



# Padova – Legnaro report

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# Last SuperLayer...



20/09/2005

Paolo Checchia

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# .....Sacrifice to glue's Gods



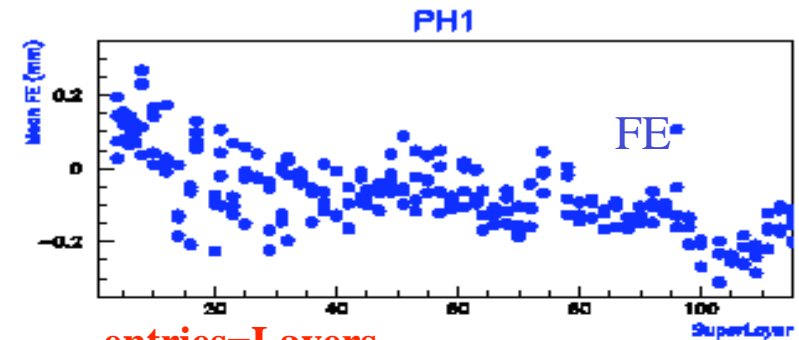
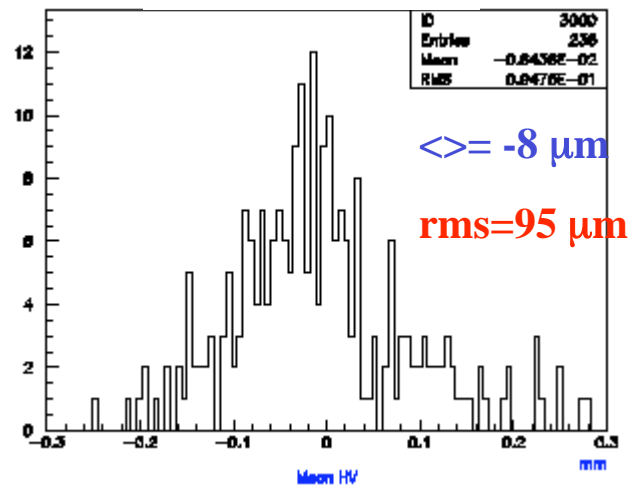
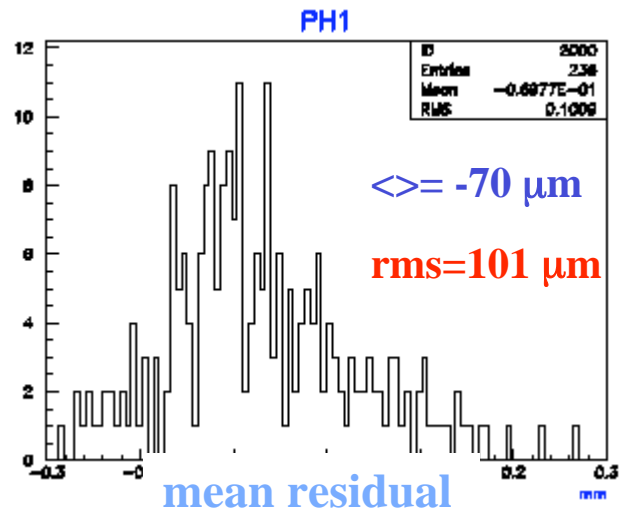
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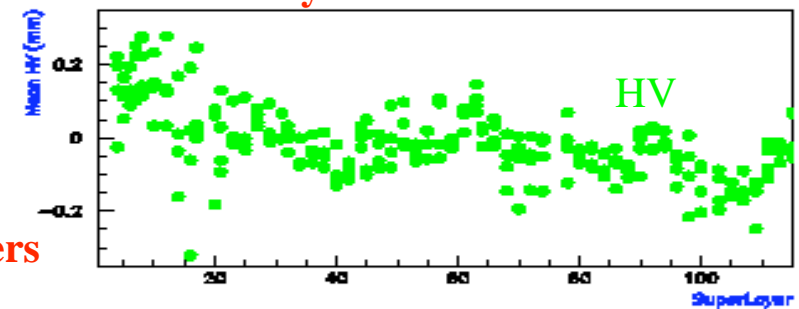
4

# Analysis Summary (wire position)

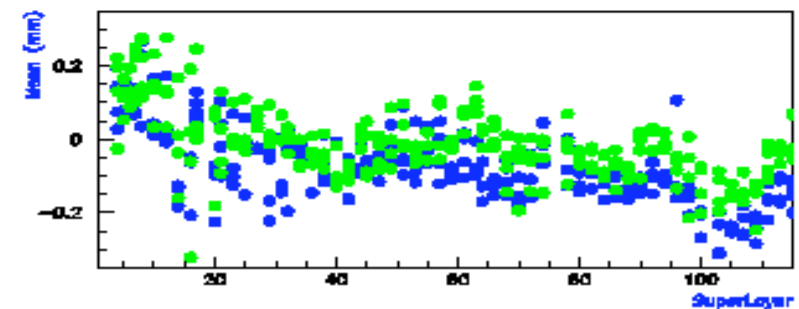
full set of standard phi production at table ph1



