Cool-Down (F. Millet)

- Over the weekend there were cooling problems in sector 78 with the following implications:
  - About one quarter of the arc 78 (7R side) was kept at temperatures up to 98K, while the other magnets were between 82K and 84K.
  - The cooling conditions are restored this morning and the temperature is decreasing to have a uniform 80K profile over the whole arc 78.
  - There is a reserve of 2 trucks of nitrogen that will be used today and then the temperature will be kept constant by means of the “turbines”.
  - In case the temperature of a sensor will go above 100K, F. Millet will give a warning to the Hardware Commissioning team of point 8 (M. Coccoli and A. Vergara) and to the Hardware Commissioning responsibles (R. Saban and R. Schmidt).

EIQA

- The EIQA activity planned for today and tomorrow could experience up to half a day of delay due to the unexpected lack of manpower (2 AT/MEL team member are ill).
- The Cool-Down will be in static conditions (according to the safety rules) during the EIQA-TP4C.
- The work in LSS7R will begin at 11am today by V.Chareyre with the green light of F.Millet.

**Sector 81 (M.Coccoli, A.Vergara)**

Warm Magnets (M.Coccoli)
- The safety conditions during commissioning should follow the procedures in a closer way. J.Uythoven pointed out that the safety of the warm magnets test should be under the responsibility of the equipment owners, i.e. M.Karppinen and D.Smekens. This afternoon a visual inspection will be performed by M.Coccoli, J.Etheridge, M.Karppinen, J.Uythoven (D.Smekens will be invited to be present as well).
- The communication tests advanced noticeably last Friday. J.Uythoven asked to have a slot Tuesday 6th or Wednesday 7th and E.Barbero will try to arrange for it.
- Up to date, the tests advanced according to the planning.

**Open Issues**

**AC non-conformity**
- 29.01.07  Installation of UPS PIC boxes (E.Barbero)
- 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**
- 19.01.07  Warm Magnet cable positioning to be changed to avoid “antenna” effects (M.Condemine, 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**
- 16.01.07  Vac-Cryo Interlock tests - window of 1 day needed (P.Cruikshank-F.Millet)
- 22.11.06  Instrumentation and remote control not fully stable (P.Gayet - F.Millet)

**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 El_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

Mobile camera installed, tested, fully operational (K.Kershaw) 16.01.07
DFBXG Temperature sensors repaired (R.Rabehl) 16.01.07
Warm magnet transport stuck in the arc 78. 15.01.07
Connection of the NC Magnets in LSS8R (J-C.Guillaume) 15.01.07
DFBX Pumping of Current Leads insulation vacuum (S.Feher, P.Chambouvet) 15.01.07
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 cosses 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 DFBBAO 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

ElQA-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

ElQA-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

ElQA-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 DFBAO  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 [15.01.07]  ELQA-TP4B (Phase III)
Week 03  Cool Down Sector 78
Week 05  Preparation for Powering Tests
Week 08  Decision on DFBs clamps disconnection from Sector 78 (to use them in Sect45 and Sect81)

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Next RAT meeting
Tuesday, February 6th 8:30 @ P8 2889-R-009

Mirco Coccoli