

# Status of Interconnect Works in the LHC Arcs and DS regions – week 49 (December 4 - 9, 2006)

C. Vollinger, AT-MCS (on behalf of the arc coordination team)

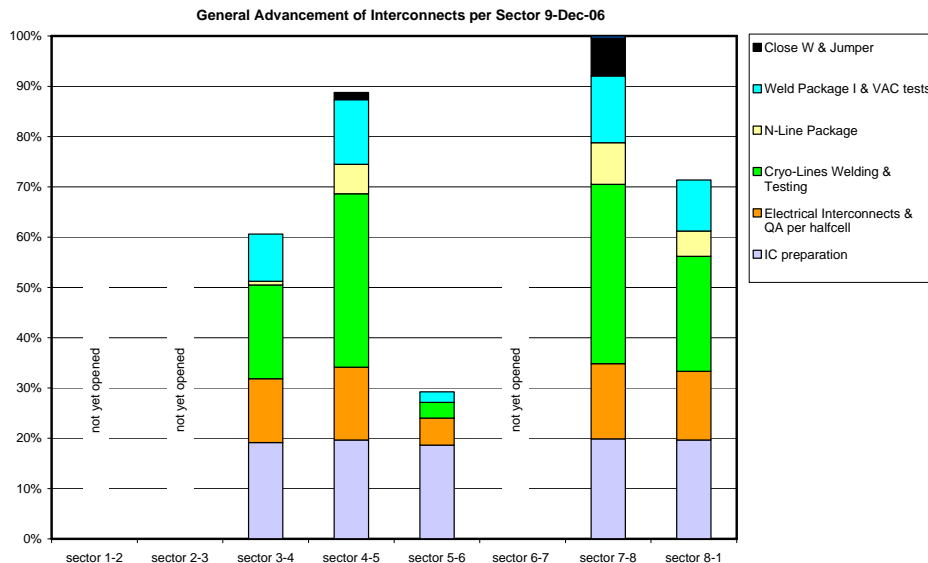
EDMS n. 808153

This report gives the status of the interconnect works in the LHC arcs and dispersion suppressor regions carried out during week 49 (December 4 - 9, 2006) 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, the data is reported for each sector separately.

## The Dashboard

- Number of magnets in the tunnel: 990 MB, 357 SSS, 70 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:**

**P. Fessia, A. Musso, F. Seyvet, M. Struik, C. Vollinger**

<i>Sectors</i>	<i>Started</i>
1-2 2-3 6-7	No
7-8	finished
3-4 4-5 5-6 8-1	Yes

**Sector 2-3: start planned for week 51**

**Sector 1-2/ Sector 6-7: not yet opened.**

**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.

### Sector 3-4

- 7 magnets not aligned.
- Production of Work Package 1 and welding of K1, K2 ongoing. First HVQN accomplished.

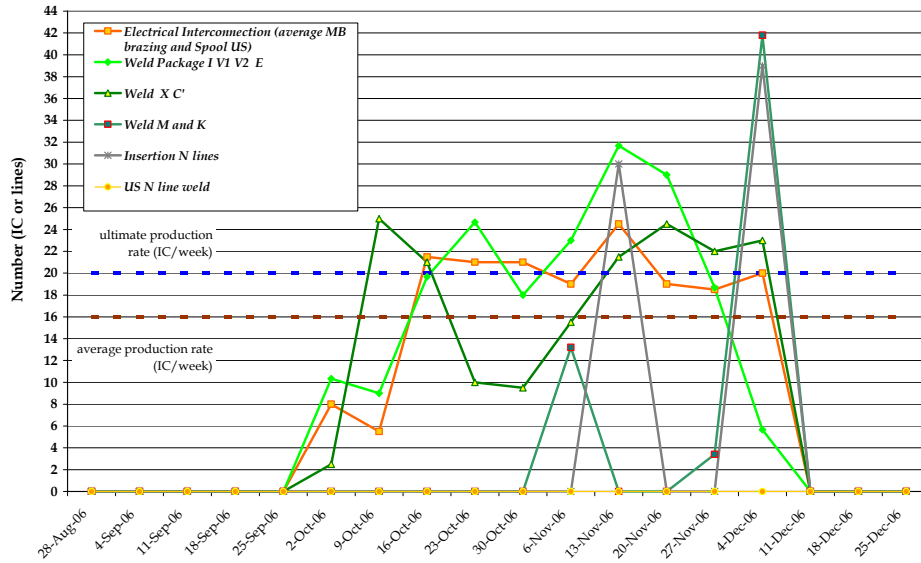


Fig1: Production rates in sector 3-4.

