

2HDM Type-II,  $d\sigma/dm_{Zh}$ , LHC at 13 TeV, (gg  $\rightarrow$  Z + A  $\rightarrow$  Zh) process

Hybrid basis:

$$m_A = 221.43 \text{ GeV}/c^2$$

$$\Gamma_A = 0.074 \text{ GeV}$$

$$\cos(\beta-\alpha) = 0.49$$

$$\tan(\beta) = 3.72$$

$$m_h = 125.00 \text{ GeV}/c^2$$

$$m_H = 500.00 \text{ GeV}/c^2$$

$$m_{H^{\pm}} = 500.00 \text{ GeV}/c^2$$

$$Z_4 = -4.26$$

$$Z_5 = 2.37$$

$$Z_7 = 0.00$$

$$\sigma(Z) = 35.11 \text{ fb}$$

$$\sigma(A) = 18.38 \text{ fb}$$

$$\sigma(A+Z) = 71.27 \text{ fb}$$

$$\sigma(\text{int}) = 17.93 \text{ fb}$$

