

Process	Selection	Generator	NLO cross section (pb)	Channel
Z+jets $\rightarrow$ $ll$ +jets	$p_T^Z = 70\text{--}100$ GeV	MADGRAPH	$5.30 \times 10^4$	$2l2j$
Z+jets $\rightarrow$ $ll$ +jets	$p_T^Z > 100$ GeV	MADGRAPH	$3.92 \times 10^4$	$2l2j$
W+jets $\rightarrow$ $lv$ +jets	—	MADGRAPH	$3.63 \times 10^4$	$2l2j$
$Z\gamma \rightarrow ll\gamma$	$\Delta R(\gamma, \ell) > 0.6$	SHERPA	14.9	$ll\gamma$
$t\bar{t}$ +jets	—	MADGRAPH	23.9	$2l2j$
$t\bar{t}\gamma$	$E_T(\gamma) > 10$ GeV	MADGRAPH	1.44(LO)	$ll\gamma$
$t\bar{t}Z$	—	MADGRAPH	0.208	$4l$
$t\bar{t}W$	—	MADGRAPH	0.232	$4l$
$WW \rightarrow 2l2\nu$	—	MADGRAPH	6.03	$2l2j$
WW	—	PYTHIA6	54.8	$ll\gamma$
$WZ \rightarrow 2l2q$	—	MADGRAPH	2.32	$2l2j, 4l$
$WZ \rightarrow 3l\nu$	—	MADGRAPH	1.00	$2l2j, 4l$
WZ	—	PYTHIA6	33.2	$ll\gamma$
$ZZ \rightarrow 2l2q$	—	MADGRAPH	2.47	$2l2j, 4l$
$ZZ \rightarrow 2l2\nu$	—	MADGRAPH	0.71	$2l2j$
$ZZ \rightarrow 4l$	—	MADGRAPH	0.177	$2l2j$
ZZ inclusive	—	PYTHIA6	17.7	$ll\gamma$
$ZZ \rightarrow 4l$	—	POWHEG	0.077	$4l$
$ZZ \rightarrow 2l2l'$	—	POWHEG	0.176	$4l$
$gg \rightarrow ZZ \rightarrow 4l$	—	GG2ZZ	0.005	$4l$
$gg \rightarrow ZZ \rightarrow 2l2l'$	—	GG2ZZ	0.012	$4l$
WWZ	—	MADGRAPH	0.063	$4l$
WZZ	—	MADGRAPH	0.020	$4l$
ZZZ	—	MADGRAPH	0.005	$4l$