

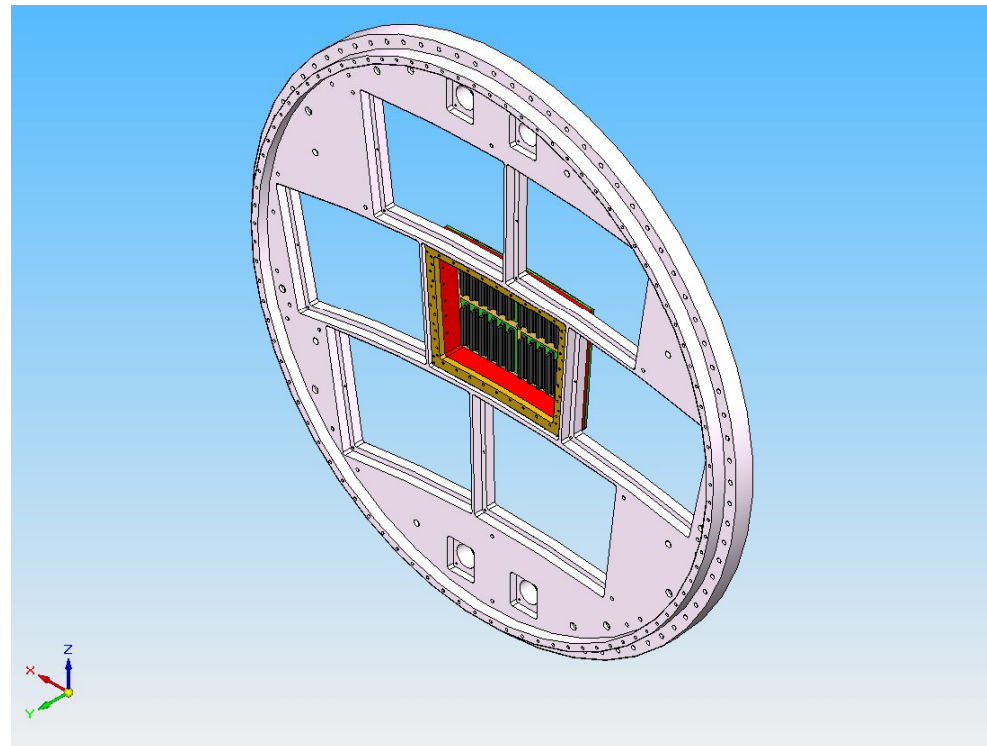
# TPC Large Prototype panels

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**Status of the Micromegas  
Large Prototype panels**

