LHC Vertical Dispersion and MQ powering

LNO Section Meeting

24/05/2024

Yannis Angelis

The plan

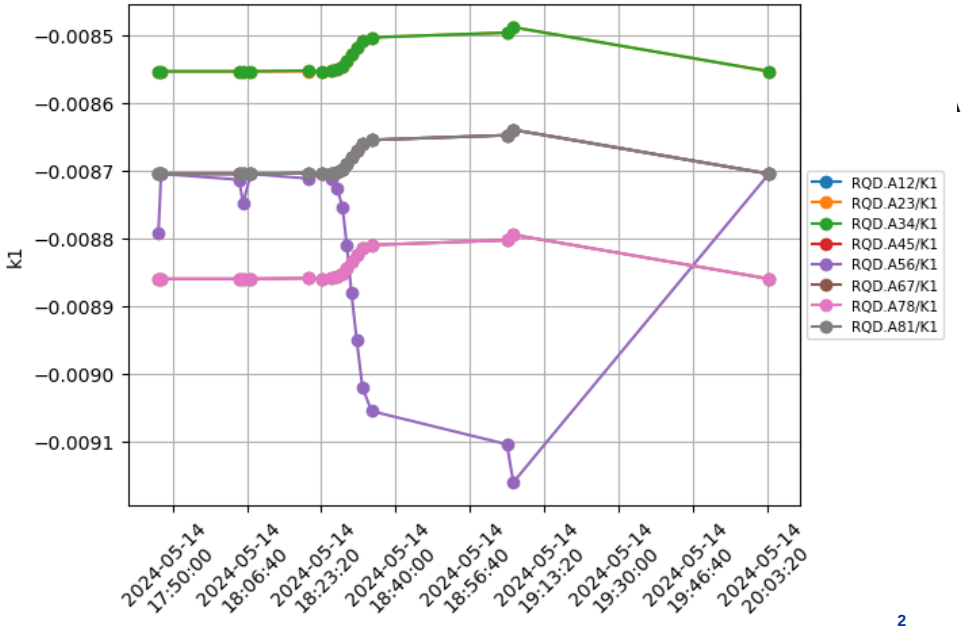
- Reduce by 10% MQ strength at ARC 56 (specifically the knob connected with MQ.29R5.B2 -> KQD.A56)
- Compensate with MQT

