



MD3563

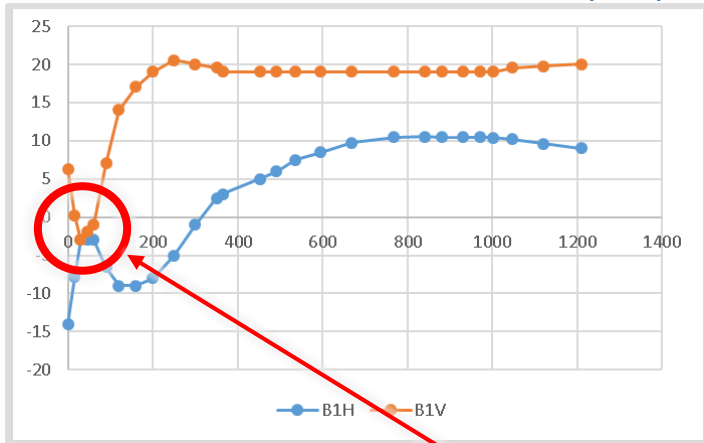
Improving b3 model in the first part of the ramp

(performed on the night between 15th and 16th Sep 2018)

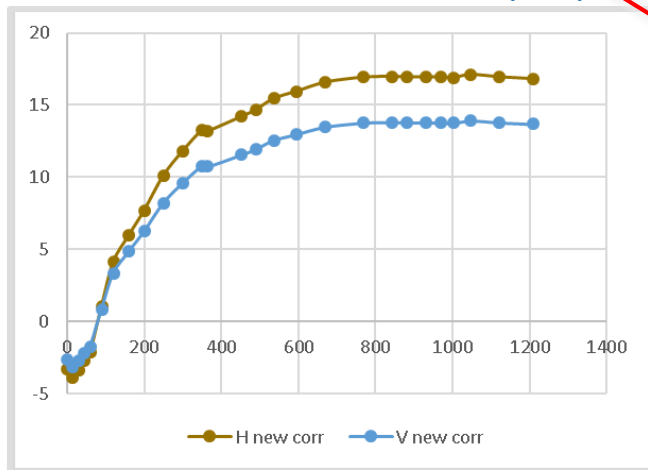
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Motivation

Nominal Q' corrections (B1)

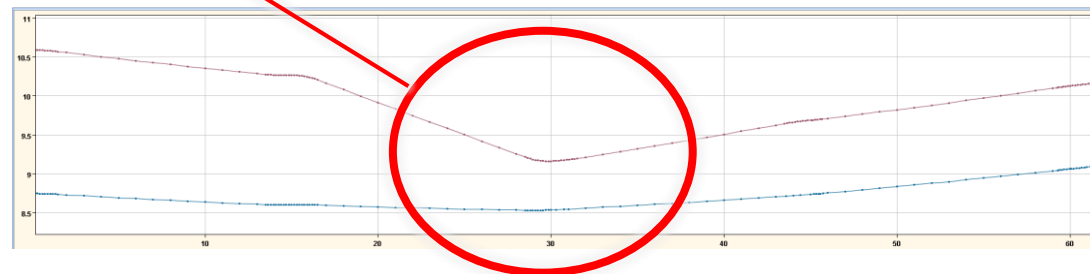


New Q' corrections (B1)

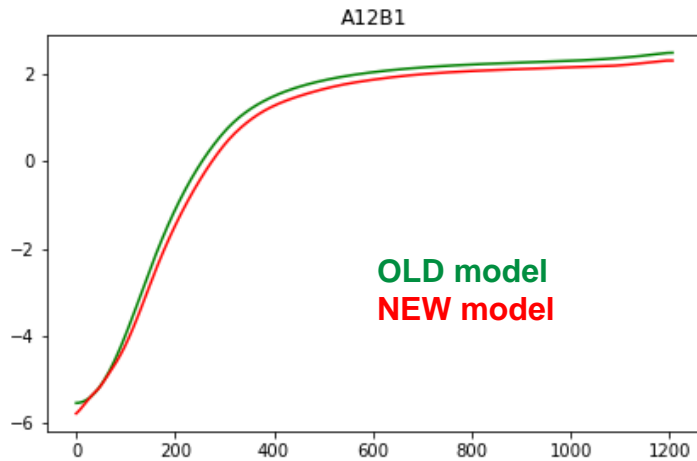


- Sign and dimension of ramp Q' corrections clearly indicate a **b3 error**
- “Cleaning” was done during LS1, updating the b3 model (increase of about **1 unit** in the first part of the ramp)
- Situation can be **further improved**
- Beyond magnetic cleanness, acceleration may become an issue, especially with full telescopic ATS optics

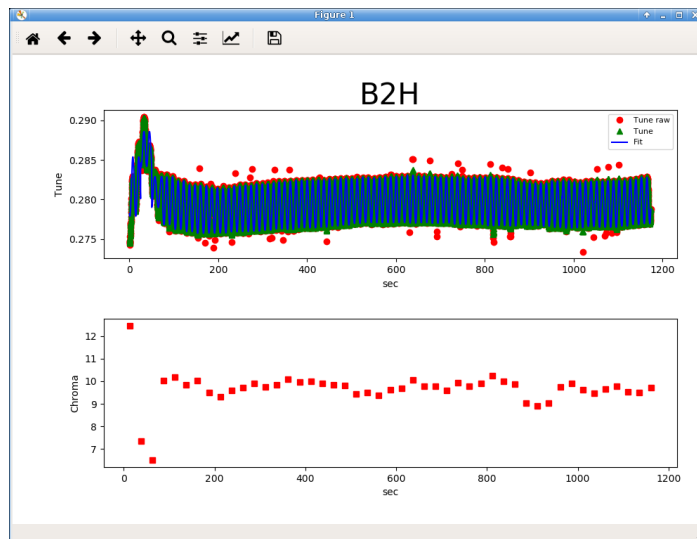
Current in the first 60 sec of the ramp for PSD2.A12B2 (before and after b3 cleaning)



Results



b3 systematic were inserted in the functions (removed from the lattice sextupole corrections)



- A few **problems of sign** on the modified b3 functions were found
- The **first ramp** already showed a very stable chromaticity throughout the whole process
- **Manual feed-forward** to clean the correction done in the ramp-down
- Flat Q' at 10 units throughout the **second ramp**
- Established **starting point** for **Run3**