Supplementary materials

Tables of cross-section times branching fraction upper limits

N.B.: In order to ease machine reading, the tables on CDS are given in plain ASCII format. Here the same information is given in the form of LaTeX tables.
The tables give the cross-section times branching fraction upper limits at 95% CL computed for each signal model by the CLs approach. The results for the two datasets collected at $\sqrt{s} = 7$ and 8 TeV are shown, corresponding to 1 and $2\,\mathrm{fb}^{-1}$ of integrated luminosity. The masses are given in [GeV/c^2], the lifetime in [ps], cross-sections in [pb].

Tables 5, 6, 7, and 8, present the results for processes *PA*, *PB*, *PC*, and *PD*, with parameters indicated in the caption. Table 9 corresponds to process *PC* for $m_{\mathrm{h}^0} = 125\,\mathrm{GeV}/c^2$.

In the context of SUSY/mSUGRA LV models, in addition to varying the LLP mass and lifetime, the study is extended to different squark and gluino mass values. Unless otherwise specified the common squark mass, $m_{\tilde{\mathrm{q}}}$, is set at $1300\,\mathrm{GeV}/c^2$, the gluino mass, $m_{\tilde{\mathrm{g}}}$, at $2000\,\mathrm{GeV}/c^2$, and the $\tilde{\chi}_1^0$ lifetime, $\tau_{\tilde{\chi}_1^0}$, at 10 ps.
Table 10 shows the upper limits as a function of $m_{\tilde{\chi}_1^0}$ and of $m_{\tilde{\mathrm{q}}}$.
Table 11 shows the upper limits as a function of $m_{\tilde{\chi}_1^0}$ and of the $\tilde{\chi}_1^0$ lifetime.
Table 12 shows the upper limits as a function of $m_{\tilde{\chi}_1^0}$ and of the gluino mass $m_{\tilde{\mathrm{g}}}$

Table 5: Cross-section times branching fraction upper limits [pb] at 95% CL for the process PA, 7 TeV and 8 TeV datasets

dataset	$m_{\tilde{\chi}_1^0}$	$\tau_{\tilde{\chi}_1^0}$	ϵ	expected UL	$-\sigma$	$+\sigma$	observed UL
7 TeV	20	5	0.76	5.11	1.48	2.18	5.26
	20	10	0.82	4.48	1.28	1.86	3.81
	20	50	0.54	6.73	1.90	2.76	5.73
	30	5	1.59	1.47	0.43	0.61	2.05
	30	10	1.72	1.21	0.33	0.51	1.60
	30	50	1.21	1.63	0.45	0.73	2.43
	40	5	2.37	0.84	0.24	0.34	0.59
	40	10	2.65	0.60	0.14	0.27	0.66
	40	50	1.98	0.76	0.19	0.33	0.93
	50	5	2.53	0.64	0.11	0.31	0.48
	50	10	2.90	0.54	0.22	0.14	0.53
	50	50	2.24	0.60	0.15	0.27	0.69
	80	5	2.30	0.37	0.10	0.19	0.29
	80	10	2.67	0.32	0.06	0.17	0.28
	80	50	2.13	0.45	0.14	0.20	0.34
8 TeV	20	5	0.95	2.40	0.68	0.98	1.75
	20	10	0.91	3.09	0.87	1.24	2.35
	20	50	0.47	4.30	1.21	1.75	3.24
	30	5	2.08	0.63	0.17	0.27	0.77
	30	10	2.00	0.80	0.21	0.33	0.96
	30	50	1.13	1.14	0.33	0.48	1.40
	40	5	3.21	0.31	0.06	0.14	0.30
	40	10	3.17	0.39	0.10	0.15	0.31
	40	50	1.88	0.47	0.14	0.22	0.70
	50	5	3.69	0.28	0.11	0.07	0.16
	50	10	3.68	0.30	0.06	0.13	0.16
	50	50	2.24	0.37	0.09	0.15	0.36
	80	5	3.71	0.15	0.04	0.08	0.08
	80	10	3.78	0.16	0.03	0.08	0.08
	80	50	2.33	0.22	0.07	0.10	0.14

Table 6: Cross-section times branching fraction upper limits [pb] at 95% CL for process *PB*, 7 TeV and 8 TeV datasets

				7 TeV			
$m_{\tilde{\chi}^0_1}$	$\tau_{\tilde{\chi}^0_1}$	$m_{\tilde{g}}$	ϵ	expected UL	$-\sigma$	$+\sigma$	observed UL
20	5	20	0.32	10.83	3.04	4.37	11.36
20	5	30	0.31	11.03	3.09	4.42	11.83
20	5	50	0.31	11.38	3.19	4.58	13.00
20	5	100	0.23	16.31	4.51	6.41	18.05
20	5	200	0.16	24.74	6.80	9.62	25.82
20	5	1000	0.09	45.84	12.51	17.61	45.03
20	10	20	0.37	8.53	2.40	3.45	8.21
20	10	30	0.36	8.29	2.34	3.39	7.65
20	10	50	0.35	9.72	2.71	3.88	8.52
20	10	100	0.27	12.51	3.49	5.00	11.39
20	10	200	0.19	19.85	5.49	7.79	17.65
20	10	1000	0.11	34.14	9.32	13.09	29.98
20	50	20	0.27	11.41	3.22	4.65	9.10
20	50	30	0.27	11.32	3.20	4.63	8.86
20	50	50	0.25	12.70	3.59	5.20	9.24
20	50	100	0.20	17.12	4.79	6.87	13.11
20	50	200	0.13	28.20	7.76	11.00	23.58
20	50	1000	0.07	48.20	13.37	19.03	31.58
30	5	20	0.79	3.18	0.93	1.36	3.35
30	5	30	0.75	3.42	0.98	1.45	3.37
30	5	50	0.71	3.20	0.94	1.40	4.99
30	5	100	0.55	4.60	1.34	1.96	6.46
30	5	200	0.37	7.46	2.15	3.17	10.85
30	5	1000	0.21	12.60	3.66	5.40	19.91
30	10	20	0.91	2.17	0.63	0.95	2.98
30	10	30	0.87	2.67	0.78	1.13	2.50
30	10	50	0.79	2.53	0.73	1.12	3.41
30	10	100	0.61	3.50	1.02	1.53	5.20
30	10	200	0.42	6.75	1.95	2.86	6.72
30	10	1000	0.23	12.34	3.58	5.25	11.73
30	50	20	0.71	2.62	0.77	1.17	3.71
30	50	30	0.67	2.86	0.84	1.27	4.10
30	50	50	0.61	3.15	0.93	1.39	4.68
30	50	100	0.47	4.52	1.33	1.97	6.25
30	50	200	0.31	6.90	2.04	3.03	10.28
30	50	1000	0.18	12.84	3.74	5.54	16.81
40	5	20	1.29	1.49	0.44	0.65	1.08
40	5	30	1.26	1.42	0.44	0.62	1.45
40	5	50	1.17	1.62	0.45	0.74	1.14
40	5	100	0.90	2.09	0.61	0.92	2.41
40	5	200	0.55	3.60	1.07	1.60	3.87
40	5	1000	0.34	5.81	1.73	2.60	6.06
40	10	20	1.56	0.92	0.29	0.40	1.19
40	10	30	1.53	0.96	0.27	0.48	1.16
40	10	50	1.34	1.15	0.33	0.48	1.29
40	10	100	1.00	1.57	0.45	0.71	1.99
40	10	200	0.63	2.68	0.81	1.21	3.52
40	10	1000	0.38	4.42	1.34	2.03	6.30
40	50	20	1.22	1.16	0.33	0.51	1.50
40	50	30	1.20	1.17	0.34	0.52	1.57
40	50	50	1.01	1.46	0.45	0.66	1.92
40	50	100	0.76	2.08	0.62	0.95	2.42
40	50	200	0.47	3.53	1.05	1.61	5.26
40	50	1000	0.28	5.69	1.73	2.64	7.74
50	5	20	1.61	1.02	0.29	0.48	0.62
50	5	30	1.59	1.03	0.29	0.47	0.63
50	5	50	1.40	1.21	0.34	0.54	0.75
50	5	100	1.09	1.59	0.45	0.74	0.98
50	5	200	0.69	2.76	0.84	1.24	1.87
50	5	1000	0.42	4.18	1.27	1.93	2.86
50	10	20	1.98	0.64	0.12	0.31	0.63
50	10	30	1.94	0.65	0.12	0.31	0.64
50	10	50	1.64	0.82	0.23	0.36	0.90
50	10	100	1.22	1.14	0.33	0.49	1.19
50	10	200	0.78	1.86	0.58	0.87	2.07
50	10	1000	0.49	2.99	0.91	1.40	2.76
50	50	20	1.65	0.75	0.19	0.34	0.94
50	50	30	1.53	0.82	0.24	0.36	1.06
50	50	50	1.29	0.95	0.30	0.49	1.07
50	50	100	0.93	1.37	0.43	0.65	1.66
50	50	200	0.61	2.09	0.64	1.00	3.16
50	50	1000	0.40	3.49	1.07	1.67	4.32
80	5	30	1.65	0.47	0.16	0.26	0.39
80	5	50	1.45	0.57	0.18	0.29	0.44
80	5	100	1.13	0.74	0.25	0.38	0.58
80	5	200	0.81	1.03	0.34	0.55	0.82
80	5	1000	0.55	1.52	0.50	0.82	1.18
80	10	30	2.18	0.40	0.11	0.19	0.32
80	10	50	1.83	0.47	0.16	0.26	0.40
80	10	100	1.34	0.65	0.20	0.35	0.55
80	10	200	0.94	0.98	0.32	0.51	0.77
80	10	1000	0.66	1.35	0.44	0.71	1.23

