Input variable	SM DNN	dim-6 DNN	dim-8 DNN
$ au_{ m h} p_{ m T}$	$\checkmark$	$\checkmark$	$\checkmark$
$\ell  p_{ m T}$	$\checkmark$	$\checkmark$	$\checkmark$
$ au_{ m h} \eta$		$\checkmark$	
$\ell \eta$		$\checkmark$	
leading VBS jet $p_{\rm T}$	$\checkmark$	$\checkmark$	$\checkmark$
subleading VBS jet $p_{\rm T}$	$\checkmark$	$\checkmark$	$\checkmark$
leading VBS jet mass		$\checkmark$	$\checkmark$
subleading VBS jet mass		$\checkmark$	$\checkmark$
VBS jet pair $\Delta \phi$		$\checkmark$	
$M_{jj}$	$\checkmark$	$\checkmark$	
$M_{1T}$	$\checkmark$	$\checkmark$	$\checkmark$
$M_{o1}$	$\checkmark$	$\checkmark$	$\checkmark$
$M_{\rm T}(\tau_{\rm h'}\vec{p}_{\rm T}^{\rm miss})$			$\checkmark$
$M_{\mathrm{T}}(\ell,ec{p}_{\mathrm{T}}^{\mathrm{miss}})$	$\checkmark$	$\checkmark$	$\checkmark$
$M_{\rm T}(\ell, \tau_{\rm h}, \vec{\vec{p}}_{\rm T}^{\rm miss})$			$\checkmark$
$p_{\mathrm{T}}^{\mathrm{rel}}(\ell$ , $j_{1})$		$\checkmark$	
$p_{\mathrm{T}}^{\mathrm{rel}}(\ell, j_2)$		$\checkmark$	
$p_{\mathrm{T}}^{\mathrm{rel}}(\tau_{\mathrm{h}}, j_{1})$		$\checkmark$	
$p_{\mathrm{T}}^{\mathrm{rel}}(\tau_{\mathrm{h}}, j_{2})$		$\checkmark$	
$\Delta oldsymbol{\phi}(\ell,j_1)$		$\checkmark$	
$\Delta \phi(\ell, j_2)$		$\checkmark$	
$\Delta \phi( au_{ m h}, j_1)$		$\checkmark$	
$\Delta \phi(\tau_{ m h}, j_2)$		$\checkmark$	
$p_{\mathrm{T,  leading}  au_{\mathrm{h}} \mathrm{track}}/p_{\mathrm{T,   au_{\mathrm{h}}}}$	$\checkmark$	$\checkmark$	
Zeppenfeld variable		$\checkmark$	