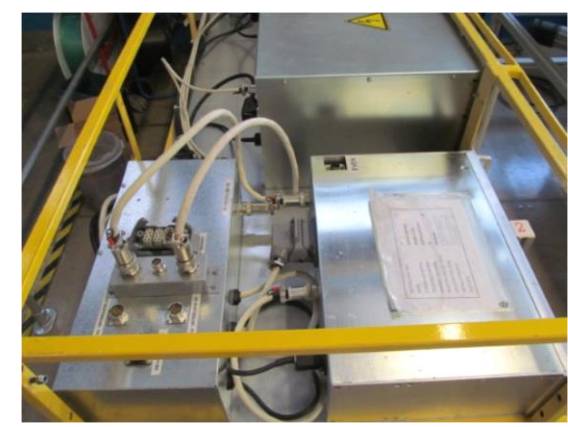
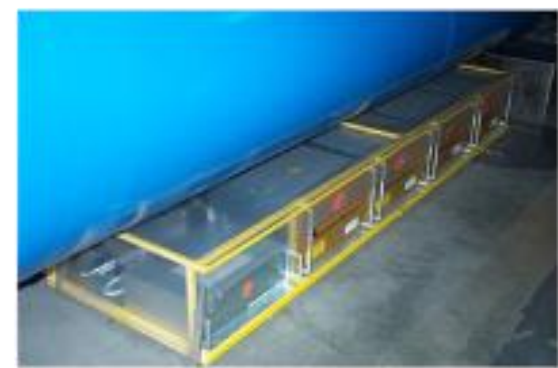


Upgrade of the DYPB racks – The final assembly, the validation tests and the re-installation in the tunnel

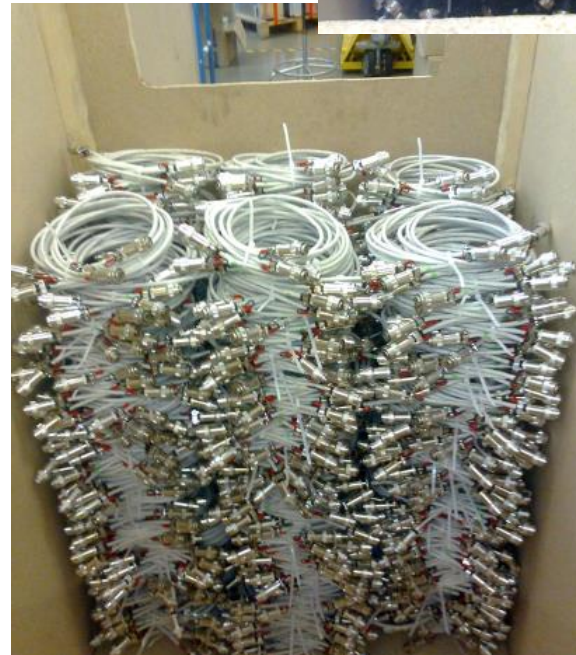
Edward Nowak on behalf of AGH-UST Team

- Mapping of the DYPB racks in the tunnel and its components
- Disconnection, checking and securing the cables in the tunnel
- Coordination with the transport team
- Disassembling of old connection box - “Crawford box”
- Recuperation of the cables and components





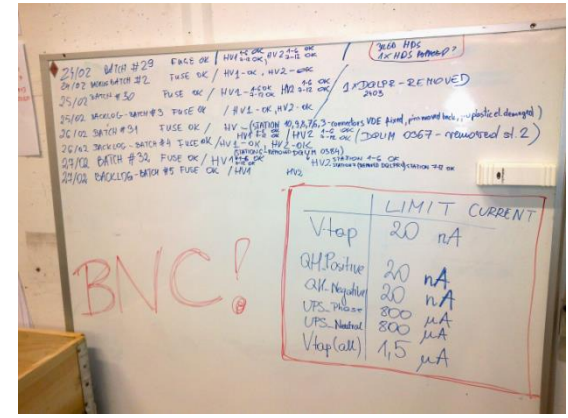
- Cable preparation
 - 5 000 power cables
 - 5 000 instrumentation cables
- *Isolation and continuity tests*
 - 37 000 HV
 - 42 000 continuity