				8 TeV			
$m_{\tilde{\chi}^0_1}$	$\tau_{\tilde{\chi}^0_1}$	$m_{\tilde{g}}$	ϵ	expected UL	$-\sigma$	$+\sigma$	observed UL
20	5	20	0.33	4.94	1.39	2.00	5.33
20	5	30	0.32	5.04	1.42	2.04	4.98
20	5	50	0.32	5.09	1.43	2.05	6.15
20	5	100	0.26	7.17	1.99	2.82	8.42
20	5	200	0.18	9.75	2.72	3.87	8.55
20	5	1000	0.09	20.32	5.61	7.92	17.38
20	10	20	0.40	5.04	1.41	2.01	5.03
20	10	30	0.39	5.21	1.46	2.09	5.18
20	10	50	0.38	5.40	1.51	2.14	5.91
20	10	100	0.30	7.43	2.06	2.93	6.84
20	10	200	0.23	9.89	2.74	3.88	9.80
20	10	1000	0.12	19.50	5.38	7.61	19.95
20	50	20	0.24	6.35	1.79	2.56	6.12
20	50	30	0.23	6.75	1.90	2.74	5.44
20	50	50	0.23	6.99	1.96	2.79	6.65
20	50	100	0.20	8.37	2.35	3.36	6.44
20	50	200	0.13	13.24	3.67	5.19	10.63
20	50	1000	0.07	28.60	7.79	10.85	20.08
30	5	20	0.88	1.40	0.41	0.59	2.24
30	5	30	0.87	1.41	0.41	0.60	2.30
30	5	50	0.76	1.64	0.47	0.70	2.56
30	5	100	0.60	2.23	0.64	0.95	3.73
30	5	200	0.41	3.52	1.02	1.50	6.52
30	5	1000	0.21	7.41	2.13	3.10	12.49
30	10	20	1.06	1.38	0.40	0.57	2.04
30	10	30	1.03	1.43	0.40	0.60	2.27
30	10	50	0.95	1.58	0.46	0.66	2.52
30	10	100	0.74	2.26	0.65	0.94	3.39
30	10	200	0.49	3.84	1.09	1.58	6.03
30	10	1000	0.26	7.00	2.00	2.90	10.71
30	50	20	0.64	1.80	0.52	0.77	2.28
30	50	30	0.61	1.98	0.57	0.84	2.68
30	50	50	0.59	2.10	0.60	0.89	2.87
30	50	100	0.46	2.87	0.82	1.20	3.74
30	50	200	0.31	4.35	1.26	1.85	5.06
30	50	1000	0.16	9.66	2.77	4.02	11.38
40	5	20	1.48	0.62	0.17	0.28	0.82
40	5	30	1.44	0.65	0.19	0.29	0.83
40	5	50	1.35	0.69	0.21	0.30	0.88
40	5	100	1.05	0.94	0.28	0.42	1.32
40	5	200	0.65	1.62	0.48	0.72	2.22
40	5	1000	0.36	2.97	0.88	1.31	3.86
40	10	20	1.86	0.61	0.17	0.26	0.67
40	10	30	1.80	0.63	0.17	0.28	0.72
40	10	50	1.65	0.68	0.20	0.28	0.68
40	10	100	1.21	1.01	0.29	0.43	1.21
40	10	200	0.77	1.64	0.48	0.71	1.81
40	10	1000	0.47	2.88	0.84	1.24	3.69
40	50	20	1.21	0.71	0.22	0.31	1.01
40	50	30	1.15	0.77	0.22	0.34	1.21
40	50	50	1.00	0.91	0.28	0.40	1.31
40	50	100	0.80	1.15	0.35	0.51	1.78
40	50	200	0.49	2.03	0.61	0.90	3.14
40	50	1000	0.30	3.33	0.99	1.47	5.21
50	5	20	1.88	0.45	0.14	0.18	0.32
50	5	30	1.85	0.45	0.14	0.18	0.34
50	5	50	1.64	0.53	0.15	0.23	0.43
50	5	100	1.31	0.70	0.22	0.31	0.52
50	5	200	0.85	1.09	0.32	0.49	0.96
50	5	1000	0.52	1.75	0.52	0.80	1.51
50	10	20	2.52	0.41	0.11	0.16	0.30
50	10	30	2.33	0.45	0.14	0.18	0.30
50	10	50	2.08	0.48	0.13	0.23	0.34
50	10	100	1.57	0.68	0.21	0.29	0.50
50	10	200	1.04	1.05	0.31	0.46	0.93
50	10	1000	0.66	1.70	0.50	0.75	1.19
50	50	20	1.68	0.46	0.14	0.19	0.51
50	50	30	1.58	0.47	0.14	0.23	0.57
50	50	50	1.31	0.60	0.17	0.27	0.69
50	50	100	1.02	0.79	0.22	0.37	0.94
50	50	200	0.66	1.27	0.37	0.58	1.60
50	50	1000	0.41	2.10	0.63	0.96	2.30
80	5	30	2.15	0.24	0.08	0.13	0.14
80	5	50	1.95	0.29	0.09	0.14	0.15
80	5	100	1.56	0.38	0.12	0.19	0.19
80	5	200	1.12	0.56	0.18	0.29	0.28
80	5	1000	0.69	0.87	0.28	0.45	0.45
80	10	30	2.92	0.21	0.06	0.09	0.12
80	10	50	2.52	0.24	0.08	0.12	0.14
80	10	100	1.96	0.31	0.09	0.15	0.16
80	10	200	1.33	0.48	0.15	0.24	0.28
80	10	1000	0.90	0.73	0.22	0.36	0.39
80	50	30	2.09	0.23	0.08	0.12	0.14
80	50	50	1.75	0.29	0.09	0.15	0.17
80	50	100	1.27	0.43	0.14	0.22	0.23
80	50	200	0.87	0.61	0.20	0.32	0.38
80	50	1000	0.62	0.85	0.28	0.45	0.54

Table 7: Cross-section times branching fraction upper limits [pb] at 95%CL for process PC, 7 TeV and 8 TeV datasets

