# **LHC Vertical Dispersion**

#### (and observations from the HL optics MD)

LNO Section Meeting 19/07/2024

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#### Content

- Dy for both beams (from HL optics MD)
- Dy @ injection and @flattop
- SbS with ~9 mrad tilt of MQ.29R5
- Conclusions (???)

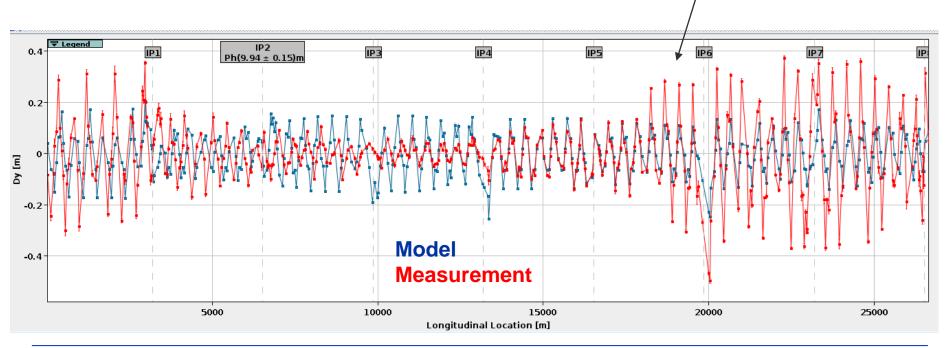
Why not from commissioning?