entries=Layers



entries=Layers



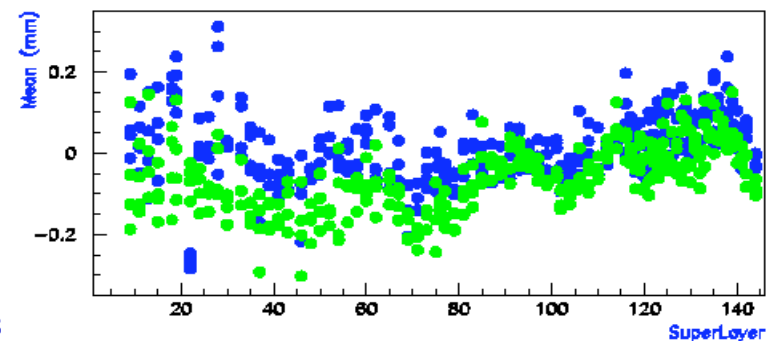
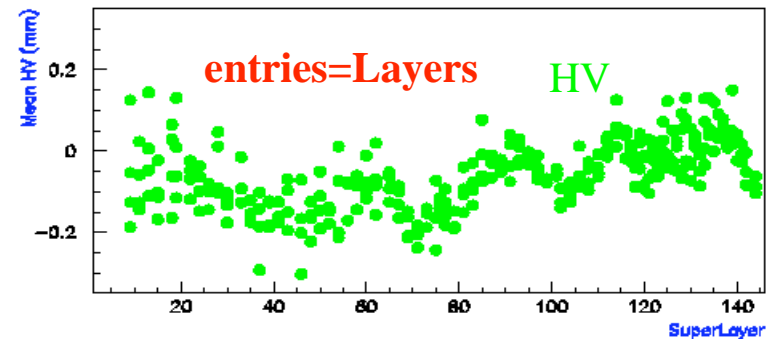
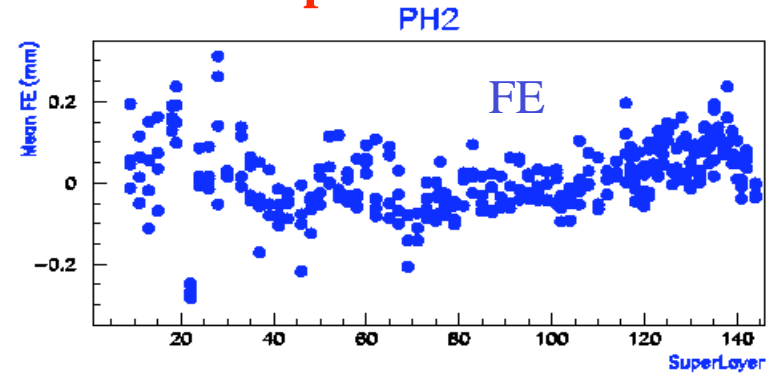
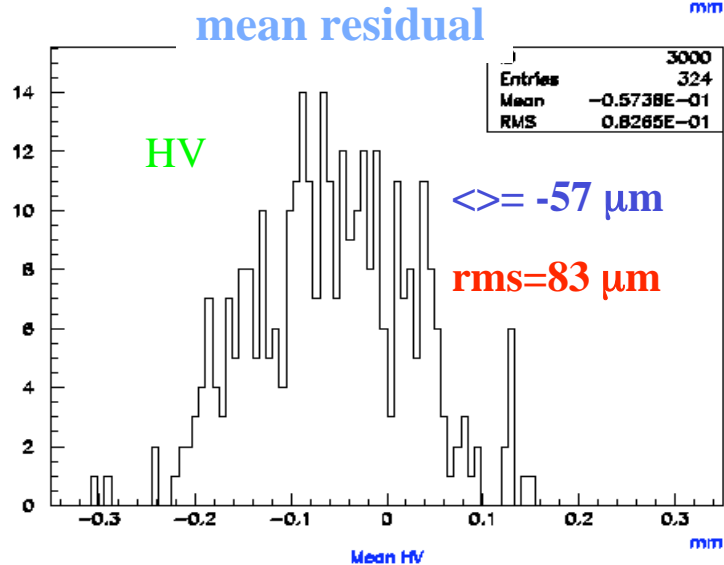
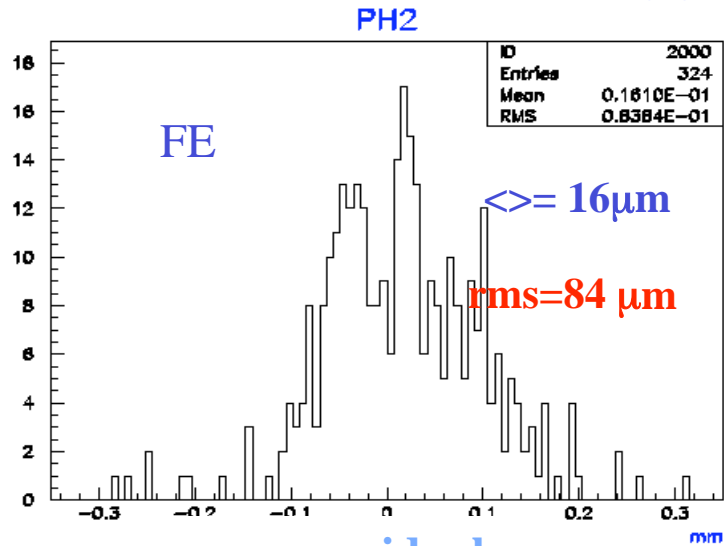
Paolo Checchia

