

atlas_phys_2014_010_hl_3l CutFlow

ATLAS
 atlas_phys_2014_010_hl_3l
 ATLAS-PHYS-2014-010
 3 leptons + etmiss
 Energy: 14 TeV
 Luminosity: 3000 fb⁻¹
 Montecarlo: Herwig++ 2.7.1

Signal region	all	
Process	$\tilde{\chi}_1^\pm \tilde{\chi}_2^0 \rightarrow WZ\tilde{\chi}_1^0\tilde{\chi}_1^0$	
Point	$m(\tilde{\chi}_1^\pm) = 400 \text{ GeV}, \quad m(\tilde{\chi}_1^0) = 1 \text{ GeV}$	
Source	ATLAS	CheckMATE 2
Generated events	10000.0	20000.0
SRA	407 ± 6	394 ± 10
SRB	224 ± 5	198 ± 7
SRC	67.9 ± 2.6	47.3 ± 3.4
SRD	19.7 ± 1.4	18.1 ± 2.1

Table 1: Cutflow validation for atlas_phys_2014_010_hl_3l. 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	all	
Process	$\tilde{\chi}_1^\pm \tilde{\chi}_2^0 \rightarrow WZ\tilde{\chi}_1^0\tilde{\chi}_1^0$	
Point	$m(\tilde{\chi}_1^\pm) = 600 \text{ GeV}, \quad m(\tilde{\chi}_1^0) = 1 \text{ GeV}$	
Source	ATLAS	CheckMATE 2
Generated events	10000.0	20000.0
SRA	195 ± 2	195 ± 3
SRB	148.9 ± 1.7	149 ± 3
SRC	81.6 ± 1.3	78.4 ± 1.9
SRD	33.5 ± 0.8	30.8 ± 1.2

Table 2: Cutflow validation for atlas_phys_2014_010_hl_3l. 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	all	
Process	$\tilde{\chi}_1^\pm \tilde{\chi}_2^0 \rightarrow WZ \tilde{\chi}_1^0 \tilde{\chi}_1^0$	
Point	$m(\tilde{\chi}_1^\pm) = 800 \text{ GeV}, \quad m(\tilde{\chi}_1^0) = 1 \text{ GeV}$	
Source	ATLAS	CheckMATE 2
Generated events	10000.0	5000.0
SRA	69.6 ± 0.6	71.5 ± 1.4
SRB	59.1 ± 0.6	61.5 ± 1.3
SRC	42.4 ± 0.5	44.9 ± 1.1
SRD	25.2 ± 0.4	26.0 ± 0.8

Table 3: Cutflow validation for atlas_phys_2014_010_hl_3l. 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	all	
Process	$\tilde{\chi}_1^\pm \tilde{\chi}_2^0 \rightarrow WZ \tilde{\chi}_1^0 \tilde{\chi}_1^0$	
Point	$m(\tilde{\chi}_1^\pm) = 1000 \text{ GeV}, \quad m(\tilde{\chi}_1^0) = 1 \text{ GeV}$	
Source	ATLAS	CheckMATE 2
Generated events	10000.0	1000.0
SRA	22.9 ± 0.2	23.9 ± 0.6
SRB	20.4 ± 0.2	21.4 ± 0.6
SRC	16.36 ± 0.16	17.3 ± 0.5
SRD	11.55 ± 0.14	12.5 ± 0.4

Table 4: Cutflow validation for atlas_phys_2014_010_hl_3l. 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	all	
Process	$\tilde{\chi}_1^\pm \tilde{\chi}_2^0 \rightarrow Wh(\rightarrow WW) \tilde{\chi}_1^0 \tilde{\chi}_1^0$	
Point	$m(\tilde{\chi}_1^\pm) = 200 \text{ GeV}, \quad m(\tilde{\chi}_1^0) = 1 \text{ GeV}$	
Source	ATLAS	CheckMATE 2
Generated events	10000.0	50000.0
SRE	181 ± 31	165 ± 12
SRF	99 ± 23	93 ± 9
SRG	27 ± 12	20.4 ± 4
SRH	0 ± 0	6.5 ± 2

Table 5: Cutflow validation for atlas_phys_2014_010_hl_3l. 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	all	
Process	$\tilde{\chi}_1^\pm \tilde{\chi}_2^0 \rightarrow Wh(\rightarrow WW)\tilde{\chi}_1^0 \tilde{\chi}_1^0$	
Point	$m(\tilde{\chi}_1^\pm) = 300 \text{ GeV}, \quad m(\tilde{\chi}_1^0) = 1 \text{ GeV}$	
Source	ATLAS	CheckMATE 2
Generated events	10000.0	20000.0
SRE	166 ± 16	154 ± 7
SRF	121 ± 13	113 ± 6
SRG	46 ± 8	40 ± 3
SRH	13 ± 4	14.3 ± 2

Table 6: Cutflow validation for atlas_phys_2014_010_hl_3l. 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	all	
Process	$\tilde{\chi}_1^\pm \tilde{\chi}_2^0 \rightarrow Wh(\rightarrow WW)\tilde{\chi}_1^0 \tilde{\chi}_1^0$	
Point	$m(\tilde{\chi}_1^\pm) = 500 \text{ GeV}, \quad m(\tilde{\chi}_1^0) = 1 \text{ GeV}$	
Source	ATLAS	CheckMATE 2
Generated events	10000.0	20000.0
SRE	57 ± 4	56.0 ± 1.6
SRF	46.1 ± 3.4	47.7 ± 1.5
SRG	31.9 ± 2.8	33.7 ± 1.2
SRH	20.5 ± 2.2	18.6 ± 0.9

Table 7: Cutflow validation for atlas_phys_2014_010_hl_3l. 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	all	
Process	$\tilde{\chi}_1^\pm \tilde{\chi}_2^0 \rightarrow Wh(\rightarrow WW)\tilde{\chi}_1^0 \tilde{\chi}_1^0$	
Point	$m(\tilde{\chi}_1^\pm) = 700 \text{ GeV}, \quad m(\tilde{\chi}_1^0) = 1 \text{ GeV}$	
Source	ATLAS	CheckMATE 2
Generated events	10000.0	2000.0
SRE	18.1 ± 1.1	18.8 ± 0.5
SRF	15.9 ± 1.0	17.0 ± 0.5
SRG	12.8 ± 0.9	13.9 ± 0.4
SRH	9.1 ± 0.8	9.8 ± 0.3

Table 8: Cutflow validation for atlas_phys_2014_010_hl_3l. 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	$1\ell 2\tau$ $\tilde{\chi}_1^\pm \tilde{\chi}_2^0 \rightarrow Wh(\rightarrow \tau\tau)\tilde{\chi}_1^0 \tilde{\chi}_1^0$	
Process	ATLAS	CheckMATE 2
Source		
Generated events	unknown	varies
(200, 0)	20	8 ± 1.3
(500, 200)	9	7 ± 0.8
(700, 0)	7	6.7 ± 0.7
(1200, 600)	0.5	0.5 ± 0.2

Table 9: Cutflow validation for atlas_phys_2014.010_hl_3l. Shown are number of events passing each cut normalised to a luminosity of 3000 fb^{-1} . Final error is Monte-Carlo events only.