

CMS Week OPENING session
Dec. 2004

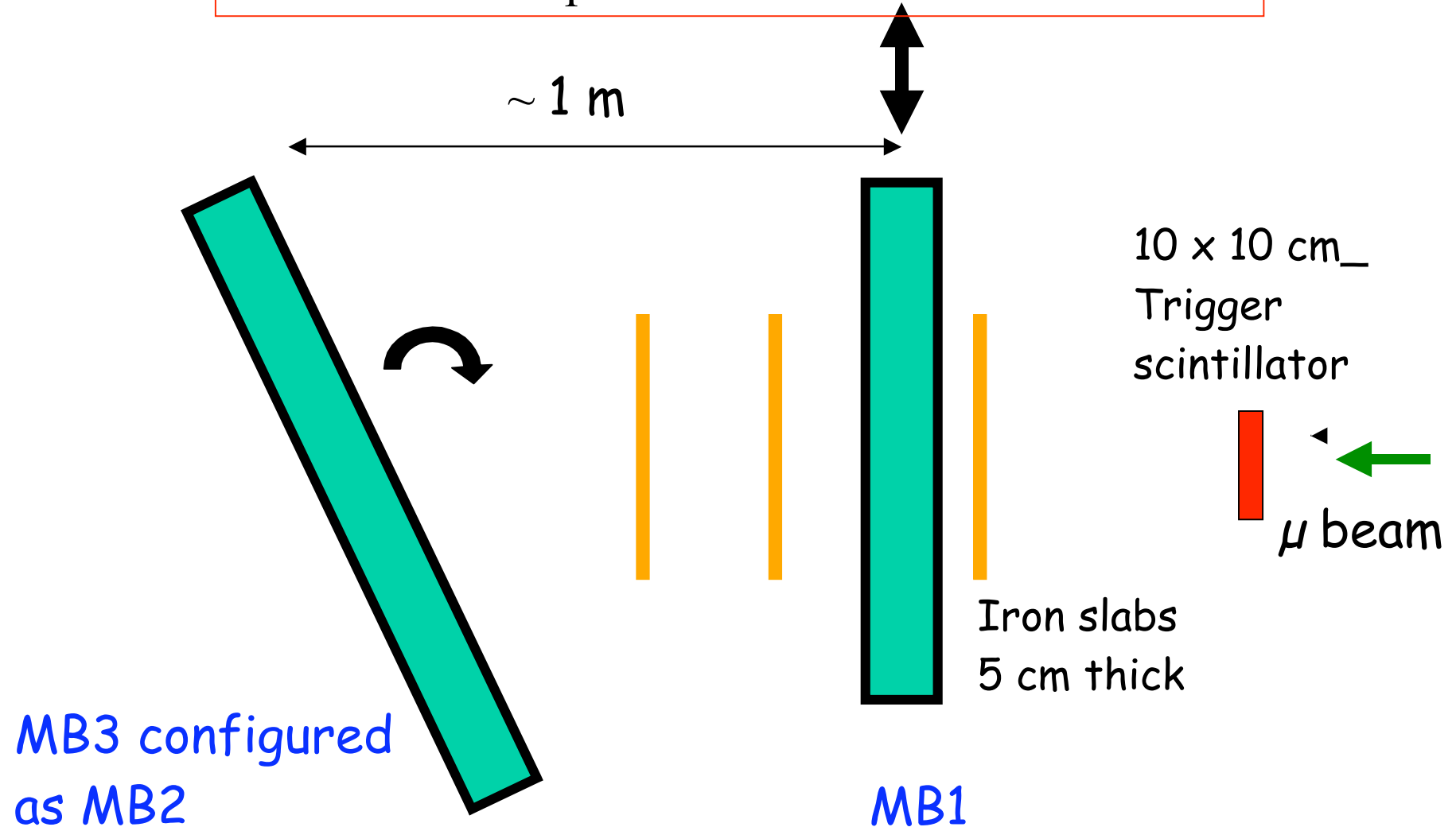
DT test beam
Detector-PRS meeting in Torino
Status :sites,HVB,Minicrates
MU Barrel Installation
Alignment

