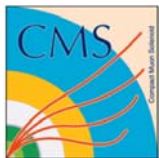


# cabling of YB+2 and YB+1

**CMS week - TB – 6.12.2005**

Fabio Montecassiano

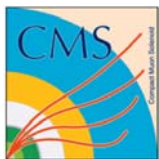
*INFN PD @ PH/CMM*



# Contents



- YB+2 & YB+1 cabling items
- General status of YB+2
- Rack side
  - DT HV racks
  - Trigger racks
  - LV racks
- Actual works and pending requests

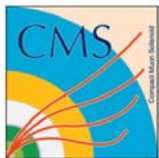


# YB+2 & YB+1 DT cabling items - draft



I'm remapping cables in order to have less extra-Lenghts -> there are cables to be done by IHEP, CIEMAT and external firm.

MB cables	Cables to be done	DETECTOR / RADIAL		PERIPHERAL		RACK	
		Items missing / to be installed	Cabling/ Plug conn.	Items missing / to be installed	Cabling by	Items missing / to be installed	Cabling by
HV		Y ground connector	IHEP/ IHEP		IHEP	<ul style="list-style-type: none"> <li>•Cables's Support (EB, next w.)</li> <li>•Rack ladder (MW, ordered)</li> <li>•Cable chain PP (EB)</li> </ul>	HOME
LV.mc	CIEMAT		IHEP/ IHEP		IHEP	<ul style="list-style-type: none"> <li>•"rastrelliere" for cables (CW)</li> <li>•Racks's front tray (DD,MW)</li> <li>•Rack ladder (MW, ordered)</li> <li>•EASY crates or make-up</li> <li>•Cable chain PP (CW, MP)</li> </ul>	HOME
LV.fe	IHEP		IHEP / HOME		IHEP		HOME
CA.tr & Ca.ro	DAETWYLER		IHEP/ IHEP	An cross-check on how I'm going to devide peripheral c-tray would welcome. L spacers would be useful	IHEP	<ul style="list-style-type: none"> <li>•"rastrelliere" for cables (CW)</li> <li>•Rack ladder (MW, ordered)</li> <li>•SC crates or make-up</li> </ul>	HOME
CA.veto & CA.sc	IHEP		IHEP/ HOME		IHEP		HOME
OF.ttc-mc & OF.sc	UNIFIBRE		IHEP/ HOME	<ul style="list-style-type: none"> <li>•Tubes(FM, ordered)</li> <li>•some BOTTOM boxes (DD)</li> <li>•TOP Small parts (LC) &amp; boxes (DD)</li> </ul>	HOME & IHEP	<ul style="list-style-type: none"> <li>•Parts for fibres' boxes (MR, LC)</li> </ul>	HOME

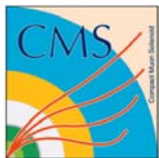


# General status of YB+2



## DT

- All **DT copper cables** of all DT chambers inside sectors from 7 to 11 installed. Sector 12 is under installation now. HV and signal cables done. LV under work.
- **DT Fibres:** S10 & S11 done. S9 began.
- **Racks side** of cables is still to be done.  
This is urgent, cables and fibres are in a dangerous situation.  
To be done as soon as possible by home institute technicians.
- **About test of cables.**  
Franco and others is doing this activity for DT. Result so far:
  - S10 all chambers (5) tested:  
1 veto cable not connected -> fixed  
Cabling ok.  
MB4 TR cables question solved (skew time of cables & mc tuning)
  - S11 mb2 and mb3 tested:  
TR cables inverted between mb3 and mb4 -> fixed  
MB2 and MB3 cabling ok



# General status of YB+2



## RPC

- S10 and S11 all cables (**HV, LV, sgn, dcs**) installed but a lot of connectors at detectors side are still not plugged because RPC group would like to perform more tests on these cables.
- Racks side is partially done for signal cables.  
To be completed as soon as possible by home institute technician
- **About test of cables** (from RPC group)  
Continuity test passed. Skew time on signal cables under progress.

