HL-LHC v1.6. E = 7.0 TeV.  $CC = -190.0 \mu rad$ .

 $L_{1/5} = 5.22 \times 10^{34} \text{ cm}^{-2} \text{s}^{-1}, L_2 = 4.22 \times 10^{29} \text{ cm}^{-2} \text{s}^{-1}, L_8 = 2.02 \times 10^{33} \text{ cm}^{-2} \text{s}^{-1}$ 

 $PU_{1/5} = 136$ ,  $\beta_{x,1}^* = 0.075$  m,  $\beta_{y,1}^* = 0.18$  m, polarity  $IP_{2/8} = 1/1$ 

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

 $\sigma_z = 7.61 \text{ cm}, \ \varepsilon_n = 2.5 \ \mu\text{m}, \ Q' = 5.0, \ I_{MO} = 60.0 \text{ A}, \ C^- = 0.001$ 

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

