

HL-LHC v1.6. E = 7.0 TeV.  $N_b \simeq 9.77 \times 10^{10}$  ppb,

$L_2 = 1.82 \times 10^{29} \text{cm}^{-2} \text{s}^{-1}$ ,  $L_8 = 2.05 \times 10^{33} \text{cm}^{-2} \text{s}^{-1}$

$PU_{1/5} = 140$ ,  $\beta_{x,1}^* = 0.15$  m,  $\beta_{y,1}^* = 0.15$  m, polarity  $IP_{2/8} = 1/1$

$\Phi/2_{2,\text{v}} = -170$   $\mu\text{rad}$ ,  $\Phi/2_{8,\text{v}} = 170$   $\mu\text{rad}$

$\sigma_z = 7.61$  cm,  $\epsilon_n = 2.5$   $\mu\text{m}$ ,  $Q' = 5.0$ ,  $C^- = 0.001$

25ns\_2760b\_2748\_2492\_2574\_288bpi\_13inj\_800ns\_bs200ns\_converted.json. Bunch 149.

