

Uncertainty source	Particle level [%]	Parton level [%]
Statistical	0.24 – 0.70	0.37 – 0.70
Pileup modeling	0.02 – 0.57	0.10 – 0.51
Trigger efficiency	0.03 – 0.74	0.06 – 0.85
Lepton efficiency	0.06 – 0.94	0.09 – 1.0
JES	0.14 – 2.0	0.31 – 1.8
JER	0.04 – 1.2	0.29 – 0.94
b jet tagging	0.12 – 1.2	0.32 – 1.2
Background	0.16 – 2.3	0.10 – 1.4
PDFs	0.15 – 1.2	0.17 – 1.0
MC generator	0.66 – 12	1.8 – 10
Fact./renorm.	0.10 – 4.7	0.21 – 4.6
Top quark mass	0.49 – 2.0	0.73 – 4.2
Top quark $p_T$	0.03 – 0.96	0.04 – 1.3
Hadronization	0.70 – 6.0	0.49 – 8.3
Total systematic uncertainty	1.7 – 17	3.3 – 13