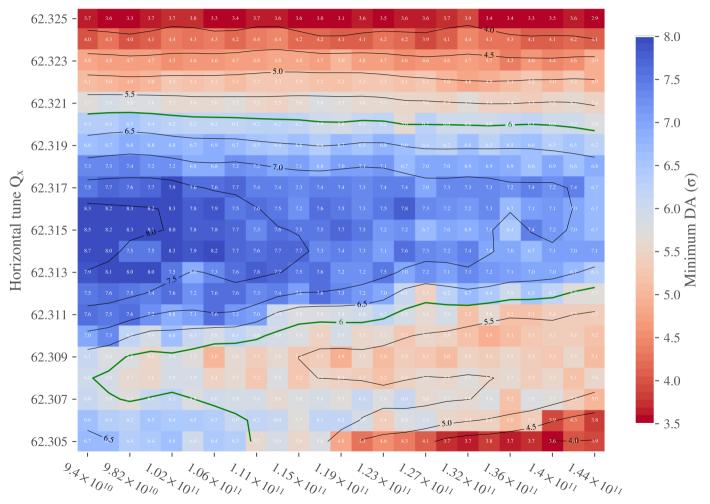
HL-LHC v1.5. Flat optics. End of levelling. CC ON  $N_b = 1.4 \times 10^{11} ppb, ~ \beta_{y, \, \rm IP1}^* = 7.5~cm, ~ \beta_{x, \, \rm IP1}^* = 18~cm, ~ \Phi/2_{\rm IP1(H)/5(V)} = 250~\mu rad$   $\sigma_z = 7.61~cm, ~ \Phi/2_{\rm IP8, \, V} = 170~\mu rad, ~ \epsilon_n = 2.5~\mu m, ~ Q' = 5, ~ I_{MO} = 60~A, ~ C^- = 10^{-3}$ 





Bunch intensity (ppb)