

Analysis	Channel	Categorization	Final discriminant
HVV Approach 1	VBF ( $a_2$ )	$\mathcal{D}_{\text{int}}$	$[\mathcal{D}_{\text{VBF}}, m_{\ell\ell}, \mathcal{D}_{0+}]$
	VBF ( $a_3$ )	$\mathcal{D}_{CP}$	$[\mathcal{D}_{\text{VBF}}, m_{\ell\ell}, \mathcal{D}_{0-}]$
	VBF ( $\kappa_1$ )	—	$[\mathcal{D}_{\text{VBF}}, m_{\ell\ell}, \mathcal{D}_{\Lambda 1}]$
	VBF ( $\kappa_2^{Z\gamma}$ )	—	$[\mathcal{D}_{\text{VBF}}, m_{\ell\ell}, \mathcal{D}_{\Lambda 1}^{Z\gamma}]$
	VH ( $a_2$ )	—	$[m_{\ell\ell}, \mathcal{D}_{0+}]$
	VH ( $a_3$ )	$\mathcal{D}_{CP}$	$[m_{\ell\ell}, \mathcal{D}_{0-}]$
	VH ( $\kappa_1$ )	—	$[m_{\ell\ell}, \mathcal{D}_{\Lambda 1}]$
	VH ( $\kappa_2^{Z\gamma}$ )	—	$[m_{\ell\ell}, \mathcal{D}_{\Lambda 1}^{Z\gamma}]$
HVV Approach 2	0- & 1-jet ggH	—	$[m_{\text{T}}, m_{\ell\ell}]$
	VBF	$\mathcal{D}_{CP}, \mathcal{D}_{\text{int}}$	$[\mathcal{D}_{\text{VBF}}, m_{\ell\ell}, \mathcal{D}_{0-}, \mathcal{D}_{0+}]$
	VH	$\mathcal{D}_{CP}$	$[m_{\ell\ell}, \mathcal{D}_{0-}, \mathcal{D}_{0+}]$
	0- & 1-jet ggH	—	$[m_{\text{T}}, m_{\ell\ell}]$
Hgg	2-jet ggH	$\mathcal{D}_{CP}^{\text{ggH}}$	$[\mathcal{D}_{\text{VBF}}, \mathcal{D}_{0-}^{\text{ggH}}]$
	0- & 1-jet ggH	—	$[m_{\text{T}}, m_{\ell\ell}]$