

Electron ID eff.	100.0	-0.0	-0.0	0.0	0.0	0.2	-0.1	-0.5	0.5	0.3	0.4	0.0	0.3	0.6	0.0	-0.0	-0.1	-0.0	-0.1	-0.1	-7.9	-28.4	
Electron isol. eff. (syst)	-0.0	100.0	-0.0	0.0	0.0	0.3	-0.1	-0.4	0.4	0.2	0.3	0.0	0.2	0.5	0.0	-0.0	-0.0	-0.0	-0.1	-0.1	-6.7	-24.3	
b-tag Eigenvar. 0	-0.0	-0.0	100.0	-0.0	0.0	-0.0	-0.1	-0.5	0.8	-0.1	-0.5	0.3	-0.1	-0.2	0.0	-0.0	-0.1	-0.0	0.1	0.1	15.4	31.7	
c-tag Eigenvar. 0	0.0	0.0	-0.0	100.0	-0.1	-1.2	0.7	0.1	0.6	-0.1	-0.4	-0.1	-0.2	-0.4	0.1	0.0	-0.2	0.0	0.3	0.2	23.6	-0.2	
light-tag Eigenvar. 0	0.0	0.0	0.0	-0.1	100.0	-1.0	0.5	0.3	0.1	-0.2	-0.6	-0.1	-0.3	-0.7	0.0	0.0	-0.1	0.0	0.2	0.2	26.5	27.1	
JER EffectiveNP 1	0.2	0.3	-0.0	-1.2	-1.0	100.0	17.1	7.8	0.3	1.1	2.1	-8.2	1.0	-2.0	0.9	0.2	-2.3	0.4	2.6	-0.2	-27.1	-2.4	
JER EffectiveNP 3	-0.1	-0.1	-0.1	0.7	0.5	17.1	100.0	-5.5	0.9	-1.6	-3.4	6.1	-1.6	-0.7	-0.5	-0.1	1.4	-0.2	-1.5	1.1	10.2	5.6	
JER EffectiveNP 4	-0.5	-0.4	-0.5	0.1	0.3	7.8	-5.5	100.0	17.7	0.0	-5.8	6.5	-0.6	0.8	0.3	-0.4	-1.1	-0.3	-0.3	2.2	6.5	9.6	
JER EffectiveNP 5	0.5	0.4	0.8	0.6	0.1	0.3	0.9	17.7	100.0	-0.0	9.4	-6.9	1.1	0.7	-1.0	0.5	2.7	0.2	-1.0	-3.9	1.5	0.7	
JES $\eta$ intercalibration modelling	0.3	0.2	-0.1	-0.1	-0.2	1.1	-1.6	0.0	-0.0	100.0	-3.9	1.5	-2.1	-4.1	0.0	0.2	0.4	0.2	0.2	1.6	-18.7	1.4	
JES flavour composition	0.4	0.3	-0.5	-0.4	-0.6	2.1	-3.4	-5.8	9.4	-3.9	100.0	5.4	-4.5	-8.4	0.4	0.3	-0.2	0.4	0.6	4.7	-37.4	-1.0	
JES flavour response	0.0	0.0	0.3	-0.1	-0.1	-8.2	6.1	6.5	-6.9	1.5	5.4	100.0	1.8	2.1	-0.1	0.0	-0.2	0.0	0.4	-2.1	16.1	0.9	
JES pileup offset NPV	0.3	0.2	-0.1	-0.2	-0.3	1.0	-1.6	-0.6	1.1	-2.1	-4.5	1.8	100.0	-4.4	0.1	0.2	0.2	0.2	0.4	1.9	-17.7	1.1	
JES pileup $p$ topology	0.6	0.5	-0.2	-0.4	-0.7	-2.0	-0.7	0.8	0.7	-4.1	-8.4	2.1	-4.4	100.0	0.3	0.5	0.3	0.5	0.8	3.5	-39.5	-22.5	
JES effective NP modelling 1	0.0	0.0	0.0	0.1	0.0	0.9	-0.5	0.3	-1.0	0.0	0.4	-0.1	0.1	0.3	100.0	0.0	0.2	-0.0	-0.2	-0.2	-17.5	0.5	
Muon isol. eff. (syst)	-0.0	-0.0	-0.0	0.0	0.0	0.2	-0.1	-0.4	0.5	0.2	0.3	0.0	0.2	0.5	0.0	100.0	-0.0	-0.0	-0.1	-0.1	-10.1	-27.5	
Pile-up rew.	-0.1	-0.0	-0.1	-0.2	-0.1	-2.3	1.4	-1.1	2.7	0.4	-0.2	-0.2	0.2	0.3	0.2	-0.0	100.0	-0.0	0.3	0.1	-12.7	-31.9	
Luminosity	-0.0	-0.0	-0.0	0.0	0.0	0.4	-0.2	-0.3	0.2	0.2	0.4	0.0	0.2	0.5	-0.0	-0.0	-0.0	100.0	-0.1	-0.2	-8.1	-24.6	
Diboson NNPDF30 37	-0.1	-0.1	0.1	0.3	0.2	2.6	-1.5	-0.3	-1.0	0.2	0.6	0.4	0.4	0.8	-0.2	-0.1	0.3	-0.1	100.0	-0.3	-26.1	0.4	
$t\bar{t}$ NLO gen.	-0.1	-0.1	0.1	0.2	0.2	-0.2	1.1	2.2	-3.9	1.6	4.7	-2.1	1.9	3.5	-0.2	-0.1	0.1	-0.2	-0.3	100.0	-10.5	28.4	
$k(Z+\text{jets})$	-7.9	-6.7	15.4	23.6	26.5	-27.1	10.2	6.5	1.5	-18.7	-37.4	16.1	-17.7	-39.5	-17.5	-10.1	-12.7	-8.1	-26.1	-10.5	100.0	31.7	
$k(t\bar{t})$	-28.4	-24.3	31.7	-0.2	27.1	-2.4	5.6	9.6	0.7	1.4	-1.0	0.9	1.1	-22.5	0.5	-27.5	-31.9	-24.6	0.4	28.4	31.7	100.0	
$\mu(tHq)$																							100.0
Electron ID eff.	Electron ID eff.	Electron isol. eff. (syst)	b-tag Eigenvar. 0	c-tag Eigenvar. 0	light-tag Eigenvar. 0	JER EffectiveNP 1	JER EffectiveNP 3	JER EffectiveNP 4	JER EffectiveNP 5	JES $\eta$ intercalibration modelling	JES flavour composition	JES flavour response	JES pileup offset NPV	JES pileup $p$ topology	JES effective NP modelling 1	Muon isol. eff. (syst)	Pile-up rew.	Luminosity	Diboson NNPDF30 37	$t\bar{t}$ NLO gen.	$k(Z+\text{jets})$	$k(t\bar{t})$	$\mu(tHq)$