

Uncertainty	Affects shape	Corr. years	Relative effect on expected yield
Experimental			
Integrated luminosity	-	Partial	2.3–2.5%
Pileup modeling	✓	✓	0.2–3.1%
L1 prefiring	✓	✓	0.3–1.1%
Electron ID	✓	✓	0.7–2.8%
Electron ID ( $p_T^e > 200$ GeV)	✓	-	0.1–1.2%
Electron trigger	-	-	0.5%
Muon ID (stat)	✓	-	0.1–0.6%
Muon ID (syst)	✓	✓	0.2–0.7%
Muon trigger	✓	-	0.1–0.7%
Photon ID	✓	✓	0.6–6.0%
Photon ID ( $p_T^\gamma > 200$ GeV)	✓	-	2.1–4.7%
Photon ID (high $p_T$ extrapolation)	✓	-	Typically 3.0–9.0%, max. 14%
Photon (e veto)	-	-	1%
Photon energy scale	✓	✓	Typically 0.1–4.8%, max. 13%
Jet energy scale	✓	-	1–4%
$p_T^{\text{miss}}$ scale	✓	Partial	0.1–10.1%
$e \rightarrow \gamma$ misidentification	✓	-	Typically 6.7–18%, max. 25%
$\text{Jet} \rightarrow \gamma$ misidentification	✓	-	10–45%
Misidentified e	✓	-	Typically 13–36%, max. 75%
Misidentified $\mu$	✓	-	Typically 16–42%, max. 70%
Theoretical			
$W^\pm \gamma$ acceptance (scale)	✓	✓	0.3–1.7%
$W^\pm \gamma$ acceptance (PDF)	✓	✓	Typically 0.5–2.2%, max. 7.6%
$W^\pm \gamma$ out-of-acceptance (scale)	✓	✓	5.2–12%
$W^\pm \gamma$ parton shower modeling	✓	✓	0.2–1.3%
Background normalization (scale)	-	✓	2.0–16%
Background normalization (PDF)	-	✓	4.2–4.8%