$t\bar{t}$ + jets	0b	1b	1b/0b	0b($\Delta\Phi < 0$)	0b($\Delta\Phi > 0$)	1b($\Delta\Phi < 0$)	1b($\Delta\Phi > 0$)	R_{CS} (0b)	R_{CS} (1b)
dihadronic	0.0	0.14	1.0	0.0	0.0	0.14	0.0	nan	0.0
di τ	1.26	3.08	2.44	0.7	0.56	2.66	0.42	0.8	0.1579
$W \to \tau + \nu \to$ had. $+ 2\nu \mid W \to$ had.	0.56	0.56	1.0	0.56	0.0	0.56	0.0	0.0	0.0
$W \to \tau + \nu \to$ had. $+ 2\nu \mid W \to e/\mu + \nu$	10.08	20.17	2.0	7.56	2.52	14.71	5.46	0.3333	0.3714
$W \to \tau + \nu \to e/\mu + 3\nu \mid W \to e/\mu + \nu$	4.34	12.33	2.84	2.94	1.4	9.52	2.8	0.4762	0.2941
$W \to \tau + \nu \to e/\mu + 3\nu \mid W \to$ had.	8.26	13.87	1.68	8.26	0.0	13.87	0.0	0.0	0.0
dileptonic	11.77	33.05	2.81	9.24	2.52	25.35	7.7	0.2727	0.3039
single lep. (e/μ)	79.84	129.98	1.63	77.03	2.8	126.06	3.92	0.0364	0.0311
total	116.11	213.17	1.84	106.31	9.8	192.86	20.31	0.0922	0.1053

Tab. 1: $t\bar{t}$ + jets, inclusive, njets=2

$t\bar{t}$ + jets	0b	1b	1b/0b	0b($\Delta\Phi < 0$)	0b($\Delta\Phi > 0$)	1b($\Delta\Phi < 0$)	1b($\Delta\Phi > 0$)	R_{CS} (0b)	R_{CS} (1b)
dihadronic	0.98	0.7	0.71	0.98	0.0	0.7	0.0	0.0	0.0
di τ	4.34	12.47	2.87	3.5	0.84	9.94	2.52	0.24	0.2535
$W \to \tau + \nu \to$ had. $+ 2\nu \mid W \to$ had.	1.26	2.94	2.33	1.26	0.0	2.66	0.28	0.0	0.1053
$W \to \tau + \nu \to$ had. $+ 2\nu \mid W \to e/\mu + \nu$	43.84	114.57	2.61	29.41	14.43	78.44	36.14	0.4905	0.4607
$W \to \tau + \nu \to e/\mu + 3\nu \mid W \to e/\mu + \nu$	14.15	51.54	3.64	9.8	4.34	34.74	16.81	0.4429	0.4839
$W \to \tau + \nu \to e/\mu + 3\nu \mid W \to$ had.	39.78	84.74	2.13	39.36	0.42	83.9	0.84	0.0107	0.01
dileptonic	41.88	117.37	2.8	31.65	10.22	86.14	31.23	0.323	0.3626
single lep. (e/μ)	410.95	886.65	2.16	394.15	16.81	847.99	38.66	0.0426	0.0456
total	557.19	1270.96	2.28	510.13	47.06	1144.48	126.48	0.0923	0.1105

Tab. 2: $t\bar{t}$ + jets, inclusive, njets=3

$t\bar{t}$ + jets	0b	1b	1b/0b	0b($\Delta\Phi < 0$)	0b($\Delta\Phi > 0$)	1b($\Delta\Phi < 0$)	1b($\Delta\Phi > 0$)	R_{CS} (0b)	R_{CS} (1b)
dihadronic	1.68	5.04	3.0	1.68	0.0	5.04	0.0	0.0	0.0
di τ	8.96	21.43	2.39	7.0	1.96	16.25	5.18	0.28	0.319
$W \to \tau + \nu \to$ had. $+ 2\nu \mid W \to$ had.	1.82	7.84	4.31	1.82	0.0	7.14	0.7	0.0	0.098
$W \to \tau + \nu \to$ had. $+ 2\nu \mid W \to e/\mu + \nu$	72.13	227.74	3.16	51.96	20.17	150.99	76.75	0.3881	0.5084
$W \to \tau + \nu \to e/\mu + 3\nu \mid W \to e/\mu + \nu$	22.27	69.89	3.14	15.41	6.86	48.04	21.85	0.4455	0.4548
$W \to \tau + \nu \to e/\mu + 3\nu \mid W \to$ had.	84.74	201.83	2.38	83.62	1.12	198.47	3.36	0.0134	0.0169
dileptonic	52.94	173.12	3.27	38.1	14.85	124.66	48.46	0.3897	0.3888
single lep. (e/μ)	902.34	2368.56	2.62	854.58	47.76	2234.66	133.9	0.0559	0.0599
total	1146.89	3075.74	2.68	1054.17	92.72	2785.53	290.21	0.088	0.1042