SuperLayer<sup>5</sup>



# Analysis Summary (wire position)

full set of standard phi production at table ph2

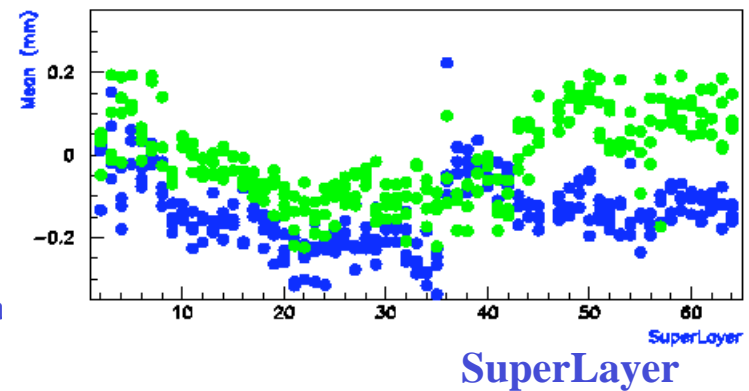
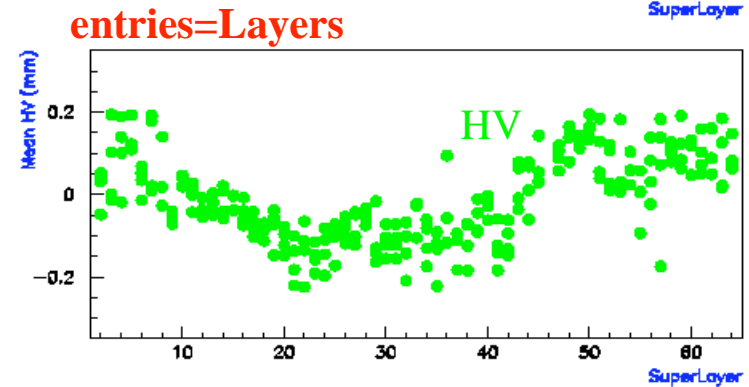
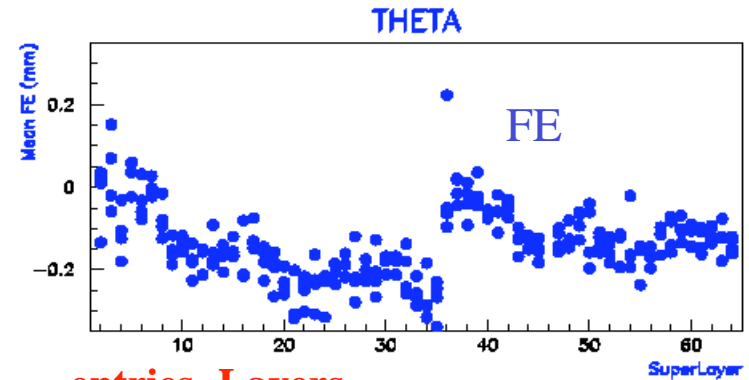
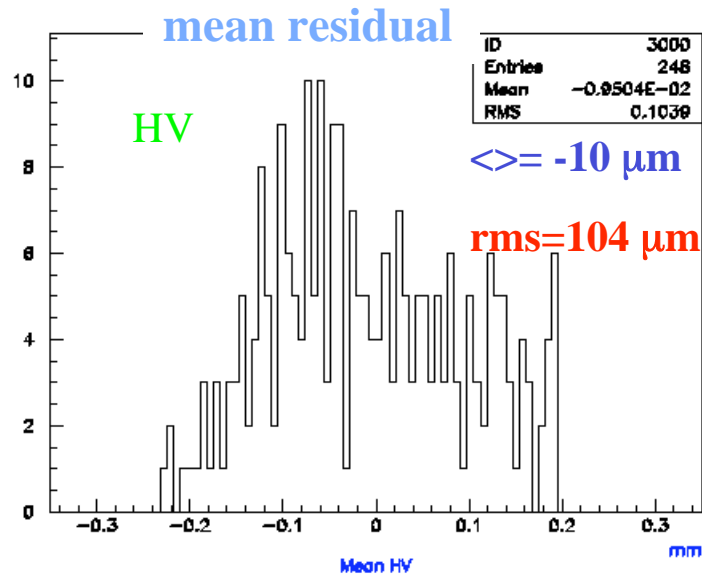
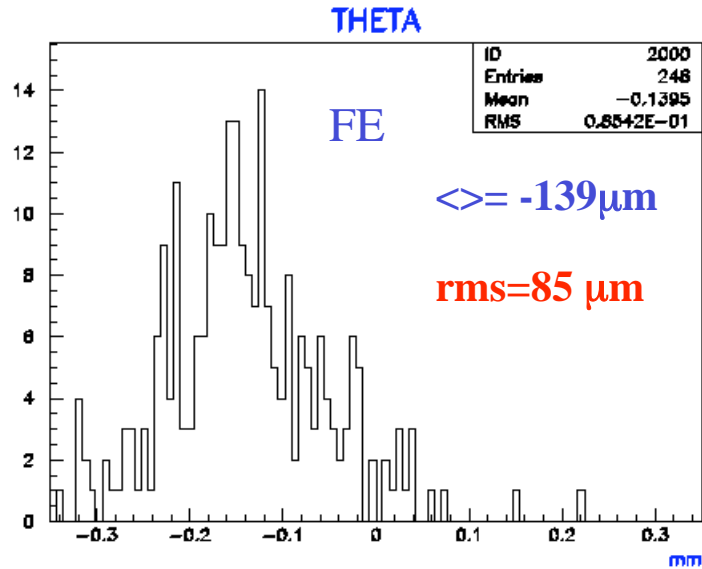


