

Sources	B or S	Effect on	Magnitude	Nuisance parameters
Parton shower + selection bias for $W, R^{\ell q q}$	B+S	Shape+rate		4, for LL, LH, HL, HH
Parton shower + selection bias for t^2	B	Shape+rate		8, for LL, LH, HL, HH
Parton shower + selection bias for $t^{3,4}, R^{3q,4q}$	B+S	Shape+rate		4, for LL, LH, HL, HH
Parton shower + selection bias for q/g	B	Shape+rate		8, for LL, LH, HL, HH
Proxy uncertainty for $R^{\ell q q}$	S	Rate	10–35%	2, for deep-W/WH
Proxy uncertainty for $R^{3q,4q}$	S	Rate	12–43%	2, for deep-W/WH
Proxy uncertainty for unmatched	S	Rate	100%	2, for deep-W/WH
High- p_T extrapolation for W	S	Rate	100%	2, for deep-W/WH
High- p_T extrapolation for $R^{\ell q q}$	S	Rate	23–30%	2, for deep-W/WH
High- p_T extrapolation for R^{3q}	S	Rate	16–34%	2, for deep-W/WH
High- p_T extrapolation for R^{4q}	S	Rate	24–33%	2, for deep-W/WH
QCD multijet normalization	B	Rate	5–40%	5, common for SR4,5
$t\bar{t}$ normalization	B	Rate	15–30%	5, common for SR4,5
Other background normalization	B	Rate	30%	5, common for SR4,5
m_{jj}, m_{jjj} tail shape	B	Shape		6, one for each SR
$t\bar{t}$ shape	B	Shape		6, one for each SR
Pileup and luminosity	S	Rate	1.7%	1, common for all SRs
PDFs, QCD renormalization and factorization scales	S	Rate	1.4%	1, common for all SRs
Jet energy scale and resolution	S	Shape		2, common for all SRs
Jet mass scale	S	Shape		1, common for all SRs