Tab. 3: $t\bar{t}$ + jets, inclusive, njets=4

$t\bar{t}$ + jets	0b	1b	1b/0b	0b($\Delta\Phi < 0$)	0b($\Delta\Phi > 0$)	1b($\Delta\Phi < 0$)	1b($\Delta\Phi > 0$)	R_{CS} (0b)	R_{CS} (1b)
dihadronic	3.36	7.42	2.21	3.08	0.28	7.14	0.28	0.0909	0.0392
di τ	7.14	22.13	3.1	5.32	1.82	15.27	6.86	0.3421	0.4495
$W \to \tau + \nu \to$ had. $+ 2\nu$ | $W \to$ had.	2.66	9.1	3.42	2.38	0.28	8.26	0.84	0.1176	0.1017
$W \to \tau + \nu \to$ had. $+ 2\nu$ | $W \to e/\mu + \nu$	72.83	226.34	3.11	50.7	22.13	150.85	75.49	0.4365	0.5005
$W \to \tau + \nu \to e/\mu + 3\nu$ | $W \to e/\mu + \nu$	15.41	59.39	3.85	9.66	5.74	40.76	18.63	0.5942	0.457
$W \to \tau + \nu \to e/\mu + 3\nu$ | $W \to$ had.	88.94	262.9	2.96	88.1	0.84	259.25	3.64	0.0095	0.014
dileptonic	47.34	156.17	3.3	33.62	13.73	109.81	46.36	0.4083	0.4222
single lep. (e/μ)	1022.8	3077.05	3.01	960.89	61.91	2871.72	205.33	0.0644	0.0715
total	1260.45	3820.82	3.03	1153.72	106.73	3463.37	357.45	0.0925	0.1032

Tab. 4: $t\bar{t}$ + jets, inclusive, njets=5

$t\bar{t}$ + jets	0b	1b	1b/0b	0b($\Delta\Phi < 0$)	0b($\Delta\Phi > 0$)	1b($\Delta\Phi < 0$)	1b($\Delta\Phi > 0$)	R_{CS} (0b)	R_{CS} (1b)
dihadronic	8.82	19.89	2.25	8.4	0.42	19.05	0.84	0.05	0.0441
di τ	7.98	24.23	3.04	6.02	1.96	16.95	7.28	0.3256	0.4298
$W \to \tau + \nu \to$ had. $+ 2\nu$ | $W \to$ had.	4.9	13.73	2.8	3.92	0.98	11.91	1.82	0.25	0.1529
$W \to \tau + \nu \to$ had. $+ 2\nu$ | $W \to e/\mu + \nu$	73.39	256.87	3.5	48.46	24.93	171.72	85.16	0.5144	0.4959
$W \to \tau + \nu \to e/\mu + 3\nu$ | $W \to e/\mu + \nu$	17.65	66.81	3.79	13.31	4.34	46.78	20.03	0.3263	0.4281
$W \to \tau + \nu \to e/\mu + 3\nu$ | $W \to$ had.	116.53	359.55	3.09	114.99	1.54	352.12	7.42	0.0134	0.0211
dileptonic	47.9	153.23	3.2	33.62	14.29	109.11	44.12	0.425	0.4044
single lep. (e/μ)	1303.99	4381.11	3.36	1214.63	89.36	4064.56	316.54	0.0736	0.0779
total	1581.09	5275.81	3.34	1443.27	137.82	4792.57	483.23	0.0955	0.1008

