

LHC RF Meeting

7th October 2005

Present: Luca Arnaudon, Thomas Bohl, Olivier Brunner, Andy Butterworth, Edmond Ciapala, Wolfgang Höfle, Pierre Maesen, Joachim Tückmantel, Elena Shaposhnikova, Volker Rödel, Daniel Valuch, Urs Wehrle, Frode Weierud.

1. UX45 Installation (Olivier)

✚ **CE work:** Work on bunker roofs and Faraday cage platforms will start next week. Extra passageways and some additions to the platforms will be needed for cable installation.

✚ **Faraday cages:** Construction of the first Faraday cage is almost completed. The second will start next week, after its zone has been prepared.

✚ **Cabling:** The first 3 7/8 flexwell cables have been pulled from the surface for the APW. A reflectometer check will be done on these cables to make sure there are no serious problems. There are 50 cables to install, at a rate of 1-2 per day. Feasibility of installation of the longer cables (~700 m ADT SR4 to pick-ups in magnet cryostats) in one single length is being checked. A test procedure will be elaborated for pre-test of the cable before unwinding from the drums.

✚ **Earth bars:** are being installed in the transit area part of the trenches. Since very heavy equipment will pass through it will be necessary to have very thick metal plates on the floor.

✚ **Cable trays in tunnel area:** Cable trays installed in the RUX/RB parts of the tunnel are positioned such that there is likely to be insufficient clearance to allow insertion/removal of the cryo lines for the modules close to the RBs. The dimensions needed and space available will be checked in situ and in SM18 and the situation discussed with TS-IC.

✚ **UX45 klystron cooling:** The cooling connections are almost finished; the pressure limiting system may be changed.

✚ **Installation database:** Data for the ADT has been entered completely in the installation database – see <http://lhclayout.web.cern.ch/lhclayout/>. Pierre and Thomas will provide similar information to S. Chemli so that ACS and APW can be entered.

✚ **APW racks on cryo side of UX45:** We have found that CV has started to prepare installation of equipment in the area designated for the APW racks. Some cooling pipes have already been put in place. The integration of this area has not been handled by TS-IC. TS-CV has perhaps understood unofficially that we would not install equipment in this area. While we would accept to move the racks a limited amount we can not accept additional cable lengths or having the racks too close to ventilation equipment.

2. ACS Couplers (Pierre from Eric)

✚ **Coupler conditioning test stand:** Conditioning of couplers 124 and 125 is difficult but progressing in pulsed mode. There are fewer arcs than at the start of conditioning.

3. ACS Modules and SM18 (Pierre)

✚ **Module 2:** On removing the conditioning electron stopper a small leak on the sector valve allowed a pressure rise up to 10E-7 (under nitrogen). This is not serious but the valve will need to be changed. It was planned to do this in the clean room, but it may be possible to do it under laminar flow, with pressurisation of the cavities. These valves were recuperated from LEP...

! **The antenna signal from cavity D seems low** (factor 2 down), when compared to input klystron power, given coupler position and radiation measurements. The connection inside the module is suspected and will be checked once the module is out of the bunker and opened.

✚ **Module 5:** is now in the bunker and cooling down. The lower frequency of the disc spring compensated cavities will be measured during cool-down. This module has the new modified safety

domes and 1.8 bar safety valves are fitted. HOM measurements, as done on module 2, can also be done - the lack of real power couplers will not affect the results.

4. ADT (Wolfgang)

✚ **Modified water cooled resistors:** Expected delivery is now 17th October

✚ **Amplifiers:** Two will be modified to the final design. Two further amplifiers are being prepared at Dubna, they will be retro-fitted here according to the new design.

✚ **JINR Collaboration:** A full CERN-JINR collaboration status meeting will take place on the 20th October. Wolfgang will make a presentation on the ADT work.

5. AoB

✚ **HOM loads:** Daniel proposed the use of special custom attenuators, made in 5 stages and better capable of withstanding HOM signals generated by the beam than the ex-LEP Spinner attenuators. He will prepare a spec and cost estimate.

✚ **Position and cabling of vacuum equipment:** TS-EL need information for cabling on the positions of vacuum equipment on the ACS modules (gauges, pumps, second beam tube) This will be followed up with J-C Billy.

Next Meeting: Friday 21st October at 08:45 in the JBA Room 864-2-B14.

E. Ciapala, 20th October 2005.