7 TeV								8 TeV							
$m_{\tilde{\chi}_1^0}$	$\tau_{\tilde{\chi}_1^0}$	m_{h^0}	ϵ	expected UL	$-\sigma$	$+\sigma$	observed UL	$m_{\tilde{\chi}_1^0}$	$\tau_{\tilde{\chi}_1^0}$	m_{h^0}	ϵ	expected UL	$-\sigma$	$+\sigma$	observed UL
20	5	50	0.22	15.62	4.39	6.31	17.33	20	5	50	0.21	8.19	2.32	3.35	10.41
20	5	70	0.36	11.36	3.21	4.64	11.54	20	5	70	0.39	5.00	1.42	2.06	4.69
20	5	90	0.38	10.42	2.99	4.33	11.37	20	5	90	0.42	5.25	1.49	2.16	4.57
20	5	110	0.38	10.73	3.07	4.44	9.44	20	5	110	0.41	5.43	1.58	2.31	3.49
20	5	130	0.34	12.95	3.81	5.58	12.43	20	5	130	0.36	5.82	1.69	2.45	4.67
20	10	50	0.26	12.11	3.41	4.91	12.76	20	10	50	0.29	7.63	2.12	3.02	8.14
20	10	70	0.41	8.12	2.33	3.37	8.33	20	10	70	0.46	5.48	1.54	2.21	5.00
20	10	90	0.43	8.38	2.56	3.77	5.55	20	10	90	0.48	5.28	1.50	2.18	3.99
20	10	110	0.40	9.57	3.00	4.40	6.73	20	10	110	0.46	5.58	1.58	2.29	3.95
20	10	130	0.38	10.37	3.09	4.58	9.51	20	10	130	0.44	5.86	1.68	2.43	4.34
20	50	50	0.19	15.81	4.50	6.54	12.11	20	50	50	0.18	9.97	2.79	3.97	9.04
20	50	70	0.29	11.45	3.27	4.77	9.61	20	50	70	0.27	6.51	1.84	2.63	5.41
20	50	90	0.31	11.47	3.24	4.69	10.46	20	50	90	0.27	7.05	1.99	2.86	5.55
20	50	110	0.28	12.76	3.60	5.20	9.97	20	50	110	0.28	6.76	1.93	2.78	6.96
20	50	130	0.28	12.98	3.68	5.33	11.04	20	50	130	0.26	7.24	2.04	2.91	5.93
30	5	70	0.62	4.14	1.19	1.76	4.03	30	5	70	0.68	1.77	0.51	0.76	2.99
30	5	90	0.82	3.12	0.92	1.34	2.79	30	5	90	0.90	1.41	0.41	0.60	2.05
30	5	110	0.80	3.43	1.00	1.47	3.55	30	5	110	0.88	1.53	0.44	0.64	2.11
30	5	130	0.75	3.49	1.04	1.55	3.54	30	5	130	0.82	1.64	0.47	0.70	2.46
30	10	70	0.84	2.33	0.69	1.02	3.65	30	10	70	0.96	1.59	0.46	0.66	2.00
30	10	90	0.94	2.18	0.64	0.95	2.90	30	10	90	1.09	1.49	0.42	0.61	1.68
30	10	110	0.87	2.44	0.71	1.05	3.95	30	10	110	1.02	1.63	0.46	0.68	1.86
30	10	130	0.83	2.63	0.76	1.14	3.31	30	10	130	0.98	1.70	0.49	0.71	2.08
30	50	70	0.67	2.78	0.84	1.23	4.64	30	50	70	0.68	1.75	0.50	0.75	2.23
30	50	90	0.68	2.97	0.87	1.31	4.23	30	50	90	0.66	1.93	0.55	0.82	2.35
30	50	110	0.65	3.21	0.95	1.43	4.14	30	50	110	0.63	2.16	0.62	0.91	2.67
30	50	130	0.59	3.52	1.03	1.55	5.09	30	50	130	0.60	2.19	0.63	0.93	3.04
40	5	90	0.95	1.85	0.57	0.82	1.97	40	5	90	1.12	0.86	0.25	0.38	0.90
40	5	110	1.16	1.57	0.44	0.69	1.35	40	5	110	1.29	0.77	0.22	0.33	0.78
40	5	130	1.14	1.63	0.46	0.75	1.48	40	5	130	1.34	0.73	0.22	0.32	0.85
40	10	90	1.37	1.18	0.33	0.51	1.26	40	10	90	1.69	0.69	0.21	0.29	0.64
40	10	110	1.43	1.14	0.32	0.47	1.17	40	10	110	1.67	0.73	0.22	0.31	0.75
40	10	130	1.28	1.26	0.36	0.59	1.52	40	10	130	1.63	0.76	0.21	0.32	0.73
40	50	90	1.27	1.15	0.33	0.49	1.77	40	50	90	1.29	0.73	0.22	0.32	0.96
40	50	110	1.07	1.46	0.45	0.66	1.88	40	50	110	1.11	0.87	0.26	0.38	1.15
40	50	130	1.03	1.48	0.45	0.67	1.88	40	50	130	1.05	0.93	0.28	0.41	1.17
50	5	110	1.08	1.48	0.45	0.66	1.15	50	5	110	1.26	0.70	0.22	0.31	0.49
50	5	130	1.23	1.38	0.43	0.61	0.86	50	5	130	1.49	0.63	0.18	0.29	0.42
50	10	110	1.57	0.88	0.27	0.37	0.94	50	10	110	2.07	0.53	0.14	0.23	0.37
50	10	130	1.59	0.89	0.27	0.37	0.86	50	10	130	2.08	0.54	0.15	0.22	0.41
50	50	110	1.62	0.83	0.24	0.36	1.15	50	50	110	1.70	0.48	0.14	0.24	0.55
50	50	130	1.29	1.04	0.30	0.49	1.32	50	50	130	1.44	0.60	0.17	0.27	0.64
60	5	130	1.03	1.35	0.42	0.64	1.22	60	5	130	1.31	0.65	0.19	0.30	0.35
60	10	130	1.61	0.85	0.25	0.36	0.72	60	10	130	2.12	0.48	0.13	0.23	0.29
60	50	130	1.67	0.72	0.17	0.34	1.03	60	50	130	1.83	0.46	0.14	0.19	0.34

Table 8: Cross-section times branching fraction upper limits [pb] at 95% CL for process *PD*, 7 TeV and 8 TeV datasets

