

$$\tilde{\chi}_1^\pm(350) \rightarrow (\ell\tilde{\nu}(175) \text{ or } \nu\tilde{\ell}(175)) \rightarrow \nu\ell\tilde{\chi}_1^0(0) \text{ (ATLAS\_CONF\_2013\_049)}$$

- 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	ee: Trigger	100.0	100.0							
1	ee: Z veto	$92.31 \pm 1.39$	$88.89 \pm 29.7$	0.96	-0.11	0	$0.92 \pm 0.01$	$0.89 \pm 0.3$	0.96	-0.11
2	ee: Jet veto	$38.46 \pm 0.9$	$11.11 \pm 11.04$	0.29	-2.47	1	$0.42 \pm 0.01$	$0.13 \pm 0.12$	0.3	-2.34
3	ee: MET <sup>rel</sup>	$32.69 \pm 0.83$	$11.11 \pm 11.04$	0.34	-1.95	2	$0.85 \pm 0.02$	$1.0 \pm 0.99$	1.18	0.15
4	ee: $m_{T2} > 90$	$22.5 \pm 0.68$	$11.11 \pm 11.04$	0.49	-1.03	3	$0.69 \pm 0.02$	$1.0 \pm 0.99$	1.45	0.31
5	ee: $m_{T2} > 110$	$18.27 \pm 0.62$	$11.11 \pm 11.04$	0.61	-0.65	4	$0.81 \pm 0.03$	$1.0 \pm 0.99$	1.23	0.19

Table 1: The cut-flow table for the  $ee$  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	$\mu\mu$ : Trigger	100.0	100.0							
1	$\mu\mu$ : Z veto	$92.31 \pm 1.39$	$100.0 \pm 31.27$	1.08	0.25	0	$0.92 \pm 0.01$	$1.0 \pm 0.31$	1.08	0.25
2	$\mu\mu$ : Jet veto	$38.46 \pm 0.9$	$55.56 \pm 24.0$	1.44	0.71	1	$0.42 \pm 0.01$	$0.56 \pm 0.24$	1.33	0.58
3	$\mu\mu$ : MET <sup>rel</sup>	$32.69 \pm 0.83$	$44.44 \pm 21.62$	1.36	0.54	2	$0.85 \pm 0.02$	$0.8 \pm 0.39$	0.94	-0.13
4	$\mu\mu$ : $m_{T2} > 90$	$22.5 \pm 0.68$	$33.33 \pm 18.86$	1.48	0.57	3	$0.69 \pm 0.02$	$0.75 \pm 0.42$	1.09	0.15
5	$\mu\mu$ : $m_{T2} > 110$	$18.27 \pm 0.62$	$22.22 \pm 15.5$	1.22	0.25	4	$0.81 \pm 0.03$	$0.67 \pm 0.47$	0.82	-0.31

Table 2: The cut-flow table for the  $\mu\mu$  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	$e\mu$ : Trigger	100.0	100.0							
1	$e\mu$ : Z veto	$92.31 \pm 1.25$	$90.91 \pm 26.76$	0.98	-0.05	0	$0.92 \pm 0.01$	$0.91 \pm 0.27$	0.98	-0.05
2	$e\mu$ : Jet veto	$38.46 \pm 0.81$	$9.09 \pm 9.03$	0.24	-3.24	1	$0.42 \pm 0.01$	$0.1 \pm 0.1$	0.24	-3.18
3	$e\mu$ : MET <sup>rel</sup>	$32.69 \pm 0.75$	$9.09 \pm 9.03$	0.28	-2.6	2	$0.85 \pm 0.02$	$1.0 \pm 0.99$	1.18	0.15
4	$e\mu$ : $m_{T2} > 90$	$22.5 \pm 0.62$	$9.09 \pm 9.03$	0.4	-1.48	3	$0.69 \pm 0.02$	$1.0 \pm 0.99$	1.45	0.31
5	$e\mu$ : $m_{T2} > 110$	$18.27 \pm 0.56$	$0.0 \pm 0.0$	0.0	-32.74	4	$0.81 \pm 0.02$	$0.0 \pm 0.0$	0.0	-32.74

Table 3: The cut-flow table for the  $e\mu$  channel.