Paolo Checchi

SuperLayer

# Analysis Summary (wire position)

present set of standard phi production at **table theta**



Paolo Checchia

# SURVEY checks

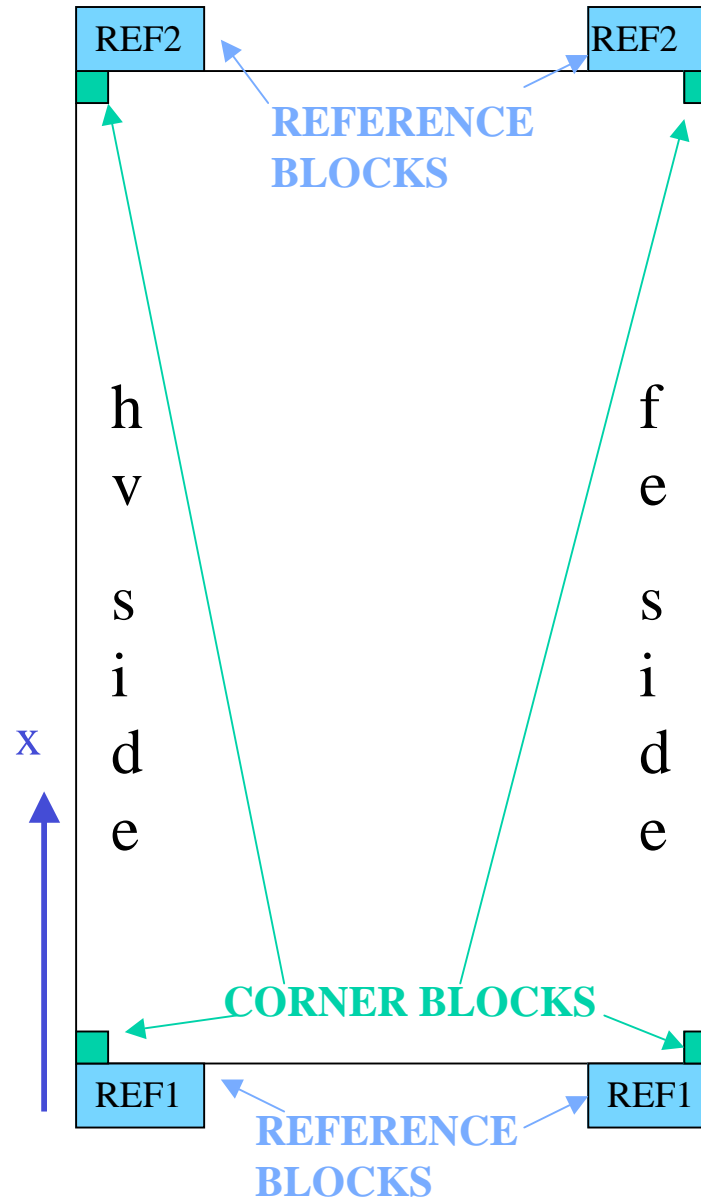
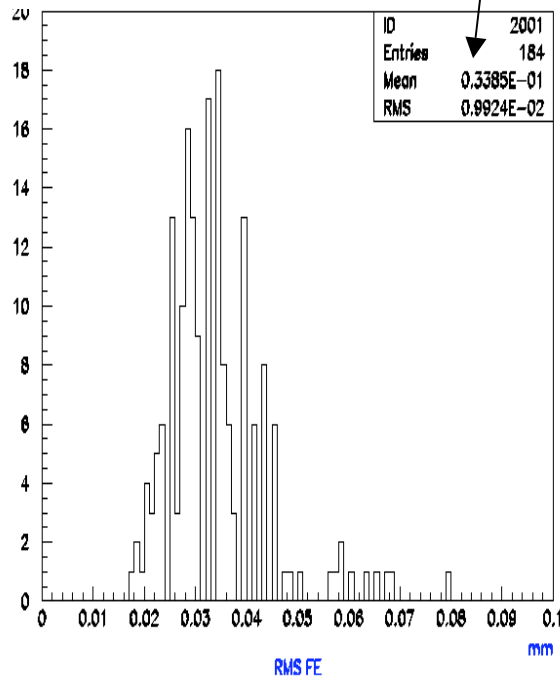
- Legnaro measurements
- CERN measurements
- +comparisons
- Analysis of the whole data set is going on



