

$\sqrt{s} = 13 \text{ TeV}, 139 \text{ fb}^{-1}$

$\tau_{\text{had}}\tau_{\text{had}}$  channel + CR

$\hat{\mu} = 0.7^{+1.9}_{-1.6}$

$\Delta\mu$

-0.5 0.0 0.5

$\tau_{\text{had}}\tau_{\text{had}}$  SMBDT bin 13

$H \rightarrow \tau\tau$  acceptance (ggF, heavy flavour)

$\tau_{\text{had}}\tau_{\text{had}}$  SMBDT bin 12

$HH$  cross section (scales +  $m_{\text{top}}$  scheme)

$tW$  acceptance (interference)

$Z + \text{HF}$  acceptance ( $\mu_f, \mu_r$ )

$Z + \text{HF}$  acceptance (MadGraph)

Fake- $\tau_{\text{had}}$  scale factor (FF extrapolation)

FF non-multi-jet subtraction (other)

JER Effective NP 4

$W + \text{jets}$  acceptance

$\tau_{\text{had}}$  energy scale (physics list)

$t\bar{t}$  acceptance (NLO+PS matching)

JER Effective NP 2

$t\bar{t}$  acceptance (parton shower,  $\tau_{\text{had}}\tau_{\text{had}}$ )

$\Delta\mu$  (post-fit impact on  $\mu$ ):

■  $+1\sigma$  ■  $-1\sigma$

$\hat{\theta}$  (best-fit nuisance parameter):

●  $\alpha$  ●  $\gamma$  ● Normalisation

