

ATLAS Internal																																									
		BTag_B_0	100.0	-0.9	-1.0	2.1	0.3	0.7	-1.9	-1.1	1.2	0.9	3.2	-3.1	0.4	1.4	-1.1	-0.3	-3.6	2.3	1.1	-0.1	-0.4	0.3	-7.3	-7.5	-9.6	15.4	7.1	9.6	8.7	8.9	11.1	7.6	11.4	13.0	12.3	12.3			
		EG_SCALE_ALL	-0.9	100.0	2.0	-0.9	1.3	1.7	-0.3	0.3	0.8	-0.1	-1.3	-1.2	0.4	-0.2	0.3	0.9	8.3	0.6	0.3	0.5	-0.8	-0.8	-1.7	-2.5	-2.1	-1.6	-0.0	-0.7	-1.7	-2.7	-5.8	-8.8	-7.5	-14.9	-19.7	-33.1			
		JET_Flavor_Composition	-1.0	2.0	100.0	10.2	-4.9	-16.6	0.1	-0.9	1.9	-1.5	-13.4	-1.4	-1.1	3.2	-3.0	-3.5	-3.2	11.3	-13.2	-1.6	-2.2	-1.9	2.5	-19.7	3.7	-21.2	-17.2	-20.2	-18.7	-18.7	-19.0	-19.2	-21.1	-18.2	-14.3	-11.8			
		JET_Flavor_Response	2.1	-0.9	10.2	100.0	1.6	7.3	0.3	0.6	-2.1	1.2	11.7	2.1	-0.6	-0.8	1.7	3.0	4.2	-5.6	4.2	-0.1	0.0	-2.4	3.5	15.2	5.3	-0.3	12.3	13.3	10.8	9.9	9.4	7.6	7.1	5.4	3.8	4.8			
		JET_Pileup_OffsetNPV	0.3	1.3	-4.9	1.6	100.0	-5.0	0.4	0.5	-0.1	-2.5	-2.8	-0.3	-1.1	2.2	-0.4	-0.6	1.9	-0.1	-3.2	-1.1	-1.5	-2.7	0.5	-1.7	3.0	-1.4	-13.3	-15.0	-13.3	-12.1	-12.2	-9.3	-9.7	-10.8	-8.4	-6.6			
		JET_Pileup_RhoTopology	0.7	1.7	-16.6	7.3	-5.0	100.0	0.1	0.4	1.4	-1.0	-10.5	1.0	-2.3	3.0	-2.5	-4.9	4.5	3.8	-8.9	-1.0	-2.0	0.6	3.1	-15.2	8.7	-20.4	-28.4	-27.5	-24.2	-25.2	-24.4	-21.8	-24.0	-23.3	-19.6	-18.4			
		PileupRW	-1.9	-0.3	0.1	0.3	0.4	0.1	100.0	0.0	2.0	0.3	-11.2	-1.2	-0.7	0.9	0.3	-5.7	3.9	0.1	-0.1	1.0	1.2	3.8	-3.6	-1.7	-3.0	22.7	7.5	7.0	7.8	13.2	6.5	7.9	6.6	10.5	10.1	4.6			
		Photon_ID	-1.1	0.3	-0.9	0.6	0.5	0.4	0.0	100.0	-0.4	0.4	-8.0	-0.9	-0.3	0.5	-0.8	0.0	-15.6	-0.4	0.3	0.5	0.4	-1.1	-0.7	-1.4	-1.9	-26.1	-20.8	-9.1	-5.1	-7.7	-7.1	-5.3	-5.1	-5.4	-5.3	-5.9			
		Photon_effiso	1.2	0.8	1.9	-2.1	-0.1	1.4	2.0	-0.4	100.0	-1.4	-3.2	1.2	-0.4	-0.5	0.8	2.3	-9.7	-2.5	-1.2	-1.1	-1.3	-7.8	3.0	4.1	3.9	-30.4	-21.0	-16.8	-18.3	-17.6	-19.1	-15.8	-12.7	-11.8	-11.6	-18.9			
		efakeSF	0.9	-0.1	-1.5	1.2	-2.5	-1.0	0.3	0.4	-1.4	100.0	-59.5	-2.4	1.3	-3.2	-1.3	6.7	12.6	-2.1	3.9	0.9	-0.6	-3.3	1.3	-1.9	-0.2	10.5	15.6	10.2	16.6	11.9	7.5	7.4	7.1	7.9	12.0	12.3			
		hfakeSF	3.2	-1.3	-13.4	11.7	-2.8	-10.5	-11.2	-8.0	-3.2	-59.5	100.0	-1.8	1.0	-8.0	-16.9	11.1	5.8	-19.1	4.5	4.6	2.2	-7.5	4.8	0.8	-2.5	0.7	-15.2	-4.3	-16.7	-10.7	-2.8	-3.3	-2.6	-3.0	-10.1	-6.5			
		lepfakeSF_	-3.1	-1.2	-1.4	2.1	-0.3	1.0	-1.2	-0.9	1.2	-2.4	-1.8	100.0	16.6	-4.2	-0.4	3.5	-12.1	3.3	-0.7	-0.8	-1.7	-5.1	-4.6	-6.1	-9.5	9.0	-6.5	-9.8	-4.6	-8.2	-8.6	-8.7	1.8	-11.0	-3.1	2.7			
