

Process	Before preselection	After SL preselection (efficiency)
$\gamma\gamma + \text{jets}$	302978	542.5 (0.179%)
$t\bar{t}\gamma + \text{jets}$	765	154.7 (20.2%)
$\gamma + \text{jet}$	830909	1061 (0.002%)
$t\bar{t} + \text{jets}$	23.6	3.35 (81.4%)
$\text{ggF } H \rightarrow \gamma\gamma$	2226.7	2.56 (0.115%)
$t\bar{t}H \rightarrow \gamma\gamma$	23.9	5.9 (24.7%)
$\text{VBF } H \rightarrow \gamma\gamma$	158.2	0.3712 (0.235%)
$VH \rightarrow \gamma\gamma$	85.6	10.1 (11.8%)
$\text{SL } HH \rightarrow WW\gamma\gamma$	0.3012	0.1044 (34.3%)