$L_{1/5} = 0 \text{cm}^{-2} \text{s}^{-1}, L_2 = 0 \text{cm}^{-2} \text{s}^{-1}, L_8 = 0 \text{cm}^{-2} \text{s}^{-1}$  $PU_{1/5} = 0$ ,  $\beta_{x,1}^* = 1.1$  m,  $\beta_{y,1}^* = 1.1$  m, polarity  $IP_{2/8} = 1/1$  $\Phi/2_{1(H)} = 250 \,\mu\text{rad}, \, \Phi/2_{5(V)} = 250 \,\mu\text{rad}, \, \Phi/2_{2,V} = -170 \,\mu\text{rad}, \, \Phi/2_{8,V} = 170 \,\mu\text{rad}$  $\sigma_z = 7.61 \text{ cm}, \ \varepsilon_n = 2.3 \ \mu\text{m}, \ Q' = 15, \ I_{MO} = 300.0 \text{ A}, \ C^- = 0.001$ 25ns\_2760b\_2748\_2492\_2574\_288bpi\_13inj\_800ns\_bs200ns.json. Bunch 150. 65.30\$ .30\$ .300 .311 5.313 65.315 .310 5.321 60.329 -8.0 - 7.5 ≥8.0 ≥8.0 ≥8.0 ≥8.0 ≥8.0 ≥8.0 ≥8.0 ≥8.0 - 5.0  $60.315 - 28.0 \ge 8.0 \ge 8.0 \ge 8.0 \ge 8.0 \ge 8.0 \ge 8.0$ - 4.5  $60.313 - \ge 8.0 \ge 8.0 \ge 8.0 \ge 8.0 \ge 8.0$ 60.311 - ≥8.0 ≥8.0 ≥8.0 60.309 -Horizontal tune Q<sub>x</sub>

rertical tune Q<sub>v</sub>

HL-LHC v1.6. E = 7.0 TeV. CC = 0.0  $\mu$ rad. N<sub>b</sub>  $\simeq 2.2 \times 10^{11}$  ppb,