

Signal**Validation**

≥ 2 AK8 jets
 $p_T > 350$ GeV (all jets)
 $|\eta| < 2.4$ (all jets)
 $p_T > 400$ GeV (jet leading in p_T)

Jet assignment

H \rightarrow $b\bar{b}$: highest T_{Xbb} score

Y \rightarrow VV: out of remaining jets, highest T_{YWW} score

$110 < m_{\text{reg}}^{\text{bb}} < 145$ GeV

$92.5 < m_{\text{reg}}^{\text{bb}} < 110$ GeV or $145 < m_{\text{reg}}^{\text{bb}} < 162.5$ GeV

Pass**Fail****Pass****Fail**

$T_{Xbb}^{\text{bb}} > \text{HP WP}$
 $T_{YWW}^{\text{VV}} > 0.6$

$T_{Xbb}^{\text{bb}} < \text{HP WP}$
 $T_{YWW}^{\text{VV}} < 0.6$

$T_{Xbb}^{\text{bb}} > \text{HP WP}$
 $T_{YWW}^{\text{VV}} > 0.6$

$T_{Xbb}^{\text{bb}} < \text{HP WP}$
 $T_{YWW}^{\text{VV}} < 0.6$