

Systematic source	Involved processes	Change in acceptance or shape	
		$e\tau_h$	$\mu\tau_h$
Integrated luminosity	Simulated processes	2.5%	
Electron ident. & trigger	Simulated processes	2%	-
Muon ident. & trigger	Simulated processes	-	2%
τ_h ident. & trigger	Simulated processes	10%	
e misidentified as τ_h	$Z \rightarrow ee$	12%	-
μ misidentified as τ_h	$Z \rightarrow \mu\mu$	-	25%
b tagging efficiency, mistag rate	Simulated processes	3–5%	
$ \vec{p}_T^{\text{miss}} $ scale	Simulated processes	Up to 4%	
W + jets normalization	W + jets	5%	
QCD multijet normalization	QCD multijet	20%	
Z + jets normalization	$Z \rightarrow \tau_h\tau_h$	20%	
$t\bar{t}$ normalization	$t\bar{t}$ (1b1f, 1b1c only)	6%	
$t\bar{t}$ cross section	$t\bar{t}$ ($b\bar{b}A$ only)	6%	
Diboson cross section	Diboson	6%	
Single top quark cross section	Single top quark	5.5%	
$b\bar{b}A$ cross section	Signal ($b\bar{b}A$ only)	50%	
τ_h energy scale	Simulated processes	Shape	
$e/\mu \rightarrow \tau_h$ energy scale	Simulated processes	Shape	
Jet energy scale	Simulated processes	4%	
Jet misidentified as τ_h	Z + jets	Shape	
Limited event count	All processes	Shape	