

atlas_phys_pub_2013_011 Signal Region

ATLAS

atlas_1407_0608

Stop Pair Production

Energy: 14 TeV

Luminosity: 3000 fb⁻¹

Montecarlo: Herwig++

Signal region	1 lepton final state	
Process	$\tilde{t} \rightarrow t\tilde{\chi}_1^0$	
Point	$m(\tilde{t}) = 800 \text{ GeV}, \quad m(\tilde{\chi}_1^0) = 100 \text{ GeV}$	
Source	ATLAS	CheckMATE
Generated events	20000.0	
Signal Region $m_{\tilde{t}_1} = 800 \text{ GeV}$	880 ± 18	987 ± 75

Table 1: Cutflow validation for atlas_phys_pub_2013_011. Shown are number of events passing each cut normalised to a luminosity of 3000 fb⁻¹. Final error is Monte-Carlo events only.

Signal region	1 lepton final state	
Process	$\tilde{t} \rightarrow t\tilde{\chi}_1^0$	
Point	$m(\tilde{t}) = 1100 \text{ GeV}, \quad m(\tilde{\chi}_1^0) = 100 \text{ GeV}$	
Source	ATLAS	CheckMATE
Generated events	20000.0	
Signal Region $m_{\tilde{t}_1} = 1100 \text{ GeV}$	55.7 ± 1.5	60.1 ± 6.2

Table 2: Cutflow validation for atlas_phys_pub_2013_011. Shown are number of events passing each cut normalised to a luminosity of 3000 fb⁻¹. Final error is Monte-Carlo events only.

Signal region	Full hadronic final state	
Process	$\tilde{t} \rightarrow t\tilde{\chi}_1^0$	
Point	$m(\tilde{t}) = 800 \text{ GeV}, \quad m(\tilde{\chi}_1^0) = 100 \text{ GeV}$	
Source	ATLAS	CheckMATE
Generated events	20000.0	
Signal Region $m_{\tilde{t}_1} = 800 \text{ GeV}$	457 ± 13	380 ± 46

Table 3: Cutflow validation for atlas_phys_pub_2013_011. Shown are number of events passing each cut normalised to a luminosity of 3000 fb⁻¹. Final error is Monte-Carlo events only.

Signal region	Full hadronic final state	
Process	$\tilde{t} \rightarrow t\tilde{\chi}_1^0$	
Point	$m(\tilde{t}) = 1100 \text{ GeV}, \quad m(\tilde{\chi}_1^0) = 100 \text{ GeV}$	
Source	ATLAS	CheckMATE
Generated events	20000.0	
Signal Region $m_{\tilde{t}_1} = 1100 \text{ GeV}$	46 ± 1.4	43.4 ± 5.3

Table 4: Cutflow validation for atlas_phys_pub_2013_011. Shown are number of events passing each cut normalised to a luminosity of 3000 fb^{-1} . Final error is Monte-Carlo events only.