KURRI FFAG MEETING 09/06/2016
Google+ hangout meeting

Attendees:
S. Sheehy, D. Kelliher, S Machida, C. Prior, C. Rogers - RAL
M Haj Tahar, F Meot - BNL
Y Ishi, T Uesugi - KURRI
Please let me know if you were participated in. We could not see who was online!

Minutes:

1. Ishi-san gave an update on the machine status.
   - Without rotating the RF unit, all the conditionings have been done.
   - Vacuum level is recovered as before.
   - Ion source will be ready in a few days.
   - Idea is to start the commissioning without rotating the RF unit. If we can get the similar beam quality, there will be no need to rotate.
2. Malek showed one slide on Zgoubi and Opal comparison and some slides on space charge.
   - Zgoubi and Opal 2D TOSCA data based calculation give the same tune. 3D based calculation is slightly off in vertical tune. It is not clear whether we have already observed this level of discrepancy when we compared the results from Earlietimes and Scode.
   - Shows the way to compensate space charge tune shifts with field profile. When Kf>Kd, the tune decreases as momentum, that is the right direction of compensation of space charge tune shift. Unfortunately, KURRI FFAG is Kf<Kd.
   - Shinji mentioned we have to take in to account the space charge tune spread, not only tune shift, which comes from the nonlinear charge distribution and longitudinal density variation along the axis.
3. Shinji gave a presentation of multipole effects in the tracking.
   - Inaccurate estimate of higher order multipole (n>4) give a wrong estimate of dynamic aperture if it goes beyond a certain threshold.
   - However, it is not necessarily due to the modeling of TOSCA field map. The magnet itself may has imperfection which create large multipople components.
   - One way to see the improvement is to use finer mesh TOSCA field map.
4. Others

   Next meeting will be Thursday 21 July in 6 weeks time.
   We may use different way of connection such as Webex.