7 TeV								8 TeV							
$m_{\tilde{\chi}_1^0}$	$\tau_{\tilde{\chi}_1^0}$	$m_{\tilde{q}}$	ϵ	expected UL	$-\sigma$	$+\sigma$	observed UL	$m_{\tilde{\chi}_1^0}$	$\tau_{\tilde{\chi}_1^0}$	$m_{\tilde{q}}$	ϵ	expected UL	$-\sigma$	$+\sigma$	observed UL
20	5	30	0.20	17.85	5.16	7.51	16.01	20	5	30	0.20	10.38	2.90	4.16	11.25
20	5	40	0.20	17.61	4.98	7.20	20.62	20	5	40	0.22	9.11	2.58	3.72	9.66
20	5	50	0.19	20.39	5.76	8.30	18.52	20	5	50	0.24	9.05	2.54	3.64	9.35
20	5	60	0.21	18.34	5.14	7.38	25.58	20	5	60	0.23	9.47	2.67	3.85	8.44
20	10	30	0.22	13.75	4.03	5.90	7.47	20	10	30	0.25	10.61	2.95	4.22	10.50
20	10	40	0.22	13.57	3.94	5.74	11.31	20	10	40	0.26	9.57	2.69	3.88	8.99
20	10	50	0.24	13.89	3.95	5.71	13.50	20	10	50	0.28	9.34	2.62	3.76	9.25
20	10	60	0.24	14.24	4.02	5.80	13.36	20	10	60	0.27	9.27	2.59	3.71	8.04
20	50	30	0.17	17.15	4.92	7.20	12.66	20	50	30	0.15	12.37	3.49	5.01	8.70
20	50	40	0.17	17.83	5.21	7.62	14.07	20	50	40	0.16	10.94	3.10	4.46	8.23
20	50	50	0.18	20.00	5.60	8.03	15.81	20	50	50	0.17	11.30	3.15	4.49	9.17
20	50	60	0.18	18.02	5.14	7.48	20.72	20	50	60	0.17	11.36	3.19	4.56	8.91
30	5	40	0.54	4.30	1.25	1.85	7.01	30	5	40	0.60	2.11	0.61	0.90	3.08
30	5	50	0.51	4.96	1.45	2.11	5.58	30	5	50	0.56	2.35	0.68	0.99	3.64
30	5	60	0.54	4.81	1.41	2.09	4.65	30	5	60	0.54	2.52	0.73	1.07	3.73
30	10	40	0.72	2.76	0.83	1.21	3.74	30	10	40	0.81	2.03	0.59	0.84	2.63
30	10	50	0.66	3.05	0.89	1.33	4.02	30	10	50	0.75	2.14	0.61	0.89	3.09
30	10	60	0.62	3.19	0.95	1.42	4.63	30	10	60	0.69	2.38	0.68	0.99	3.15
30	50	40	0.54	3.96	1.16	1.72	5.16	30	50	40	0.57	2.28	0.66	0.96	2.68
30	50	50	0.52	3.86	1.13	1.72	6.97	30	50	50	0.51	2.55	0.74	1.08	3.28
30	50	60	0.46	4.48	1.31	1.96	6.44	30	50	60	0.47	2.85	0.82	1.20	3.66
40	5	50	0.88	2.39	0.71	1.05	1.47	40	5	50	1.01	1.01	0.29	0.44	1.10
40	5	60	0.87	2.17	0.64	0.96	2.15	40	5	60	0.91	1.12	0.33	0.50	1.32
40	10	50	1.19	1.37	0.42	0.60	1.26	40	10	50	1.45	0.86	0.25	0.37	0.78
40	10	60	1.11	1.47	0.45	0.66	1.55	40	10	60	1.27	0.99	0.28	0.43	1.06
40	50	50	1.12	1.33	0.40	0.61	1.36	40	50	50	1.08	0.87	0.26	0.38	1.30
40	50	60	0.90	1.72	0.51	0.78	2.48	40	50	60	0.93	1.05	0.31	0.46	1.60
50	5	60	0.95	1.68	0.49	0.78	1.48	50	5	60	1.23	0.76	0.22	0.33	0.55
50	10	60	1.36	1.02	0.29	0.49	1.20	50	10	60	1.80	0.62	0.17	0.28	0.43
50	50	60	1.28	1.06	0.31	0.49	1.28	50	50	60	1.39	0.63	0.18	0.29	0.70

Table 9: Cross-section upper limits for process PC, m_{h^0} =125 GeV/c^2

7 TeV								8 TeV							
$\mathrm{m}_{\tilde{\chi}^0_1}$	$\tau_{\tilde{\chi}^0_1}$	m_{h^0}	ϵ	expected UL	$-\sigma$	$+\sigma$	observed UL	$\mathrm{m}_{\tilde{\chi}^0_1}$	$\tau_{\tilde{\chi}^0_1}$	m_{h^0}	ϵ	expected UL	$-\sigma$	$+\sigma$	observed UL
20	5	125	0.36	12.55	3.59	5.22	11.85	20	5	125	0.38	6.79	1.94	2.82	5.59
20	10	125	0.38	9.87	3.05	4.49	6.95	20	10	125	0.44	6.35	1.80	2.59	5.39
20	20	125	0.36	11.29	3.21	4.65	9.68	20	20	125	0.38	7.29	2.05	2.95	5.34
20	30	125	0.32	12.11	3.43	4.94	8.47	20	30	125	0.32	8.47	2.36	3.37	6.72
20	50	125	0.27	14.21	3.98	5.71	12.14	20	50	125	0.26	7.68	2.17	3.11	5.40
20	100	125	0.24	14.57	4.13	5.99	11.49	20	100	125	0.17	11.66	3.27	4.68	9.30
30	5	125	0.77	3.41	1.01	1.49	3.03	30	5	125	0.83	1.66	0.48	0.70	2.40
30	10	125	0.83	2.67	0.78	1.15	3.19	30	10	125	0.98	1.75	0.50	0.73	2.28
30	20	125	0.74	2.87	0.83	1.26	4.54	30	20	125	0.83	2.06	0.59	0.86	2.87
30	30	125	0.69	3.51	1.04	1.56	3.33	30	30	125	0.72	2.31	0.66	0.96	2.97
30	50	125	0.61	3.36	0.99	1.47	5.14	30	50	125	0.60	2.33	0.67	0.98	2.53
30	100	125	0.56	3.72	1.10	1.63	5.16	30	100	125	0.43	3.17	0.92	1.34	3.78
40	5	125	1.14	1.65	0.47	0.75	1.57	40	5	125	1.33	0.76	0.22	0.33	0.79
40	10	125	1.34	1.24	0.35	0.57	1.28	40	10	125	1.63	0.75	0.21	0.32	0.77
40	20	125	1.23	1.28	0.36	0.60	1.50	40	20	125	1.45	0.86	0.25	0.37	0.79
40	30	125	1.14	1.62	0.45	0.74	1.13	40	30	125	1.29	0.94	0.27	0.41	1.00
40	50	125	1.03	1.48	0.45	0.67	2.05	40	50	125	1.07	0.89	0.27	0.38	1.35
40	100	125	1.00	1.52	0.45	0.68	2.10	40	100	125	0.80	1.20	0.36	0.53	1.78
50	5	125	1.20	1.45	0.45	0.65	0.94	50	5	125	1.46	0.62	0.17	0.28	0.43
50	10	125	1.59	0.91	0.29	0.39	0.91	50	10	125	2.07	0.53	0.14	0.23	0.34
50	20	125	1.59	0.89	0.28	0.37	0.94	50	20	125	1.90	0.60	0.16	0.25	0.38
50	30	125	1.45	0.95	0.29	0.47	1.02	50	30	125	1.68	0.64	0.18	0.29	0.44
50	50	125	1.34	0.97	0.28	0.50	1.27	50	50	125	1.43	0.60	0.17	0.27	0.61
50	100	125	1.36	0.96	0.29	0.49	1.42	50	100	125	1.10	0.77	0.22	0.34	0.92
60	5	125	0.89	1.64	0.48	0.78	1.42	60	5	125	1.07	0.88	0.26	0.38	0.41
60	10	125	1.53	0.89	0.28	0.38	0.83	60	10	125	1.99	0.56	0.15	0.23	0.28
60	20	125	1.83	0.73	0.18	0.33	0.77	60	20	125	2.29	0.46	0.15	0.20	0.28
60	30	125	1.85	0.74	0.18	0.33	0.71	60	30	125	2.20	0.47	0.14	0.22	0.29
60	50	125	1.80	0.65	0.12	0.32	0.99	60	50	125	1.98	0.44	0.13	0.18	0.31
60	100	125	1.91	0.63	0.12	0.31	0.96	60	100	125	1.61	0.52	0.15	0.24	0.43

Table 10: Efficiency, and 95% CL cross-section times branching fraction upper limits for LV models generated with different squark masses, all with a lifetime of 10 ps, a gluino mass=2000 GeV/c^2. Left: year 7 TeV dataset, right: 8 TeV dataset

