

Pre-fit impact on  $\mu(tHq)$ :

$\square \theta = \hat{\theta} + \Delta\theta$   $\square \theta = \hat{\theta} - \Delta\theta$

Post-fit impact on  $\mu(tHq)$ :

$\blacksquare \theta = \hat{\theta} + \Delta\hat{\theta}$   $\blacksquare \theta = \hat{\theta} - \Delta\hat{\theta}$

— Nuis. Param. Pull

$\gamma$  (SRBDTtHq2L1TAUOS bin 3)

$t\bar{t}$  NLO gen.

$t\bar{t}$  FSR

JER EffectiveNP 1

$k(Z+jets)$

Tau fake norm.

$\gamma$  (SRBDTtHq2L1TAUOS bin 2)

$\gamma$  (SRBDTtHq2L1TAUOS bin 0)

JER DataVsMC MC16

JES flavour composition

$t\bar{t}$  hdamp=3m<sub>top</sub>

$k(t\bar{t})$

JER EffectiveNP 9

$t\bar{t}$   $\mu_R \mu_F$  scale

$t\bar{t}$   $\mu_R \mu_F$  scale

JER EffectiveNP 5

JER EffectiveNP 3

JES  $\eta$  intercalibration modelling

JES flavour response

$\gamma$  (CRZjets2L1TAUOS bin 0)

$\Delta\mu(tHq)$

-6 -4 -2 0 2 4 6

$\sqrt{s} = 13 \text{ TeV}, 140 \text{ fb}^{-1}$