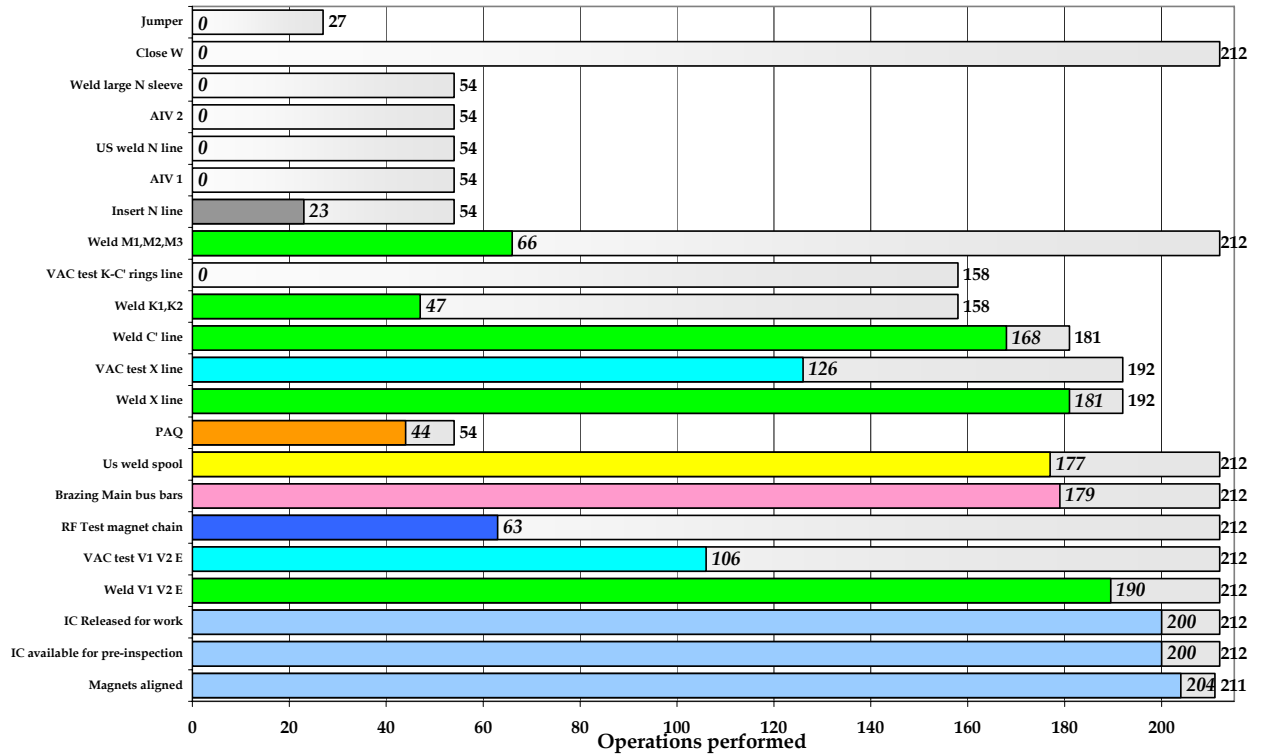


Fig. 2: Snapshot of work progress in sector 3-4 showing the number of operations achieved in total with respect to the total number of operations necessary.

## Sector 4-5

- 1 magnet not aligned.
- Closure of W-bellow ongoing. Technical development and optimization of jumper welds to solve quality issue in progress.

