CMS Simulation (LHE) 13 TeV $pp \rightarrow h \rightarrow 2h_1 \rightarrow 2h_D + 2\gamma_D \rightarrow 2h_D + 4\mu$ Fraction of events / 1 GeV $m_h = 125 \text{ GeV}, m_{n_s} = 10 \text{ GeV}, m_{n_D} = 1 \text{ GeV}$ 0.09 m_{γ_2} = 8.5 GeV, $c\tau_{\gamma_2}$ = 20 mm 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