CMS Simulation (LHE) 13 TeV $pp \rightarrow h \rightarrow 2h_1 \rightarrow 2h_D + 2\gamma_D \rightarrow 2h_D + 4\mu$ 0.04 Fraction of events / 0.7 $m_h = 125 \text{ GeV}, m_{n_a} = 30 \text{ GeV}, m_{n_b} = 1 \text{ GeV}$ $m_{\gamma_{D}} = 10$ GeV, $c\tau_{\gamma_{D}} = 100$ mm 1st muon (leading p_T) 2nd muon 3rd muon 4th muon 0.03 0.02 0.01