		lepfakeSF_var1	0.4	0.4	-1.1	-0.6	-1.1	-2.3	-0.7	-0.3	-0.4	1.3	1.0	16.6	100.0	-2.1	-1.1	0.4	9.4	1.6	1.0	-0.3	-0.2	-0.1	1.4	3.5	5.6	1.2	-3.1	0.7	1.1	-0.5	-1.5	2.8	0.4	-6.1	-3.7	-1.0			
		lepfakeSF_var2	1.4	-0.2	3.2	-0.8	2.2	3.0	0.9	0.5	-0.5	-3.2	-8.0	-4.2	-2.1	100.0	1.1	2.6	2.6	-5.2	3.3	0.7	0.9	0.2	0.9	3.1	-1.0	-6.2	12.4	13.3	9.2	13.5	12.0	14.0	2.3	22.8	13.1	2.9			
		ty(t channel) Norm	-1.1	0.3	-3.0	1.7	-0.4	-2.5	0.3	-0.8	0.8	-1.3	-16.9	-0.4	-1.1	1.1	100.0	-1.0	3.9	3.7	-2.0	0.1	-0.2	-0.7	1.5	0.5	1.7	4.3	-2.2	0.2	4.7	4.9	3.3	3.6	4.4	3.3	3.8	3.5			
		ttbar_pt_hard	-0.3	0.9	-3.5	3.0	-0.6	-4.9	-5.7	0.0	2.3	6.7	11.1	3.5	0.4	-2.6	-1.0	100.0	-10.2	-10.7	5.4	2.0	4.3	19.4	0.8	-13.3	7.1	-14.5	9.7	6.4	2.2	-1.2	-1.8	-1.6	-2.1	-2.9	-4.3	-8.8			
		tyt_dec_Herwig7	-3.6	8.3	-3.2	4.2	1.9	4.5	3.9	-15.6	-9.7	12.6	5.8	-12.1	9.4	2.6	3.9	-10.2	100.0	-1.9	-2.1	0.7	3.4	11.3	0.1	-1.8	-23.0	53.3	-0.6	20.7	25.3	29.5	25.8	18.7	12.4	8.1	2.4	-4.5			
		tyt_prod_Herwig7	2.3	0.6	11.3	-5.6	-0.1	3.8	0.1	-0.4	-2.5	-2.1	-19.1	3.3	1.6	-5.2	3.7	-10.7	-1.9	100.0	5.0	2.2	-3.4	-22.6	-0.7	1.2	-1.2	16.1	-16.3	-22.8	-6.9	-10.0	-9.2	-15.7	7.5	4.2	-1.1	21.8			
		tyt_prod_var3c	1.1	0.3	-13.2	4.2	-3.2	-8.9	-0.1	0.3	-1.2	3.9	4.5	-0.7	1.0	3.3	-2.0	5.4	-2.1	5.0	100.0	1.9	2.7	7.1	0.5	7.2	-0.4	20.8	-4.5	-2.1	5.9	4.9	-1.5	-7.8	15.0	21.0	-3.3	13.0			
		uncalib_bjet	-0.1	0.5	-1.6	-0.1	-1.1	-1.0	1.0	0.5	-1.1	0.9	4.6	-0.8	-0.3	0.7	0.1	2.0	0.7	-2.2	1.9	100.0	-4.3	-21.3	-0.1	-6.3	1.3	2.4	-1.2	0.7	0.6	-0.1	1.4	0.9	0.9	1.7	0.2	-6.0			
		uncalib_cjet	-0.4	-0.8	-2.2	0.0	-1.5	-2.0	1.2	0.4	-1.3	-0.6	2.2	-1.7	-0.2	0.9	-0.2	4.3	3.4	-3.4	2.7	-4.3	100.0	-21.9	-0.9	-9.8	-1.5	5.3	-1.1	0.3	0.0	0.5	-1.1	1.8	-0.3	-1.1	-3.2	-7.5			
		uncalib_ljet	0.3	-0.8	-1.9	-2.4	-2.7	0.6	3.8	-1.1	-7.8	-3.3	-7.5	-5.1	-0.1	0.2	-0.7	19.4	11.3	-22.6	7.1	-21.3	-21.9	100.0	-10.9	23.5	-13.3	10.5	13.1	13.0	11.0	7.5	7.7	3.9	-1.3	-2.7	-5.8	22.7			
		Wty Norm	-7.3	-1.7	2.5	3.5	0.5	3.1	-3.6	-0.7	3.0	1.3	4.8	-4.6	1.4	0.9	1.5	0.8	0.1	-0.7	0.5	-0.1	-0.9	-10.9	100.0	-10.0	-20.2	-29.7	-14.9	-19.1	-23.4	-25.2	-25.1	-26.0	-24.8	-25.4	-25.6	-21.1			
		Wty Norm	-7.5	-2.5	-19.7	15.2	-1.7	-15.2	-1.7	-1.4	4.1	-1.9	0.8	-6.1	3.5	-3.1	0.5	-13.3	-1.8	1.2	7.2	-6.3	-9.8	-23.5	-10.0	100.0	-19.4	18.8	14.8	13.7	10.4	14.6	13.7	13.5	14.3	13.0	12.1	16.2			
