

Status of Interconnect Works in the LHC Arcs and DS regions – week 36

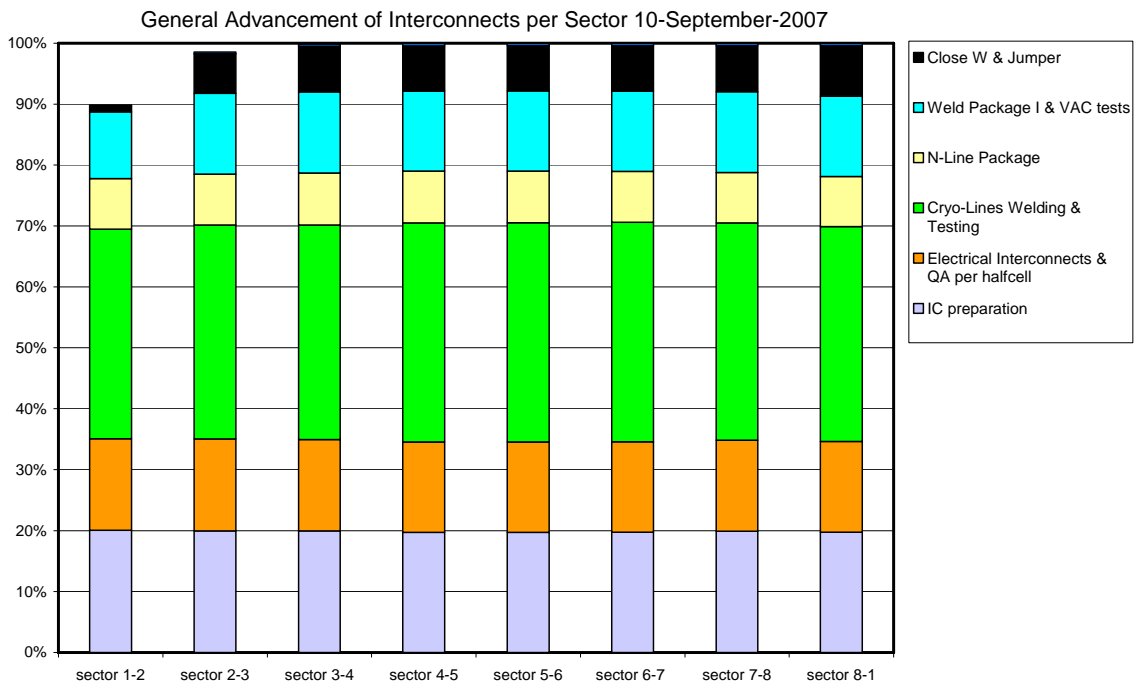
A. Musso, AT-MCS (on behalf of the arc coordination team)

EDMS 867107

This report gives the status of the interconnect works in the LHC arcs and dispersion suppressor regions carried out up to week 36 included in responsibility of the interconnection arc coordination team, starting with a general overview about the advancement per sector. For the status of the VAC test, production rates, work progress, and number of operations foreseen and performed, data are reported for each sector separately.

The Dashboard

- Number of magnets in the tunnel: 1232 MB, 473 SSS, 113 LSS.



Data for General Advancement Plot is counted by number of interventions and grouped by activities as follows:

- IC preparation: Magnet alignment, IC pre-inspection, IC released for work,
- Electrical Interconnects & QA per halfcell: PAQ, US weld of spool pieces, brazing of main busbars,
- Cryo-Lines Welding & Testing: Welding of main busbar lines M1, M2, M3, weld K1 line, K2 line, K3 line, C' line, X line. Vacuum tests of K lines, C' line, X line.
- N-Line package: Insert N line, AIV 1, AIV 2, US welding of N line, weld of large sleeve for N line.
- Beam Pipes Welding & VAC tests. VAC sector test: Welding of V1, V2, E line and VAC tests V1, V2, E line. RF test magnet chain.
- Close W bellow and Jumper.
- VAC test for sector.

Sector coordination team:
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<i>Sectors</i>	<i>Started</i>
4-5 7-8 8-1	finished
1-2 2-3 3-4 5-6 6-7	Yes

Remarks:

1. The color coding of the general advancement plot matches the color coding of the other plots (snapshot and production rates).
2. The plots of the production rates also show the average production rate (IC/week) foreseen for the sectors and the ultimate production rates for the ideal case.
3. From week 9 on, we added a plot showing the general advancement per sector. For easy comparison, the starting dates in all plots are set to 1-Oct-06, except for sector 4-5.
4. For sectors that are completed, we will suppress the plots and simple give the work status instead.

Sector 1-2

- 34 plugins still to be welded; Two V chains+global test to be performed. These activities are actually in stand-by
- W Closures started.
- All K-C' circuits welded and tested.
- 7 M lines still to be welded.
- 2 Jumper to weld and 8 to be tested to complete.

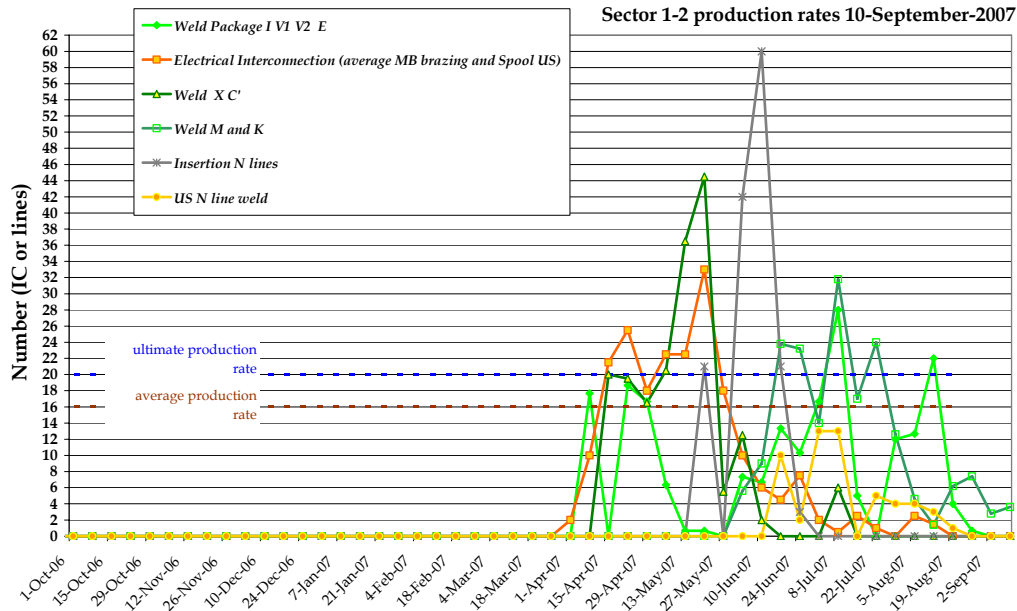


Fig. 1: Production rates in sector 1-2.

