

Source	No charm tag	Charm tag	Impact on $R_c^W$
	Uncertainty [%]		
Charm tagging: muon identification	—	2.7	2.6
Charm tagging: muon rate in simulation	—	2.2	2.1
Parton shower final state radiation	4.0	6.0	1.9
Jet energy scale	4.0	4.0	0.6
SS data statistical uncertainty	—	1.6	0.5
Charm fragmentation modeling	—	0.4	0.3
Jet energy resolution	1.0	1.0	0.3
b tagging	2.5	2.5	0.2
MC background normalization	5.0	5.0	0.1
Integrated luminosity	1.6	1.6	0.1
Total			3.9