

All samples used are generated with Pythia “MC8_Pythia_Common.py” (10 TeV).
The setting of the lower Pt limit parameter is $ckin[3]=18$. GeV. This has been proved by the QCD sample studies to be in a fairly x-section*efficiency flat region.

The event generator job transform parameter used are:

- run number 105046 for the QCD sample;
- run number 105204 for the ttbar all hadronic sample.

The latter means that the ttbar meta-data cross-section has to be multiplied by the all-hadronic BR (44%). In fact all W from top in the event are made decaying to quarks by pythia.

The effective number of events simulated is:

- 1000000 events /sample for QCD;
- 10000 events/sample for ttbar.

	<i>efficiency</i>	<i>sigma Pythia</i>	<i>eff. * sigma</i>	<i>S/B</i>
5J10_4J35_3J45_J60 ttbar	$5.46 \cdot 10^{-1}$	$0.230 * 0.44 \text{ nb}$	$5.5 \cdot 10^{-2} \text{ nb}$	$3.7 * 10^{-4}$
5J10_4J35_3J45_J60 QCD	$2 \cdot 10^{-4}$	751619 nb	$1.5 \cdot 10^2 \text{ nb}$	
4J35_3J45_2J50_J60 ttbar	$5.5 \cdot 10^{-1}$	$0.228 * 0.44 \text{ nb}$	$5.5 \cdot 10^{-2} \text{ nb}$	$3.3 * 10^{-4}$
4J35_3J45_2J50_J60 QCD	$2.2 \cdot 10^{-4}$	751978 nb	$1.7 \cdot 10^2 \text{ nb}$	
4J45_J60 ttbar	$4.1 \cdot 10^{-1}$	$0.231 * 0.44 \text{ nb}$	$4.1 \cdot 10^{-2} \text{ nb}$	$5.5 * 10^{-4}$
4J45_J60 QCD	$1.0 \cdot 10^{-4}$	751305	$7.5 \cdot 10^1 \text{ nb}$	
4J17_3J35 ttbar	$8.22 \cdot 10^{-1}$	$0.230 * 0.44 \text{ nb}$	$8.4 \cdot 10^{-2} \text{ nb}$	$7.5 * 10^{-5}$
4J17_3J35 QCD	$1.45 \cdot 10^{-3}$	751682 nb	$1.1 \cdot 10^3 \text{ nb}$	
5J17_3J35 ttbar	$7.29 \cdot 10^{-1}$	$0.230 * 0.44 \text{ nb}$	$7.4 \cdot 10^2 \text{ nb}$	$1.5 * 10^{-4}$
5J17_3J35 QCD	$6.47 \cdot 10^{-4}$	751682 nb	$4.87 \cdot 10^2 \text{ nb}$	
1J100 ttbar	$5.46 \cdot 10^{-1}$	$0.230 * 0.44 \text{ nb}$	$5.5 \cdot 10^{-2} \text{ nb}$	$5.7 * 10^{-5}$
1J100 QCD	$1.34 \cdot 10^{-3}$	751619 nb	$1 \cdot 10^3 \text{ nb}$	
6J30 ttbar	$2.5 \cdot 10^{-1}$	$0.230 * 0.44 \text{ nb}$	$2.5 \cdot 10^{-2} \text{ nb}$	$1.2 * 10^{-3}$
6J30 QCD	$2.6 \cdot 10^{-5}$	751716 nb	20 nb	
6J35 ttbar	$1.6 \cdot 10^{-1}$	$0.232 * 0.44 \text{ nb}$	$1.7 \cdot 10^{-2} \text{ nb}$	$1.9 * 10^{-3}$
6J35 QCD	$1.2 \cdot 10^{-5}$	752344 nb	9 nb	
6J40 ttbar	$1 \cdot 10^{-1}$	$0.230 * 0.44 \text{ nb}$	$1.1 \cdot 10^{-2} \text{ nb}$	$3.0 * 10^{-3}$
6J40 QCD	$5 \cdot 10^{-6}$	752412 nb	3.8 nb	
6J45 ttbar	$7.2 \cdot 10^{-2}$	$0.231 * 0.44 \text{ nb}$	$7.5 \cdot 10^{-3} \text{ nb}$	$4.9 * 10^{-3}$
6J45 QCD	$2.1 \cdot 10^{-6}$	751994 nb	1.6 nb	
6J204J40 ttbar	$3.74 \cdot 10^{-1}$	$0.230 * 0.44 \text{ nb}$	$3.8 \cdot 10^{-2} \text{ nb}$	$1.1 * 10^{-3}$
6J204J40 QCD	$5 \cdot 10^{-5}$	752050 nb	$3.76 \cdot 10^1 \text{ nb}$	