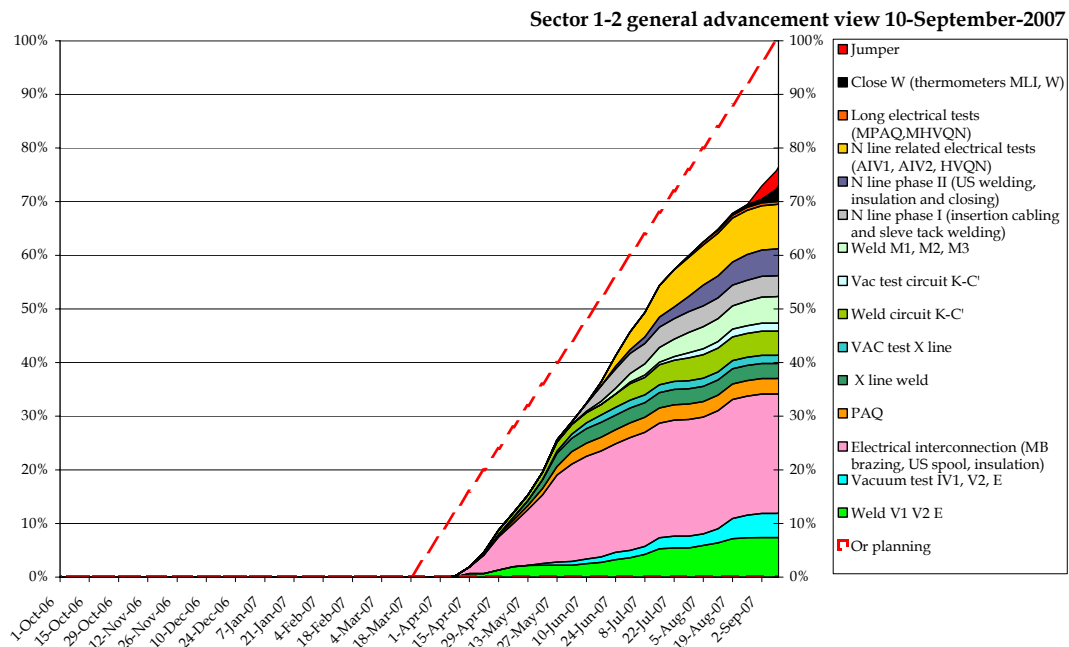


Fig. 2: General advancement view for sector 1-2.

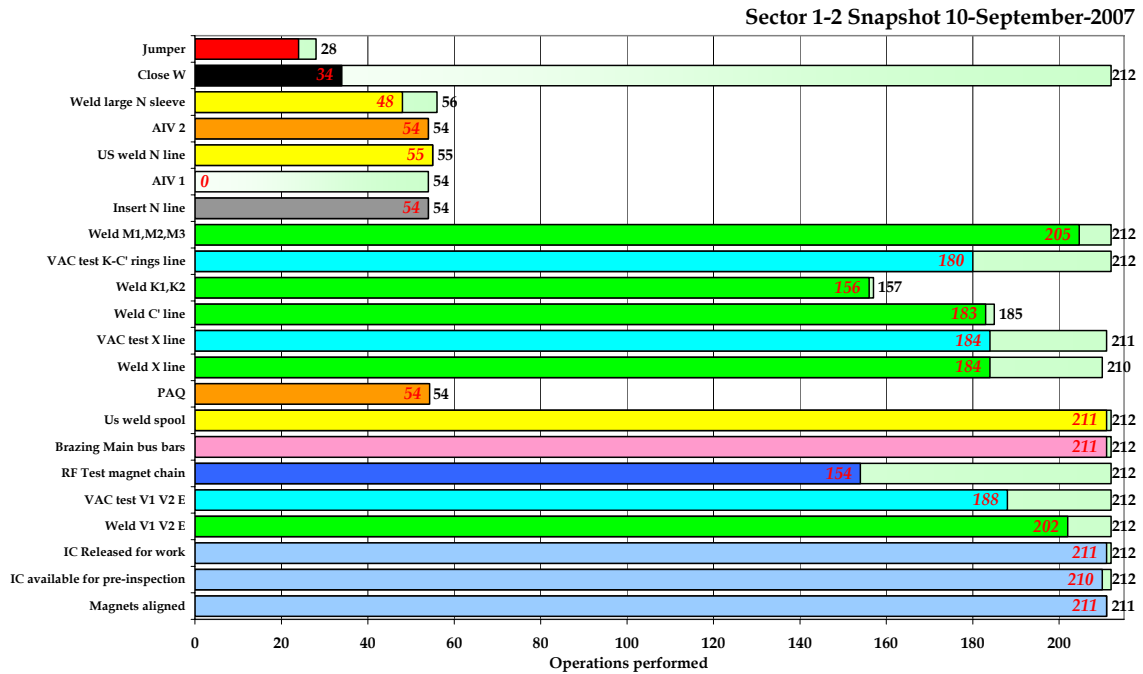


Fig. 3: Snapshot of work progress in sector 1-2 showing the number of operations achieved in total with respect to the total number of operations necessary.

Sector 2-3

- 4 Plugins still to be welded; in stand by.
- Q11 completely connected.
- Last jumper to be closed.
- 189 W's closed.
- 10 Vacuum sectors provided to VAC (6 leak tight, 2 minor leaks and 2 major leaks)

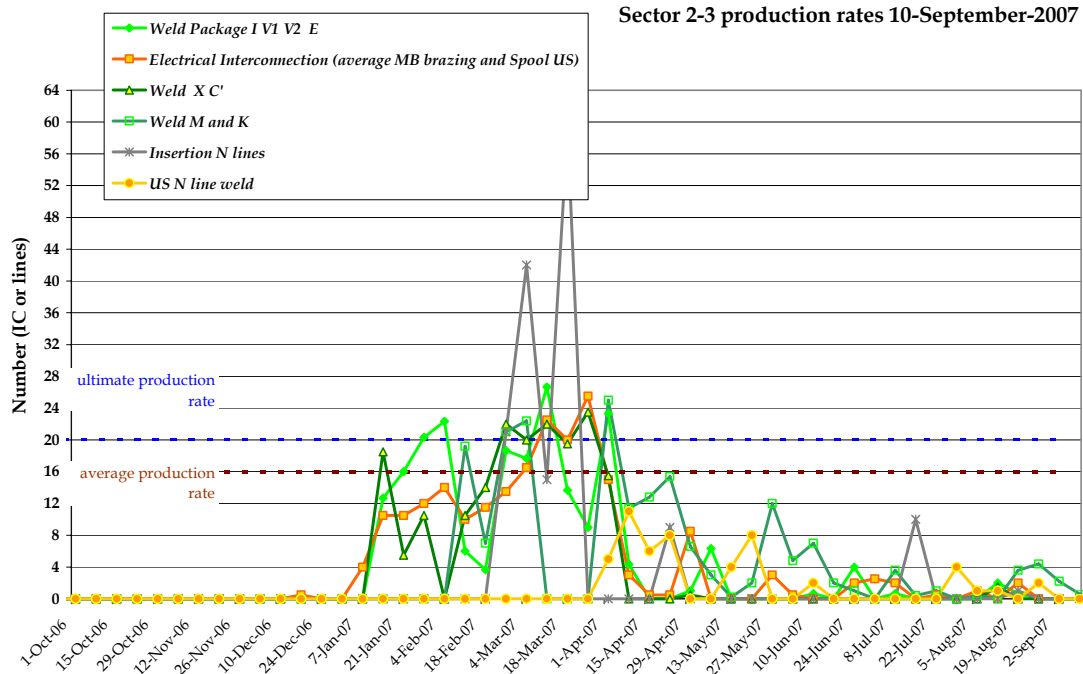


Fig. 4: Production rates in sector 2-3.

