Reconstructed event category	1st categorization step	Number of jets	Kinematical requirements (GeV)	Targeted production bin
Untagged-0j-$p_T^{4\ell}[0,10]$	Untagged	0	$0 < p_T^{4\ell} < 10$	ggH-0j/$p_T[0,10]$
Untagged-0j-$p_T^{4\ell}[10,200]$	Untagged	0	$10 < p_T^{4\ell} < 200$	ggH-0j/$p_T[10,200]$
Untagged-1j-$p_T^{4\ell}[0,60]$	Untagged	1	$0 < p_T^{4\ell} < 60$	ggH-1j/$p_T[0,60]$
Untagged-1j-$p_T^{4\ell}[60,120]$	Untagged	1	$60 < p_T^{4\ell} < 120$	ggH-1j/$p_T[60,120]$
Untagged-1j-$p_T^{4\ell}[120,200]$	Untagged	1	$120 < p_T^{4\ell} < 200$	ggH-1j/$p_T[120,200]$
Untagged-2j-$p_T^{4\ell}[0,60]$	Untagged	2	$0 < p_T^{4\ell} < 60$, $m_{jj} < 350$	ggH-2j/$p_T[0,60]$
Untagged-2j-$p_T^{4\ell}[60,120]$	Untagged	2	$60 < p_T^{4\ell} < 120$, $m_{jj} < 350$	ggH-2j/$p_T[60,120]$
Untagged-2j-$p_T^{4\ell}[120,200]$	Untagged	2	$120 < p_T^{4\ell} < 200$, $m_{jj} < 350$	ggH-2j/$p_T[120,200]$
Untagged-$p_T^{4\ell} > 200$	Untagged	—	$p_T^{4\ell} > 200$	ggH/$p_T > 200$
Untagged-2j-$m_{jj} > 350$	Untagged	2	$m_{jj} > 350$	ggH-2j/$m_{jj} > 350$
VBF-1jet-tagged	VBF-1jet-tagged	—	—	qqH-rest
VBF-2jet-tagged-$m_{jj}[350,700]$	VBF-2jet-tagged	—	$p_T^{4\ell} < 200$, $p_T^{4\ell jj} < 25$, $350 < m_{jj} < 700$	qqH-2j/$m_{jj}[350,700]$
VBF-2jet-tagged-$m_{jj} > 700$	VBF-2jet-tagged	—	$p_T^{4\ell} < 200$, $p_T^{4\ell jj} < 25$, $m_{jj} > 700$	qqH-2j/$m_{jj} > 700$
VBF-3jet-tagged-$m_{jj} > 350$	VBF-2jet-tagged	—	$p_T^{4\ell} < 200$, $p_T^{4\ell jj} > 25$, $m_{jj} > 350$	qqH-3j/$m_{jj} > 350$
VBF-2jet-tagged-$p_T^{4\ell} > 200$	VBF-2jet-tagged	—	$p_T^{4\ell} > 200$, $m_{jj} > 350$	qqH-2j/$p_T > 200$
VBF-rest	VBF-2jet-tagged	—	$m_{jj} < 350$	qqH-rest
VH-hadronic-tagged-$m_{jj}[60,120]$	VH-hadronic-tagged	—	$60 < m_{jj} < 120$	qqH-2j/$m_{jj}[60,120]$
VH-rest	VH-hadronic-tagged	—	$m_{jj} < 60$ or $m_{jj} > 120$	qqH-rest
VH-leptonic-tagged-$p_T^{4\ell}[0,150]$	VH-leptonic-tagged	—	$p_T^{4\ell} < 150$	VH-lep/$p_T^H[0,150]$
VH-leptonic-tagged-$p_T^{4\ell} > 150$	VH-leptonic-tagged	—	$p_T^{4\ell} > 150$	VH-lep/$p_T^H > 150$
$t\bar{t}$H-leptonic-tagged	$t\bar{t}$H-leptonic-tagged	—	—	ttH
$t\bar{t}$H-hadronic-tagged	$t\bar{t}$H-hadronic-tagged	—	—	ttH