Not well matched knob

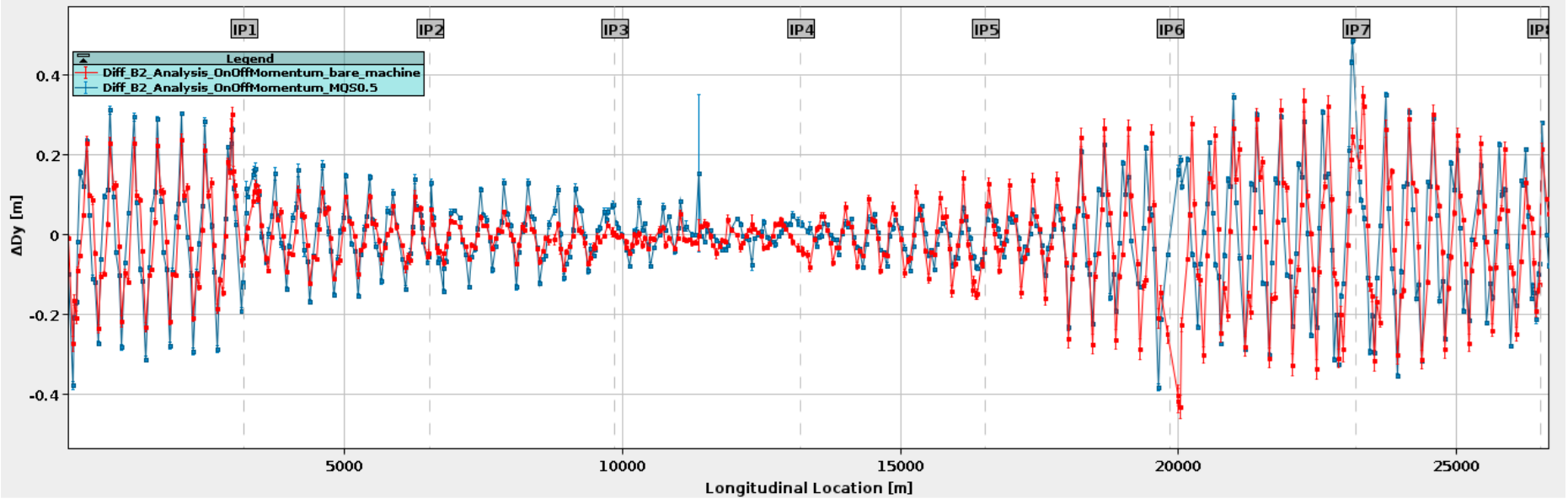
-> dump + tune of 59

The measurement

- Reduce by 5% MQ strength at ARC 56 (specifically the knob connected with MQ.29R5.B2 -> KQD.A56)
- Compensate with all the other arcs
- Fill 9627

