Run III (hybrid). E = 6.8 TeV.  $N_b \simeq 1.2 \times 10^{11} \text{ ppb}$ ,  $L_{1/5} = 2 \times 10^{34} \text{ cm}^{-2} \text{ s}^{-1}, L_2 = 1.6 \times 10^{30} \text{ cm}^{-2} \text{ s}^{-1}, L_8 = 2 \times 10^{33} \text{ cm}^{-2} \text{ s}^{-1}$  $\beta_{x \text{ IP1}}^* = 0.3 \text{ m}, \beta_{y \text{ IP1}}^* = 0.3 \text{ m}, \text{ polarity IP}_{2/8} = 1/1$  $\Phi/2_{\text{IP1(V)}} = 160 \text{ }\mu\text{rad}, \Phi/2_{\text{IP5(H)}} = 160 \text{ }\mu\text{rad}, \Phi/2_{\text{IP2, V}} = 200 \text{ }\mu\text{rad}, \Phi/2_{\text{IP8, V}} = 200 \text{ }\mu\text{rad}$  $\sigma_z = 9.0 \text{ cm}, \ \varepsilon_n = 2.2 \ \mu\text{m}, \ Q' = 15.0, \ I_{MO} = 300.0 \ A, \ C^- = 0.0$ 25ns\_2464b\_2452\_1842\_1821\_236bpi\_12inj. Bunch 411. 7.0 - 6.5 60.319 -60.317 -60.315 -60.313 -- 5.0 60.311 -60.309 -60.307 -

Horizontal tune O<sub>x</sub>

Vertical tune Q<sub>v</sub>