Projects

E.Benedetto, H.Bartosik

PSB (E. Benedetto)

E. Metral: You have managed to well reproduce the measurements when the optics model is implemented in the PTC-Orbit simulations Are you already satisfied with the machine model?
E.B.: This was a special MD to get data for code-benchmarking, i.e. close to the half-integer with correctors off. Only the linear model, for which we have measurements, was relevant for this study and indeed results proved that having a good model is fundamental for quantitative estimates of beam losses and blow-up. However, for the working-points used in operation, the non-linear model will be equally important, and measurements are planned for 2014-2015. Moreover, this year also the linear optics studies should be redone as the machine has been completely realigned.

R. Garoby: You did your measurements at 160 MeV. What about studies at 50 MeV?
E.B.: Measurements at low energy are important to have a large space-charge tune spreads and are planned for this year. In 2012-2013 we preferred to focus on studies on the special measurement cycle with a 160 MeV plateau, to have a consistent set of data of optics and space-charge measurements for code benchmarking. Latest results of measurements at 60 MeV were presented at HB2012 by Bettina Mikulec et al.

PS (S. Gilardoni)

No questions

SPS (H. Bartosik)

E. Metral: Are you planning measurements with large chromaticity?
H.B.: They could be for sure interesting, however it may be difficult to disentangle the effect of spacecharge and chromaticity.

LEIR (M. Bodendorfer)

R. Garoby: Congratulations, it's the first time I hear such an extensive description of the issues in LEIR and where the work should be focused on. Keep in mind that the deadline for the Upgrade is already LS2 for Alice and they expect high luminosity already in 2020. We need to be ready with ions earlier than with protons, since the experiments for protons will be upgraded in LS3…
When comparing the transverse stability before and after RF capture, in both cases the electron cooling is off, right?
M.B.: The electron cooling is on in the beginning and off at RF capture. R. Garoby: So maybe the damping is coming from the cooling. M.B.: Correct. These two effects are not yet disentangled. The problem is that the LEIR machine heavily depends on the electron cooling, otherwise the machine does not work properly.
R. Garoby: Are you able to progress with the planned MDs with Argon ions?
M.B.: There are some studies we can do with Argon. For example, can do a test to switch off the damper earlier and see if we can get a stable beam.
R. Garoby: D you know already that you will have these phenomena with the Argon beam?

M.B.: We expect a completely different machine with Argon. But we will try our best to understand as much as possible with the Argon beam.

ELENA (C. Carli)

E. Metral: When you split, the bunches are shorter …
C.C.: No the bunch length is given and should be 300 ns and then one gains the factor 4. Of course if we would have the same longitudinal emittance and the same RF voltage, the bunches would become shorter. But this is not what we will do. We will do bunched beam cooling and then the final emittances will not depend so strongly on the intensity and the fine adjustment one can get with the RF voltage.
R. Garoby: What is the revolution period at 100 keV?
C.C.: It's a bit less than 7 μs.