

Process	ME event generator	PDF	PS and hadronisation	UE tune	Cross-section calculation
$V$ +jets ( $V = W/Z$ )	SHERPA 2.2.1 [77]	NNPDF3.0 NNLO	SHERPA	Default	NNLO [78]
$t\bar{t} + V$	aMC@NLO 2.3.3	NNPDF3.0 NLO	PYTHIA 8.210	A14	NLO [67]
$t\bar{t}$	POWHEG-Box v2 [79]	NNPDF3.0 NNLO	PYTHIA 8.230	A14	NNLO+NNLL [80,81,82,83,84,85]
Single top	POWHEG-Box v2	NNPDF3.0 NNLO	PYTHIA 8.230	A14	NNLO+NNLL [86,87,88]
Diboson	SHERPA 2.2.1-2.2.2	NNPDF3.0 NNLO	SHERPA	Default	NLO
$t\bar{t}H$	aMC@NLO 2.2.3	NNPDF3.0 NLO	PYTHIA 8.230	A14	NLO [89,90,91,92]
$tWZ, tZ$	aMC@NLO 2.3.3	NNPDF2.3 LO	PYTHIA 8.212,8.230	A14	NLO
$VH$	PYTHIA 8.230	NNPDF2.3 LO	PYTHIA 8.2	A14	NLO