**Studies on resistive coatings**

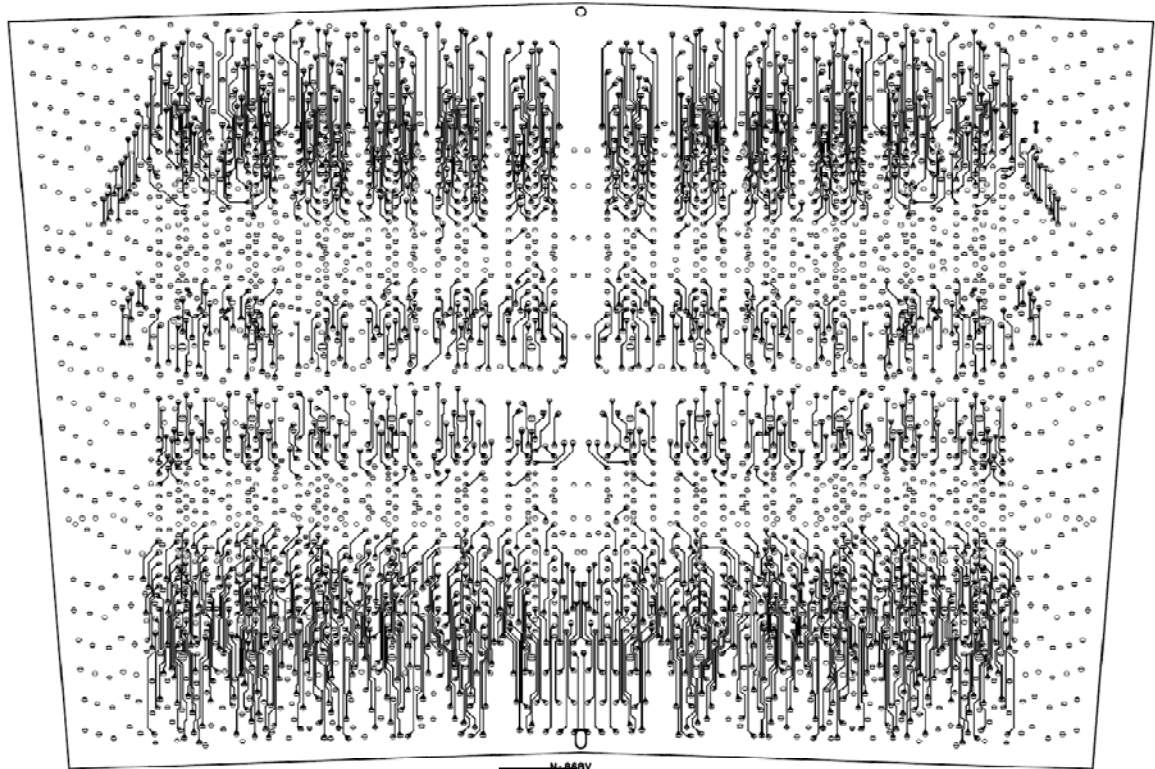
**Installation in DESY**



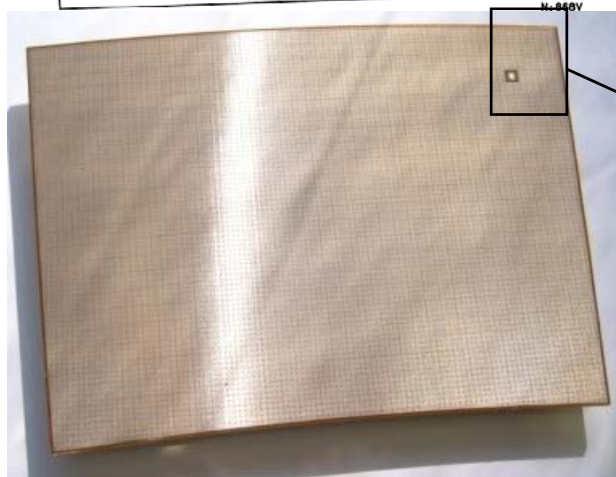
# The panels

PCBs have been produced  
4 with the Saclay routing in  
6 layers (delivered early  
June)

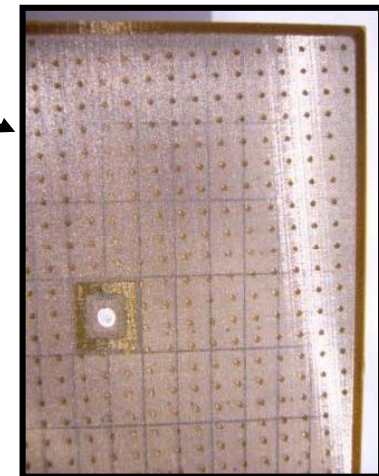
4 with the CERN routing  
with 4 layers (August)



Phone meeting - Sep. 24, 2008



P. Colas - Large Prototype panels



A first 'bulk Micromegas' panel (without resistive foil) has been produced at CERN

