0.1 $\tilde{g}\tilde{g}$ direct (1162, 337): (ATLAS_CONF_2013_047)

- Process: $pp \to \tilde{g}\tilde{g} \to (qq\chi_1^0)(qq\chi_1^0)$.
- Mass: $m_{\tilde{q}} = 1162$ GeV, $m_{\tilde{\chi}_1^0} = 337$ GeV.
- The number of events: $5 \cdot 10^3$.
- 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	98.45 ± 1.4	99.88 ± 0.05	1.01	1.02	0	0.98 ± 0.01	1.0 ± 0.0	1.01	1.02
2	base: MET > 160	88.81 ± 1.33	89.8 ± 0.43	1.01	0.71	1	0.9 ± 0.01	0.9 ± 0.0	1.0	-0.21
3	base: $p_T(j_1) > 130$	88.81 ± 1.33	89.78 ± 0.43	1.01	0.69	2	1.0 ± 0.02	1.0 ± 0.0	1.0	-0.01
4	base: $p_T(j_2) > 60$	88.73 ± 1.33	89.76 ± 0.43	1.01	0.74	3	1.0 ± 0.01	1.0 ± 0.0	1.0	0.04
5	$p_T(j_3) > 60$	87.09 ± 1.32	88.2 ± 0.46	1.01	0.79	4	0.98 ± 0.01	0.98 ± 0.01	1.0	0.07
6	$p_T(j_4) > 60$	74.1 ± 1.22	74.14 ± 0.62	1.0	0.03	5	0.85 ± 0.01	0.84 ± 0.01	0.99	-0.66
7	$p_T(j_5) > 60$	40.93 ± 0.9	36.54 ± 0.68	0.89	-3.88	6	0.55 ± 0.01	0.49 ± 0.01	0.89	-3.9
8	D base: $\Delta\phi(j_i, \text{MET}) > 0.4$	34.23 ± 0.83	30.24 ± 0.65	0.88	-3.79	7	0.84 ± 0.02	0.83 ± 0.02	0.99	-0.32
9	D base: $\Delta\phi(j_i > 40, \text{MET}) > 0.2$	28.51 ± 0.76	26.24 ± 0.62	0.92	-2.32	8	0.83 ± 0.02	0.87 ± 0.02	1.04	1.15
10	DM: $\text{MET}/m_{\rm eff}(5j) > 0.2$	22.06 ± 0.66	20.66 ± 0.57	0.94	-1.6	9	0.77 ± 0.02	0.79 ± 0.02	1.02	0.43
11	DM: $m_{\rm eff}(\text{inc}) > 1600$	13.4 ± 0.52	13.02 ± 0.48	0.97	-0.54	10	0.61 ± 0.02	0.63 ± 0.02	1.04	0.69

Table 1: The cut-flow table for D signal region: $\tilde{g}\tilde{g}$ direct (1162, 337).