

August 26, 2010

Method2 STJP

CEM Electrons

Process	1jet	2jets	3jets	4jets	5jets
All Pretag Candidates	336241.00 $\pm$ 0.00	58797.00 $\pm$ 0.00	10261.00 $\pm$ 0.00	2281.00 $\pm$ 0.00	565.00 $\pm$ 0.00
Total Pretag Non-W (after MET cut)	59494.21 $\pm$ 23797.68	17898.26 $\pm$ 7159.30	3472.65 $\pm$ 1389.06	599.52 $\pm$ 239.81	129.87 $\pm$ 51.95
Total Pretag ww (after MET cut)	1030.98 $\pm$ 87.59	1110.20 $\pm$ 94.32	216.05 $\pm$ 18.41	37.38 $\pm$ 3.24	6.55 $\pm$ 0.62
Total Pretag wz (after MET cut)	133.49 $\pm$ 14.09	162.76 $\pm$ 17.18	37.51 $\pm$ 3.97	6.57 $\pm$ 0.71	1.26 $\pm$ 0.15
Total Pretag zz (after MET cut)	5.24 $\pm$ 0.77	5.02 $\pm$ 0.74	2.99 $\pm$ 0.44	0.75 $\pm$ 0.11	0.16 $\pm$ 0.03
Total Pretag stops (after MET cut)	39.05 $\pm$ 3.54	91.63 $\pm$ 8.29	28.61 $\pm$ 2.59	6.19 $\pm$ 0.57	1.28 $\pm$ 0.12
Total Pretag stopt (after MET cut)	119.60 $\pm$ 13.06	146.02 $\pm$ 15.94	42.33 $\pm$ 4.63	8.23 $\pm$ 0.91	1.34 $\pm$ 0.16
Total Pretag zlf (after MET cut)	9981.98 $\pm$ 872.20	2670.19 $\pm$ 233.32	521.80 $\pm$ 45.60	89.17 $\pm$ 7.80	14.80 $\pm$ 1.30
Total Pretag top (after MET cut)	67.18 $\pm$ 5.85	353.81 $\pm$ 30.69	702.61 $\pm$ 60.91	660.16 $\pm$ 57.24	218.07 $\pm$ 18.93
Total Pretag wh115 (after MET cut)	5.52 $\pm$ 0.33	12.85 $\pm$ 0.77	3.48 $\pm$ 0.21	0.63 $\pm$ 0.04	0.11 $\pm$ 0.01
Total Pretag wh100 (after MET cut)	11.99 $\pm$ 0.72	20.78 $\pm$ 1.25	4.91 $\pm$ 0.30	0.82 $\pm$ 0.05	0.13 $\pm$ 0.01
Total Pretag wh105 (after MET cut)	9.36 $\pm$ 0.56	18.01 $\pm$ 1.08	4.46 $\pm$ 0.27	0.78 $\pm$ 0.05	0.12 $\pm$ 0.01
Total Pretag wh110 (after MET cut)	7.14 $\pm$ 0.43	15.16 $\pm$ 0.91	3.84 $\pm$ 0.23	0.66 $\pm$ 0.04	0.11 $\pm$ 0.01
Total Pretag wh120 (after MET cut)	4.12 $\pm$ 0.25	10.43 $\pm$ 0.63	2.96 $\pm$ 0.18	0.54 $\pm$ 0.03	0.09 $\pm$ 0.01
Total Pretag wh125 (after MET cut)	3.01 $\pm$ 0.18	8.21 $\pm$ 0.49	2.43 $\pm$ 0.15	0.44 $\pm$ 0.03	0.07 $\pm$ 0.01
Total Pretag wh130 (after MET cut)	2.11 $\pm$ 0.13	6.24 $\pm$ 0.38	1.93 $\pm$ 0.12	0.37 $\pm$ 0.02	0.06 $\pm$ 0.00
Total Pretag wh135 (after MET cut)	1.41 $\pm$ 0.09	4.51 $\pm$ 0.27	1.47 $\pm$ 0.09	0.28 $\pm$ 0.02	0.05 $\pm$ 0.00
Total Pretag wh140 (after MET cut)	0.92 $\pm$ 0.06	3.11 $\pm$ 0.19	1.04 $\pm$ 0.06	0.21 $\pm$ 0.01	0.03 $\pm$ 0.00
Total Pretag wh145 (after MET cut)	0.56 $\pm$ 0.03	2.04 $\pm$ 0.12	0.70 $\pm$ 0.04	0.14 $\pm$ 0.01	0.03 $\pm$ 0.00
Total Pretag wh150 (after MET cut)	0.32 $\pm$ 0.02	1.23 $\pm$ 0.07	0.44 $\pm$ 0.03	0.09 $\pm$ 0.01	0.02 $\pm$ 0.00
Total Pretag wh120L (after MET cut)	4.12 $\pm$ 0.25	10.48 $\pm$ 0.63	2.94 $\pm$ 0.18	0.52 $\pm$ 0.03	0.08 $\pm$ 0.01
Total Pretag wh120M (after MET cut)	3.89 $\pm$ 0.23	10.06 $\pm$ 0.61	3.17 $\pm$ 0.19	0.65 $\pm$ 0.04	0.13 $\pm$ 0.01
Total Pretag MC (after MET cut)	11377.51 $\pm$ 933.94	4539.63 $\pm$ 329.17	1551.91 $\pm$ 109.12	808.44 $\pm$ 64.02	243.47 $\pm$ 20.04
Total Pretag Wbb (after MET cut)	3675.02 $\pm$ 1150.78	1373.86 $\pm$ 493.16	344.06 $\pm$ 137.97	84.38 $\pm$ 34.88	22.57 $\pm$ 9.42
Total Pretag Wcc (after MET cut)	9384.64 $\pm$ 2938.67	2913.26 $\pm$ 1045.75	697.60 $\pm$ 279.74	159.60 $\pm$ 65.97	41.37 $\pm$ 17.27
Total Pretag Wcj (after MET cut)	17802.22 $\pm$ 5574.53	3219.13 $\pm$ 1155.54	504.22 $\pm$ 202.19	82.52 $\pm$ 34.11	17.42 $\pm$ 7.27
Total Pretag Mistags (after MET cut)	234507.40 $\pm$ 24749.51	28852.87 $\pm$ 7444.43	3690.56 $\pm$ 1479.16	546.54 $\pm$ 271.61	110.31 $\pm$ 62.34
Total Pretag HF	30861.88 $\pm$ 6733.22	7506.24 $\pm$ 2013.83	1545.88 $\pm$ 496.52	326.51 $\pm$ 110.29	81.35 $\pm$ 28.03
Total Pretag Corrected	265369.28 $\pm$ 23816.00	36359.12 $\pm$ 7166.87	5236.44 $\pm$ 1393.34	873.05 $\pm$ 248.21	191.66 $\pm$ 55.68
Total LF Pretag Corrected	234507.40 $\pm$ 24749.51	28852.87 $\pm$ 7444.43	3690.56 $\pm$ 1479.16	546.54 $\pm$ 271.61	110.31 $\pm$ 62.34
Tagged ww	0.09 $\pm$ 0.02	0.99 $\pm$ 0.23	0.78 $\pm$ 0.14	0.33 $\pm$ 0.05	0.14 $\pm$ 0.03
Tagged wz	0.32 $\pm$ 0.06	2.44 $\pm$ 0.35	0.64 $\pm$ 0.09	0.14 $\pm$ 0.02	0.06 $\pm$ 0.01
Tagged zz	0.00 $\pm$ 0.00	0.07 $\pm$ 0.01	0.06 $\pm$ 0.01	0.02 $\pm$ 0.00	0.00 $\pm$ 0.00
Tagged stops	0.40 $\pm$ 0.06	9.04 $\pm$ 1.15	3.28 $\pm$ 0.42	0.86 $\pm$ 0.12	0.19 $\pm$ 0.03
Tagged stopt	0.36 $\pm$ 0.06	3.07 $\pm$ 0.49	2.95 $\pm$ 0.42	0.83 $\pm$ 0.12	0.16 $\pm$ 0.02
Tagged zlf	0.28 $\pm$ 0.06	1.30 $\pm$ 0.25	1.71 $\pm$ 0.32	0.58 $\pm$ 0.13	0.19 $\pm$ 0.05
Tagged top	0.78 $\pm$ 0.13	25.15 $\pm$ 3.30	76.88 $\pm$ 10.06	98.10 $\pm$ 12.79	36.69 $\pm$ 5.22
Tagged wh115	0.08 $\pm$ 0.01	1.23 $\pm$ 0.13	0.39 $\pm$ 0.04	0.09 $\pm$ 0.01	0.02 $\pm$ 0.00
Tagged wh100	0.20 $\pm$ 0.03	1.91 $\pm$ 0.20	0.55 $\pm$ 0.06	0.10 $\pm$ 0.01	0.02 $\pm$ 0.00
Tagged wh105	0.14 $\pm$ 0.02	1.70 $\pm$ 0.18	0.50 $\pm$ 0.06	0.10 $\pm$ 0.01	0.02 $\pm$ 0.00
Tagged wh110	0.11 $\pm$ 0.02	1.46 $\pm$ 0.16	0.43 $\pm$ 0.05	0.08 $\pm$ 0.01	0.01 $\pm$ 0.00
Tagged wh120	0.06 $\pm$ 0.01	1.03 $\pm$ 0.11	0.34 $\pm$ 0.04	0.07 $\pm$ 0.01	0.01 $\pm$ 0.00
Tagged wh125	0.04 $\pm$ 0.01	0.82 $\pm$ 0.09	0.28 $\pm$ 0.03	0.06 $\pm$ 0.01	0.01 $\pm$ 0.00
Tagged wh130	0.03 $\pm$ 0.00	0.63 $\pm$ 0.07	0.23 $\pm$ 0.03	0.05 $\pm$ 0.01	0.01 $\pm$ 0.00
Tagged wh135	0.02 $\pm$ 0.00	0.46 $\pm$ 0.05	0.17 $\pm$ 0.02	0.04 $\pm$ 0.00	0.01 $\pm$ 0.00
Tagged wh140	0.01 $\pm$ 0.00	0.32 $\pm$ 0.04	0.12 $\pm$ 0.01	0.03 $\pm$ 0.00	0.01 $\pm$ 0.00
Tagged wh145	0.01 $\pm$ 0.00	0.21 $\pm$ 0.02	0.08 $\pm$ 0.01	0.02 $\pm$ 0.00	0.00 $\pm$ 0.00
Tagged wh150	0.00 $\pm$ 0.00	0.13 $\pm$ 0.01	0.05 $\pm$ 0.01	0.01 $\pm$ 0.00	0.00 $\pm$ 0.00
Tagged wh120L	0.06 $\pm$ 0.01	1.03 $\pm$ 0.11	0.34 $\pm$ 0.04	0.07 $\pm$ 0.01	0.01 $\pm$ 0.00
Tagged wh120M	0.06 $\pm$ 0.01	0.98 $\pm$ 0.11	0.36 $\pm$ 0.04	0.08 $\pm$ 0.01	0.02 $\pm$ 0.00
Raw Mis-tags(info)	1.08 $\pm$ 0.42	8.03 $\pm$ 4.00	6.11 $\pm$ 2.43	2.60 $\pm$ 1.18	1.16 $\pm$ 0.59
Tagged Wbb	19.41 $\pm$ 6.60	55.91 $\pm$ 20.71	20.03 $\pm$ 8.22	6.37 $\pm$ 2.70	2.27 $\pm$ 0.98
Tagged Wcc	1.97 $\pm$ 0.68	10.36 $\pm$ 4.02	6.01 $\pm$ 2.54	1.29 $\pm$ 1.09	0.96 $\pm$ 0.43
Tagged Wcj	3.73 $\pm$ 1.29	11.45 $\pm$ 4.44	4.34 $\pm$ 1.84	2.49 $\pm$ 0.56	0.41 $\pm$ 0.18
Tagged Total HF	25.10 $\pm$ 8.45	77.72 $\pm$ 27.28	30.38 $\pm$ 11.19	10.15 $\pm$ 3.81	3.64 $\pm$ 1.39
Tagged Total MC	2.22 $\pm$ 0.36	42.07 $\pm$ 5.29	86.31 $\pm$ 11.14	100.86 $\pm$ 13.13	37.42 $\pm$ 5.34
Tagged Mistags	0.76 $\pm$ 0.30	3.94 $\pm$ 2.21	2.20 $\pm$ 1.24	0.62 $\pm$ 0.42	0.23 $\pm$ 0.17
Tagged Non-W	4.58 $\pm$ 1.83	21.53 $\pm$ 8.61	16.52 $\pm$ 6.61	7.42 $\pm$ 5.94	3.51 $\pm$ 2.81
Total Prediction	32.67 $\pm$ 8.66	145.26 $\pm$ 29.17	135.41 $\pm$ 17.16	119.05 $\pm$ 14.91	44.80 $\pm$ 6.20
Observed	32.00 $\pm$ 0.00	127.00 $\pm$ 0.00	121.00 $\pm$ 0.00	112.00 $\pm$ 0.00	53.00 $\pm$ 0.00

