

$A \rightarrow Zh \rightarrow (vv, ll)bb$  $35.9 \text{ fb}^{-1} (13 \text{ TeV})$ 

Events

**CMS***Preliminary****2l, 2 b tag, signal region***

● Data

Z(ll) + jets

Z(ll) + b

Z(ll) +  $b\bar{b}$ t $\bar{t}$ 

t+X

VV, VH

Fit unc.

- - - Pre-fit

/ / /  $m_A = 300 \text{ GeV}$ / / /  $m_A = 500 \text{ GeV}$ / / /  $m_A = 1000 \text{ GeV}$  $\sigma_{bbA} = 0.1 \text{ pb}$ 

200

100

20

10

2

1

0.2

 $(N^{\text{data}} - N^{\text{bkg}})/\sigma$ 

4

2

0

-2

-4

300

400

500

600

700

800

900

1000

1100

1200

 $m_{Zh} [\text{GeV}]$