

(13.6 TeV)

CMS *Simulation*

$H \rightarrow SS, S \rightarrow b\bar{b}/d\bar{d}/\tau^+\tau^-$
 $m_H = 125 \text{ GeV}, m_S = 40 \text{ GeV}$

$b/d/\tau$

Gen.-level $p_T > 40 \text{ GeV}, |\eta| < 2.0$

\bullet b quark

\blacktriangle d quark

\blacksquare τ lepton

HLT per-parton tagging efficiency

1
0.8
0.6
0.4
0.2
0

Gen.-level parton production vertex $L_{xy} [\text{cm}]$

10^{-1} 1 10 10^2

