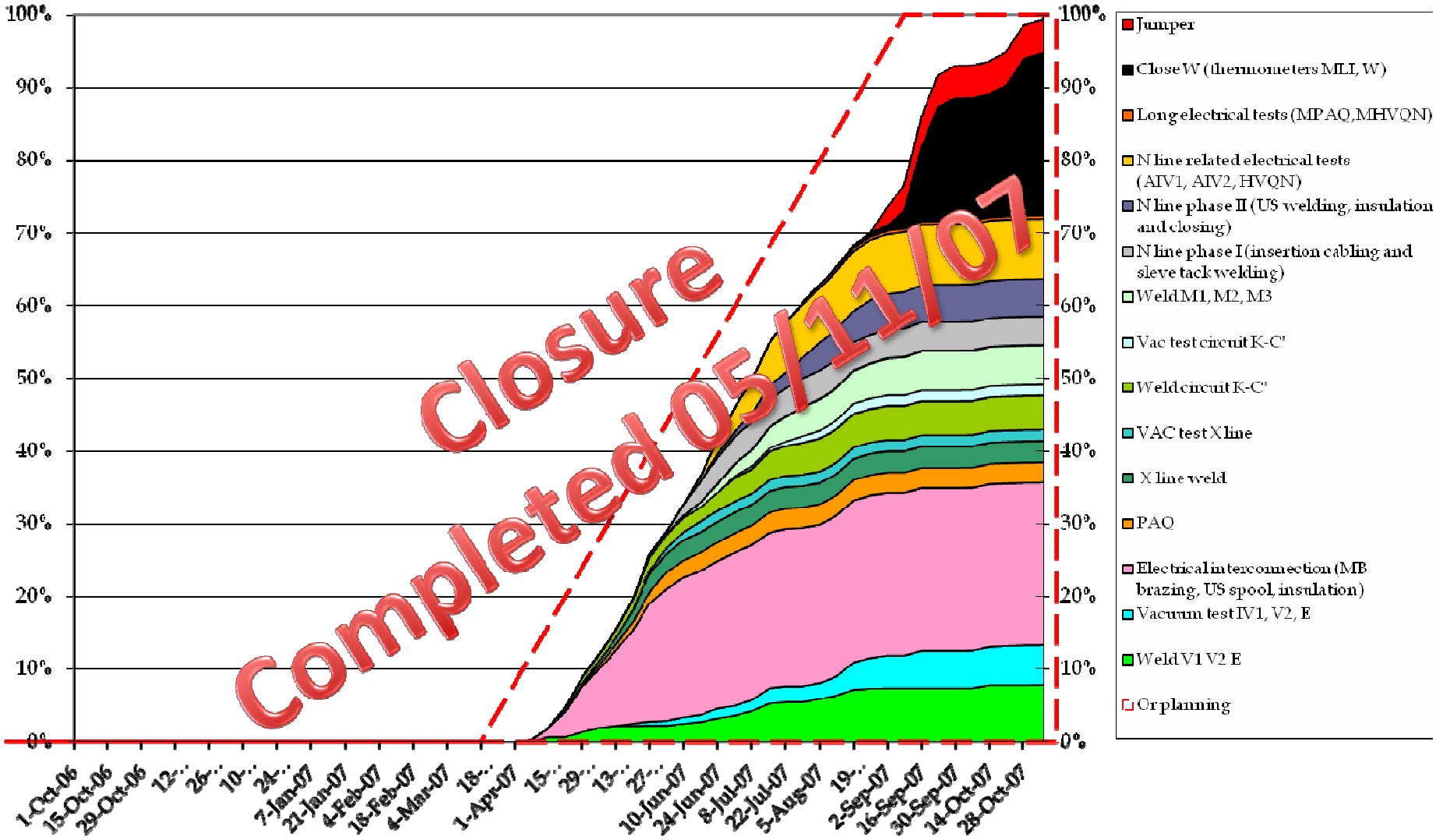


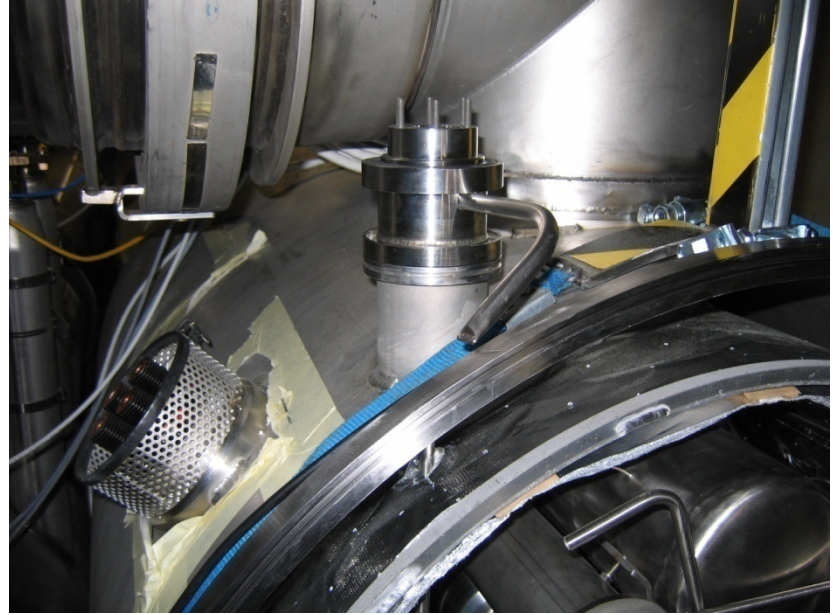
LHC arc interconnection report

Sector 1-2 general advancement view 05-November-2007



Resume of situation arc

- 3-4: research of leak E line in jumper DFBA L4
- 2-3 1 leak to be repaired in consolidation phase in sector 7L3. Pressure test end of week 46
- 1-2: last IC closed, all sector to be leak tested
- 7-8: leak testing and repair started
- 8-1
 - closing interconnects of new Q17R8. Repair He gauge tomorrow. Closure as planned end of week. Request to ACR instrumentation team to verify asap the He gauges in other sectors (1-2 and last part 2-3). Possible deformation of bellow due to wrong manipulation
 - TS-MME intervening on the DFBAs



