

ATLAS

$\sqrt{s} = 13 \text{ TeV}, 126\text{---}140 \text{ fb}^{-1}$

$\sigma_{\text{ggF}}^{\text{SM}}(HH) = 31.1 \text{ fb}$

- Observed limit (95% CL)
- ⋯ Expected limit (95% CL)
($\mu_{HH} = 0$ hypothesis)
- Expected limit $\pm 1\sigma$
- Expected limit $\pm 2\sigma$

Obs.

Exp.

$b\bar{b}l\bar{l} + E_{\text{T}}^{\text{miss}}$

Multilepton

$b\bar{b}b\bar{b}$

$b\bar{b}\gamma\gamma$

$b\bar{b}\tau^+\tau^-$

Combined

10

14

17

12

5.4

8.2

4.1

5.3

5.9

3.3

2.9

2.4

95% CL upper limit on ggF HH signal strength μ_{ggF}