Tab. 5: $t\bar{t}$ + jets, inclusive, $njets \geq 6$

W+jets	0b	1b	1b/0b	0b($\Delta\Phi < 0$)	0b($\Delta\Phi > 0$)	1b($\Delta\Phi < 0$)	1b($\Delta\Phi > 0$)	R_{CS} (0b)	R_{CS} (1b)
$W \to \tau + \nu \to$ had. $+ 2\nu$	6.01	0.88	0.15	5.94	0.08	0.88	0.0	0.0129	0.0
$W \to \tau + \nu \to e/\mu + 3\nu$	150.79	16.95	0.11	149.0	1.79	16.78	0.17	0.012	0.01
single lep. (e/μ)	1484.98	166.04	0.11	1411.81	73.18	156.68	9.36	0.0518	0.0597
total	1641.89	183.86	0.11	1566.85	75.04	174.33	9.53	0.0479	0.0547

Tab. 6: W+jets, inclusive, njets=2

W+jets	0b	1b	1b/0b	0b($\Delta\Phi < 0$)	0b($\Delta\Phi > 0$)	1b($\Delta\Phi < 0$)	1b($\Delta\Phi > 0$)	R_{CS} (0b)	R_{CS} (1b)
$W \to \tau + \nu \to$ had. $+ 2\nu$	8.6	1.36	0.16	8.5	0.1	1.31	0.05	0.0122	0.0351
$W \to \tau + \nu \to e/\mu + 3\nu$	214.74	32.7	0.15	211.91	2.84	32.26	0.44	0.0134	0.0137
single lep. (e/μ)	2163.15	344.07	0.16	2056.69	106.46	325.19	18.88	0.0518	0.0581
total	2385.25	378.14	0.16	2275.85	109.4	358.78	19.37	0.0481	0.054

Tab. 7: W+jets, inclusive, njets=3

W+jets	0b	1b	1b/0b	0b($\Delta\Phi < 0$)	0b($\Delta\Phi > 0$)	1b($\Delta\Phi < 0$)	1b($\Delta\Phi > 0$)	R_{CS} (0b)	R_{CS} (1b)
$W \to \tau + \nu \to$ had. $+ 2\nu$	6.7	1.39	0.21	6.55	0.15	1.34	0.06	0.0228	0.043
$W \to \tau + \nu \to e/\mu + 3\nu$	171.21	34.51	0.2	169.1	2.11	33.96	0.55	0.0125	0.0162
single lep. (e/μ)	1763.96	369.39	0.21	1673.8	90.16	348.15	21.24	0.0539	0.061
total	1941.99	405.31	0.21	1849.57	92.42	383.46	21.85	0.05	0.057

Tab. 8: W+jets, inclusive, njets=4

W+jets	0b	1b	1b/0b	0b($\Delta\Phi < 0$)	0b($\Delta\Phi > 0$)	1b($\Delta\Phi < 0$)	1b($\Delta\Phi > 0$)	R_{CS} (0b)	R_{CS} (1b)
$W \to \tau + \nu \to$ had. $+ 2\nu$	3.56	1.44	0.41	3.28	0.28	1.39	0.06	0.0853	0.0414
$W \to \tau + \nu \to e/\mu + 3\nu$	87.89	22.92	0.26	86.79	1.1	22.5	0.43	0.0127	0.0189
single lep. (e/μ)	933.68	239.57	0.26	885.35	48.33	226.42	13.16	0.0546	0.0581
total	1025.15	263.93	0.26	975.43	49.72	250.29	13.64	0.051	0.0545

Tab. 9: W+jets, inclusive, njets=5

W+jets	0b	1b	1b/0b	0b($\Delta\Phi < 0$)	0b($\Delta\Phi > 0$)	1b($\Delta\Phi < 0$)	1b($\Delta\Phi > 0$)	R_{CS} (0b)	R_{CS} (1b)
$W \to \tau + \nu \to$ had. $+ 2\nu$	2.22	0.57	0.26	2.03	0.19	0.56	0.02	0.0944	0.0345
$W \to \tau + \nu \to e/\mu + 3\nu$	48.13	15.16	0.32	47.3	0.83	15.01	0.15	0.0175	0.0102
single lep. (e/μ)	511.62	170.41	0.33	484.17	27.44	159.8	10.61	0.0567	0.0664
total	561.99	186.14	0.33	533.52	28.46	175.36	10.79	0.0534	0.0615