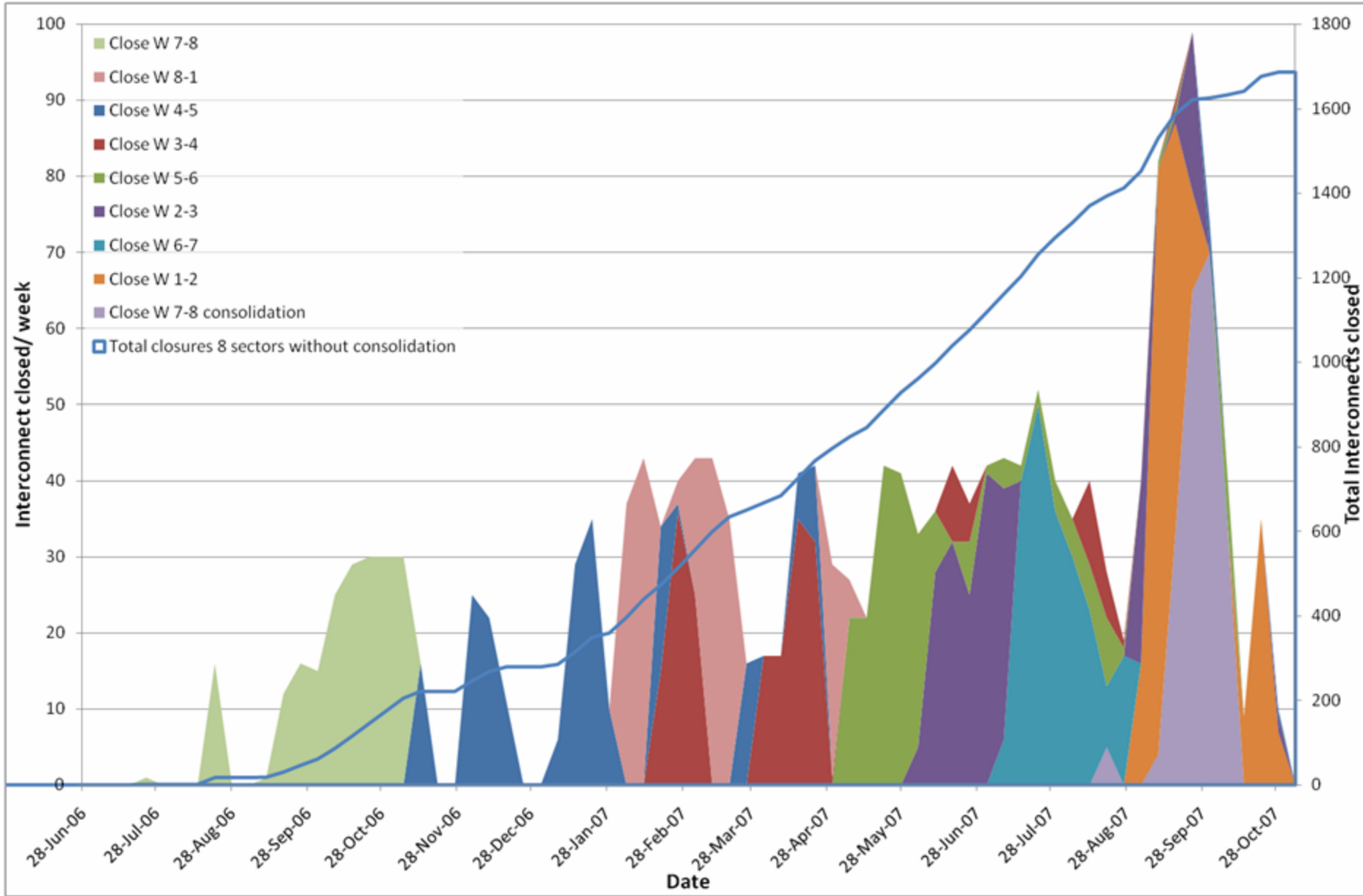
Resume situation special interconnect

- 4-5 :
 - 5L working on triplet providing priority to AT-VAC for connection to CMS
- 3-4 :
 - IC QDQI7R3 opened and also line N to allow DSLC ELQA tests
 - Electrical IC between DFBLC and DSLC done and successfully tested ;
 - Cryogenics lines under closure including rework of the extremities in case of needs
- 2-3 :
 - Triplet at 2R is completely closed ; pumping will start this afternoon.
 - Q6L3 is connected to QRL and under leak test
- 1-2
 - Triplets are under closure :
 - Triplet 2L : Possible obstruction on E line ; one IC has been cut to allow endoscopic inspection.
 - LSS1R : Additional cryo instrumentation : additional port are under installation on Q3 cryostat and Q4 jumper (DSL circuit) (Holes done ; welding at the end of this week) ; for Q4-D2 and DFBAB, routing via existing ports.
- 7-8 :
 - Triplet 8L : leak on the CM circuit reappeared ; not yet localized. One IC has been reopened to allow accumulation test.
- 8-1 :
 - Triplet 8R : waiting realignment of cryomagnets to start leak test of external envelope
- F523 Contract : Negotiation are well advanced for the extension up to April 2008. Functional test of induction soldering machines are taking place on 8/11/2007