TEST BEAM OCTOBER 04

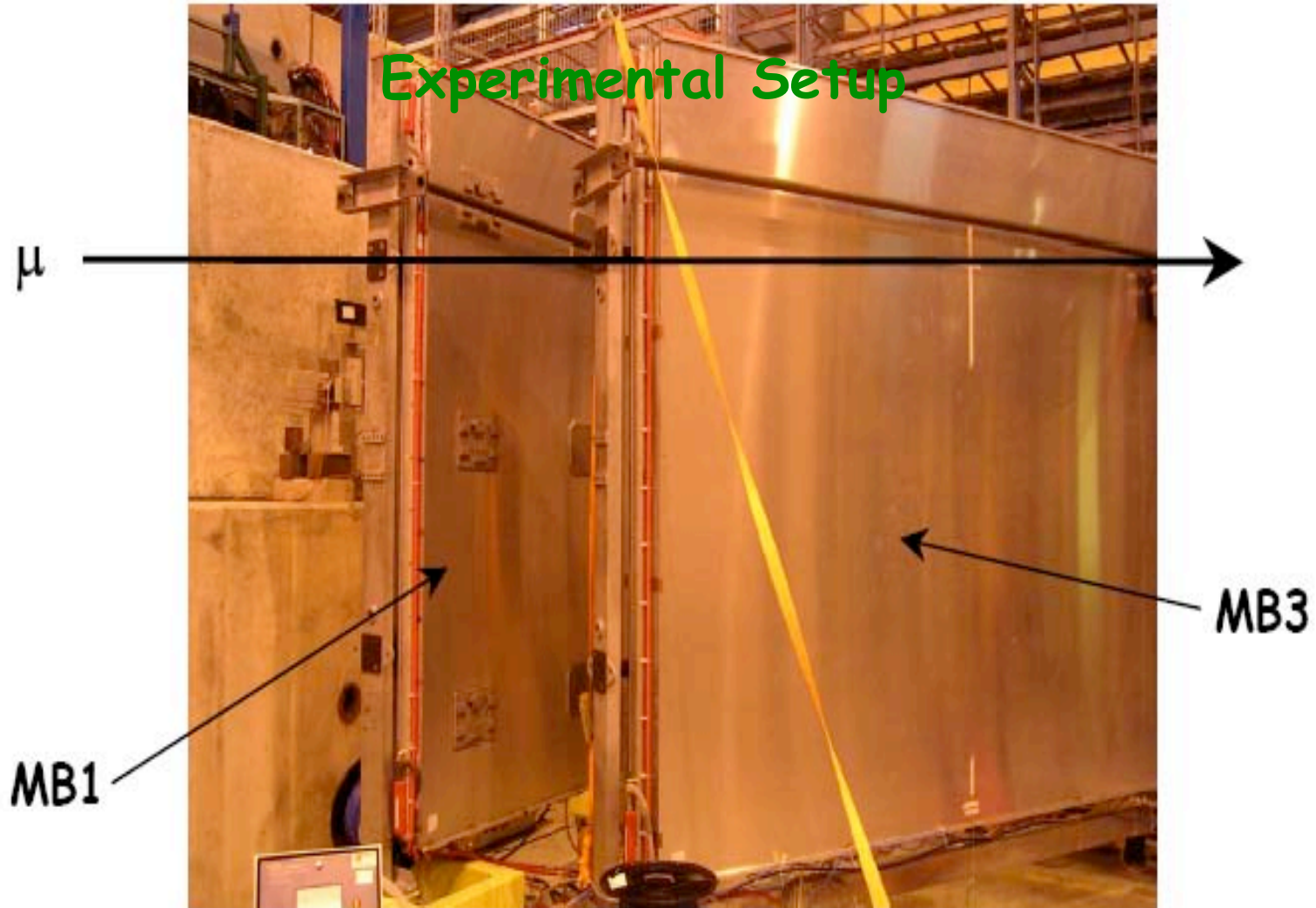
- **Two chambers** with front-end electronics for read-out and **Local DT Trigger + Phi Track-Finder + Wedge Sorter** were exposed to a 40 MHz bunched muon beam at CERN at the beginning of October.
- The chamber configuration reproduced the trigger conditions of a MB1 and a "fake" MB2 at wheel 0 in CMS (see picture next slide)