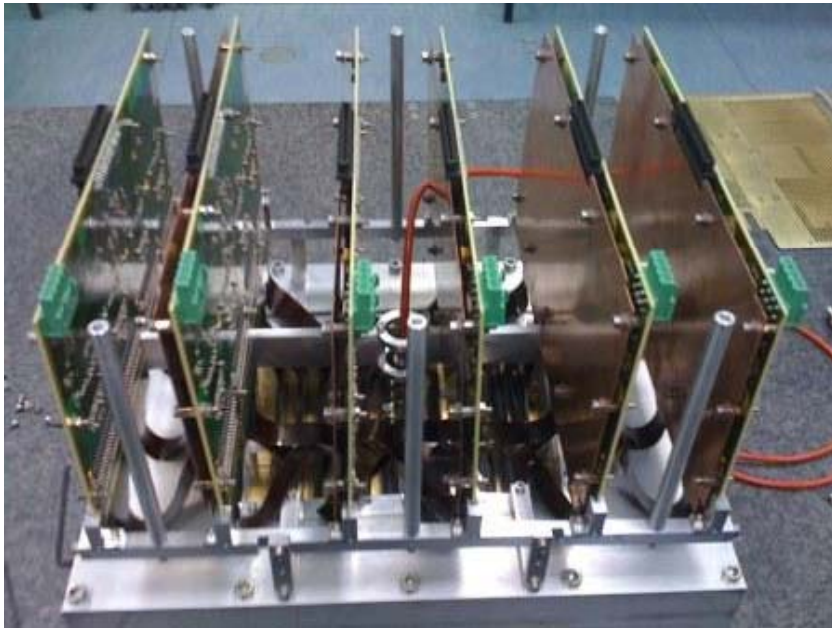
(Rui de Oliveira)





# Mechanical support of the electronics

All the components have been received and mounted (flat cables, shielding, Faraday cage, gasbox...)