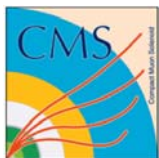
## HO

- They installed LV and HV cables for 2 RBX boxes (over a total of 6)

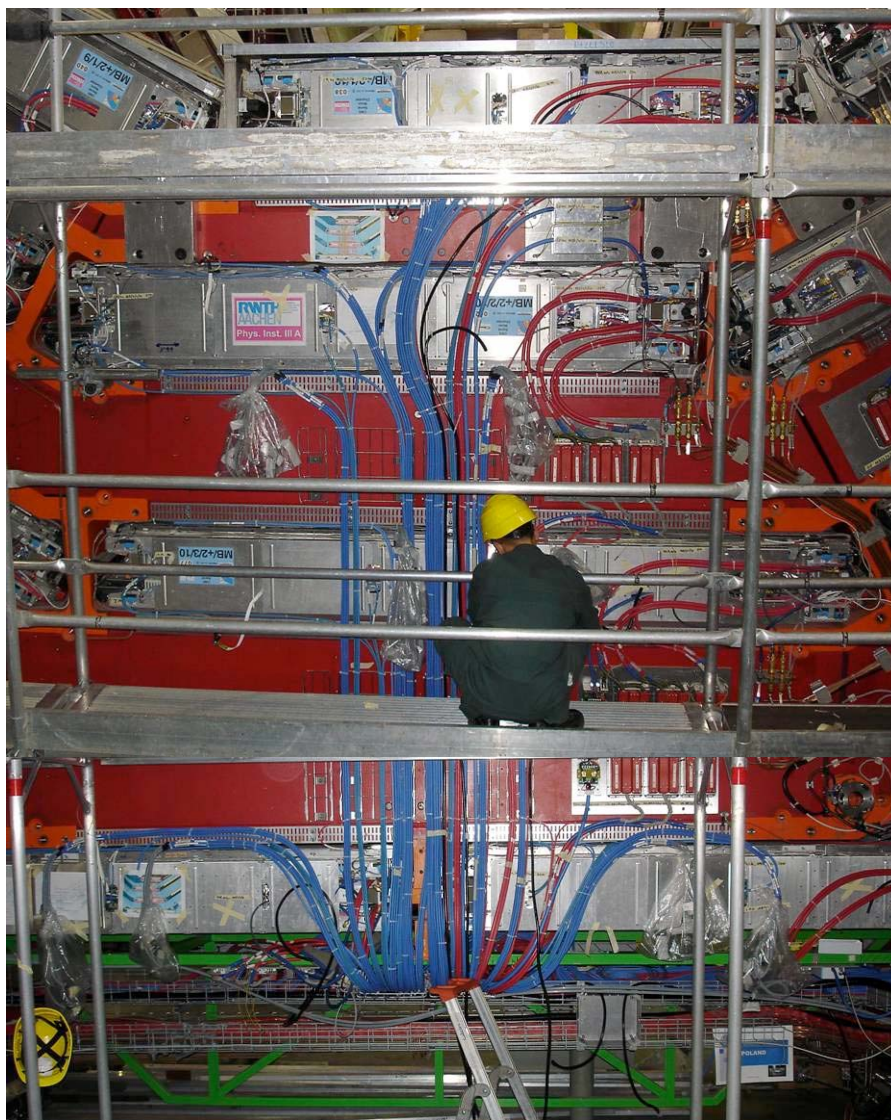
## ALIGNMENT

- to be done

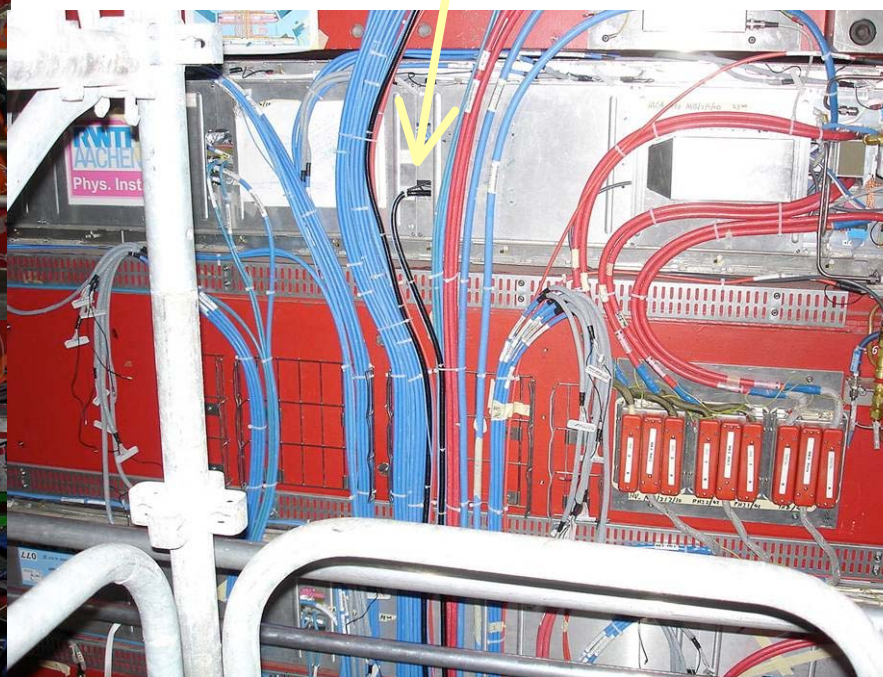




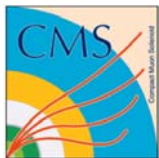
# Some Picture - Status of S10



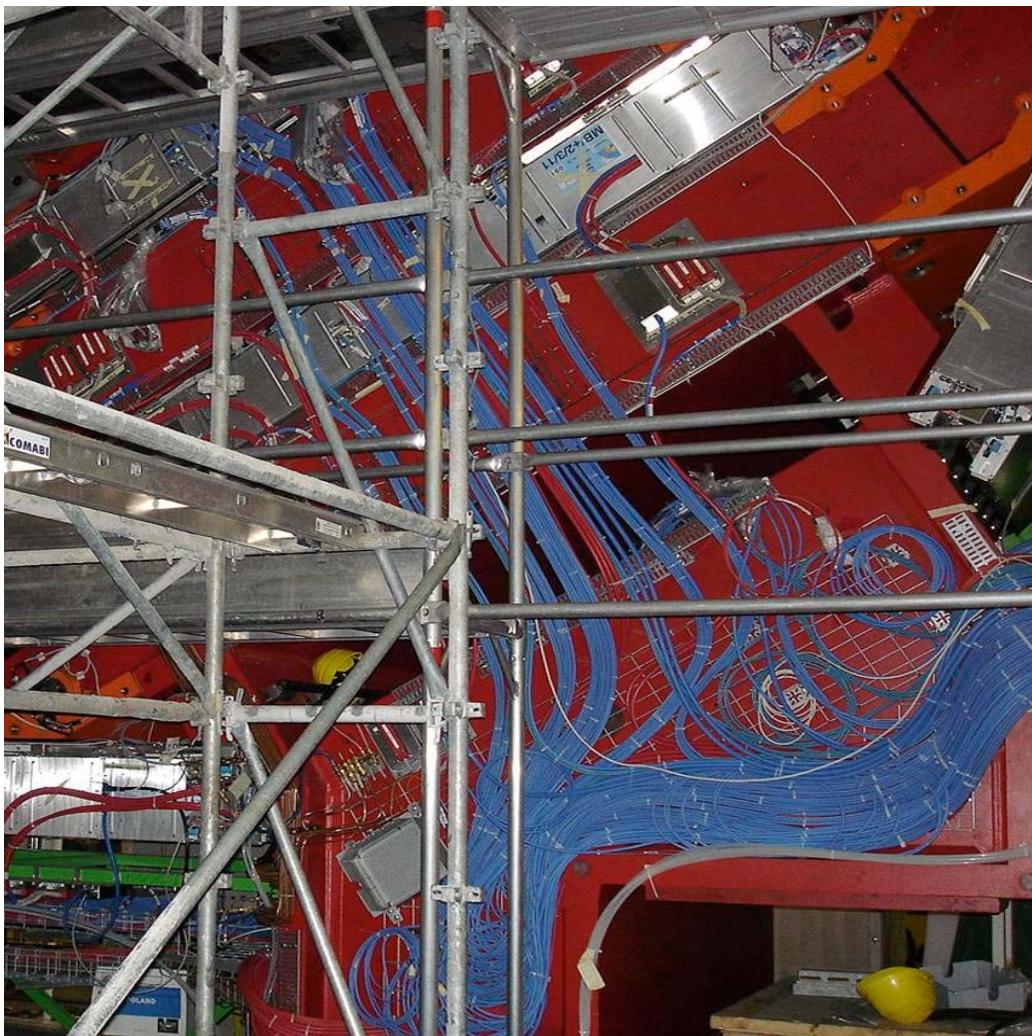
- Copper cables and fibers for both DT and RPC are installed.  
(The picture on the left was taken before the end of installation)
- Below a detail about how the fibers enter inside the MB2' minicrate



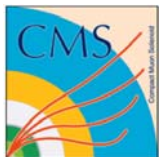




## Some Picture - Status of S11



- Copper cables for both DT and RPC are installed.
- The MB4 at S9 and S11 are now installed (picture is 3 weeks old).
- Fibers are installed.