PHX Electrons

Process	1jet	2jets	3jets	4jets	5jets
All Pretag Candidates	116649.00 $\pm$ 0.00	18249.00 $\pm$ 0.00	3131.00 $\pm$ 0.00	558.00 $\pm$ 0.00	109.00 $\pm$ 0.00
Total Pretag Non-W (after MET cut)	5214.92 $\pm$ 2085.97	2916.48 $\pm$ 1166.59	956.06 $\pm$ 382.42	110.00 $\pm$ 44.00	9.15 $\pm$ 3.66
Total Pretag ww (after MET cut)	326.83 $\pm$ 27.82	327.34 $\pm$ 27.86	59.16 $\pm$ 5.09	9.61 $\pm$ 0.88	1.74 $\pm$ 0.21
Total Pretag wz (after MET cut)	48.34 $\pm$ 5.11	59.36 $\pm$ 6.28	12.46 $\pm$ 1.33	1.76 $\pm$ 0.20	0.34 $\pm$ 0.05
Total Pretag zz (after MET cut)	1.37 $\pm$ 0.20	0.67 $\pm$ 0.10	0.30 $\pm$ 0.05	0.07 $\pm$ 0.01	0.01 $\pm$ 0.00
Total Pretag stops (after MET cut)	8.94 $\pm$ 0.81	16.60 $\pm$ 1.51	4.54 $\pm$ 0.42	0.99 $\pm$ 0.10	0.20 $\pm$ 0.02
Total Pretag stopt (after MET cut)	31.57 $\pm$ 3.45	27.95 $\pm$ 3.06	7.60 $\pm$ 0.84	1.36 $\pm$ 0.16	0.22 $\pm$ 0.03
Total Pretag zlf (after MET cut)	693.07 $\pm$ 60.57	174.05 $\pm$ 15.22	44.99 $\pm$ 3.94	8.13 $\pm$ 0.72	1.45 $\pm$ 0.13
Total Pretag top (after MET cut)	13.48 $\pm$ 1.20	66.02 $\pm$ 5.75	121.96 $\pm$ 10.60	111.01 $\pm$ 9.65	34.56 $\pm$ 3.02
Total Pretag wh115 (after MET cut)	1.09 $\pm$ 0.07	2.22 $\pm$ 0.13	0.55 $\pm$ 0.03	0.09 $\pm$ 0.01	0.02 $\pm$ 0.00
Total Pretag wh100 (after MET cut)	2.50 $\pm$ 0.15	3.78 $\pm$ 0.23	0.81 $\pm$ 0.05	0.12 $\pm$ 0.01	0.02 $\pm$ 0.00
Total Pretag wh105 (after MET cut)	1.94 $\pm$ 0.12	3.28 $\pm$ 0.20	0.70 $\pm$ 0.04	0.11 $\pm$ 0.01	0.01 $\pm$ 0.00
Total Pretag wh110 (after MET cut)	1.47 $\pm$ 0.09	2.69 $\pm$ 0.16	0.61 $\pm$ 0.04	0.10 $\pm$ 0.01	0.01 $\pm$ 0.00
Total Pretag wh120 (after MET cut)	0.81 $\pm$ 0.05	1.80 $\pm$ 0.11	0.46 $\pm$ 0.03	0.07 $\pm$ 0.01	0.01 $\pm$ 0.00
Total Pretag wh125 (after MET cut)	0.57 $\pm$ 0.04	1.40 $\pm$ 0.08	0.37 $\pm$ 0.02	0.06 $\pm$ 0.00	0.01 $\pm$ 0.00
Total Pretag wh130 (after MET cut)	0.39 $\pm$ 0.02	1.03 $\pm$ 0.06	0.30 $\pm$ 0.02	0.05 $\pm$ 0.00	0.01 $\pm$ 0.00
Total Pretag wh135 (after MET cut)	0.26 $\pm$ 0.02	0.75 $\pm$ 0.05	0.22 $\pm$ 0.01	0.04 $\pm$ 0.00	0.01 $\pm$ 0.00
Total Pretag wh140 (after MET cut)	0.16 $\pm$ 0.01	0.51 $\pm$ 0.03	0.15 $\pm$ 0.01	0.03 $\pm$ 0.00	0.00 $\pm$ 0.00
Total Pretag wh145 (after MET cut)	0.10 $\pm$ 0.01	0.32 $\pm$ 0.02	0.10 $\pm$ 0.01	0.02 $\pm$ 0.00	0.00 $\pm$ 0.00
Total Pretag wh150 (after MET cut)	0.05 $\pm$ 0.00	0.19 $\pm$ 0.01	0.07 $\pm$ 0.00	0.01 $\pm$ 0.00	0.00 $\pm$ 0.00
Total Pretag wh120L (after MET cut)	0.80 $\pm$ 0.05	1.78 $\pm$ 0.11	0.45 $\pm$ 0.03	0.07 $\pm$ 0.01	0.01 $\pm$ 0.00
Total Pretag wh120M (after MET cut)	0.76 $\pm$ 0.05	1.74 $\pm$ 0.11	0.50 $\pm$ 0.03	0.08 $\pm$ 0.01	0.01 $\pm$ 0.00
Total Pretag MC (after MET cut)	1123.60 $\pm$ 83.09	671.98 $\pm$ 46.82	251.01 $\pm$ 17.58	132.93 $\pm$ 10.64	38.51 $\pm$ 3.20
Total Pretag Wbb (after MET cut)	1243.89 $\pm$ 373.91	483.09 $\pm$ 149.95	115.91 $\pm$ 41.73	28.15 $\pm$ 9.37	7.20 $\pm$ 2.24
Total Pretag Wcc (after MET cut)	3289.87 $\pm$ 988.92	1096.55 $\pm$ 340.36	238.68 $\pm$ 85.92	56.42 $\pm$ 18.77	13.34 $\pm$ 4.14
Total Pretag Wcj (after MET cut)	6191.41 $\pm$ 1861.11	1050.55 $\pm$ 326.08	148.03 $\pm$ 53.29	23.62 $\pm$ 7.86	4.39 $\pm$ 1.36
Total Pretag Mistags (after MET cut)	99585.32 $\pm$ 2993.78	12030.35 $\pm$ 1278.89	1421.31 $\pm$ 406.04	206.88 $\pm$ 51.95	36.41 $\pm$ 7.07
Total Pretag HF	10725.16 $\pm$ 2145.82	2630.19 $\pm$ 521.94	502.62 $\pm$ 135.32	108.20 $\pm$ 25.49	24.94 $\pm$ 5.13
Total Pretag Corrected	110310.48 $\pm$ 2087.62	14660.54 $\pm$ 1167.53	1923.93 $\pm$ 382.83	315.07 $\pm$ 45.27	61.34 $\pm$ 4.86
Total LF Pretag Corrected	99585.32 $\pm$ 2993.78	12030.35 $\pm$ 1278.89	1421.31 $\pm$ 406.04	206.88 $\pm$ 51.95	36.41 $\pm$ 7.07
Tagged ww	0.05 $\pm$ 0.01	0.24 $\pm$ 0.04	0.17 $\pm$ 0.03	0.07 $\pm$ 0.01	0.03 $\pm$ 0.01
Tagged wz	0.17 $\pm$ 0.03	1.07 $\pm$ 0.15	0.29 $\pm$ 0.04	0.06 $\pm$ 0.01	0.00 $\pm$ 0.00
Tagged zz	0.00 $\pm$ 0.00	0.00 $\pm$ 0.00	0.01 $\pm$ 0.00	0.00 $\pm$ 0.00	0.00 $\pm$ 0.00
Tagged stops	0.12 $\pm$ 0.02	1.56 $\pm$ 0.20	0.54 $\pm$ 0.07	0.14 $\pm$ 0.02	0.03 $\pm$ 0.00
Tagged stopt	0.12 $\pm$ 0.02	0.63 $\pm$ 0.09	0.54 $\pm$ 0.08	0.16 $\pm$ 0.02	0.03 $\pm$ 0.00
Tagged zlf	0.06 $\pm$ 0.01	0.15 $\pm$ 0.03	0.15 $\pm$ 0.03	0.05 $\pm$ 0.01	0.02 $\pm$ 0.00
Tagged top	0.16 $\pm$ 0.03	4.78 $\pm$ 0.60	13.72 $\pm$ 1.77	17.19 $\pm$ 2.19	5.92 $\pm$ 0.80
Tagged wh115	0.01 $\pm$ 0.00	0.21 $\pm$ 0.02	0.06 $\pm$ 0.01	0.01 $\pm$ 0.00	0.00 $\pm$ 0.00
Tagged wh100	0.04 $\pm$ 0.01	0.33 $\pm$ 0.03	0.09 $\pm$ 0.01	0.01 $\pm$ 0.00	0.00 $\pm$ 0.00
Tagged wh105	0.03 $\pm$ 0.00	0.30 $\pm$ 0.03	0.08 $\pm$ 0.01	0.01 $\pm$ 0.00	0.00 $\pm$ 0.00
Tagged wh110	0.02 $\pm$ 0.00	0.25 $\pm$ 0.03	0.07 $\pm$ 0.01	0.01 $\pm$ 0.00	0.00 $\pm$ 0.00
Tagged wh120	0.01 $\pm$ 0.00	0.17 $\pm$ 0.02	0.05 $\pm$ 0.01	0.01 $\pm$ 0.00	0.00 $\pm$ 0.00
Tagged wh125	0.01 $\pm$ 0.00	0.14 $\pm$ 0.02	0.04 $\pm$ 0.00	0.01 $\pm$ 0.00	0.00 $\pm$ 0.00
Tagged wh130	0.00 $\pm$ 0.00	0.10 $\pm$ 0.01	0.03 $\pm$ 0.00	0.01 $\pm$ 0.00	0.00 $\pm$ 0.00
Tagged wh135	0.00 $\pm$ 0.00	0.07 $\pm$ 0.01	0.02 $\pm$ 0.00	0.01 $\pm$ 0.00	0.00 $\pm$ 0.00
Tagged wh140	0.00 $\pm$ 0.00	0.05 $\pm$ 0.01	0.02 $\pm$ 0.00	0.00 $\pm$ 0.00	0.00 $\pm$ 0.00
Tagged wh145	0.00 $\pm$ 0.00	0.03 $\pm$ 0.00	0.01 $\pm$ 0.00	0.00 $\pm$ 0.00	0.00 $\pm$ 0.00
Tagged wh150	0.00 $\pm$ 0.00	0.02 $\pm$ 0.00	0.01 $\pm$ 0.00	0.00 $\pm$ 0.00	0.00 $\pm$ 0.00
Tagged wh120L	0.01 $\pm$ 0.00	0.16 $\pm$ 0.02	0.05 $\pm$ 0.01	0.01 $\pm$ 0.00	0.00 $\pm$ 0.00
Tagged wh120M	0.01 $\pm$ 0.00	0.16 $\pm$ 0.02	0.05 $\pm$ 0.01	0.01 $\pm$ 0.00	0.00 $\pm$ 0.00
Raw Mis-tags(info)	0.39 $\pm$ 0.14	2.84 $\pm$ 1.30	1.94 $\pm$ 0.86	1.00 $\pm$ 0.34	0.25 $\pm$ 0.09
Tagged Wbb	5.90 $\pm$ 1.93	17.43 $\pm$ 5.60	6.62 $\pm$ 2.45	2.22 $\pm$ 0.77	0.71 $\pm$ 0.23
Tagged Wcc	0.60 $\pm$ 0.20	3.83 $\pm$ 1.31	1.97 $\pm$ 0.75	0.82 $\pm$ 0.29	0.37 $\pm$ 0.13
Tagged Wcj	1.13 $\pm$ 0.37	3.67 $\pm$ 1.26	1.22 $\pm$ 0.47	0.34 $\pm$ 0.12	0.12 $\pm$ 0.04
Tagged Total HF	7.62 $\pm$ 2.49	24.92 $\pm$ 8.03	9.81 $\pm$ 3.40	3.38 $\pm$ 1.13	1.21 $\pm$ 0.40
Tagged Total MC	0.68 $\pm$ 0.11	8.44 $\pm$ 1.01	15.43 $\pm$ 1.96	17.68 $\pm$ 2.25	6.03 $\pm$ 0.82
Tagged Mistags	0.33 $\pm$ 0.12	1.87 $\pm$ 0.88	0.88 $\pm$ 0.46	0.37 $\pm$ 0.16	0.08 $\pm$ 0.03
Tagged Non-W	0.53 $\pm$ 0.21	3.31 $\pm$ 1.32	4.63 $\pm$ 1.85	2.32 $\pm$ 1.85	0.73 $\pm$ 0.58
Total Prediction	9.16 $\pm$ 2.51	38.55 $\pm$ 8.25	30.75 $\pm$ 4.37	23.75 $\pm$ 3.13	8.05 $\pm$ 1.08
Observed	8.00 $\pm$ 0.00	39.00 $\pm$ 0.00	31.00 $\pm$ 0.00	19.00 $\pm$ 0.00	6.00 $\pm$ 0.00

