ATLAS

$\sqrt{s}$ = 13 TeV, 126—139 fb^{-1}

$\sigma^{SM}_{ggF+VBF}(HH)$ = 32.7 fb

- Observed limit
- Expected limit (μ_{HH} = 0 hypothesis)
- Expected limit ±1σ
- Expected limit ±2σ

Lower is better

	Obs.	Exp.
$b\bar{b}\gamma\gamma$	4.2	5.7
$b\bar{b}\tau^+\tau^-$	4.7	3.9
$b\bar{b}b\bar{b}$	5.4	8.1
Combined	2.4	2.9

My work

Combination with other channels

Standard Model (sesitivtiy goal)

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