		Zty Norm	-9.6	-2.1	3.7	5.3	3.0	8.7	-3.0	-1.9	3.9	-0.2	-2.5	-9.5	5.6	-1.0	1.7	7.1	-23.0	-1.2	-0.4	1.3	-1.5	-13.3	-20.2	-19.4	100.0	-28.8	-10.8	-13.3	-6.1	-9.9	-9.2	-2.1	-5.0	-1.3	-0.2	3.3			
		Norm factor for tyt dec	15.4	-1.6	-21.2	-0.3	-1.4	-20.4	22.7	-26.1	-30.4	10.5	0.7	9.0	1.2	-6.2	4.3	-14.5	53.3	16.1	20.8	2.4	5.3	10.5	-29.7	18.8	-28.8	100.0	13.6	25.4	35.1	41.3	39.2	33.0	40.2	37.4	29.8	32.5			
		tyt_pt Unfolded Truth Bin 1	7.1	-0.0	-17.2	12.3	-13.3	-28.4	7.5	-20.8	-21.0	15.6	-15.2	-6.5	-3.1	12.4	-2.2	9.7	-0.6	-16.3	-4.5	-1.2	-1.1	13.1	-14.9	14.8	-10.8	13.6	100.0	63.2	71.9	67.8	61.6	53.5	47.2	45.9	46.2	33.2			
		tyt_pt Unfolded Truth Bin 2	9.6	-0.7	-20.2	13.3	-15.0	-27.5	7.0	-9.1	-16.8	10.2	-4.3	-9.8	0.7	13.3	0.2	6.4	20.7	-22.8	-2.1	0.7	0.3	13.0	-19.1	13.7	-13.3	25.4	83.2	100.0	73.9	73.4	67.1	58.2	50.6	49.1	47.3	32.4			
		tyt_pt Unfolded Truth Bin 3	8.7	-1.7	-18.7	10.8	-13.3	-24.2	7.8	-5.1	-18.3	16.6	-16.7	-4.6	1.1	9.2	4.7	2.2	25.3	-6.9	5.9	0.6	0.0	11.0	-23.4	10.4	-6.1	35.1	71.9	73.9	100.0	67.9	63.4	54.2	51.7	49.3	46.2	36.4			
		tyt_pt Unfolded Truth Bin 4	8.9	-2.7	-18.7	9.9	-12.1	-25.2	13.2	-7.7	-17.6	11.9	-10.7	-8.2	-0.5	13.5	4.9	-1.2	29.5	-10.0	4.9	-0.1	0.5	7.5	-25.2	14.6	-9.9	41.3	67.8	73.4	67.9	100.0	61.1	56.0	51.5	51.2	47.4	37.3			
		tyt_pt Unfolded Truth Bin 5	11.1	-5.8	-19.0	9.4	-12.2	-24.4	6.5	-7.1	-19.1	7.5	-2.8	-8.6	-1.5	12.0	3.3	-1.8	25.8	-9.2	-1.5	1.4	-1.1	7.7	-25.1	13.7	-9.2	39.2	61.6	67.1	63.4	61.1	100.0	49.3	48.4	47.8	45.4	36.0			
		tyt_pt Unfolded Truth Bin 6	7.6	-8.8	-19.2	7.6	-9.3	-21.8	7.9	-5.3	-15.8	7.4	-3.3	-8.7	-2.8	14.0	3.6	-1.6	18.7	-15.7	-7.8	0.9	1.8	3.9	-26.0	13.5	-2.1	33.0	53.5	58.2	54.2	56.0	49.3	100.0	37.1	43.4	42.8	32.3			
		tyt_pt Unfolded Truth Bin 7	11.4	-7.5	-21.1	7.1	-9.7	-24.0	6.6	-5.1	-12.7	7.1	-2.6	1.8	0.4	2.3	4.4	-2.1	12.4	7.5	15.0	0.9	-0.3	-1.3	-24.8	14.3	-5.0	40.2	47.2	50.6	51.7	51.5	48.4	37.1	100.0	41.9	40.7	40.5			
		tyt_pt Unfolded Truth Bin 8	13.0	-14.9	-18.2	5.4	-10.8	-23.3	10.5	-5.4	-11.8	7.9	-3.0	-11.0	-6.1	22.8	3.3	-2.9	8.1	4.2	21.0	1.7	-1.1	-2.7	-25.4	13.0	-1.3	37.4	45.9	49.1	49.3	51.2	47.8	43.4	41.9	100.0	41.4	43.9			
		tyt_pt Unfolded Truth Bin 9	12.3	-19.7	-14.3	3.8	-8.4	-19.6	10.1	-5.3	-																														