

$\tilde{\chi}_1^\pm(140) \rightarrow W^\pm \tilde{\chi}_1^0(20)$  (**ATLAS\_CONF\_2013\_049**)

- Process:  $\tilde{\chi}_1^+ \tilde{\chi}_1^- : \tilde{\chi}_1^\pm \rightarrow W^\pm \tilde{\chi}_1^0$ .
- Mass:  $m_{\tilde{\chi}_1^\pm} = 140$  GeV,  $m_{\tilde{\chi}_1^0} = 20$  GeV.
- The number of events:  $5 \cdot 10^4$ .
- 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 | WW: Jet veto                             | 100.0                   | 100.0                    |                                  |   |     |                  |                   |                                  |   |
| 1 | WW: $p_T(\ell_1) > 35, p_T(\ell_2) > 20$ | $74.1 \pm 2.36$         | $74.84 \pm 6.83$         | 1.01                             | 0.1   | 0   | $0.74 \pm 0.02$  | $0.75 \pm 0.07$   | 1.01                             | 0.1   |
| 2 | WWb                                      | $5.9 \pm 0.66$          | $5.03 \pm 1.78$          | 0.85                             | -0.46   | 1   | $0.08 \pm 0.01$  | $0.07 \pm 0.02$   | 0.84                             | -0.49   |

Table 1: The cut-flow table for WWb signal region.