

Type	Source	$t u \gamma$ (%)	$t c \gamma$ (%)
Rate	Integrated luminosity	1.8	4
	Background normalization ( $W + \text{jets}$ )	5.6	3
	Background normalization ( $W\gamma + \text{jets}$ )	2.5	1.1
	Other background normalizations	$<1$	1
Rate+Shape	Trigger efficiency	2.2	0.4
	Pileup effects	7	2.3
	Lepton identification and isolation	$<1$	4.4
	Photon identification and isolation	1.9	4.5
	Photon energy scale	$<1$	3.1
	b tagging and mistag efficiency	1.1	4
	Jet energy scale	2.9	2.2
	Jet energy resolution	2.1	3.4
	PDF	3.1	$<1$
	Scale	1	2.4
Top quark mass	2.5	1	