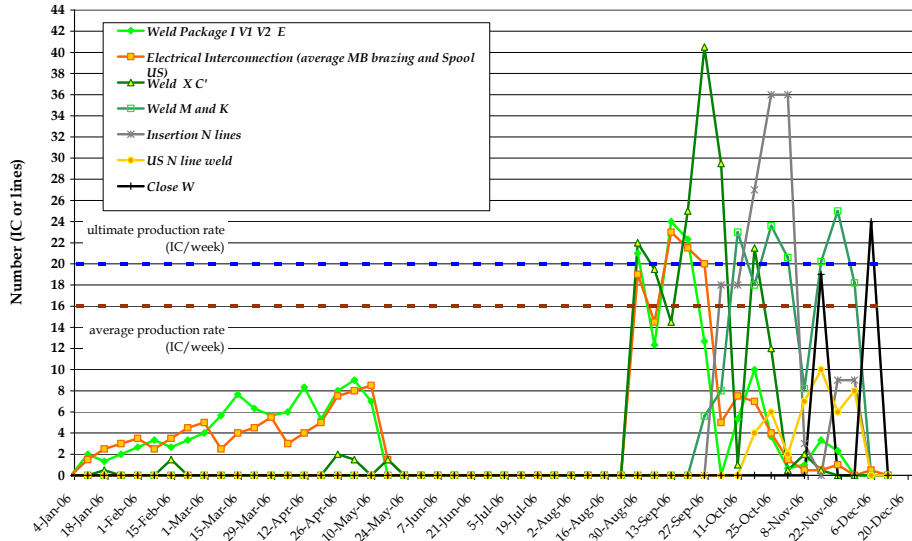


Fig. 3: Production rates in sector 4-5.

