CMS GROUP AT CIEMAT

Ciemat

Centro de Investigaciones
Energéticas, Medioambientales
y Tecnológicas

Status of Chamber Construction QC at CIEMAT

B. de la Cruz

CIEMAT (Madrid)

CMS Week February 2003

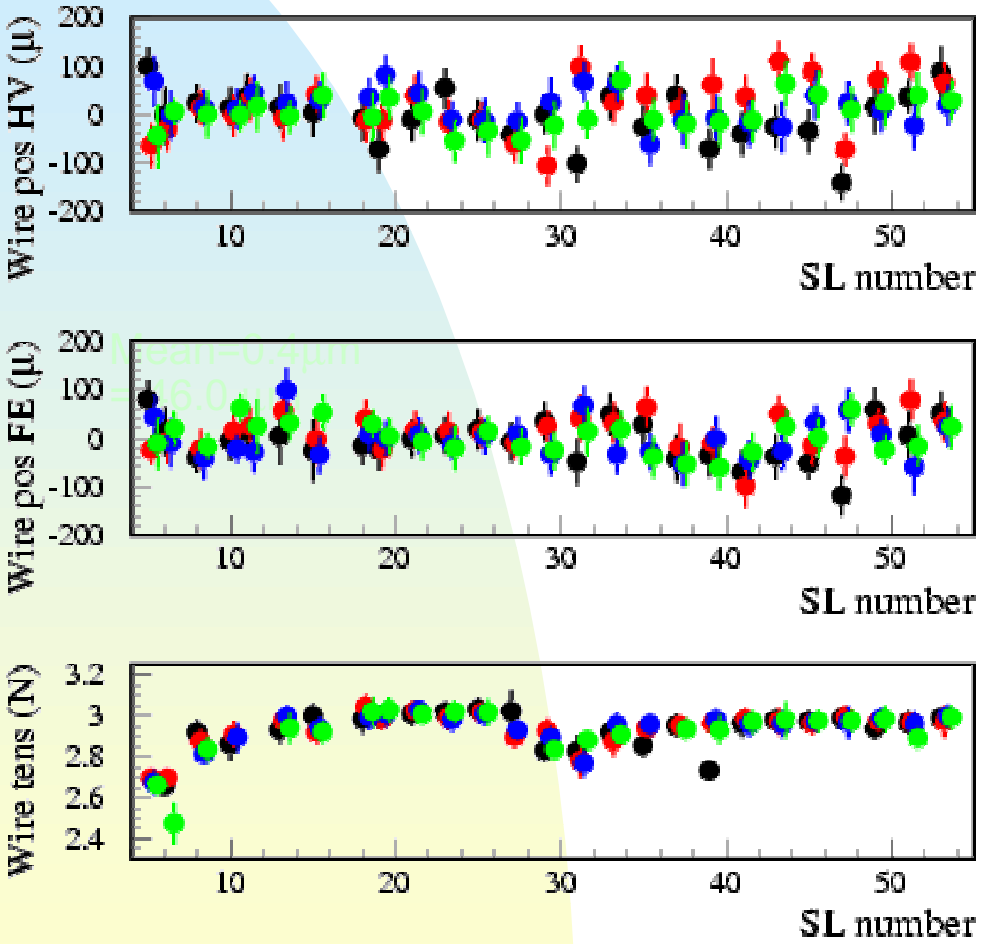
- Number of SL and Chambers produced up to now:
  - 54 φ SL
  - 28 θ SL
  - 24 assembled chambers, 19 already sent to CERN.
  - Next week, shipment of 5 more chambers.
  -
- Summary showing continuous trend in construction items:
  - Wire positions and tensions
  - Corner Block positions
  - Chamber thickness & planarity