A Sketch of the Experimental Set-Up

Rotation and displacement to simulate bent tracks



Experimental Setup



FIRST RESULTS ARE GOOD :ANLYSIS GOING ON

Well attended meeting MU Detector –PRS
For PTDR and Detector Commissioning
in Torino on 16 and 17 of November
Agenda and presentations can be found @

<http://newton.ph.unito.it/muon-prs/>

DT STATUS

Sites :

Aa,LNL,CIEMAT going on , **some concern for HVB and small parts availability.**

Torino assembled 11 SL ,the second table is ready.

Planned 5 ch (10 SL) by end 04

No chamber assembled yet because of missing details of the assembly table,ready for Christmas ?

First MB4 chambers are needed at CERN for training and Alignment in the second half of Jan.

MINICRATES

CIEMAT

42 read out MC available, in production 12/month

COMPLETE MINICRATES

19 by Dec 20

35 by first week of February to equip YB+2

(10 from Bologna, started in Nov., and 25 from Legnaro)

At current rate of 12/month (expected 14~16)

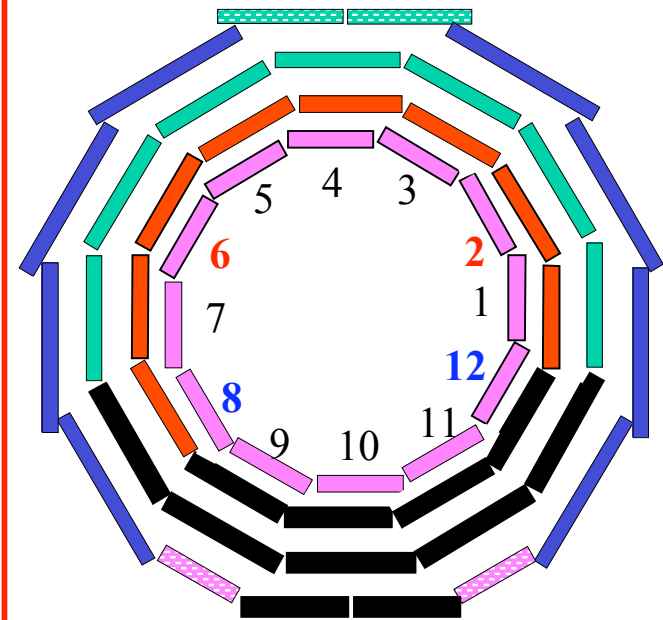
in Feb.: 12~14 Minicrates **behind schedule ~ 1 month**

**Urgent to find way to speed up production
(this week at the TB)**

FIRST BMU Installation July 04 (YB+2)