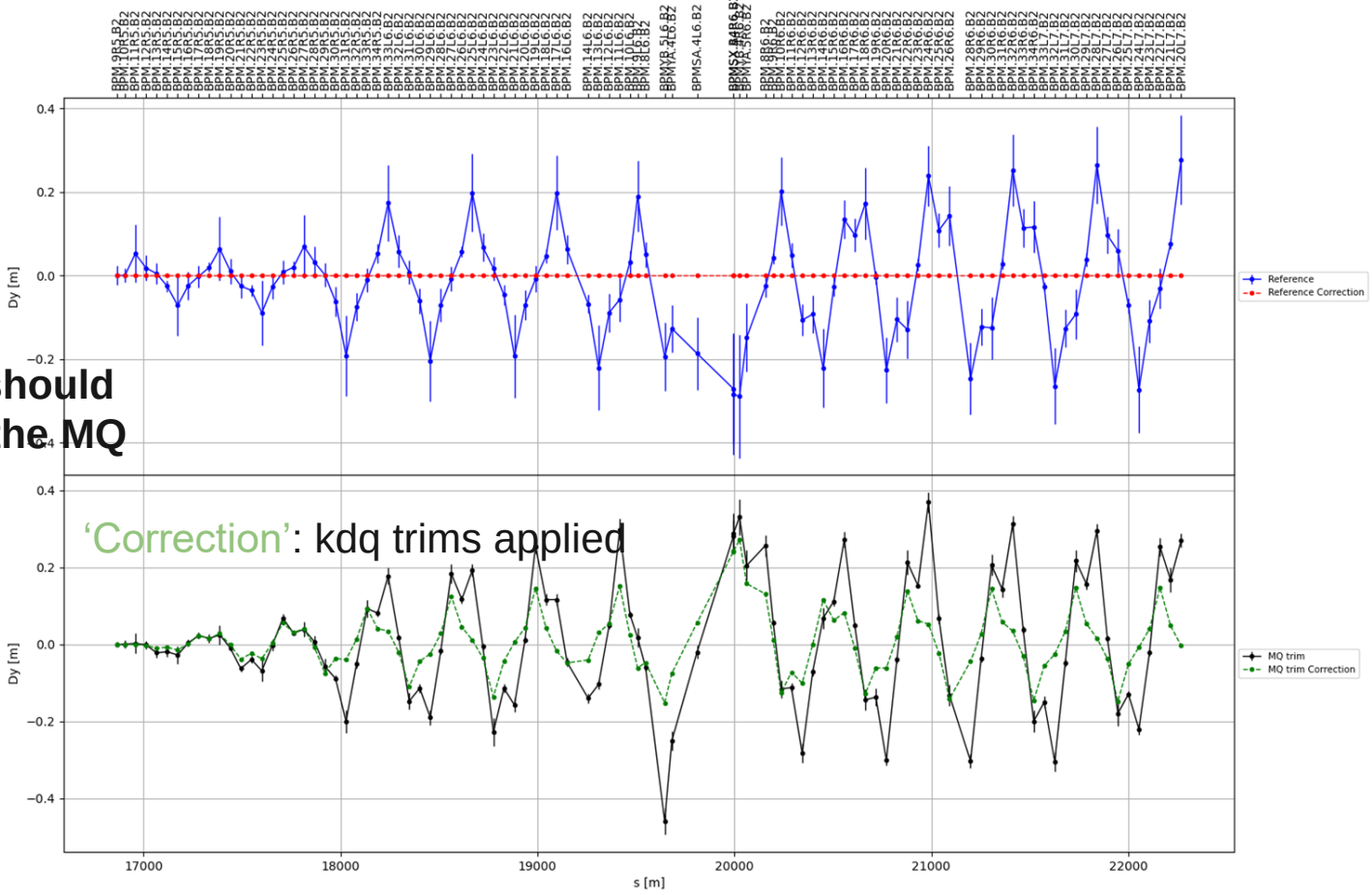


Global Dispersion



Extracted from BetaBeat SBS

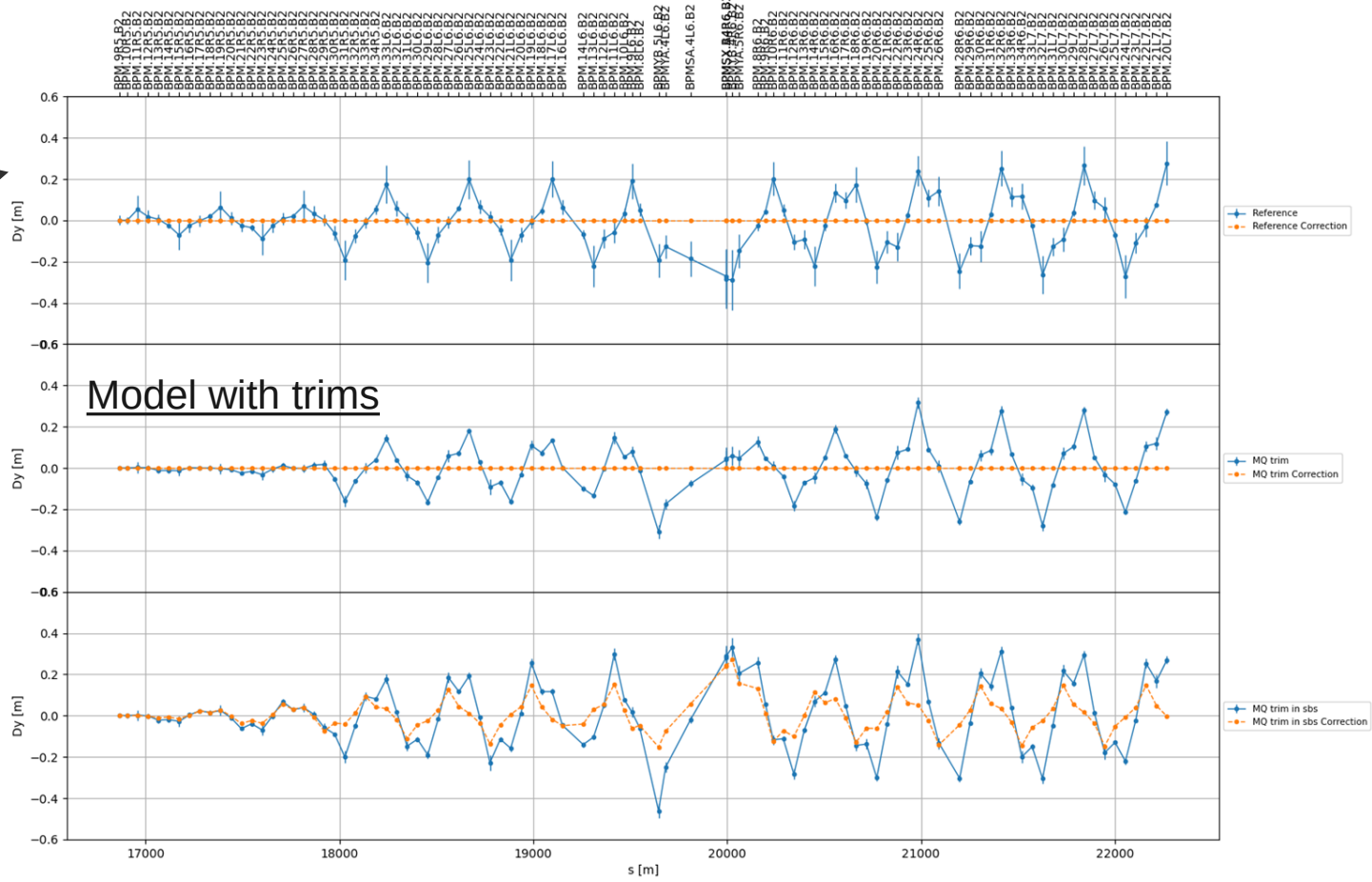
For completeness we should also use a model with the MQ trims applied



