CMS Simulation (LHE) 13 TeV 0.18 $pp \rightarrow h \rightarrow 2h_1 \rightarrow 2h_D + 2\gamma_D \rightarrow 2h_D + 4\mu$ Fraction of events / 1 GeV $m_h = 125 \text{ GeV}, m_{n_a} = 10 \text{ GeV}, m_{n_b} = 1 \text{ GeV}$ 0.16 $m_{\gamma_{D}} = 8.5 \text{ GeV}, c\tau_{\gamma_{D}} = 0.5 \text{ mm}$ 0.14 —1st n_D (leading p_T) 2nd n_D 0.12 0.1 80.0 0.06 0.04 0.02 40 120 20 60 100 80 of n [GeV]