## CMS Simulation (LHE) 14 TeV $h \rightarrow 2h_1 \rightarrow 2h_D + 2\gamma_D \rightarrow 2h_D + 4\mu$ Fraction of events / 1 Ge/ 0.035 10.00 10.00 10.01 $= 125 \text{ GeV}, m_{n_1} = 50 \text{ GeV}, m_{n_2} = 1 \text{ GeV}$ GeV, $c\tau_{\gamma} = 100 \text{ mm}$ **1st dar**k photon (leading $p_{T}$ ) and dark photon 0.005 30 50 40 60 p of $\gamma_{\Gamma}$ [GeV]