

Process	Matrix element	Parton shower	PDF set	Cross-section
$Z^{(*)}/\gamma^* + \text{jets}$	SHERPA 2.2.1		NNPDF 3.0 NNLO [86]	NNLO [87]
Diboson	SHERPA 2.1.1 / 2.2.1 / 2.2.2		NNPDF 3.0 NNLO	Generator NLO
Triboson	SHERPA 2.2.1		NNPDF 3.0 NNLO	Generator LO, NLO
$t\bar{t}$	POWHEG-BOX v2	PYTHIA 6.428	NLO CT10 [88]	NNLO+NNLL [89,90,91,92]
t (s -channel)	POWHEG-BOX v1	PYTHIA 6.428	NLO CT10	NNLO+NNLL [93]
t (t -channel)	POWHEG-BOX v1	PYTHIA 6.428	NLO CT10f4	NNLO+NNLL [94,95]
$t + W$	POWHEG-BOX v1	PYTHIA 6.428	NLO CT10	NNLO+NNLL [96]
$h(\rightarrow \ell\ell, WW)$	POWHEG-BOX v2	PYTHIA 8.186	NLO CTEQ6L1 [97]	NLO [98]
$h + W/Z$	MG5_aMC@NLO 2.2.2	PYTHIA 8.186	NNPDF 2.3 LO	NLO [98]
$t\bar{t} + W/Z/\gamma^*$	MG5_aMC@NLO 2.3.3	PYTHIA 8.186	NNPDF 3.0 LO	NLO [64]
$t\bar{t} + WW/t\bar{t}$	MG5_aMC@NLO 2.2.2	PYTHIA 8.186	NNPDF 2.3 LO	NLO [64]
$t + Z$	MG5_aMC@NLO 2.2.1	PYTHIA 6.428	NNPDF 2.3 LO	LO [64]
$t + WZ$	MG5_aMC@NLO 2.3.2	PYTHIA 8.186	NNPDF 2.3 LO	NLO [64]
$t + t\bar{t}$	MG5_aMC@NLO 2.2.2	PYTHIA 8.186	NNPDF 2.3 LO	LO [64]