

Table 1: Validation courtesy of Junjie Cao, Liangliang Shang, Jin Min Yang and Yang Zhang of their implementation of atlas_1503.03290, the ATLAS search for the leptonic- $Z + jets + E_T^{miss}$ signal in CheckMATE. Numbers in the columns EXP and OUR are the event numbers of electron pair or muon pair obtained by the ATLAS collaboration and us respectively, and those in the column DIFF represent their relative difference.

	$m_{\tilde{g}} = 900 GeV, \mu = 600 GeV$ $N_{raw}^{EXP} = 100000, N_{raw}^{OUR} = 50000$					
	EXP		OUR		DIFF	
No cuts	189±0.0		189±0.0			
At least 2 leptons	88.8±0.31		73.41±0.41		-17%	
	ee			$\mu\mu$		
	EXP	OUR	DIFF	EXP	OUR	DIFF
Lepton flavour	36.1±0.24	30.77±0.31	-15%	25.7±0.20	28.5±0.30	11%
PromptLeptons	35.3±0.24	30.73±0.31	-13%	25.6±0.20	28.43±0.30	11%
Opposite charged leptons	33.6±0.23	30.05±0.31	-11%	24.2±0.20	28.01±0.30	16%
> 1jet	32.2±0.24	27.75±0.30	-14%	23.1±0.20	25.97±0.29	12%
$m_{ll} > 15$	30.0±0.23	27.69±0.30	-8%	23.0±0.20	25.93±0.29	13%
$\Delta\phi(j_1, E_T^{miss}) > 0.4$	28.3±0.22	25.91±0.29	-8%	21.9±0.20	24.48±0.28	12%
$\Delta\phi(j_2, E_T^{miss}) > 0.4$	25.7±0.21	23.27±0.28	-9%	19.9±0.19	22.13±0.27	11%
$81 GeV < m_{ll} < 101 GeV$	22.1±0.20	21.38±0.27	-3%	16.6±0.17	18.77±0.25	13%
$H_T > 600 GeV$	20.5±0.20	18.01±0.25	-12%	15.1±0.17	15.54±0.23	3%
$E_T^{miss} > 225 GeV$	15.0±0.17	13.74±0.22	-8%	11.1±0.15	11.47±0.20	3%

Table 2: Validation courtesy of Junjie Cao, Liangliang Shang, Jin Min Yang and Yang Zhang of their implementation of atlas_1503.03290, the ATLAS search for the leptonic- Z + jets + E_T^{miss} signal in CheckMATE. Numbers in the columns EXP and OUR are the event numbers of electron pair or muon pair obtained by the ATLAS collaboration and us respectively, and those in the column DIFF represent their relative difference.

	$m_{\tilde{g}} = 1000\text{GeV}, \mu = 700\text{GeV}$ $N_{raw}^{EXP} = 100000, N_{raw}^{OUR} = 50000$					
	EXP		OUR		DIFF	
No cuts	71.8±0.0		71.8±0.0			
At least 2 leptons	33.8±0.12		26.7±0.16		-21%	
	ee			$\mu\mu$		
	EXP	OUR	DIFF	EXP	OUR	DIFF
Lepton flavour	14.3±0.09	11.48±0.12	-20%	9.3±0.07	10.04±0.11	8%
PromptLeptons	14.0±0.09	11.47±0.12	-18%	9.3±0.07	10.04±0.11	8%
Opposite charged leptons	13.3±0.09	11.27±0.12	-15%	8.8±0.07	9.94±0.11	13%
> 1jet	12.8±0.09	10.48±0.11	-18%	8.4±0.07	9.07±0.11	8%
$m_{ll} > 15$	12.0±0.09	10.48±0.11	-13%	8.3±0.07	9.04±0.11	9%
$\Delta\phi(j_1, E_T^{miss}) > 0.4$	11.3±0.09	9.84±0.11	-13%	8.0±0.07	8.47±0.10	6%
$\Delta\phi(j_2, E_T^{miss}) > 0.4$	10.3±0.08	8.82±0.11	-14%	7.2±0.07	7.66±0.10	6%
$81\text{GeV} < m_{ll} < 101\text{GeV}$	8.8±0.08	8.1±0.10	-8%	5.9±0.06	6.38±0.09	8%
$H_T > 600\text{GeV}$	8.4±0.08	6.94±0.09	-17%	5.6±0.06	5.52±0.09	-1%
$E_T^{miss} > 225\text{GeV}$	6.7±0.07	5.44±0.08	-19%	4.4±0.06	4.28±0.08	-3%