Electron ID eff.	100.0	0.0	-0.0	0.0	-0.9	0.2	0.1	0.2	0.1	0.2	-0.3	-0.1	0.1	-0.8	0.8	0.1	-0.1	0.1	-0.7	-0.9	-1.9	0.9	-7.3	-16.9	
b-tag Eigenvar. 0	0.0	100.0	-0.0	-0.0	0.4	-0.3	-0.5	-0.3	-0.1	-0.2	0.1	0.0	-0.2	0.2	-0.3	-0.0	0.0	-0.0	0.6	0.5	0.4	0.5	16.0	18.9	
c-tag Eigenvar. 0	-0.0	-0.0	100.0	-0.1	-1.0	0.3	-0.6	-0.2	-0.2	-0.4	-0.0	-0.0	-0.1	0.3	-0.4	0.1	0.1	0.1	1.6	0.2	-0.3	1.2	25.0	-0.4	
light-tag Eigenvar. 0	0.0	-0.0	-0.1	100.0	-0.7	0.2	-0.6	-0.4	-0.2	-0.6	0.1	0.0	-0.2	0.5	-0.7	0.0	0.1	0.1	1.8	0.4	0.3	0.7	27.8	15.8	
JER EffectiveNP 1	-0.9	0.4	-1.0	-0.7	100.0	19.6	3.9	1.7	-1.5	-4.1	-3.6	-0.4	3.3	0.8	0.7	1.8	-1.1	0.8	15.2	-17.4	-19.3	1.4	-18.4	-5.2	
JER EffectiveNP 3	0.2	-0.3	0.3	0.2	19.6	100.0	-2.4	-4.2	-0.8	-1.1	1.2	0.1	-1.9	-0.6	-2.0	-0.9	0.3	-0.5	-4.0	5.1	3.3	3.2	8.8	4.4	
JER EffectiveNP 6	0.1	-0.5	-0.6	-0.6	3.9	-2.4	100.0	-0.2	0.4	0.5	1.0	-0.0	-2.5	1.0	-1.4	0.0	0.8	0.3	6.7	6.3	3.5	10.1	-15.4	3.9	
JES flavour composition	0.2	-0.3	-0.2	-0.4	1.7	-4.2	-0.2	100.0	-4.4	-9.1	-0.1	0.2	-0.0	2.9	-7.5	-0.3	-0.5	-0.3	11.6	-2.5	-1.3	-2.0	-41.6	0.1	
JES pileup offset NPV	0.1	-0.1	-0.2	-0.2	-1.5	-0.8	0.4	-4.4	100.0	-4.4	-0.2	0.1	0.2	1.4	-3.4	0.1	-0.1	0.1	6.1	-2.0	-2.2	-0.1	-17.4	-0.8	
JES pileup ρ topology	0.2	-0.2	-0.4	-0.6	-4.1	-1.1	0.5	-9.1	-4.4	100.0	-0.3	0.2	0.4	3.7	-7.7	0.1	-0.4	-0.0	14.6	-3.1	-2.8	-0.7	-40.3	-18.3	
JES effective NP modelling 1	-0.3	0.1	-0.0	0.1	-3.6	1.2	1.0	-0.1	-0.2	-0.3	100.0	-0.2	0.5	-1.1	1.0	0.2	-0.4	0.0	-0.8	-3.0	-4.1	0.2	-15.2	-0.0	
Muon isol. eff. (syst)	-0.1	0.0	-0.0	0.0	-0.4	0.1	-0.0	0.2	0.1	0.2	-0.2	100.0	0.0	-0.6	0.6	0.1	-0.0	0.1	-0.6	-0.5	-1.2	0.8	-9.9	-16.5	
Pile-up rew.	0.1	-0.2	-0.1	-0.2	3.3	-1.9	-2.5	-0.0	0.2	0.4	0.5	0.0	100.0	0.3	-0.5	-0.1	0.4	0.0	1.0	1.9	0.9	3.7	-16.5	-18.5	
Tau fake norm.	-0.8	0.2	0.3	0.5	0.8	-0.6	1.0	2.9	1.4	3.7	-1.1	-0.6	0.3	100.0	5.8	0.3	-0.4	0.0	-8.8	-3.3	-7.1	2.6	-16.2	-71.3	
Z+jets μ _R scale	0.8	-0.3	-0.4	-0.7	0.7	-2.0	-1.4	-7.5	-3.4	-7.7	1.0	0.6	-0.5	5.8	100.0	-0.1	0.4	0.1	16.0	2.0	4.4	-0.7	5.5	-2.0	
tW (DR vs. DS)	0.1	-0.0	0.1	0.0	1.8	-0.9	0.0	-0.3	0.1	0.1	0.2	0.1	-0.1	0.3	-0.1	100.0	-1.1	-1.5	-1.2	-2.1	2.5	-6.1	-2.1	21.3	
tW NLO gen.	-0.1	0.0	0.1	0.1	-1.1	0.3	0.8	-0.5	-0.1	-0.4	-0.4	-0.0	0.4	-0.4	0.4	-1.1	100.0	-1.1	-1.3	-3.0	0.3	-5.3	0.1	18.7	
tW PS + had.	0.1	-0.0	0.1	0.1	0.8	-0.5	0.3	-0.3	0.1	-0.0	0.0	0.1	0.0	0.0	0.1	-1.5	-1.1	100.0	-1.2	-2.3	1.7	-5.7	-1.4	19.9	
ttZ NLO gen. + PS + had.	-0.7	0.6	1.6	1.8	15.2	-4.0	6.7	11.6	6.1	14.6	-0.8	-0.6	1.0	-8.8	16.0	-1.2	-1.3	-1.2	100.0	-2.0		-11.2			
tt FSR	-0.9	0.5	0.2	0.4	-17.4	5.1	6.3	-2.5	-2.0	-3.1	-3.0	-0.5	1.9	-3.3	2.0	-2.1	-3.0	-2.3	-2.0			-12.0			
tt NLO gen.	-1.9	0.4	-0.3	0.3	-19.3		3.5	-1.3	-2.2	-2.8	-4.1	-1.2	0.9	-7.1	4.4	2.5	0.3	1.7	0.3	-23.0	100.0			26.5	
	0.9			0.3		3.2		-2.0	-2.2 -0.1	-0.7	0.2					-6.1					37.1	100.0		-5.1	
tt PS + had.		0.5	1.2		1.4		10.1					0.8		2.6			-5.3								
k(Z+jets)	-7.3	16.0	25.0	27.8	-18.4	8.8		-41.6			-15.2		-16.5			-2.1	0.1	-1.4	-28.7	18.3	8.1			30.6	
$k(t\overline{t})$	-16.9	18.9	-0.4	15.8	-5.2	4.4	3.9	0.1	-0.8	-18.3	-0.0	-16.5	-18.5	-71.3	-2.0	21.3	18.7	19.9	12.9	-5.2	26.5	-5.1	30.6	100.0	
$\mu(tHq)$:	:																				100.0
	Electron ID eff.	b-tag Eigenvar. 0	c-tag Eigenvar. 0	light-tag Eigenvar. 0	JER EffectiveNP 1	JER EffectiveNP 3	JER EffectiveNP 6	JES flavour composition	JES pileup offset NPV	JES pileup p topology	JES effective NP modelling 1	Muon isol. eff. (syst)	Pile-up rew.	Tau fake norm.	Z+jets μ _R scale	tW (DR vs. DS)	tW NLO gen.	tW PS + had.	ttZ NLO gen. + PS + had.	tt FSR	tt NLO gen.	tt PS + had.	k(Z+jets)	$k(t\bar{t})$	$\mu(tHq)$