CMUP Muons

Process	1jet	2jets	3jets	4jets	5jets
All Pretag Candidates	144484.00 $\pm$ 0.00	23213.00 $\pm$ 0.00	3896.00 $\pm$ 0.00	861.00 $\pm$ 0.00	211.00 $\pm$ 0.00
Total Pretag Non-W (after MET cut)	9139.59 $\pm$ 3655.84	1648.40 $\pm$ 659.36	236.36 $\pm$ 94.54	35.05 $\pm$ 14.02	9.02 $\pm$ 3.61
Total Pretag ww (after MET cut)	506.28 $\pm$ 43.06	540.62 $\pm$ 45.97	109.45 $\pm$ 9.36	18.68 $\pm$ 1.64	3.30 $\pm$ 0.34
Total Pretag wz (after MET cut)	70.82 $\pm$ 7.48	84.06 $\pm$ 8.88	18.69 $\pm$ 1.99	3.11 $\pm$ 0.34	0.49 $\pm$ 0.06
Total Pretag zz (after MET cut)	4.57 $\pm$ 0.67	5.32 $\pm$ 0.78	1.64 $\pm$ 0.24	0.37 $\pm$ 0.06	0.08 $\pm$ 0.02
Total Pretag stops (after MET cut)	19.54 $\pm$ 1.77	47.45 $\pm$ 4.30	14.95 $\pm$ 1.36	3.28 $\pm$ 0.30	0.64 $\pm$ 0.06
Total Pretag stopt (after MET cut)	59.66 $\pm$ 6.52	74.30 $\pm$ 8.12	22.33 $\pm$ 2.44	4.16 $\pm$ 0.46	0.70 $\pm$ 0.08
Total Pretag zlf (after MET cut)	10776.54 $\pm$ 941.98	1929.64 $\pm$ 168.67	303.02 $\pm$ 26.49	44.37 $\pm$ 3.88	6.46 $\pm$ 0.57
Total Pretag top (after MET cut)	34.82 $\pm$ 3.04	187.85 $\pm$ 16.31	368.00 $\pm$ 31.93	343.55 $\pm$ 29.81	114.36 $\pm$ 9.94
Total Pretag wh115 (after MET cut)	2.91 $\pm$ 0.18	6.82 $\pm$ 0.41	1.79 $\pm$ 0.11	0.32 $\pm$ 0.02	0.05 $\pm$ 0.00
Total Pretag wh100 (after MET cut)	6.31 $\pm$ 0.38	11.12 $\pm$ 0.67	2.55 $\pm$ 0.16	0.43 $\pm$ 0.03	0.07 $\pm$ 0.01
Total Pretag wh105 (after MET cut)	4.95 $\pm$ 0.30	9.59 $\pm$ 0.58	2.35 $\pm$ 0.14	0.40 $\pm$ 0.03	0.06 $\pm$ 0.01
Total Pretag wh110 (after MET cut)	3.72 $\pm$ 0.23	7.89 $\pm$ 0.48	1.98 $\pm$ 0.12	0.34 $\pm$ 0.02	0.06 $\pm$ 0.00
Total Pretag wh120 (after MET cut)	2.18 $\pm$ 0.13	5.57 $\pm$ 0.34	1.53 $\pm$ 0.09	0.26 $\pm$ 0.02	0.05 $\pm$ 0.00
Total Pretag wh125 (after MET cut)	1.61 $\pm$ 0.10	4.38 $\pm$ 0.26	1.26 $\pm$ 0.08	0.23 $\pm$ 0.01	0.04 $\pm$ 0.00
Total Pretag wh130 (after MET cut)	1.12 $\pm$ 0.07	3.33 $\pm$ 0.20	1.00 $\pm$ 0.06	0.19 $\pm$ 0.01	0.03 $\pm$ 0.00
Total Pretag wh135 (after MET cut)	0.76 $\pm$ 0.05	2.43 $\pm$ 0.15	0.77 $\pm$ 0.05	0.14 $\pm$ 0.01	0.03 $\pm$ 0.00
Total Pretag wh140 (after MET cut)	0.50 $\pm$ 0.03	1.68 $\pm$ 0.10	0.55 $\pm$ 0.03	0.11 $\pm$ 0.01	0.02 $\pm$ 0.00
Total Pretag wh145 (after MET cut)	0.31 $\pm$ 0.02	1.11 $\pm$ 0.07	0.37 $\pm$ 0.02	0.08 $\pm$ 0.00	0.01 $\pm$ 0.00
Total Pretag wh150 (after MET cut)	0.17 $\pm$ 0.01	0.66 $\pm$ 0.04	0.23 $\pm$ 0.01	0.05 $\pm$ 0.00	0.01 $\pm$ 0.00
Total Pretag wh120L (after MET cut)	2.20 $\pm$ 0.13	5.59 $\pm$ 0.34	1.50 $\pm$ 0.09	0.25 $\pm$ 0.02	0.03 $\pm$ 0.00
Total Pretag wh120M (after MET cut)	2.03 $\pm$ 0.12	5.40 $\pm$ 0.33	1.67 $\pm$ 0.10	0.33 $\pm$ 0.02	0.07 $\pm$ 0.00
Total Pretag MC (after MET cut)	11472.24 $\pm$ 971.69	2869.25 $\pm$ 214.54	838.09 $\pm$ 59.06	417.52 $\pm$ 33.19	126.03 $\pm$ 10.45
Total Pretag Wbb (after MET cut)	1687.01 $\pm$ 508.72	707.36 $\pm$ 213.82	186.86 $\pm$ 56.54	38.79 $\pm$ 12.13	9.37 $\pm$ 3.12
Total Pretag Wcc (after MET cut)	4377.96 $\pm$ 1320.18	1469.64 $\pm$ 444.25	376.32 $\pm$ 113.87	82.94 $\pm$ 25.93	16.71 $\pm$ 5.57
Total Pretag Wcj (after MET cut)	8378.50 $\pm$ 2526.54	1660.76 $\pm$ 502.02	273.50 $\pm$ 82.76	39.04 $\pm$ 12.21	7.10 $\pm$ 2.37
Total Pretag Mistags (after MET cut)	109428.70 $\pm$ 4775.24	14857.60 $\pm$ 994.33	1984.87 $\pm$ 190.10	247.67 $\pm$ 48.89	42.77 $\pm$ 13.53
Total Pretag HF	14443.47 $\pm$ 2914.38	3837.75 $\pm$ 712.68	836.68 $\pm$ 153.99	160.77 $\pm$ 33.06	33.18 $\pm$ 7.80
Total Pretag Corrected	123872.17 $\pm$ 3782.77	18695.35 $\pm$ 693.39	2821.55 $\pm$ 111.47	408.43 $\pm$ 36.03	75.94 $\pm$ 11.05
Total LF Pretag Corrected	109428.70 $\pm$ 4775.24	14857.60 $\pm$ 994.33	1984.87 $\pm$ 190.10	247.67 $\pm$ 48.89	42.77 $\pm$ 13.53
Tagged ww	0.05 $\pm$ 0.01	0.41 $\pm$ 0.09	0.37 $\pm$ 0.07	0.18 $\pm$ 0.03	0.05 $\pm$ 0.01
Tagged wz	0.15 $\pm$ 0.03	1.18 $\pm$ 0.17	0.30 $\pm$ 0.04	0.07 $\pm$ 0.01	0.02 $\pm$ 0.00
Tagged zz	0.01 $\pm$ 0.00	0.09 $\pm$ 0.02	0.03 $\pm$ 0.01	0.01 $\pm$ 0.00	0.00 $\pm$ 0.00
Tagged stops	0.21 $\pm$ 0.03	4.65 $\pm$ 0.59	1.77 $\pm$ 0.24	0.43 $\pm$ 0.06	0.10 $\pm$ 0.02
Tagged stopt	0.16 $\pm$ 0.03	1.54 $\pm$ 0.25	1.61 $\pm$ 0.24	0.44 $\pm$ 0.07	0.10 $\pm$ 0.01
Tagged zlf	0.59 $\pm$ 0.11	2.16 $\pm$ 0.41	1.13 $\pm$ 0.23	0.36 $\pm$ 0.08	0.10 $\pm$ 0.03
Tagged top	0.40 $\pm$ 0.07	13.38 $\pm$ 1.76	39.65 $\pm$ 5.21	51.04 $\pm$ 6.72	19.27 $\pm$ 2.76
Tagged wh115	0.04 $\pm$ 0.01	0.66 $\pm$ 0.07	0.20 $\pm$ 0.02	0.04 $\pm$ 0.00	0.01 $\pm$ 0.00
Tagged wh100	0.10 $\pm$ 0.01	1.04 $\pm$ 0.11	0.29 $\pm$ 0.03	0.06 $\pm$ 0.01	0.01 $\pm$ 0.00
Tagged wh105	0.08 $\pm$ 0.01	0.88 $\pm$ 0.09	0.27 $\pm$ 0.03	0.05 $\pm$ 0.01	0.01 $\pm$ 0.00
Tagged wh110	0.06 $\pm$ 0.01	0.76 $\pm$ 0.08	0.23 $\pm$ 0.03	0.04 $\pm$ 0.00	0.01 $\pm$ 0.00
Tagged wh120	0.03 $\pm$ 0.00	0.54 $\pm$ 0.06	0.18 $\pm$ 0.02	0.03 $\pm$ 0.00	0.01 $\pm$ 0.00
Tagged wh125	0.02 $\pm$ 0.00	0.43 $\pm$ 0.05	0.14 $\pm$ 0.02	0.03 $\pm$ 0.00	0.01 $\pm$ 0.00
Tagged wh130	0.01 $\pm$ 0.00	0.33 $\pm$ 0.04	0.12 $\pm$ 0.01	0.02 $\pm$ 0.00	0.01 $\pm$ 0.00
Tagged wh135	0.01 $\pm$ 0.00	0.25 $\pm$ 0.03	0.09 $\pm$ 0.01	0.02 $\pm$ 0.00	0.00 $\pm$ 0.00
Tagged wh140	0.01 $\pm$ 0.00	0.17 $\pm$ 0.02	0.06 $\pm$ 0.01	0.02 $\pm$ 0.00	0.00 $\pm$ 0.00
Tagged wh145	0.00 $\pm$ 0.00	0.12 $\pm$ 0.01	0.04 $\pm$ 0.00	0.01 $\pm$ 0.00	0.00 $\pm$ 0.00
Tagged wh150	0.00 $\pm$ 0.00	0.07 $\pm$ 0.01	0.03 $\pm$ 0.00	0.01 $\pm$ 0.00	0.00 $\pm$ 0.00
Tagged wh120L	0.03 $\pm$ 0.00	0.55 $\pm$ 0.06	0.17 $\pm$ 0.02	0.03 $\pm$ 0.00	0.00 $\pm$ 0.00
Tagged wh120M	0.03 $\pm$ 0.00	0.52 $\pm$ 0.06	0.19 $\pm$ 0.02	0.04 $\pm$ 0.00	0.01 $\pm$ 0.00
Raw Mis-tags(info)	0.40 $\pm$ 0.13	3.31 $\pm$ 1.65	2.34 $\pm$ 0.91	0.97 $\pm$ 0.43	0.34 $\pm$ 0.17
Tagged Wbb	9.18 $\pm$ 3.02	28.11 $\pm$ 8.82	10.60 $\pm$ 3.34	2.91 $\pm$ 0.95	0.89 $\pm$ 0.31
Tagged Wcc	1.08 $\pm$ 0.36	5.61 $\pm$ 1.87	3.32 $\pm$ 1.10	1.15 $\pm$ 0.39	0.38 $\pm$ 0.14
Tagged Wcj	2.06 $\pm$ 0.70	6.33 $\pm$ 2.12	2.42 $\pm$ 0.80	0.54 $\pm$ 0.19	0.16 $\pm$ 0.06
Tagged Total HF	12.32 $\pm$ 4.07	40.05 $\pm$ 12.73	16.34 $\pm$ 5.22	4.60 $\pm$ 1.50	1.44 $\pm$ 0.49
Tagged Total MC	1.57 $\pm$ 0.26	23.41 $\pm$ 3.02	44.87 $\pm$ 5.84	52.53 $\pm$ 6.91	19.64 $\pm$ 2.82
Tagged Mistags	0.30 $\pm$ 0.10	2.12 $\pm$ 1.07	1.19 $\pm$ 0.48	0.28 $\pm$ 0.13	0.07 $\pm$ 0.04
Tagged Non-W	0.91 $\pm$ 0.37	2.82 $\pm$ 1.13	1.13 $\pm$ 0.45	0.02 $\pm$ 0.50	0.01 $\pm$ 0.50
Total Prediction	15.11 $\pm$ 4.10	68.40 $\pm$ 13.17	63.53 $\pm$ 7.86	57.42 $\pm$ 7.09	21.15 $\pm$ 2.90
Observed	15.00 $\pm$ 0.00	70.00 $\pm$ 0.00	63.00 $\pm$ 0.00	72.00 $\pm$ 0.00	28.00 $\pm$ 0.00

