KURRI FFAG MEETING 8/5/2014

Google+ hangout meeting

Attendees:

KURRI, RAL, BNL, Imperial

Minutes

1. Shinji gave two talks, one is on dispersion matching and the other is vertical and horizontal orbit matching. From the measurement, ratio of magnet strength and magnet current is about 0.6. Uesugi-san's TOSCA calculation indicates about 0.5 (discussed below).
2. David gave a talk on the different tune measurement. Error from simple FFT and Chris R's method (RMS/sqrt(n)) are similar. It is not clear why both are similar.
3. NAFF accuracy becomes worse when too many sample are included. It is not clear why this happens.
4. NAFF gives smoother D-current dependence because of no restriction of 1/n frequency step.
5. Chris R gave a talk on energy loss measurement. Some people question the validity of Geant 4, but it depends on models inside Geant 4. There are many models for different purpose.
6. Rf frequency was not adjusted before the measurement. However, it should be accurate. Beam is sensitive to small change of the frequency.
7. Uesugi-san gave a talk on TOSCA model. It turns out F and D are not changed with the same amount. Roughly, the change of magnet strength is about 50% of the change of magnet current.
8. Magnetic field may respond differently in the inner and outer radius region. Uesugi-san will check if there is any difference.
9. Using this calibration factor and experimental results, the dispersion function at the foil position is 0.7 m.
10. Ishi-san updated many issues, foil geometry, vertical BPM capacitance, injection line optics, COD calculation, etc.
11. At the foil position, COD moves the injection point a few cm. However, he adjusted the incoming beam to match to the distorted orbit. Once the COD is corrected, injection becomes difficult.
12. Malek gave a talk on injection line modeling. There is some discrepancy between Malek and Ishi-san on the injection orbit within the main magnet. This may be because of different assumption of the foil position. They will check it off-line. In the injection line outside of the FFAG main magnet, he got a fairly good agreement.
13. It is possible to have a week beam time starting from 23 June. Let us schedule it. Suzie is ready to join if the beam is available. On the other hand, it should be made clear beforehand what is missing in the March experiment and how the one week experiment could help to complete the documentation out of the March experiment.

    [ALL] Next meeting will be on Thursday 5th June (1pm UK time)