

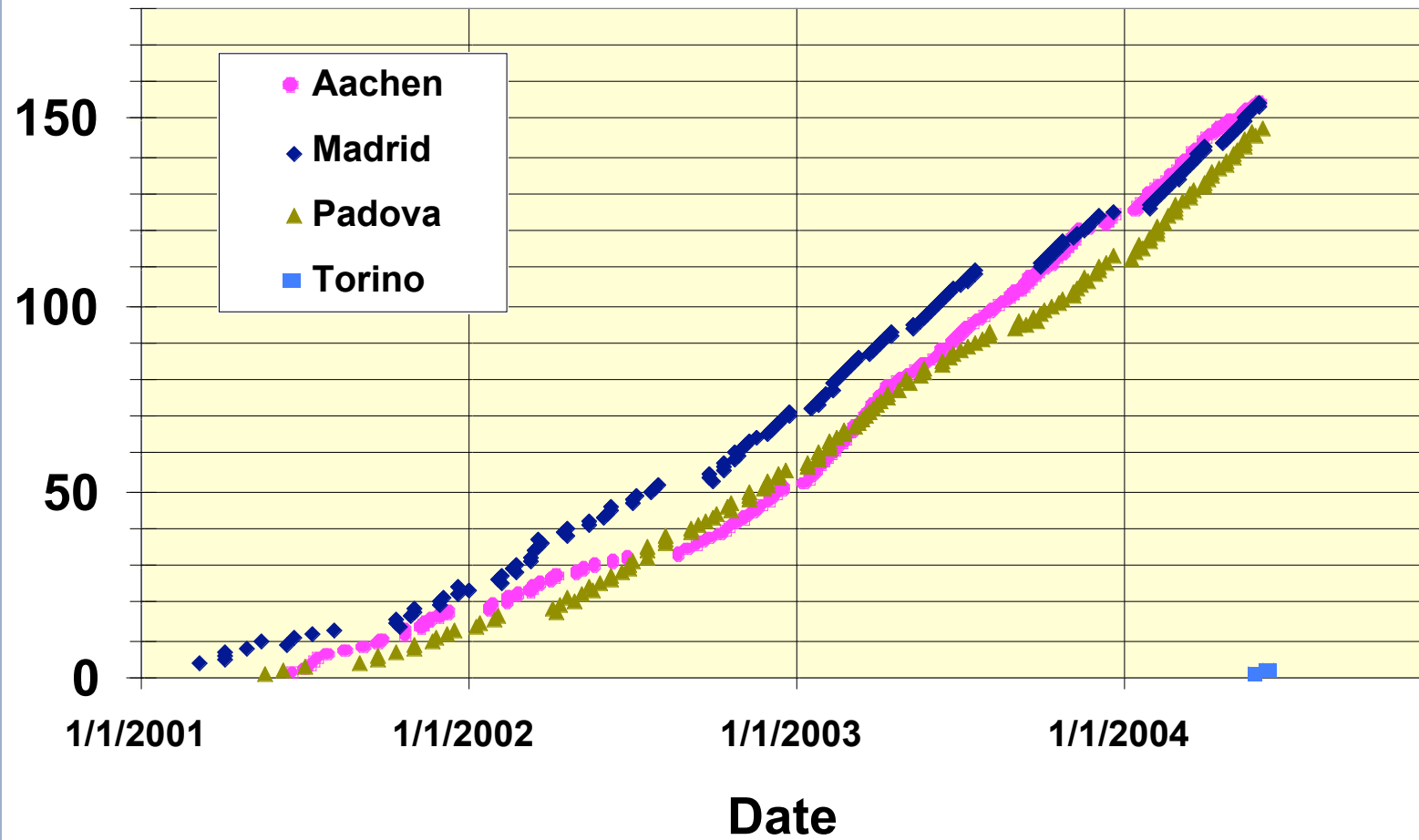


Drift Tube Quality Control

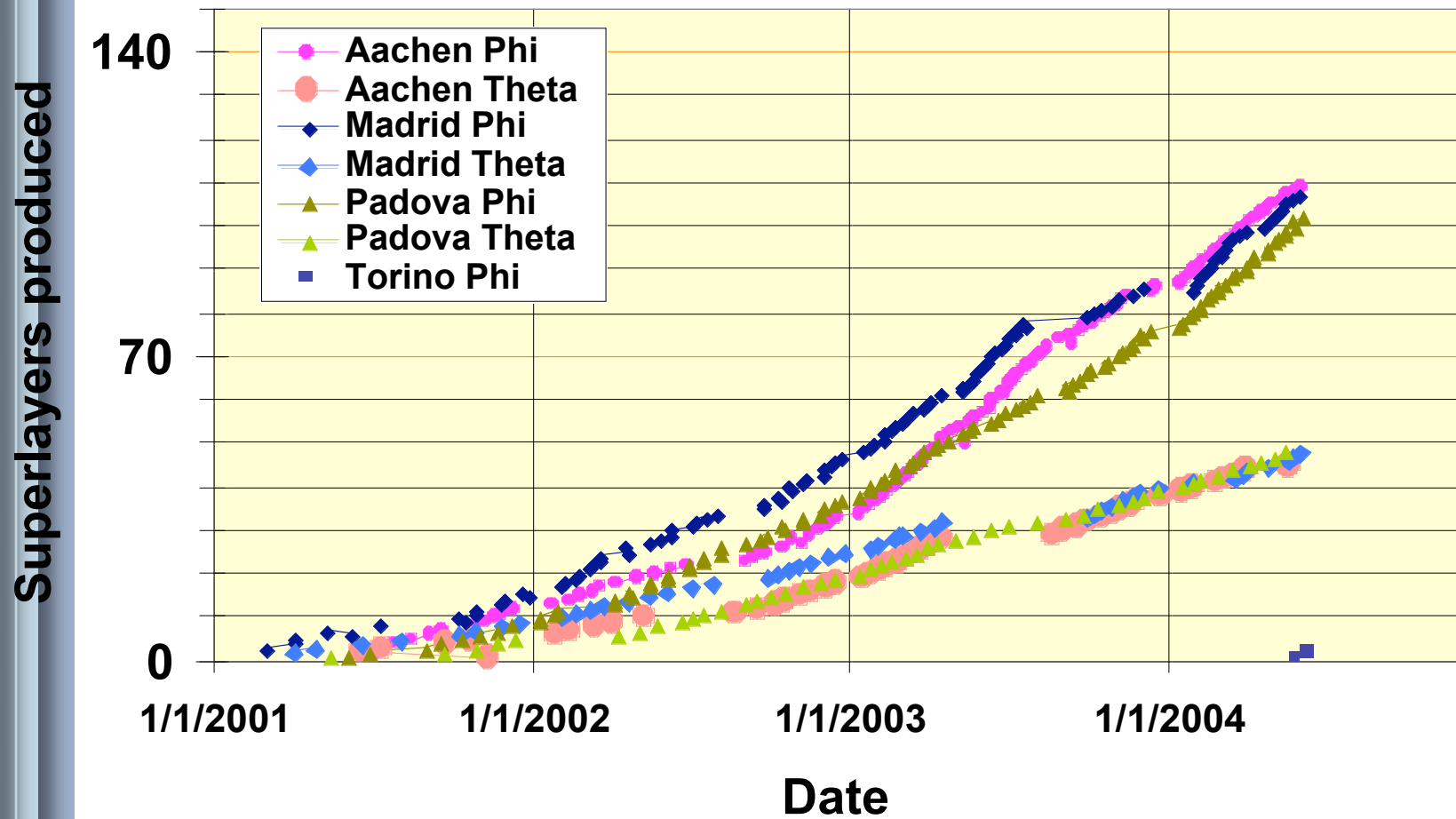
CMS week – CERN– 7th June 2004

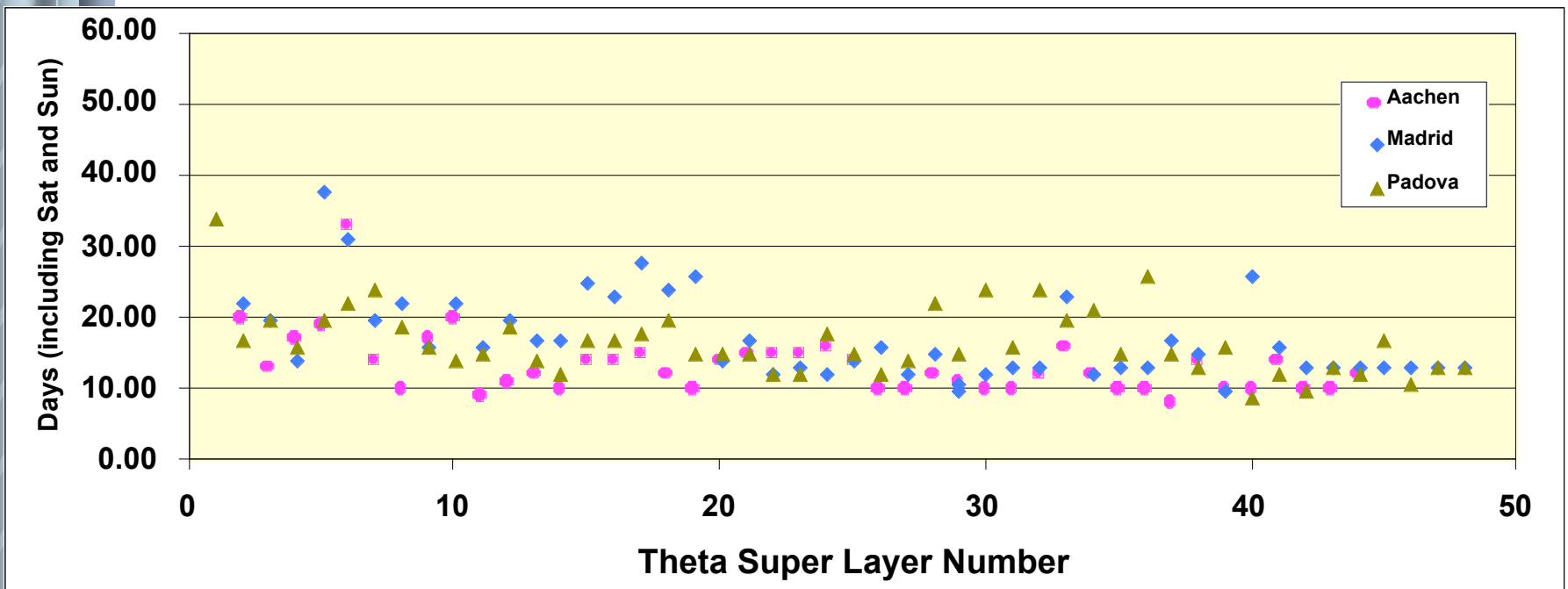
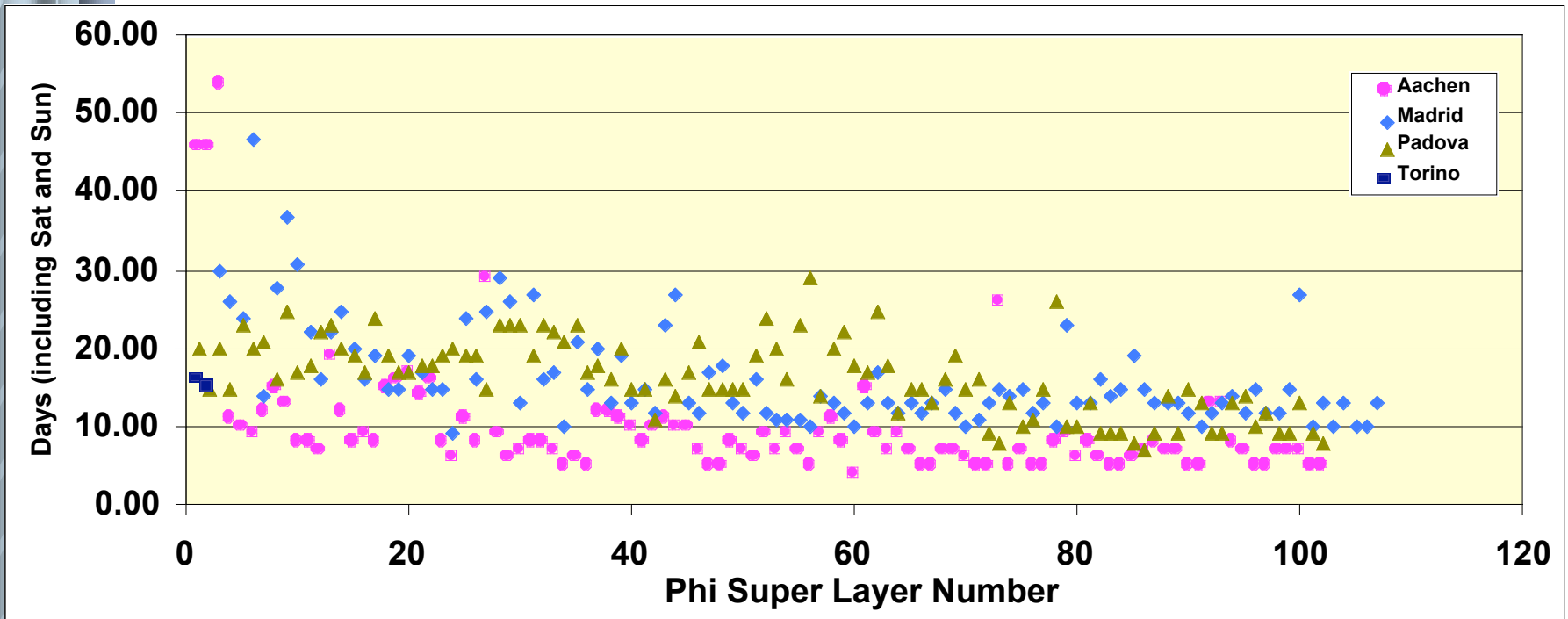
- **SL and Chamber Production rate** Silvia
- **QC at Production Sites**
 - Torino:** First QC tests Silvia
 - Wire Position and Table measure Amedeo
 - Aachen, Madrid, Padova**
- **News from ISR** Gyorgy
- **Labelling and Data Base of Chambers** Zoltan
- **AoB**