Model (7 TeV)	$m_{\tilde{q}}$	$m_{\tilde{g}}$	ϵ	expected UL	$-\sigma$	$+\sigma$	observed UL
LV 23 10ps	200	2000	0.316	11.60	8.31	16.35	12.47
LV 23 10ps	280	2000	0.273	13.22	9.46	18.67	14.23
LV 23 10ps	350	2000	0.244	14.80	10.60	20.91	17.19
LV 23 10ps	475	2000	0.196	18.03	12.90	25.50	19.34
LV 23 10ps	750	2000	0.175	20.85	14.92	29.49	22.48
LV 23 10ps	1025	2000	0.232	15.46	11.06	21.86	19.30
LV 23 10ps	1300	2000	0.298	11.78	8.43	16.65	12.46
LV 23 10ps	1575	2000	0.336	10.45	7.46	14.78	11.24
LV 38 10ps	200	2000	0.695	2.48	1.74	3.60	3.03
LV 38 10ps	280	2000	0.612	2.81	1.96	4.09	3.29
LV 38 10ps	350	2000	0.528	3.33	2.32	4.83	4.02
LV 38 10ps	475	2000	0.430	4.15	2.89	6.05	5.21
LV 38 10ps	750	2000	0.362	4.90	3.43	7.14	6.00
LV 38 10ps	1025	2000	0.439	3.95	2.76	5.74	5.06
LV 38 10ps	1300	2000	0.576	3.02	2.12	4.39	3.53
LV 38 10ps	1575	2000	0.635	2.75	1.91	3.99	3.36
LV 58 10ps	200	2000	0.913	1.44	0.97	2.11	1.47
LV 58 10ps	280	2000	0.777	1.71	1.20	2.52	1.53
LV 58 10ps	350	2000	0.689	1.89	1.30	2.81	1.78
LV 58 10ps	475	2000	0.582	2.22	1.54	3.31	2.13
LV 58 10ps	750	2000	0.481	2.79	1.91	4.12	2.48
LV 58 10ps	1025	2000	0.561	2.31	1.59	3.44	2.27
LV 58 10ps	1300	2000	0.703	1.89	1.29	2.80	1.91
LV 58 10ps	1575	2000	0.768	1.77	1.22	2.58	1.80
LV 78 10ps	200	2000	0.890	1.19	0.80	1.78	0.81
LV 78 10ps	280	2000	0.777	1.28	0.88	1.94	0.94
LV 78 10ps	350	2000	0.694	1.37	0.93	2.07	1.05
LV 78 10ps	475	2000	0.567	1.76	1.20	2.65	1.27
LV 78 10ps	750	2000	0.481	2.07	1.40	3.13	1.57
LV 78 10ps	1025	2000	0.583	1.81	1.24	2.71	1.24
LV 78 10ps	1300	2000	0.722	1.43	0.97	2.16	1.06
LV 78 10ps	1575	2000	0.804	1.30	0.89	1.95	0.95
LV 98 10ps	200	2000	0.795	1.24	0.84	1.89	0.87
LV 98 10ps	280	2000	0.680	1.42	0.95	2.16	0.95
LV 98 10ps	350	2000	0.611	1.56	1.05	2.37	1.04
LV 98 10ps	475	2000	0.507	1.92	1.30	2.92	1.22
LV 98 10ps	750	2000	0.433	2.09	1.40	3.21	1.53
LV 98 10ps	1025	2000	0.532	1.69	1.12	2.58	1.28
LV 98 10ps	1300	2000	0.696	1.41	0.95	2.14	0.97
LV 98 10ps	1575	2000	0.754	1.32	0.89	2.00	0.90
LV 118 10ps	200	2000	0.808	1.20	0.80	1.83	0.72
LV 118 10ps	280	2000	0.667	1.39	0.93	2.12	0.81
LV 118 10ps	350	2000	0.590	1.63	1.09	2.48	0.91
LV 118 10ps	475	2000	0.491	1.89	1.26	2.89	1.09
LV 118 10ps	750	2000	0.434	2.13	1.43	3.27	1.22
LV 118 10ps	1025	2000	0.554	1.57	1.05	2.43	1.00
LV 118 10ps	1300	2000	0.741	1.37	0.92	2.08	0.74
LV 118 10ps	1575	2000	0.808	1.13	0.76	1.74	0.73
LV 138 10ps	200	2000	0.797	1.27	0.85	1.93	0.63
LV 138 10ps	280	2000	0.646	1.62	1.09	2.46	0.76
LV 138 10ps	350	2000	0.564	1.59	1.06	2.45	0.89
LV 138 10ps	475	2000	0.458	1.80	1.19	2.80	1.10
LV 138 10ps	750	2000	0.418	2.02	1.33	3.13	1.19
LV 138 10ps	1025	2000	0.568	2.18	1.49	3.26	0.82
LV 138 10ps	1300	2000	0.771	1.13	0.75	1.75	0.66
LV 138 10ps	1575	2000	0.854	1.17	0.79	1.78	0.58
LV 158 10ps	200	2000	0.775	1.04	0.67	1.64	0.67
LV 158 10ps	280	2000	0.598	1.34	0.87	2.13	0.89
LV 158 10ps	350	2000	0.514	1.65	1.07	2.60	0.95
LV 158 10ps	475	2000	0.423	1.76	1.13	2.82	1.19
LV 158 10ps	750	2000	0.396	1.95	1.26	3.10	1.28
LV 158 10ps	1025	2000	0.554	1.44	0.93	2.27	0.86
LV 158 10ps	1300	2000	0.807	0.97	0.63	1.54	0.61
LV 158 10ps	1575	2000	0.896	0.86	0.55	1.37	0.56
LV 178 10ps	200	2000	0.743	1.15	0.75	1.81	0.66
LV 178 10ps	280	2000	0.545	1.51	0.98	2.39	0.95
LV 178 10ps	350	2000	0.461	1.87	1.22	2.93	1.10
LV 178 10ps	475	2000	0.385	2.16	1.40	3.41	1.26
LV 178 10ps	750	2000	0.360	2.17	1.40	3.45	1.33
LV 178 10ps	1025	2000	0.539	1.32	0.85	2.12	0.91
LV 178 10ps	1300	2000	0.802	0.93	0.60	1.48	0.61
LV 178 10ps	1575	2000	0.896	0.86	0.56	1.37	0.52
LV 198 10ps	280	2000	0.498	1.59	1.03	2.52	1.06
LV 198 10ps	350	2000	0.417	1.90	1.23	3.02	1.29
LV 198 10ps	475	2000	0.332	2.29	1.47	3.64	1.55
LV 198 10ps	750	2000	0.328	2.27	1.46	3.62	1.51
LV 198 10ps	1025	2000	0.513	1.67	1.09	2.61	0.89
LV 198 10ps	1300	2000	0.780	0.96	0.62	1.52	0.59
LV 198 10ps	1575	2000	0.865	0.94	0.62	1.48	0.52

