

EEE Upgrade

Status Update

# MRPCs construction update

20170222001	LAMP-01
20170223002	LAMP-01
20170225003	LAMP-01
20170314004	GENO-01
20170316005	GENO-01
20170317006	GENO-01
20170405007	SIEN-02
20170406008	SIEN-02
20170407009	SIEN-02
20170425010	CARI-01
20170426011	CARI-01
20170427012	CARI-01
20170509013	TORI-05
20170510014	TORI-05
20170511015	TORI-05
20170523016	LODI-03
20170524017	LODI-03
20170524018	LODI-03
20170926021	CAGL-04
20170927022	CAGL-04
20180221028	CAGL-04
20171121025	BOLO-05
20171123026	BOLO-05
20171124027	BOLO-05

20170719019	spare – ROMA-01
20170921020	spare – FRAS-01
20170928023	spare
20171026024	spare – COSE-01
20180222029	spare – REGG-01
20180227030	spare – SAVO-03
20180228031	spare
20180320032	spare
20180322033	spare
20180725034	spare
20180726035	spare
20180727036	spare
20190115037	BITE-01
20190117038	BITE-01
20190118039	BITE-01
20190131040	BRA-01
20190211041	BRA-01
20190213042	BRA-01

Ch 43 ....

# Issues found and solved – HV inversion

CH 36 was found with inverted HV by Paola

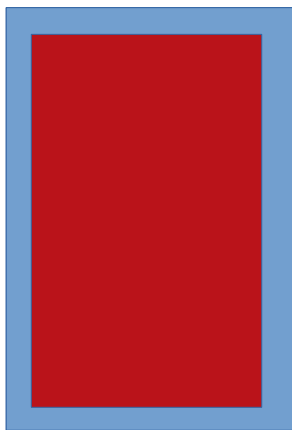
We found the problem was due to the new interface cards.

They are mounted 180 degrees w.r.t. previous ones.  
This correspond to and inversion of strips polarity

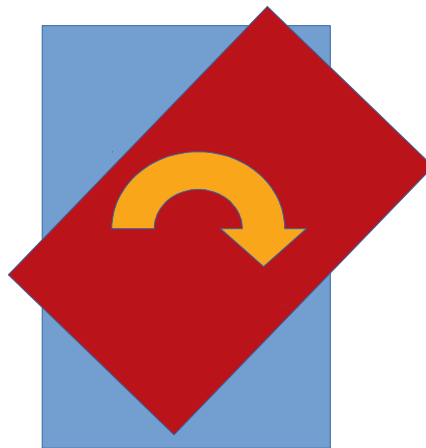
We asked to lay the chamber inside the chassis rotated  
by 180 degrees in order to solve the issue.

This worked

HV+



HV-

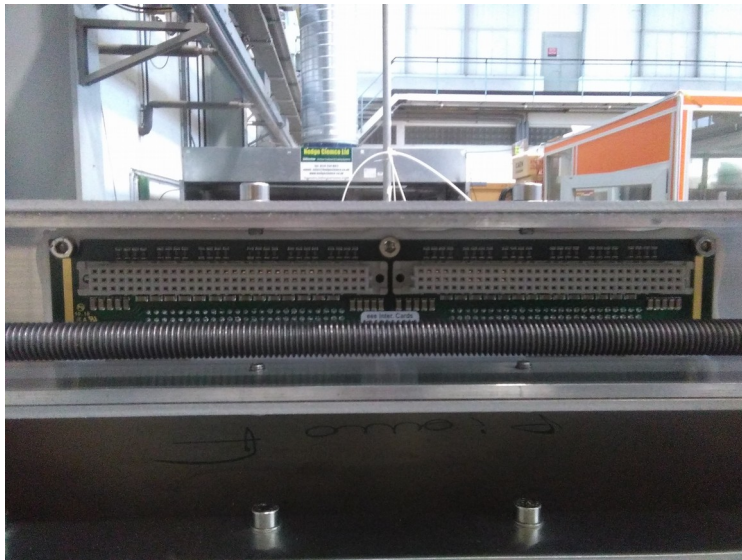


Ch 36-37-38-39  
was found to be  
correctly labeled after the rotation

This is being a rule from now on

# Issues found and solved

- FEA mounting on new/old interconnections

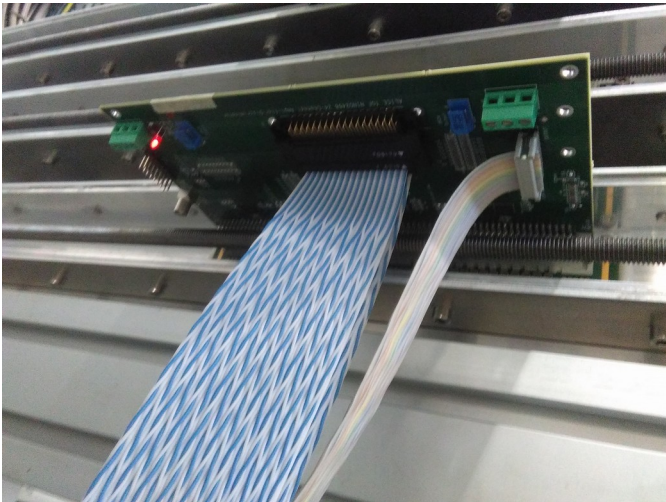


New interconnection cards are upside down mounted  
(look at the teeth)

The new cards will show  
the NUGENT connector on top

# Issues found and solved

- FEA mounting on new/old interconnections



On 300 um gap MRPCS  
the nugent connector  
shows on bottom

(plus also for  
#chamber < 36)