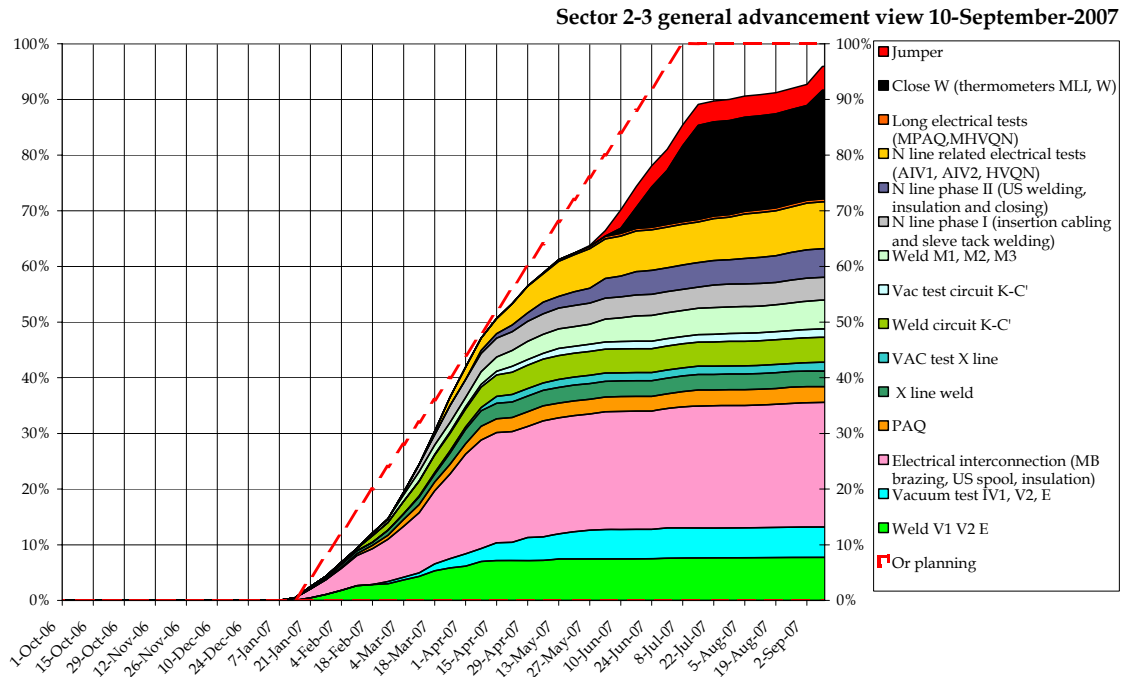


Fig. 5: General advancement view for sector 2-3.

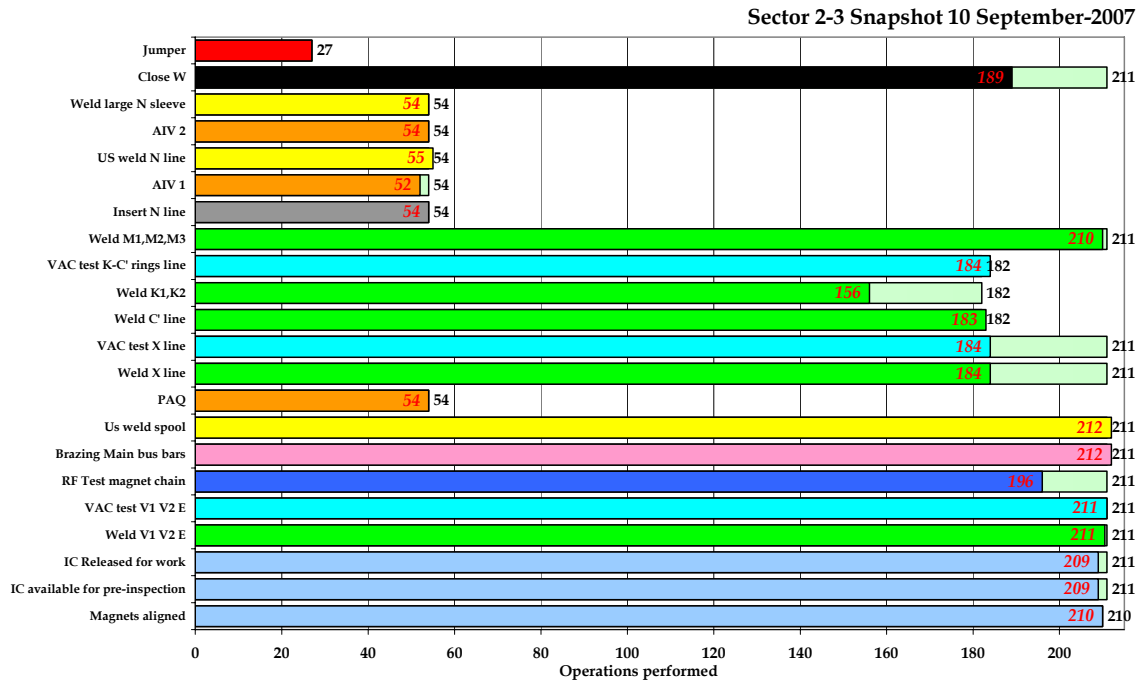


Fig. 6: Snapshot of work progress in sector 2-3 showing the number of operations achieved in total with respect to the total number of operations necessary.

Sector 3-4

- 1 W to be closed after resolution of NCR
- 11 Vacuum sectors provided to VAC: 9 leak tight and 2 in test.

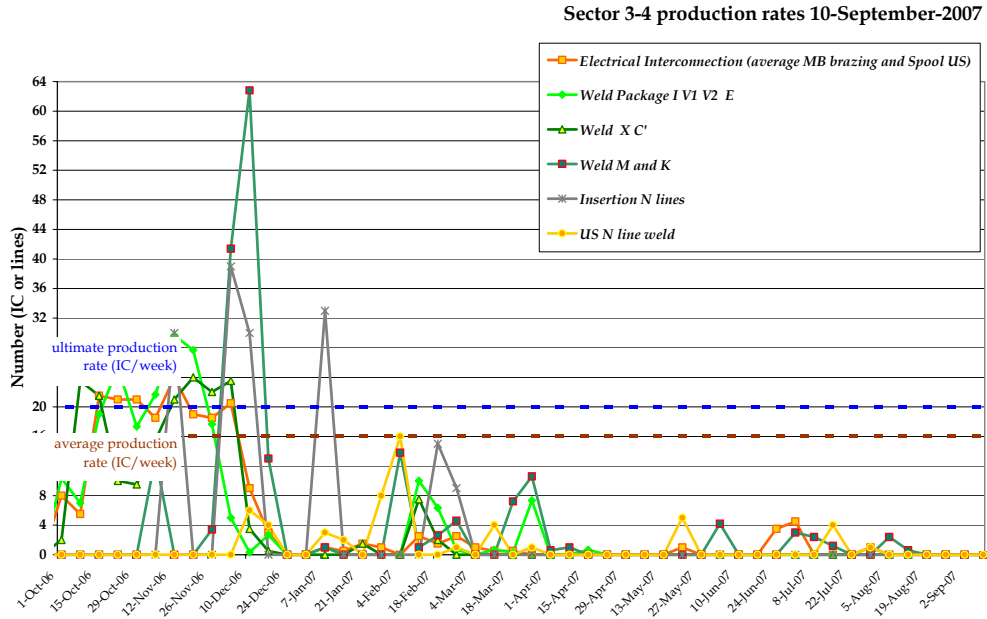


Fig. 7: Production rates in sector 3-4.