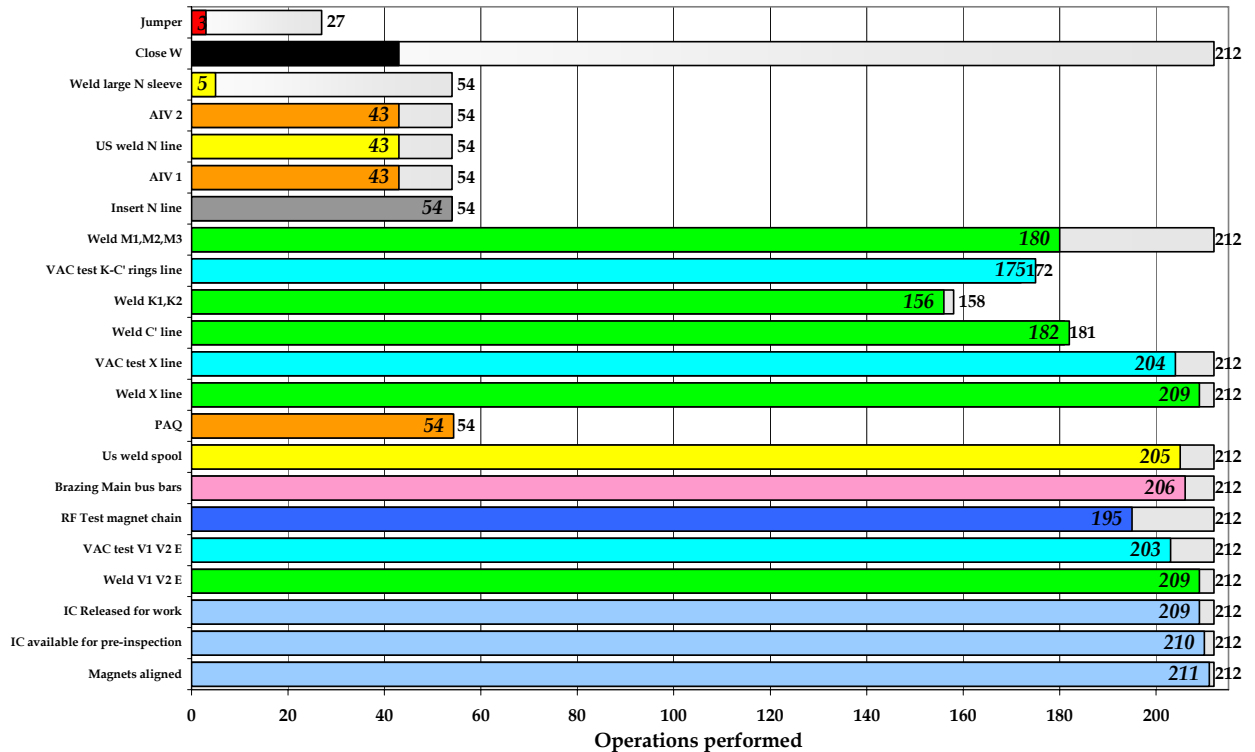


Fig. 4: Snapshot of work progress in sector 4-5 showing the number of operations achieved in total with respect to the total number of operations necessary.

## Sector 5-6

- 12 magnets not aligned.
- Production of Work Package 1: Brazing of main busbars, ultrasonic welding of spool pieces, welds V1,V2, X, C', E ongoing.

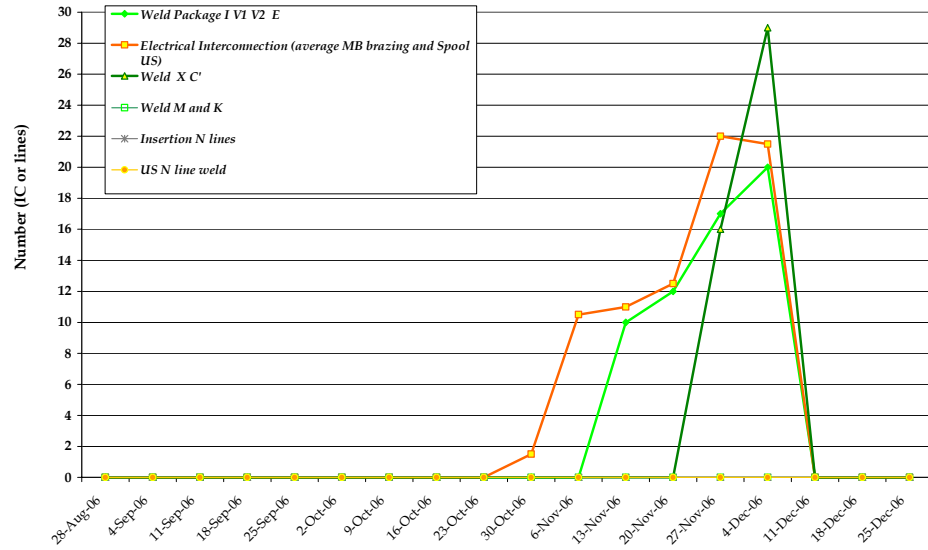


Fig. 5: Production rates in sector 5-6.

