





CMS $137 \text{ fb}^{-1} (13 \text{ TeV})$ $\text{H} \rightarrow \gamma\gamma$ $|\eta^{j_1}| < 2.5$ $p_T^{j_1} > 30 \text{ GeV}$  MADGRAPH5_aMC@NLO, NNLOPS ggH + HX MADGRAPH5_aMC@NLO ggH + HX POWHEG ggH + HX HX = MADGRAPH5_aMC@NLO VBF+VH+ttH Data, stat \oplus syst unc. syst unc.

p-value(nominal SM): 0.019

 $\Delta\sigma_{\text{fid}} / \Delta|\Delta y_{\gamma\gamma, j_1}| \text{ (fb)}$ $\sigma_{\text{fid}}(|\Delta y_{\gamma\gamma, j_1}| > 2.5)$
0.6Ratio to
prediction $|\Delta y_{\gamma\gamma, j_1}|$ 