CMX Muons

Process	1jet	2jets	3jets	4jets	5jets
All Pretag Candidates	92995.00 $\pm$ 0.00	14744.00 $\pm$ 0.00	2266.00 $\pm$ 0.00	521.00 $\pm$ 0.00	119.00 $\pm$ 0.00
Total Pretag Non-W (after MET cut)	8306.58 $\pm$ 3322.63	1582.08 $\pm$ 632.83	244.61 $\pm$ 97.84	14.74 $\pm$ 5.90	5.30 $\pm$ 2.12
Total Pretag ww (after MET cut)	277.22 $\pm$ 23.61	297.38 $\pm$ 25.32	59.25 $\pm$ 5.10	10.24 $\pm$ 0.93	1.63 $\pm$ 0.19
Total Pretag wz (after MET cut)	41.14 $\pm$ 4.35	50.05 $\pm$ 5.30	11.08 $\pm$ 1.18	1.81 $\pm$ 0.21	0.33 $\pm$ 0.05
Total Pretag zz (after MET cut)	2.72 $\pm$ 0.40	3.02 $\pm$ 0.44	0.92 $\pm$ 0.14	0.17 $\pm$ 0.03	0.04 $\pm$ 0.01
Total Pretag stops (after MET cut)	10.23 $\pm$ 0.93	22.22 $\pm$ 2.02	6.82 $\pm$ 0.62	1.50 $\pm$ 0.14	0.30 $\pm$ 0.03
Total Pretag stopt (after MET cut)	31.45 $\pm$ 3.44	36.73 $\pm$ 4.02	10.69 $\pm$ 1.18	1.90 $\pm$ 0.21	0.34 $\pm$ 0.04
Total Pretag zlf (after MET cut)	7037.48 $\pm$ 615.21	1185.09 $\pm$ 103.60	181.88 $\pm$ 15.90	25.99 $\pm$ 2.28	4.00 $\pm$ 0.35
Total Pretag top (after MET cut)	16.33 $\pm$ 1.44	87.79 $\pm$ 7.64	173.82 $\pm$ 15.10	161.89 $\pm$ 14.06	53.69 $\pm$ 4.68
Total Pretag wh115 (after MET cut)	1.41 $\pm$ 0.09	3.26 $\pm$ 0.20	0.87 $\pm$ 0.05	0.15 $\pm$ 0.01	0.02 $\pm$ 0.00
Total Pretag wh100 (after MET cut)	3.11 $\pm$ 0.19	5.34 $\pm$ 0.32	1.18 $\pm$ 0.07	0.20 $\pm$ 0.01	0.03 $\pm$ 0.00
Total Pretag wh105 (after MET cut)	2.40 $\pm$ 0.15	4.58 $\pm$ 0.28	1.10 $\pm$ 0.07	0.18 $\pm$ 0.01	0.03 $\pm$ 0.00
Total Pretag wh110 (after MET cut)	1.81 $\pm$ 0.11	3.73 $\pm$ 0.23	0.91 $\pm$ 0.06	0.15 $\pm$ 0.01	0.02 $\pm$ 0.00
Total Pretag wh120 (after MET cut)	1.06 $\pm$ 0.06	2.66 $\pm$ 0.16	0.72 $\pm$ 0.04	0.13 $\pm$ 0.01	0.02 $\pm$ 0.00
Total Pretag wh125 (after MET cut)	0.76 $\pm$ 0.05	2.10 $\pm$ 0.13	0.60 $\pm$ 0.04	0.10 $\pm$ 0.01	0.02 $\pm$ 0.00
Total Pretag wh130 (after MET cut)	0.54 $\pm$ 0.03	1.57 $\pm$ 0.10	0.47 $\pm$ 0.03	0.08 $\pm$ 0.01	0.01 $\pm$ 0.00
Total Pretag wh135 (after MET cut)	0.37 $\pm$ 0.02	1.13 $\pm$ 0.07	0.35 $\pm$ 0.02	0.06 $\pm$ 0.00	0.01 $\pm$ 0.00
Total Pretag wh140 (after MET cut)	0.23 $\pm$ 0.01	0.77 $\pm$ 0.05	0.25 $\pm$ 0.02	0.05 $\pm$ 0.00	0.01 $\pm$ 0.00
Total Pretag wh145 (after MET cut)	0.14 $\pm$ 0.01	0.50 $\pm$ 0.03	0.17 $\pm$ 0.01	0.03 $\pm$ 0.00	0.01 $\pm$ 0.00
Total Pretag wh150 (after MET cut)	0.08 $\pm$ 0.00	0.31 $\pm$ 0.02	0.10 $\pm$ 0.01	0.02 $\pm$ 0.00	0.00 $\pm$ 0.00
Total Pretag wh120L (after MET cut)	1.06 $\pm$ 0.06	2.64 $\pm$ 0.16	0.70 $\pm$ 0.04	0.12 $\pm$ 0.01	0.01 $\pm$ 0.00
Total Pretag wh120M (after MET cut)	1.00 $\pm$ 0.06	2.55 $\pm$ 0.15	0.77 $\pm$ 0.05	0.15 $\pm$ 0.01	0.03 $\pm$ 0.00
Total Pretag MC (after MET cut)	7416.56 $\pm$ 631.32	1682.28 $\pm$ 127.53	444.47 $\pm$ 31.32	203.50 $\pm$ 16.00	60.33 $\pm$ 4.98
Total Pretag Wbb (after MET cut)	1015.34 $\pm$ 307.83	408.77 $\pm$ 124.77	100.22 $\pm$ 30.77	28.32 $\pm$ 8.64	6.00 $\pm$ 1.90
Total Pretag Wcc (after MET cut)	2600.13 $\pm$ 788.30	894.74 $\pm$ 273.10	208.29 $\pm$ 63.94	52.16 $\pm$ 15.92	12.11 $\pm$ 3.83
Total Pretag Wcj (after MET cut)	4915.39 $\pm$ 1490.23	959.06 $\pm$ 292.73	145.95 $\pm$ 44.81	27.44 $\pm$ 8.38	4.86 $\pm$ 1.54
Total Pretag Mistags (after MET cut)	68740.99 $\pm$ 3801.79	9217.06 $\pm$ 776.40	1122.46 $\pm$ 134.75	194.85 $\pm$ 26.69	30.40 $\pm$ 7.30
Total Pretag HF	8530.86 $\pm$ 1736.42	2262.58 $\pm$ 431.35	454.47 $\pm$ 87.19	107.91 $\pm$ 20.54	22.97 $\pm$ 4.90
Total Pretag Corrected	77271.86 $\pm$ 3382.08	11479.64 $\pm$ 645.55	1576.92 $\pm$ 102.73	302.76 $\pm$ 17.05	53.37 $\pm$ 5.41
Total LF Pretag Corrected	68740.99 $\pm$ 3801.79	9217.06 $\pm$ 776.40	1122.46 $\pm$ 134.75	194.85 $\pm$ 26.69	30.40 $\pm$ 7.30
Tagged ww	0.02 $\pm$ 0.00	0.21 $\pm$ 0.04	0.22 $\pm$ 0.04	0.09 $\pm$ 0.02	0.01 $\pm$ 0.00
Tagged wz	0.10 $\pm$ 0.02	0.77 $\pm$ 0.11	0.21 $\pm$ 0.03	0.04 $\pm$ 0.01	0.02 $\pm$ 0.00
Tagged zz	0.01 $\pm$ 0.00	0.06 $\pm$ 0.01	0.02 $\pm$ 0.00	0.00 $\pm$ 0.00	0.00 $\pm$ 0.00
Tagged stops	0.11 $\pm$ 0.02	2.22 $\pm$ 0.28	0.81 $\pm$ 0.10	0.21 $\pm$ 0.03	0.05 $\pm$ 0.01
Tagged stopt	0.08 $\pm$ 0.01	0.83 $\pm$ 0.13	0.75 $\pm$ 0.11	0.20 $\pm$ 0.03	0.05 $\pm$ 0.01
Tagged zlf	0.37 $\pm$ 0.07	1.25 $\pm$ 0.24	0.66 $\pm$ 0.13	0.22 $\pm$ 0.05	0.06 $\pm$ 0.02
Tagged top	0.20 $\pm$ 0.03	6.36 $\pm$ 0.84	19.02 $\pm$ 2.49	24.60 $\pm$ 3.20	9.09 $\pm$ 1.30
Tagged wh115	0.02 $\pm$ 0.00	0.32 $\pm$ 0.03	0.10 $\pm$ 0.01	0.02 $\pm$ 0.00	0.00 $\pm$ 0.00
Tagged wh100	0.05 $\pm$ 0.01	0.50 $\pm$ 0.05	0.12 $\pm$ 0.01	0.03 $\pm$ 0.00	0.00 $\pm$ 0.00
Tagged wh105	0.03 $\pm$ 0.00	0.43 $\pm$ 0.05	0.12 $\pm$ 0.01	0.02 $\pm$ 0.00	0.00 $\pm$ 0.00
Tagged wh110	0.03 $\pm$ 0.00	0.34 $\pm$ 0.04	0.10 $\pm$ 0.01	0.02 $\pm$ 0.00	0.00 $\pm$ 0.00
Tagged wh120	0.01 $\pm$ 0.00	0.26 $\pm$ 0.03	0.09 $\pm$ 0.01	0.02 $\pm$ 0.00	0.00 $\pm$ 0.00
Tagged wh125	0.01 $\pm$ 0.00	0.21 $\pm$ 0.02	0.07 $\pm$ 0.01	0.01 $\pm$ 0.00	0.00 $\pm$ 0.00
Tagged wh130	0.01 $\pm$ 0.00	0.16 $\pm$ 0.02	0.06 $\pm$ 0.01	0.01 $\pm$ 0.00	0.00 $\pm$ 0.00
Tagged wh135	0.00 $\pm$ 0.00	0.12 $\pm$ 0.01	0.04 $\pm$ 0.00	0.01 $\pm$ 0.00	0.00 $\pm$ 0.00
Tagged wh140	0.00 $\pm$ 0.00	0.08 $\pm$ 0.01	0.03 $\pm$ 0.00	0.01 $\pm$ 0.00	0.00 $\pm$ 0.00
Tagged wh145	0.00 $\pm$ 0.00	0.05 $\pm$ 0.01	0.02 $\pm$ 0.00	0.00 $\pm$ 0.00	0.00 $\pm$ 0.00
Tagged wh150	0.00 $\pm$ 0.00	0.03 $\pm$ 0.00	0.01 $\pm$ 0.00	0.00 $\pm$ 0.00	0.00 $\pm$ 0.00
Tagged wh120L	0.02 $\pm$ 0.00	0.25 $\pm$ 0.03	0.08 $\pm$ 0.01	0.02 $\pm$ 0.00	0.00 $\pm$ 0.00
Tagged wh120M	0.01 $\pm$ 0.00	0.25 $\pm$ 0.03	0.09 $\pm$ 0.01	0.02 $\pm$ 0.00	0.00 $\pm$ 0.00
Raw Mis-tags(info)	0.31 $\pm$ 0.10	1.91 $\pm$ 1.01	1.36 $\pm$ 0.50	0.67 $\pm$ 0.23	0.21 $\pm$ 0.08
Tagged Wbb	5.18 $\pm$ 1.71	16.36 $\pm$ 5.20	5.37 $\pm$ 1.71	2.16 $\pm$ 0.69	0.61 $\pm$ 0.21
Tagged Wcc	0.55 $\pm$ 0.18	3.36 $\pm$ 1.14	1.80 $\pm$ 0.60	0.86 $\pm$ 0.29	0.32 $\pm$ 0.11
Tagged Wcj	1.03 $\pm$ 0.35	3.60 $\pm$ 1.22	1.26 $\pm$ 0.42	0.45 $\pm$ 0.15	0.13 $\pm$ 0.04
Tagged Total HF	6.76 $\pm$ 2.23	23.33 $\pm$ 7.49	8.43 $\pm$ 2.70	3.46 $\pm$ 1.11	1.06 $\pm$ 0.36
Tagged Total MC	0.89 $\pm$ 0.14	11.69 $\pm$ 1.50	21.68 $\pm$ 2.81	25.37 $\pm$ 3.30	9.28 $\pm$ 1.33
Tagged Mistags	0.23 $\pm$ 0.08	1.19 $\pm$ 0.64	0.67 $\pm$ 0.26	0.25 $\pm$ 0.09	0.05 $\pm$ 0.02
Tagged Non-W	0.49 $\pm$ 0.50	1.50 $\pm$ 0.60	0.00 $\pm$ 0.50	0.43 $\pm$ 0.50	0.09 $\pm$ 0.50
Total Prediction	8.37 $\pm$ 2.29	37.71 $\pm$ 7.68	30.78 $\pm$ 3.93	29.51 $\pm$ 3.52	10.49 $\pm$ 1.46
Observed	11.00 $\pm$ 0.00	37.00 $\pm$ 0.00	30.00 $\pm$ 0.00	36.00 $\pm$ 0.00	8.00 $\pm$ 0.00

