

Present: AB/PO: H.Thiesen.
AB/CO: R.Lauckner, R.Schmidt.
AT/ACR: S.Junker, E.Millet, R.Rabehl, A.Suraci.
AT/MCS: R.Lopez, A.Poncet.
AT/MEL: D.Bozzini, P.Chambouvet, R.Denz, S.Feher.
AT/VAC: W.Maan.
TS/EL: J.C.Guillaume
TS/HDO: M.Coccoli, S.Gillet, I.Moya, B.Perea, R.Saban,
M.Solfaroli, A.Vergara.
TS/IC: K.Kershaw.
TS/LEA: D.Macina.

Preparation of the Cool-Down in Sector 78, 81 and 45.

Sector 78

Flushing (R.Schmidt):

- Due to problems experienced by the control system the flushing was temporarily stopped. It was decided during the meeting that the flushing will be continued over the weekend in order to start the cool-down on Monday afternoon as scheduled.
- The EIQA-TP4B tests which were supposed to take place this afternoon will take place Monday 15th with the agreement of D.Bozzini.
- From Monday 15th Jan the access to the underground controlled areas (arc 78, UX85) will only be possible using the 5 access cards with the LHCCOOL access granted; these cards are available in the cryo control room. (The team performing the EIQA on Monday is composed by 5 people and will use these LHCCOOL cards).

Vacuum & Cryo (W.Maan-A.Suraci):

- The VAC-CRYO interlocks analysis showed 3 incoherences which have been fully understood by Isabelle. Final tests can then be carried out today by P.Gomes. The possibility of provoking a vacuum loss interlock should be discussed with F.Millet.
- The 2 cables for cryo-instrumentation controlling the temperature of the HTS were pulled but the connector still need to be installed, thus the EIQA will be performed with the old cables withstanding 600 V that are already available. Today the cable in the RR77 will be pulled.

Non-conformities in cabling (J.C.Guillaume):

- J.C.Guillaume informed that the non-conformities in the DFBXG current lead temperature sensor cables have been fixed. P.Chambouvet will carry the functional tests today.

QPS (R.Denz):

- The QPS racks exposed to the water leak in C33L8 have been protected after the meeting: one has been moved away from the water and the other has been lifted up by means of wooden supports. R.Denz informed that this setup is acceptable for the cooldown, but not for the powering tests and QPS-IST at cold.
- The damaged cable was repaired by R.Lopez.

DFBX (R.Rabehl):

- The final works and tests on the DFBX are being performed today and are coordinated between R.Rabehl/S.Feher and P.Chambouvet.

LHCf and BRAN (D.Macina):

- LHCf: the electronics and racks arrived at CERN; the LHCf detector is in US15 and should be transported to the tunnel today.
- BRAN: the hardware should arrive at CERN on Jan 14th and the installation can start one week later on Jan 22nd (this will be confirmed early next week).

AOB:

- Current Leads survey cameras during cool-down (R.Schmidt):
 - Fixed cameras choice: 1 over 3 cameras was installed; P.Chambouvet, S.Junker, A.Ballarino will agree about the location of the other 2 cameras and install them by the end of the day.
 - Mobile Camera:
 - At the moment it is not fully implemented and can be operated only by expert operators;
 - It runs with a battery and this means that it has a finite energy autonomy;
 - It hangs to the *monorail* and thus the space around it should be freed along the arc to allow its passage, especially the clamps installed with the *consignation* should be removed;
 - An official statement is required to confirm the request of the use of this system.
- Holes in IFS Boxes: the repair has been postponed after the cool-down.
- Preparation of the control software tests: The 6 or 7 circuits to be involved in the tests have been defined and should be short-circuited

at the level of the current leads with the galvanic insulation. Davide Bozzini will leave the circuits in such state after ELQA-TP4B on Monday.

Sector 81

Warm Magnets (M.Coccoli):

- The magnets on the injection line still need to enter the commissioning phase (a general Warm Magnet commissioning meeting is scheduled for Monday 15th).
- WEIQA: the magnets on the LSS8 LHC beam-line passed the WEIQA except one (missing the DC cable connection that J.C.Guillaume will do on Monday 15th).
- WIC: performed in all the magnets that passed the WEIQA.

Current Leads functional tests (P.Chambouvet):

- There are still non-conformities in the current lead heating system cables. Such repairs cannot be done before next week and therefore P.Chambouvet will request a delay in the rack transport, which was supposed to take place early next week.

