

Preparation of Cool-Down in Sector 78 RAT Réunion Avancement Travaux

HARDWARE COMMISSIONING COORDINATION - WEEK 47

27 November 2006 8:30 2889-R-009

Present: D.Bozzini, S.Brown, P.Chambouvet, M.Coccoli, B.Dehning, J-C.Guillaume, F.Millet, B.Perea Solano, A.Suraci.

Preparation of the Cool-Down in Sector 78

AC cabling: -

Instrumentation cabling:

- A.Suraci informed that the HV on cryo-instrumentation is finished but for 4 cables in LSS8L and 2 cables in LSS7R, where the tests were carried out last Friday. These cables are to be repaired by Jean-Claude Guillaume by Wednesday. Suraci also needs to intervene in the DFBXG.

Vacuum:

- Pressure test
 - A strong leak has been found in the inner triplet-D1, between circuit C and D. The investigation about this leak is ongoing and probably the inner triplet will be excluded from the sector cooldown. The pressure is presently 7 bar.
 - The arc performed well.
- B.Dehning asked when the pumping groups will be removed at level L27, L31, L32, L33 and R34, so that he will have the possibility to start positioning the BLMs in those regions (this is being clarified with Paul Cruikshank). At the moment 10 BLMs are connected in the arc and the activities will be extended during the next weeks.
- J-C.Guillaume and B.Dehning confirmed that the BPMs from Q1 to Q12 L8 need to have the cabling checked again. This will be done during wk 50.

Cryogenics: -

DFB Commissioning:

- J-C.Guillaume informed that:
 - He agreed with A.Vergara that 120A cables will not be connected on 7R since the polarity tests are to be carried out during the 60 A Orbit Corrector tests next week; MME should connect them right after (week 50).
 - Flohe has 5 people that can be split on two teams and can work on two separate DFBs at the same time in LSS8L. They

will therefore start with the DFBAO and DFBMs at the same time.

- Flohe teams want to work on Saturday though Esther Barbero confirmed that there is transport during the weekend and this will pose a problem.
- Flohe should present the 6 kA and 13 kA cables for the DFBAO late this week.
- Jean-Claude stressed the fact that the consignment du gaine monorail is done late (8:30 or 9:00) and the deconsignment too early in the afternoon (16:30 or 17:00). Therefore the Flohe team is losing 1 to 2 hours work each day. B.Perea said that Roberto Saban, Rudiger Schmidt and Felix Rodriguez are trying to find a solution for this. Until this happens the procedure will be kept as usual.
- P.Chambouvet informed that the current lead heater tests would start today in LSS7R and current lead insulation vacuum in LSS8L. The activities related to the heaters should last for 2 weeks.

Safety: -

Preparation of Powering Procedure Test (previously called Dry Run): -

ELQA:

- D.Bozzini informed that the EIQA-TP4-A is taking place on DFBAO low current module today, and that he will work on DFBX later during this week since the 6 T sensor upgrade is not ready.
- He also informed that he will work together with Boris Bellesia and Hugues Thiesen in the 60 A Orbit Corrector pre-tests.

AOB:

- B.Perea prepared a day-to-day schedule for the current week 48. It represents the activities ongoing on the arc 78 pieces of equipment. (see appendix).
- B.Perea informed that an extra flash oxygen detector will be installed on Wednesday 29th of Nov at 8:00, thus in principle, obstructing other activities planned for that day. They will run a cable (2*1.5) from an existing flash in R81->R79; total length of cable to be installed 120 meters.

Open Issues

AC non-conformity

- 21.11.06 Transport and installation of the heater system of the current leads for RR77 and UA83 (P.Chambouvet: about 2 weeks of work starting Mon 27 Nov)
- 21.11.06 Non-conformity on instrumentation cables (temperature sensors on current leads) (A.Suraci: 4 cables are in repair)

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, orbit corrector power converters & VAC.

DC cabling

25.11.06 Functional test on the leads heaters: DFBMA, DFBMC, DFBX

25.11.06 120A and 600A positioning on DFBAN and DFBMH

23.11.06 Cable temporary positioning on the transport side of the tunnel (A.Vergara: next year)

22.11.06 Pre-connection of 120A cables in LSSR7

20.11.06 Galvanic insulation installation on all DFBs

13.11.06 Non-conformity of the DC cabling of the orbit corrector power converters

13.11.06 6 kA and 13 kA cables positioning at DFBAO, DFBMA and DFBMC

Assembly

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Vacuum

-

Cryogenics

22.11.06 Cryo-valves remote control in CCC by AB/CO

22.11.06 Control of quench valve

20.11.06 DFB instrumentation cables to be connected (D.Bozzini: 80% done)

17.11.06 Instrumentation cable HV tests in LSS8L (A.Suraci: 4 cables to be tested)

DFB Commissioning

13.11.06 EIQA-TP4-A for all DFBs between 7 and 8 (D.Bozzini: ongoing according to schedule (next: DFBMA, DFBMC, DFBX); in week 48 will begin EIQA-TP4-B, i.e. HV tests)

17.11.06 Pumping of insulation vacuum for all DFBs between 7 and 8 (P.Chambouvet: DFBAN done; next: DFBMA, DFBMC, DFBX)

Safety

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

23.11.06 Wooden structure for UA access restriction (that will allow transport).

23.11.06 Preparation of a prototype insulating protection (derived from a plastic tube) of the monorail by J.C.Guillaume and approval by J.Etheridge.

23.11.06 Water leak on the tunnel concrete wall to be fixed (33L8).

23.11.06 Planning of *consignations/deconsignations*

16.11.06 Cool down safety procedure & access conditions

Preparation of powering test

- 22.11.06 Pretest of 60A converters in sector 78, location C16L8. (B.Bellesia: stopped due to LQA hardware problems; expected end by Tuesday 28 Nov)
- 22.11.06 Installation of flexible cables by CV (UA83)
- 16.11.06 Water circulating in UA83 for the Powering Procedure Test: filters need to be checked.

AOB

- 13.11.06 BPM connection in Q2, Q3, Q4, Q5, Q6, Q7
- 13.11.06 Quench protection continuity tests and cables assignment LLS7R (DFBMH, DFBAN) and LSS8L (DFBMC, DFBMA and DFBX)

Closed Issues

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 Runs)	23.11.06
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 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
ELOA-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	Diesel Tests
Week 50	Flushing
Week 50 [15.12.06]	Giga PAQ
Week 51	Cool Down Sector 78



Next RAT meeting

Monday, November 28th 8:30 @ P8 2889-R-009

Mirco Coccoli

Activities at the DFBs during week 48

	Monday	Tuesday	Wed.	Thursday	Friday
DFBMH			CL Heater	TP4A	QP
DFBAN	CL Heater	Flohe 6 kA and 13 kA Cabling			
ARC	Opening Interconnection + repair leaks + final leak tests + reconfiguration QUI and QRL + purge and filling (full sector 78)				
DFBAO	Flohe 6 kA and 13 kA Cabling			QP	AT/ACR
DFBMC	CL Insulation Vac	CL Heater Tests	Flohe 6 kA and 13 kA Cabling		
DFBMA	AT/MEL TP4A	AT/ACR	QP cable assignment		
DFBX	AT/MEL 6 T sensor	CL Insulation Vac	AT/MEL TP4A	QP	AT/ACR