Model (8 TeV)	$m_{\tilde{q}}$	$m_{\tilde{g}}$	ϵ	expected UL	$-\sigma$	$+\sigma$	observed UL
LV 23 10ps	200	2000	0.357	7.37	5.30	10.34	8.94
LV 23 10ps	280	2000	0.320	8.31	5.98	11.65	9.89
LV 23 10ps	350	2000	0.279	9.43	6.79	13.22	11.53
LV 23 10ps	475	2000	0.217	11.96	8.62	16.76	14.80
LV 23 10ps	750	2000	0.182	14.40	10.36	20.20	20.01
LV 23 10ps	1025	2000	0.234	11.37	8.18	15.95	14.73
LV 23 10ps	1300	2000	0.319	8.37	6.03	11.72	10.20
LV 23 10ps	1575	2000	0.369	6.91	4.96	9.72	8.73
LV 38 10ps	200	2000	0.841	1.58	1.12	2.25	1.92
LV 38 10ps	280	2000	0.741	1.80	1.27	2.56	2.02
LV 38 10ps	350	2000	0.638	2.16	1.53	3.08	2.49
LV 38 10ps	475	2000	0.521	2.58	1.83	3.69	2.94
LV 38 10ps	750	2000	0.416	3.23	2.29	4.63	4.27
LV 38 10ps	1025	2000	0.493	2.80	1.99	4.00	3.35
LV 38 10ps	1300	2000	0.663	2.12	1.51	3.03	2.29
LV 38 10ps	1575	2000	0.749	1.80	1.27	2.57	2.21
LV 58 10ps	200	2000	1.186	0.91	0.63	1.30	0.47
LV 58 10ps	280	2000	1.029	1.06	0.75	1.53	0.50
LV 58 10ps	350	2000	0.912	1.17	0.82	1.68	0.62
LV 58 10ps	475	2000	0.753	1.42	1.01	2.05	0.75
LV 58 10ps	750	2000	0.592	1.78	1.25	2.57	1.02
LV 58 10ps	1025	2000	0.682	1.60	1.13	2.32	0.84
LV 58 10ps	1300	2000	0.899	1.24	0.88	1.78	0.64
LV 58 10ps	1575	2000	1.022	1.10	0.78	1.58	0.57
LV 78 10ps	200	2000	1.286	0.53	0.37	0.79	0.30
LV 78 10ps	280	2000	1.085	0.64	0.44	0.94	0.34
LV 78 10ps	350	2000	0.968	0.71	0.50	1.05	0.37
LV 78 10ps	475	2000	0.787	0.87	0.61	1.29	0.46
LV 78 10ps	750	2000	0.635	1.06	0.73	1.57	0.56
LV 78 10ps	1025	2000	0.740	0.97	0.68	1.43	0.50
LV 78 10ps	1300	2000	0.986	0.72	0.50	1.06	0.38
LV 78 10ps	1575	2000	1.144	0.62	0.43	0.91	0.34
LV 98 10ps	200	2000	1.185	0.46	0.31	0.69	0.37
LV 98 10ps	280	2000	1.002	0.50	0.34	0.76	0.42
LV 98 10ps	350	2000	0.876	0.56	0.38	0.85	0.49
LV 98 10ps	475	2000	0.721	0.76	0.52	1.15	0.51
LV 98 10ps	750	2000	0.602	0.78	0.52	1.20	0.75
LV 98 10ps	1025	2000	0.721	0.75	0.51	1.13	0.55
LV 98 10ps	1300	2000	0.971	0.53	0.36	0.80	0.44
LV 98 10ps	1575	2000	1.138	0.45	0.30	0.68	0.39
LV 118 10ps	200	2000	1.212	0.33	0.21	0.52	0.37
LV 118 10ps	280	2000	1.021	0.39	0.26	0.61	0.41
LV 118 10ps	350	2000	0.908	0.42	0.27	0.67	0.50
LV 118 10ps	475	2000	0.753	0.55	0.36	0.85	0.51
LV 118 10ps	750	2000	0.638	0.58	0.37	0.93	0.68
LV 118 10ps	1025	2000	0.779	0.55	0.37	0.85	0.47
LV 118 10ps	1300	2000	1.073	0.39	0.26	0.61	0.39
LV 118 10ps	1575	2000	1.274	0.32	0.21	0.49	0.34
LV 138 10ps	200	2000	1.240	0.27	0.17	0.45	0.33
LV 138 10ps	280	2000	0.993	0.34	0.21	0.56	0.40
LV 138 10ps	350	2000	0.881	0.43	0.28	0.68	0.41
LV 138 10ps	475	2000	0.711	0.46	0.29	0.76	0.55
LV 138 10ps	750	2000	0.598	0.54	0.34	0.89	0.65
LV 138 10ps	1025	2000	0.801	0.44	0.28	0.70	0.47
LV 138 10ps	1300	2000	1.141	0.29	0.18	0.47	0.34
LV 138 10ps	1575	2000	1.366	0.28	0.18	0.44	0.27
LV 158 10ps	200	2000	1.186	0.23	0.13	0.39	0.38
LV 158 10ps	280	2000	0.913	0.29	0.17	0.51	0.48
LV 158 10ps	350	2000	0.795	0.33	0.19	0.57	0.55
LV 158 10ps	475	2000	0.653	0.38	0.22	0.67	0.64
LV 158 10ps	750	2000	0.577	0.43	0.25	0.76	0.73
LV 158 10ps	1025	2000	0.780	0.31	0.18	0.55	0.53
LV 158 10ps	1300	2000	1.156	0.22	0.13	0.38	0.36
LV 158 10ps	1575	2000	1.399	0.18	0.10	0.31	0.30
LV 178 10ps	200	2000	1.114	0.23	0.13	0.40	0.38
LV 178 10ps	280	2000	0.836	0.31	0.18	0.54	0.50
LV 178 10ps	350	2000	0.704	0.37	0.21	0.65	0.62
LV 178 10ps	475	2000	0.578	0.43	0.25	0.76	0.72
LV 178 10ps	750	2000	0.529	0.47	0.27	0.82	0.78
LV 178 10ps	1025	2000	0.722	0.34	0.19	0.59	0.56
LV 178 10ps	1300	2000	1.105	0.21	0.12	0.38	0.36
LV 178 10ps	1575	2000	1.384	0.17	0.10	0.30	0.29
LV 198 10ps	280	2000	0.740	0.36	0.21	0.63	0.60
LV 198 10ps	350	2000	0.627	0.41	0.24	0.72	0.69
LV 198 10ps	475	2000	0.503	0.51	0.29	0.88	0.84
LV 198 10ps	750	2000	0.464	0.53	0.31	0.92	0.88
LV 198 10ps	1025	2000	0.651	0.36	0.21	0.63	0.61
LV 198 10ps	1300	2000	1.044	0.22	0.13	0.39	0.37
LV 198 10ps	1575	2000	1.263	0.18	0.11	0.32	0.31

Table 11: Efficiency, and 95% CL cross-section times branching fraction upper limits for LV models generated with a squark mass=1300 GeV/c^2, and a gluino mass=2000 GeV/c^2. Left: 7 TeV dataset, right: 8 TeV dataset.

