## CMS Simulation (LHE) 14TeV TeV $pp \rightarrow h \rightarrow 2h_1 \rightarrow 2h_D + 2\gamma_D \rightarrow 2h_D + 4\mu'$ $m_h = 125 \text{ GeV}, m_{n_s} = 50 \text{ GeV}, m_{n_h} = 1 \text{ GeV}$ $m_{\gamma_D} = 20 \text{ GeV}, c\tau_{\gamma_D} = 10 \text{ mm}$ 1st dark photon (leading p<sub>T</sub>) 2nd dark photon 5

Normalized Fraction of events / 1.0 mm

## $L_{XY}$ of $\gamma_{D}$ [mm]