

2.3 fb<sup>-1</sup> ( 13 TeV )

**CMS**  
 **$Z' \rightarrow \text{DM} + H(2\text{HDM})$**   
 **$M_{A0} = 300 \text{ GeV}, M_\chi = 100 \text{ GeV}$**

- CL<sub>S</sub> Observed
- CL<sub>S</sub> Expected  $\pm 1\sigma$
- CL<sub>S</sub> Expected  $\pm 2\sigma$
- - -  $\sigma_{\text{TH}}, g_Z \leq 0.03 \times \frac{g_W}{\cos\theta_W \times \sin^2\beta} \times \frac{\sqrt{M_{Z'}^2 - M_Z^2}}{M_Z}$
- - -  $\sigma_{\text{TH}}, g_Z = 0.8$

**$H \rightarrow \gamma\gamma$**

**$H \rightarrow b\bar{b}$**

