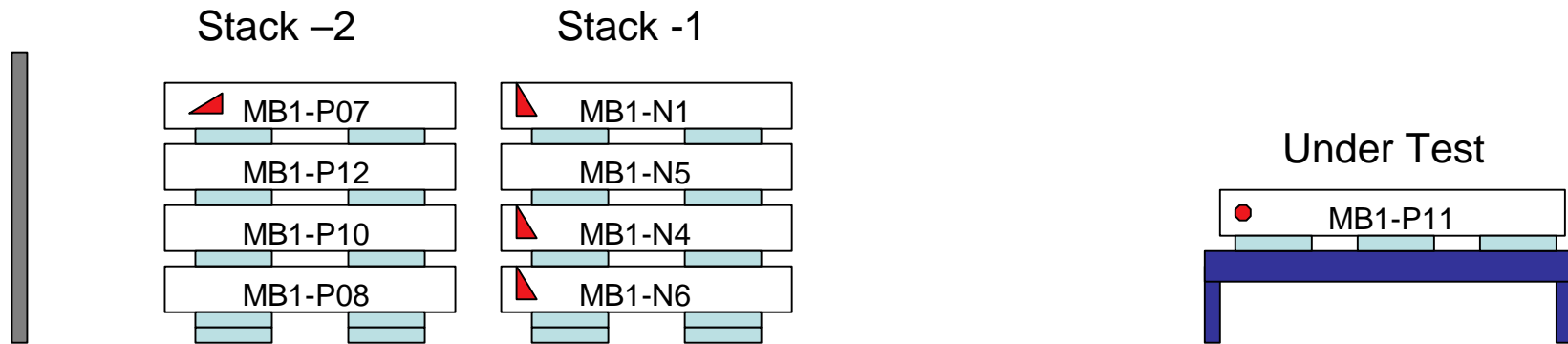


# ISR Work Progress Report

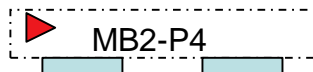
CMS Week June 2nd 2003

A. Benvenuti  
INFN Bologna

## Chamber Stacks Layout In I3-I4 Tunnel (part 1)

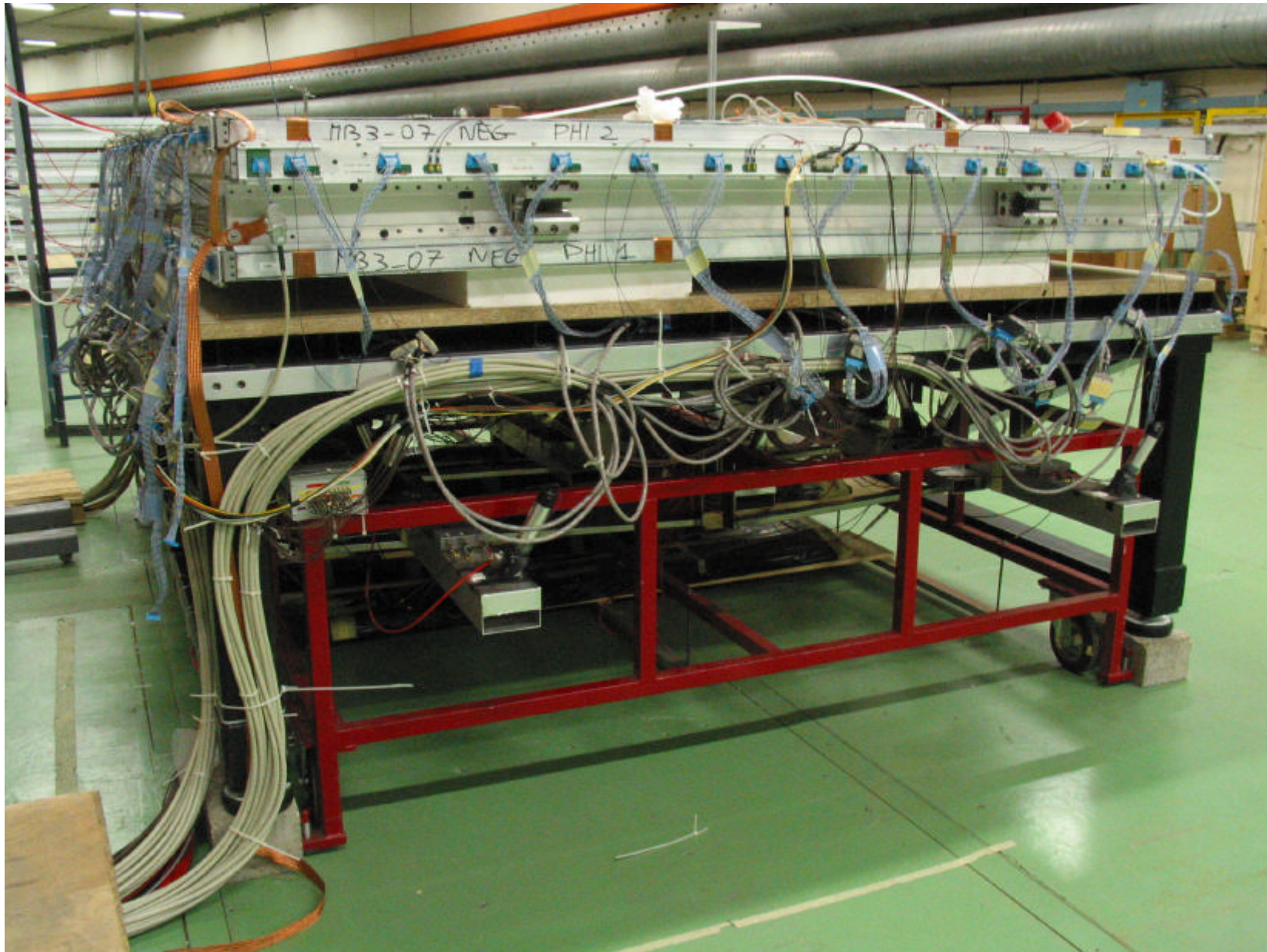


- All chambers under Gas
- Space for moving chambers between table and Stack -1



