

## Non-resonant analysis (event yields)

Process	0 b tags	1 b tag	2 b tags
Non-resonant HH production (100 SM)	$1.2 \pm 0.2$	$4.6 \pm 0.6$	$4.3 \pm 0.5$
$Z \rightarrow \tau\tau$	$120.3 \pm 11.1$	$17.7 \pm 3.0$	$2.0 \pm 0.8$
Multijet	$27.9 \pm 2.7$	$5.4 \pm 1.0$	$0.7 \pm 0.2$
W+jets	$4.3 \pm 0.8$	$0.4 \pm 0.1$	$0.4 \pm 0.1$
Z+jets (e, $\mu$ , or jet misidentified as $\tau_h$ )	$0.7 \pm 0.2$	$<0.1$	$<0.1$
$t\bar{t}$	$1.3 \pm 0.2$	$3.4 \pm 0.5$	$1.2 \pm 0.2$
Di-bosons + single top quark	$5.7 \pm 1.0$	$1.1 \pm 0.2$	$0.5 \pm 0.1$
SM Higgs boson	$3.7 \pm 1.3$	$0.6 \pm 0.2$	$0.2 \pm 0.1$
Total expected	$163.9 \pm 11.4$	$28.6 \pm 3.2$	$5.2 \pm 1.1$
Observed data	165	26	1

## Resonant analysis (event yields)

Process	0 b tags	1 b tag	2 b tags
500 GeV radion $\rightarrow$ HH	$1.6 \pm 0.2$	$5.7 \pm 0.7$	$6.2 \pm 0.8$
500 GeV graviton $\rightarrow$ HH	$2.4 \pm 0.3$	$7.8 \pm 0.9$	$7.6 \pm 0.9$
$Z \rightarrow \tau\tau$	$130.6 \pm 13.8$	$19.8 \pm 3.4$	$2.7 \pm 1.0$
Multijet	$92.7 \pm 8.1$	$12.6 \pm 2.2$	$1.8 \pm 0.6$
W+jets	$8.4 \pm 1.5$	$0.8 \pm 0.3$	$0.4 \pm 0.1$
Z+jets (e, $\mu$ or jet misidentified as $\tau_h$ )	$1.6 \pm 0.5$	$<0.1$	$0.2 \pm 0.1$
$t\bar{t}$	$2.5 \pm 0.4$	$5.2 \pm 0.7$	$2.7 \pm 0.5$
Di-bosons + single top	$6.1 \pm 1.1$	$1.7 \pm 0.4$	$0.5 \pm 0.1$
SM Higgs boson	$5.0 \pm 1.7$	$0.7 \pm 0.2$	$0.2 \pm 0.1$
Total expected	$246.8 \pm 13.9$	$40.6 \pm 3.9$	$8.4 \pm 1.3$
Observed data	268	39	4