Tab. 10: W+jets, inclusive, $njets \geq 6$

$t\bar{t}$ + jets	0b	1b	1b/0b	0b($\Delta\Phi < 0$)	0b($\Delta\Phi > 0$)	1b($\Delta\Phi < 0$)	1b($\Delta\Phi > 0$)	R_{CS} (0b)	R_{CS} (1b)
dihadronic	0.0	0.0	1.0	0.0	0.0	0.0	0.0	nan	nan
di τ	0.28	0.98	3.5	0.28	0.0	0.84	0.14	0.0	0.1667
$W \to \tau + \nu \to$ had. $+ 2\nu \mid W \to$ had.	0.28	0.56	2.0	0.28	0.0	0.56	0.0	0.0	0.0
$W \to \tau + \nu \to$ had. $+ 2\nu \mid W \to e/\mu + \nu$	5.04	8.54	1.69	3.64	1.4	7.0	1.54	0.3846	0.22
$W \to \tau + \nu \to e/\mu + 3\nu \mid W \to e/\mu + \nu$	2.1	6.44	3.07	1.4	0.7	5.18	1.26	0.5	0.2432
$W \to \tau + \nu \to e/\mu + 3\nu \mid W \to$ had.	3.92	7.14	1.82	3.92	0.0	7.14	0.0	0.0	0.0
dileptonic	5.32	13.31	2.5	4.62	0.7	11.06	2.24	0.1515	0.2025
single lep. (e/μ)	36.7	57.15	1.56	36.42	0.28	57.15	0.0	0.0077	0.0
total	53.64	94.12	1.75	50.56	3.08	88.94	5.18	0.0609	0.0583

Tab. 11: $t\bar{t}$ + jets, $S_T \geq 250,\ 500 \leq H_T \leq 750,\ njets = 2$

$t\bar{t}$ + jets	0b	1b	1b/0b	0b($\Delta\Phi < 0$)	0b($\Delta\Phi > 0$)	1b($\Delta\Phi < 0$)	1b($\Delta\Phi > 0$)	R_{CS} (0b)	R_{CS} (1b)
dihadronic	0.42	0.14	0.33	0.42	0.0	0.14	0.0	0.0	0.0
di τ	2.24	4.76	2.13	2.1	0.14	3.92	0.84	0.0667	0.2143
$W \to \tau + \nu \to$ had. $+ 2\nu \mid W \to$ had.	0.28	1.4	5.0	0.28	0.0	1.26	0.14	0.0	0.1111
$W \to \tau + \nu \to$ had. $+ 2\nu \mid W \to e/\mu + \nu$	17.65	43.56	2.47	12.89	4.76	29.13	14.43	0.3696	0.4952
$W \to \tau + \nu \to e/\mu + 3\nu \mid W \to e/\mu + \nu$	4.9	20.45	4.17	3.78	1.12	13.87	6.58	0.2963	0.4747
$W \to \tau + \nu \to e/\mu + 3\nu \mid W \to$ had.	14.57	33.19	2.28	14.57	0.0	33.19	0.0	0.0	0.0
dileptonic	15.55	39.64	2.55	11.91	3.64	29.83	9.8	0.3059	0.3286
single lep. (e/μ)	144.54	288.25	1.99	143.28	1.26	286.57	1.68	0.0088	0.0059
total	200.15	431.4	2.16	189.22	10.92	397.93	33.47	0.0577	0.0841

Tab. 12: $t\bar{t}$ + jets, $S_T \geq 250,\ 500 \leq H_T \leq 750,\ njets = 3$

$t\bar{t}$ + jets	0b	1b	1b/0b	0b($\Delta\Phi < 0$)	0b($\Delta\Phi > 0$)	1b($\Delta\Phi < 0$)	1b($\Delta\Phi > 0$)	R_{CS} (0b)	R_{CS} (1b)
dihadronic	0.84	1.12	1.33	0.84	0.0	1.12	0.0	0.0	0.0
di τ	3.5	6.72	1.92	3.22	0.28	5.74	0.98	0.087	0.1707
$W \to \tau + \nu \to$ had. $+ 2\nu \mid W \to$ had.	0.42	2.66	6.33	0.42	0.0	2.38	0.28	0.0	0.1176
$W \to \tau + \nu \to$ had. $+ 2\nu \mid W \to e/\mu + \nu$	24.79	66.53	2.68	18.49	6.3	43.7	22.83	0.3409	0.5224
$W \to \tau + \nu \to e/\mu + 3\nu \mid W \to e/\mu + \nu$	7.42	20.03	2.7	5.74	1.68	13.31	6.72	0.2927	0.5053
$W \to \tau + \nu \to e/\mu + 3\nu \mid W \to$ had.	29.97	66.67	2.22	29.97	0.0	66.67	0.0	0.0	0.0
dileptonic	16.67	50.0	3.0	12.75	3.92	36.0	14.01	0.3077	0.3891
single lep. (e/μ)	248.05	647.4	2.61	246.65	1.4	644.04	3.36	0.0057	0.0052
total	331.67	861.15	2.6	318.09	13.59	812.97	48.18	0.0427	0.0593