LMU Muons

Process	1jet	2jets	3jets	4jets	5jets
All Pretag Candidates	22433.00 ± 0.00	9052.00 ± 0.00	1934.00 ± 0.00	516.00 ± 0.00	136.00 ± 0.00
Total Pretag Non-W (after MET cut)	0.00 ± 0.00	0.00 ± 0.00	0.00 ± 0.00	0.00 ± 0.00	0.00 ± 0.00
Total Pretag ww (after MET cut)	157.40 ± 13.48	229.90 ± 19.66	58.91 ± 5.09	11.15 ± 1.02	2.25 ± 0.26
Total Pretag wz (after MET cut)	24.19 ± 2.57	41.97 ± 4.45	11.80 ± 1.26	2.03 ± 0.23	0.36 ± 0.05
Total Pretag zz (after MET cut)	1.50 ± 0.22	2.62 ± 0.39	1.01 ± 0.15	0.20 ± 0.03	0.04 ± 0.01
Total Pretag stops (after MET cut)	8.43 ± 0.77	25.36 ± 2.31	8.32 ± 0.76	1.81 ± 0.17	0.35 ± 0.04
Total Pretag stopt (after MET cut)	24.74 ± 2.71	38.74 ± 4.24	11.79 ± 1.30	2.22 ± 0.25	0.40 ± 0.05
Total Pretag zlf (after MET cut)	1796.18 ± 157.44	900.46 ± 78.93	190.69 ± 16.72	30.67 ± 2.69	5.16 ± 0.46
Total Pretag top (after MET cut)	20.54 ± 1.82	121.30 ± 10.58	237.92 ± 20.71	219.07 ± 19.07	73.57 ± 6.43
Total Pretag wh115 (after MET cut)	1.35 ± 0.08	3.60 ± 0.22	1.10 ± 0.07	0.20 ± 0.01	0.03 ± 0.00
Total Pretag wh100 (after MET cut)	2.67 ± 0.16	5.51 ± 0.34	1.52 ± 0.09	0.27 ± 0.02	0.04 ± 0.00
Total Pretag wh105 (after MET cut)	2.13 ± 0.13	4.88 ± 0.30	1.34 ± 0.08	0.25 ± 0.02	0.04 ± 0.00
Total Pretag wh110 (after MET cut)	1.65 ± 0.10	4.11 ± 0.25	1.17 ± 0.07	0.19 ± 0.01	0.04 ± 0.00
Total Pretag wh120 (after MET cut)	1.06 ± 0.06	3.02 ± 0.18	0.94 ± 0.06	0.17 ± 0.01	0.03 ± 0.00
Total Pretag wh125 (after MET cut)	0.77 ± 0.05	2.42 ± 0.15	0.77 ± 0.05	0.15 ± 0.01	0.03 ± 0.00
Total Pretag wh130 (after MET cut)	0.55 ± 0.03	1.86 ± 0.11	0.63 ± 0.04	0.12 ± 0.01	0.02 ± 0.00
Total Pretag wh135 (after MET cut)	0.38 ± 0.02	1.39 ± 0.08	0.47 ± 0.03	0.10 ± 0.01	0.02 ± 0.00
Total Pretag wh140 (after MET cut)	0.26 ± 0.02	0.98 ± 0.06	0.34 ± 0.02	0.07 ± 0.00	0.01 ± 0.00
Total Pretag wh145 (after MET cut)	0.16 ± 0.01	0.64 ± 0.04	0.23 ± 0.01	0.05 ± 0.00	0.01 ± 0.00
Total Pretag wh150 (after MET cut)	0.09 ± 0.01	0.39 ± 0.02	0.15 ± 0.01	0.03 ± 0.00	0.01 ± 0.00
Total Pretag wh120L (after MET cut)	1.06 ± 0.07	3.05 ± 0.19	0.92 ± 0.06	0.16 ± 0.01	0.03 ± 0.00
Total Pretag wh120M (after MET cut)	0.98 ± 0.06	2.93 ± 0.18	1.03 ± 0.06	0.21 ± 0.01	0.04 ± 0.00
Total Pretag MC (after MET cut)	2032.99 ± 167.93	1360.35 ± 101.51	520.43 ± 37.06	267.15 ± 21.30	82.12 ± 6.81
Total Pretag Wbb (after MET cut)	374.76 ± 112.47	313.15 ± 94.04	96.38 ± 29.02	24.33 ± 7.59	6.77 ± 2.21
Total Pretag Wcc (after MET cut)	820.32 ± 246.19	642.64 ± 192.98	196.42 ± 59.15	45.56 ± 14.21	13.07 ± 4.25
Total Pretag Wcj (after MET cut)	1313.29 ± 394.14	583.08 ± 175.09	116.96 ± 35.22	20.19 ± 6.30	4.42 ± 1.44
Total Pretag Mistags (after MET cut)	17891.64 ± 507.01	6152.78 ± 295.48	1003.81 ± 83.84	158.77 ± 28.11	29.62 ± 8.77
Total Pretag HF	2508.37 ± 478.39	1538.87 ± 277.50	409.76 ± 75.20	90.08 ± 18.34	24.26 ± 5.54
Total Pretag Corrected	20400.01 ± 167.93	7691.65 ± 101.51	1413.57 ± 37.06	248.85 ± 21.30	53.88 ± 6.81
Total LF Pretag Corrected	17891.64 ± 507.01	6152.78 ± 295.48	1003.81 ± 83.84	158.77 ± 28.11	29.62 ± 8.77
Tagged ww	0.02 ± 0.01	0.23 ± 0.05	0.24 ± 0.05	0.09 ± 0.01	0.05 ± 0.01
Tagged wz	0.08 ± 0.02	0.64 ± 0.09	0.21 ± 0.03	0.06 ± 0.01	0.01 ± 0.00
Tagged zz	0.00 ± 0.00	0.03 ± 0.01	0.03 ± 0.01	0.01 ± 0.00	0.00 ± 0.00
Tagged stops	0.10 ± 0.02	2.56 ± 0.32	1.01 ± 0.13	0.27 ± 0.04	0.05 ± 0.01
Tagged stopt	0.07 ± 0.01	0.96 ± 0.16	0.90 ± 0.13	0.24 ± 0.04	0.05 ± 0.01
Tagged zlf	0.17 ± 0.03	1.07 ± 0.22	0.71 ± 0.15	0.27 ± 0.06	0.07 ± 0.02
Tagged top	0.24 ± 0.04	8.94 ± 1.20	26.02 ± 3.45	33.30 ± 4.38	12.31 ± 1.76
Tagged wh115	0.02 ± 0.00	0.36 ± 0.04	0.13 ± 0.01	0.02 ± 0.00	0.00 ± 0.00
Tagged wh100	0.05 ± 0.01	0.53 ± 0.06	0.17 ± 0.02	0.04 ± 0.00	0.01 ± 0.00
Tagged wh105	0.03 ± 0.01	0.48 ± 0.05	0.16 ± 0.02	0.03 ± 0.00	0.01 ± 0.00
Tagged wh110	0.02 ± 0.00	0.40 ± 0.04	0.13 ± 0.01	0.03 ± 0.00	0.01 ± 0.00
Tagged wh120	0.02 ± 0.00	0.31 ± 0.03	0.11 ± 0.01	0.03 ± 0.00	0.00 ± 0.00
Tagged wh125	0.01 ± 0.00	0.25 ± 0.03	0.09 ± 0.01	0.02 ± 0.00	0.00 ± 0.00
Tagged wh130	0.01 ± 0.00	0.19 ± 0.02	0.08 ± 0.01	0.01 ± 0.00	0.00 ± 0.00
Tagged wh135	0.01 ± 0.00	0.14 ± 0.02	0.06 ± 0.01	0.01 ± 0.00	0.00 ± 0.00
Tagged wh140	0.00 ± 0.00	0.10 ± 0.01	0.04 ± 0.00	0.01 ± 0.00	0.00 ± 0.00
Tagged wh145	0.00 ± 0.00	0.07 ± 0.01	0.03 ± 0.00	0.01 ± 0.00	0.00 ± 0.00
Tagged wh150	0.00 ± 0.00	0.04 ± 0.00	0.02 ± 0.00	0.00 ± 0.00	0.00 ± 0.00
Tagged wh120L	0.02 ± 0.00	0.31 ± 0.03	0.11 ± 0.01	0.02 ± 0.00	0.00 ± 0.00
Tagged wh120M	0.02 ± 0.00	0.29 ± 0.03	0.12 ± 0.01	0.03 ± 0.00	0.01 ± 0.00
Raw Mis-tags(info)	0.19 ± 0.07	1.87 ± 1.04	1.33 ± 0.53	0.56 ± 0.25	0.31 ± 0.19
Tagged Wbb	2.63 ± 0.86	14.04 ± 4.40	6.12 ± 1.93	1.87 ± 0.61	0.69 ± 0.24
Tagged Wcc	0.37 ± 0.12	3.08 ± 1.05	2.12 ± 0.70	0.78 ± 0.27	0.34 ± 0.12
Tagged Wcj	0.59 ± 0.20	2.79 ± 0.95	1.26 ± 0.42	0.34 ± 0.12	0.11 ± 0.04
Tagged Total HF	3.59 ± 1.18	19.91 ± 6.37	9.51 ± 3.05	2.99 ± 0.98	1.14 ± 0.39
Tagged Total MC	0.68 ± 0.11	14.43 ± 1.89	29.12 ± 3.84	34.22 ± 4.50	12.55 ± 1.80
Tagged Mistags	0.15 ± 0.06	1.27 ± 0.71	0.69 ± 0.28	0.17 ± 0.08	0.07 ± 0.05
Tagged Non-W	0.27 ± 0.50	0.00 ± 0.50	0.00 ± 0.50	10.44 ± 8.35	2.37 ± 1.90
Total Prediction	4.69 ± 1.29	35.61 ± 6.70	39.32 ± 4.94	47.82 ± 9.54	16.13 ± 2.64
Observed	7.00 ± 0.00	32.00 ± 0.00	36.00 ± 0.00	44.00 ± 0.00	10.00 ± 0.00

