

Summary of PS talks

MD review meeting

Space Charge in the PS (R. Wasef)

- Priority: integer scans with different tune spreads and working point.
 - Comparison with emittance growth measurements done by R. Capi in 1993
- Increase the vertical tune above 0.25 to study the limitations.
- Shortening the flat bottom ?
 - time scale of the transverse emittance blow up
- PS already operates at the longitudinal limits 180 ns @ injection.
- Additional space charge simulations are needed with improved PS lattice (available since yesterday).
- Important to collect all necessary information before LS1 for simulations concerning:
 - Working point control by the PFWs and their influence on non-linearities (also for optics with large dispersion)
 - Correction of chromaticity
 - **Slow effects for simulations.**

Longitudinal Plane (H. Damerau)

- RF manipulations mainly driven by requirement from High brightness LHC beams.
- HW installation during LS1:
 - Finemet-based wide-band kicker cavity will be installed during LS1.
 - 1-turn feedback on all 10MHz cavities
- profit of MD session in extended run to test the existing coupled bunch feedback with C10-11 as kicker.
- More studies are then needed to characterize the parameters of the CBI (rise time etc.), excite the beam with feedback
- Limitation in intensity in the PS due to CBI: $1.7-1.9e11$ ppb
- Cavity C11 could be used to damp the CBI, but it is then not available as spare.

Transverse Plane of the PS

- Transverse damper in commissioning, missing the TD in the vertical plane.
- TD fixed frequency and fixed tune.
- Move the working point away from the linear coupling and check the damper on LHC beam.
- E-cloud: decision after 2013, waiting for further improvement of the simulations (can we live with the damper? coating ?)
- Importance of the impedance model for prediction of instability intensity threshold (headtail...) and impedance localization (MD in parallel).

PS-SPS longitudinal beam transfer studies (H. Timko)

- Budget is available for extra 40 or 80 MHz cavities. But the impedance budget should be first understood.
- 40MHz space cavity: they are optimistic that the 40MHz can be repaired and used for tests. The cause of failure is not yet understood.
- Not necessary to open the vacuum.
- Power supplies of the cavities are the weak point (voltage per gap)
- Additional MD time needed at the beginning of 2013 if the 40MHz are back.