

# MB Production Status @ Aachen



# Chamber Production Status @ Aachen

Status of 16.09.2005

Production Step	No. of SL	Full production	Need for installation (excluding spares)
Mechanically finished	<b>214 SL</b>	214 SL	190 SL
Fully assembled with HV + FE	<b>198 SL</b>	93% of full prod.	100% without spares
Fully tested SL	<b>197 SL</b>	92% of full prod.	100% without spares
Material available for	<b>208 SL</b>		
Chambers completed	<b>61</b>	62 MB1 + 11 Feet + 2 chimney = 75	58 MB1 + 10 Feet + 2 chimney = 70
Chambers to be glued	<b>5</b>	88% of full prod.	94%

Chambers at CERN = 49 MB1 + 10 Feet (all regular) = 59 chambers

Last shipment of 7 chambers was 18.07.2005

Next shipment January 2006: 8 MB1 chambers (incl. 1 special one-sided HV)

# Some Remarks

- **Chamber assembly** estimated to finish by March/April 2006  
Chamber **deliveries to Cern**: (1) January (2) March/April 2006  
**Spare chambers** also to Cern (how to "store" spare chambers?, repair trials)
- **Mechanical workshop**: now working on chamber assembly and drift velocity monitoring chamber → see talk Georg Altenhoefer
- **Assembly & tests**: recent 2 SL have higher (than average) number of dead cells (problems with strips and glue). Develop further repair skills...
- **Assembly crew** still working at either Aachen or ISR → impact on timing
- MB1 chambers **at the ISR**: HVB mostly exchanged, testing ongoing (HV problems being fixed after HVB exchange)
- For assembly of all 214 SL material is needed in ~8 weeks

# Material Status

Material item	Requested quantity 27.07.05	Delivery from ISR 01.09.2005	Still needed (incl. Spares) 15.09.05	Excess	Number per SL	
					-	-
Front-end Bord (FEB) Standard-16	91	22	69		11	13
Front-end Bord (FEB) Standard-20	0	0			1	1
HVC 16-channel	153	379	155 for Aachen	160 + 64	11	13
HVC 20-channel	0	0		82	1	1
LV feedthrough	0	0			1	1
Slow Control bus bar _	10	6	4		1	
Slow Control bus bar _	7	3	4			1
Flat I2C Predecode conn. (8-pins) _	0	0			1	
Flat I2C Predecode conn. (8-pins) _	0	0				1
Signal Feedthrough 4 channels	0	0			1	1
Signal Feedthrough 16 channels	35	0	35		12	14
Slow Control feedthrough	0	0			1	
Output & P. S. flat cable 40-pins	0	0		55	12	14
Output & P. S. flat cable 10-pins	0	0			1	1
Testpulse-feedthrough w. splitter - standard	34	44			3	3
Testpulse-feedthrough w. splitter - special	1	1				1
Cu-protection for slow control feedthrough	0	0			1	1
CuBe ground contacts FE-cover	110	110				
FE-cover	2 theta + 1 phi	0	2 theta + 1 phi		1	1
Plastic clam b to hold HV cables	124	0	124		12	14



# MB1 Commissioning Data: No. Dead Cells

- Goal: compare chamber performance at production site & ISR (mostly without minicrate) with commissioning performance (with final readout and final environment)
- Start by comparing number of dead cells in commissioned MB1 chambers
- Use Marco Zanetti's analysis (see <http://cms.pd.infn.it/commissioning/> & Marco's talk)

Sector	Chamber ID	Dead cells in AC Traveller	Commissioning result
02	028	Phi1: L2C01, L2C30	SL1: L2C01, L2C30 <small>from timeboxes, not yet in summary</small>
03	009	Theta: L4C28 Phi2: L1C20	SL2: <b>L4C27 (?)</b> SL3: L1C20
04	034 <small>Confusion in No.</small>	Phi1: L3C18 Theta: L4C45, L4C46	SL1: L3C18, <b>L4C05</b> SL2: L4C45, L4C46
05	016	Theta: L1C50	SL2: L1C50
06	013	Phi1: L3C03	SL1: <b>L1C45</b> , L3C03
08	010	Phi2: L2C07, L2C47	SL3: <b>L2C06 (?)</b> , L2C47
09	014	-	-
10	015	Phi1: L4C3	-
11	017	-	SL1: <b>L2C22 ineff.</b>
12	020	-	To be done

# MB1 Commissioning ctd.

- Before commissioning: 12 dead cells in 9 chambers → av. 1.3 dead cells/chamber
- **After: 3 additional dead cells appeared** (assuming that C27 and C06 are "counting problems") → **av. 1.6 dead cells/chamber**
- **To do: Find out the reason - slow control, HV, FE, connector?**  
Hopefully they can be cured
- **Until then, which information to enter in the chamber traveller?**
- Check for other new effects (missing cathodes, noise, "strange new effects" as reported by Marco yesterday)
- In general: chambers seem to be more noisy