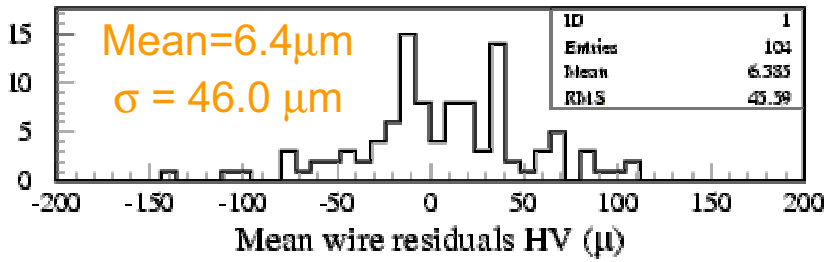
B. de la Cruz
CIEMAT (Madrid)

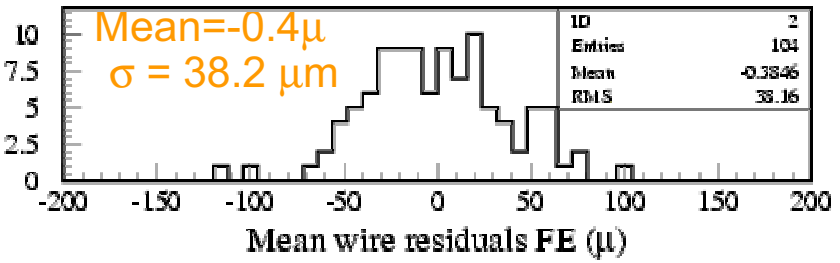
Wires Position & Tension

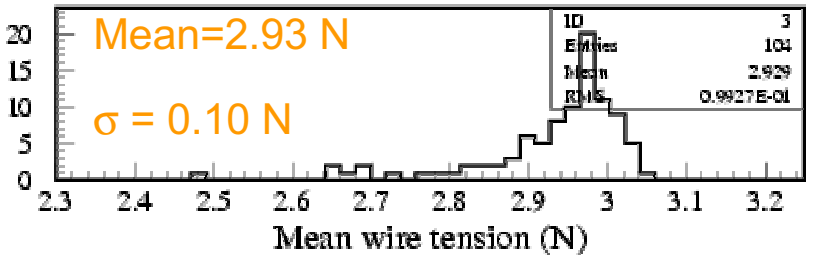
φ SL at table 1

♦ Layer 1 ♦ Layer 2 ♦ Layer 3 ♦ Layer 4