ISOTKm Muons

Process	1jet	2jets	3jets	4jets	5jets
All Pretag Candidates	34785.00 ± 0.00	14697.00 ± 0.00	3392.00 ± 0.00	858.00 ± 0.00	191.00 ± 0.00
Total Pretag Non-W (after MET cut)	14749.40 ± 5899.76	5530.16 ± 2212.06	1516.70 ± 606.68	211.65 ± 84.66	3.37 ± 1.35
Total Pretag ww (after MET cut)	149.86 ± 19.11	227.85 ± 29.03	61.73 ± 7.90	11.89 ± 1.56	2.16 ± 0.32
Total Pretag wz (after MET cut)	23.17 ± 3.30	41.60 ± 5.91	12.19 ± 1.74	2.27 ± 0.33	0.42 ± 0.07
Total Pretag zz (after MET cut)	1.51 ± 0.27	2.41 ± 0.42	1.02 ± 0.18	0.23 ± 0.04	0.05 ± 0.01
Total Pretag stops (after MET cut)	8.61 ± 1.13	26.76 ± 3.51	8.66 ± 1.14	1.85 ± 0.25	0.41 ± 0.06
Total Pretag stopt (after MET cut)	25.49 ± 3.69	38.86 ± 5.62	12.44 ± 1.80	2.40 ± 0.35	0.45 ± 0.07
Total Pretag zlf (after MET cut)	2349.92 ± 302.84	1014.09 ± 130.69	210.93 ± 27.19	35.28 ± 4.55	5.28 ± 0.68
Total Pretag top (after MET cut)	18.15 ± 2.35	114.08 ± 14.67	236.44 ± 30.38	223.02 ± 28.65	76.19 ± 9.80
Total Pretag wh115 (after MET cut)	1.32 ± 0.15	3.56 ± 0.40	1.08 ± 0.12	0.20 ± 0.02	0.03 ± 0.00
Total Pretag wh100 (after MET cut)	2.60 ± 0.29	5.53 ± 0.62	1.49 ± 0.17	0.27 ± 0.03	0.04 ± 0.01
Total Pretag wh105 (after MET cut)	2.18 ± 0.25	4.79 ± 0.54	1.38 ± 0.16	0.24 ± 0.03	0.04 ± 0.01
Total Pretag wh110 (after MET cut)	1.66 ± 0.19	4.10 ± 0.46	1.21 ± 0.14	0.22 ± 0.03	0.03 ± 0.00
Total Pretag wh120 (after MET cut)	1.02 ± 0.11	2.99 ± 0.34	0.94 ± 0.11	0.18 ± 0.02	0.03 ± 0.00
Total Pretag wh125 (after MET cut)	0.77 ± 0.09	2.42 ± 0.27	0.79 ± 0.09	0.14 ± 0.02	0.03 ± 0.00
Total Pretag wh130 (after MET cut)	0.54 ± 0.06	1.86 ± 0.21	0.62 ± 0.07	0.12 ± 0.01	0.02 ± 0.00
Total Pretag wh135 (after MET cut)	0.37 ± 0.04	1.38 ± 0.15	0.47 ± 0.05	0.09 ± 0.01	0.02 ± 0.00
Total Pretag wh140 (after MET cut)	0.24 ± 0.03	0.97 ± 0.11	0.34 ± 0.04	0.07 ± 0.01	0.01 ± 0.00
Total Pretag wh145 (after MET cut)	0.15 ± 0.02	0.63 ± 0.07	0.23 ± 0.03	0.05 ± 0.01	0.01 ± 0.00
Total Pretag wh150 (after MET cut)	0.09 ± 0.01	0.39 ± 0.04	0.15 ± 0.02	0.03 ± 0.00	0.01 ± 0.00
Total Pretag wh120L (after MET cut)	1.03 ± 0.12	3.00 ± 0.34	0.93 ± 0.11	0.15 ± 0.02	0.03 ± 0.00
Total Pretag wh120M (after MET cut)	0.98 ± 0.11	2.93 ± 0.33	1.02 ± 0.11	0.21 ± 0.02	0.04 ± 0.01
Total Pretag MC (after MET cut)	2576.70 ± 325.36	1465.65 ± 177.29	543.41 ± 64.27	276.94 ± 34.14	84.95 ± 10.68
Total Pretag Wbb (after MET cut)	303.55 ± 137.29	306.60 ± 127.54	91.77 ± 50.25	34.52 ± 13.42	12.48 ± 3.97
Total Pretag Wcc (after MET cut)	698.29 ± 315.81	640.94 ± 266.61	186.10 ± 101.90	70.04 ± 27.22	22.11 ± 7.02
Total Pretag Wcj (after MET cut)	1090.82 ± 493.34	573.18 ± 238.43	109.43 ± 59.92	29.74 ± 11.56	8.29 ± 2.64
Total Pretag Mistags (after MET cut)	15366.23 ± 5964.38	6180.47 ± 2278.53	944.59 ± 639.23	235.11 ± 100.31	59.81 ± 14.15
Total Pretag HF	2092.67 ± 812.94	1520.72 ± 516.75	387.30 ± 190.85	134.31 ± 41.59	42.88 ± 9.19
Total Pretag Corrected	17458.90 ± 5908.72	7701.19 ± 2219.16	1331.89 ± 610.07	369.42 ± 91.28	102.68 ± 10.76
Total LF Pretag Corrected	15366.23 ± 5964.38	6180.47 ± 2278.53	944.59 ± 639.23	235.11 ± 100.31	59.81 ± 14.15
Tagged ww	0.02 ± 0.00	0.20 ± 0.05	0.24 ± 0.05	0.10 ± 0.02	0.02 ± 0.00
Tagged wz	0.04 ± 0.01	0.63 ± 0.11	0.20 ± 0.03	0.04 ± 0.01	0.01 ± 0.00
Tagged zz	0.00 ± 0.00	0.03 ± 0.01	0.02 ± 0.00	0.00 ± 0.00	0.00 ± 0.00
Tagged stops	0.09 ± 0.02	2.69 ± 0.43	1.00 ± 0.16	0.26 ± 0.04	0.06 ± 0.01
Tagged stopt	0.06 ± 0.01	0.92 ± 0.18	0.93 ± 0.16	0.24 ± 0.04	0.07 ± 0.01
Tagged zlf	0.18 ± 0.04	1.14 ± 0.26	0.79 ± 0.17	0.22 ± 0.05	0.08 ± 0.02
Tagged top	0.24 ± 0.05	8.02 ± 1.32	25.41 ± 4.12	33.08 ± 5.35	12.83 ± 2.19
Tagged wh115	0.02 ± 0.00	0.35 ± 0.05	0.12 ± 0.02	0.03 ± 0.00	0.00 ± 0.00
Tagged wh100	0.04 ± 0.01	0.53 ± 0.08	0.17 ± 0.03	0.03 ± 0.01	0.01 ± 0.00
Tagged wh105	0.04 ± 0.01	0.46 ± 0.07	0.15 ± 0.02	0.03 ± 0.00	0.01 ± 0.00
Tagged wh110	0.02 ± 0.00	0.41 ± 0.06	0.14 ± 0.02	0.03 ± 0.00	0.01 ± 0.00
Tagged wh120	0.02 ± 0.00	0.29 ± 0.04	0.11 ± 0.02	0.02 ± 0.00	0.00 ± 0.00
Tagged wh125	0.01 ± 0.00	0.24 ± 0.04	0.10 ± 0.01	0.02 ± 0.00	0.00 ± 0.00
Tagged wh130	0.01 ± 0.00	0.18 ± 0.03	0.07 ± 0.01	0.02 ± 0.00	0.00 ± 0.00
Tagged wh135	0.00 ± 0.00	0.14 ± 0.02	0.06 ± 0.01	0.01 ± 0.00	0.00 ± 0.00
Tagged wh140	0.00 ± 0.00	0.10 ± 0.01	0.04 ± 0.01	0.01 ± 0.00	0.00 ± 0.00
Tagged wh145	0.00 ± 0.00	0.07 ± 0.01	0.03 ± 0.00	0.01 ± 0.00	0.00 ± 0.00
Tagged wh150	0.00 ± 0.00	0.04 ± 0.01	0.02 ± 0.00	0.00 ± 0.00	0.00 ± 0.00
Tagged wh120L	0.02 ± 0.00	0.30 ± 0.04	0.11 ± 0.02	0.02 ± 0.00	0.00 ± 0.00
Tagged wh120M	0.02 ± 0.00	0.29 ± 0.04	0.12 ± 0.02	0.03 ± 0.00	0.01 ± 0.00
Raw Mis-tags(info)	0.38 ± 0.15	3.20 ± 1.70	2.38 ± 0.97	1.20 ± 0.51	0.44 ± 0.19
Tagged Wbb	2.11 ± 0.99	14.59 ± 6.21	5.52 ± 3.06	2.71 ± 1.09	1.29 ± 0.44
Tagged Wcc	0.30 ± 0.15	2.93 ± 1.30	1.71 ± 0.96	1.12 ± 0.46	0.49 ± 0.17
Tagged Wcj	0.47 ± 0.23	2.62 ± 1.16	1.00 ± 0.56	0.47 ± 0.20	0.18 ± 0.06
Tagged Total HF	2.89 ± 1.21	20.14 ± 7.76	8.23 ± 3.75	4.30 ± 1.57	1.96 ± 0.66
Tagged Total MC	0.63 ± 0.12	13.63 ± 2.22	28.60 ± 4.61	33.94 ± 5.49	13.07 ± 2.24
Tagged Mistags	0.17 ± 0.09	1.34 ± 0.87	0.66 ± 0.52	0.33 ± 0.20	0.14 ± 0.07
Tagged Non-W	4.19 ± 1.67	8.82 ± 3.53	7.48 ± 2.99	4.07 ± 3.25	2.25 ± 1.80
Total Prediction	7.87 ± 2.07	43.94 ± 8.85	44.98 ± 6.67	42.64 ± 6.57	17.42 ± 2.95
Observed	9.00 ± 0.00	40.00 ± 0.00	50.00 ± 0.00	38.00 ± 0.00	21.00 ± 0.00

