# LHC RF Meeting 17<sup>th</sup> March 2006

**Participants:** Luca Arnaudon, Thomas Bohl, Andy Butterworth, Olivier Brunner, Edmond Ciapala, Pierre Maesen, Wolfgang Höfle, Trevor Linnecar, John Molendijk, Eric Montesinos, Elena Shaposhnikova, Joachim Tückmantel, Daniel Valuch.

## 1. Couplers (Eric)

**SA2 conditioning:** Conditioning of couplers MC128/129 in SA2 is now at 150 kW with 100us pulsing. Problems with the klystron blower filter caused some loss of time.

#### 2. ACS Modules and SM18 (Pierre)

**Module 3:** Has been tested. All measurements are good, including the frequencies on cavities C and D now fitted with tuning springs.

**Planning:** We will now install module 5 (couplers recently fitted) in the bunker for power test and conditioning before doing module 1 low power tests. (needed after fitting tuning compensation springs and other modifications).

This has two advantages:

1) More time to finish the mechanical work on module 1 and less pressure during the holiday period.

2) Earlier test of module 5. Time for LLRF tests would be available at the end of June, after module 5 conditioning.

# 3. ADT (Eric)

**Kicker assembly:** Thanks to an excellent effort the Dubna team managed to complete the work of assembling 18 kickers by the end of their present stay. The completion of the kickers and their supports is a significant milestone.

### 4. APW (Thomas)

**Feedthroughs:** The problem with the leaking of the feedthroughs after bakeout has been studied in the workshop (S.Sgobba). A report will come shortly.

### 5. LLRF and tests: (John)

**Series tuner control module** A series tuner control module should be ready for the SM18 tests in June. The final **prototype RF feedback module** should also be tested in SM18 at the same time.

**Conditioning module:** By the end of March the design will be at the stage where it can be given to the design office. If we can accelerate the fabrication of a prototype, it may also be possible to do first tests on it in SM18 in June.

# 6. ACS power converters (Luca)

A meeting was held with AB-PO in SR4. PO group have tested three of the large transformers outside the building. They will install new controls electronics. PO group would also like to have the names of the equipment to which each converter is connected, this information has to be part of their equipment database.

### 7. UX45 installation progress (Olivier).

**Shielding wall:** Blocks are now being put around the cryo passages.

**Cabling:** This is ongoing, cable tray routing between the walls will be finalized early next week.

- **Water:** The final water connections to the klystrons will be made next week.
- **Ventilation units:** Installation has started with those on the Faraday cages.

#### 8. Vacuum layout (Olivier/Ed)

Following the compilation of the detailed vacuum layout list by M. Jimenez, (Latest version can be obtained at <u>http://layout.web.cern.ch/layout/</u> => options LSS4 / Study in design) we have re-checked our RF layout diagram LHCLJ4GA0007. The definitions of length and positions for ACS cavities is now slightly different, since the module vacuum valves are now considered as separate elements, but the positioning of the modules is still correct with respect to IR4. However, an error has crept in with the last modifications of the APWL positions, from use of an incorrect value of the distance from IR1 (the database reference point) to IR4 (our reference used in the layout). If not corrected the APW would be 8 cm from their original positions and asymmetrical around the IP. We should therefore get the positions corrected as quickly as possible, before VA group make the final order for vacuum chambers in IR4. (Action: Olivier)

#### 9. LSS review (Olivier/Ed)

A 'pre-meeting' within the AB department has been held in preparation for the forthcoming review of the installation planning for the long straight sections.

The points summarized in last week's meeting <u>LHC RF 10th March</u> were stated; i.e. all RF equipment will be ready, it must be installed straight away and bake-out in LSS4 is essential.

There is some uncertainty about the readiness of the BPWAH and BPWAV transverse observation pick-ups supplied by BI group. These are not essential for pilot beam, however their delayed installation would create more work for the vacuum group.

**Next Meeting:** Friday 24<sup>th</sup> March at 08:45 in the JBA room.

E. Ciapala, 22<sup>nd</sup> March 2006.