Phone meeting - Sep. 24, 2008



P. Colas - Large Prototype panels

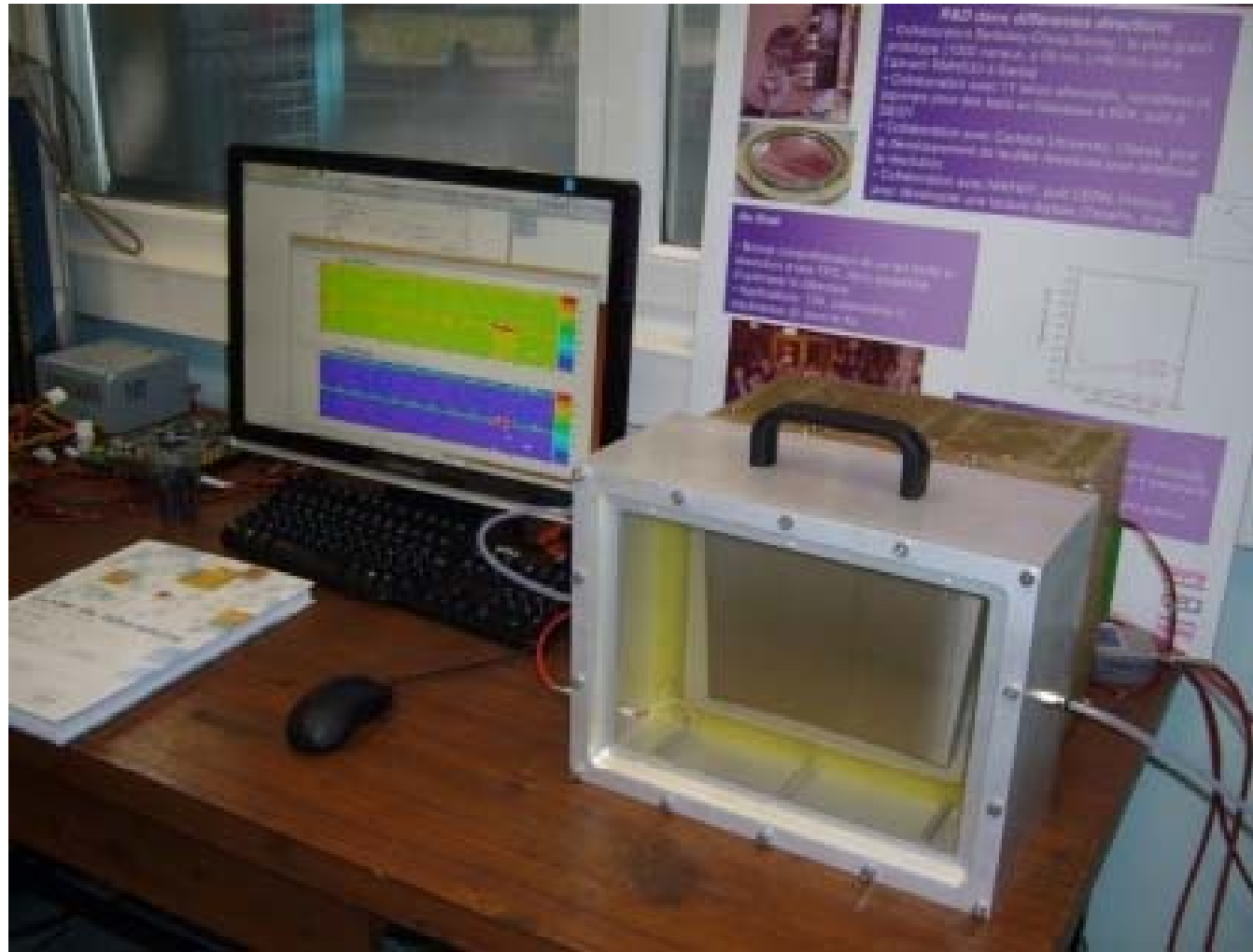


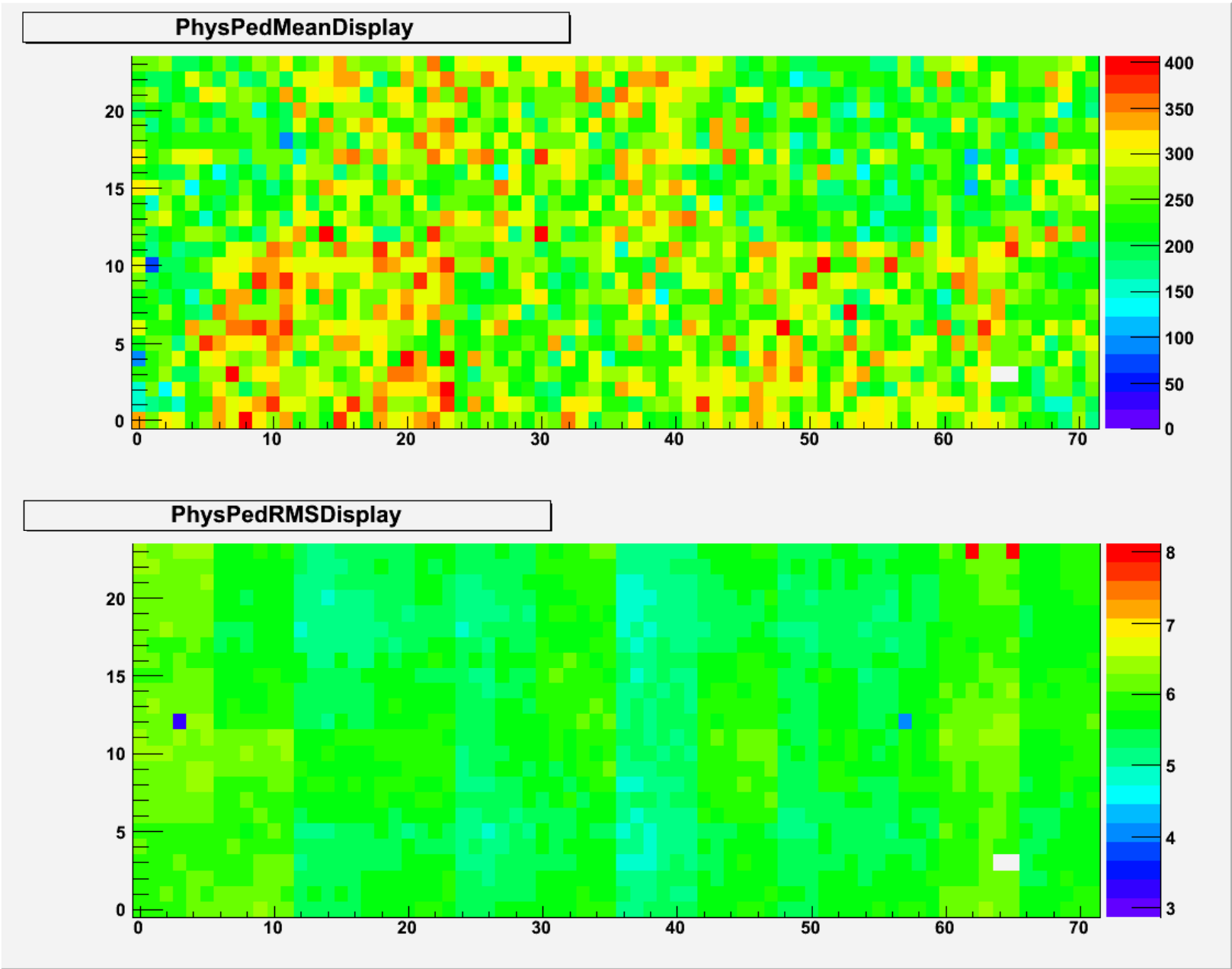
Phone meeting - Sep. 24, 2008

