

GENERAL INFORMATION

Frank Zimmermann

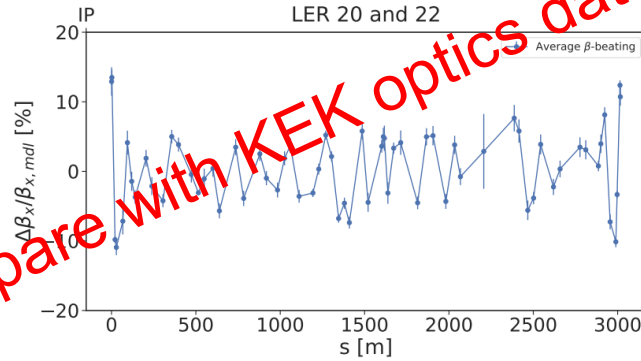
FCC-ee Optics Design Meeting #190 & 61st FCCIS WP2.2 meeting, 8 August 2024

Important outstanding issues

- Xsuite beam-beam PIC module close to deployment
- collaboration on implementing spin in xsuite with EIC team
- looking for 1-2 year postdoc at LNF, DR design, DA optimization
- baseline optics for FSR
- IR solenoid compensation scheme, and effect of polarisation
- LCC dynamic aperture discrepancy between codes
- beam lifetime in xsuite & SAD
- work on/with relaxed optics
- documentation of arc alignment tolerances (100 or 150 μm ?) & DA
- follow up SKEKB measurements: compare beta's with KEK-team measurements, check RDT for LER with relevant KEK optics, compare measured tune shift vs amplitude with model

SKEKB follow up – various files received from H. Sugimoto

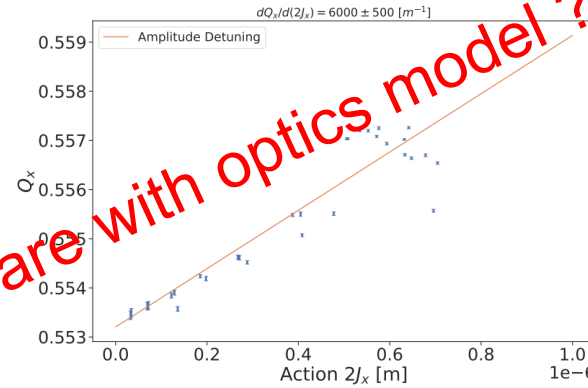
LER Squeezed 8mm



RMS β -beating $\approx 6\%$

- Beating near IP? Analysis artefact or real?

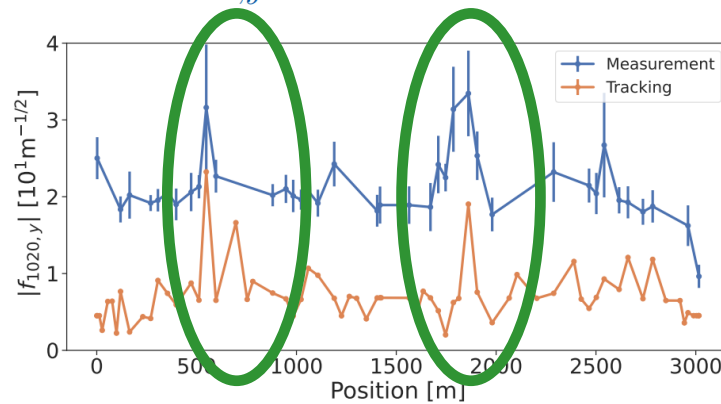
Amplitude Detuning



- Tune taken from the first 200 turns
- Amplitude detuning term $\frac{\partial Q_x}{\partial 2J_x}$ can be measured

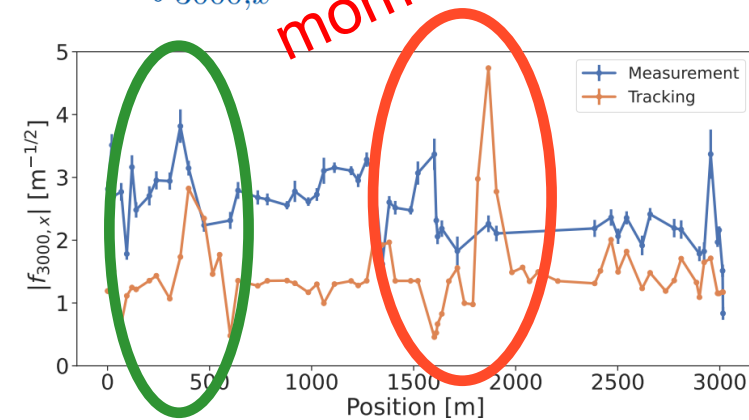
results from M. Le Garrec

HER 06 - $f_{1020,y}$



- Measured RDT about 3 times larger than expected from the model
- Decoherence factor not yet taken into account in analysis

LER 06 - $f_{3000,x}$



??

- Measured RDT *also* about 3 times larger than expected
- Decoherence smaller than for HER

Today's agenda

15:00 → 15:15 **General Information**

Speaker: Frank Zimmermann (CERN)

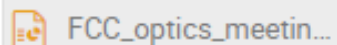
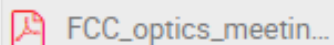
🕒 15m



15:20 → 15:40 **Reverse phase operation**

Speaker: Ivan Karpov (CERN)

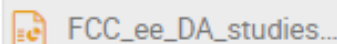
🕒 20m



15:45 → 16:05 **Dynamic aperture studies with Xsulte**

Speaker: Kevin Daniel Joel Andre (CERN)

🕒 20m



16:10 → 16:25 **Update on the lattice repository**

Speaker: Ghislain Roy (CERN)

🕒 15m