# Rack side - DT HV racks



There are 2 racks ready to be finalized by HOME INSTITUTE technicians (X3J22 & X3A22)

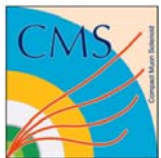


**X3A22: HV DT cables**



**X3J22: HV DT cables**





# Rack side - Trigger rack X2J22 to be finalized

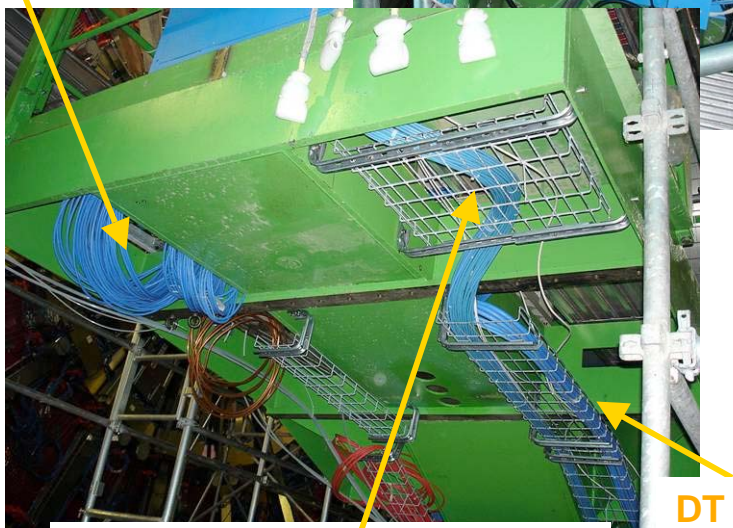


Box to store DT  
TTC fibres extra L  
(It can be extracted)

RPC sgn S10  
(support has to be installed)



RPC sgn cables S11



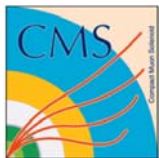
DT tr & ro 6 bottom sectors

DT LV S10



Link Board crate

RPC sgn cables S10

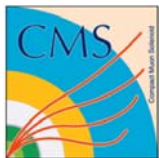


## Rack side - LV racks to be finalized



There are 2 racks ready to be finalized by HOME INSTITUTE technicians (X2J21 & X2A21)

