CMS Simulation (LHE) 13 TeV $pp \rightarrow h \rightarrow 2h_1 \rightarrow 2h_D + 2\gamma_D \rightarrow 2h_D + 4\mu$ GeV $m_h = 125 \text{ GeV}, m_{n_s} = 10 \text{ GeV}, m_{n_D} = 1 \text{ GeV}$ 0.09 $m_{\gamma_{2}} = 8.5 \text{ GeV}, c\tau_{\gamma_{2}} = 0.5 \text{ mm}$ Fraction of events / 1 0.08 —1st n_D (leading p_T) 0.07 2nd n_D 0.06 0.05 0.04 0.03 0.02 0.01 20 40 120 60 80 100