0.035 0.025 0.025 15 CMS Simulation (LHE) 14TeV TeV $|pp| \rightarrow |h| \rightarrow |2h_1| \rightarrow |2h_D| + |2|\gamma_D| \rightarrow |2h_D| + |4\mu|$ $m_h = 125 \text{ GeV}, m_{n_s} = 50 \text{ GeV}, m_{n_D} = 1 \text{ GeV}$ $m_{\gamma_D} = 20$ GeV, $c\tau_{\gamma_D} = 1000$ mm 1st dark photon (leading p_T) 2nd dark photon 30 40 50 60 80 90