# Legnaro measurements

**to be considered:**

- measurement error (<40  $\mu\text{m}$  from wire measurements)
- construction effects



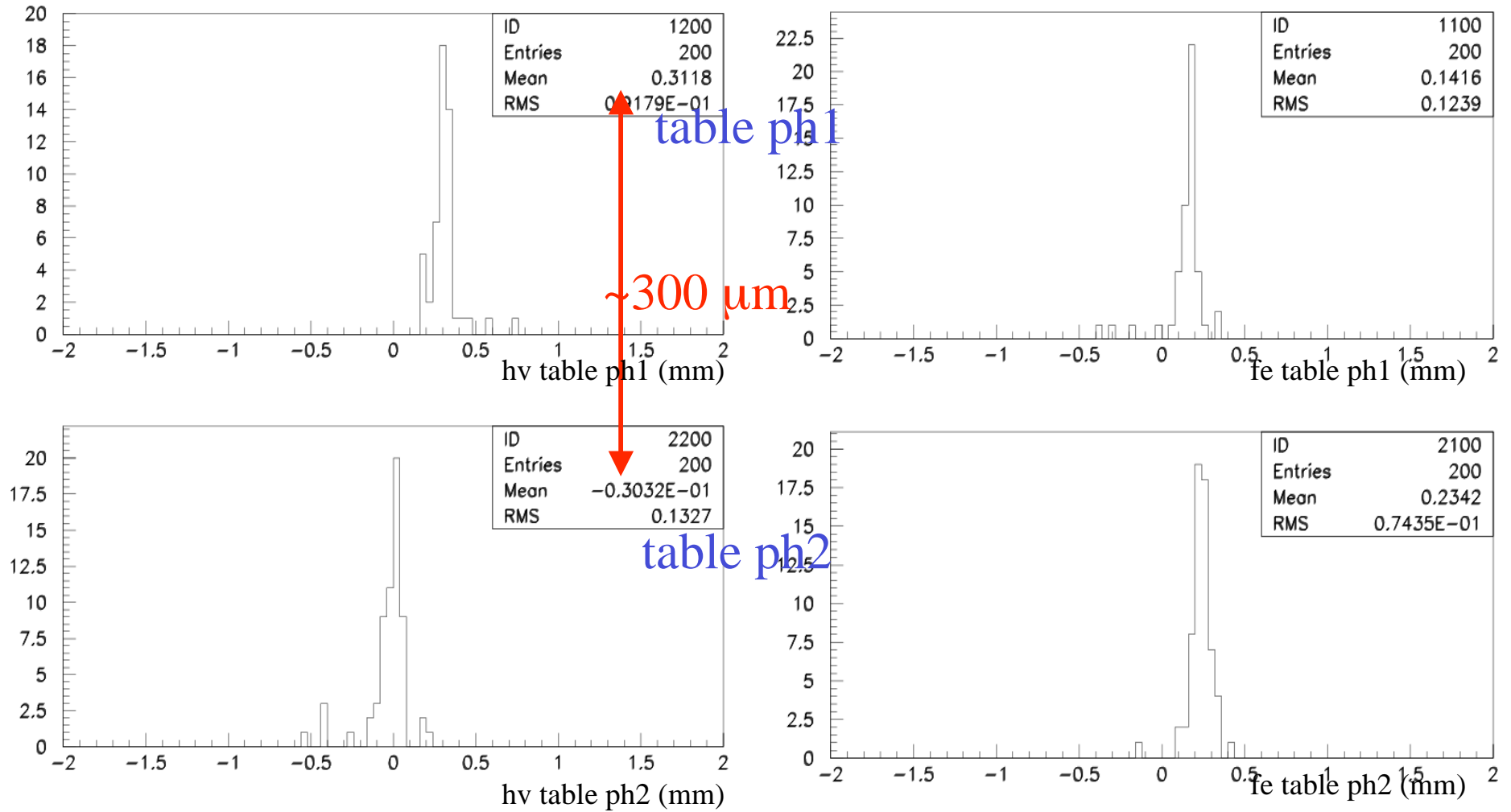
**SL ONLY**

**x-length(dist)  
take:**

**$x_{\text{REF2}} - x_{\text{REF1}}$   
and subtract the  
nominal value**

# Legnaro measurements

x-length (-nominal)



