ sample) |
| PS scale FSR [†] | S | correlated | Final state radiation uncertainty of the PS (PYTHIA), independent for $t\bar{t}H$, $t\bar{t}B$ ($t\bar{t}b\bar{b}$ sample), other $t\bar{t}$ ($t\bar{t}$ sample) |
| ME-PS matching ($t\bar{t}$) [†] | R | correlated | NLO ME-PS matching (for $t\bar{t} + \text{jets}$ events), independent for $t\bar{t}B$, $t\bar{t}C$, $t\bar{t}LF$ |
| Underlying event ($t\bar{t}$) | R | correlated | Underlying event (for all $t\bar{t} + \text{jets}$ events) |
| STXS migration | R | correlated | Signal, only in STXS measurement |
| STXS acceptance | S | correlated | Signal, only in STXS measurement |
| Integrated luminosity | R | partially | Signal and all backgrounds |
| Lepton ID/Iso (2 sources) | S | uncorrelated | Signal and all backgrounds |
| Trigger efficiency (4 sources) | S | uncorrelated | Signal and all backgrounds |
| L1 prefiring correction | S | uncorrelated | Signal and all backgrounds |
| Pileup | S | correlated | Signal and all backgrounds |
| Jet energy scale (11 sources) | S | partially | Signal, $t\bar{t} + \text{jets}$ and single t |
| Jet energy resolution | S | uncorrelated | Signal, $t\bar{t} + \text{jets}$ and single t |
| b tag bkg. contam. (2 sources) | S | partially | Signal and all backgrounds |
| b tag bkg. contam. stat. (4 sources) | S | uncorrelated | Signal and all backgrounds |
| b tag charm (2 sources) | S | partially | Signal and all backgrounds |
| TF _{loose} correction | S | uncorrelated | QCD background estimate |
| Size of the MC samples | S | uncorrelated | Statistical uncertainty of signal and background prediction due to limited sample size |