CMS Simulation (LHE) 13 TeV 0.04 $pp \rightarrow h \rightarrow 2h_1 \rightarrow 2h_D + 2\gamma_D \rightarrow 2h_D + 4\mu$ Fraction of events / 0.1 0.035 0.035 0.035 0.035 $m_h = 125 \text{ GeV}, m_{n_a} = 10 \text{ GeV}, m_{n_b} = 1 \text{ GeV}$ $m_{\gamma_2} = 8.5 \text{ GeV}, c\tau_{\gamma_2} = 100 \text{ mm}$ 1st n_D (leading p_T) 2nd n_D 0.01 0.005