Total Superlayers produced

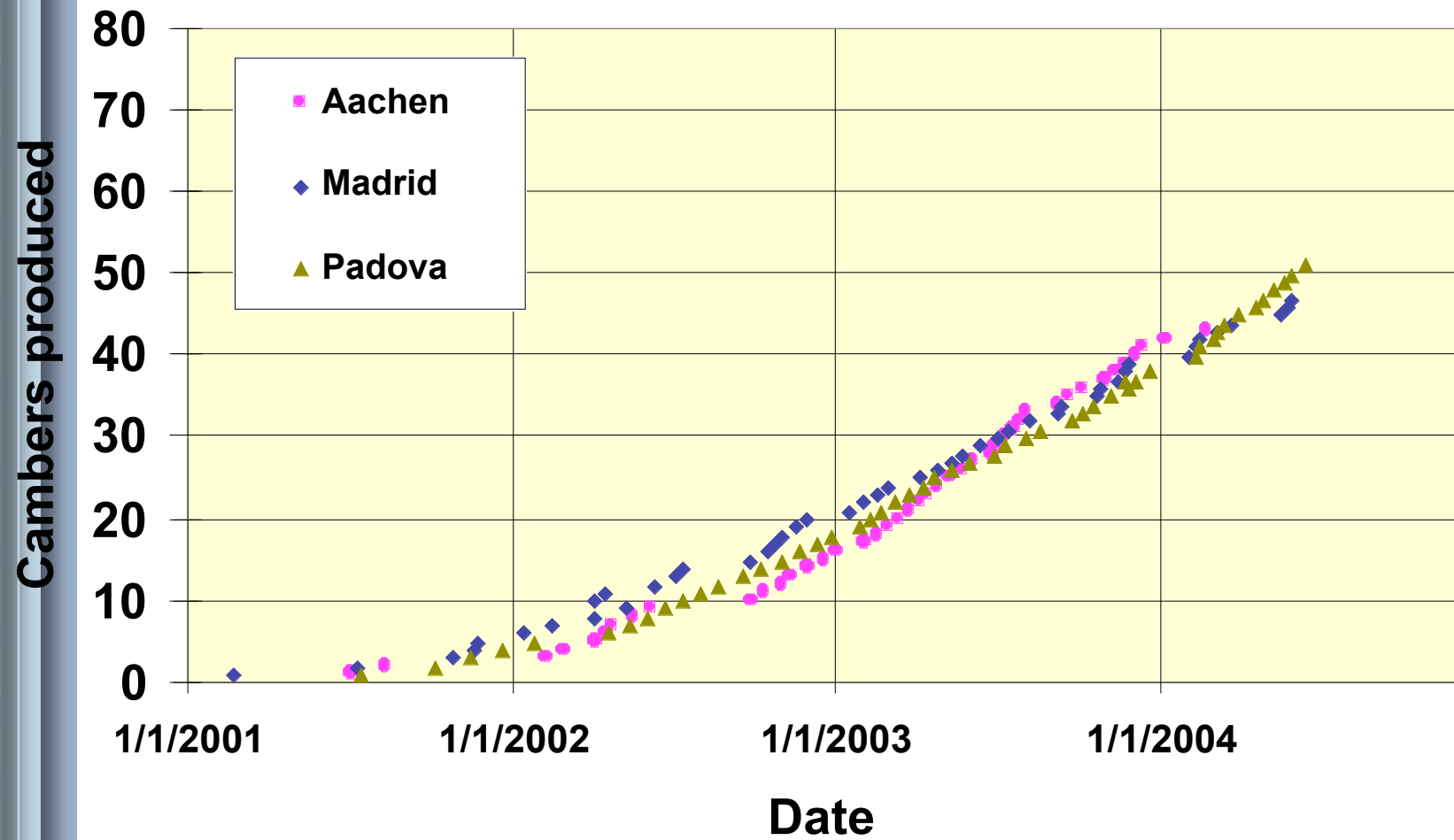


Superlayers





Chambers OR 3 Fully Tested SuperLayers



Torino Production Site



The I-beam tool



7th June 2004

CMS Week, Silvia Maselli Torino

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Quality Control at Torino

During mechanical assembly:

Visual inspection

Wire tension

Wire position (see Amedeo)

T, H, p conditions at table(s)/hall

Planarity per layer & SL thickness

Grounding Al-plate/I-beam

(Corner blocks)

Quality control during/after SL assembly:

