CMS Simulation (LHE) 14TeV TeV $|pp| \rightarrow |h| \rightarrow |2h_1| \rightarrow |2h_D| + |2\gamma_D| \rightarrow |2h_D| + |4\mu|$ 0.04 0.035 0.04 $m_h = 125 \text{ GeV}, m_{n_s} = 10 \text{ GeV}, m_{n_h} = 1 \text{ GeV}$ $m_{\gamma_{D}} = 20$ GeV, $c\tau_{\gamma_{D}} = 10$ mm -1st dark photon (leading p₊) 2nd dark photon 90 60 80