

0.1 $\tilde{t}_R \tilde{t}_R^* \rightarrow t \tilde{\chi}_1^0 \bar{t} \tilde{\chi}_1^0$ (ATLAS_CONF_2013_024)

#	cut name	ϵ_{Exp}	ϵ_{Atom}	Atom Exp	(Exp-Atom) Error	#/?	R_{Exp}	R_{Atom}	Atom Exp	(Exp-Atom) Error
0	No cut	100.0	100.0							
1	μ veto	75.14 ± 0.17	82.07 ± 1.93	1.09	3.58	0	0.75 ± 0.0	0.82 ± 0.02	1.09	3.58
2	e veto	56.0 ± 0.15	55.05 ± 2.5	0.98	-0.38	1	0.75 ± 0.0	0.67 ± 0.03	0.9	-2.44
3	MET > 130	51.86 ± 0.14	47.47 ± 2.51	0.92	-1.75	2	0.93 ± 0.0	0.86 ± 0.05	0.93	-1.4
4	N_{jets} and p_T	19.18 ± 0.09	42.17 ± 2.48	2.2	9.26	3	0.37 ± 0.0	0.89 ± 0.05	2.4	9.91
5	MET _{track} > 30	18.98 ± 0.09	41.92 ± 2.48	2.21	9.24	4	0.99 ± 0.0	0.99 ± 0.06	1.0	0.07
6	$\Delta\phi(\text{MET}, \text{MET}_{\text{track}}) < \pi/3$	17.8 ± 0.08	41.16 ± 2.47	2.31	9.44	5	0.94 ± 0.0	0.98 ± 0.06	1.05	0.75
7	$\Delta\phi(\text{jet}, \text{MET}) > \pi/5$	15.2 ± 0.08	37.63 ± 2.43	2.48	9.21	6	0.85 ± 0.0	0.91 ± 0.06	1.07	1.02
8	τ veto	13.29 ± 0.07	36.62 ± 2.42	2.76	9.63	7	0.87 ± 0.0	0.97 ± 0.06	1.11	1.53
9	≥ 2 -bjets	5.82 ± 0.05	13.13 ± 1.7	2.26	4.31	8	0.44 ± 0.0	0.36 ± 0.05	0.82	-1.7
10	$m_T(\text{bjets}, \text{MET}) > 175$	3.98 ± 0.04	10.86 ± 1.56	2.73	4.4	9	0.68 ± 0.01	0.83 ± 0.12	1.21	1.19
11	$80 < m_{jjj}^0 < 270$	3.51 ± 0.04	7.83 ± 1.35	2.23	3.2	10	0.88 ± 0.01	0.72 ± 0.12	0.82	-1.29
12	$80 < m_{jjj}^1 < 270$	2.15 ± 0.03	1.01 ± 0.5	0.47	-2.26	11	0.61 ± 0.01	0.13 ± 0.06	0.21	-7.47
13	SR1: MET > 200	2.03 ± 0.03	1.01 ± 0.5	0.5	-2.03	12	0.94 ± 0.01	1.0 ± 0.5	1.06	0.11
14	SR2: MET > 300	1.54 ± 0.02	0.76 ± 0.44	0.49	-1.79	13	0.76 ± 0.01	0.75 ± 0.43	0.99	-0.02
15	SR3: MET > 350	1.2 ± 0.02	0.76 ± 0.44	0.63	-1.02	14	0.78 ± 0.01	1.0 ± 0.58	1.28	0.38

Table 1: The cut-flow table for the $\tilde{t}_R \tilde{t}_R^* \rightarrow t \tilde{\chi}_1^0 \bar{t} \tilde{\chi}_1^0$ process. The masses are set at $m_{\tilde{t}_R} = 600$ GeV, $m_{\tilde{\chi}_1^0} = 0$ GeV. The Atom efficiencies are calculated using 10^4 events generated by **Herwig++ 2.5.2**.