source of systematic uncertainty	uncertainty	type	process
$t\bar{t}$ cross section	8.7%	Normalization	—
W+jets cross section	6.0%	Normalization	—
Z+jets cross section	20%	Normalization	—
single top cross section	20%	Normalization	—
QCD cross section	100%	Normalization	—
luminosity	2.7%	Normalization	—
b-tag eff.	$\pm 1\ \sigma\ (p_T, \eta)$	Norm.+Shape (3-8%)	signal+background
light-flavour-mistag eff.	$\pm 1\ \sigma\ (p_T, \eta)$	Norm.+Shape (0.8-4%)	signal+background
JES	$\pm 1\ \sigma\ (p_T, \eta)$	Norm.+Shape (0-4%)	signal+background
JER	$\pm 1\ \sigma\ (\eta)$	Norm.+Shape (0-1.3%)	signal+background
jet mass resolution	$\pm 1\ \sigma\ (\eta)$	Norm.+Shape (0-7%)	signal+background
pile-up	$\sigma_{minibias} \pm 5\%$	Norm.+Shape (0-3%)	signal+background
muon ID	$\pm 1\ \sigma\ (p_T, \eta)$	Norm.+Shape (1.2-1.8%)	signal+background
muon trigger	$\pm 1\ \sigma\ (p_T, \eta)$	Norm.+Shape (0.7-1%)	signal+background
electron ID	$\pm 1\ \sigma\ (p_T, \eta)$	Norm.+Shape (0.7-1%)	signal+background
electron trigger	2%	Normalization	signal+background
H_T reweighting	Δ(nominal, 2x reweighted)	Norm.+Shape (3-14%)	signal+background
PDF	NNPDF 3.0	Norm.+Shape (0-13%)	Z+jets, Single top
PDF	NNPDF 3.0	Shape only (3-10%)	signal
renormalization/factorization scale	$1/2\mu - 2\mu$	Norm.+Shape (2-23%)	Z+jets, Single top
renormalization/factorization scale	$1/2\mu - 2\mu$	Shape only (0.4-1%)	signal