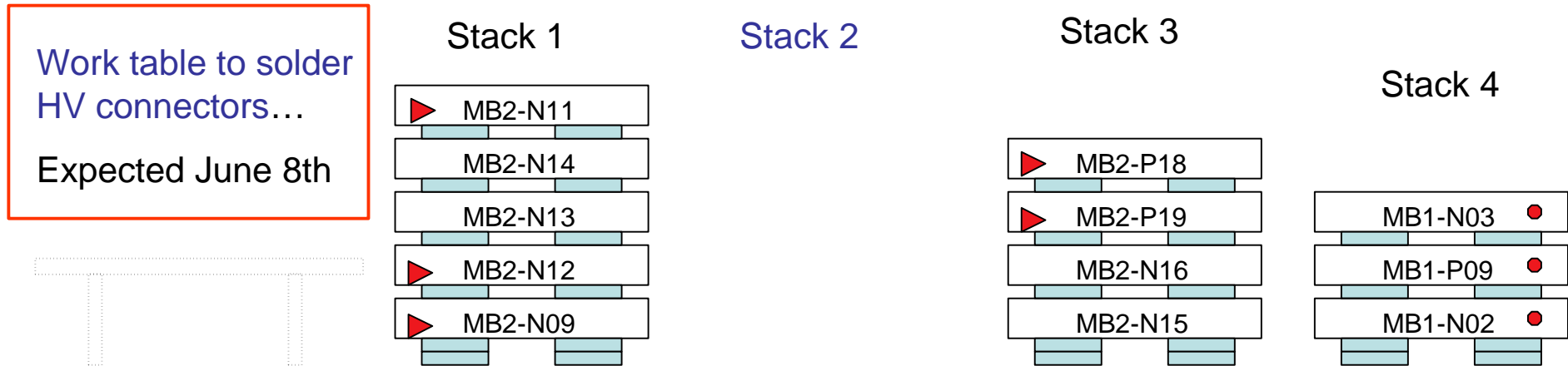
On Alignment bench

- ▴ Chambers with DCS problem
  - ▴ Front-end board problem
- SL must be opened to fix problem



Chamber can be moved with simple supports through the alignment passages  
Cabling and access to front-end much easier/faster

