

Table 1: SM yields

	2lss m 3b	2lss p 3b	2lss m 2b	2lss p 2b	3l m 1b	3l p 1b	3l m 2b	3l p 2b	3l onZ 1b	3l onZ 2b	4l 2b
Diboson sm	0.02	0.09	10.31	12.43	26.37	24.51	1.42	2.22	265.9	19.09	4.17
Triboson sm	0.04	0.07	2.05	3.0	0.92	1.28	0.1	0.17	15.54	2.52	0.43
charge flips sm	1.62	1.57	17.5	17.39	0.0	0.0	0.0	0.0	0.0	0.0	0.0
fakes sm	6.94	9.28	116.32	124.88	58.19	57.87	12.81	11.37	60.2	11.69	0.0
convs sm	0.95	0.83	11.54	9.69	3.36	2.92	3.2	3.04	0.79	0.67	0.01
Sum bkg	9.57	11.84	157.72	167.39	88.83	86.59	17.52	16.8	342.42	33.97	4.61
ttlnu sm	10.64	20.1	125.09	236.48	22.07	40.68	23.31	43.31	8.75	9.77	0.02
ttll sm	8.26	8.6	79.44	80.89	39.06	39.31	36.84	37.12	284.7	260.7	35.48
ttH sm	9.25	9.25	83.09	83.29	23.38	23.08	22.61	22.43	9.56	9.58	3.45
tllq sm	0.45	0.82	6.41	11.54	5.4	9.44	2.35	4.16	110.35	47.22	0.01
tHq sm	0.12	0.22	1.41	2.6	0.47	0.83	0.35	0.6	0.34	0.23	0.03
tttt sm	7.29	7.24	5.79	5.7	0.66	0.64	3.67	3.71	0.16	0.98	0.41
Sum sig	36.01	46.23	301.23	420.51	91.03	113.98	89.13	111.33	413.86	328.48	39.4
Sum expected	45.58	58.07	458.95	587.9	179.86	200.57	106.65	128.13	756.28	362.45	44.01
Observation	45.58	58.07	458.95	587.9	179.86	200.57	106.65	128.13	756.28	362.45	44.01