Gas tightness

Check/test HVB HVC

HV-test with HVB in air

HV-test in gas

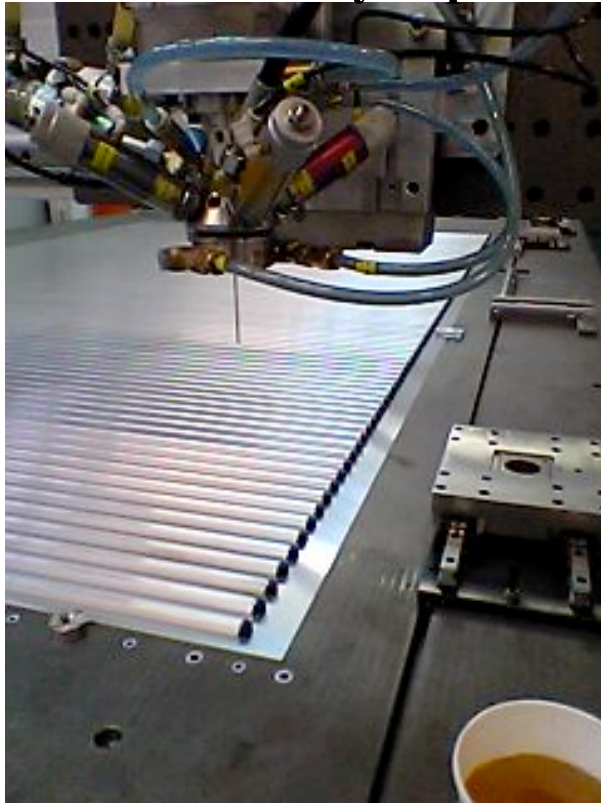
Slow control for FE

Cosmic tracks

SL assembly

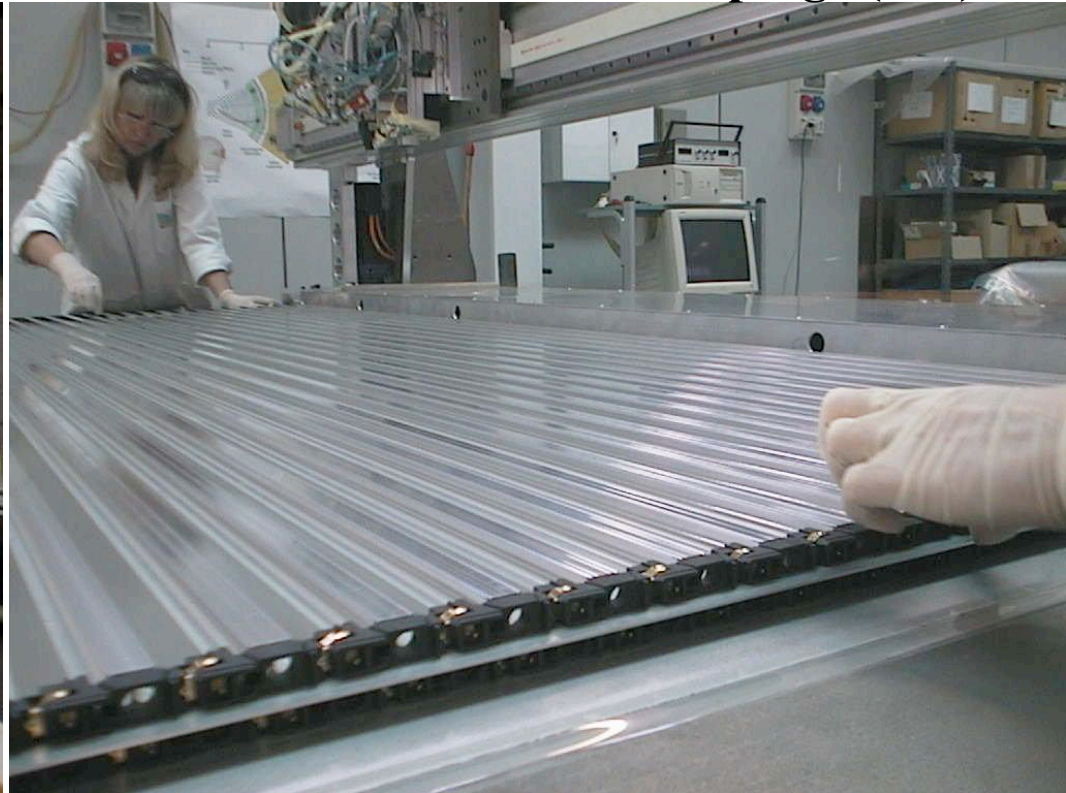
Glue dispensing

**Cordons and drops
deposited by machine**
**Conductive glue
manually deposited**



Wire Positioning

Insert/test HV Ibeam contacts
