

$\tilde{\chi}_1^\pm(350) \rightarrow (\ell\tilde{\nu}(175) \text{ or } \nu\tilde{\ell}(175)) \rightarrow \nu\ell\tilde{\chi}_1^0(0)$  (**ATLAS\_2014\_I1286761 (1403.5294)**)

- Process:  $\tilde{\chi}_1^+ \tilde{\chi}_1^- : \tilde{\chi}_1^\pm \rightarrow (\ell\tilde{\nu} \text{ or } \nu\tilde{\ell}) \rightarrow \nu\ell\tilde{\chi}_1^0$ .
- Mass:  $m_{\tilde{\chi}_1^\pm} = 350$  GeV,  $m_{\tilde{\ell}/\tilde{\nu}} = 175$  GeV,  $m_{\tilde{\chi}_1^0} = 0$  GeV.
- The number of events:  $10^4$ .
- Event Generator: **Herwig++ 2.5.2**.

#	cut name	$\epsilon_{\text{Exp}}$	$\epsilon_{\text{Atom}}$	$\frac{\text{Atom}}{\text{Exp}}$	$\frac{(\text{Exp}-\text{Atom})}{\text{Error}}$	#/?	$R_{\text{Exp}}$	$R_{\text{Atom}}$	$\frac{\text{Atom}}{\text{Exp}}$	$\frac{(\text{Exp}-\text{Atom})}{\text{Error}}$
0	= 2 OSlep $p_T > 35, 20$ : SF	100.0	100.0							
1	Jet veto: SF	$43.19 \pm 0.73$	$39.35 \pm 1.35$	0.91	-2.5	0	$0.43 \pm 0.01$	$0.39 \pm 0.01$	0.91	-2.5
2	Z veto: SF	$40.58 \pm 0.71$	$36.4 \pm 1.3$	0.9	-2.82	1	$0.94 \pm 0.02$	$0.93 \pm 0.03$	0.98	-0.4
3	$m_{T_2} > 90$ : SF	$24.25 \pm 0.55$	$22.45 \pm 1.04$	0.93	-1.53	2	$0.6 \pm 0.01$	$0.62 \pm 0.03$	1.03	0.61
4	$m_{T_2} > 120$ : SF	$18.14 \pm 0.48$	$17.1 \pm 0.91$	0.94	-1.01	3	$0.75 \pm 0.02$	$0.76 \pm 0.04$	1.02	0.31
5	$m_{T_2} > 150$ : SF	$11.92 \pm 0.39$	$11.4 \pm 0.75$	0.96	-0.62	4	$0.66 \pm 0.02$	$0.67 \pm 0.04$	1.01	0.19

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

#	cut name	$\epsilon_{\text{Exp}}$	$\epsilon_{\text{Atom}}$	$\frac{\text{Atom}}{\text{Exp}}$	$\frac{(\text{Exp}-\text{Atom})}{\text{Error}}$	#/?	$R_{\text{Exp}}$	$R_{\text{Atom}}$	$\frac{\text{Atom}}{\text{Exp}}$	$\frac{(\text{Exp}-\text{Atom})}{\text{Error}}$
0	= 2 OSlep $p_T > 35, 20$ : DF	100.0	100.0							
1	Jet veto: DF	$41.7 \pm 0.73$	$41.04 \pm 1.4$	0.98	-0.42	0	$0.42 \pm 0.01$	$0.41 \pm 0.01$	0.98	-0.42
2	Z veto: DF	$41.7 \pm 0.73$	$41.04 \pm 1.4$	0.98	-0.42	1	$1.0 \pm 0.02$	$1.0 \pm 0.03$	1.0	0.0
3	$m_{T_2} > 90$ : DF	$24.58 \pm 0.56$	$23.59 \pm 1.08$	0.96	-0.81	2	$0.59 \pm 0.01$	$0.57 \pm 0.03$	0.98	-0.5
4	$m_{T_2} > 120$ : DF	$18.92 \pm 0.49$	$18.12 \pm 0.95$	0.96	-0.75	3	$0.77 \pm 0.02$	$0.77 \pm 0.04$	1.0	-0.04
5	$m_{T_2} > 150$ : DF	$13.0 \pm 0.41$	$12.75 \pm 0.8$	0.98	-0.27	4	$0.69 \pm 0.02$	$0.7 \pm 0.04$	1.02	0.34

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