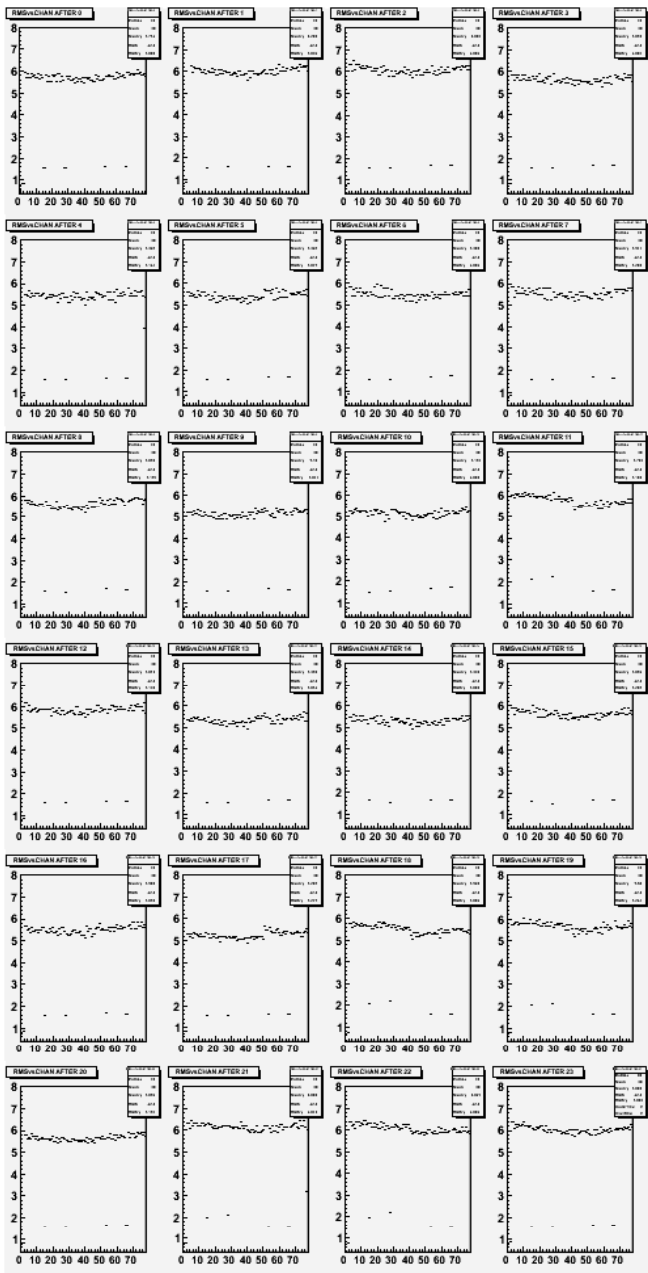
P. Colas - Large Prototype panels

# Test setup operational

Tests in gas  
have started  
(one faulty pad  
had to be  
disconnected)

