RAT in Point 8 Réunion Avancement Travaux

HARDWARE COMMISSIONING COORDINATION - WEEK 18

4 May 2007 08:30 in 2889-R-009

Present:	AB/CO:	M. Koratzinos, R. Schmidt, M. Zerlauth
	AB/PO:	V. Montabonnet, H. Thiesen
	AB/OP:	F. Pirotte, R. Giachino
	AT/MEL:	V. Chareyre, S. Feher, G. Kirby, B. Flora, KH. Mess, A. Ballarino, K. Dahlerup-Petersen
	AT/MTM:	A. Siemko
	AT/ACR:	F. Millet, R. Rabehl
	TS/HDO:	R. Saban, A. Vergara, M. Pojer, B. Bellesia, MP. Casas Lino

Sector 78

- F. Millet reported on cryo progress: 15mbar were reached with the new pumping group yesterday morning. After an hour of successful operation, it was noted that two UPS units in SHM8 were not on. TS/EL was called. When the units were switched on, all equipment tripped. The cryo team is still recovering from that incident. In addition, this morning there was a glitch caused by a cooling water pressure interlock. We are now in cold stand-by mode and the outlook for the day is to pump down to 15 mbar this morning.
- KH Mess noted that the stability of various services needs to improve by two orders of magnitude if the LHC is to run smoothly.
- A. Vergara: there was progress according to the published schedule of yesterday. 120A leads of Q5 connected, one 120A power convert in short circuit mode switched on, two power converters (that power Q6) were switched on with the short on the DFB side for the sequencer tests. These tests will be completed today. Powering now awaits the correct cryogenic conditions to proceed.
- M. Pojer reported that the DFBMC (hot) air blowers were in place. They actually work in the low speed setting and without the heating elements on. There are three blowers facing the three 13kA leads of the DFB.

  The DFBMA was equipped with ‘dry air bags’ on all chimneys: dry air (dew point -40°C) is taken from the tunnel compressed air supply. The air flow is not known. KH. Mess requested if the flow be measured. The air is blown in plastic transparent bags taped in place between the copper of the lead and the chimney. Pictures on

https://twiki.cern.ch/twiki/bin/view/HCC/BlogEntryPoint8x2007x05x03x23x05?point=8

- M. Pojer took more meteorological data in the tunnel yesterday. These can be seen in

  https://twiki.cern.ch/twiki/bin/view/HCC/BlogEntryPoint8x2007x05x03x22x39?point=8.

  He noted that the change in relative humidity should not be necessarily attributed to geography; RH conditions were varying over time last night.

- R. Saban would like to see the meteorological measurements from the last few days and compare them to the weather station at the CV plant.

- R. Schmidt showed a detailed list of conditions that need to be met for powering the different types of current leads. This was summarised by A. Ballarino as follows (see also attached slides):

  Conditions for powering: 600A, 6kA, 13kA leads

  1. At least 40mm of liquid covering the bottom of the leads
  2. The temperature of the gas cooling the resistive part of the lead should be less than 25K
  3. The temperature at the top of the HTS should be 50±2K
  4. At least 30 minutes should pass since attaining point (3)

  Conditions for powering: 120A leads

  1. At least 40mm of liquid covering the bottom of the leads
  2. No more than 35K at the intermediate heat exchanger of the leads. Please note that this point has been relaxed from the original specifications which were 20K.

- G. Kirby noted that it is imperative that the liquid helium level is above the bottom of the current leads when powered; otherwise the high temperature superconductor would melt in a matter of seconds even at currents less than nominal.

- Regarding the cryo interlock signals, F. Millet explained that it was not foreseen to have partial powering tests: the whole LSS is treated with one cryo_start and cryo_maintain signal. For powering one DFB, the signal from the other(s) will need to be masked. He also mentioned that some of the cryo signals will be simulated (regarding cryo plant conditions for instance), but not the ones that monitor the DFB.

- Next meeting Monday 7 May at 8:30 in 2889-R-009

M. Koratzinos

Open Hardware Commissioning Issues in SECTOR 78

REGION	ISSUE
SECTOR 78	
	QPS voltage tap problem in quadrupole 33R7 - Another tap will be used instead. Attention because the damaged tap might be floating on the conductor.
	Non-conformity of the crates of cryo instrumentation (inrush current) (A.Suraci)
	Securing of the ventilation units
	Four circuits in Q5 suffer a breakdown at around 450V due to a weak insulation. The four circuits are RCBCVS5.L8B1, RCBCHS5.L8B2, RCBCHS5.L8B1 and RCBCVS5.L8B2. Insulation towards ground and other circuits is OK.
	EI_QA performed on C16L8. ICC test showed reversed sequence of V-taps on circuit RCBV16.L8B1 (D.Bozzini) check
	BPM connection in Q2 (R.Jones) ? waiting for Inner Triplet to be repaired
	MB1055 magnet to be changed before powering above 2kA RB.A78
	Inner Triplet in Point 8 to be repaired
	Failure of supports (red jacks) of D2-Q4 in L8 - temporary repair in place. EDMS document "Major movements of the D2-Q4 magnets and supports in 8L" https://edms.cern.ch/document/833365/1
	Water leak on the tunnel concrete wall to be fixed (C33L8).

Closed hardware commissioning issues in sector 78 can be found at **http://hcc.web.cern.ch/hcc/activities/activities.php?region=S78**.