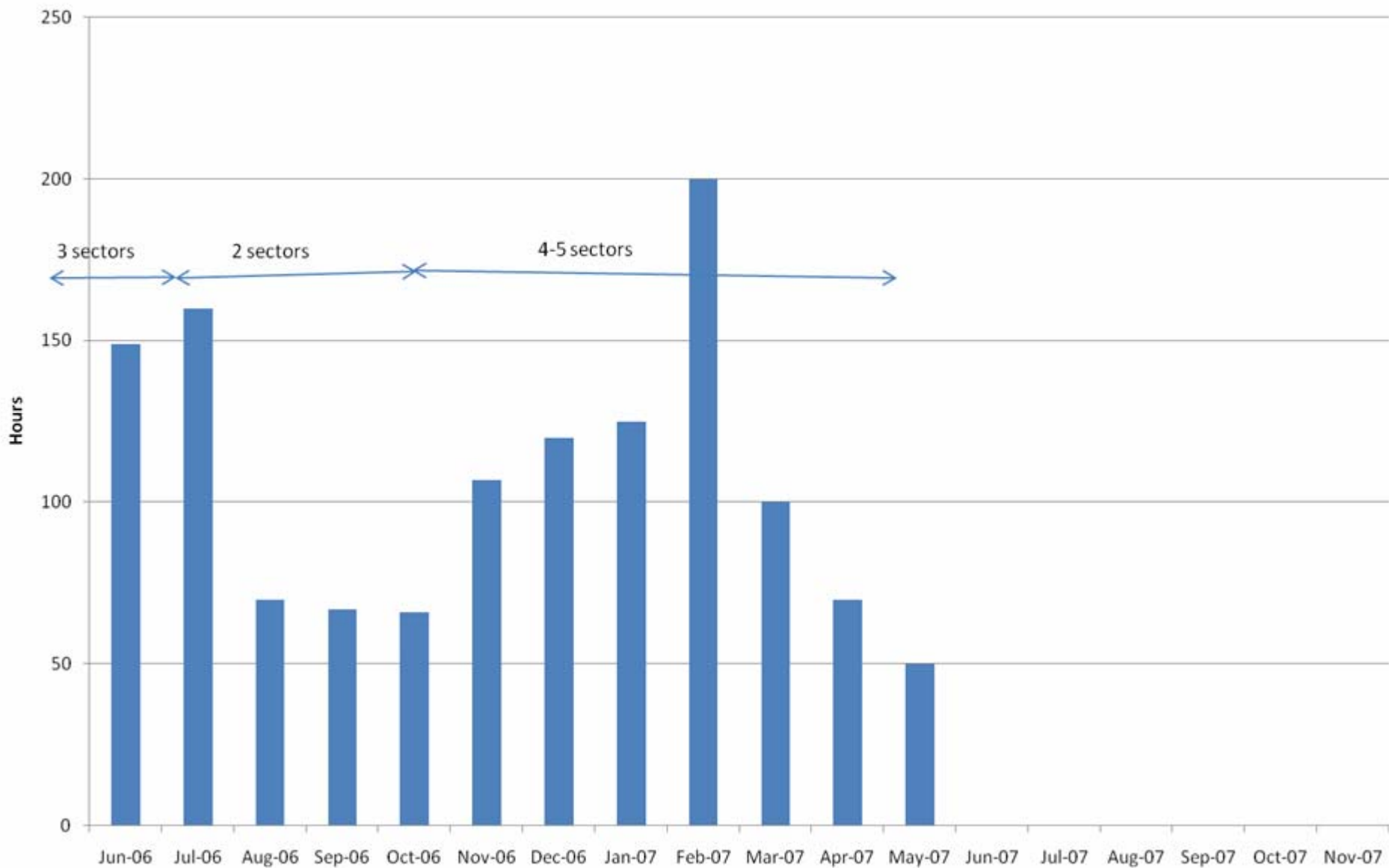
The LHC arc interconnection

- 1695 interconnect magnet to magnet
- 224 interconnect magnet to QRL
- Each interconnect
 - 18 assembly actions divided in 9 interventions
 - 5 leak tightness check
 - 5 electrical tests
 - 1 RF test
- A sector
 - 1964 assembly interventions
 - 226 electrical tests on sub-assemblies
 - 70 vacuum tests on sub-assemblies
 - 14 RF test on sub-assemblies

W closures



Lost working hours



From November IEG deployed 15000 man hours/month

Change in interconnection coordination

- From Monday 12/11/07 the interconnection coordination of special interconnect and arc will be covered by a Jean Philippe Tock with Andrea Musso

Consolidation of IC Quality Control documentation in November – December 2007: some examples

- ICIT: extension of a few contracts

transfer of inspection documentation (D. Tommasini)