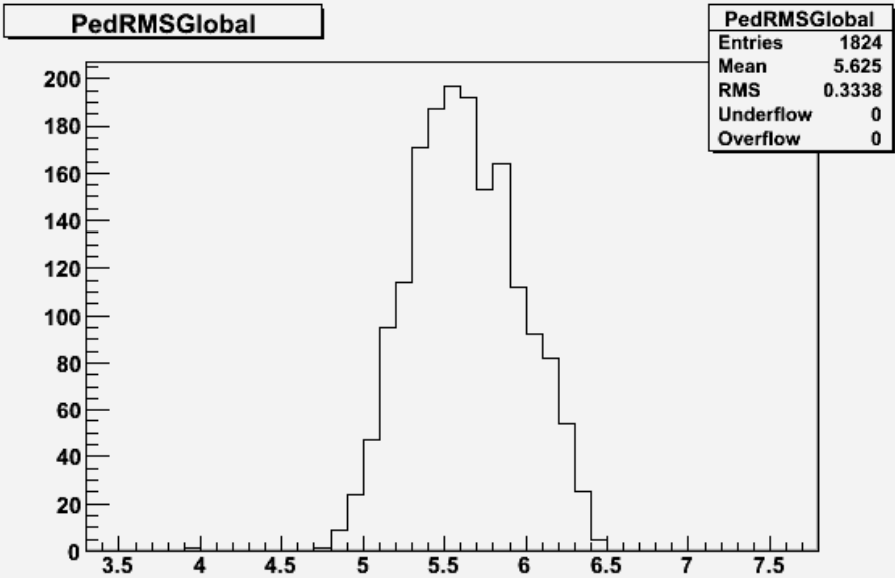
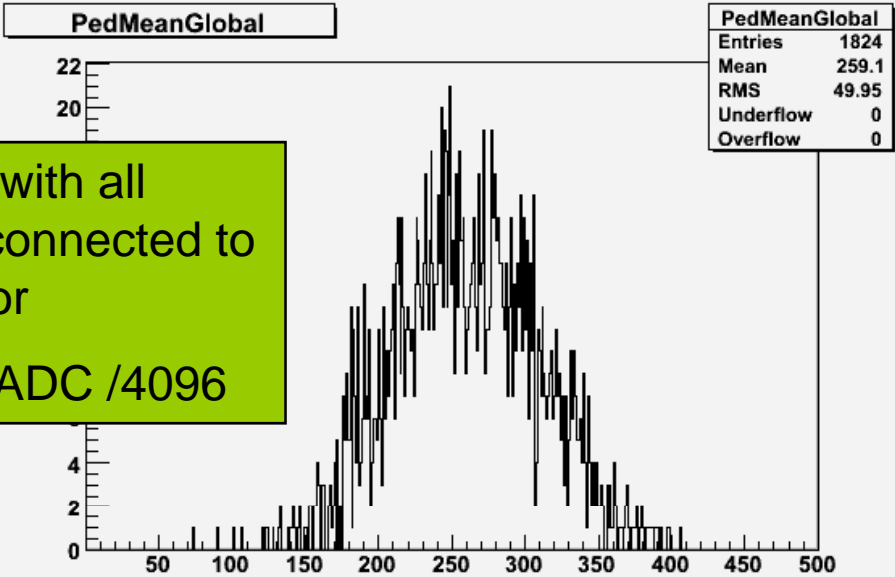