Proposed procedure

- Transport
- Cleaning
- *Earth fuse replacement*
- DQLIM installation
- DQLPR installation
- Cabling
- *Isolation tests*
- Final connection
- *Final isolation test*
- Functionality test by TE-MPE-EP

62 000 HV tests





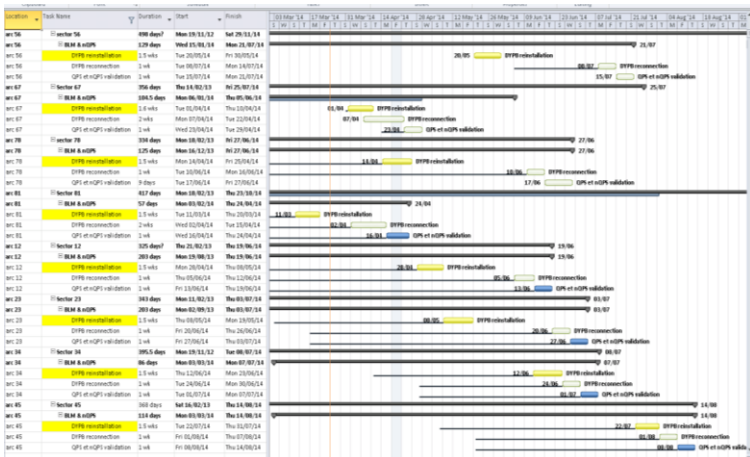
new DYPB assembling in bld.281



- Perfect planning... (after 25x12 DYPB tested)
 - From 2014-02-11 to 2014-06-16 **NO DELAY!**
 - Regular meetings
 - 12 racks per day standard tests plus backlog
 - Checklist
 - Coordination and collaboration

Standard test 12x DYPB

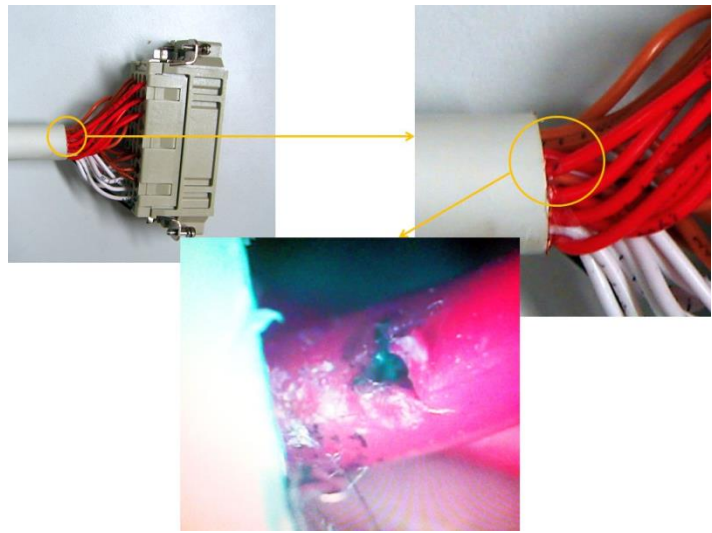
07:00	Removing of palettes tested on the day before
07:30	Move of 4 new palettes. 12 new DYPB racks installed on Test Benches
08:00	Cleaning, power strip removal
08:30	
09:00	
09:30	Fuse replacement on the 48 Q.H. Power Supplies
10:00	
10:30	
11:00	Installation DQLIM units and cabling (for HV Tests)
11:30	
12:00	
12:30	Lunch time
13:00	
13:30	
14:00	Perform HV Tests
14:30	
15:00	Re-cabling for Functional Test
15:30	
16:00	Functional Test (Including time to debug and to replace DQLIM
16:30	
17:00	
17:30	
18:00	
18:30	Disconnection of Cables



