Impedance working group: summary of activities (23/10/2013)

- General:
  - CST: specialized training; another bug in eigenmode solver (Serena). Situation with licenses better now – will ask for licenses for thermal simu.
  - Study of the matching of wire measurements (Johannes). Webmeeting on bench measurements next Monday.
  - ECRs to be approved.
- LHC:
  - TDI coating: finally 2 microns Cu + 5 microns Ti (+NEG).
  - ALFA: gap between bellow & filler went up to 2 mm → OK (not more). Also talk given by Olav during collaboration week.
  - Non conformities in RF contacts: talk at LBOC (Benoît) → small impact for impedance. Finally 2 out of 3 to be repaired (the one in triplets stays).
  - 3 MKIs upgraded with 24 screen conductors. Decision to keep as is one RF finger not in contact with tube (based on Hugo's simu+meas.).
  - BGV: imp. OK even with 75° tapering angle. ECR + talk at LSC coming.
  - TCTP: second measurement system ready (EN/MME + Joseph)

Impedance WG summary

- LHC (continued):
  - UA9: proposing to build a testbench at CERN that could be used for imp. measurements (collaboration with LAL in Orsay) ; meeting in November.
  - Measurements on carbon composite experimental beam pipe ongoing (Olav).
  - Impedances and heat load in 2-beams region – ongoing (Giovannis & Carlo).
  - Pumping slots imp. in beam screens from CST – ongoing (Carlo).
  - Impedance model version 2.0 in preparation.
- SPS:
  - Wire scanner : measurements on current wire scanner 416 ongoing
  - Many requests from LIU-SPS: ZS, new septum for ions.
  - New TPST, similar to the PS dummy septum (Serena).
  - BE-RF/BR trying to reproduce beam spectrum observed with long bunches. Survey of transitions in short straight sections (damping resistors) (Jose).
  - ZS transitions: update of shunt impedances estimate (Benoît), not accounting for resistive coating of damping resistors. No transitions to be modified during LS1 (no clear improvement).

Impedance WG summary

- PS: Elena W. working on several types of kickers.
- PS-Booster: Elena B. reported about some requests (injection region) (Carlo).
- TLEP: first impedance model (vacuum pipe+photon absorber incl. tapers + RF)
- CLIC DRs: look for cluster (IT/EPFL/PSI) for short bunches simulations (Eirini)
- HL-LHC:
  - Beam induced heating estimates for current machine with HL-LHC parameters (2nd update last Friday) (Benoît).
  - BBLR to be studied: A priori very close to TCT collimator (wire beyond Tunsgten skin depth for all freq. above 10kHz).
  - First results by INFN on geometric imp. of ”new” collimators → close to analytic formulas (flat tapers – Stupakov). Some computational issues (very demanding GdFidl simulations) (M .Zobov & O. Frasciello).
  - HL-LHC impedance model in preparation (Deadline: 1st November). Webmeeting next Tuesday 3 PM (with R. Wanzenberg and M. Zobov).