Pedestals with all channels connected to the detector

$\langle \sigma \rangle = 5.6 \text{ ADC} / 4096$





## Several techniques are being tested for the resistive coating

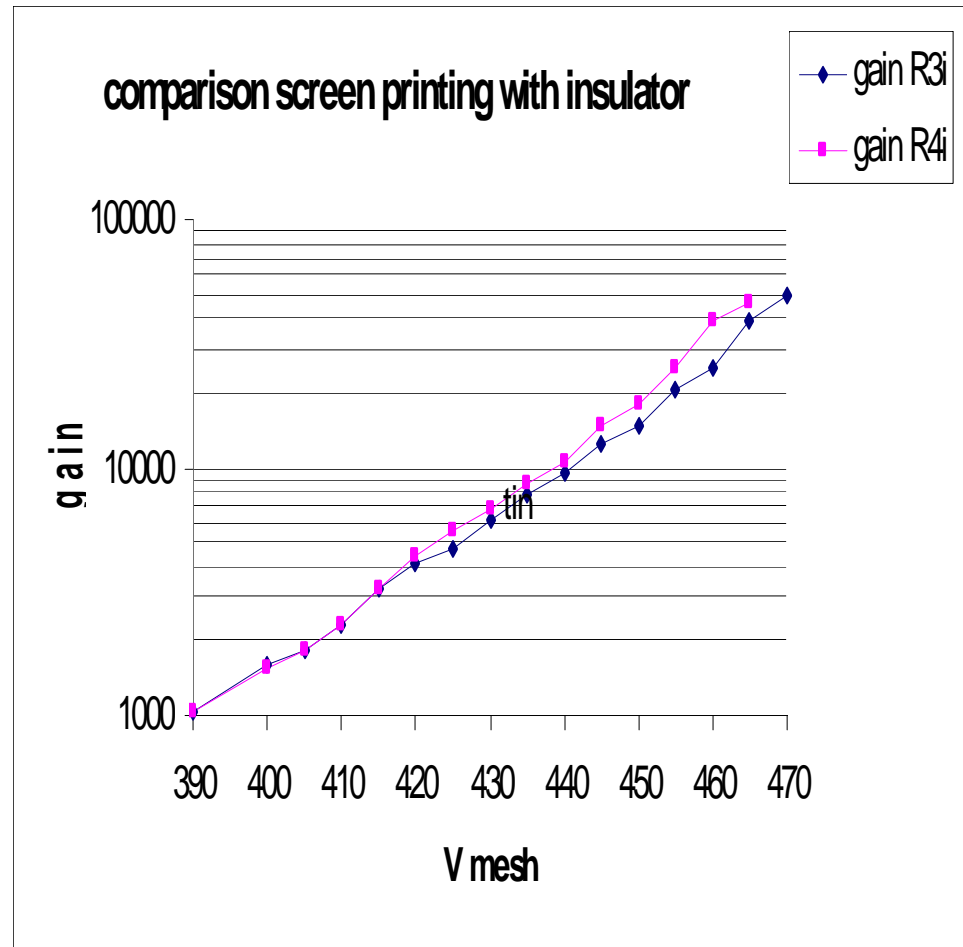
- 1) Carbon-loaded kapton. An old technique first tested in Carleton, using a Dupont film 1 MOhm/sq. Improvements on application of the resistive foil and switch to bulk.

First results promising.  
Production of a panel started.



## 2) Prepreg+ screen printing

This has been tried at CERN. 2 prototypes of 10x10 cm (2 and 8 MOhm/sq) have been tried at Saclay. There is not clear evidence that they are spark protected. Even one of the detector has been damaged by the HV during the test. Still such a layer will be applied to a CERN panel.



Plasma deposition of thin layers (Neuchatel, used for SiProt)

Preliminary tests going on. Next step: cover a PCB and make a bulk out of it



# Schedule

The tests in gas will continue this week. Travel to DESY on September 29

- Upgrade of the thermics for the MPPC trigger

- Installation and tests in situ. Cosmics

Then take beam data in the magnet in the period of weeks 44-45-46 (+1?) depending on the field cage status.