ISOTKh Muons

Process	1jet	2jets	3jets	4jets	5jets
All Pretag Candidates	32392.00 ± 0.00	6521.00 ± 0.00	1140.00 ± 0.00	235.00 ± 0.00	44.00 ± 0.00
Total Pretag Non-W (after MET cut)	3833.46 ± 1533.38	1143.53 ± 457.41	270.12 ± 108.05	59.86 ± 23.94	10.38 ± 4.15
Total Pretag ww (after MET cut)	179.23 ± 22.85	180.69 ± 23.03	36.66 ± 4.71	5.38 ± 0.73	0.86 ± 0.15
Total Pretag wz (after MET cut)	26.70 ± 3.80	27.50 ± 3.91	5.59 ± 0.80	0.88 ± 0.14	0.14 ± 0.03
Total Pretag zz (after MET cut)	2.21 ± 0.39	0.81 ± 0.15	0.23 ± 0.04	0.04 ± 0.01	0.01 ± 0.00
Total Pretag stops (after MET cut)	7.54 ± 0.99	15.97 ± 2.10	4.28 ± 0.57	0.87 ± 0.12	0.18 ± 0.03
Total Pretag stopt (after MET cut)	22.51 ± 3.26	26.00 ± 3.76	6.82 ± 0.99	1.08 ± 0.16	0.17 ± 0.03
Total Pretag zlf (after MET cut)	426.68 ± 54.99	129.95 ± 16.75	28.02 ± 3.61	4.74 ± 0.61	0.79 ± 0.11
Total Pretag top (after MET cut)	19.08 ± 2.47	81.98 ± 10.55	125.35 ± 16.11	95.66 ± 12.30	27.18 ± 3.51
Total Pretag wh115 (after MET cut)	1.02 ± 0.12	2.09 ± 0.24	0.53 ± 0.06	0.08 ± 0.01	0.01 ± 0.00
Total Pretag wh100 (after MET cut)	2.02 ± 0.23	3.30 ± 0.37	0.74 ± 0.08	0.11 ± 0.01	0.01 ± 0.00
Total Pretag wh105 (after MET cut)	1.61 ± 0.18	2.88 ± 0.32	0.67 ± 0.08	0.10 ± 0.01	0.01 ± 0.00
Total Pretag wh110 (after MET cut)	1.30 ± 0.15	2.47 ± 0.28	0.59 ± 0.07	0.08 ± 0.01	0.01 ± 0.00
Total Pretag wh120 (after MET cut)	0.76 ± 0.09	1.72 ± 0.19	0.45 ± 0.05	0.07 ± 0.01	0.01 ± 0.00
Total Pretag wh125 (after MET cut)	0.56 ± 0.06	1.34 ± 0.15	0.37 ± 0.04	0.06 ± 0.01	0.01 ± 0.00
Total Pretag wh130 (after MET cut)	0.40 ± 0.05	1.04 ± 0.12	0.29 ± 0.03	0.05 ± 0.01	0.01 ± 0.00
Total Pretag wh135 (after MET cut)	0.27 ± 0.03	0.75 ± 0.08	0.23 ± 0.03	0.04 ± 0.00	0.01 ± 0.00
Total Pretag wh140 (after MET cut)	0.18 ± 0.02	0.52 ± 0.06	0.17 ± 0.02	0.03 ± 0.00	0.00 ± 0.00
Total Pretag wh145 (after MET cut)	0.11 ± 0.01	0.35 ± 0.04	0.11 ± 0.01	0.02 ± 0.00	0.00 ± 0.00
Total Pretag wh150 (after MET cut)	0.06 ± 0.01	0.21 ± 0.02	0.07 ± 0.01	0.01 ± 0.00	0.00 ± 0.00
Total Pretag wh120L (after MET cut)	0.76 ± 0.09	1.73 ± 0.19	0.43 ± 0.05	0.07 ± 0.01	0.01 ± 0.00
Total Pretag wh120M (after MET cut)	0.71 ± 0.08	1.65 ± 0.19	0.48 ± 0.05	0.09 ± 0.01	0.02 ± 0.00
Total Pretag MC (after MET cut)	683.95 ± 82.14	462.90 ± 54.06	206.95 ± 24.70	108.66 ± 13.60	29.33 ± 3.72
Total Pretag Wbb (after MET cut)	392.10 ± 119.60	195.83 ± 61.55	48.87 ± 16.78	5.91 ± 3.02	0.52 ± 0.70
Total Pretag Wcc (after MET cut)	996.15 ± 303.84	382.61 ± 120.25	89.57 ± 30.76	11.60 ± 5.94	0.96 ± 1.28
Total Pretag Wcj (after MET cut)	1704.40 ± 519.87	375.06 ± 117.88	53.05 ± 18.22	5.28 ± 2.70	0.35 ± 0.46
Total Pretag Mistags (after MET cut)	24781.94 ± 1658.80	3961.08 ± 499.42	471.44 ± 120.41	43.69 ± 29.42	2.46 ± 6.07
Total Pretag HF	3092.65 ± 627.39	953.49 ± 193.06	191.49 ± 47.07	22.80 ± 10.34	1.83 ± 2.40
Total Pretag Corrected	27874.59 ± 1535.58	4914.58 ± 460.59	662.93 ± 110.83	66.48 ± 27.54	4.29 ± 5.58
Total LF Pretag Corrected	24781.94 ± 1658.80	3961.08 ± 499.42	471.44 ± 120.41	43.69 ± 29.42	2.46 ± 6.07
Tagged ww	0.02 ± 0.00	0.21 ± 0.04	0.13 ± 0.03	0.06 ± 0.01	0.03 ± 0.01
Tagged wz	0.08 ± 0.02	0.39 ± 0.06	0.09 ± 0.01	0.03 ± 0.01	0.00 ± 0.00
Tagged zz	0.00 ± 0.00	0.01 ± 0.00	0.00 ± 0.00	0.00 ± 0.00	0.00 ± 0.00
Tagged stops	0.09 ± 0.02	1.55 ± 0.24	0.50 ± 0.08	0.12 ± 0.02	0.03 ± 0.00
Tagged stopt	0.07 ± 0.01	0.56 ± 0.10	0.44 ± 0.07	0.11 ± 0.02	0.02 ± 0.00
Tagged zlf	0.03 ± 0.01	0.18 ± 0.04	0.12 ± 0.03	0.04 ± 0.01	0.01 ± 0.00
Tagged top	0.25 ± 0.05	6.14 ± 0.96	13.33 ± 2.19	14.00 ± 2.35	4.59 ± 0.83
Tagged wh115	0.02 ± 0.00	0.21 ± 0.03	0.06 ± 0.01	0.01 ± 0.00	0.00 ± 0.00
Tagged wh100	0.03 ± 0.01	0.32 ± 0.05	0.08 ± 0.01	0.01 ± 0.00	0.00 ± 0.00
Tagged wh105	0.03 ± 0.00	0.28 ± 0.04	0.07 ± 0.01	0.01 ± 0.00	0.00 ± 0.00
Tagged wh110	0.02 ± 0.00	0.24 ± 0.03	0.07 ± 0.01	0.01 ± 0.00	0.00 ± 0.00
Tagged wh120	0.01 ± 0.00	0.18 ± 0.03	0.05 ± 0.01	0.01 ± 0.00	0.00 ± 0.00
Tagged wh125	0.01 ± 0.00	0.14 ± 0.02	0.04 ± 0.01	0.01 ± 0.00	0.00 ± 0.00
Tagged wh130	0.01 ± 0.00	0.11 ± 0.02	0.03 ± 0.01	0.01 ± 0.00	0.00 ± 0.00
Tagged wh135	0.00 ± 0.00	0.08 ± 0.01	0.03 ± 0.00	0.01 ± 0.00	0.00 ± 0.00
Tagged wh140	0.00 ± 0.00	0.05 ± 0.01	0.02 ± 0.00	0.00 ± 0.00	0.00 ± 0.00
Tagged wh145	0.00 ± 0.00	0.04 ± 0.01	0.01 ± 0.00	0.00 ± 0.00	0.00 ± 0.00
Tagged wh150	0.00 ± 0.00	0.02 ± 0.00	0.01 ± 0.00	0.00 ± 0.00	0.00 ± 0.00
Tagged wh120L	0.01 ± 0.00	0.18 ± 0.03	0.05 ± 0.01	0.01 ± 0.00	0.00 ± 0.00
Tagged wh120M	0.01 ± 0.00	0.17 ± 0.02	0.06 ± 0.01	0.01 ± 0.00	0.00 ± 0.00
Raw Mis-tags(info)	0.19 ± 0.06	1.63 ± 0.62	0.86 ± 0.37	0.33 ± 0.26	0.11 ± 0.06
Tagged Wbb	2.04 ± 0.67	8.56 ± 2.79	2.60 ± 0.93	0.46 ± 0.24	0.06 ± 0.07
Tagged Wcc	0.28 ± 0.09	1.77 ± 0.60	0.91 ± 0.34	0.20 ± 0.11	0.02 ± 0.03
Tagged Wcj	0.49 ± 0.16	1.73 ± 0.59	0.54 ± 0.20	0.09 ± 0.05	0.01 ± 0.01
Tagged Total HF	2.81 ± 0.92	12.06 ± 3.90	4.06 ± 1.38	0.75 ± 0.32	0.09 ± 0.08
Tagged Total MC	0.53 ± 0.10	9.04 ± 1.37	14.61 ± 2.37	14.37 ± 2.41	4.68 ± 0.84
Tagged Mistags	0.15 ± 0.05	0.99 ± 0.40	0.36 ± 0.18	0.06 ± 0.06	0.01 ± 0.02
Tagged Non-W	3.50 ± 1.40	3.41 ± 1.36	3.33 ± 1.33	1.61 ± 1.29	0.54 ± 0.43
Total Prediction	6.99 ± 1.68	25.50 ± 4.37	22.36 ± 3.05	16.79 ± 2.75	5.31 ± 0.95
Observed	6.00 ± 0.00	19.00 ± 0.00	15.00 ± 0.00	12.00 ± 0.00	4.00 ± 0.00

