

1 Lepton and trigger efficiencies for single Top

Following the TopPag recommended selection. For the description of the method see AN-12-389

	Data	Simulation	Scale Factor
Id Efficiency	0.9947 ± 0.0002	0.9977 ± 0	0.9970 ± 0.0002
Iso Efficiency	0.9643 ± 0.00034	0.9623 ± 0.0002	1.0021 ± 0.0006
Global Efficiency	0.9591 ± 0.0004	0.9601 ± 0.0002	0.9990 ± 0.0006

Table 1: Muon efficiencies using **deltaBeta corrections** for the isolation, with a cone of 0.4 and cut in 0.2.

	Data	Simulation	Scale Factor
Id Efficiency	$0.8815_{pm}0.0004$	$0.9137_{pm}0.0003$	$0.9648_{pm}0.0005$
Iso Efficiency	$0.9615_{pm}0.0002$	$0.9641_{pm}0.0002$	$0.9974_{pm}0.0003$
Global Efficiency	$0.8476_{pm}0.0003$	$0.8808_{pm}0.0003$	$0.9623_{pm}0.0003$

Table 2: Electron efficiencies using **rho corrections** for the isolation, with recommended selection. Gsf electrons!

channel	SF_{trig}	$SF_{Iso,ID}$	$SF_{Tri,Iso,ID}$
ee	0.975 ± 0.011	\pm	\pm
$e\mu$	0.953 ± 0.011	\pm	\pm
$\mu\mu$	0.965 ± 0.010	0.998 ± 0.020	0.963 ± 0.022

Table 3: Summary of trigger scale factors SF_{trig} , lepton efficiency scale factors $SF_{Iso,ID}$ and the combined scale factors $SF_{Tri,Iso,ID}$ for each analysis channel based on samples reprocessed in CMSSW_5_3_X. The trigger scale factors are obtained with data corresponding to a luminosity of 12.2 fb^{-1} .