

atlas_phys_2014_010_HL CutFlow

ATLAS
 atlas_phys_2014_010_HL
 ATLAS-PHYS-2014-010
 2-6 jets + etmiss
 Energy: 14 TeV
 Luminosity: 3000 fb⁻¹
 Montecarlo: Herwig++, MadGraph

Signal region	all	
Process	$\tilde{g}\tilde{g} \rightarrow q\bar{q}\tilde{\chi}_1^0 q\bar{q}\tilde{\chi}_1^0$	
Point	$m(\tilde{g}) = 1950 \text{ GeV}, \quad m(\tilde{\chi}_1^0) = 1 \text{ GeV}$	
Source	ATLAS	CheckMATE
Generated events	-	24466.0
SR2jl	55.8 ± 1.8	60 ± 3.6
SR2jm	43.4 ± 1.6	41 ± 3
SR3j	163.9 ± 3.1	213 ± 7
SR4jl	75.2 ± 2.1	88 ± 4
SR4jm	191 ± 3.4	253 ± 7
SR4jt	159.1 ± 3.1	153 ± 6
SR5j	152.7 ± 3	195 ± 7
SR6jl	257 ± 4	334 ± 9
SR6jm	73.4 ± 2.1	73 ± 4
SR6jt	36 ± 1.5	33.5 ± 2.7

Table 1: Cutflow validation for atlas_phys_2014_010_HL. 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	$\tilde{g}\tilde{g} \rightarrow q\bar{q}\tilde{\chi}_1^0 q\bar{q}\tilde{\chi}_1^0$	
Point	$m(\tilde{g}) = 1425 \text{ GeV}, \quad m(\tilde{\chi}_1^0) = 1400 \text{ GeV}$	
Source	ATLAS	CheckMATE
Generated events	–	244753
SR2jl	10.5 ± 3.3	3.5 ± 1.1
SR2jm	15 ± 4	4.5 ± 1.3
SR3j	48 ± 7	21.2 ± 2.8
SR4jl	19 ± 4	11.2 ± 2.0
SR4jm	23 ± 5	13.4 ± 2.2
SR4jt	8.4 ± 3	5.6 ± 1.4
SR5j	14 ± 4	5.2 ± 1.4
SR6jl	7.4 ± 2.8	10.8 ± 2.0
SR6jm	5.3 ± 2.4	7.5 ± 1.7
SR6jt	0 ± 0	0 ± 0

Table 2: Cutflow validation for atlas_phys_2014_010_HL. 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	$\tilde{q}\tilde{q} \rightarrow q\tilde{\chi}_1^0 q\tilde{\chi}_1^0$	
Point	$m(\tilde{q}) = 1050 \text{ GeV}, \quad m(\tilde{\chi}_1^0) = 900 \text{ GeV}$	
Source	ATLAS	CheckMATE
Generated events	–	500000.0
SR2jl	5 ± 5	0 ± 0
SR2jm	10 ± 7	0 ± 0
SR3j	15 ± 9	4.6 ± 2.0
SR4jl	10 ± 7	10 ± 3
SR4jm	15 ± 9	3.6 ± 1.8
SR4jt	15 ± 9	0.9 ± 0.9
SR5j	10 ± 7	2.8 ± 1.6
SR6jl	25 ± 11	10 ± 3
SR6jm	5 ± 5	2.8 ± 1.6
SR6jt	5 ± 5	0 ± 0

Table 3: Cutflow validation for atlas_phys_2014_010_HL. 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	$\tilde{q}\tilde{q} \rightarrow q\tilde{\chi}_1^0 q\tilde{\chi}_1^0$	
Point	$m(\tilde{g}) = 2250 \text{ GeV}, \quad m(\tilde{\chi}_1^0) = 1 \text{ GeV}$	
Source	ATLAS	CheckMATE
Generated events	–	10000.0
SR2jl	186 ± 3	97.2 ± 6.6
SR2jm	208 ± 3	138 ± 8
SR3j	558 ± 6	536 ± 16
SR4jl	254 ± 4	238 ± 10
SR4jm	320 ± 4	305 ± 12
SR4jt	183 ± 3	155 ± 8
SR5j	136 ± 3	130 ± 8
SR6jl	75 ± 2	81 ± 6
SR6jm	50.9 ± 1.7	47 ± 5
SR6jt	13.6 ± 0.9	6.8 ± 1.7

Table 4: Cutflow validation for atlas_phys_2014_010_HL. Shown are number of events passing each cut normalised to a luminosity of 3000 fb^{-1} . Final error is Monte-Carlo events only.