

LHC RF Meeting

27th March 2008

Participants: Luca Arnaudon, Maria-Elena Angoletta, Philippe Baudrenghien, Thomas Bohl, Olivier Brunner, Edmond Ciapala, John Molendijk, Joachim Tückmantel, Vittorio Rossi, Frode Weierud.

1. Equipment status in tunnel (RUX 45)

✚ **Water Cooling:** Water is off till the end of next week. Tests on ADT powering will then continue.

✚ **Sector 3-4 planning:** Cool-down is planned to start in mid-April; the cavities would be cold for low power measurements in mid-May.

✚ **Faraday Cages:** With the water off, overheating is a serious problem for the electronics crates. We will nevertheless try to set up temporary cooling (with fans) to allow the electronics for least one cavity to be left on and the software development to proceed.

✚ **False floors:** The installation of flooring in the area between the bunkers, racks and cages is ongoing. It will be finished before the open days on 5th and 6th April.

2. SR4 remaining work:

Status: A review was done in SR4 on the 18th of March and lists made of the remaining work to be done. This will be discussed and the work organized in a separate meeting early next week. (Confirmed by Luc for Wed 2nd April in 864 R A19)

RF Synchro: Installation is going well and signals will soon be distributed to experiments and BT equipment.

3. LLRF & Synchro:

✚ **Electronics for beam control:**

- **The loops controller** interface will be ready for test in 1-2 weeks.
- **The damper processing module firmware** is now being programmed and the memory map defined. We will manufacture four pre-series boards. If all goes well these could already be used for final installation.
- **Damper analog processing:** A problem has been found with the filters on the analog processing section for the damper.

✚ **VME crates:** The production of a further 20 crates will be organized. We will need to obtain CPUs and timing modules.

✚ **LARP collaboration:** D. Van Winkle, our LARP collaborator from SLAC has arrived and started work on Matlab applications using embedded diagnostics data in the VME modules. A first step is building a FESA to MATLAB interface. We also need to provide a software configured crate for this project.

✚ **Emittance blow-up:** We will need a flexible set-up for generating the correct spectra at different stages of the ramp. Although we could implement the system in existing DSPs in the beam control system, it was decided that a separate dedicated system would be the best and safest approach.

4. Software:

✚ **Status:** It would be useful to review the status of progress on developing FESA classes in a future meeting. Also the news on new LabView applications which are being created for the LLRF systems would certainly be of interest.

5. SPS Rephasing:

✚ **Status:** The hardware is in good shape, the serial transmission has been debugged and software is progressing. Slow timing control remains to be implemented.

✚ **Planning:** There are two scenarios for the machine testing, depending on SPS startup plans. Either we will have continuous LHC cycles during operation, or we will need to ask for dedicated MD sessions. At the moment the first option is planned.

✚ **APC committee:** There will be a presentation on SPS re-phasing by Philippe at the APC of 17th April.

6. APW

✚ The signal combiners have been installed. We must aim to have hardware and software for mountain range for first beam.

Next Meeting: Thursday 3rd April in 864 1 C02 at 08:45