11 chambers

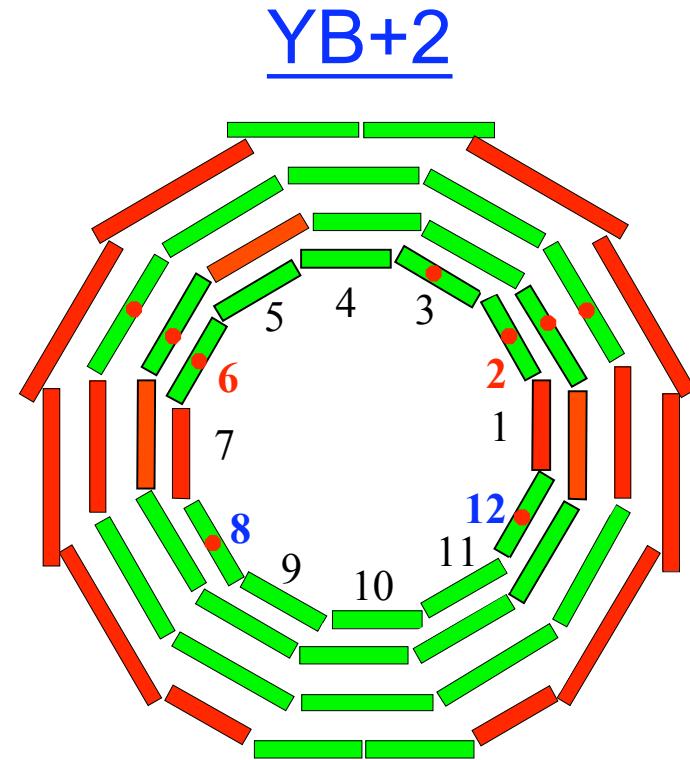
- MB1 installation postponed until supports are mounted and HO related work is completed (**September**)
- ==> **11 Chambers installed** (the black)
4 MB2 (9 to 12), 5 MB3 (8 to 12) 2MB4 (10)
- The most problematic sectors for equipping installed chambers with MiniCrates are Sectors **2, 6** and **8, 12**.



THIRD BMU Installation NOV.04

12 CHAMBERS

- From November 25th to December 3rd we have installed 12 chambers:
3MB1, 5MB2, 2MB3, 2MB4/4
- One of the RPCs for MB2 Sector **5** has to be rebuilt. This chamber will be installed next year (February March)
- **5MB1, 2MB2 and 2MB3** were installed with Minicrates (indicated with red dots)
- The MC were checked with the boundary scan program at SX5 (M.Zanetti, R. Travaglini, J.P.Pelayo)



33 chambers installed
Dots = Minicrates

- After installation all DTs are kept under gas flow and, on a rotational basis, under HV (up to 10 DTs)
- Temporary (serial) gas and HV distribution





INSTALLATION PLAN UP TO SEPTEMBER 05

YB+2	Complete	36 + 6 MB4 To
YB+1	Complete	36 + 6 MB4 To
YB0	Half positive	18 + 3 MB4 To
YB-1	2 sect.	9
YB-2	2 sect.	9

**123 chamber ~ half of
the lot (installed 32)**

**15 of them from
Torino**

123 Minicrates

90 chambers = 45 working days at 2 chambers/day

SUMMARY:

Lot of progress has been made:

**JUNE :no MB4 from Torino, no HVB,
no chamber installed, no minicrate**

**Installation is going on smoothly,with improved tools (motors)
9 chambers have been installed with Minicrates
and thanks to IHEP Beijing colleagues
the mass production of the NEW HVB is now a reality.**