## Chamber Stacks Layout In I3-I4 Tunnel (part 2)



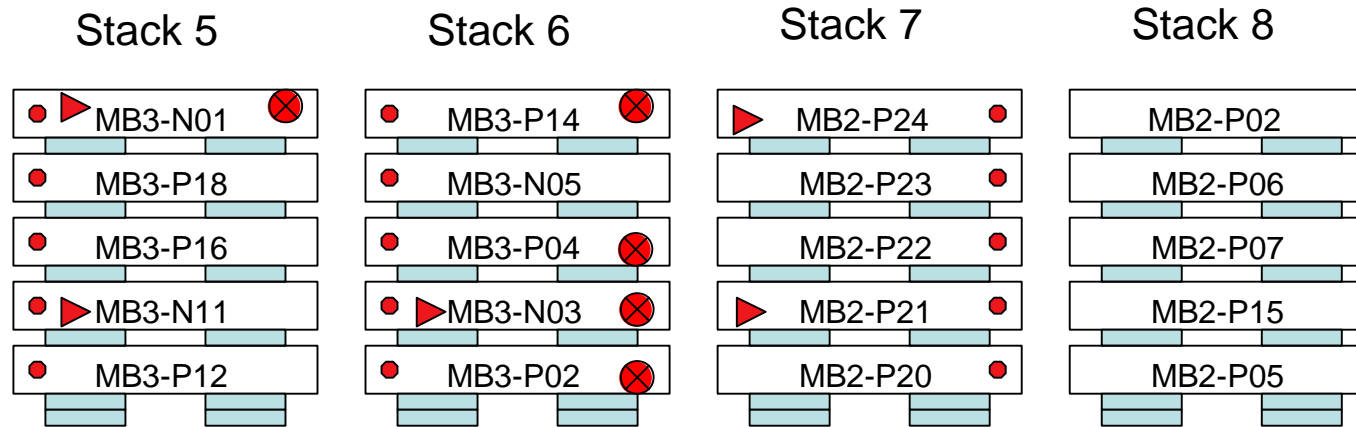
### ▶ HV problems:

- MB2N11: Phi1 B connector clicking badly
- **MB2N12**: Phi1 A short, Phi1 B OVC at 3000V
- MB2N09: Phi2 B OVC
- **MB2P18**: Phi2 A wire Layer 1 e, wire Layer 0 d
- MB2P19: Theta B connector clicking badly, ground strap on DCS card
- **MB2N15**: Phi1 A short, Phi1 B OVC at 3000V, Theta strip Layer 2 g
- **MB1N03**: discharges inside Phi2 B connector **FIXED**
- **MB1N02**: Phi1 A layer 0 board e (at acceptance test) **FIXED**

- Chambers under HV

**MB2-P18** used for dressing exercise with Prototype Minicrate

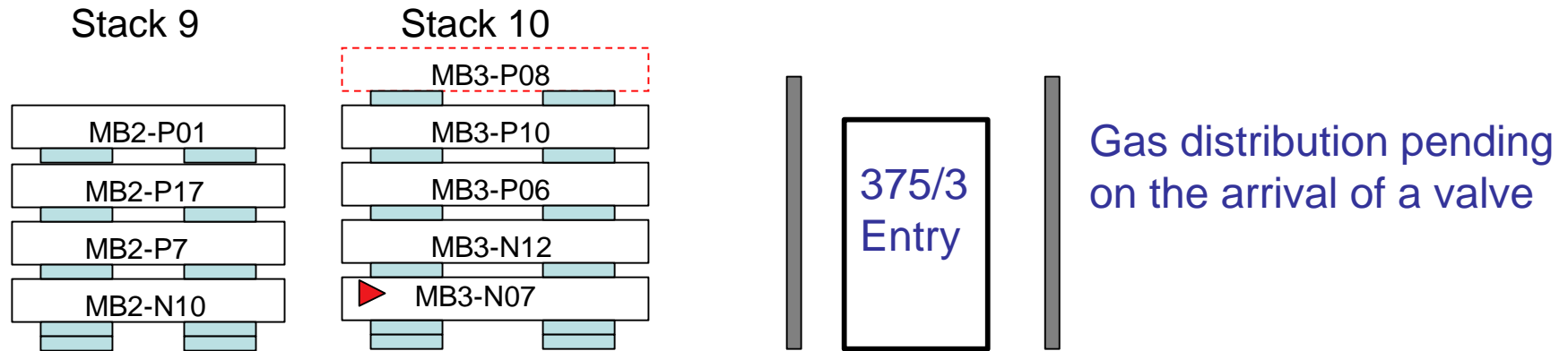
## Chamber Stacks Layout In I3-I4 Tunnel (part 3)



