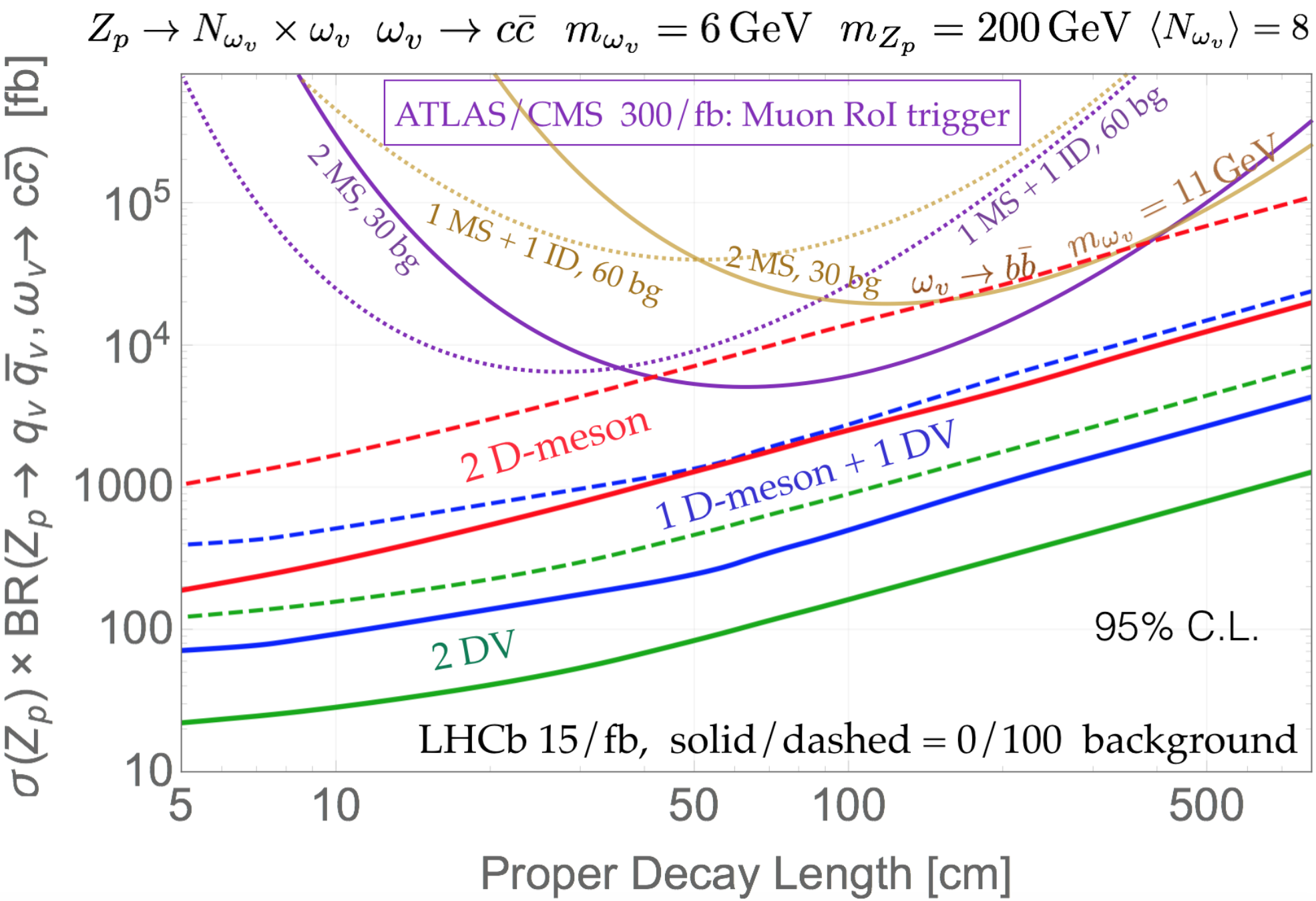
$Z_p \to N_{\omega_v} \times \omega_v \;\; \omega_v \to c\bar{c} \;\; m_{\omega_v} = 6\,\mathrm{GeV} \;\; m_{Z_p} = 200\,\mathrm{GeV} \;\; \langle N_{\omega_v} \rangle = 8$
ATLAS/CMS 300/fb: Muon RoI trigger
2 MS, 30 bg
1 MS + 1 ID, 60 bg
2 MS, 30 bg
1 MS + 1 ID, 60 bg
$\omega_v \to b\bar{b}$
$m_{\omega_v} = 11$ GeV
2 D-meson
1 D-meson + 1 DV
2 DV
95% C.L.
LHCb 15/fb, solid/dashed = 0/100 background
$\sigma(Z_p) \times \mathrm{BR}(Z_p \to q_v, \bar{q}_v, \omega_v \to c\bar{c})$ [fb]
10^5
10^4
1000
100
10
5
10
50
100
500
Proper Decay Length [cm]