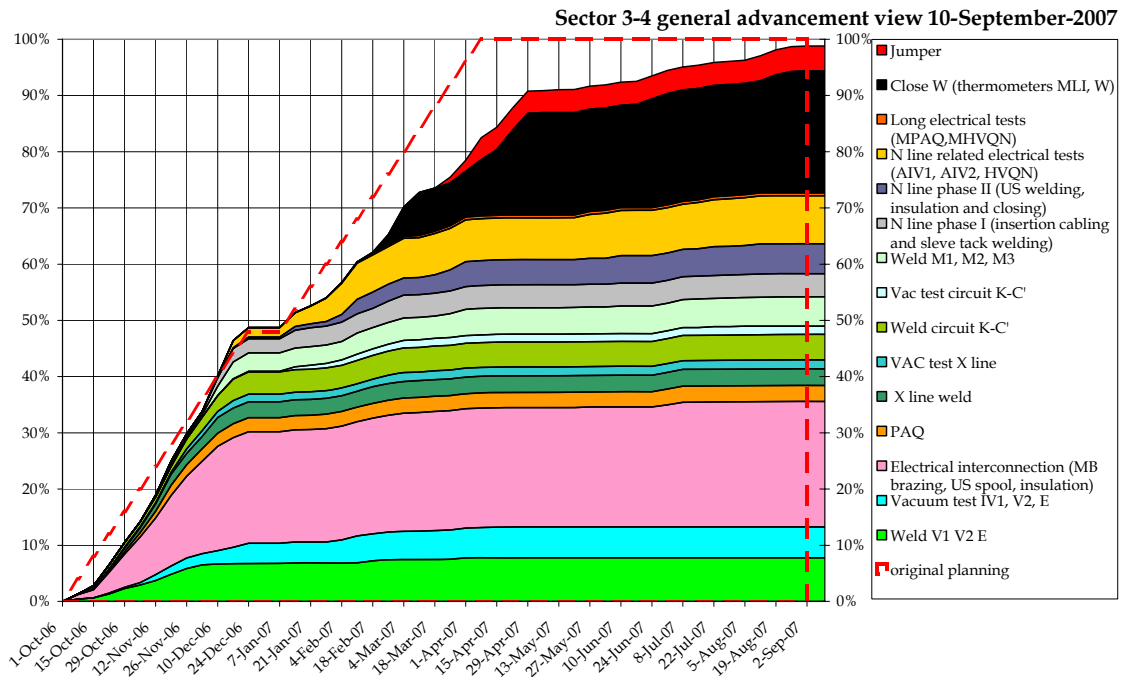


Fig. 8: General advancement view for sector 3-4.

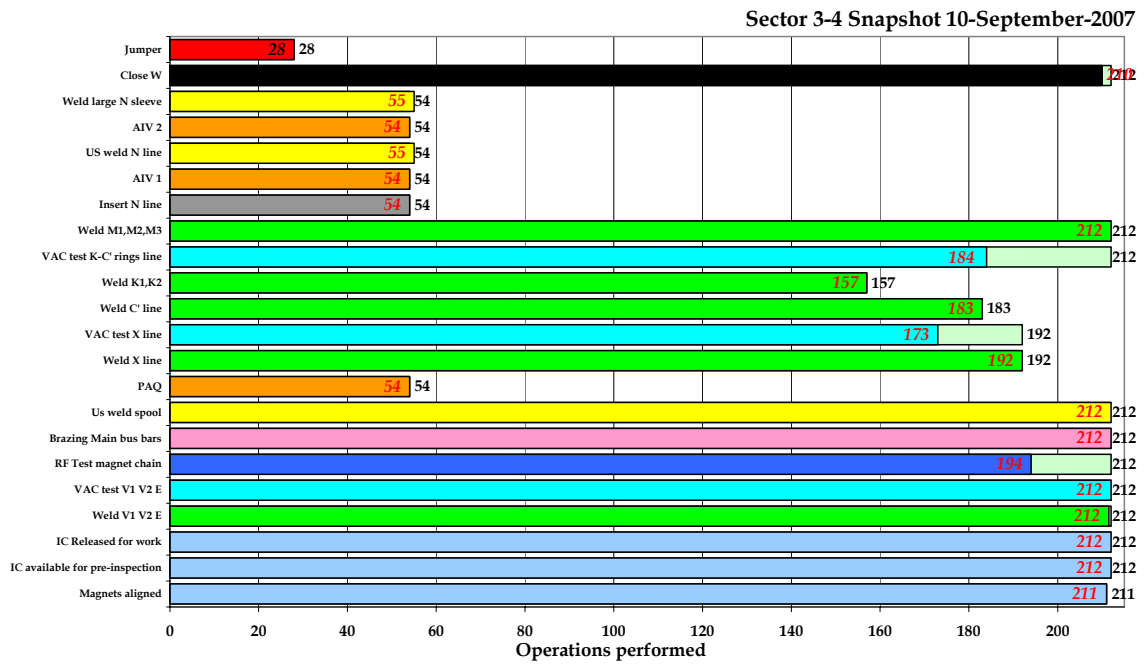


Fig. 9: Snapshot of work progress in sector 3-4 showing the number of operations achieved in total with respect to the total number of operations necessary.

Sector 4-5 (completed on 29-Apr-07)

- Warming up.

Sector 5-6

- 14 vacuum sectors provided to VAC: 13 leak tight and 1 in reparation.

