

# CMS Simulation Preliminary

Mis-ID probability

$p_T^{\tau_h} > 20 \text{ GeV}, |\eta_{\tau_h}| < 2.3$   
13 TeV, 20 pileup at 25ns

$10^{-2}$

$10^{-3}$

- Run1,  $\Delta\beta = 0.46$
- Run1,  $\Delta\beta = 0.46, p_T^{\text{strip, outer}}$
- ▲ Run1,  $\Delta\beta = 0.2, p_T^{\text{strip, outer}}$
- ▼ Run2,  $\Delta\beta = 0.2, p_T^{\text{strip, outer}}$

Efficiency :  $H \rightarrow \tau\tau$  MC

Fake rate : QCD multi-jet MC ( $20 < p_T < 100 \text{ GeV}$ )

0.4

0.5

0.6

0.7

$\tau_h$  identification efficiency

