CMS Simulation (LHE) 14TeV TeV $|pp| \rightarrow |h| \rightarrow |2h_1| \rightarrow |2h_D| + |2\gamma_D| \rightarrow |2h_D| + |4\mu|$ Normalized Fraction of events / 1.0 mm $m_h = 125 \text{ GeV}, m_{n_s} = 10 \text{ GeV}, m_{n_p} = 1 \text{ GeV}$ $m_{\gamma_D} = 20 \text{ GeV}, c\tau_{\gamma_D} = 10 \text{ mm}$ 1st dark photon (leading p_T) 2nd dark photon 5 15 20 25 30 35 40