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table ph1: 300  $\mu\text{m}$  additional length on HV side

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# Legnaro measurements

average (4 wires) position difference

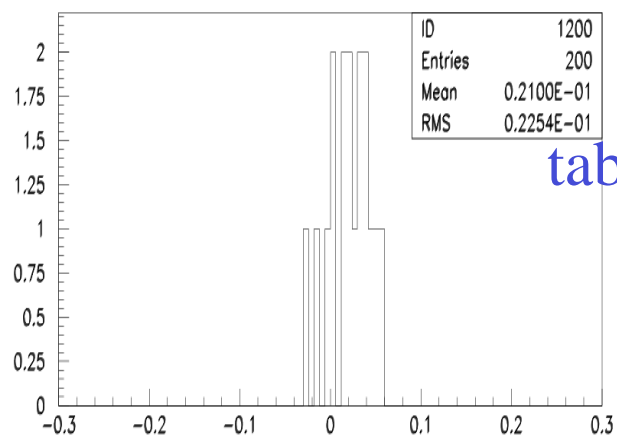
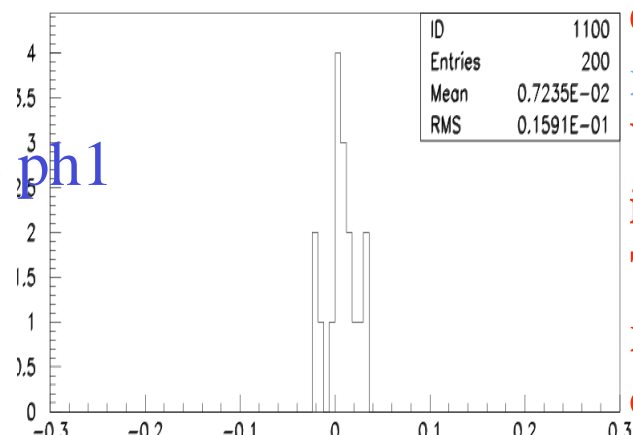


table ph1



during construction  
ref. blocks are removed  
before corner block  
insertion .

To check the position  
reproducibility 4 wires  
of the 4<sup>th</sup> layer are  
remeasured after  
corner block fixing

