

Uncertainty source	Signal/Background process	Variation (%)	Correlation
Luminosity	Signal/Rare/Non-Z γ conversion	2.3 – 2.5	No
Lepton reco, ID and iso. efficiency	Signal/Background*	4 – 5	No
Lepton displacement efficiency (only in 3L)	Signal/Background*	3 – 5	Yes
Trigger efficiency	Signal/Background*	< 3	No
B tag efficiency	Signal/Background*	< 5	No
Minbias cross section (pileup)	Signal/Background*	< 3	Yes
Factorization/renormalization scale & PDF	Signal/Background*	< 10	Yes
Jet energy scale	Signal/Background*	< 5	Yes
Unclustered energy scale	Signal/Background*	< 5	Yes
Muon energy scale and resolution	Signal/Background*	< 5	Yes
Electron energy scale and resolution	Signal/Background*	< 2	Yes
WZ normalization (0/1/2/ ≥ 3 jets)	WZ	5 – 10	Yes
ZZ normalization (0/1/ ≥ 2 jets)	ZZ	5 – 10	Yes
t \bar{t} Z normalization	t \bar{t} Z	15 – 20	Yes
Conversion normalization	Conversion	20 – 50	Yes
Rare normalization	Rare	50	Yes
Lepton misidentification rates	Misidentified lepton	30 – 40	Yes
Electron charge misidentification	WZ/ZZ [†]	< 20	No

*WZ, ZZ, t \bar{t} Z, rare, and conversion background processes.
[†]Only in 3L OSSF0 and 4L OSSF1 signal regions.