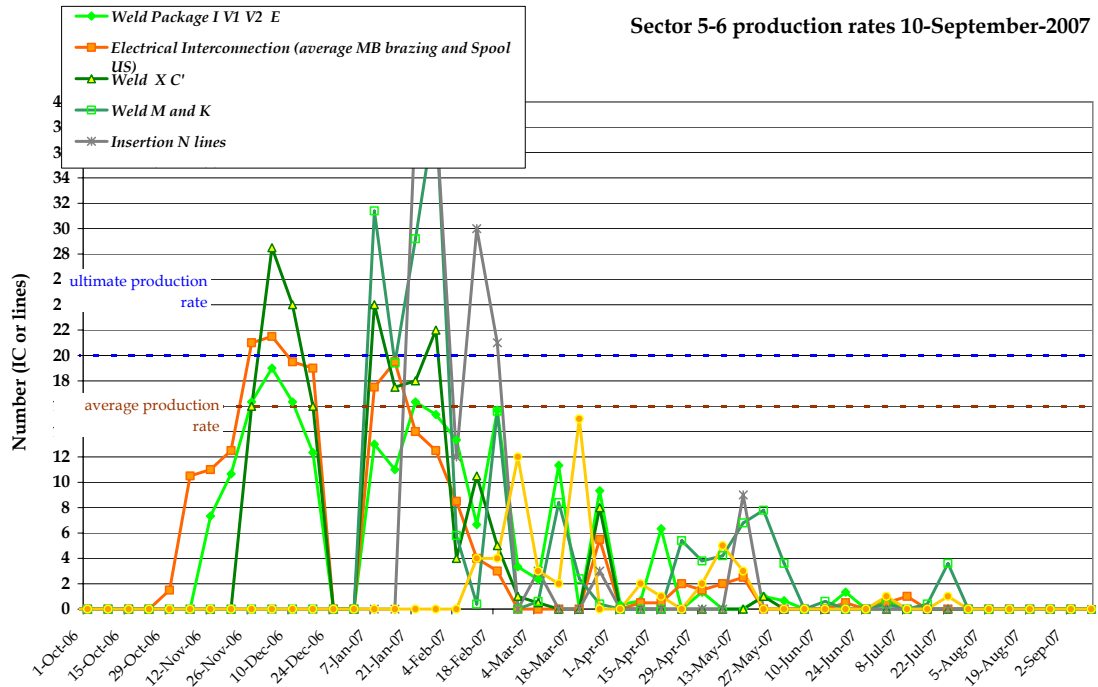


Fig. 10: Production rates in sector 5-6.

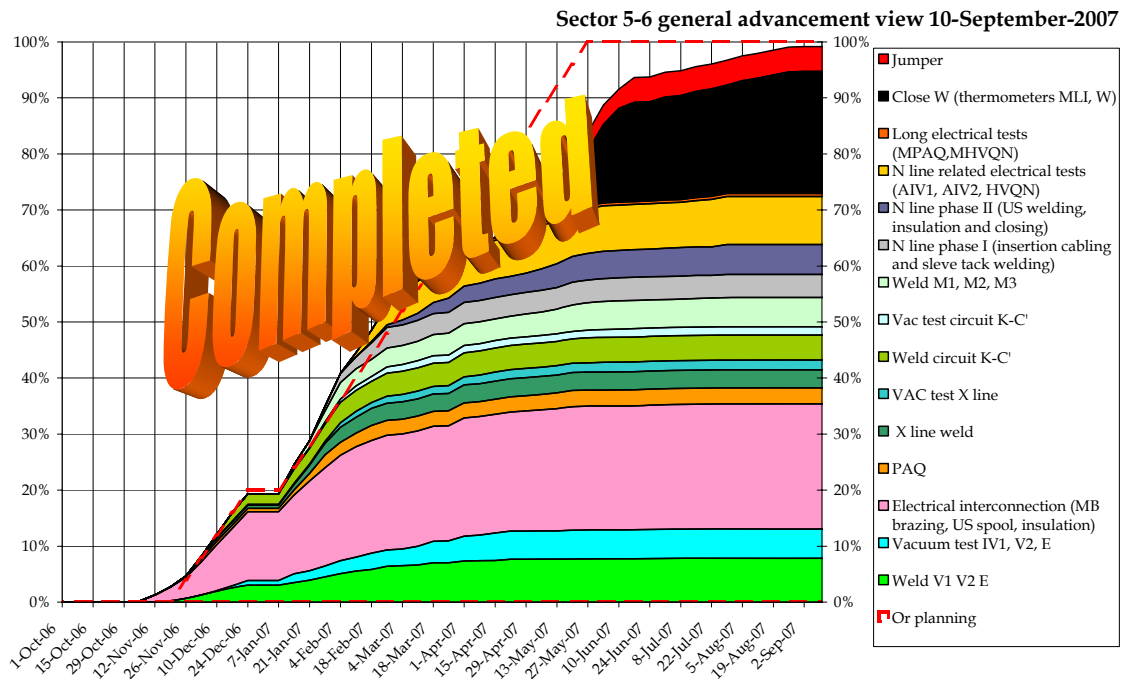


Fig. 11: General advancement view for sector 5-6.

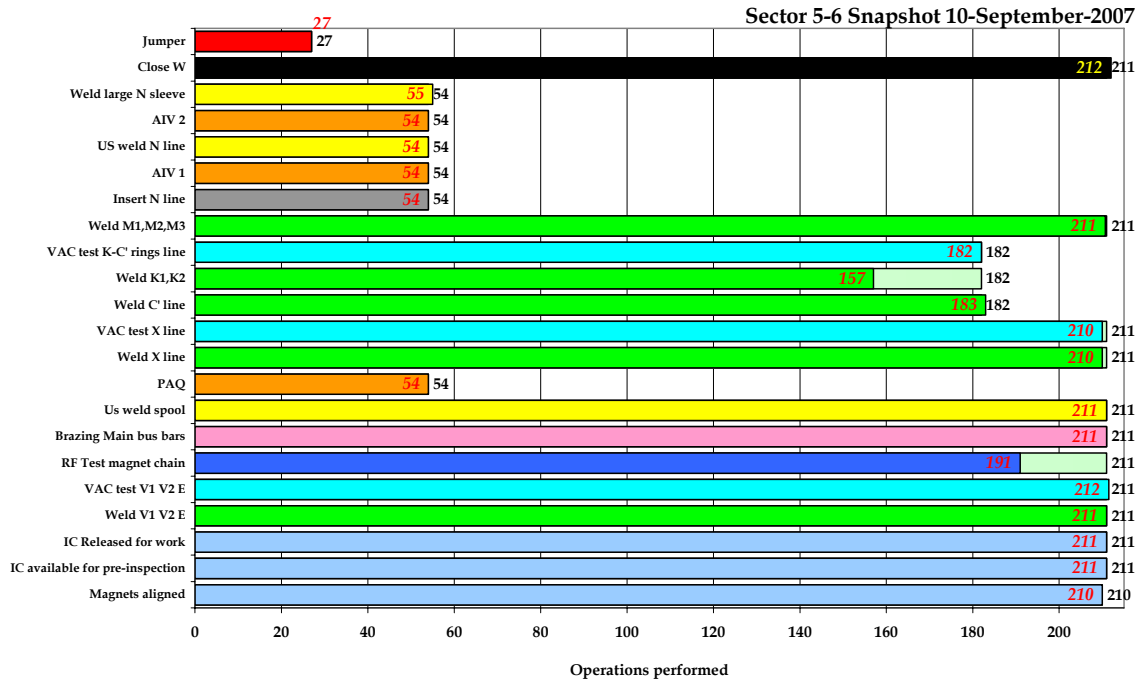


Fig. 12: Snapshot of work progress in sector 5-6 showing the number of operations achieved in total with respect to the total number of operations needed.

Sector 6-7

- All W's closed.
- 14 VAC sectors provided to VAC: 6 leak tight, 2 leaks and 6 to be tested.
- All Jumpers welded.

