

35.9 fb⁻¹ (13 TeV)

CMS

2HDM+a, $h \rightarrow b\bar{b}$

$\sin \theta = 0.35$, $m_\chi = 10$ GeV, $m_A = m_H = m_{H^\pm} = 600$ GeV

solid (dashed) lines: observed (expected) limit

unc. band: ± 1 std. dev. on exp. limit

95% CL asymptotic limit on $\mu = \sigma/\sigma_{\text{theory}}$

100

10

1

0.1

$\pm 20\%$ theory uncertainty

$m_a = 100$ GeV

$m_a = 150$ GeV

$m_a = 200$ GeV

$m_a = 250$ GeV

$m_a = 300$ GeV

$\tan \beta$

