$\tilde{t}_1(400) \to b\tilde{\chi}_1^+(250) \to W^+\tilde{\chi}_1^0(1)$ (ATLAS_CONF_2013_048)

- Process: $pp \to \tilde{t}_1\tilde{t}_1^* : \tilde{t}_1 \to b\tilde{\chi}_1^+ \to W^+\tilde{\chi}_1^0$.
- Mass: $m_{\tilde{t}_1} = 400$ GeV, $m_{\tilde{\chi}_1^\pm} = 250$ GeV, $m_{\tilde{\chi}_1^0} = 1$ GeV.
- The number of events: $3 \cdot 10^4$.
- Event Generator: `MadGraph 5 and Pythia 6`.

#	cut name	ϵ_{Exp}	ϵ_{Atom}	$\frac{\text{Atom}}{\text{Exp}}$	$\frac{(\text{Exp}-\text{Atom})}{\text{Error}}$	#/?	R_{Exp}	R_{Atom}	$\frac{\text{Atom}}{\text{Exp}}$	$\frac{(\text{Exp}-\text{Atom})}{\text{Error}}$
0	Same Flavour	100.0	100.0							
1	SF: Opposite Sign	97.82 ± 2.67	98.73 ± 3.69	1.01	0.2	0	0.98 ± 0.03	0.99 ± 0.04	1.01	0.2
2	SF: $m_{\ell\ell} > 20$	96.55 ± 2.66	96.48 ± 3.65	1.0	−0.02	1	0.99 ± 0.03	0.98 ± 0.04	0.99	−0.22
3	SF: Leading lepton p_T	95.01 ± 2.63	94.8 ± 3.62	1.0	−0.05	2	0.98 ± 0.03	0.98 ± 0.04	1.0	−0.03
4	SF: $\lvert m_{\ell\ell} - m_Z \rvert > 20$	70.38 ± 2.27	72.57 ± 3.17	1.03	0.56	3	0.74 ± 0.02	0.77 ± 0.03	1.03	0.61
5	SF: $\Delta\phi_{\text{min}} > 1$	36.96 ± 1.64	38.96 ± 2.33	1.05	0.7	4	0.53 ± 0.02	0.54 ± 0.03	1.02	0.29
6	SF: $\Delta\phi_b < 1.5$	35.58 ± 1.61	36.01 ± 2.24	1.01	0.15	5	0.96 ± 0.04	0.92 ± 0.06	0.96	−0.53
7	SF: M90	7.85 ± 0.76	6.19 ± 0.93	0.79	−1.38	6	0.22 ± 0.02	0.17 ± 0.03	0.78	−1.45
8	SF: M100	3.34 ± 0.49	3.09 ± 0.66	0.93	−0.3	7	0.43 ± 0.06	0.5 ± 0.11	1.17	0.6
9	SF: M110	3.78 ± 0.53	3.8 ± 0.73	1.0	0.02	8	1.13 ± 0.16	1.23 ± 0.24	1.09	0.34
10	SF: M120	2.5 ± 0.43	2.95 ± 0.64	1.18	0.58	9	0.66 ± 0.11	0.78 ± 0.17	1.17	0.57

Table 1: The cut-flow table for the same flavour channel.

#	cut name	ϵ_{Exp}	ϵ_{Atom}	$\frac{\text{Atom}}{\text{Exp}}$	$\frac{(\text{Exp}-\text{Atom})}{\text{Error}}$	#/?	R_{Exp}	R_{Atom}	$\frac{\text{Atom}}{\text{Exp}}$	$\frac{(\text{Exp}-\text{Atom})}{\text{Error}}$
0	Opposite Flavour	100.0	100.0							
1	OF: Opposite Sign	97.43 ± 2.74	99.0 ± 3.72	1.02	0.34	0	0.97 ± 0.03	0.99 ± 0.04	1.02	0.34
2	OF: $m_{\ell\ell} > 20$	96.42 ± 2.72	97.3 ± 3.69	1.01	0.19	1	0.99 ± 0.03	0.98 ± 0.04	0.99	−0.15
3	OF: Leading lepton p_T	94.82 ± 2.7	95.59 ± 3.66	1.01	0.17	2	0.98 ± 0.03	0.98 ± 0.04	1.0	−0.02
4	OF: $\Delta\phi_{\text{min}} > 1$	46.68 ± 1.89	50.78 ± 2.68	1.09	1.25	3	0.49 ± 0.02	0.53 ± 0.03	1.08	1.13
5	OF: $\Delta\phi_b < 1.5$	45.05 ± 1.86	48.93 ± 2.63	1.09	1.21	4	0.97 ± 0.04	0.96 ± 0.05	1.0	−0.02
6	OF: M90	9.51 ± 0.85	8.39 ± 1.09	0.88	−0.8	5	0.21 ± 0.02	0.17 ± 0.02	0.81	−1.35
7	OF: M100	3.33 ± 0.51	4.13 ± 0.77	1.24	0.87	6	0.35 ± 0.05	0.49 ± 0.09	1.4	1.34
8	OF: M110	5.06 ± 0.62	4.55 ± 0.8	0.9	−0.5	7	1.52 ± 0.19	1.1 ± 0.19	0.73	−1.54
9	OF: M120	3.64 ± 0.53	3.13 ± 0.67	0.86	−0.6	8	0.72 ± 0.1	0.69 ± 0.15	0.95	−0.18

Table 2: The cut-flow table for the opposite flavour channel.