HL-LHC v1.6. E = 7.0 TeV.  $CC = -190.0 \mu \text{rad}$ .  $N_b \simeq 1.03 \times 10^{11} \text{ ppb}$ ,  $L_{1/5} = 4.98 \times 10^{34} \text{cm}^{-2} \text{s}^{-1}, L_2 = 1.11 \times 10^{30} \text{cm}^{-2} \text{s}^{-1}, L_8 = 1.98 \times 10^{33} \text{cm}^{-2} \text{s}^{-1}$  $PU_{1/5} = 130$ ,  $\beta_{x=1}^* = 0.075$  m,  $\beta_{y=1}^* = 0.18$  m, polarity  $IP_{2/8} = 1/1$  $\Phi/2_{1(V)} = 250 \,\mu\text{rad}, \,\Phi/2_{5(H)} = 250 \,\mu\text{rad}, \,\Phi/2_{2,V} = -170 \,\mu\text{rad}, \,\Phi/2_{8,V} = 170 \,\mu\text{rad}$  $\sigma_z = 7.61 \text{ cm}, \ \varepsilon_n = 2.5 \ \mu\text{m}, \ Q' = 5.0, \ I_{MO} = -60.0 \ A, \ C^- = 0.001$ 25ns\_2760b\_2748\_2492\_2574\_288bpi\_13inj\_800ns\_bs200ns\_converted.json. Bunch 149. 65.302 65.307 65.317 65.312 65.312 65.319 65.351 65.353 65.353 60.329 - $60.327 - \le 5.0 \le 5.0$ 8.0 60.325 -- 7.5 60.323 - 45 60.321 -60.319 -60.317 -- 5.0 60.315 -- 4.5 60.313 -60.311 -60.309 -Horizontal tune Q<sub>x</sub>

/ertical tune Q<sub>v</sub>