Tab. 13: $t\bar{t}$ + jets, $S_T \geq 250,\ 500 \leq H_T \leq 750,\ njets = 4$

$t\bar{t}$ + jets	0b	1b	1b/0b	0b($\Delta\Phi < 0$)	0b($\Delta\Phi > 0$)	1b($\Delta\Phi < 0$)	1b($\Delta\Phi > 0$)	R_{CS} (0b)	R_{CS} (1b)
dihadronic	0.7	1.4	2.0	0.7	0.0	1.4	0.0	0.0	0.0
di τ	2.38	6.3	2.65	1.68	0.7	4.62	1.68	0.4167	0.3636
$W \to \tau + \nu \to$ had. $+ 2\nu \mid W \to$ had.	0.42	1.82	4.33	0.42	0.0	1.68	0.14	0.0	0.0833
$W \to \tau + \nu \to$ had. $+ 2\nu \mid W \to e/\mu + \nu$	20.31	61.35	3.02	13.17	7.14	39.36	21.99	0.5426	0.5587
$W \to \tau + \nu \to e/\mu + 3\nu \mid W \to e/\mu + \nu$	5.18	14.99	2.89	3.78	1.4	10.5	4.48	0.3704	0.4267
$W \to \tau + \nu \to e/\mu + 3\nu \mid W \to$ had.	24.93	72.69	2.92	24.93	0.0	72.69	0.0	0.0	0.0
dileptonic	13.45	39.22	2.92	9.94	3.5	28.85	10.36	0.3521	0.3592
single lep. (e/μ)	241.61	662.95	2.74	239.78	1.82	659.45	3.5	0.0076	0.0053
total	308.98	860.73	2.79	294.41	14.57	818.58	42.16	0.0495	0.0515

Tab. 14: $t\bar{t}$ + jets, $S_T \geq 250,\ 500 \leq H_T \leq 750,\ njets = 5$

$t\bar{t}$ + jets	0b	1b	1b/0b	0b($\Delta\Phi < 0$)	0b($\Delta\Phi > 0$)	1b($\Delta\Phi < 0$)	1b($\Delta\Phi > 0$)	R_{CS} (0b)	R_{CS} (1b)
dihadronic	0.98	2.38	2.43	0.84	0.14	2.38	0.0	0.1667	0.0
di τ	1.4	4.76	3.4	1.4	0.0	3.22	1.54	0.0	0.4783
$W \to \tau + \nu \to$ had. $+ 2\nu \mid W \to$ had.	0.7	2.38	3.4	0.7	0.0	1.96	0.42	0.0	0.2143
$W \to \tau + \nu \to$ had. $+ 2\nu \mid W \to e/\mu + \nu$	13.03	55.18	4.24	8.4	4.62	35.16	20.03	0.55	0.5697
$W \to \tau + \nu \to e/\mu + 3\nu \mid W \to e/\mu + \nu$	4.2	14.29	3.4	2.94	1.26	10.36	3.92	0.4286	0.3784
$W \to \tau + \nu \to e/\mu + 3\nu \mid W \to$ had.	23.11	60.23	2.61	23.11	0.0	60.09	0.14	0.0	0.0023
dileptonic	12.19	25.63	2.1	8.96	3.22	17.37	8.26	0.3594	0.4758
single lep. (e/μ)	200.99	638.44	3.18	199.87	1.12	634.8	3.64	0.0056	0.0057
total	256.59	803.3	3.13	246.23	10.36	765.35	37.96	0.0421	0.0496

Tab. 15: $t\bar{t}$ + jets, $S_T \geq 250,\ 500 \leq H_T \leq 750,\ njets \geq 6$