

$t\bar{t}H(2\text{IOS}+\pi)$

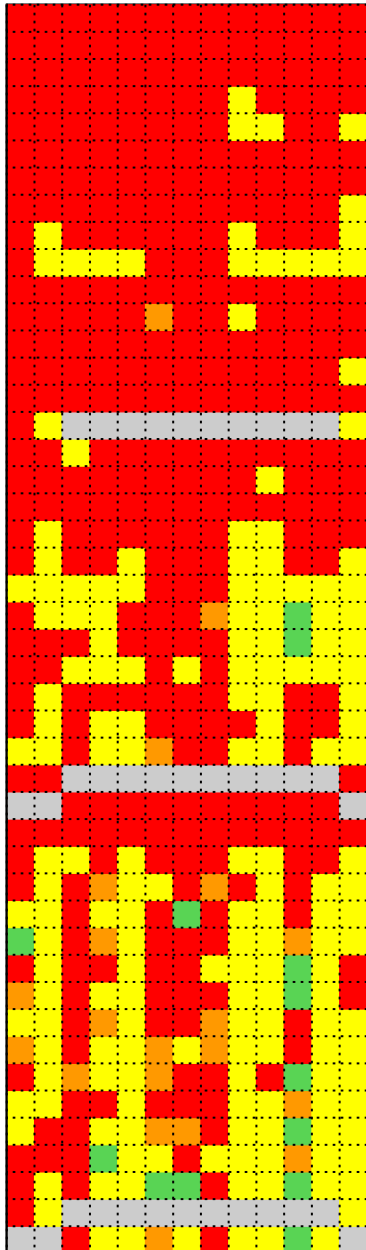
SR

CR  $t\bar{t}$

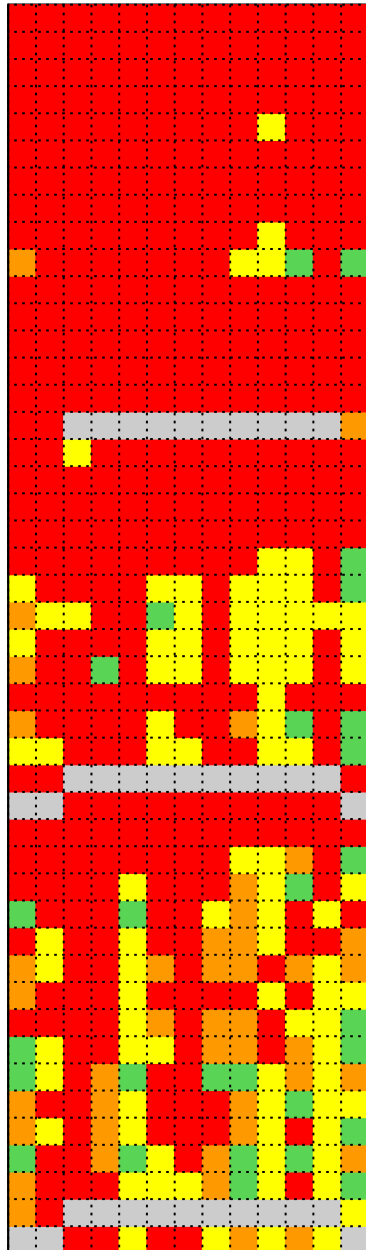
CR Z+jets

JES effective NP stat. 6  
 JES effective NP stat. 5  
 JES effective NP stat. 4  
 JES effective NP stat. 3  
 JES effective NP stat. 2  
 JES effective NP stat. 1  
 JES effective NP modelling 4  
 JES effective NP modelling 3  
 JES effective NP modelling 2  
 JES effective NP modelling 1  
 JES effective NP mixed 3  
 JES effective NP mixed 2  
 JES effective NP mixed 1  
 JES effective NP detector 2  
 JES effective NP detector 1  
 JES relative non-closure AFII  
 intercalibration non-closure (pos  $\eta$ )  
 intercalibration non-closure (neg  $\eta$ )  
 intercalibration non-closure (high-E)  
 intercalibration NonClosure 2018data  
 JES  $\eta$  intercalibration total stat  
 JES  $\eta$  intercalibration modelling  
 JES flavour composition  
 JES flavour response  
 JES pileup  $\rho$  topology  
 JES pileup  $p_T$  term  
 JES pileup offset NPV  
 JES pileup offset  $\mu$   
 JES Punchthrough (AFII)  
 JES Punchthrough  
 JES single particle (high- $p_T$ )  
 JES BJES Response  
 JER EffectiveNP 12restTerm  
 JER EffectiveNP 11  
 JER EffectiveNP 10  
 JER EffectiveNP 9  
 JER EffectiveNP 8  
 JER EffectiveNP 7  
 JER EffectiveNP 6  
 JER EffectiveNP 5  
 JER EffectiveNP 4  
 JER EffectiveNP 3  
 JER EffectiveNP 2  
 JER EffectiveNP 1  
 JER DataVsMC AFII  
 JER DataVsMC MC16

Not present  
 Kept  
 Shape dropped  
 Norm. dropped  
 Dropped  
 Norm >99% (dropped)  
 Bad shape (dropped)  
 Bad shape & norm. (dropped)



$t\bar{t}H$   
 $t\bar{t}W$   
 $t\bar{t}Z$   
 $t\bar{t}H$   
 $t\bar{t}Z$   
 $t\bar{t}H$   
 $t\bar{t}Z$   
 $t\bar{t}H$   
 $t\bar{t}Z$   
 $t\bar{t}H$   
 $t\bar{t}Z$   
 $t\bar{t}H$



$t\bar{t}H$   
 $t\bar{t}W$   
 $t\bar{t}Z$   
 $t\bar{t}H$   
 $t\bar{t}Z$   
 $t\bar{t}H$   
 $t\bar{t}Z$   
 $t\bar{t}H$   
 $t\bar{t}Z$   
 $t\bar{t}H$   
 $t\bar{t}Z$   
 $t\bar{t}H$



$t\bar{t}H$   
 $t\bar{t}W$   
 $t\bar{t}Z$   
 $t\bar{t}H$   
 $t\bar{t}Z$   
 $t\bar{t}H$   
 $t\bar{t}Z$   
 $t\bar{t}H$   
 $t\bar{t}Z$   
 $t\bar{t}H$   
 $t\bar{t}Z$   
 $t\bar{t}H$