Model (7 TeV)	$m_{\tilde{q}}$	$m_{\tilde{g}}$	ϵ	expected UL	$-\sigma$	$+\sigma$	observed UL
LV 23 5ps	1300	2000	0.270	14.64	10.47	20.67	16.11
LV 23 10ps	1300	2000	0.298	11.78	8.43	16.65	12.46
LV 23 20ps	1300	2000	0.270	12.67	9.06	17.91	12.04
LV 23 30ps	1300	2000	0.239	14.28	10.21	20.18	15.30
LV 23 50ps	1300	2000	0.206	15.23	10.89	21.56	15.79
LV 23 75ps	1300	2000	0.182	17.15	12.26	24.31	21.63
LV 23 100ps	1300	2000	0.177	16.82	11.99	23.89	16.72
LV 38 5ps	1300	2000	0.502	4.53	3.19	6.52	3.28
LV 38 10ps	1300	2000	0.576	3.02	2.12	4.39	3.53
LV 38 20ps	1300	2000	0.540	3.27	2.28	4.76	3.79
LV 38 30ps	1300	2000	0.495	3.44	2.41	5.01	4.33
LV 38 50ps	1300	2000	0.439	3.78	2.64	5.51	4.91
LV 38 75ps	1300	2000	0.402	4.07	2.84	5.95	5.60
LV 38 100ps	1300	2000	0.394	4.08	2.85	5.96	5.84
LV 58 5ps	1300	2000	0.612	2.50	1.74	3.68	2.41
LV 58 10ps	1300	2000	0.703	1.89	1.29	2.80	1.91
LV 58 20ps	1300	2000	0.666	1.96	1.36	2.90	2.08
LV 58 30ps	1300	2000	0.618	2.17	1.51	3.19	2.14
LV 58 50ps	1300	2000	0.559	2.17	1.50	3.22	3.21
LV 58 75ps	1300	2000	0.529	2.24	1.55	3.37	3.43
LV 58 100ps	1300	2000	0.530	2.27	1.56	3.40	3.16
LV 78 5ps	1300	2000	0.614	1.52	1.03	2.30	1.22
LV 78 10ps	1300	2000	0.722	1.43	0.97	2.16	1.06
LV 78 20ps	1300	2000	0.707	1.48	1.01	2.22	1.09
LV 78 30ps	1300	2000	0.657	1.59	1.09	2.39	1.21
LV 78 50ps	1300	2000	0.598	1.89	1.28	2.83	1.42
LV 78 75ps	1300	2000	0.571	2.01	1.37	3.01	1.44
LV 78 100ps	1300	2000	0.580	1.98	1.36	2.97	1.47
LV 98 10ps	1300	2000	0.696	1.41	0.95	2.14	0.97
LV 98 20ps	1300	2000	0.673	1.43	0.96	2.19	1.06
LV 98 30ps	1300	2000	0.631	1.60	1.09	2.43	1.07
LV 98 50ps	1300	2000	0.580	1.75	1.19	2.67	1.27
LV 98 75ps	1300	2000	0.554	1.89	1.27	2.86	1.29
LV 98 100ps	1300	2000	0.565	1.80	1.21	2.74	1.30
LV 118 5ps	1300	2000	0.610	1.33	0.88	2.07	0.91
LV 118 10ps	1300	2000	0.741	1.37	0.92	2.08	0.74
LV 118 20ps	1300	2000	0.721	1.40	0.94	2.13	0.77
LV 118 30ps	1300	2000	0.678	1.48	1.00	2.26	0.83
LV 118 50ps	1300	2000	0.628	1.52	1.01	2.33	0.98
LV 118 75ps	1300	2000	0.612	1.56	1.04	2.39	1.00
LV 118 100ps	1300	2000	0.624	1.58	1.06	2.42	0.99
LV 138 5ps	1300	2000	0.621	1.28	0.84	2.00	0.80
LV 138 10ps	1300	2000	0.771	1.13	0.75	1.75	0.66
LV 138 20ps	1300	2000	0.737	1.26	0.84	1.94	0.68
LV 138 30ps	1300	2000	0.691	1.27	0.84	1.97	0.74
LV 138 50ps	1300	2000	0.634	1.55	1.04	2.37	0.81
LV 138 75ps	1300	2000	0.624	1.44	0.96	2.23	0.86
LV 138 100ps	1300	2000	0.646	1.47	0.98	2.26	0.81
LV 158 5ps	1300	2000	0.638	1.19	0.77	1.89	0.74
LV 158 10ps	1300	2000	0.807	0.97	0.63	1.54	0.61
LV 158 20ps	1300	2000	0.770	1.00	0.65	1.60	0.66
LV 158 30ps	1300	2000	0.713	1.14	0.74	1.81	0.70
LV 158 50ps	1300	2000	0.657	1.42	0.94	2.20	0.77
LV 158 75ps	1300	2000	0.649	1.22	0.79	1.92	0.85
LV 158 100ps	1300	2000	0.668	1.57	1.05	2.40	0.73
LV 178 5ps	1300	2000	0.637	1.29	0.84	2.03	0.71
LV 178 10ps	1300	2000	0.802	0.93	0.60	1.48	0.61
LV 178 20ps	1300	2000	0.774	1.01	0.65	1.60	0.62
LV 178 30ps	1300	2000	0.712	1.15	0.75	1.81	0.67
LV 178 50ps	1300	2000	0.658	1.25	0.82	1.96	0.76
LV 178 75ps	1300	2000	0.645	1.41	0.93	2.19	0.76
LV 178 100ps	1300	2000	0.672	1.17	0.76	1.84	0.75
LV 198 10ps	1300	2000	0.780	0.96	0.62	1.52	0.59
LV 198 20ps	1300	2000	0.743	0.97	0.63	1.55	0.63
LV 198 30ps	1300	2000	0.687	1.06	0.69	1.70	0.69
LV 198 50ps	1300	2000	0.627	1.23	0.80	1.94	0.78
LV 198 75ps	1300	2000	0.619	1.28	0.84	2.01	0.78
LV 198 100ps	1300	2000	0.641	1.31	0.86	2.04	0.74

Model (8 TeV)	$m_{\tilde{q}}$	$m_{\tilde{g}}$	ϵ	expected UL	$-\sigma$	$+\sigma$	observed UL
LV 23 5ps	1300	2000	0.273	7.97	5.72	11.23	10.58
LV 23 10ps	1300	2000	0.319	8.37	6.03	11.72	10.20
LV 23 20ps	1300	2000	0.272	9.51	6.84	13.35	12.19
LV 23 30ps	1300	2000	0.230	10.69	7.68	15.01	13.41
LV 23 50ps	1300	2000	0.177	10.17	7.28	14.33	12.13
LV 23 75ps	1300	2000	0.142	12.89	9.24	18.15	16.20
LV 23 100ps	1300	2000	0.116	15.24	10.94	21.43	17.09
LV 38 5ps	1300	2000	0.551	2.06	1.45	2.96	2.52
LV 38 10ps	1300	2000	0.663	2.12	1.51	3.03	2.29
LV 38 20ps	1300	2000	0.587	2.32	1.64	3.31	2.98
LV 38 30ps	1300	2000	0.515	2.58	1.83	3.69	3.37
LV 38 50ps	1300	2000	0.410	2.58	1.82	3.72	3.95
LV 38 75ps	1300	2000	0.337	3.07	2.16	4.42	5.22
LV 38 100ps	1300	2000	0.286	3.59	2.52	5.17	5.41
LV 58 5ps	1300	2000	0.734	1.24	0.87	1.80	0.73
LV 58 10ps	1300	2000	0.899	1.24	0.88	1.78	0.64
LV 58 20ps	1300	2000	0.795	1.40	0.98	2.01	0.73
LV 58 30ps	1300	2000	0.694	1.59	1.12	2.29	0.83
LV 58 50ps	1300	2000	0.573	1.42	0.99	2.07	1.28
LV 58 75ps	1300	2000	0.480	1.69	1.18	2.48	1.42
LV 58 100ps	1300	2000	0.413	1.99	1.39	2.91	1.61
LV 78 5ps	1300	2000	0.788	0.84	0.57	1.26	0.43
LV 78 10ps	1300	2000	0.986	0.72	0.50	1.06	0.38
LV 78 20ps	1300	2000	0.906	0.78	0.54	1.15	0.41
LV 78 30ps	1300	2000	0.809	0.88	0.61	1.30	0.47
LV 78 50ps	1300	2000	0.665	0.89	0.60	1.34	0.53
LV 78 75ps	1300	2000	0.567	1.04	0.71	1.59	0.63
LV 78 100ps	1300	2000	0.494	1.23	0.83	1.87	0.71
LV 98 5ps	1300	2000	0.767	0.57	0.37	0.91	0.62
LV 98 10ps	1300	2000	0.971	0.53	0.36	0.80	0.44
LV 98 20ps	1300	2000	0.893	0.58	0.39	0.88	0.49
LV 98 30ps	1300	2000	0.798	0.64	0.43	0.97	0.57
LV 98 50ps	1300	2000	0.671	0.61	0.39	0.98	0.77
LV 98 75ps	1300	2000	0.574	0.73	0.47	1.16	0.89
LV 98 100ps	1300	2000	0.506	0.82	0.53	1.31	1.04
LV 118 5ps	1300	2000	0.834	0.42	0.26	0.70	0.50
LV 118 10ps	1300	2000	1.073	0.39	0.26	0.61	0.39
LV 118 20ps	1300	2000	0.964	0.44	0.29	0.69	0.42
LV 118 30ps	1300	2000	0.858	0.45	0.29	0.72	0.53
LV 118 50ps	1300	2000	0.721	0.48	0.30	0.79	0.61
LV 118 75ps	1300	2000	0.621	0.53	0.33	0.89	0.71
LV 118 100ps	1300	2000	0.557	0.62	0.38	1.02	0.81
LV 138 5ps	1300	2000	0.856	0.35	0.21	0.59	0.43
LV 138 10ps	1300	2000	1.141	0.29	0.18	0.47	0.34
LV 138 20ps	1300	2000	1.039	0.32	0.20	0.53	0.37
LV 138 30ps	1300	2000	0.937	0.35	0.22	0.58	0.43
LV 138 50ps	1300	2000	0.806	0.35	0.21	0.60	0.49
LV 138 75ps	1300	2000	0.690	0.41	0.25	0.70	0.58
LV 138 100ps	1300	2000	0.606	0.50	0.30	0.84	0.65
LV 158 5ps	1300	2000	0.878	0.33	0.20	0.56	0.41
LV 158 10ps	1300	2000	1.156	0.22	0.13	0.38	0.36
LV 158 20ps	1300	2000	1.049	0.24	0.14	0.42	0.40
LV 158 30ps	1300	2000	0.937	0.27	0.15	0.46	0.44
LV 158 50ps	1300	2000	0.798	0.38	0.23	0.63	0.45
LV 158 75ps	1300	2000	0.692	0.43	0.26	0.73	0.52
LV 158 100ps	1300	2000	0.612	0.49	0.30	0.83	0.59
LV 178 5ps	1300	2000	0.837	0.33	0.19	0.56	0.41
LV 178 10ps	1300	2000	1.105	0.21	0.12	0.38	0.36
LV 178 20ps	1300	2000	1.010	0.23	0.14	0.41	0.39
LV 178 30ps	1300	2000	0.906	0.26	0.15	0.46	0.44
LV 178 50ps	1300	2000	0.762	0.37	0.22	0.63	0.45
LV 178 75ps	1300	2000	0.660	0.43	0.26	0.73	0.52
LV 178 100ps	1300	2000	0.586	0.48	0.29	0.82	0.59
LV 198 5ps	1300	2000	0.781	0.34	0.20	0.59	0.44
LV 198 10ps	1300	2000	1.044	0.22	0.13	0.39	0.37
LV 198 20ps	1300	2000	0.950	0.24	0.14	0.43	0.40
LV 198 30ps	1300	2000	0.848	0.28	0.16	0.49	0.47
LV 198 50ps	1300	2000	0.727	0.38	0.23	0.64	0.46
LV 198 75ps	1300	2000	0.623	0.45	0.27	0.76	0.54
LV 198 100ps	1300	2000	0.559	0.49	0.29	0.84	0.60