Sector 45

DC cabling (J.C.Guillaume):

- The cable positioning, labelling and the polarity test are starting next week in the RR53, RR57 and UA47 on the DFBA's.
- TS/HDO should inform about the new colleague that is expected to start working from Jan 22nd on the labelling.

QPS sector 45 (R.Denz):

- QPS tests will start tomorrow in sector 45 with a brand new team.

Open Issues

AC non-conformity

- 13.11.06 Non-conformity of the crates of cryo instrumentation (inrush current) (A.Suraci: ready next year)
- 13.11.06 Non-conformity of the AC cabling of the crates under the magnets. This concerns ACR, MEL & VAC.

DC cabling

- 10.01.07 Connection of the NC Magnets in LSS8R (J-C.Guillaume)
- 22.11.06 Pre-connection of 120A cables in LSSR7 (TS/EL) - PC Non conformities (H.Thiesen)

Instrumentation Cabling

- 12.01.07 Cryo-instrumentation cables: 2 LSS8L connectors (A.Suraci-J-C.Guillaume)

10.01.07 Continuity error with cable 1813004A and a wrong housing of 1702440 which should be replaced (D.Bozzini)

Cryogenics

22.11.06 Instrumentation and remote control not fully stable (P.Gayet - F.Millet)

DFB Commissioning

29.11.06 DFBX Pumping of Current Leads insulation vacuum (S.Feher)

Safety

General remark: written communication in advance to announce operations!!!

23.11.06 Water leak on the tunnel concrete wall to be fixed (C33L8).

Preparation of powering test

30.11.06 EI_QA performed on C16L8. ICC test showed reversed sequence of V-taps on circuit RCBV16.L8B1 (D.Bozzini)

AOB

08.01.07 Re-installation of 3 BLMs interfering with pumping groups (B.Dehning)

13.11.06 BPM connection in Q2 (R.Jones) - waiting for Inner Triplet to be repaired

Closed Issues

QPS - 2 cables need repair (R.Denz-D.Tommasini)	12.01.07
DFBXG non-conformity on the current lead heater cables 1821322 and 1821323 (P.Chambouvet-J-C.Guillaume)	12.01.07
Cryo-instrumentation cables: 2 LSS8L + 1 LSS7R to be pulled (A.Suraci-J-C.Guillaume)	15.01.07
Bad positioning of the 13 kA power cable <i>coses</i> corrected (J-C.Guillaume-P.Denis)	11.01.07
Cryo-instrumentation cables at DFBX inversion sorted out (A.Suraci)	10.01.07
Calibration of the Arc Detectors on the 13 kA EE System (K.Dahlerup-Petersen)	19.12.06
Short-to-ground in QBBI.A21R7 (Lyra side) (D.Bozzini, F.Seyvet)	19.12.06
BPM connection in Q3, Q4, Q5, Q6, Q7 (R.Jones)	15.12.06
DFBAO Functional test on the leads heaters	15.12.06
DFBXG 100V test on current leads (S.Feher)	15.12.06
Repositioning of 1 DC cable on DFBAO and of 2 DV cables on DFBAN (all 13kA) (J.C.Guillaume)	14.12.06
Wooden structure for UA access restriction (that will allow transport)	12.12.06
Non conformity in DFBMH, DFBAN and DFBXG current lead heaters (P.Chambouvet-J-C.Guillaume)	12.12.06
Galvanic insulation installation on all DFBs (AT/MEL)	08.12.06