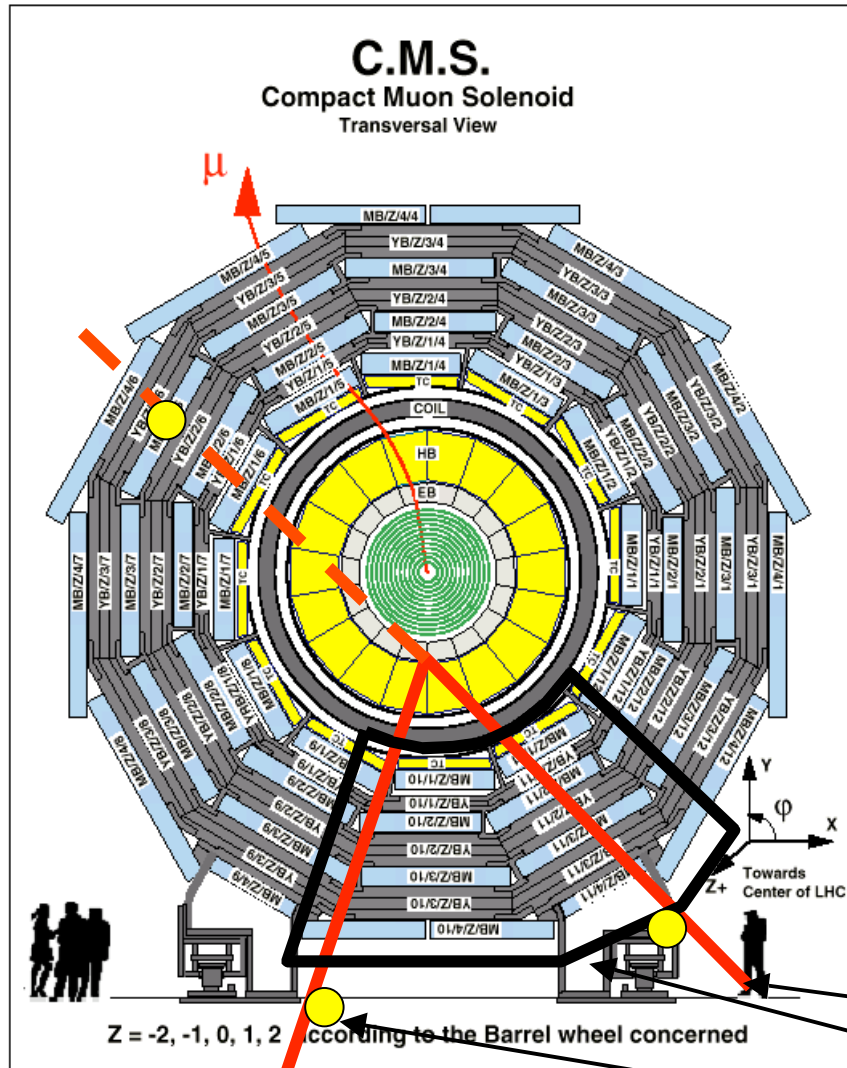
**The long awaited production of chambers in Torino and
of Minicrates started.**

But we are still not out of the emergency, no buffer for the three critical items has been created yet, and the schedule is still uncertain and highly exposed to any type of accident

**Cabling of the wheels is another concern : six months of work
At the same time as chamber installation.....**

Cables pass in front of the Mu stations and can be put down only after all the DT+RPC packages are inserted in the iron and the Minicrates in place.

ALIGNMENT: Magnet Test Configuration



~1/3 of the system
 Bottom lines (MB 10/11 sectors) fully instrumented (see next transp.)

