KURRI FFAG MEETING 16/1/2014

Google+ hangout meeting

Attendees:

C. Prior
C. Rogers
S. Sheehy
D. Kelliher
S. Machida
Y. Ishi
T. Uesugi
Y. Mori

Minutes

Slides and files on http://hadron.kek.jp/FFAG/colabo/index.htm

1. Matters arising from last meeting:

    a. SS: Has created a spreadsheet describing the data files from November visit. This is on ASTeC-IB-data server and S.M to put on hadron.kek.jp server.

Action: [S.M.] to put spreadsheet describing data on hadron.kek server (Done).

    b. Linac frequency is 425MHz

2. Simulation and analysis updates:

Action: [Y.I.] (from prev. meeting) Ishi-san to present in future some previous work on a simple model of the bunch monitor using AC coupling with time constant.

Action: [DK & CR] (from prev. meeting) compare distributions to expected/simulated distributions from foil scattering/energy loss

    a. S.M presented updated tune analysis from 13/11/13 data. Single bunch monitor used to calculate tune at the moment.

    Better to calculate the second largest frequency component when NASS is used, especially near half integer tune.

    Kyushu University have made similar measurement on their machine.

    Mori-san feels that tune measurement is harder when the machine uses H- injection instead of H+. He thinks H- injection together with energy loss at foil increases the beam momentum spread. In practice, chromaticity is not zero and large momentum spread with finite chromaticity accelerates decoherence so that betatron oscillation signal disappear quickly.

Discussion about what might be happening on the half integer with regards to possibly missing the foil. Coherence was discussed with regards to tune measurement.

If decoherence in transverse plane is strong, happening in 10-11 turns, half integer or not does not make much difference.

Is concept of stopband and dynamics aperture relevant in this time scale of 10 to 20 turns?

Action: [S.M.] In order to determine the tune, second largest frequency component should be checked.

Action: [Y.M.] Mori-san will look at previous data how fast the decoherence occurs and what time scale did he define stopband of half integer resonance.

Action: [Y.M.] Mori-san to try and find data from Kyushu, possibly present at next meeting?

3. Experimental plans:

ADS run is now until 7th March. Scheduled power outage confirmed for 16th March. RAL group March visit is now planned for 17th March to 4th April.

Discussion of preamp and power supply requirements to instrument double plate monitor and triangle monitor:

- Double plate monitor: need 1 extra preamp (can connect to existing power supply)
- Triangle plate monitor: need 2 extra preamps and 1 extra power supply

Action: [S.S.] will order items (or as many as can be approved ASAP).

Action: For next meeting, KURRI and RAL to present experiment proposals that we can then fit into the 3 week schedule. (eg. Proposals from FFAG'13). [ALL]

4. Any other business:

[C.R.P] MoU – has come back from STFC legal, contents are pretty much fine now. Next will go to administration now at KURRI.

[ALL] Next meeting will be on Wednesday 12th February (1pm UK time)