All detectors

Process	1jet	2jets	3jets	4jets	5jets
All Pretag Candidates	779979.00 $\pm$ 0.00	145273.00 $\pm$ 0.00	26020.00 $\pm$ 0.00	5830.00 $\pm$ 0.00	1375.00 $\pm$ 0.00
Total Pretag Non-W (after MET cut)	100738.15 $\pm$ 25144.47	30718.90 $\pm$ 7652.07	6696.50 $\pm$ 1572.89	1030.82 $\pm$ 259.64	167.09 $\pm$ 52.43
Total Pretag ww (after MET cut)	2627.80 $\pm$ 224.22	2913.97 $\pm$ 248.95	601.20 $\pm$ 51.55	104.33 $\pm$ 9.01	18.49 $\pm$ 1.65
Total Pretag wz (after MET cut)	367.84 $\pm$ 38.95	467.30 $\pm$ 49.52	109.32 $\pm$ 11.61	18.43 $\pm$ 1.97	3.34 $\pm$ 0.37
Total Pretag zz (after MET cut)	19.12 $\pm$ 2.80	19.87 $\pm$ 2.90	8.11 $\pm$ 1.19	1.81 $\pm$ 0.27	0.40 $\pm$ 0.06
Total Pretag stops (after MET cut)	102.34 $\pm$ 9.32	245.98 $\pm$ 22.44	76.20 $\pm$ 6.96	16.50 $\pm$ 1.51	3.36 $\pm$ 0.31
Total Pretag stopt (after MET cut)	315.03 $\pm$ 34.53	388.61 $\pm$ 42.64	114.01 $\pm$ 12.52	21.35 $\pm$ 2.35	3.60 $\pm$ 0.40
Total Pretag zlf (after MET cut)	33061.85 $\pm$ 2897.59	8003.47 $\pm$ 705.97	1481.33 $\pm$ 130.99	238.35 $\pm$ 21.10	37.94 $\pm$ 3.36
Total Pretag top (after MET cut)	189.58 $\pm$ 16.64	1012.84 $\pm$ 88.79	1966.10 $\pm$ 172.27	1814.36 $\pm$ 158.91	597.62 $\pm$ 52.38
Total Pretag wh115 (after MET cut)	14.62 $\pm$ 0.89	34.39 $\pm$ 2.10	9.40 $\pm$ 0.58	1.67 $\pm$ 0.10	0.28 $\pm$ 0.02
Total Pretag wh100 (after MET cut)	31.20 $\pm$ 1.90	55.35 $\pm$ 3.38	13.21 $\pm$ 0.81	2.22 $\pm$ 0.14	0.35 $\pm$ 0.02
Total Pretag wh105 (after MET cut)	24.57 $\pm$ 1.50	48.00 $\pm$ 2.93	12.00 $\pm$ 0.74	2.05 $\pm$ 0.13	0.32 $\pm$ 0.02
Total Pretag wh110 (after MET cut)	18.74 $\pm$ 1.14	40.15 $\pm$ 2.45	10.31 $\pm$ 0.63	1.74 $\pm$ 0.11	0.28 $\pm$ 0.02
Total Pretag wh120 (after MET cut)	11.00 $\pm$ 0.67	28.19 $\pm$ 1.72	8.01 $\pm$ 0.49	1.43 $\pm$ 0.09	0.24 $\pm$ 0.02
Total Pretag wh125 (after MET cut)	8.05 $\pm$ 0.49	22.25 $\pm$ 1.36	6.60 $\pm$ 0.41	1.19 $\pm$ 0.07	0.20 $\pm$ 0.01
Total Pretag wh130 (after MET cut)	5.68 $\pm$ 0.35	16.93 $\pm$ 1.04	5.24 $\pm$ 0.32	0.97 $\pm$ 0.06	0.17 $\pm$ 0.01
Total Pretag wh135 (after MET cut)	3.83 $\pm$ 0.23	12.34 $\pm$ 0.76	3.97 $\pm$ 0.24	0.75 $\pm$ 0.05	0.13 $\pm$ 0.01
Total Pretag wh140 (after MET cut)	2.50 $\pm$ 0.15	8.53 $\pm$ 0.52	2.85 $\pm$ 0.18	0.56 $\pm$ 0.03	0.09 $\pm$ 0.01
Total Pretag wh145 (after MET cut)	1.52 $\pm$ 0.09	5.60 $\pm$ 0.34	1.92 $\pm$ 0.12	0.39 $\pm$ 0.02	0.07 $\pm$ 0.00
Total Pretag wh150 (after MET cut)	0.87 $\pm$ 0.05	3.39 $\pm$ 0.21	1.20 $\pm$ 0.07	0.24 $\pm$ 0.02	0.04 $\pm$ 0.00
Total Pretag wh120L (after MET cut)	11.03 $\pm$ 0.67	28.28 $\pm$ 1.73	7.88 $\pm$ 0.48	1.33 $\pm$ 0.08	0.20 $\pm$ 0.01
Total Pretag wh120M (after MET cut)	10.35 $\pm$ 0.63	27.24 $\pm$ 1.67	8.64 $\pm$ 0.53	1.72 $\pm$ 0.11	0.34 $\pm$ 0.02
Total Pretag MC (after MET cut)	36683.56 $\pm$ 1537.10	13052.04 $\pm$ 466.37	4356.27 $\pm$ 150.99	2215.13 $\pm$ 85.87	664.74 $\pm$ 26.83
Total Pretag Wbb (after MET cut)	8691.66 $\pm$ 1365.09	3788.66 $\pm$ 596.55	984.06 $\pm$ 169.02	244.41 $\pm$ 42.10	64.92 $\pm$ 11.33
Total Pretag Wcc (after MET cut)	22167.36 $\pm$ 3497.24	8040.37 $\pm$ 1266.55	1992.99 $\pm$ 342.81	478.33 $\pm$ 81.29	119.66 $\pm$ 20.75
Total Pretag Wcj (after MET cut)	41396.04 $\pm$ 6619.08	8420.82 $\pm$ 1371.40	1351.14 $\pm$ 240.29	227.83 $\pm$ 40.31	46.83 $\pm$ 8.48
Total Pretag Mistags (after MET cut)	570302.23 $\pm$ 26407.19	81252.22 $\pm$ 8010.93	10639.04 $\pm$ 1684.41	1633.49 $\pm$ 302.14	311.77 $\pm$ 66.98
Total Pretag HF	72255.07 $\pm$ 7920.41	20249.84 $\pm$ 2324.48	4328.19 $\pm$ 583.48	950.57 $\pm$ 128.45	231.40 $\pm$ 31.90
Total Pretag Corrected	642557.29 $\pm$ 25191.41	101502.06 $\pm$ 7666.27	14967.23 $\pm$ 1580.12	2584.06 $\pm$ 273.48	543.18 $\pm$ 58.90
Total LF Pretag Corrected	570302.23 $\pm$ 26407.19	81252.22 $\pm$ 8010.93	10639.04 $\pm$ 1684.41	1633.49 $\pm$ 302.14	311.77 $\pm$ 66.98
Tagged ww	0.26 $\pm$ 0.06	2.49 $\pm$ 0.54	2.16 $\pm$ 0.40	0.91 $\pm$ 0.15	0.33 $\pm$ 0.07
Tagged wz	0.94 $\pm$ 0.17	7.14 $\pm$ 1.02	1.94 $\pm$ 0.28	0.43 $\pm$ 0.07	0.12 $\pm$ 0.02
Tagged zz	0.03 $\pm$ 0.01	0.29 $\pm$ 0.05	0.18 $\pm$ 0.03	0.05 $\pm$ 0.01	0.01 $\pm$ 0.00
Tagged stops	1.11 $\pm$ 0.18	24.28 $\pm$ 3.09	8.91 $\pm$ 1.17	2.30 $\pm$ 0.32	0.51 $\pm$ 0.08
Tagged stopt	0.93 $\pm$ 0.16	8.51 $\pm$ 1.36	8.13 $\pm$ 1.17	2.23 $\pm$ 0.33	0.48 $\pm$ 0.07
Tagged zlf	1.67 $\pm$ 0.32	7.23 $\pm$ 1.43	5.27 $\pm$ 1.04	1.73 $\pm$ 0.39	0.53 $\pm$ 0.15
Tagged top	2.26 $\pm$ 0.37	72.77 $\pm$ 9.59	214.03 $\pm$ 28.25	271.31 $\pm$ 35.71	100.69 $\pm$ 14.42
Tagged wh115	0.21 $\pm$ 0.03	3.34 $\pm$ 0.36	1.08 $\pm$ 0.12	0.22 $\pm$ 0.03	0.04 $\pm$ 0.00
Tagged wh100	0.50 $\pm$ 0.07	5.17 $\pm$ 0.55	1.47 $\pm$ 0.16	0.28 $\pm$ 0.03	0.05 $\pm$ 0.01
Tagged wh105	0.38 $\pm$ 0.06	4.52 $\pm$ 0.48	1.35 $\pm$ 0.15	0.26 $\pm$ 0.03	0.05 $\pm$ 0.01
Tagged wh110	0.28 $\pm$ 0.04	3.87 $\pm$ 0.42	1.18 $\pm$ 0.13	0.21 $\pm$ 0.02	0.04 $\pm$ 0.00
Tagged wh120	0.16 $\pm$ 0.02	2.78 $\pm$ 0.30	0.94 $\pm$ 0.10	0.19 $\pm$ 0.02	0.04 $\pm$ 0.00
Tagged wh125	0.11 $\pm$ 0.02	2.23 $\pm$ 0.24	0.76 $\pm$ 0.08	0.16 $\pm$ 0.02	0.03 $\pm$ 0.00
Tagged wh130	0.07 $\pm$ 0.01	1.70 $\pm$ 0.19	0.62 $\pm$ 0.07	0.13 $\pm$ 0.01	0.03 $\pm$ 0.00
Tagged wh135	0.05 $\pm$ 0.01	1.27 $\pm$ 0.14	0.47 $\pm$ 0.05	0.10 $\pm$ 0.01	0.02 $\pm$ 0.00
Tagged wh140	0.03 $\pm$ 0.00	0.88 $\pm$ 0.10	0.34 $\pm$ 0.04	0.08 $\pm$ 0.01	0.01 $\pm$ 0.00
Tagged wh145	0.02 $\pm$ 0.00	0.58 $\pm$ 0.07	0.23 $\pm$ 0.03	0.05 $\pm$ 0.01	0.01 $\pm$ 0.00
Tagged wh150	0.01 $\pm$ 0.00	0.35 $\pm$ 0.04	0.15 $\pm$ 0.02	0.03 $\pm$ 0.00	0.01 $\pm$ 0.00
Tagged wh120L	0.16 $\pm$ 0.02	2.79 $\pm$ 0.30	0.91 $\pm$ 0.10	0.17 $\pm$ 0.02	0.03 $\pm$ 0.00
Tagged wh120M	0.15 $\pm$ 0.02	2.66 $\pm$ 0.29	1.00 $\pm$ 0.11	0.22 $\pm$ 0.03	0.05 $\pm$ 0.01
Raw Mis-tags(info)	2.95 $\pm$ 1.08	22.78 $\pm$ 11.33	16.33 $\pm$ 6.57	7.32 $\pm$ 3.19	2.81 $\pm$ 1.36
Tagged Wbb	46.44 $\pm$ 15.33	155.00 $\pm$ 49.94	56.86 $\pm$ 18.81	18.71 $\pm$ 6.22	6.53 $\pm$ 2.21
Tagged Wcc	5.15 $\pm$ 1.73	30.93 $\pm$ 10.58	17.84 $\pm$ 6.14	7.40 $\pm$ 2.58	2.88 $\pm$ 1.02
Tagged Wcj	9.50 $\pm$ 3.18	32.20 $\pm$ 11.02	12.05 $\pm$ 4.16	3.53 $\pm$ 1.23	1.12 $\pm$ 0.40
Tagged Total HF	61.09 $\pm$ 20.17	218.13 $\pm$ 70.47	86.75 $\pm$ 28.31	29.63 $\pm$ 9.75	10.54 $\pm$ 3.53
Tagged Total MC	7.21 $\pm$ 1.17	122.71 $\pm$ 15.65	240.63 $\pm$ 31.39	278.96 $\pm$ 36.68	102.67 $\pm$ 14.74
Tagged Mistags	2.09 $\pm$ 0.77	12.73 $\pm$ 6.42	6.65 $\pm$ 2.87	2.08 $\pm$ 0.95	0.64 $\pm$ 0.33
Tagged Non-W	14.47 $\pm$ 6.48	41.39 $\pm$ 17.06	33.09 $\pm$ 14.24	26.30 $\pm$ 21.68	9.50 $\pm$ 8.52
Total Prediction	84.86 $\pm$ 21.24	394.96 $\pm$ 74.45	367.12 $\pm$ 44.70	336.98 $\pm$ 43.72	123.35 $\pm$ 17.39
Observed	88.00 $\pm$ 0.00	364.00 $\pm$ 0.00	346.00 $\pm$ 0.00	333.00 $\pm$ 0.00	130.00 $\pm$ 0.00