Extracted from BetaBeat SBS

Reference model

MQ trims in sbs ‘corrections’

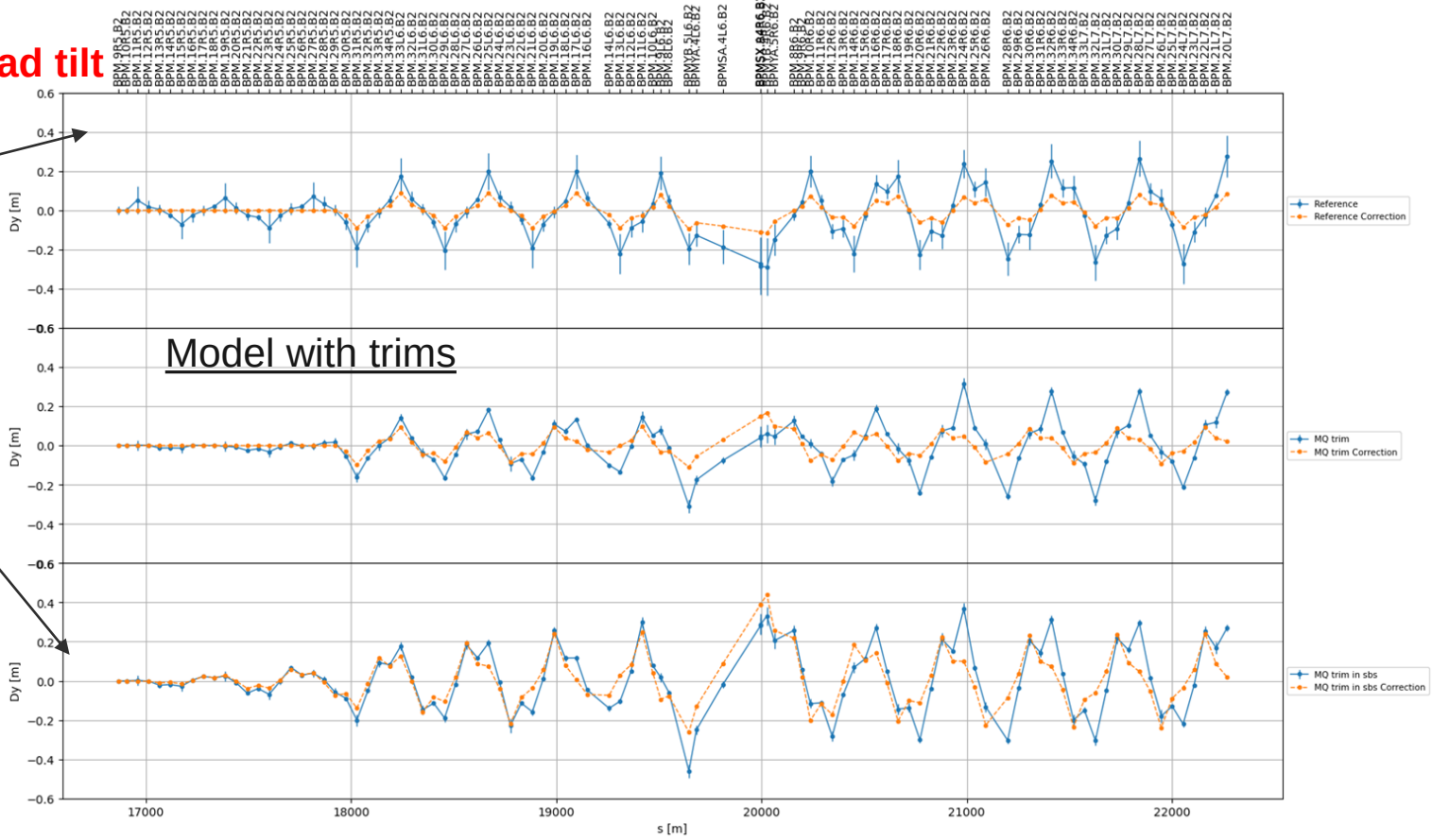


Extracted from BetaBeat SBS

MQ.29R5.B2: 9 mrad tilt

Reference model

MQ trims in sbs ‘corrections’



Extracted from BetaBeat SBS

MQ.29R5.B2: 15 mrad tilt

Reference model

MQ trims in sbs ‘corrections’