

ATLAS Preliminary

$\sqrt{s} = 13 \text{ TeV}, 27.5\text{--}139 \text{ fb}^{-1}$

- Observed
- Expected
- Expected $\pm 2 \sigma$
- Expected $\pm 1 \sigma$

Obs. Exp.

6.9 10

Normalised to σ_{ggF}

Phys. Lett. B 800 (2020) 135103

40 29

Normalised to σ_{ggF}

Phys. Lett. B 801 (2020) 135145

4.1 5.5

Normalised to $\sigma_{\text{ggF} + \text{VBF}}$

ATLAS-CONF-2021-016

4.7 3.9

Normalised to $\sigma_{\text{ggF} + \text{VBF}}$

ATLAS-CONF-2021-030

Combined

27.5–36.1 fb^{-1}

$b\bar{b}\ell^+\nu\ell^-\nu$

139 fb^{-1}

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

139 fb^{-1}

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

139 fb^{-1}

2

5

10

20

50

100

200

95% CL upper limit on $\sigma (\text{pp} \rightarrow \text{HH})$ normalised to σ_{SM}