CMS Simulation (LHE) 14TeV TeV $pp \rightarrow h \rightarrow 2h_1 \rightarrow 2h_D + 2\gamma_D \rightarrow 2h_D + 4\mu$ $m_h = 125 \text{ GeV}, m_{n_1} = 50 \text{ GeV}, m_{n_D} = 1 \text{ GeV}$ m_{γ_D} = 20 GeV, $c\tau_{\gamma_D}$ = 100 mm 1st dark photon (leading p_{T}) 2nd dark photon

Normalized Fraction of events 6 10.0 mm

L_{Z} of γ_{D} [mm]