Check wire endplugs fixed in position
Glue detached Ibeam endplugs (1%)

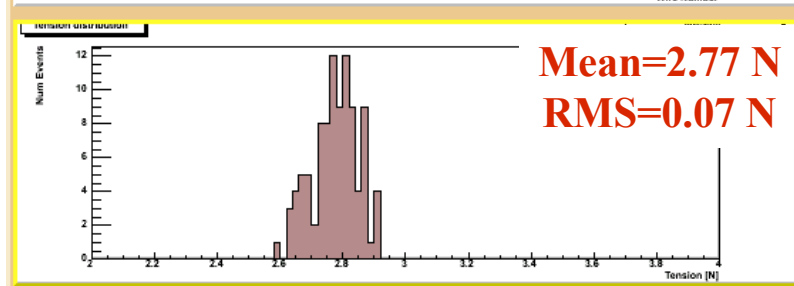
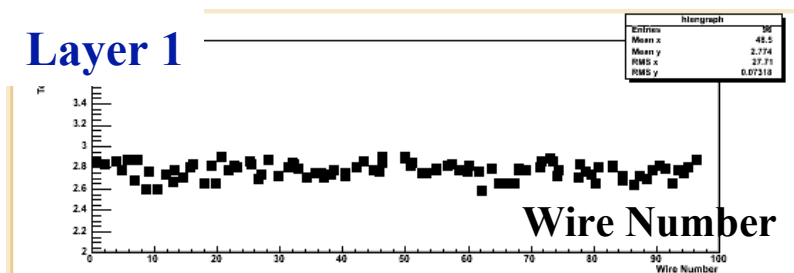


Wire Tension Test

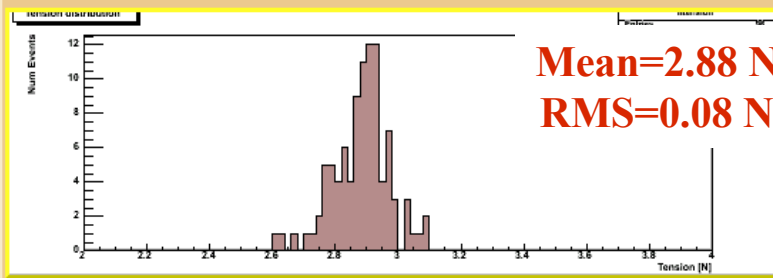
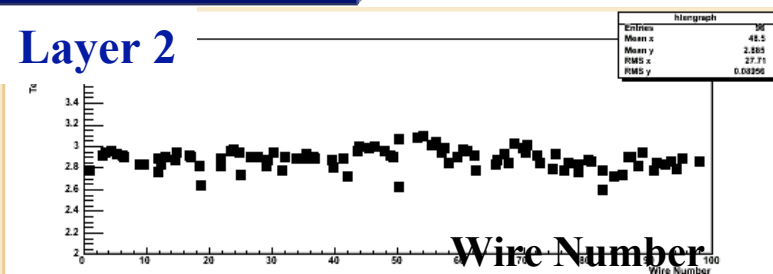
SL(1,7)_001

Tension [N]

Layer 1

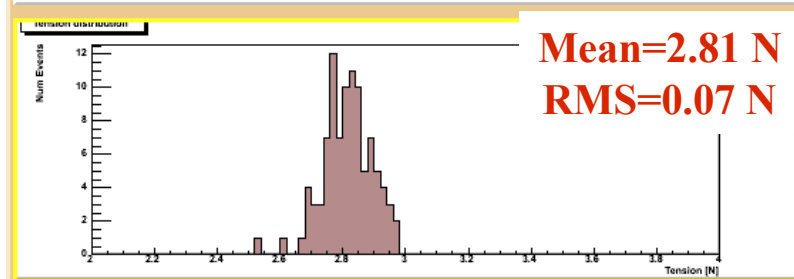
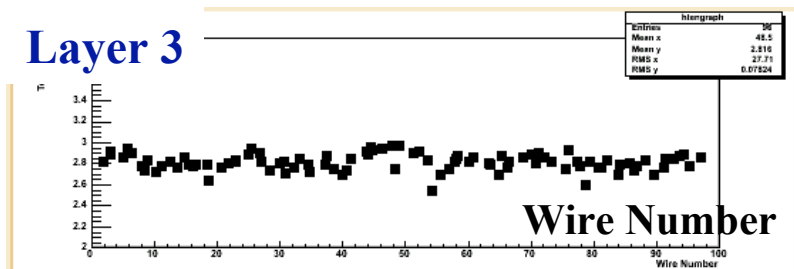


