

Data and $W \rightarrow \ell \nu$ simulation		Signal simulation	
Object	Selection	Object	Selection
≥ 1 isolated muon with $p_{\text{T}} > 24 \text{ GeV}$ at the HLT		≥ 1 tracks	$ \eta < 2.5$
≥ 1 muons	$p_{\text{T}} > 55 \text{ GeV}$		passing high purity ID
	$ \eta < 2.1$		$d_0 < 0.02 \text{ cm}$
	passing tight muon ID		$d_z < 0.5 \text{ cm}$
	$I < 0.15$		hits ≥ 4
	missing inner hits =0		missing inner hits =0
	missing middle hits =0		missing middle hits =0
	match HLT muon ($\Delta R < 0.1$)		$I < 0.01$