On-off momentum measurement with no xing or with on\_disp=1



### Beam 2 from HL optics MD (6/6/24)

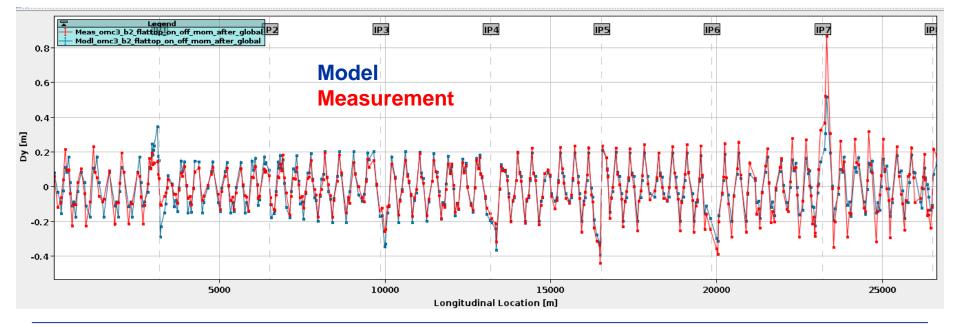
- Injection
- Flat top





### Beam 2 from HL optics MD (6/6/24)

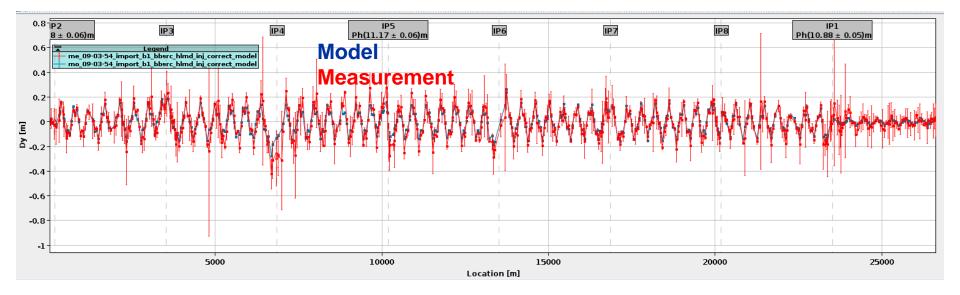
- Injection
- Flat top





# Beam 1 from HL optics MD (6/6/24)

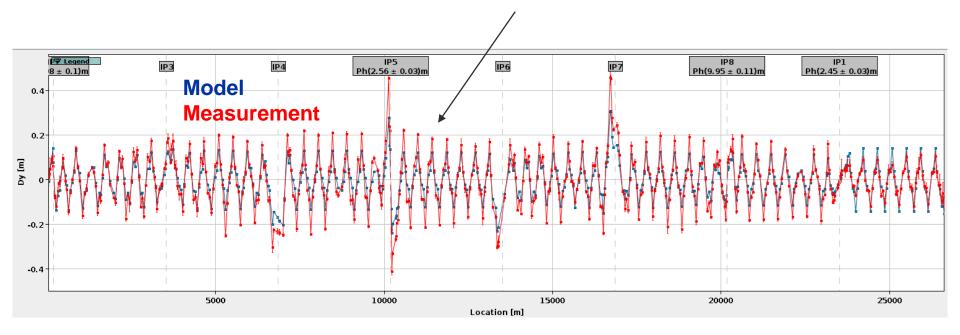
- Injection
- Flat top





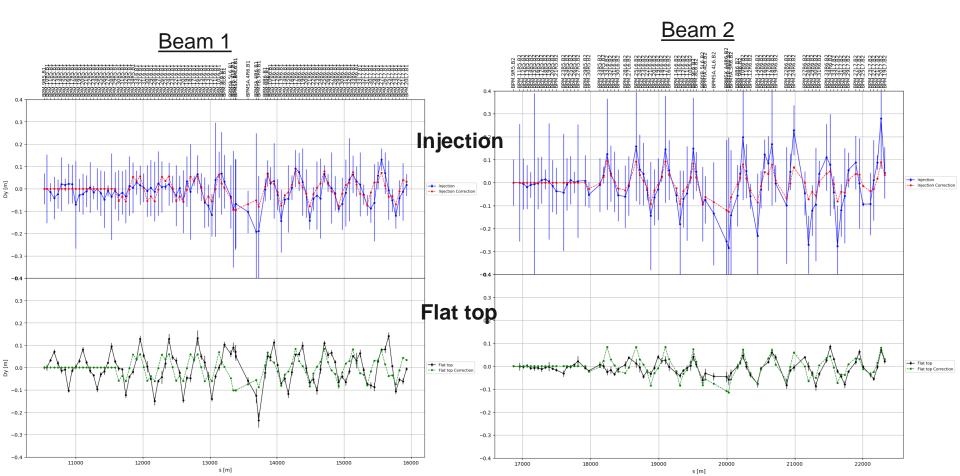
# Beam 1 from HL optics MD (6/6/24)

- Injection
- Flat top





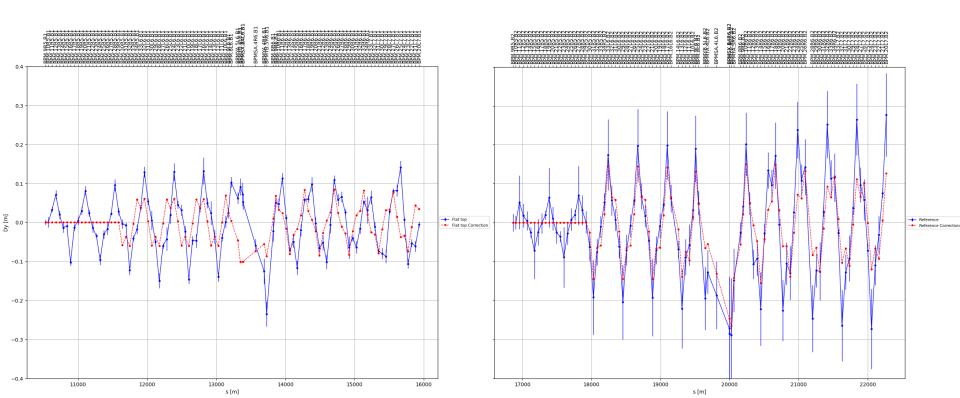
#### SbS for both beams MQ.29R5 ~9mrad tilt



#### SbS for both beams

Beam1 @flat top (HL Optics MD)

#### Beam2 @injection previous measurement (smaller error bars)



# **Conclusions (???)**

- Dy wave 'visible' in both beams but not at same energy
- MQ.29R5 for B1?

