

ME generator ME mode ME pQCD level $\mu_R = \mu_F$	POWHEG v2 h <sub>vq</sub> t $\bar{t}$ [NLO] 1 jet [LO] $m_T^t$	aMC@NLO Inclusive t $\bar{t}$ [NLO] 1 jet [LO] $\sum_{t,\bar{t}} m_T/2$	MG5_aMC@NLO FxFX Merging t $\bar{t}$ +0,1,2 jets [NLO] 3 jets [LO] $\sum_{t,\bar{t},\text{jets}} m_T/2$	MG5_aMC@NLO MLM t $\bar{t}$ + 0, 1, 2, 3 jets [LO] $\sum_{t,\bar{t},\text{jets}} m_T/2$
PS Tune Tune ME PDF ME $\alpha_s$	PYTHIA 8.219 CUETP8M2T4 CUETP8M1 NNPDF3.0 [39] 0.118	PYTHIA 8.219 CUETP8M2T4  NNPDF3.0 0.118	PYTHIA 8.219 CUETP8M2T4  NNPDF3.0 0.118	PYTHIA 8.219 CUETP8M2T4  NNPDF23 [40] 0.130
Other   $q_{cut}$ (8 TeV) $q_{cut}$ (13 TeV) Other (8 TeV) Other (13 TeV)	$h_{damp} = 1.581m_t$ $h_{damp} = m_t$ $ptsqmin = 0.8 \text{ GeV}$ $pThard = 0$ $pTdef = 1$  -	- - - -	30 GeV 40 GeV $q_{cut}^{ME} = 10 \text{ GeV}$ $q_{cut}^{ME} = 20 \text{ GeV}$	60 GeV 80 GeV $x_{qcut} = 20 \text{ GeV}$ $x_{qcut} = 20 \text{ GeV}$