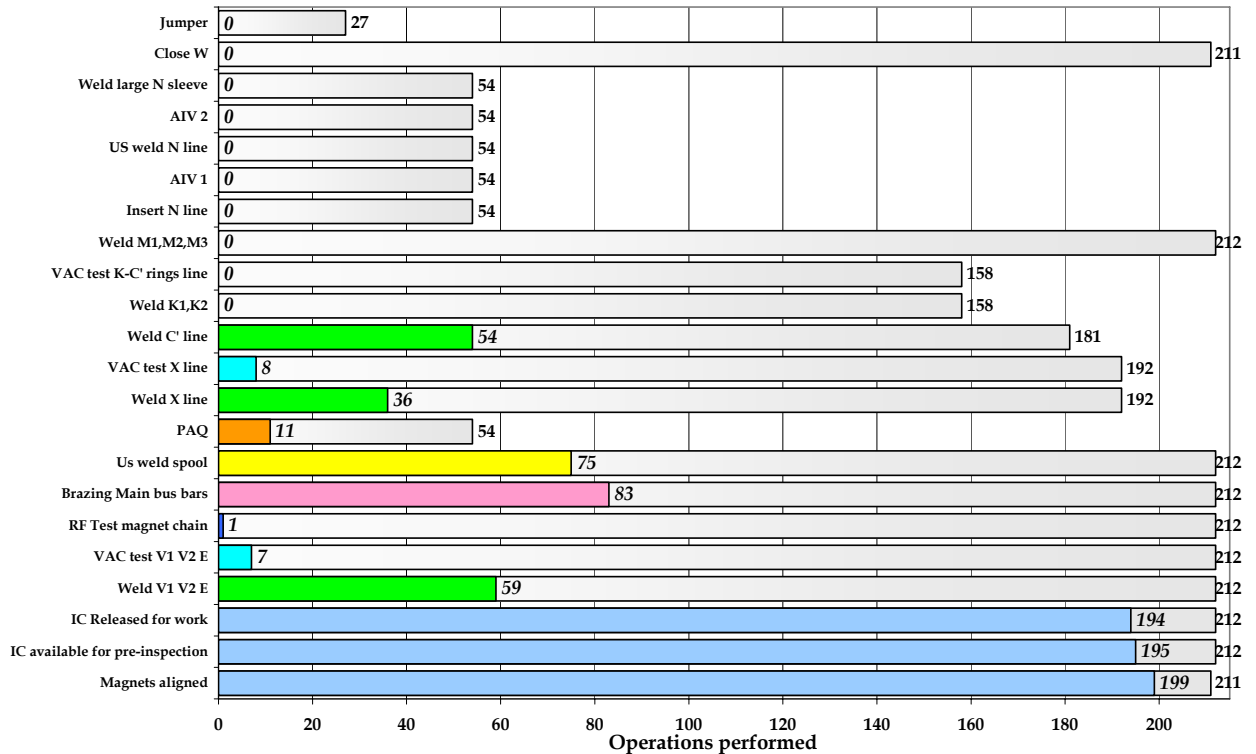


Fig. 6: Snapshot of work progress in sector 5-6 showing the number of operations achieved in total with respect to the total number of operations needed.

## Sector 8-1

- Production of Work Package 1: Brazing of main busbars, ultrasonic welding of spool pieces, welds V1,V2, X, C', E lines.