Layer 2

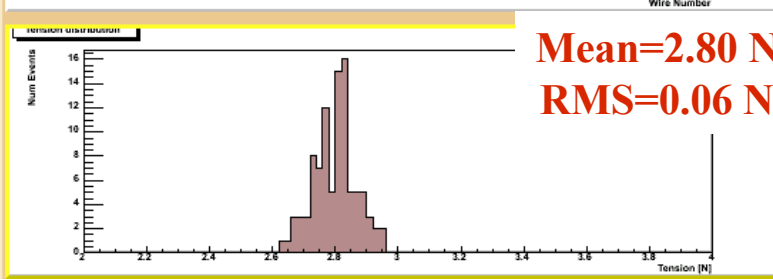
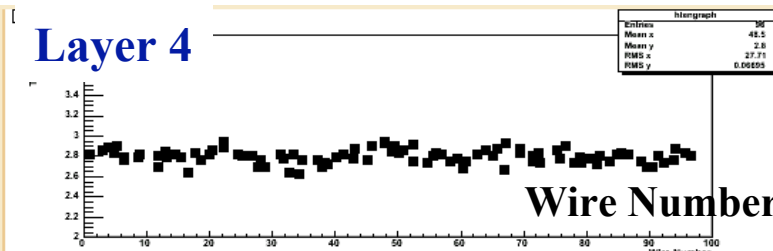


Tension [N]

Layer 3

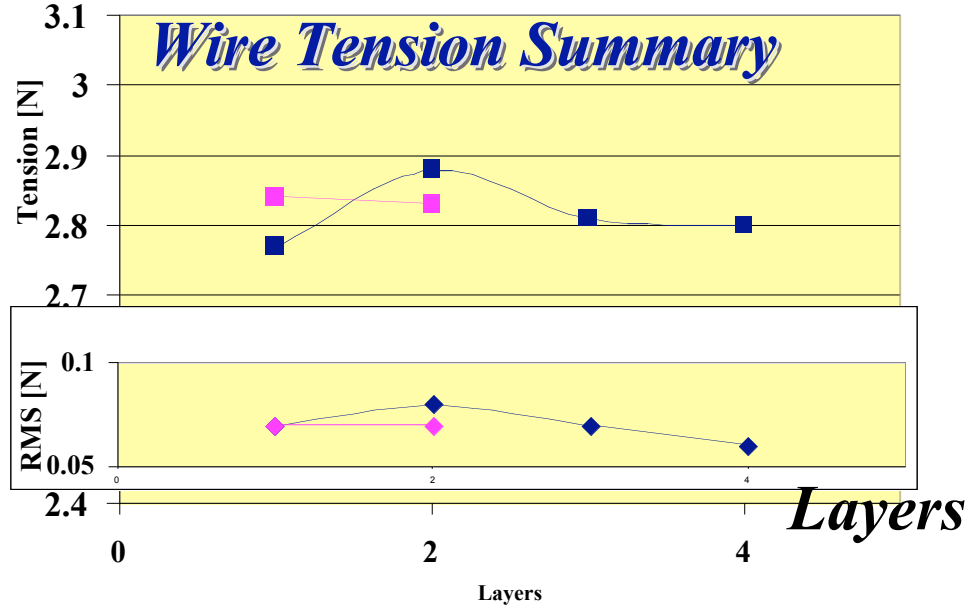
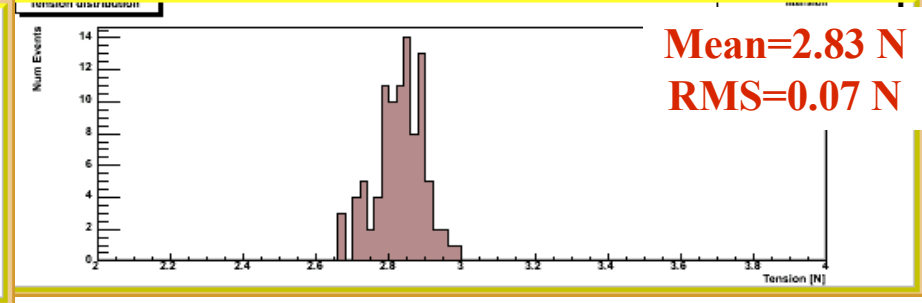
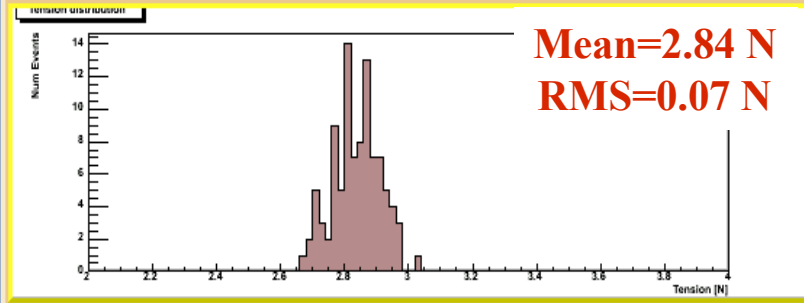
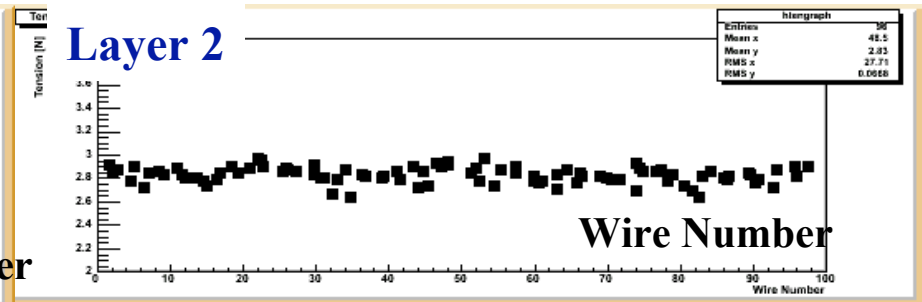
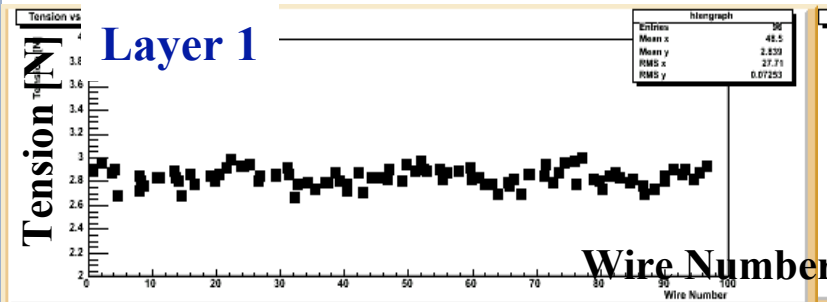