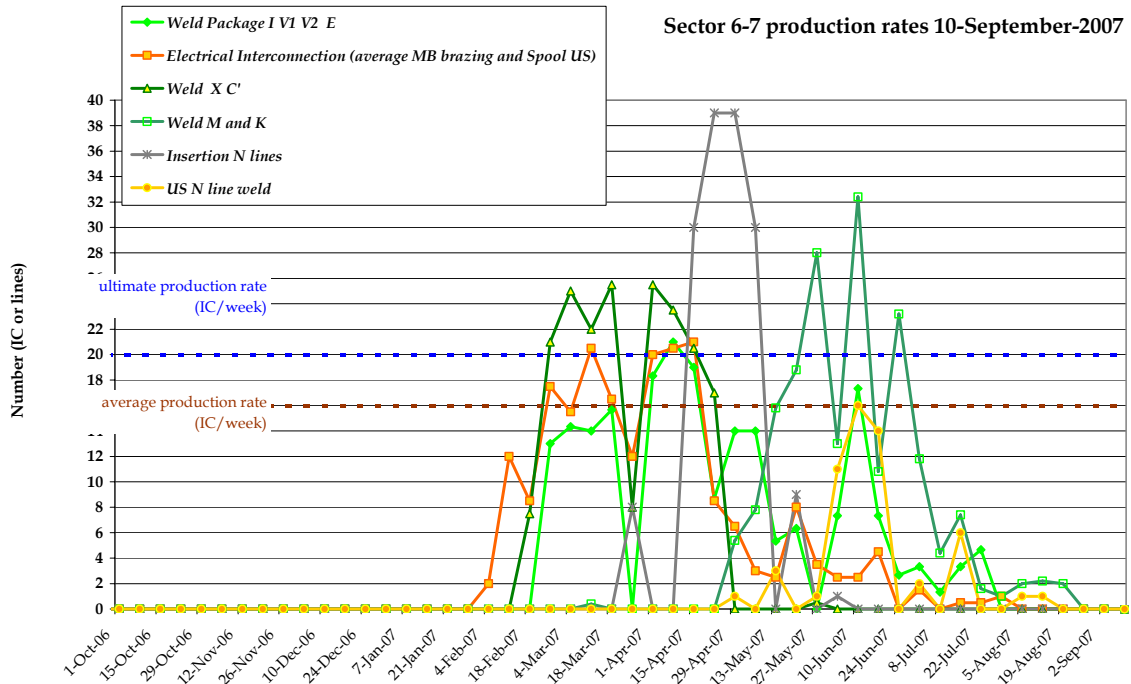


Fig. 13: Production rates in sector 6-7.

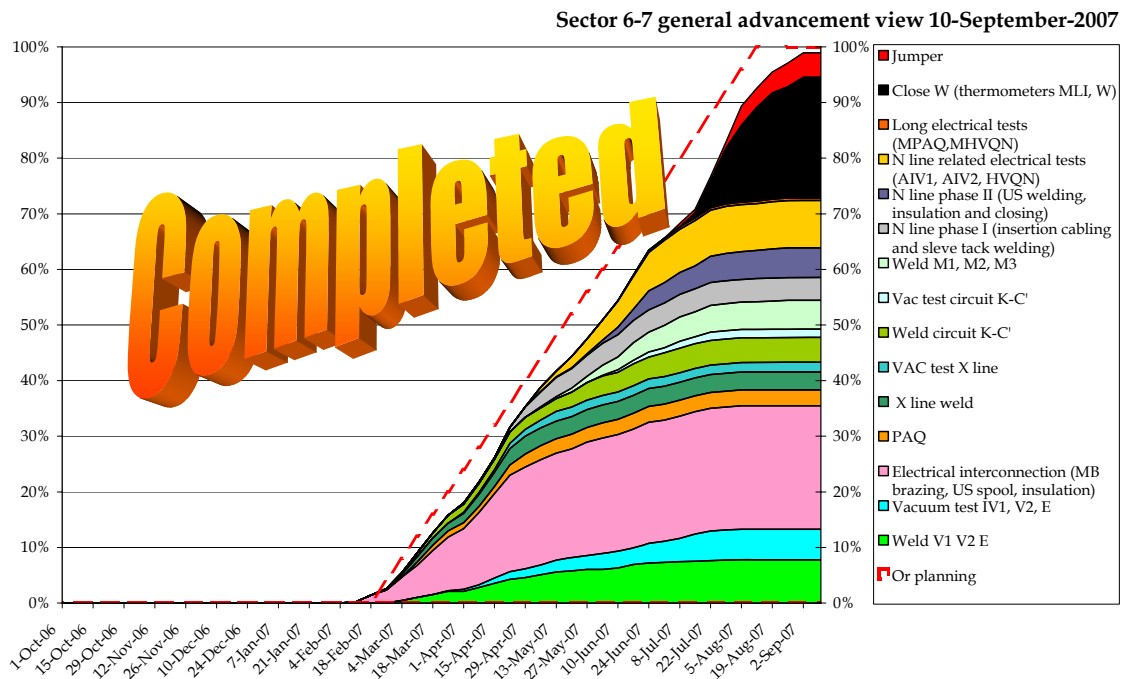


Fig. 14: General advancement view for sector 6-7.

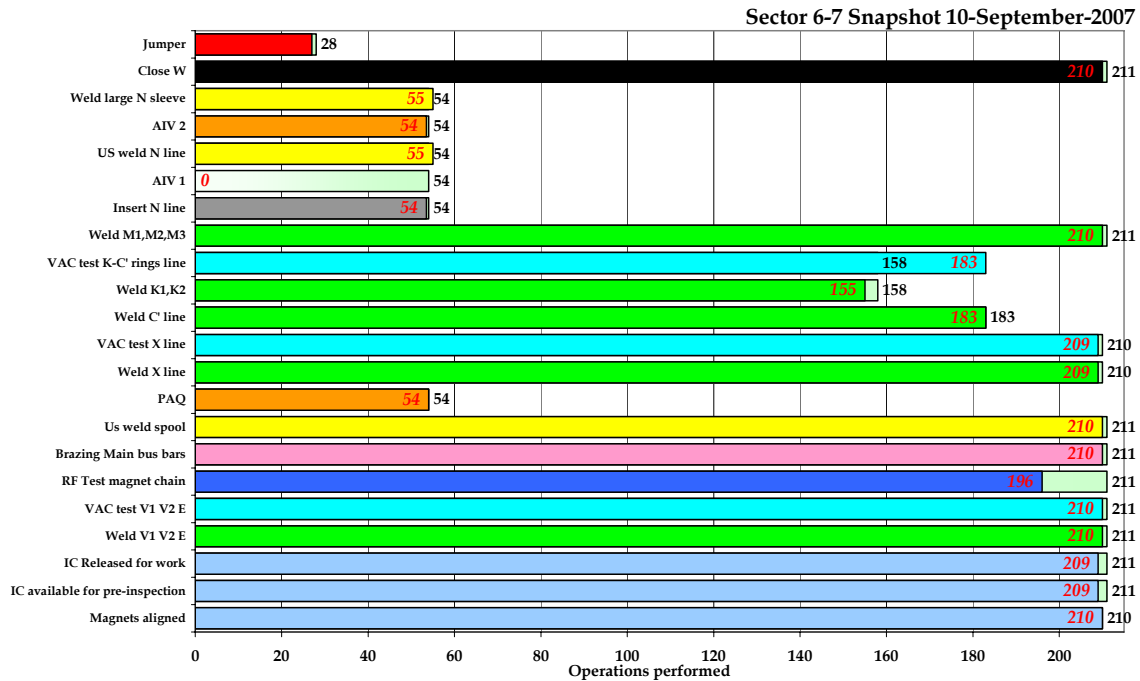


Fig. 15: Snapshot of work progress in sector 6-7 showing the number of operations achieved in total with respect to the total number of operations needed.

