CMS Simulation (LHE) 14TeV TeV $pp \rightarrow h \rightarrow 2h_1 \rightarrow 2h_D + 2h_D \rightarrow 2h_D + 4\mu'$ Fraction of events / 1 GeV $m_h = 125 \text{ GeV}, m_{n_s} = 50 \text{ GeV}, m_{n_D} = 1 \text{ GeV}$ 0.07 $m_{\gamma_{D}} = 20$ GeV, $c\tau_{\gamma_{D}} = 0$ mm 1st dark photon (leading p_{τ}) 0.06 2nd dark photon 0.05 0.04 0.03 0.02 0.01 40 50 30 60 80 90 of γ_{Γ} [GeV]