Layer 4



Wire Tension Test

SL(1,7)_002



Welding of ground contacts



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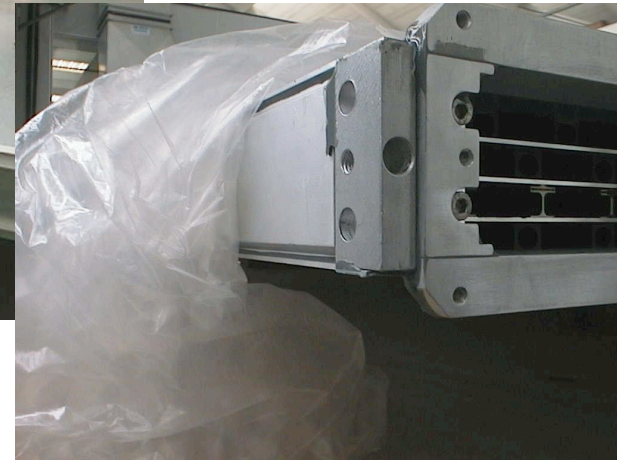
Preparatory work

- Assemble HV connectors
- Cover assembly
- HV cable
- **Material status: OK**
- **Tools: OK**



SL Gas Tightness

Time constant measured on dummy SL = infinity
50 mbar overpressure 5 hours – no loss



HV Test – First steps

Test HVB (?)

DC cabling

Capacity of strips/cathodes

Mount HVB

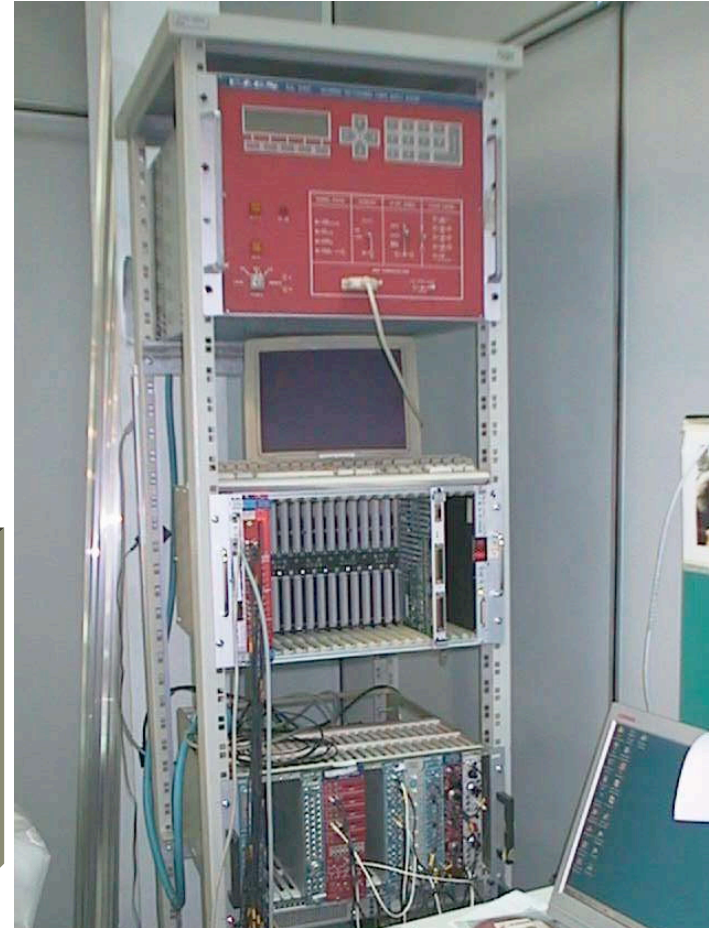
HV test in air

Material status:

enough for 4 SLs

Urgently needed HVB and HVC

Tools: OK (for assembly & testing)



MB4 Production Database

ent System - Microsoft Internet Explorer

avorites Tools Help

Search Favorites Media

localhost/mb4dev/

CMS Muon System in Torino

Click on a name of a Wheel to find out information about installed Chambers.

