

LHC RF Meeting

4th February 2005

Present:

Luca Arnaudon, Thomas Bohl, Philippe Baudrenghien, Olivier Brunner, Andy Butterworth, Wolfgang Höfle; Trevor Linnecar, Pierre Maesen, Eric Montesinos, Volker Rödel, Joachim Tuckmantel, Daniel Valuch

1. Installation and Planning (Olivier)

The building of the shielding wall has started.

Removing the rails in UX45 has started.

A new planning of the RF installation will be available shortly from S. Weisz.

Olivier has reminded R. Principe that the TS/CV works should start in April 05 and should finish in July 05.

The vacuum layout has been discussed with M. Jimenez. Once the LHC Reference Data Base (S. Chemli) is up-dated (by the end of February 05), Miguel will finalize the vacuum layout for the RF.

The stoppers will be installed between APW and ACS as close as possible to the ACS.

There will be no dust traps.

The electrical powering for the RF has been reviewed with J. Gomez.

The copper sheet metal (0.3 mm thick, 1 m wide) for earthing in UX45 has been ordered and for this new EVM work units have been created.

2. ACS Modules (Pierre)

The resonant frequencies of the 4 cavities in Module 5 are too high such that there is little tuning margin below the nominal frequency of 400.790 MHz. These cavities had been tuned to the correct frequencies by plastic deformation in the year 2002 and cycled thermally thereafter. This effect is so far not understood and needs further investigation. During the discussion, it has been suggested to redesign the tuner system of the cavities.

The leak test of Module 3 is ok but the resonant frequencies have moved in a similar way as for Module 5 (measured in 2003). Module 3 will be re-measured shortly.

3. ADT (Wolfgang)

The collaborators in Dubna need up-dated drawings. It has been agreed that Dubna builds the supports.

Some hardware shipments from CERN to Dubna have to be done. The first amplifiers are to be delivered to CERN in March 05.

With Thales, there is now agreement on access to the manufacturing documents.

The amplifiers are late, and application of a penalty is considered.

The delivery dates for the RF cables are awaited from Andrew. The Andrew cable type will also be printed on the cable.

The RF cables should be delivered and stored at Point 4.

We should decide soon whether the RF cable pulling is done by CERN or by an outside contractor. We had a visit from a local company specialized in cable pulling. But given the expected size of the contract a call for tender seems to be excluded since the works should start in September 05.

Installation of the cable trays starts in April 05, and control cable pulling in July 05.

Connector mounting can be a separate FSU contract.

4. Faraday Cages and LLRF (Philippe)

A draft of the Technical Specification is now on EDMS. A specification meeting is planned for next week.

A second card of RF feedback has been received.

The fibers for the 8km link from BA3 to the CPS are being evaluated and look promising.

The drift with temperature needs further investigation.

5. Controls (Luca)

A block diagram of the ADT has been circulated. Further discussions are needed.

The interlocks are to be discussed and their cables to be defined and included in the DIC.

The fast interlock signal which stop the beam have still to be defined. Luca will circulate a draft for discussion.

A prototype controller for the LHC power converters is available and can be tested in SM18 for the ACS control. It needs the proper software.

An arc detector will also be installed in SM 18 and tested (sensitivity to noise)

Next Meeting

Friday, 11^h February 08:45 in JBA Room 864-2-B14.

Agenda: ACS Interlocks, Beam Dump (Luca).

V. Rodel, 7th February 2005