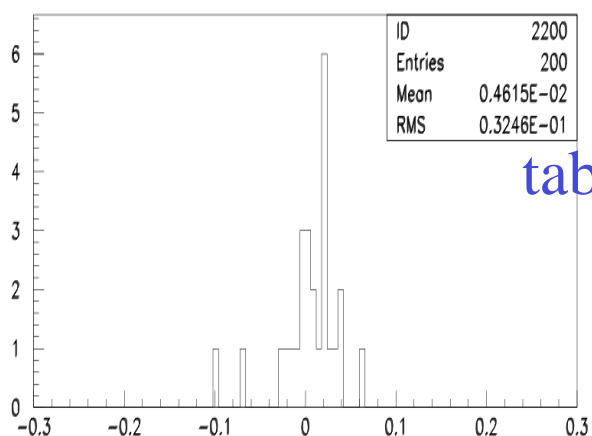
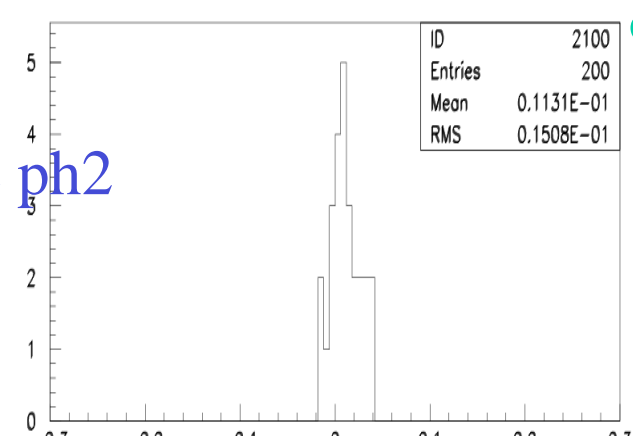
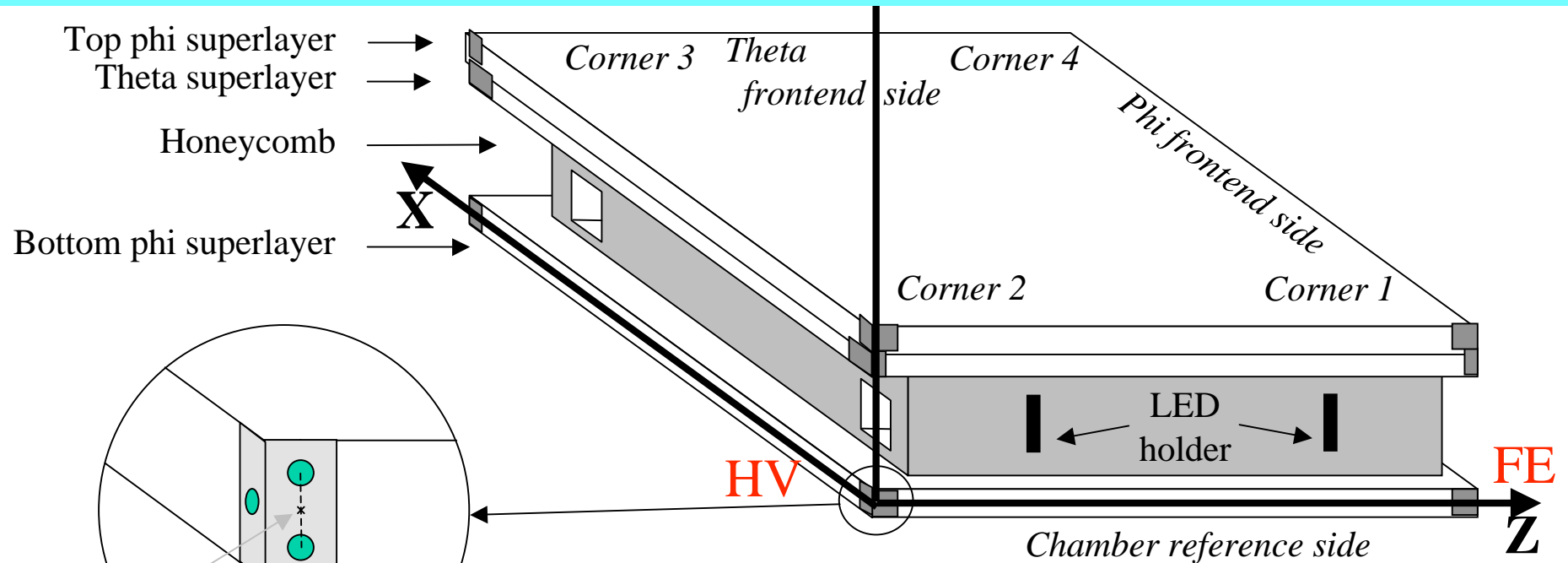


table ph2



better than 35  $\mu\text{m}$

# CERN measurements



Corner block reference point: middle-point of the line drawn on the surface and connecting the centres of the holes on the two-hole side.

*The chamber coordinate system is attached to the corner blocks 1,2,3 of the bottom superlayer:*

**Origo:** corner 2 (HV).  
**Z-axis:** trough corner 1 (FE)  
**X-Z plane:** corners 2,3,1.

## Chamber measurements:

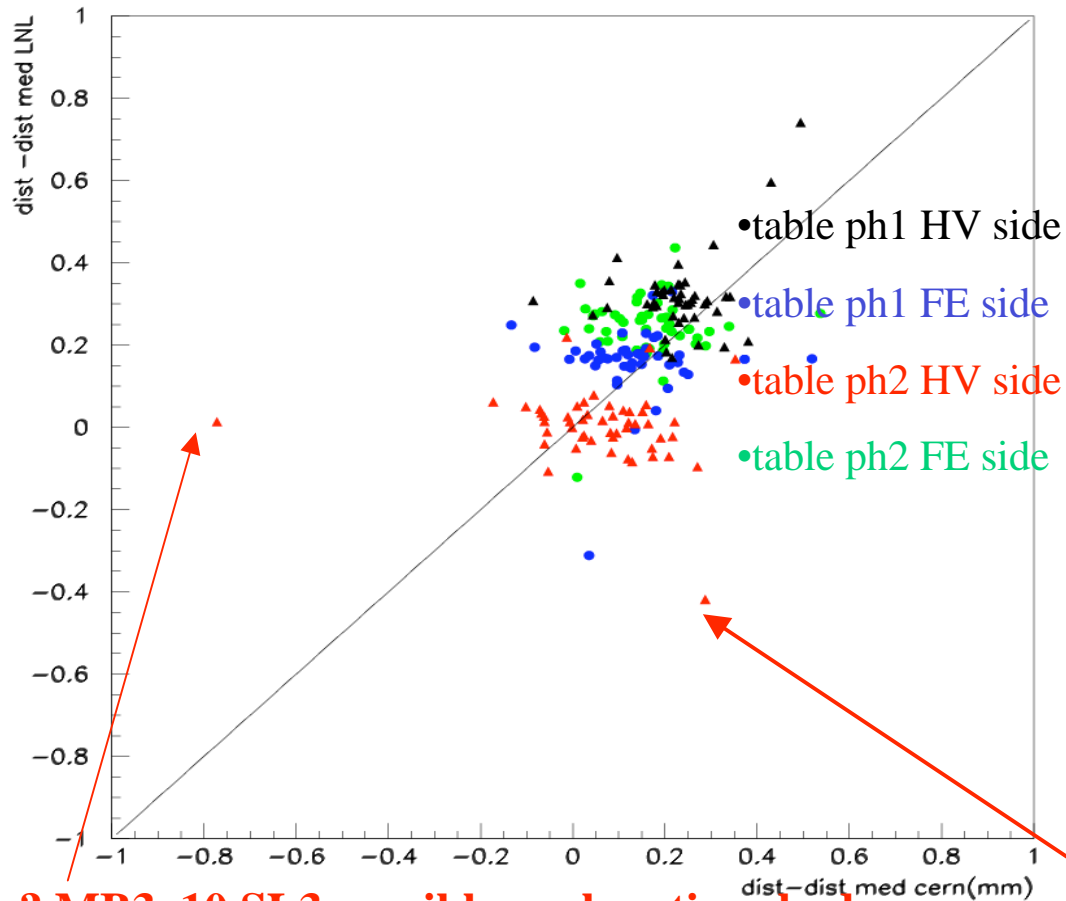
- x SL3-SL1
- z (SL3-SL1)