Table 12: Efficiency, and 95% CL cross-section times branching fraction upper limits for LV models generated with three different values of M_{gluino}. The squark mass is 1300 GeV/c^2, the LLP lifetime 10 ps.

Model	$m_{\tilde{q}}$	$m_{\tilde{g}}$	ϵ	expected UL	$-\sigma$	$+\sigma$	observed UL
7 TeV							
LV 23 10ps	1300	1500	0.289	12.28	8.78	17.36	12.75
LV 23 10ps	1300	2000	0.298	11.78	8.43	16.65	12.46
LV 23 10ps	1300	2500	0.313	11.34	8.12	16.01	11.52
LV 38 10ps	1300	1500	0.537	3.30	2.31	4.79	4.00
LV 38 10ps	1300	2000	0.576	3.02	2.12	4.39	3.53
LV 38 10ps	1300	2500	0.591	2.94	2.07	4.29	3.32
LV 58 10ps	1300	1500	0.675	1.98	1.38	2.92	2.06
LV 58 10ps	1300	2000	0.703	1.89	1.29	2.80	1.91
LV 58 10ps	1300	2500	0.721	1.89	1.30	2.80	1.74
LV 98 10ps	1300	1500	0.657	1.46	0.98	2.23	1.06
LV 98 10ps	1300	2000	0.696	1.41	0.95	2.14	0.97
LV 98 10ps	1300	2500	0.710	1.38	0.93	2.10	0.96
8 TeV							
LV 23 10ps	1300	1500	0.296	9.20	6.62	12.91	10.69
LV 23 10ps	1300	2000	0.319	8.37	6.03	11.72	10.20
LV 23 10ps	1300	2500	0.333	7.82	5.62	10.99	8.96
LV 38 10ps	1300	1500	0.613	2.21	1.57	3.16	2.76
LV 38 10ps	1300	2000	0.663	2.12	1.51	3.03	2.29
LV 38 10ps	1300	2500	0.698	1.96	1.39	2.80	2.29
LV 58 10ps	1300	1500	0.827	1.34	0.94	1.92	0.67
LV 58 10ps	1300	2000	0.899	1.24	0.88	1.78	0.64
LV 58 10ps	1300	2500	0.949	1.17	0.82	1.68	0.60
LV 98 10ps	1300	1500	0.910	0.56	0.38	0.86	0.46
LV 98 10ps	1300	2000	0.971	0.53	0.36	0.80	0.44

Additional figures

This section shows two figures in which the results for the process PC with $m_{\mathrm{h}^0} = 125\,\mathrm{GeV}/c^2$ are displayed in a complementary way. Figure 1 shows the 95% CL upper limit on $\sigma_{H^0} \times \mathcal{B}(H^0 \to \tilde{\chi}_1^0\tilde{\chi}_1^0)$ normalized to the SM σ_{H^0} as a function of the $\tilde{\chi}_1^0$ $c\tau$ for different values of the $\tilde{\chi}_1^0$ mass and for data taken at $\sqrt{s} = 8$ TeV. Figure 2 shows almost the same information, but displayed in the $\tilde{\chi}_1^0$ mass-lifetime plane, showing the regions where different values of $\mathcal{B}(H^0 \to \tilde{\chi}_1^0\tilde{\chi}_1^0)$ are excluded at 95% CL.

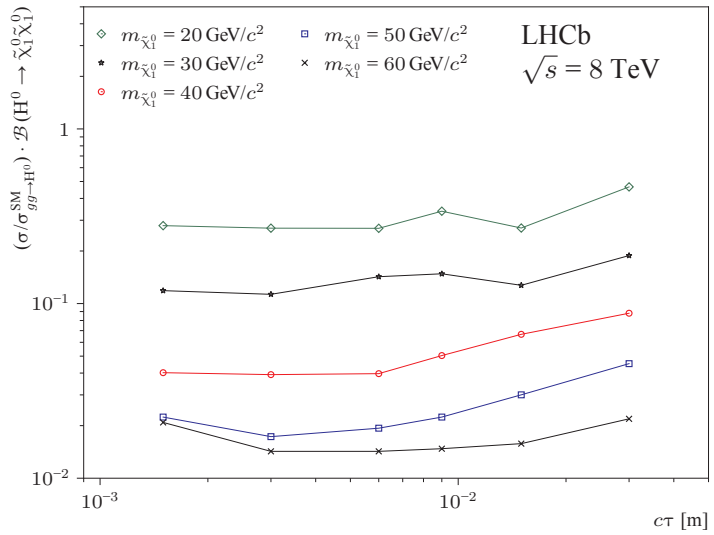

Figure 1: 95% CL upper limit on $\sigma_{H^0} \times \mathcal{B}(H^0 \to \tilde{\chi}_1^0\tilde{\chi}_1^0)$ normalized to the SM σ_{H^0} as a function of the $\tilde{\chi}_1^0$ $c\tau$ for different values of the $\tilde{\chi}_1^0$ mass and for data taken at $\sqrt{s} = 8$ TeV.

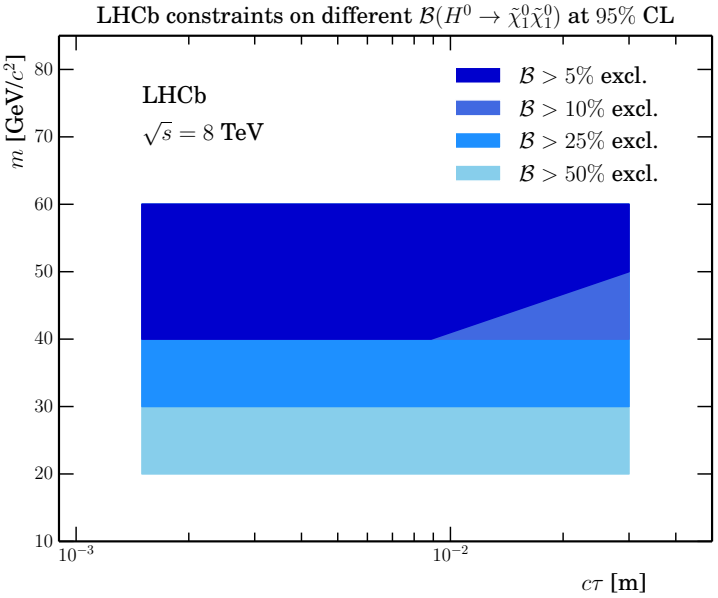

Figure 2: Regions in the $\tilde{\chi}_1^0$ mass-lifetime plane where $\mathcal{B}(H^0 \to \tilde{\chi}_1^0\tilde{\chi}_1^0)$ is excluded at 95% CL with data taken at $\sqrt{s} = 8$ Tev. This plot assumes σ_{H^0} to be the SM one.