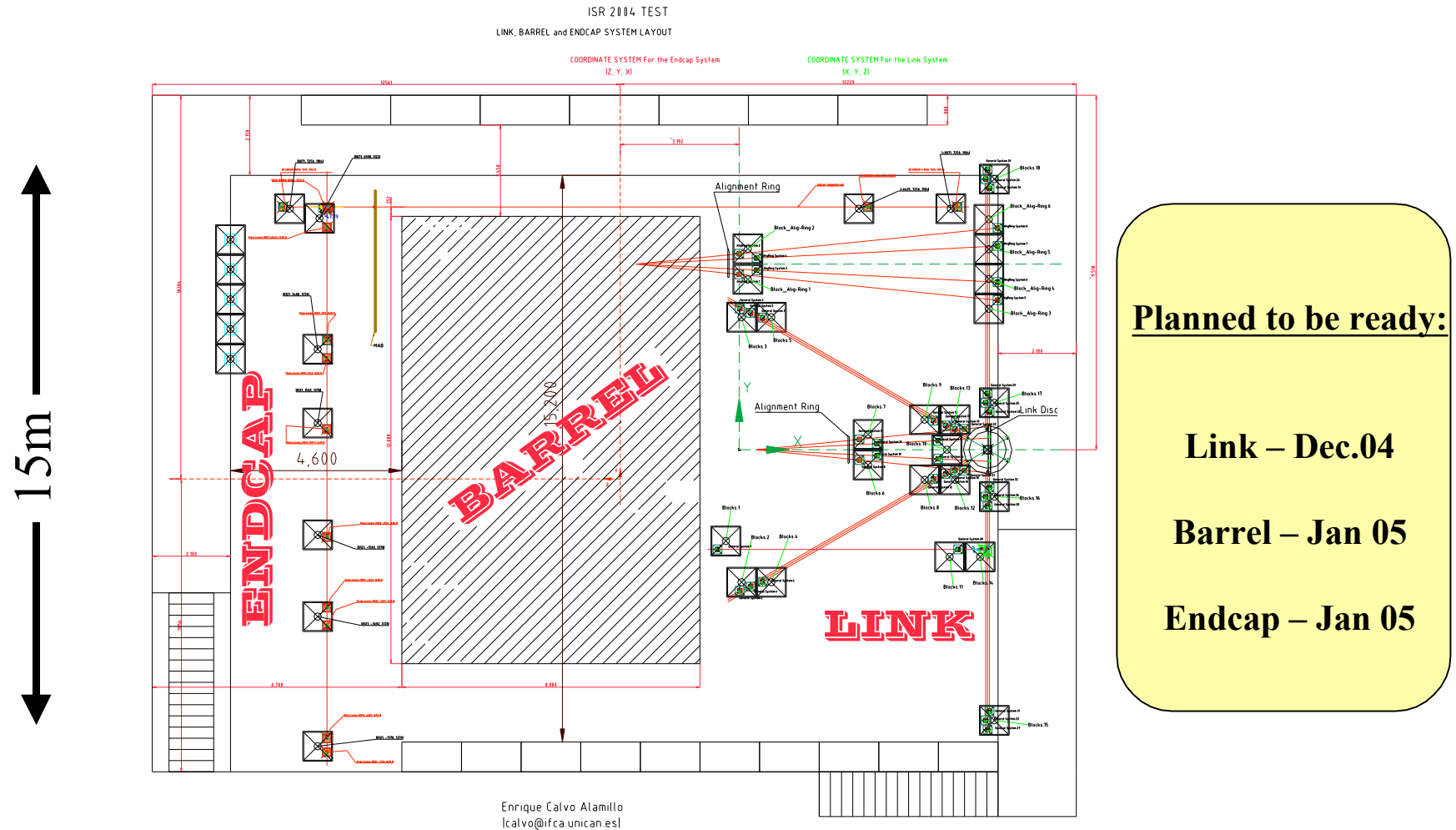
Extra line(s) in the upper part to close Endcap (1 or 2) +/-Z axial-SLM loops and cross-check and compatibility of link internal meas.

AR Tracker fixations and +/-Z connection to be worked out (extra Si box & cabling test)

Equip sectors 10 and 11 in YB+1 and 2 (Plans in the MU TB)

