

Source	Type	Backgrounds		Signals	
		QCD	$Z \rightarrow \mu\mu\gamma$	$Z \rightarrow \psi(nS)\gamma$	$H \rightarrow \psi(nS)\gamma$
Integrated luminosity	norm.	—	—	1.6%	1.6%
Fact. and renorm. scales	norm.	—	—	3.5%	5.6%
PDF	norm.	—	—	1.7%	3.2%
Pileup modeling	norm.	—	—	0.9%	0.8%
Trigger efficiency	norm.	—	—	3.5%	3.5%
Trigger timing shift	norm.	—	—	0.6%	2.7%
Muon identification/isolation	norm.	—	—	2.0%	1.4%
Photon identification	norm.	—	—	1.5%	1.5%
Electron veto	norm.	—	—	1.0%	1.0%
Jet energy scale (VBF category)	norm.	—	—	—	2.9%
Jet energy resolution (VBF category)	norm.	—	—	—	1.0%
Jet b tagging (HF category)	norm.	—	—	—	5.4%
QCD background model	shape	discrete	—	—	—
Resonant bkg. model	norm.	—	1%	—	—
Signal model	norm.	—	—	1%	1%
Size of MC samples	$m_{\mu\mu\gamma}$ mean	—	0.06%	0.06%	0.06%
Size of MC samples	$m_{\mu\mu\gamma}$ width	—	0.1%	0.1%	0.1%
μ calibration	$m_{\mu\mu\gamma}$ mean	—	0.05%	0.05%	0.05%
μ calibration	$m_{\mu\mu\gamma}$ width	—	0.8%	0.8%	0.8%
γ energy	$m_{\mu\mu\gamma}$ mean	—	0.04%	0.04%	0.04%
γ energy	$m_{\mu\mu\gamma}$ width	—	3.4%	3.4%	3.4%
γ resolution	$m_{\mu\mu\gamma}$ width	—	1.8%	1.8%	1.8%