CMS Simulation (LHE) 14 TeV $pp \rightarrow h \rightarrow 2h_1 \rightarrow 2h_D + 2\gamma_D \rightarrow 2h_D + 4\mu$ GeV $m_h = 125 \text{ GeV}, m_{n_s} = 50 \text{ GeV}, m_{n_p} = 1 \text{ GeV}$ 0.09 m_{γ_D} = 20.0 GeV, $c\tau_{\gamma_D}$ = 0.00 mm Fraction of events / 1 80.0 _1st n_D (leading p_T) 2nd n_D 0.07 0.06 0.05 0.04 0.03 0.02 0.01 120 20 40 60 100 80 p_r of n_D [GeV]