Sector 7-8

- Consolidation ongoing.
- For more details, please refer to MARIC and ICC presentations.

Sector 8-1 (completed on 9-May-2007)

- Consolidation ongoing.
- 17R8 : special leak test detection with use of Neon ongoing. Leak localized on SSS080. A new SSS for possible replacement is under cryostating.

Vacuum Tests by Sector

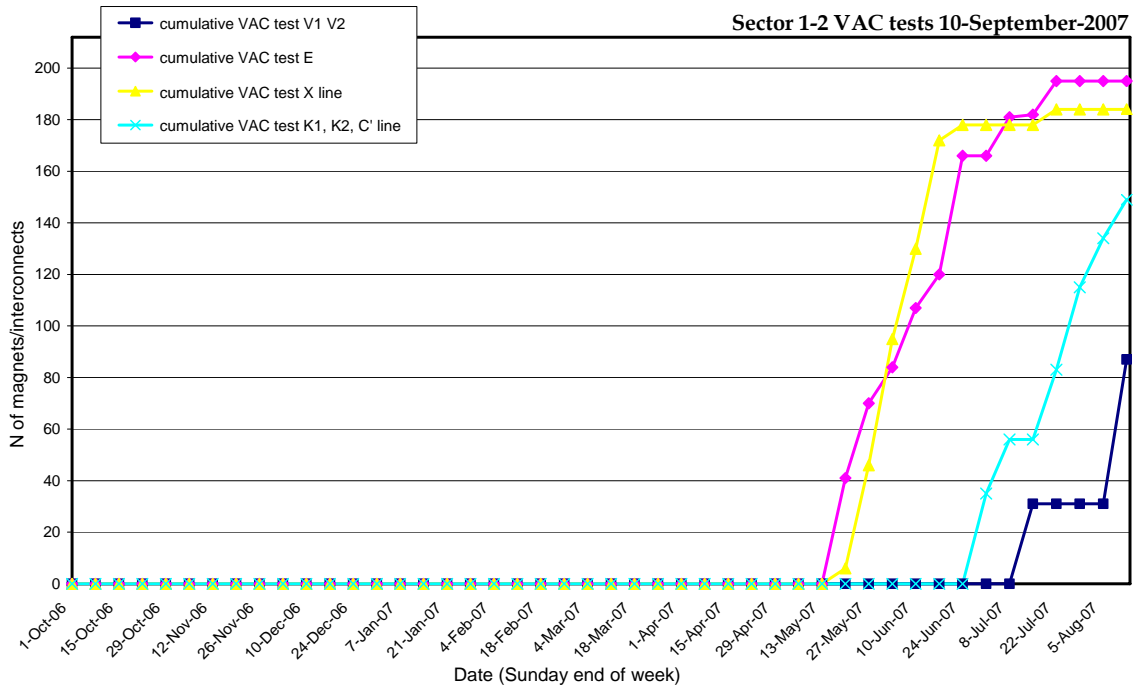


Fig. 16: Status of the VAC tests in sector 1-2.

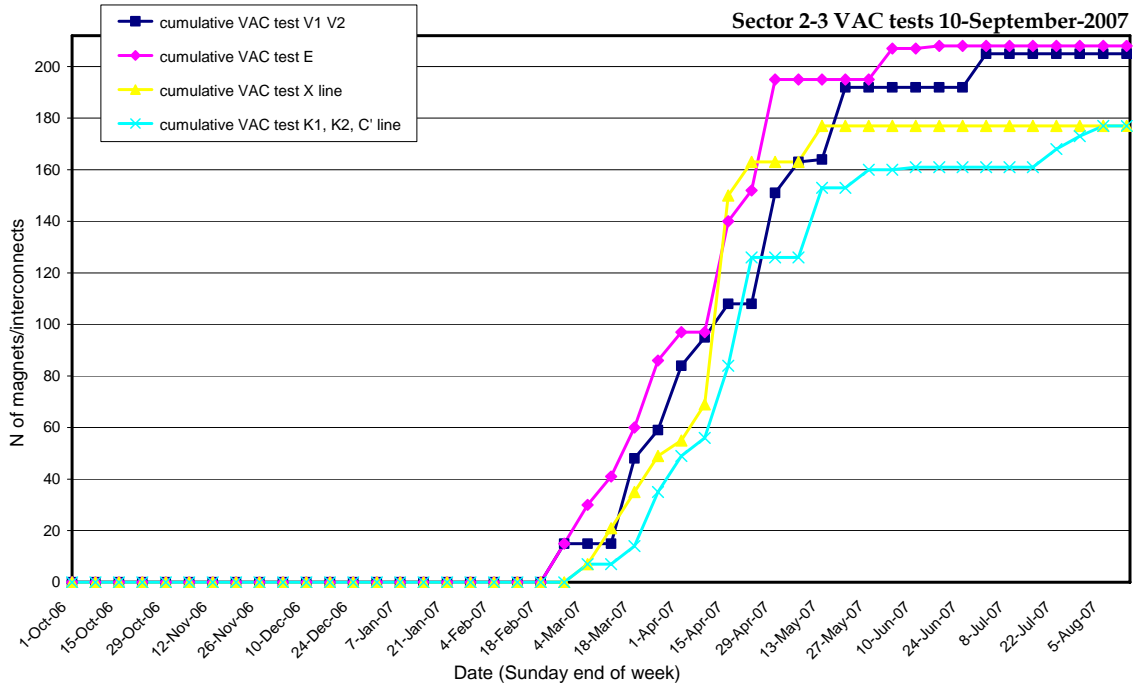


Fig. 17: Status of the VAC tests in sector 2-3.