The new FEA are just LEFT type  
When inserting the card type in DAQ

- V1 if #ch < 36 or 300 um gap

-V3 if #ch >= 36

# Issues found and solved

## – #42 issue

Ch42 was found with (non reproducible) strip connection

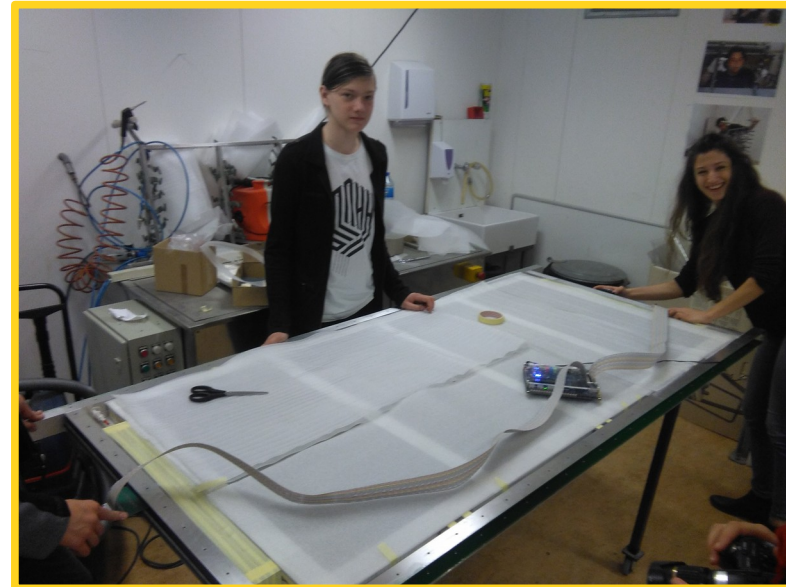
The Bossini Box test gave errors on ch #7 and #8

The connections were tested before and after interconnections with a tester

They were found working

When inserted in chassis and tested with Box, we got the error.

The chamber will stay at CERN for dismounting and ch#43 will be named 42 and delivered to Bra.



# Issues found and solved

## Lampedusa leakage

LAMP-01/02/03 were found highly leaking

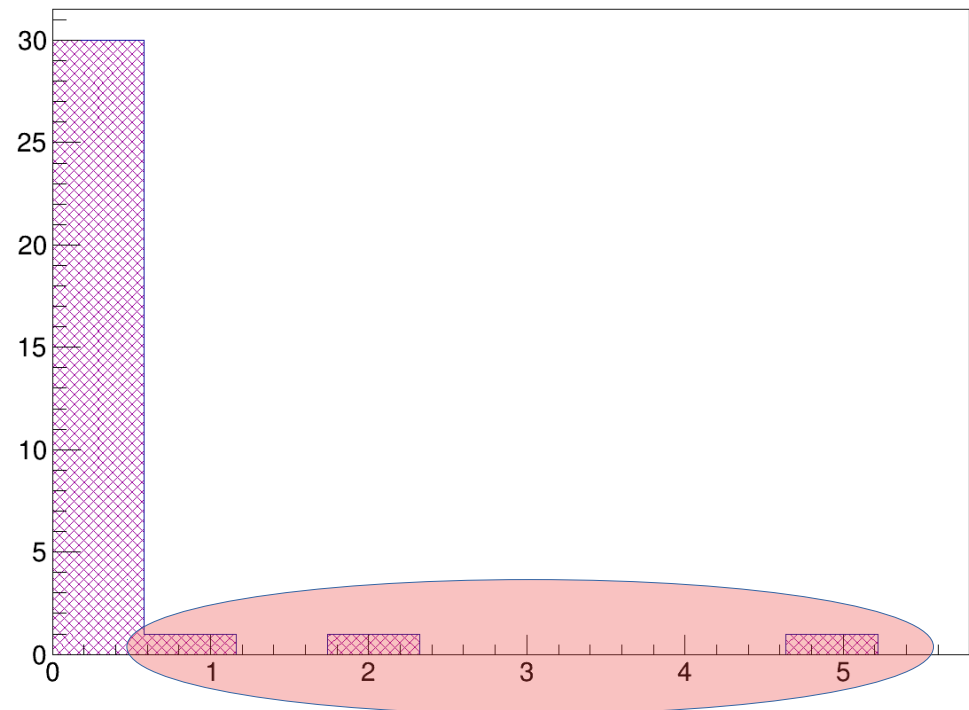
Maria Paola did again the measurements and found

01 ---> 0,36 l/h  
02 ---> 3,92 l/h  
03 ---> 0,49 l/h

Corrado's group investigated the issue and they opened the chamber with Roman

02 --> now is 0.47 l/h !

Gas tightness summary (l/h)



At the moment LAMP chambers are ready to be sent (already in a wood box together with a spare chamber on bottom, probably a spare built by some group not in the list)



# Issues found...

## Transport

We got a damage on 2/3 chambers of the last 250 um production, Most likely because of the transport.

CARI-01	substitution with a spare. Now working
SIEN-02	working at 18 kV (plateau was at 15 kV)
LODI-03	not working

For all the detectors the sites refer the transport arrived on a little Van. The company put in charge by CERN is most likely outsourcing the local dispatch, it's a normal logistics approach.

We should try to fix the problem.

In 2 weeks from now we can send BITE and BRA telescopes (what about LAMP?)

# Issues found...

## Transport and broken chambers

A technician from LNF CS is available for bringing the detectors to the sites.

We can borrow a van at CERN and he can bring 2/3 telescopes to destination taking care of the quality of the transport.

The broken CARI-01 chamber can be brought easily to Marco's lab (picture) where there is

- space available
- crane
- clean rooms

open it and test it.

→ LECCE telescope has been brought to this lab and will be mounted and put in operation as a EEE detector and a testing station

