$\tilde{g}\tilde{g}$ one step (1065, 785, 505): (ATLAS_CONF_2013_047)

- Process: $pp \to \tilde{g}\tilde{g} : \tilde{g} \to qq\chi_1^{\pm} \to W^{\pm}qq\tilde{\chi}_1^0$.
- Mass: $m_{\tilde{q}} = 1065$ GeV, $m_{\tilde{\chi}_1^{\pm}} = 785$ GeV, $m_{\tilde{\chi}_1^0} = 505$ GeV.
- The number of events: $2 \cdot 10^4$.
- Event Generator: `MadGraph 5 and Pythia 6`. The MLM merging is used with the shower-k_T scheme implemented in MadGraph 5 and Pythia 6, where we take xqcut = qcut = $M_{\rm SUSY}/4$ with MSUSY being the mass of the heavier SUSY particles in the production.

#	cut name	$\epsilon_{\rm Exp}$	$\epsilon_{\rm Atom}$	$\frac{\rm Atom}{\rm Exp}$	$\frac{\rm (Exp-Atom)}{\rm Error}$	#/?	$R_{\rm Exp}$	$R_{\rm Atom}$	$\frac{\rm Atom}{\rm Exp}$	$\frac{\rm (Exp-Atom)}{\rm Error}$
0	No cut	100.0	100.0							
1	base: 0 lepton	63.7 ± 1.13	65.01 ± 0.34	1.02	1.11	0	0.64 ± 0.01	0.65 ± 0.0	1.02	1.11
2	base: MET > 160	50.04 ± 1.0	50.89 ± 0.35	1.02	0.8	1	0.79 ± 0.02	0.78 ± 0.01	1.0	−0.17
3	base: $p_T(j_1) > 130$	49.28 ± 0.99	49.79 ± 0.35	1.01	0.48	2	0.98 ± 0.02	0.98 ± 0.01	0.99	−0.31
4	base: $p_T(j_2) > 60$	49.25 ± 0.99	49.73 ± 0.35	1.01	0.46	3	1.0 ± 0.02	1.0 ± 0.01	1.0	−0.01
5	$p_T(j_3) > 60$	48.6 ± 0.99	48.88 ± 0.35	1.01	0.27	4	0.99 ± 0.02	0.98 ± 0.01	1.0	−0.19
6	$p_T(j_4) > 60$	44.55 ± 0.94	44.42 ± 0.35	1.0	−0.12	5	0.92 ± 0.02	0.91 ± 0.01	0.99	−0.37
7	$p_T(j_5) > 60$	34.4 ± 0.83	33.06 ± 0.33	0.96	−1.5	6	0.77 ± 0.02	0.74 ± 0.01	0.96	−1.39
8	D base: $\Delta\phi(j_i, \text{MET}) > 0.4$	29.23 ± 0.76	28.42 ± 0.32	0.97	−0.99	7	0.85 ± 0.02	0.86 ± 0.01	1.01	0.4
9	D base: $\Delta\phi(j_i > 40, \text{MET}) > 0.2$	24.64 ± 0.7	24.4 ± 0.3	0.99	−0.31	8	0.84 ± 0.02	0.86 ± 0.01	1.02	0.61
10	DM: $\text{MET}/m_{\rm eff}(5j) > 0.2$	21.59 ± 0.66	21.81 ± 0.29	1.01	0.3	9	0.88 ± 0.03	0.89 ± 0.01	1.02	0.6
11	DM: $m_{\rm eff}(\text{inc}) > 1600$	1.97 ± 0.2	1.87 ± 0.1	0.95	−0.47	10	0.09 ± 0.01	0.09 ± 0.0	0.94	−0.55

Table 1: The cut-flow table for D signal region: $\tilde{g}\tilde{g}$ one step (1065, 785, 505).