

Uncertainty label	Type	Processes	Initial size	N_p
q/g normalization	Y	q/g	50%	12
Non-q/g normalization	Y	$m_t, m_W, \text{lost t/W}$	25%	12
Non-q/g composition	Y	$m_t, m_W, \text{lost t/W}$	25%	6
Non-q/g composition p_T dep.	m_{HH}	$m_t, m_W, \text{lost t/W}$	$\pm 0.13(m_{HH} / \text{TeV})$	6
SD scale	$m_{b\bar{b}}$	m_t, m_W, signal	1%	1
SD resolution	$m_{b\bar{b}}$	m_t, m_W, signal	20%	1
Lost t/W $m_{b\bar{b}}$ scale	$m_{b\bar{b}}$	Lost t/W	$\pm 0.0015(m_{b\bar{b}} / \text{GeV})$	3
Lost t/W low $m_{b\bar{b}}$	$m_{b\bar{b}}$	Lost t/W	$\pm 18(\text{GeV} / m_{b\bar{b}})$	3
q/g $m_{b\bar{b}}$ scale	$m_{b\bar{b}}$	q/g	$\pm 0.0025(m_{b\bar{b}} / \text{GeV})$	3
q/g low $m_{b\bar{b}}$	$m_{b\bar{b}}$	q/g	$\pm 30(\text{GeV} / m_{b\bar{b}})$	3
Non-q/g m_{HH} scale	m_{HH}	$m_t, m_W, \text{lost t/W}$	$\pm 0.13(m_{HH} / \text{TeV})$	12
Non-q/g m_{HH} resolution	m_{HH}	$m_t, m_W, \text{lost t/W}$	$\pm 0.28(\text{TeV} / m_{HH})$	12
q/g m_{HH} scale	m_{HH}	q/g	$\pm 0.5(m_{HH} / \text{TeV})$	12
q/g m_{HH} resolution	m_{HH}	q/g	$\pm 1.4(\text{TeV} / m_{HH})$	12
Luminosity	Y	Signal	2.5%	1
PDF and scales	Y	Signal	2%	1
Trigger	Y	Signal	2%	2
Lepton selection	Y	Signal	e:5.7% μ :5.3%	2
Jet energy scale	Y, m_{HH}	Signal	Y:0.5% S:1% R:2%	1
Jet energy res.	Y, m_{HH}	Signal	Y:1% S:0.5% R:5%	1
Unclustered energy	Y, m_{HH}	Signal	Y:1% S:0.5% R:0.5%	1
$b\bar{b}$ jet b tagging	Y	Signal	<10%	1
AK4 jet b tagging veto	Y	Signal	1%	1
$q\bar{q}' \tau_2 / \tau_1$	Y	Signal	HP:14% LP:33%	1
$q\bar{q}' \tau_2 / \tau_1$ extrapolation	Y	Signal	<7%	1