Chamber coordinate system

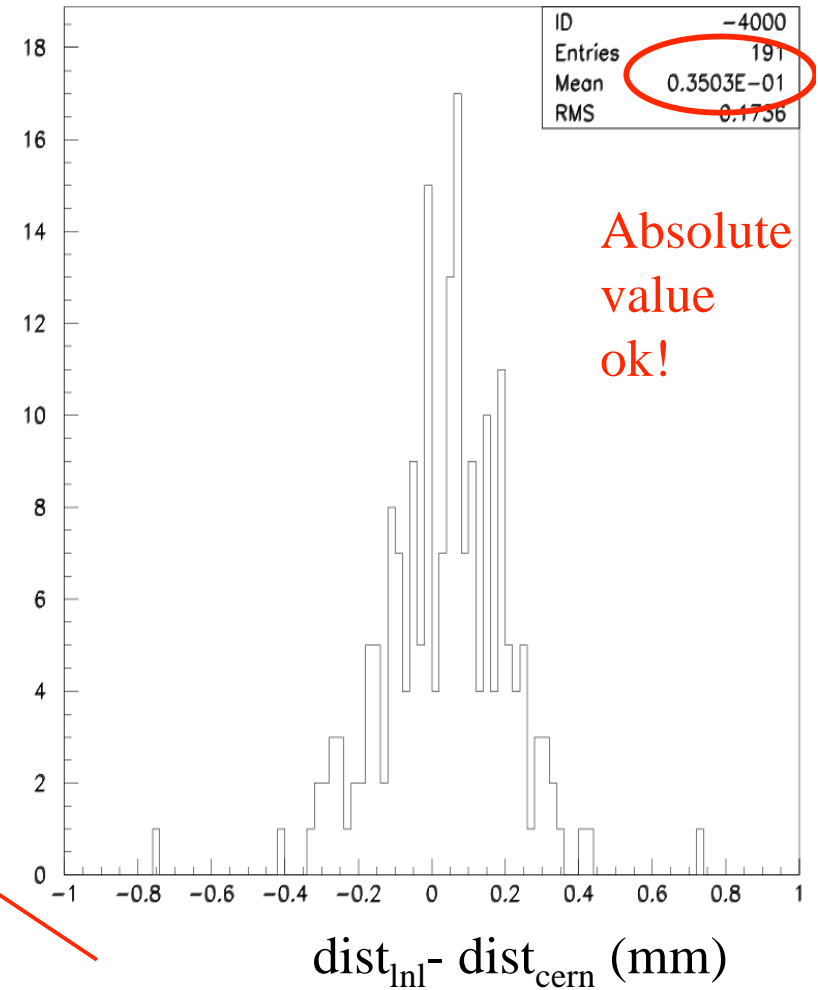
G. Bencze

# comparison

## SL x-length



? MB3\_10 SL3 possible explanation: bad corner  
block contact with reference block (construction  
problem)



? MB3\_45 SL3

# Conclusions

SL production completed well within promised schedule

Assembling of regular chambers completed

Problems with one honeycomb for the last spare MB3: bad thickness (+ 2 mm in one edge). To be cured (additional Al foil?)

Chamber test station busy for readout test

**New shipment of 5 chambers foreseen in January (5 weeks to complete the tests)**

Analysis of all data and inclusion of survey measurements in the cosmic data to be completed (contacts with the alignment team)