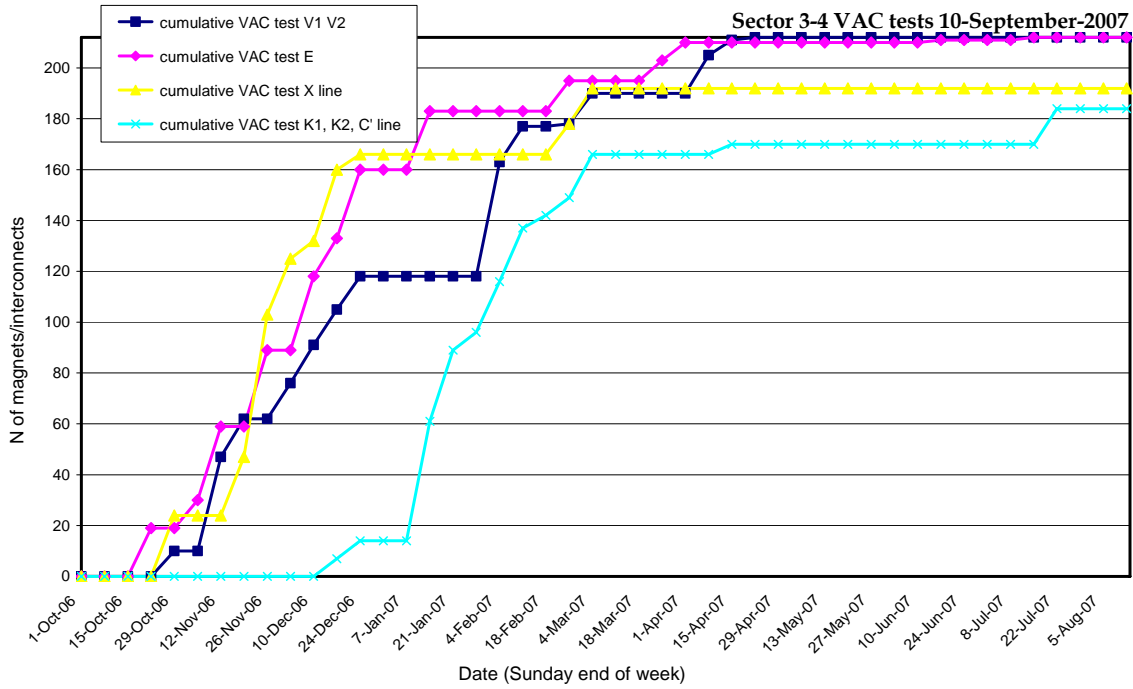


Fig. 18: Status of the VAC tests in sector 3-4.

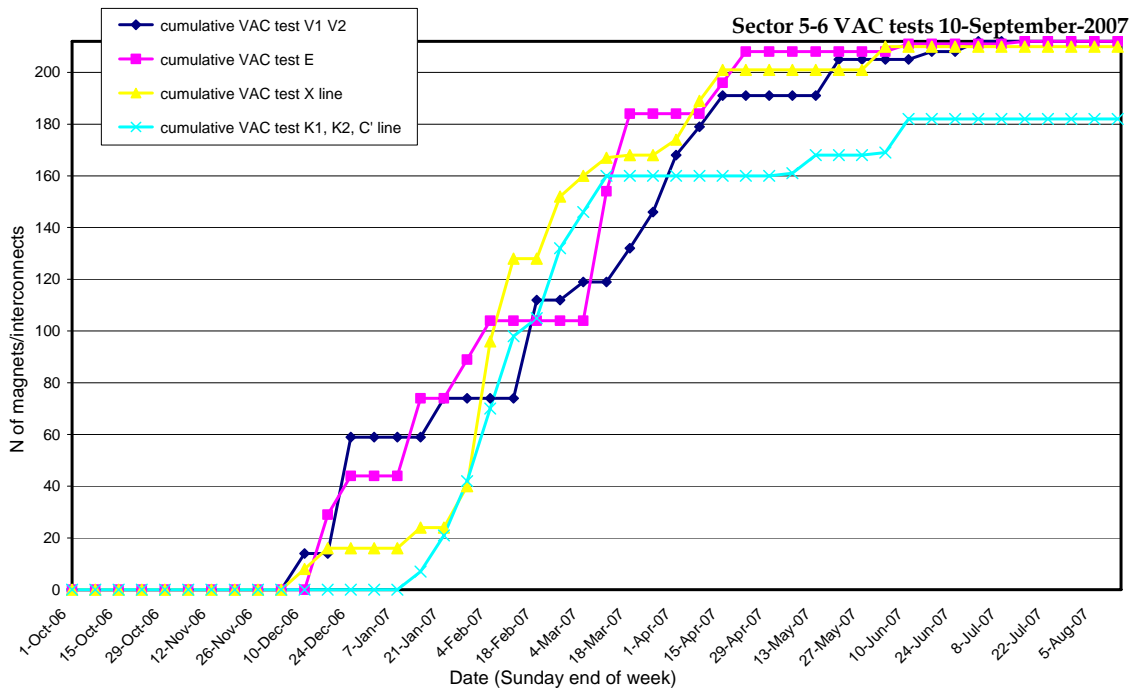


Fig. 19: Status of the VAC tests in sector 5-6.

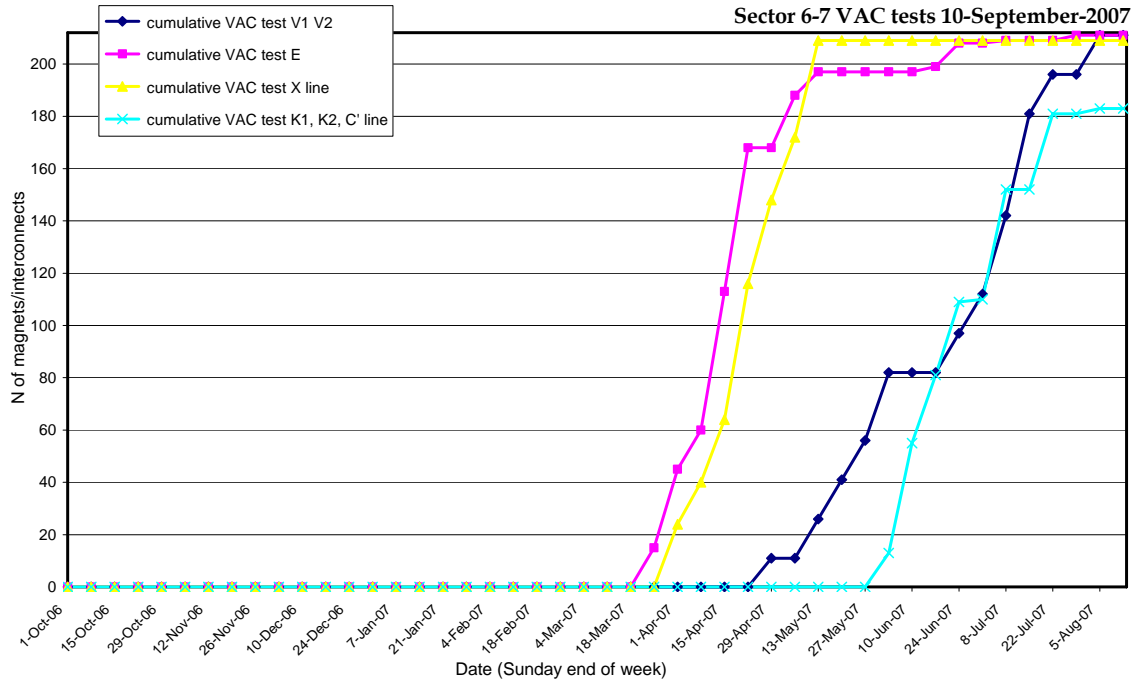


Fig. 20: Status of the VAC tests in sector 6-7.