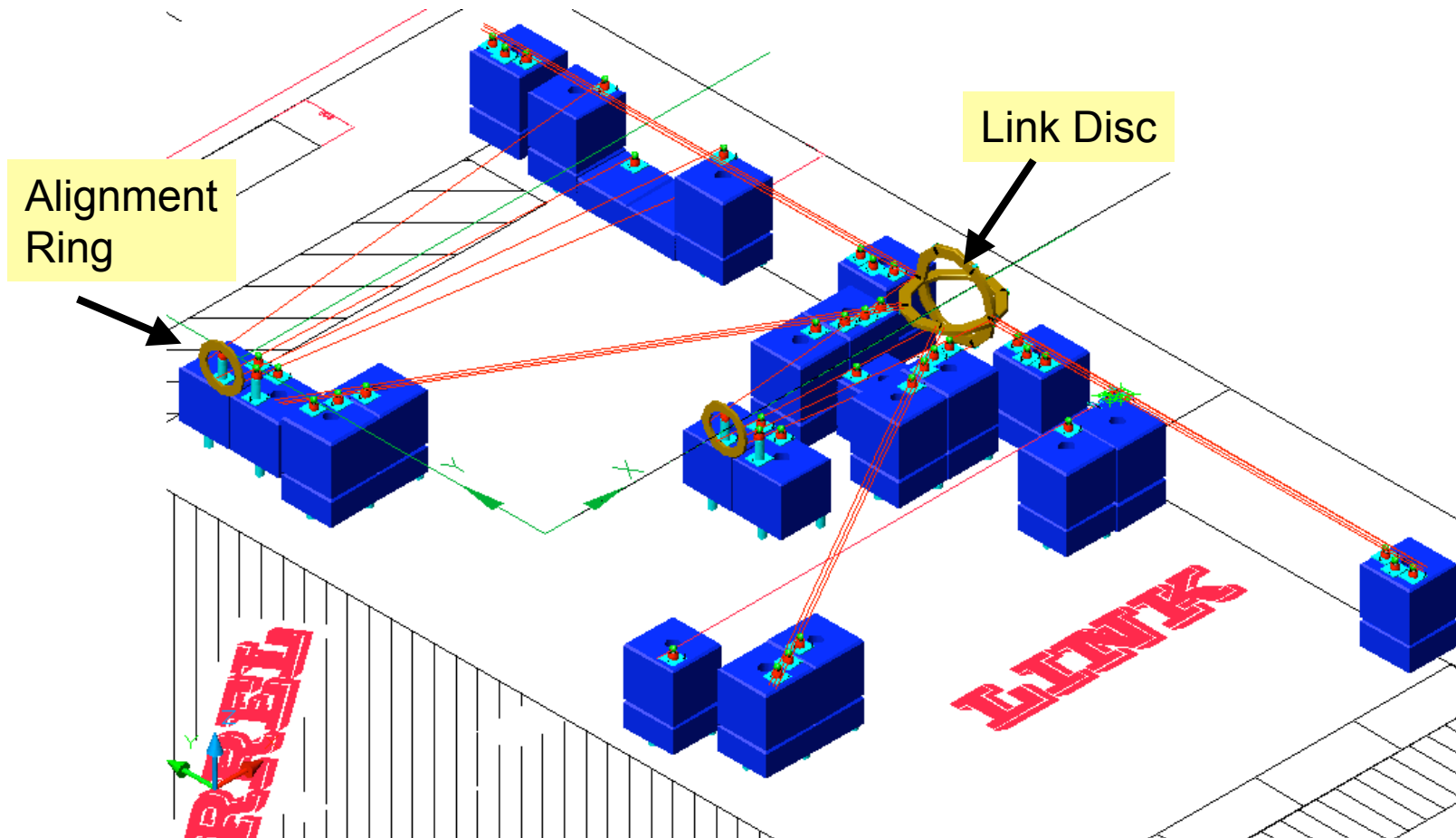
- Link line
- Barrel zone
- Endcap transfer line

MT setup for MAB and LINK calibration: ISR zone



Link calibration zone

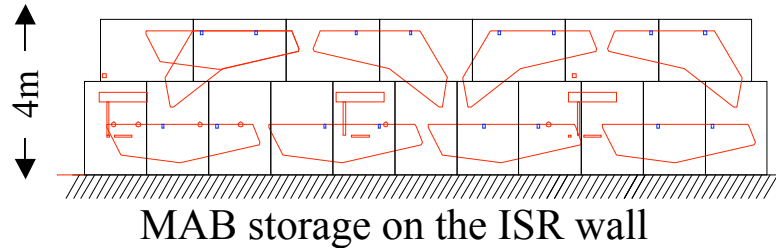
Alignment rings come from Tracker. Status: delivery in February



