

Source	systematic uncertainty (%)
PDF shapes uncertainty (size of simulation sample)	2.0
Fixing $B \rightarrow D^{*-} D_s^+(X)$ bkg model parameters	1.1
Fixing $B \rightarrow D^{*-} D^0(X)$ bkg model parameters	1.5
Fractions of signal τ^+ decays	0.3
Fixing the $\bar{D}^{**} \tau^+ \nu_\tau$ and $D_s^{**+} \tau^+ \nu_\tau$ fractions	+1.8 -1.9
Knowledge of the $D_s^+ \rightarrow 3\pi X$ decay model	1.0
Specifically the $D_s^+ \rightarrow a_1 X$ fraction	1.5
Empty bins in templates	1.3
Signal decay template shape	1.8
Signal decay efficiency	0.9
Possible contributions from other τ^+ decays	1.0
$B \rightarrow D^{*-} D^+(X)$ template shapes	+2.2 -0.8
$B \rightarrow D^{*-} D^0(X)$ template shapes	1.2
$B \rightarrow D^{*-} D_s^+(X)$ template shapes	0.3
$B \rightarrow D^{*-} 3\pi X$ template shapes	1.2
Combinatorial background normalisation	+0.5 -0.6
Preselection efficiency	2.0
Kinematic reweighting	0.7
Vertex error correction	0.9
PID efficiency	0.5
Signal efficiency (size of simulation sample)	1.1
Normalisation mode efficiency (modelling of $m(3\pi)$)	1.0
Normalisation efficiency (size of simulation sample)	1.1
Normalisation mode PDF choice	1.0
Total systematic uncertainty	+6.2 -5.9
Total statistical uncertainty	5.9