- PIMs: analysis of IC distance – merging SMI2 measurements with production data at CMAs

A. Poncet, J. Perreira, D. Missiaen - TS/SU (merci!)

- Recorded production data (TIG welding, BB brasing, US welding)

Work well advanced thanks to E. Wildner, Z. Gao (6-month extension of contract until February 2008), T. Pettersson TS/CSE, R. Lyzwa TS/CSE

... but urgently need TS/CSE support to finish this work, please



LHC Interconnection Quality Assurance

General | NC Follow Up | LSS Inspections | Technical Support | IC Certification | Direct Links to MTF

LHC LAYOUT - INTERCONNECTION OPEN NC'S RESUME

Sector 4-5

Sector 3-4

Sector 2-3

Sector 1-2

(Choose the Sector to see



LHC Interconnection Quality Assurance

General | NC Follow Up | LSS Inspections | Technical Support | IC Certification | Direct Links to MTF

SECTOR 7-8

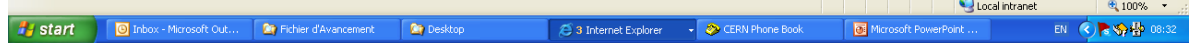
IC distances | Inspections | Welding Dist. | Contact Point | Defects List | Statistics

Difference value to nominal distance between IC Beam Screen Flanges
(Last Update Wednesday, November 07, 2007)

The values presented are from measurements done by [TS/SU](#), and they include the alignment on the tunnel.

- Positive value means that the IC length is above nominal that value.
- Negative value means that the IC length is below nominal that value.

IC Slot	V1	V2
QBBI.7R7	Not available	Not available
QBBI.8R7	Not available	Not available
QBQI.8R7	Not available	Not available
QBBI.8R7	Not available	Not available
QBBI.9R7	-0.77	-1.65
QBQI.9R7	Not available	Not available
QBBI.9R7	Not available	Not available
QBBI.10R7	Not available	Not available
QBQI.10R7	Not available	Not available
QBBI.10R7	Not available	Not available
QBBI.11R7	1.82	0.15
QBBI.11R7	Not available	Not available
QBBI.A12R7	Not available	Not available
QBBI.B12R7	Not available	Not available
QBQI.12R7	-0.49	-1.17
QBBI.12R7	5.08	2.7
QBBI.A13R7	3.32	2.8
QBBI.B13R7	0.84	0.16
QBQI.13R7	0.37	0.25
QBBI.13R7	4.17	3.92
QBBI.A14R7	0.51	-0.01
QBBI.B14R7	-0.2	-0.31
QBQI.14R7	1.81	1.06
QBBI.14R7	1.74	1.23
QBBI.A15R7	1.46	1.07
QBBI.B15R7	-0.43	-1.24



Dipole Geometry

- Production Follow-Up
- Derived Data
- Shifts
- Report Maker
- Saw tooth
- Viewers: (MB) (LB) (LE)

Dipole Warm Mag. Field

- Upload
- Download
- Send mail to Project Engineer
- Send mail to Firm
- Holding Point magnets list

Quadrupole Geometry

- Viewers: SSS Low β
- SSS shift tool
- Shifts
- Geo Summary: SSS Low β

LHC Interconnections

- Data completeness [DEV version]
- Data quality (test)