Barrel calibration zone

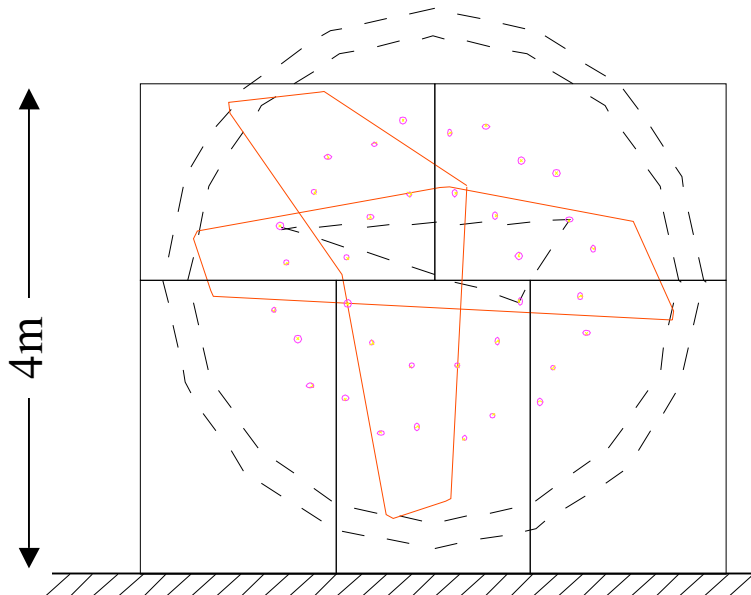
MABs are all delivered, assembly and cabling going on (CERN/Debrecen)

Calibration: same procedures as for DT chambers (successful)

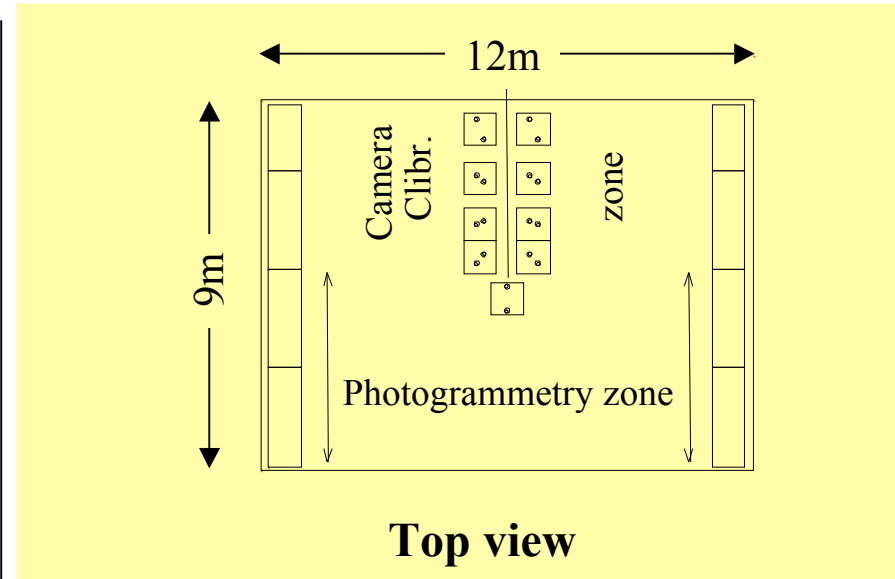


MAB storage on the ISR wall

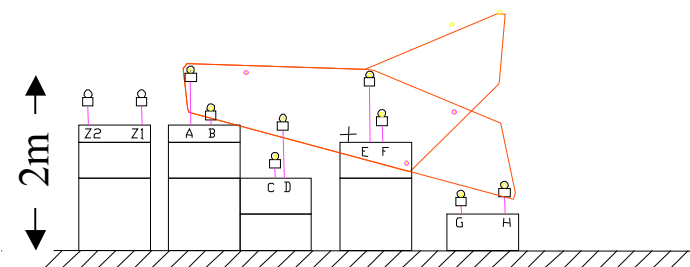
It worths a visit!



Photogrammetry zone



Top view



Camera calibration zone