X2J21- LV rack

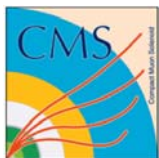


# Actual works

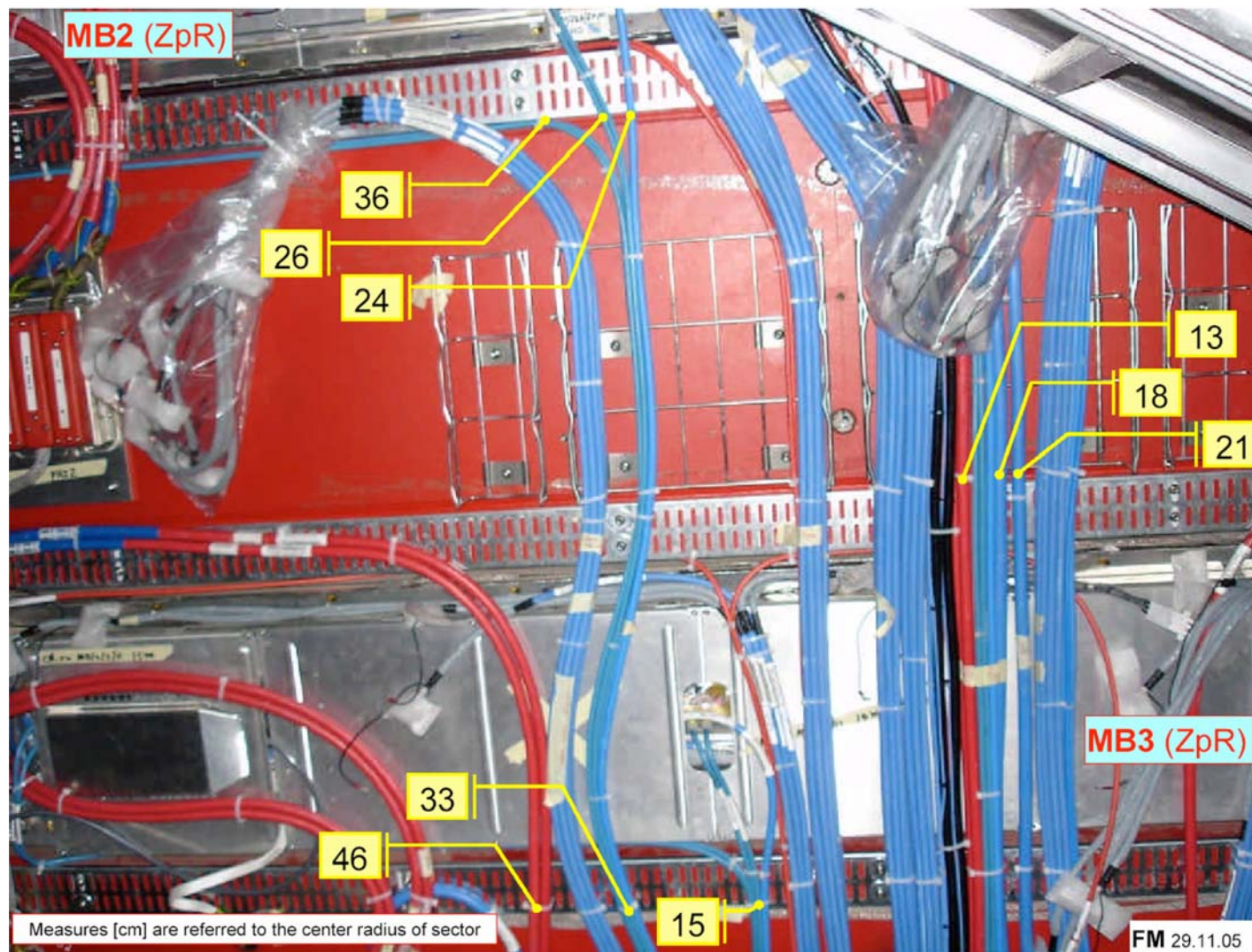


- Remapping of cables in order to have less extra-Lengths (**FM**, now)
  - YB+2 's TOP sectors cables installation docs (**FM**, now)
  - Preparing production of missing cables for YB+1 (**FM**, now )
    - **LV.fe, veto, long sc** cables to be manufactured by IHEP during XMAS (**FM**)
    - **LV.mc** cables to be manufactured by CIEMAT asap (**FM**)
- Installation of mesh and flex rail for the 6 top sectors near MB3 iron corner. They are needed before begin YB+2 top sectors (**Russian**, now)
- Preparing production of cables for YB+1 (**FM**, now )
  - **LV.fe, veto, long sc** cables to be manufactured by IHEP during XMAS for YB+1 (**FM**)
  - **LV.mc** cables to be manufactured by CIEMAT asap for YB+1 (**FM**)
- **URGENT**: cutting list for RPC cables needed to complet YB+2 (next week – no other activities are possible in parallel)
- **Short sc** cables (daisy-chain between chambers) missing to be manufactured by IHEP during XMAS for YB+1 (**DD**)
- About the drawing for installation of radial part.  
In order to let the new russian cabling team to work properly we have to prepare good drawings and pictures. The radial part is crucial.  
We cannot wait for a CAD design, it's too late (2 works week only before NY) so I prepared a doc made by snapshot over which I wrote some number.  
This should be verified and improved (Kerstin could make this ?)

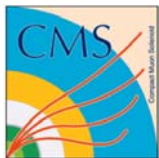




# A page from that doc which could substitute the missing drawings







# Pending requests...



- Alignment: the request for more racks U is still to be evaluated
  - PRR for long cables between UX and US
  - YB0 study – this is a huge amount
- (.... there are other requests and work to do)

but my time (more the the normal working time) is **FULL BOOKED** until the end of my cern contract !

Priorities have to be discussed together Alberto.