

	Run 1	Run 2
Final state	$\mu$ +jets	$\mu$ +jets and <b>e+jets</b>
Strategy	Cutoff-based: untagged jet $ \eta  > 2.5$ $\mu$ charge = +1	<b>Multivariate:</b> <b>Boosted decision tree (BDT)</b> per lepton flavour <b>Any lepton charge</b> <b>Optimised thresholds on BDT responses</b>
Fit observable	Reconstructed $m_t$ ( $m_{\mu\nu b}$ )	$\zeta = \ln(m_t / 1 \text{ GeV})$
Signal and background norm.	No constraints	<b>Constrained in final fit</b>
QCD multijet background	Absorbed into EW (V+jets and VV) category during final fit	Subtracted from data before final fit; separate systematic uncertainty for its modelling
Fit model validation	Using events with $\mu$ charge = -1	Using orthogonal region based on the BDT values