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 Ge\ 0.45 $m_h = 125 \text{ GeV}, m_{n_s} = 10 \text{ GeV}, m_{n_D} = 1 \text{ GeV}$ $m_{\gamma_{D}} = 58 \text{ GeV}, c\tau_{\gamma_{D}} = 100 \text{ mm}$ 0.4 —1st n_D (leading p_T) 0.35 2nd n_D 0.3 0.25 0.15 0.1 0.05 20 40 120 60 80 100 of n [GeV]