



# *Padova report*

## *Items*

- 1 *Hall and production line status*
- 1 *Chambers and SL review*
- 1 *Measurements*
- 1 *Materials for chambers*
- 1 *Conclusions*

## *Hall and production line status*

### **CMSweek 16-9-2003**

The cables for encoders gave reliability problems during last months.

We decided to replace the cables with new ones having higher performance (lifetime)  
Replacement will be completed in October



### **NOW**

The cables for encoders have been replaced in the first half of October  
The production line is now working well.



# Chambers and SL review

CMSweek 16/09/2003

CMSweek 9/12/2003

# SL

94 (62 phi, 32 theta)

**111** (74 phi, 37 theta)

# MB3 Chambers from built SL

31+1/3

**37**

(tested with HV, gas OVP, scalers)

(30)



+ 5.66 chambers

(36)

+ 4.74 nominal rate

# Assembled Chambers

**MB3+ MB3- MB4/4 MB3c MB4/4c**

**20**

**10**

**2**

**0**

**0**

(tested with cosmic rays)

18

10

2

0

0

# Chambers sent to CERN

**18**

**10**

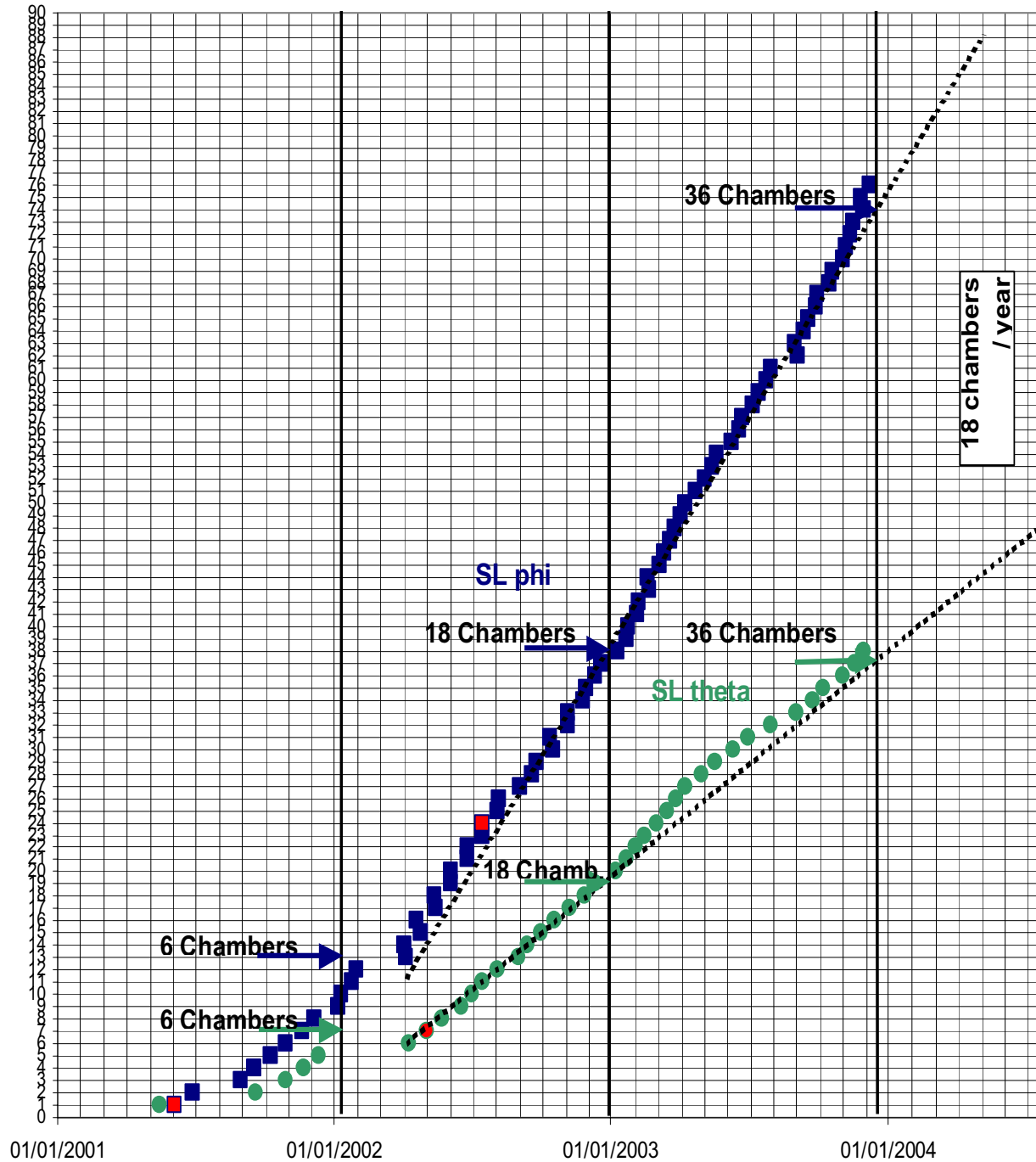
**2**

**0**

**0**

# Chambers from built SL end 2002: 18 (17)

# Chambers from built SL end 2003: 36 (35)



Milestone of 36 chambers  
achieved at:

end November 2003

Planning for end 2003:

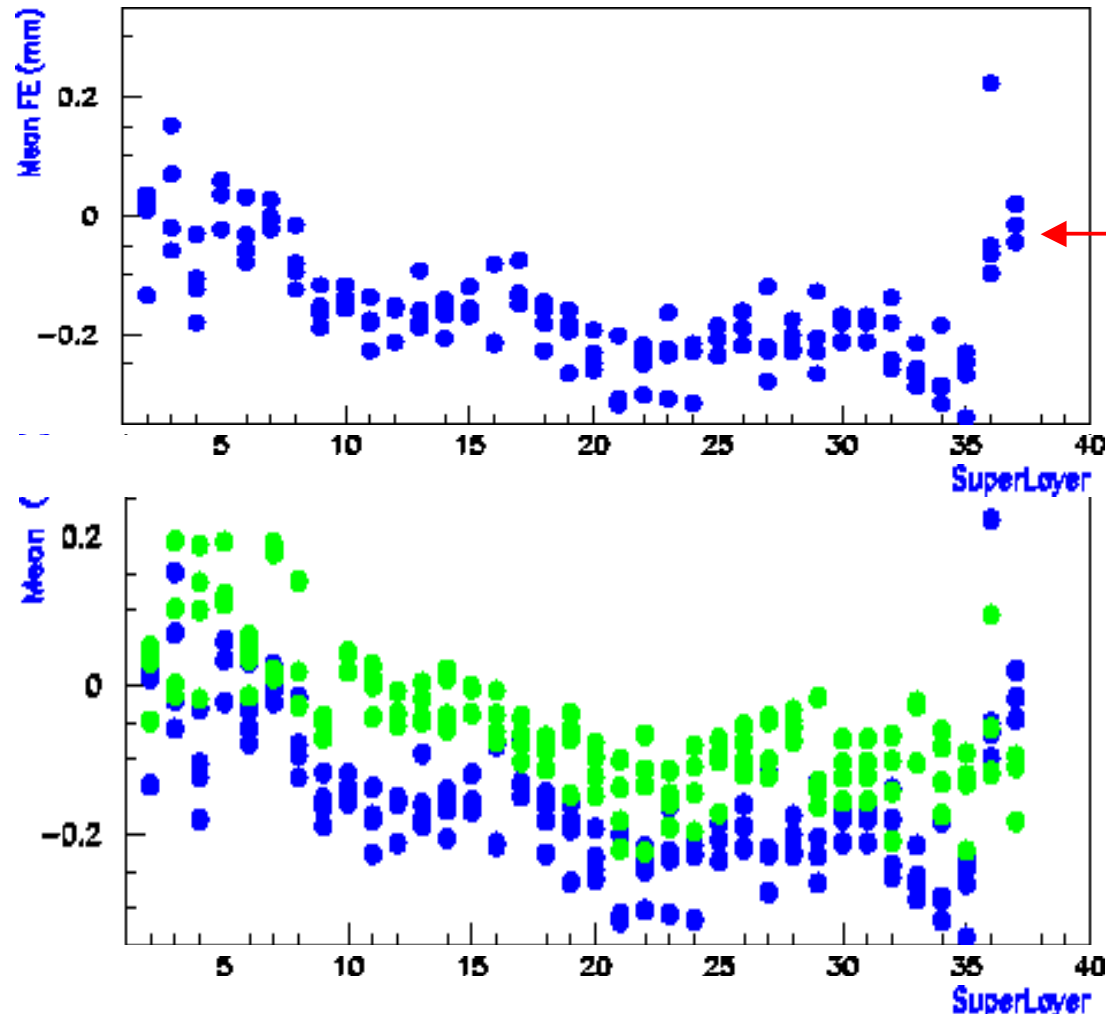
> 38 chambers



# Measurements

THETA

Mean wire position



Reference system modified for Theta FE side to reduce offsets from the nominal position

Theta FE  
Theta HV

CMS NOTE:

Study of the internal alignment of the CMS Muon Barrel Drift Chambers using Cosmic Ray Tracks



## *Materials for chambers*

Recently we got: 25k end plugs, 25k cathode plastic inserts, 10k crimping blocks

Critical item: HVB

HVB 16 328 boards (6.8 chambers, 3.4 months)

HVB 20 14 boards (7.0 chambers, 3.5 months)

	<b>Aachen</b>	<b>Madrid</b>	<b>Torino</b>	<b>Padova</b>	<b>Global</b>
Cathode contacts	<b>-3240</b>	<b>-3572</b>	<b>-844</b>	<b>+23828</b>	<b>+16172</b>
Strip FE contacts	<b>-2584</b>	<b>+84</b>	<b>-500</b>	<b>+27252</b>	<b>+24084</b>
Strip HV contacts	<b>-1784</b>	<b>-2616</b>	<b>-500</b>	<b>+28984</b>	<b>+24084</b>
Bus bar	<b>-500</b>	<b>-200</b>	<b>+500</b>	<b>-1000</b>	<b>-1200</b>



## Material for chimney chambers:

	<b>Need</b>	<b>Received</b>
Phi cathodes	2320 (8 Phi chimney SL)	100%
Al plates	30 (MB3c) + 20 (MB44c)	0%
Honeycomb	2 (MB3c) + 2 (MB44c)	0%
C profiles	16 (8 Phi chimney SL)	100%
L profiles	8 (theta MB3c)	100%
HV covers	2 (theta MB3c)	100%
FE covers	2 (theta MB3c)	100%



## *Conclusions*

- #SL: 111 , #Chambers from built SLs: 37
- The production rate in 2003 was 20 chambers/year
- 2 MB4/4 chambers built and delivered to ISR
- Material flow: new delivery of contacts and bus bar to be scheduled