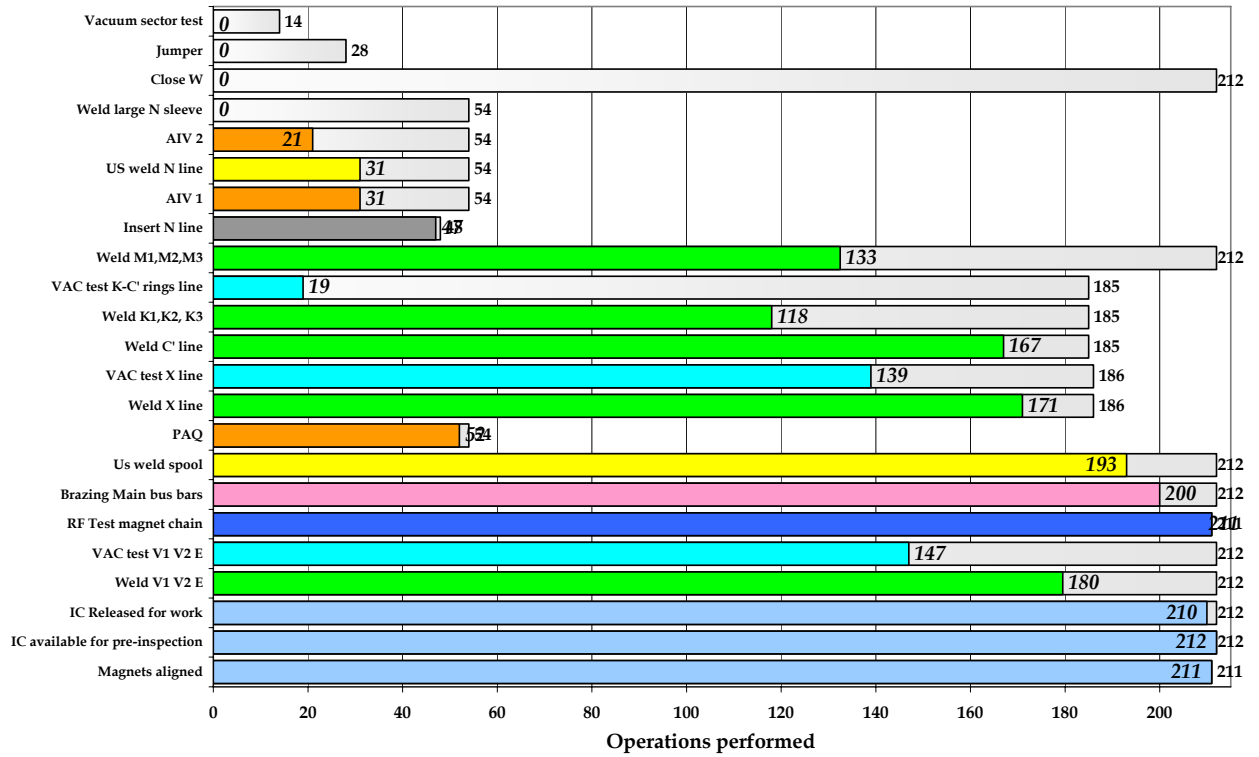


Fig. 7: Snapshot of work progress in sector 8-1 showing the number of operations achieved in total with respect to the total number of operations needed.

## Vacuum Tests by Sector

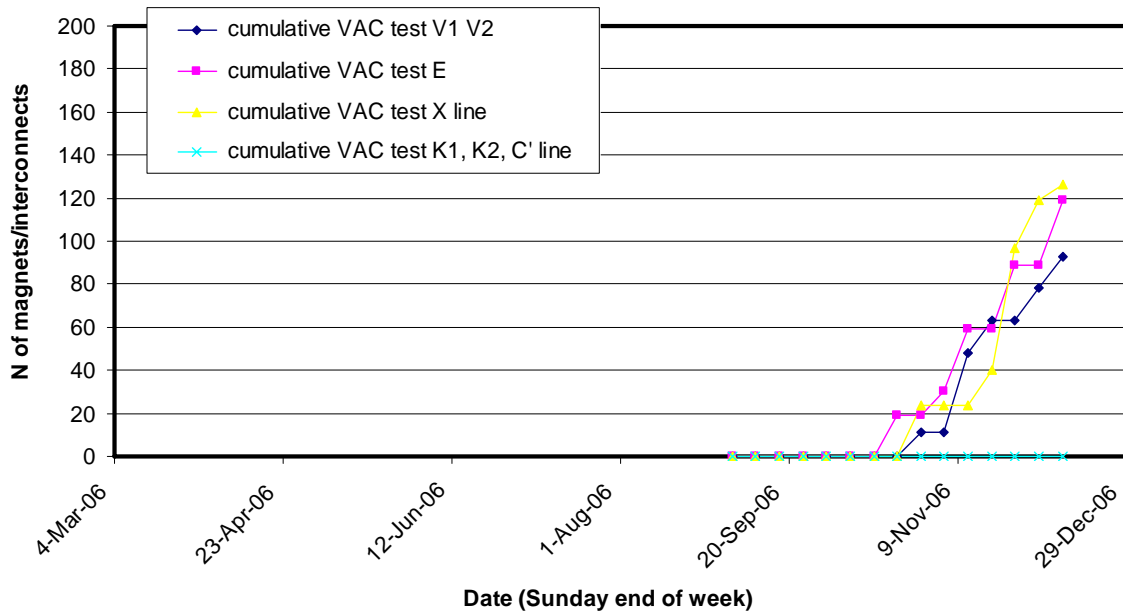


Fig. 8: Status of the VAC tests in sector 3-4.