Click on one of the left items to navigate into assembled Chambers, SuperLayers, Covers and Material Store.

Wheel -2 Wheel -1 Wheel 0 Wheel +1 Wheel +2

MB4 Assembly

- [MB4 Home](#)
- [Chambers](#)
- [SuperLayers](#)
- [Covers](#)
- [Store](#)

Local intranet 2:10 PM





Quality Control at Torino Summary

First mechanical assembly

Final production speed not yet realistic

First QC tests done

SL construction DataBase ready

Next steps:

Reach nominal speed of production

Experience with HV/FE assembly and testing

First DAQ cosmic rays

from Gyorgy...

Dear Colleagues,

Yestersday on Alberto's request I changed the DCS cabling of three chambers already calibrated before. I would like to give the details here. At the same time ask those who are involved in QC and database related activity to consider the consequences and the steps necessary to make.

Chambers touched (original characteristics):

Item	Chamber	Service	Chamber ID	Survey	Calibr.
	type	side	code	date	
1)	MB4-10R	A(right)	351030103900030	129	28 Jan 2004
2)	MB4-10L	A(right)	351030103700034	130	29 Jan 2004
3)	MB4/9,11	B(left)	351010103500030	133	3 Feb 2004

Operation made: the service side has been changed:

for item 1): from A(right) to B(left)

for item 2): from A(right) to B(left)

for item 3): from B(left) to A(right)

Chambers in item 1) and 2) are from CIEMAT, 3) from Aachen.

I propose to put this story on the agenda of the QC meeting

next week to make sure that nothing is overlooked.

Best regards, Gyorgy

7th June 2004

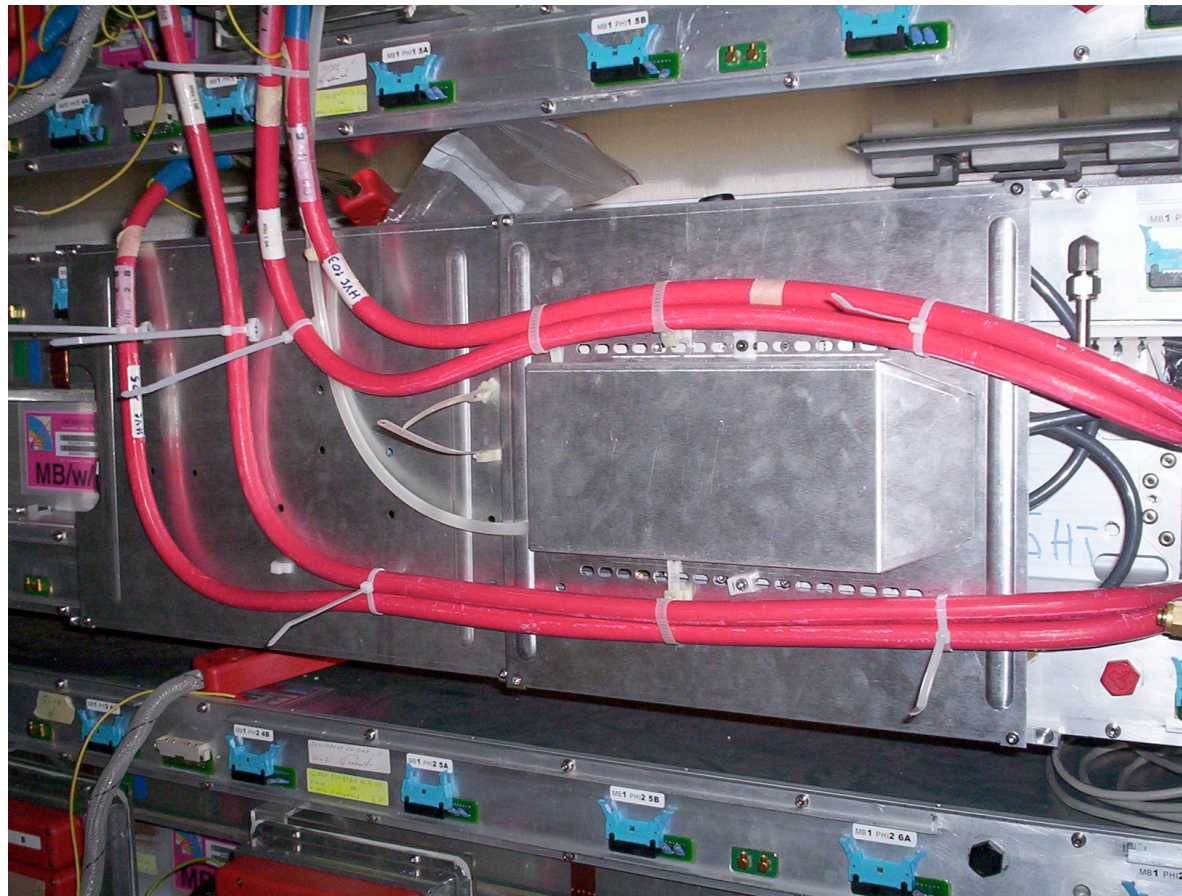
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Labelling the full Chamber

Proposal from Hans:

- Attach ~A4 size autoadhesive label on carter
- Identify chamber and carter segments with small label on chamber body



7th June 2004

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