- Chambers under HV
- ⊗ Gas Problems
  - One wrong connector glued to gas cover (bad thread) P02
  - 7 gas caps glued to gas cover
    - MB3 N1 (Phi2, 2), P14(Tht,1), P4(Tht,1), N3(1 on each SL)

- ▶ HV Problems:
  - **MB3N01**: Phi1A cathode L2 c1 c-d
  - MB3N11: Theta B clicking badly
  - **MB3N03**: Phi1 A L0 board e, Phi2 B wire short Layer 3 board a
  - MB2P24: Phi2A Clicking badly
  - MB2P21 Phi2A OVC

## Chamber Stacks Layout In I3-I4 Tunnel (part 4)



### ▶ HV Problems:

- MB3N07: Phi1 B OVC and badly clicking

12 MB1, 23 +1 MB2 , 15 MB3 = 51 Chambers today  
Shipments from CIEMAT and Aachen expected ~June 17  
Legnaro ??? ( give advance notice..)



Not much space left for additional stacks

Move MB minus to other side of tunnel (vacated by ATLAS)

Shelves for HV cables and Balance beams ready

## DT Chamber Status

- All Chambers are complete with RPC Pads (apart for MB2-1)
- All chambers are under gas flow (apart for dressing test / work)
- 20 chambers are under HV: 4 MB1, 5 MB2, 11 MB3
- Cosmic tests done on ~17 MB2, 5 MB3, 2 MB1 (+5MB1 Phi, 2MB1 Theta) with help of CSC technician for moving chambers.
- Scaler test (Chiara) on 12 MB1, 10 MB2, 10 MB3 + 4MB3Phi but stopped by gas problem, leak, on May 28th.
- MB1 front end DCS tested (Kerstin) => Leak test on 18 SL + cosmons.... MB2 have been tested at CIEMAT ???
- 5 Chambers with HV problems: MB2N12, MB2N15, MB2P18, MB3N01, MB3N11

## Preparatory Work

**Alignment** (full list to be prepared by Gyorgy):

- Alignment pins are missing on 1 MB1, 14 MB2, 8 MB3; 3MB2 have shorter pins. Replacement pins are available
- Alignment passages are often dirty, with a lot of white dust. They should be cleaned at the sites.
- Reference blocks should be cleaned of excessive glue:

5 MB1, 51 MB2, 13 MB3

should leak test again after cleaning ??

**Honeycomb frames:**

- Alignment passages should be checked, deformations observed in 2 MB3 chambers (lifting tool does not fit)
- Excess glue on alignment passages makes HV cables insertion difficult if not impossible, must be cleaned



## Chambers to be installed in 2003

YB + 2					
Sectors	+8	+9	+10	+11	+12
Services	Left (ZpB)	Right (ZpA)	Left (ZpB)	Right (ZpA)	Left (ZpB)
YB - 1					
Sectors	-8	-9			
Services	Left (ZmB)	Right (ZmA)			
YB + 1					
Sectors	+8	+9	+10	+11	+12
Services	Right (ZpA)	Left (ZpB)	Right (ZpA)	Left (ZpB)	Right (ZpA)

	DT Type										Total	
	Positive		Negative		Left		Right		Unisex			
	Need	ISR	Need	ISR	Need	ISR	Need	ISR	Need	ISR		
MB1	10	6	2	6							12	
MB2	10	16	2	8							12	
MB3	10	9	2	6							12	
* MB4/9,11								URGENT		5		5
* MB4/10			URGENT		2		2					4
MB4/8,12					2		3			Torino		5
Total	30	31	6	20	4		5			5		50