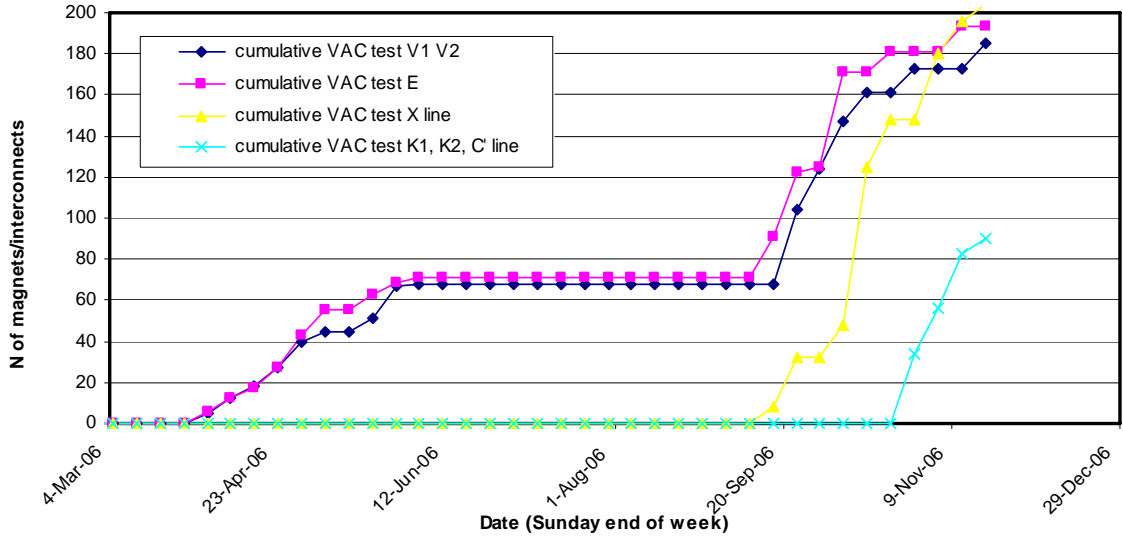


Fig. 9: Status of the VAC tests in sector 4-5.

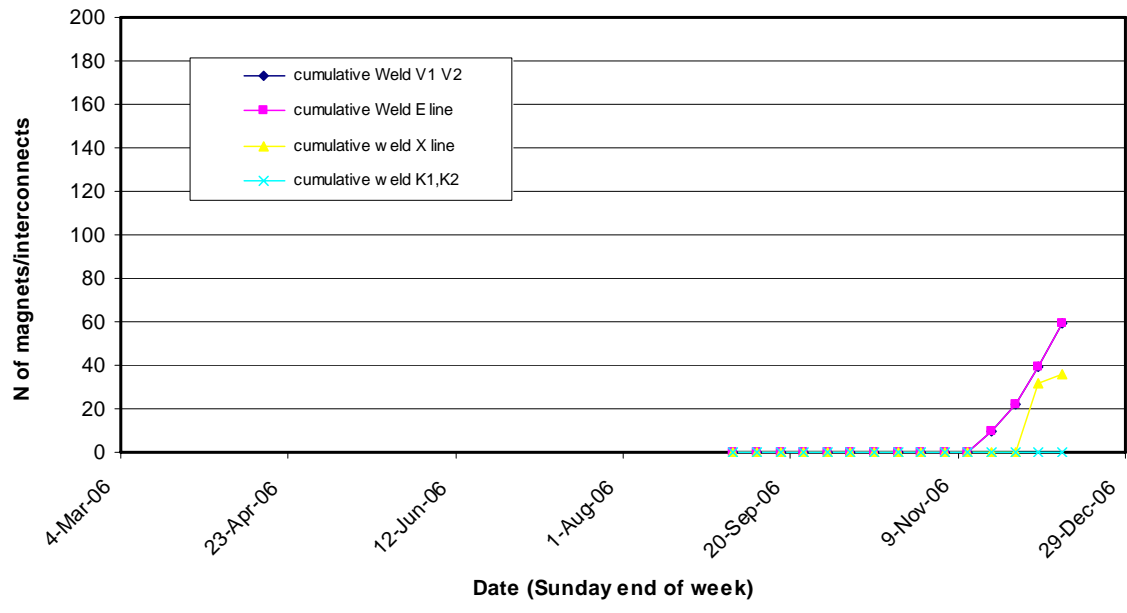


Fig. 10: Status of the VAC tests in sector 5-6.