

Injection HL (from run III optics). E = 0.45 TeV.  $N_b \simeq 2.3 \times 10^{11}$  ppb,

$\beta_{x,1}^* = 10$  m,  $\beta_{y,1}^* = 10$  m, polarity IP<sub>2/8</sub> = 1/1, phase\_change = 0

$\sigma_z = 7.61$  cm,  $\varepsilon_n = 2.5$   $\mu$ m,  $Q' = 15.0$ ,  $I_{MO} = -45$  A,  $C^- = 0.001$

25ns\_2452b\_2440\_1952\_2240\_248bpi\_12inj. Bunch 1130.