Cryomagnet Interconnects: Data Completeness

Sector: 12 Rows per page: all records Show Gene

#	Slot	status	IWP01.050. TR								
			files	C	E	K	do	up	do	up	
1	QQQ1.7R1	Pending	0	0	0	0	0	0	0	0	0
2	QQB1.7R1	Pending	10	0	3	2	3	3	0	0	0
3	QBB1.8R1	Pending	9	0	3	2	3	3	0	0	0
4	QBQ1.8R1	Pending	46	0	3	2	3	3	0	0	0
5	QQB1.8R1	Pending	6	0	0	0	0	0	0	0	0
6	QBB1.9R1	Pending	12	0	3	2	3	3	0	0	0
7	QBQ1.9R1	Pending	7	0	0	0	0	0	0	0	0
8	QQB1.9R1	Pending	24	0	3	2	3	3	0	0	0
9	QBB1.10R1	Pending	30	0	3	2	3	3	0	0	0
10	QBQ1.10R1	Pending	5	0	0	0	3	3	0	0	0
11	QQB1.10R1	Pending	9	0	3	2	3	3	0	0	0
12	QBB1.11R1	Pending	10	0	3	2	3	3	0	0	0
13	QBB1.11R1	Pending	0	0	0	0	0	0	0	0	0
14	QEQ1.11R1	Pending	15	0	3	2	3	3	0	0	0
15	QQB1.11R1	Pending	8	0	3	2	3	3	0	0	0
16	QBB1.A12R1	Pending	25	0	3	2	3	3	0	0	0
17	QBB1.B12R1	Pending	17	0	3	2	3	3	0	0	0
18	QBQ1.12R1	Pending	7	0	0	0	3	3	0	0	0
19	QQB1.12R1	Pending	13	0	3	2	3	3	0	0	0
20	QBB1.A13R1	Pending	9	0	3	2	3	3	0	0	0
21	QBB1.B13R1	Pending	13	0	3	2	3	3	0	0	0
22	QBQ1.13R1	Pending	17	0	3	2	3	3	0	0	0
23	QQB1.13R1	Pending	11	0	3	2	3	3	0	0	0

Operateur: LAASSIRI
Générateur: PS 164 160A
Soudure: E06@#3&3f0
Programme: VIUP1133
N° soudure: 12869
N° reprise:
Fin de cycle: OK
Date / Heure: 24/11/05 - 15:37:33
Durée: 00:03:55

Ligne	Tension	Courant	Rotation	File
1	10,4	61	0	0
2	9,9	61	300	0
3	9,7	61	302	0
4	9,8	61	298	0
5	9,7	61	297	0
6	9,6	61	301	0
7	9,6	61	303	0
8	9,6	61	299	0
9	9,5	61	300	0
10	9,5	61	303	0
11	9,6	61	304	0
12	9,7	61	297	0
13	9,9	61	300	0
14	9,8	61	306	0
15	9,8	61	305	0
16	9,9	61	296	0
17	9,9	61	303	0
18	10	61	305	0
19	10	61	296	0
20	10	61	299	0
21	10,2	61	295	0
22	10,2	61	305	0
23	10,1	61	300	0
24	10,3	61	298	0
25	10,1	61	294	0
26	10,2	61	310	0
27	10	61	300	0
28	10,1	61	301	0
29	10,1	61	298	0
30	10,1	61	307	0
31	10,1	61	295	0
32	10,1	61	299	0
33	10,1	61	306	0
34	10,2	61	305	0
35	9,8	61	300	0
36	9,8	61	301	0
37	9,7	61	305	0
38	9,3	30	304	0

Tension

Courant

Rotation

Energy deposition

Ligne	Tension	Courant	Rotation	File
1	10,4	61	0	0
2	9,9	61	300	0
3	9,7	61	302	0
4	9,8	61	298	0
5	9,7	61	297	0
6	9,6	61	301	0
7	9,6	61	303	0
8	9,6	61	299	0
9	9,5	61	300	0
10	9,5	61	303	0
11	9,6	61	304	0
12	9,7	61	297	0
13	9,9	61	300	0
14	9,8	61	306	0
15	9,8	61	305	0
16	9,9	61	296	0
17	9,9	61	303	0
18	10	61	305	0
19	10	61	296	0
20	10	61	299	0
21	10,2	61	295	0
22	10,2	61	305	0
23	10,1	61	300	0
24	10,3	61	298	0
25	10,1	61	294	0
26	10,2	61	310	0
27	10	61	300	0
28	10,1	61	301	0
29	10,1	61	298	0
30	10,1	61	307	0
31	10,1	61	295	0
32	10,1	61	299	0
33	10,1	61	306	0
34	10,2	61	305	0
35	9,8	61	300	0
36	9,8	61	301	0
37	9,7	61	305	0
38	9,3	30	304	0

Just thanks and ...