Batch No. #	Yellow Back Number	MCQPB-DQI-E00
	DQIM	MCQIM-MQI-C000
	DQI-FU	MCQI-FU-D04-C0

Checklist for DYPB tests performed in bld 281	Date/Time	Name
1) DYPB correctly installed on test benches		
2) Back cleaned (vacuum cleaner) and all old sticker (objects) have been removed		
3) DQLIM and DQI-FU installed. Both have a barcode sticker. Orange strap is on DQIM		
4) Barcodes of Current Transformers stored in DB		
5) Pair of DQI-FU inserted with correct Serial Numbers (i.e. correct Serial Cabling)		
6) All Cables correctly connected and fixed		
7) Global test successfully performed		
8) DYPB rack put back on palette without visible damage. Last quality control performed before storage.		

- Components quality
- Transport



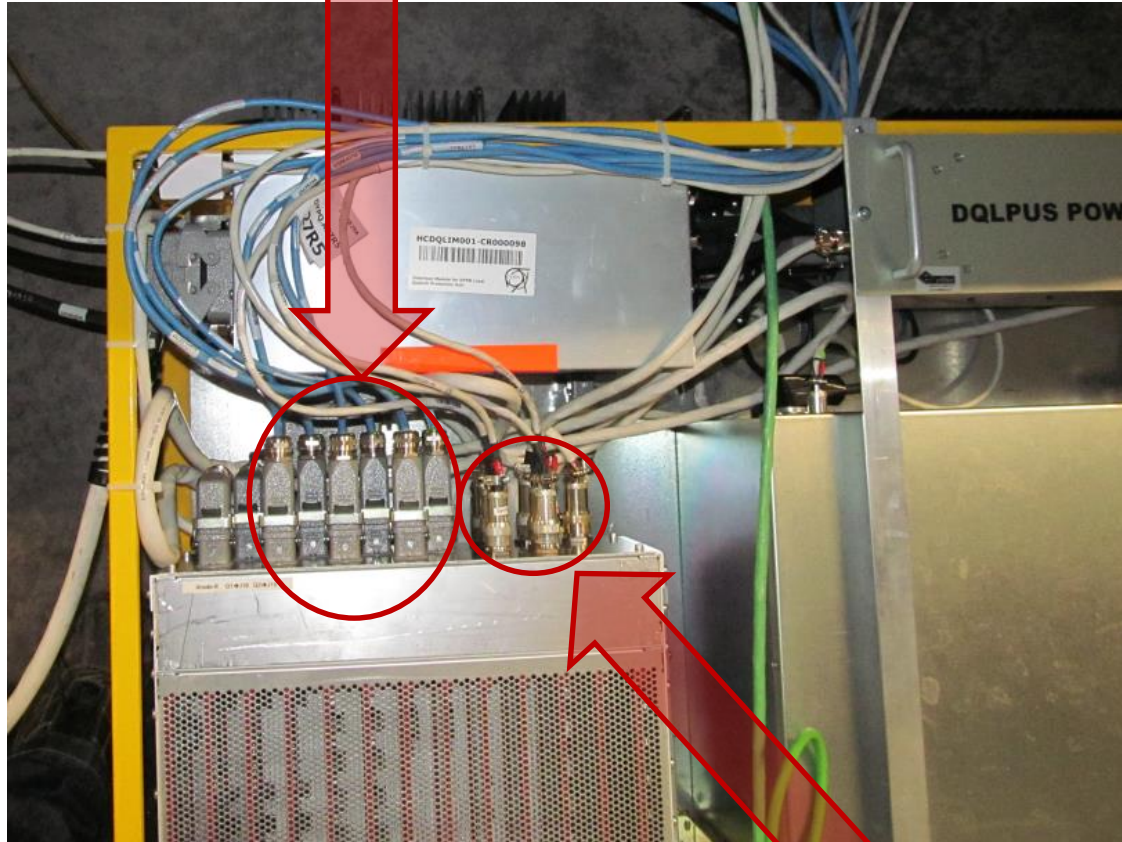


- 1232 DYPB racks
- 10 000 cables



- 436 DQLPU-S
- 7 000 cables

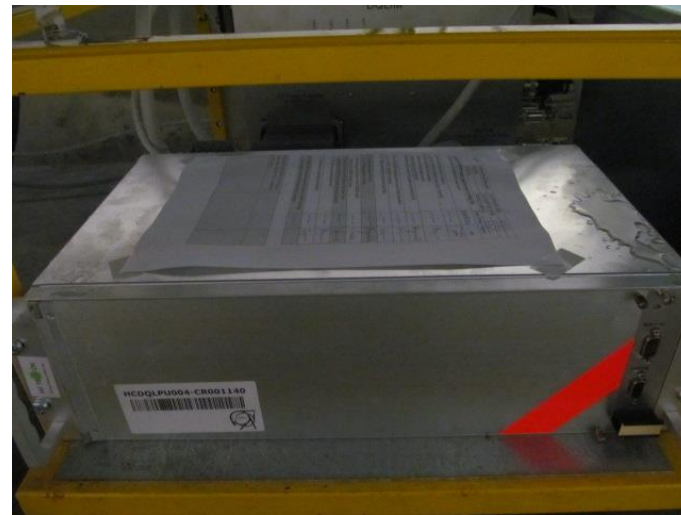
Warm Busbar Measurement and CSCM



Trigger cable test

Affected area:
21R3 to the cell 25L4

DYPB - 64 units
DYPQ - 23 units
cabling





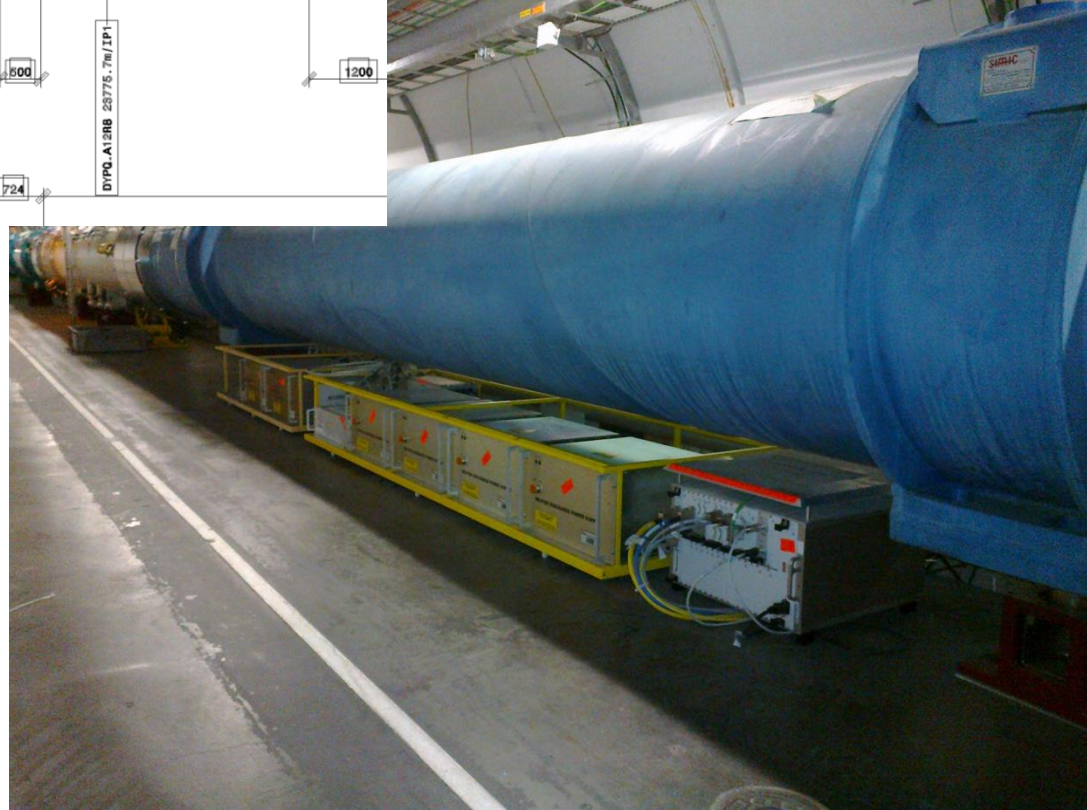
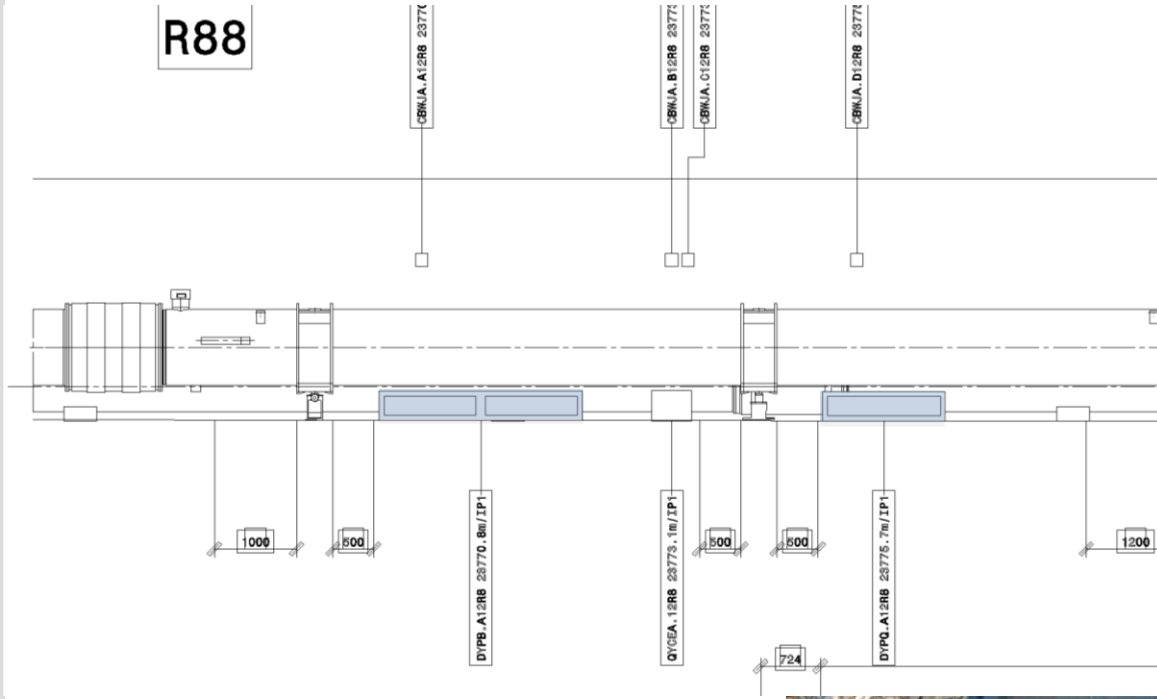
A structure with plastic walls



Crates have been opened up for better exchange with the blown air.

Two fans 15kW each

R88



- Planned well in advanced but not in details
- Initial schedule did not match with the realized one
- Not enough resources – amendment to the contracts has been required in the last moment
- DYPB racks consolidation have been done without written procedures
- Improve a logging of exchanged components (cards, cables, DQHDS, etc.)
- Lack of information flow
- No reports, documentation and procedures
- The core team was overloaded - involved in the different projects

Thank you for your attention!