Re-positioning collars used to fix the WRL to the CLs (all DFBs) (A.Perin-D.Bozzini-F.Millet)	08.12.06
6 kA and 13 kA cables positioning at DFBAO, DFBMA, DFBMC (Flohe)	08.12.06
Functional test on the leads heaters: DFBMA, DFBMC	08.12.06
EIQA-TP4B safety procedure (1900 volts tests!).	07.12.06
Cool down safety procedure & access conditions	07.12.06
Instrumentation cable HV tests in LSS8L (A.Suraci: 4 cables to be tested)	06.12.06
Non-conformity on instrumentation cables (temperature sensors on current leads) (A.Suraci: 3 cables are in repair-Wed.29th)	06.12.06
Quench protection continuity tests and cables assignment LLS7R (DFBMH, DFBAN) and LSS8L (DFBMC, DFBMA and DFBX)	06.12.06
DFBAN cable positioning (J.C.Guillaume)	06.12.06
Access & Safety Cable Installation (full sector) (J.C.Guillaume)	06.12.06
EIQA-TP4-A for all DFBs sector78	04.12.06
Water circulating in UA83 for the Powering Procedure Test: filters checked, installation of flexible cables by CV.	04.12.06
LHCb ODH System ready	04.12.06
Definition of owner of activity and pumping needs for current leads insulation vacuum (DFBX) (S.Feher, R.J.Rabehl)	04.12.06
DFB instrumentation cables to be connected (A.Suraci)	04.12.06
Functional test on the leads heaters DFBMA	04.12.06
Functional test on the leads heaters DFBMC	04.12.06
Non-conformity of the DC cabling of the orbit corrector power converters	04.12.06
Pretest of 60A converters in sector 78, location C16L8.	30.11.06
EIQA-TP4-A on DFBAN, DFBMH, DFBAO LC module	29.11.06
Pumping of insulation vacuum for all DFBs between 7 and 8 (except DFBX)	29.11.06
Functional test on the leads heaters DFBMH	29.11.06
Functional test on the leads heaters DFBAN	28.11.06
Pumping of current lead insulation vacuum DFBAN	25.11.06
120A and 600A positioning on DFBAN and DFBMH (INEO)	25.11.06
Missing labels on DFBAO instrumentation cables	24.11.06
Adjustment of cable length on DFBAO	24.11.06
Prototype of galvanic insulation to be tested at Point 6	23.11.06
Definition of Safety procedure for Powering Procedure Test (aka Dry	23.11.06

Runs)

Leaks on DFBAO gas recovery line in repair/installation of helicoflex	22.11.06
21 leak detectors to be placed all along the arc 78	22.11.06
Connections (made by TS/MME) of 120 A cables to be verified (TS/EL)	22.11.06
600 A cable positioning on DFBAO	22.11.06
Pumping of current lead insulation vacuum DFBMH	21.11.06
Pressurized air supply to valve on WRL	21.11.06
Support on DFBAO WRL	21.11.06
Bellows in Q6-Q7 LSS8L which had been damaged, is now repaired	20.11.06
Valve on the WRL is operational	20.11.06
Leak in arc Q11-8L	20.11.06
Cryogenic valve manipulation on DFBX	20.11.06
Removal of some BLMs in conflict with the pumping groups	17.11.06
120 A Cables connection in DFBAO, DFBMC, DFBMA and DFBX LSS8L	17.11.06
DS7R and DS8L leak test finished	17.11.06
Leak in R7 repaired	17.11.06
Q6-Q7 bake-out completed	17.11.06
Current lead vacuum: man power and pumping groups availability	15.11.06
Hydraulic connection of the current leads	15.11.06
DFBX AT/MEL Transformers installation	14.11.06
WRL connection DFBMH LSS7R	14.11.06
ELQA-TP3 test of the sector 78	14.11.06
Polarity tests of the 600A and 120A cables for DFBAN and DFBMH (LSS7R)	14.11.06
QUI available	10.11.06
Pressure tests of QUI and DFBs safety valves finished	10.11.06
QRL valves available for all sector	09.11.06
QRL valve opening/cabling verification	13.11.06
Interconnections DFBAO, DFBMA and DFBMC.	13.11.06
WRL connection at DFBMC, DFBMA and DFBX	13.11.06
120A cables positioning at DFBAO, DFBMA and DFBMC	13.11.06
Q6-Q11L8 leak test envelope	13.11.06
Interconnections of DFBAN and DFBMH	13.11.06

Milestones: Test Schedule

Week 45	Interconnections
End week 46 [18.11.06]	Leak Test
End week 47 [24.11.06]	Pressure Test
Week 47-48	EE sensor tests in RR77
Week 48 & 49	Purge and filling
Week 49	Dry Run
Week 49	Short Circuit tests of 60 A
Week 49 [07.12.06]	Diesel Tests
Week 49	ELQA-TP4B (Phase I)
Week 50	Flushing
Week 50 [15.12.06]	ELQA-TP4B (Phase II)
Week 02 [12.01.07]	ELQA-TP4B (Phase III)
Week 03	Cool Down Sector 78



Next RAT meeting

Monday, January 15th 8:30 @ P8 2889-R-009

Mirco Coccoli