

atlas_1506_08616 CutFlow

ATLAS
 atlas_1506_08616
 ATLAS-SUSY-2014-07
 various stops
 Energy: 8 TeV
 Luminosity: 20.1 fb⁻¹
 Montecarlo: Herwig++ or Madgraph+Pythia

Signal region	SR1-7	
Process	$\tilde{t}_1 \rightarrow b\tilde{\chi}_1^+$	
Point	$m(\tilde{t}_1) = 160 \text{ GeV}, m(\tilde{\chi}_1^\pm) = 160 \text{ GeV}, m(\tilde{\chi}_1^0) = 100 \text{ GeV}$	
Source	ATLAS	CheckMATE
Generated events	408079.9	342407.0
Total	408079 ± 0	117000 ± 0
Trigger	151183 ± 310	44400 ± 97
Cleaning cuts*	149116 ± 310	-
Bad leading jets*	148990 ± 310	-
2 leptons 10 GeV	22147.9 ± 140	18900 ± 74
OF	11221.0 ± 100	9200 ± 54
OF + iso	6910.1 ± 82	7560 ± 49
OF + iso + OS	6862.3 ± 82	7540 ± 49
OF + iso + OS + $M_{ll} > 20 \text{ GeV}$	6416.7 ± 79	7010 ± 48
OF + iso + OS + $M_{ll} > 20 \text{ GeV}$ + ptll	5186.7 ± 72	6010 ± 44
OF + ... + R1	340.5 ± 18	437 ± 12
OF + ... + mT2	275.0 ± 17	327 ± 11
OF + ... + dxv	188.3 ± 14	224 ± 8.7
OF + ... + R2	80.9 ± 9	102 ± 5.9
OF + ... + SR0	27.8 ± 5.3	33.5 ± 3.4
OF + ... + SR1	43.0 ± 6.6	55.8 ± 4.4
OF + ... + SR2	65.1 ± 8.1	77 ± 5.1
OF + ... + SR3	3.6 ± 1.9	4.79 ± 1.3
OF + ... + SR4	0.0 ± 0.0	0.0 ± 0.0
OF + ... + SR5	56.4 ± 7.5	70.9 ± 4.9
OF + ... + SR6	0.0 ± 0.0	0.0 ± 0.0

Table 1: Cutflow validation for atlas_1506_08616. Shown are number of events passing each cut normalised to a luminosity of 20.1 fb⁻¹. Final error is Monte-Carlo events only. Collaboration events with generator level filter; Checkmate events for leptonic decays only.

Signal region	SR1-7	
	$\tilde{t}_1 \rightarrow bW\tilde{\chi}_1^0$	
Process	$m(\tilde{t}_1) = 200 \text{ GeV}, m(\tilde{\chi}_1^0) = 110 \text{ GeV}$	
Point		
Source	ATLAS	CheckMATE
Generated events	189044.3	100000.0
Total	189044.3 ± 0	37700 ± 0
Trigger	92887.2 ± 220	25000 ± 56
Cleaning cuts*	91640.1 ± 220	-
Bad leading jets*	91527.1 ± 220	-
2 leptons 10 GeV	12830.6 ± 110	10900 ± 54
OF	6426.8 ± 79	5440 ± 42
OF + iso	4696.4 ± 68	4780 ± 40
OF + iso + OS	4674.6 ± 68	4770 ± 40
OF + iso + OS + $M_{ll} > 20 \text{ GeV}$	4503.1 ± 66	4550 ± 39
OF + iso + OS + $M_{ll} > \text{GeV} + \text{ptll}$	4367.2 ± 65	4350 ± 38
OF + ... + R1	428.7 ± 21	539 ± 14
OF + ... + mT2	387.4 ± 20	497 ± 14
OF + ... + dxv	248.0 ± 16	351 ± 11
OF + ... + R2	149.8 ± 12	206 ± 8.8
OF + ... + SR0	19.9 ± 4.5	20 ± 2.7
OF + ... + SR1	18.3 ± 4.3	44.5 ± 4.1
OF + ... + SR2	104.8 ± 10	134 ± 7.1
OF + ... + SR3	66.1 ± 8.1	67.2 ± 5
OF + ... + SR4	7.1 ± 2.7	4.15 ± 1.3
OF + ... + SR5	51.6 ± 7.2	92.8 ± 5.9
OF + ... + SR6	36.1 ± 6	23 ± 2.9

Table 2: Cutflow validation for atlas_1506_08616. Shown are number of events passing each cut normalised to a luminosity of 20.1 fb^{-1} . Final error is Monte-Carlo events only. Collaboration events with generator level filter; Checkmate events for leptonic decays only.