

















Events / 0.25

ATLAS Internal
 $\sqrt{s} = 13\text{TeV}, 139\text{fb}^{-1}$
FCNC tqH $H \rightarrow \tau\tau$

$t_l \tau_{\text{had}} \tau_{\text{had}}$ SS

Other MC

b-jets fake τ

τ_W

Other Fake τ

$\bar{t}t \rightarrow bWcH \times 60$

$ug \rightarrow tH \times 200$

$tuH WWZZ \times 100$

$t\bar{t}$

lepton fake τ

double fake τ

data

$cg \rightarrow tH \times 900$

$\bar{t}t \rightarrow bWuH \times 50$

$tcH WWZZ \times 100$

80

60

40

20

0

Data/Bkg

1.4

1.2

1.0

0.8

0.6

0

0.5

1

1.5

2

2.5

 $\eta_{\tau, \text{max}}$ 