

# LHC RF Meeting

24th July 2008

**Participants:** Pierre Maesen, John Molendijk, Daniel Valuch, Edmond Ciapala, Andy Butterworth, Vittorio Rossi, Luca Arnaudon, Joachim Tuckmantel, Olivier Brunner, Wolfgang Hofle, Thomas Bohl, Elena Chapochnikova, Wolfgang Weingarten, Maria Elena Angoletta

## 1. Point 4 status and planning

- + Cavities 7 and 8 Beam 2 are ready in sector 3-4. The planning is as follows:
  - o Finish power calibrations.
  - o Continue working on the main coupler and tuner position control.
  - o Do the tuner setup (find optimal tuner phase).
  - o If all is ready tomorrow we could start setting up the RF feedback on one cavity.
- + **Tuner and MC position control:** New firmware and DSP code have been deployed in all of sector 4-5. A problem has been identified with the power supply commands, and is being investigated.
- + **Access:** Next week it will be possible to run every day, depending on the DSO tests. In 2 weeks there will be access for DFBs and the vacuum group (sector valves of the modules). The sector valve intervention has already been done in sector 4-5. Coordination by Olivier: there will be an informal meeting in the lab 864-RA27 every day at 9am. An EDH request is needed to access RUX45 or the RBs.

## 2. APW

- + The acquisition hardware is now all installed in UX45.
- + The OASIS software is still being finalized, but it is still possible to connect a scope on the surface via the cables.

## 3. Cavity Low-Level

- + All modules are now installed and patched except the Setpoint module (5 cavities in sector 4-5). These will be installed by the end of next week. A bug has been fixed in the firmware of the function generator distribution; this is now much more reliable, with an error rate of 1 in 30 million frames (i.e. 30000 seconds).
- + **Crate Management Module:** The first 30 modules will be received at the end of July. The front panels may not be available due to a problem with the mechanics (holes touching). TS-DEM is re-checking this.




## 4. Beam Control

- + **Beam Position:** Maarten is ready with the Beam Position module.
- + **VCXO:** A possible solution to the thermal drift problem has been found, using a commercial thermal regulator chip stuck onto the oscillator. It is also proposed to perform a digital compensation in the FPGA.
- + **Phase module:** The calibration and assembly is now finished for 8 modules. Daniel is working on the FPGA code: the averaging is still to be implemented. The crates for radial and transverse position pickups are finished; these need to be measured and installed. Serge will help with the calibration before the 4-port network analyser is needed by Philippe.

## 5. ADT LL

- + **DSPU:** All 4 cards are within specification. Gerd is working on the FPGA code compilation. The capacitor problem on the DSPU has been rectified (the capacitors on the longitudinal 1-T feedback are now being modified in the same way). TS-DEM stated that we cannot rely on the month of August for manufacturing. The final series of 8 DSPU cards will be received at the end of September.
- + **Beam simulator:** This will be ready in 2 weeks (Daniel).

## 6. AOB

-  **Injection test:** An injection test into sector 2-3 is planned for 9th August. Depending on progress it may be re-scheduled for 16<sup>th</sup> August. The SPS/LHC synchronisation will have to be operational for this test, including the SPS rephasing and the new extraction prepulse and warning generation hardware. No date has been announced recently in the ICC for circulating beam.
-  **DSO tests:** RF will supply 2 people for DSO tests (patrols) on Monday and Tuesday. Names to be confirmed.
-  **FSU workload:** The FSU workload is reducing, so please communicate any jobs you may have to Luca, even if they are not urgent.

A. Butterworth, 6th July 2008