

## LHC RF Meeting 18<sup>th</sup> June 2003

### **Present:**

Luca Arnaudon, Philippe Baudrenghien, Olivier Brunner, Andy Butterworth, Elena Chapochnikova, Edmond Ciapala, Wolfgang Höfle, Trevor Linnecar, Eric Montesinos, Volker Rödel, Joachim Tückmantel.

**Excused/Absent:** Thomas Bohl, Roberto Losito, Daniel Valuch.

### **1) EVM:**

- Wolfgang explained the approach of splitting WUs so that they do not cross the EVM start date of 1<sup>st</sup> Jan 2003. In this way PV, EV and actual cost (AC) are clearly defined on that date. The amounts on our various budget codes in the special 'automatically generated' WU 3756 corresponding to the differences between PV and AC on that date then correctly represent the difference between money spent up until then on activities not included in EVM and those that are. These amounts should remain fixed, simplifying our own accounting and tracking. The required modifications were done successfully to the ADT EVM. Some help from EVM specialists was needed, partly because of system bugs that have since been fixed.

- The same has been done for controls and ACS Power. For the latter, work units that cross the EVM start date but are now completed were left alone. One WU needs changing in ACS couplers. The other systems require no changes.

- Infrastructure & installation estimates should be returned to the original April values.

(**Action:** Ed/Volker)

### **2) Power Couplers: (Eric)**

- A leak occurred on the second ceramic on one of the two recently assembled couplers, after bakeout to 120°. This is being investigated with vacuum and materials specialists. Depending on the exact cause, a number of possible solutions are available. Until the best solution is found, the upper parts of the couplers (up to four) will be baked at lower temperature. This will allow us to maintain our priority schedule of conditioning four couplers, installing them in a module and doing power tests in SM18 by September. In the machine however the couplers must withstand full bakeout.

### **3) Matters arising from previous meeting on 11<sup>th</sup> June:**

#### **i) HOMC connections:**

- Location of cable rolls has still to be decided. The exact dimensions need to be checked

(**Action:** Olivier)

- A drawing has been published. Quotes have been obtained for attenuators. Development of directional couplers, filters and power meters is ongoing.

- Possible layouts for ADT kicker HOMs connections should be prepared, in a similar form. (**Action:** Wolfgang, Joachim, Ed)

#### **ii) ADT**

The proposal for drive amplifiers contract is being presented to the current finance committee. (*The contract has been awarded to Thales Communications, Belgium*)

#### **iii) Radiation studies:**

- Work ongoing, results expected end of June.

#### **iv) SM18 cooling water:**

- A request for modification of the PLC to provide an overpressure interlock has been made by CV to the outside contractor. Modifying the pump such that less pressure is available would be another (but more expensive) option. We must have absolutely safe operating conditions for klystrons and loads, both in SM18 and for the machine. We have to ensure we get the necessary support from CV. (**Action:** Olivier, Trevor).

**v) VME modules and crates.**

- AB-CO can provide a few CPU modules for tests. For the LL RF controllers, three prototype crates will be built. The contract for VME chassis negotiated by AB-CO with Wiener allows for the supply of a number of custom crates (e.g. for BDI). Our exact specs for LL RF controller crates (e.g. for power supplies) may not be confirmed till after tests in SM18 (end 2004). We should check with W. Heinze if this would be still compatible with the AB-CO contract and produce a brief specification, which could possibly be included as an option. (**Actions:** Andy, Ed, Philippe)

**3) Round table**

**i) Sub-Systems (Trevor)**

- A more detailed look (than can be done in the present meetings) will be taken in the coming weeks at the technical aspects of the various sub-systems.

**ii) Installation and Layout (Volker/Olivier)**

- Civil engineering work (wall and platform) in UX45 will start next year. There will be a meeting with W. Van Baaren next week
- The next version of RF UX45 layout drawings will show the full chicanes at the tunnel entrances.

**iii) Ex LEP Racks (Olivier)**

- The arrangements for ex-LEP rack recuperation have been discussed again with Claude Guillaume. Updated lists of racks for RF will be provided; specifying where the existing support bars should be retained.
- Dismantling ex-LEP racks should take place in the ISR, with sufficient 'buffer' and re-stacking space made available, e.g. by starting to remove waveguides. The work will need RF group supervision. (**Action:** Olivier/J-C Perrier)

**iv) LHC Ions (Elena)**

- A design report is to be prepared on LHC ions in the SPS.

**v) LL RF (Philippe)**

- A new phase shifter is being developed by Daniel and M. Barnoud.

**Next Meeting:**

25<sup>th</sup> June at 09:00 in 864-1-C01

E. Ciapala, 19th June 2003