

Source	2016	2017	2018	Correlation scheme	Processes
Electron efficiency	0 – 3.3	0 – 3.0	0 – 2.8	Partially correlated	All MC
Muon efficiency	0 – 2.4	0 – 2.1	0 – 2.0	Partially correlated	All MC
Muon energy scale	0 – 5	0 – 5	0 – 5	Correlated	All MC
Electron energy scale	0 – 5	0 – 5	0 – 5	Correlated	All MC
Trigger efficiency	–1.0/0.6	–0.7/0.6	–0.7/0.6	Partially correlated	All MC
Jet energy scale	0.9	0.7	1.1	Partially correlated	All MC
B-tagging (heavy)	1.0	0.7	0.9	Correlated	All MC
B-tagging (light)	0.5	0.4	0.3	Correlated	All MC
Pileup	0.9	0.8	0.8	Correlated	ALL MC
ISR	0.2 – 20	0.2 – 20	0.2 – 20	Correlated	WZ
Nonprompt norm.	30	30	30	Correlated	nonprompt
VVV norm.	50	50	50	Correlated	VVV
VH norm.	25	25	25	Correlated	VH
WZ VBS norm.	20	20	20	Correlated	WZ VBS
ZZ	Free	Free	Free	Correlated	ZZ
t \bar{t} Z norm.	Free	Free	Free	Correlated	t \bar{t} X
tZq norm.	Free	Free	Free	Correlated	tZq
X γ norm.	Free	Free	Free	Correlated	X γ
Luminosity	2.5	2.3	2.5	Partially correlated	All MC
Statistical uncertainties	By bin	By bin	By bin	Decorrelated	All MC
Theoretical (PDF + Scale)	0.9	0.9	0.9	Correlated	WZ