

HL-LHC v1.6. E = 7.0 TeV.  $N_b \simeq 2.3 \times 10^{11}$  ppb,

$L_{1/5} = 2.09 \times 10^{34} \text{cm}^{-2} \text{s}^{-1}$ ,  $L_2 = 1.61 \times 10^{30} \text{cm}^{-2} \text{s}^{-1}$ ,  $L_8 = 1.66 \times 10^{33} \text{cm}^{-2} \text{s}^{-1}$

$\text{PU}_{1/5} = 77$ ,  $\beta_{y,1}^* = 0.7 \text{ m}$ ,  $\beta_{x,1}^* = 2.8 \text{ m}$ , polarity  $\text{IP}_{2/8} = 1/1$

$\Phi/2_{1(\text{H})} = 250 \mu\text{rad}$ ,  $\Phi/2_{5(\text{V})} = 250 \mu\text{rad}$ ,  $\Phi/2_{2,\text{V}} = -170 \mu\text{rad}$ ,  $\Phi/2_{8,\text{V}} = 170 \mu\text{rad}$

$\sigma_z = 7.61 \text{ cm}$ ,  $\epsilon_n = 2.3 \mu\text{m}$ ,  $Q' = 15$ ,  $C^- = 0.001$

8b4e\_1972b\_1960\_1178\_1886\_224bpi\_12inj. Bunch 89.

