

Analysis	Signal	$\int \mathcal{L} dt \text{ (fb}^{-1}\text{)}$	
		7 TeV	8 TeV
Categorisation or final states $H \rightarrow \gamma\gamma$ [12] $t\bar{t}H$ : leptonic, hadronic $VH$ : one-lepton, dilepton, $E_T^{\text{miss}}$ , hadronic VBF: tight, loose ggF: 4 $p_{T_t}$ categories	Strength $1.17 \pm 0.27$	Significance [ $\sigma$ ] 5.2 (4.6)	4.5 20.3 ✓ ✓ ✓ ✓
$H \rightarrow ZZ^* \rightarrow 4\ell$ [13] VBF $VH$ : hadronic, leptonic ggF	$1.44^{+0.40}_{-0.33}$	8.1 (6.2)	4.5 20.3 ✓ ✓ ✓
$H \rightarrow WW^*$ [14,15] ggF: (0-jet, 1-jet) $\otimes (ee + \mu\mu, e\mu)$ ggF: $\geq 2$ -jet and $e\mu$ VBF: $\geq 2$ -jet $\otimes (ee + \mu\mu, e\mu)$ $VH$ : opposite-charge dilepton, three-lepton, four-lepton $VH$ : same-charge dilepton	$1.16^{+0.24}_{-0.21}$	6.5 (5.9)	4.5 20.3 ✓ ✓ ✓ ✓ ✓
$H \rightarrow \tau\tau$ [17] Boosted: $\tau_{\text{lep}}\tau_{\text{lep}}, \tau_{\text{lep}}\tau_{\text{had}}, \tau_{\text{had}}\tau_{\text{had}}$ VBF: $\tau_{\text{lep}}\tau_{\text{lep}}, \tau_{\text{lep}}\tau_{\text{had}}, \tau_{\text{had}}\tau_{\text{had}}$	$1.43^{+0.43}_{-0.37}$	4.5 (3.4)	4.5 20.3 ✓ ✓ ✓
$VH \rightarrow Vb\bar{b}$ [18] $0\ell$ ( $ZH \rightarrow \nu\nu b\bar{b}$ ): $N_{\text{jet}} = 2, 3$ , $N_{\text{btag}} = 1, 2$ , $p_T^V >$ and $< 120$ GeV $1\ell$ ( $WH \rightarrow \ell\nu b\bar{b}$ ): $N_{\text{jet}} = 2, 3$ , $N_{\text{btag}} = 1, 2$ , $p_T^V >$ and $< 120$ GeV $2\ell$ ( $ZH \rightarrow \ell\ell b\bar{b}$ ): $N_{\text{jet}} = 2, 3$ , $N_{\text{btag}} = 1, 2$ , $p_T^V >$ and $< 120$ GeV	$0.52 \pm 0.40$	1.4 (2.6)	4.7 20.3 ✓ ✓ ✓ ✓
95% CL limit			
$H \rightarrow Z\gamma$ [19] 10 categories based on $\Delta\eta_{Z\gamma}$ and $p_{T_t}$	$\mu < 11$ (9)		4.5 20.3 ✓ ✓
$H \rightarrow \mu\mu$ [20] VBF and 6 other categories based on $\eta_\mu$ and $p_T^{\mu\mu}$	$\mu < 7.0$ (7.2)		4.5 20.3 ✓ ✓
$t\bar{t}H$ production [21,22,23] $H \rightarrow b\bar{b}$ : single-lepton, dilepton $t\bar{t}H \rightarrow$ multileptons: categories on lepton multiplicity $H \rightarrow \gamma\gamma$ : leptonic, hadronic	$\mu < 3.4$ (2.2) $\mu < 4.7$ (2.4) $\mu < 6.7$ (4.9)		4.5 20.3 ✓ ✓ ✓
Off-shell $H^*$ production [24] $H^* \rightarrow ZZ \rightarrow 4\ell$ $H^* \rightarrow ZZ \rightarrow 2\ell 2\nu$ $H^* \rightarrow WW \rightarrow e\nu\mu\nu$	$\mu < 5.1 - 8.6$ (6.7 – 11.0)		20.3 ✓ ✓ ✓