LHC RF Meeting 20th November 2003

Present: Luca Arnaudon, Olivier Brunner, Edmond Ciapala, Wolfgang Höfle, Trevor Linnecar, Roberto Losito. Joachim Tückmantel. **Excused/Absent:** Philippe Baudrenghien, Thomas Bohl, Andy Butterworth, Elena Chapochnikova, Eric Montesinos, Volker Rödel, Daniel Valuch.

Agenda:

- 1) Module 3 news and planning
- 2) Integration Follow-up.
- 3) Points arising from AB LTC Technical Review
- 4) Other news & round table

1) Module 3 status in SM18 (Roberto)

Power tests started on Friday 14th November, but were interrupted by a cryo plant stop the same afternoon. Tests were resumed on Monday 17th. Cavity one coupler conditioning, with the cavity detuned and the coupler antenna fully in, went very well and 250 kW continuous has now been reached. The plan is to condition all couplers then afterwards to do cavity conditioning with the cavities tuned.

2) Integration follow-up from last meeting

RUX45 Integration Approval: (info from Volker) There have been no objections to the list of items compiled by C. Ruivet and submitted for the RUX45 integration approval process.

ADT Connections: The routing of cables and water connections potentially interferes with space which will be used to pass alignment equipment. In spite of this, drawings prepared for the integration WG should show routing of cables and pipes in the most direct way.

(Action: J-F Malo, S, Girod, Volker) Any modifications, should only result from justified objections and only be considered afterwards.

Dust Traps: We must ensure that sufficient space is kept available in the RF zone.

(Action: Volker)

3) Points arising from AB LTC Technical Review

There were four LHC RF presentations:

- 1. 400 MHz System: Cavities Roberto
- 2. 400 MHz System: Power Olivier
- 3. Beam Control System Philippe
- 4. Transverse Feedback Wolfgang

In general the work to be done is clearly defined, however in certain areas resources and planning can now be seen to be very critical.

Some points raised in the discussions

- i) Vacuum and radiation single event upsets. Our assumed vacuum level of 1.0E-11 corresponds to good vacuum, during physics conditions. At other times the vacuum could be up to 100 times poorer, e.g. during scrubbing. The implications are therefore even more serious than previously considered. We will have to follow up the possible solutions: either to use rad hard equipment or to resite the LLRF crates.
- **ii)** Cryo and helium safety. The ACS cavities may be the only elements in the sector which can allow possible loss of all helium through safety valves. Other cryo elements (e.g. DFB) will use rupture discs. The safety issue has to be taken up with TIS.

(Action: Roberto, Ed.)

iii) Naming: Our naming and AT-CR naming e.g. for the ACS cavity modules should be chosen to correspond.

4) Round Table

• LEP Equipment recuperation. (Olivier)

Work has started on the cleaning out a first batch of racks (70) in the ISR tunnel. A larger amount of equipment than originally planned is being recovered. Items include connectors, crates, RF connectors, as well as all commercially procured material. AT-VAC group and AB-BT are also taking some material.

Next Meeting:

Date and agenda to be announced.

E. Ciapala, 24th. November 2003.