

ATLAS

$\sqrt{s} = 13 \text{ TeV}, 140 \text{ fb}^{-1}$

$\text{HH} \rightarrow 2\text{b}+2\text{l}+E_{\text{T}}^{\text{miss}}$

● Observed

○ Expected

$\pm 1\sigma$

$\pm 2\sigma$

$$\frac{\sigma_{\text{gg} \rightarrow \text{HH}}}{\sigma_{\text{gg} \rightarrow \text{HH}}^{\text{SM}}}$$

Obs. (Exp.)

ggF SR & VBF SR

10.5 (17.0)

$$\frac{\sigma_{\text{qq} \rightarrow \text{HHjj}}}{\sigma_{\text{qq} \rightarrow \text{HHjj}}^{\text{SM}}}$$

ggF SR & VBF SR

118 (130)

$$\frac{\sigma_{\text{pp} \rightarrow \text{HH}}}{\sigma_{\text{pp} \rightarrow \text{HH}}^{\text{SM}}}$$

ggF SR only

10.7 (16.6)

$$\frac{\sigma_{\text{pp} \rightarrow \text{HH}}}{\sigma_{\text{pp} \rightarrow \text{HH}}^{\text{SM}}}$$

ggF SR & VBF SR

9.7 (16.2)

10

10^2

10^3

95% CL upper limit