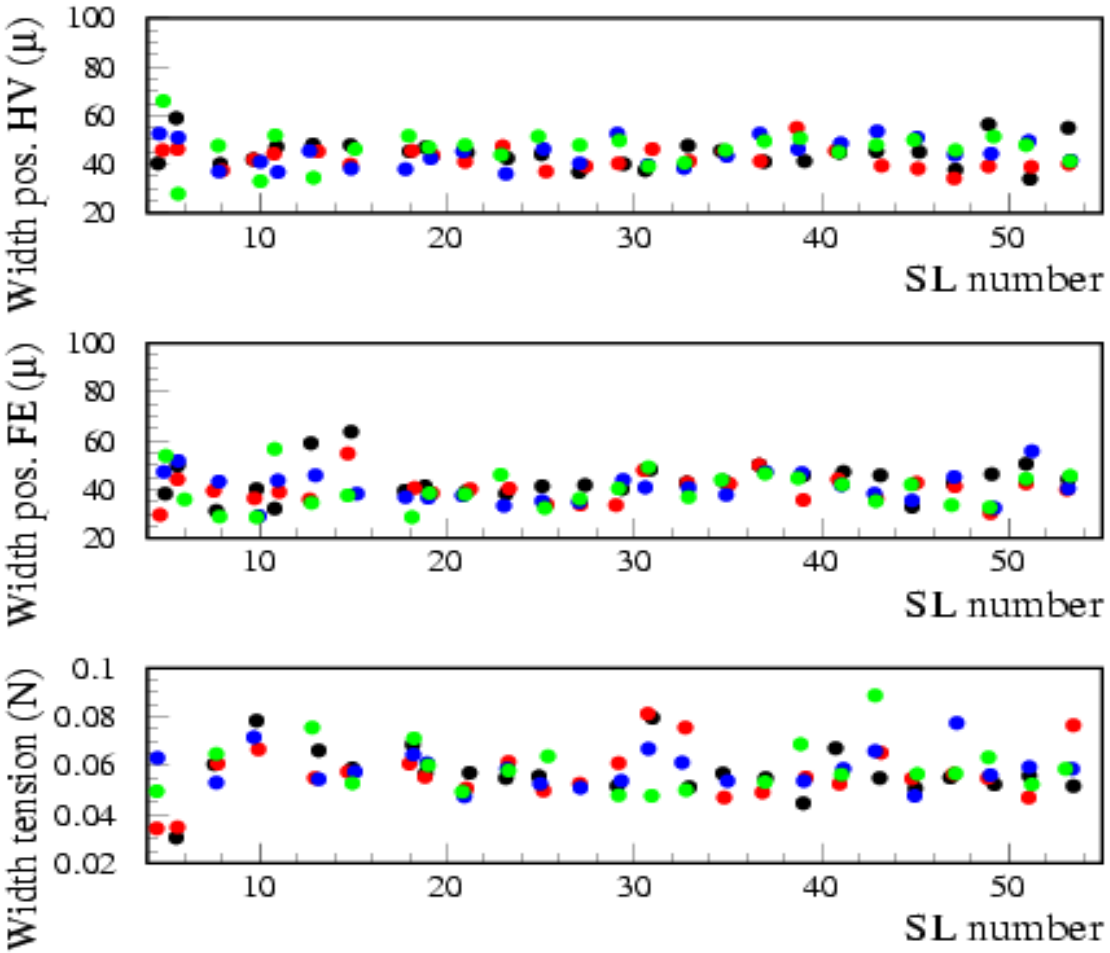




Wires Position & Tension

φ SL at table 1

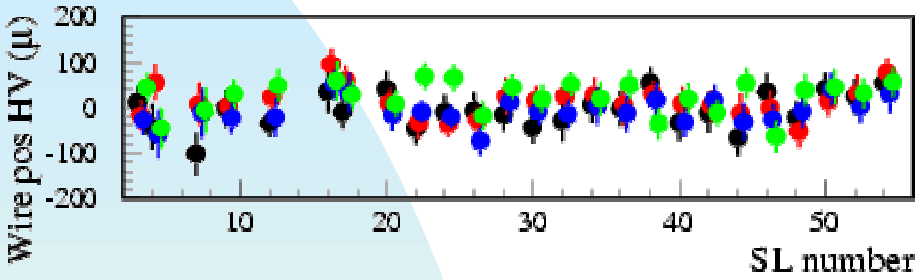
♦ Layer 1 ♦ Layer 2 ♦ Layer 3 ♦ Layer 4

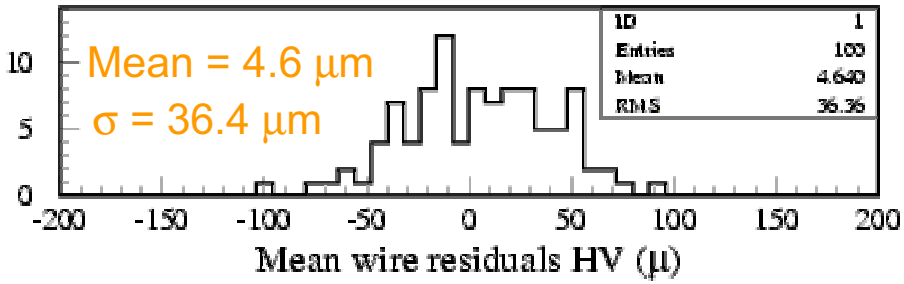


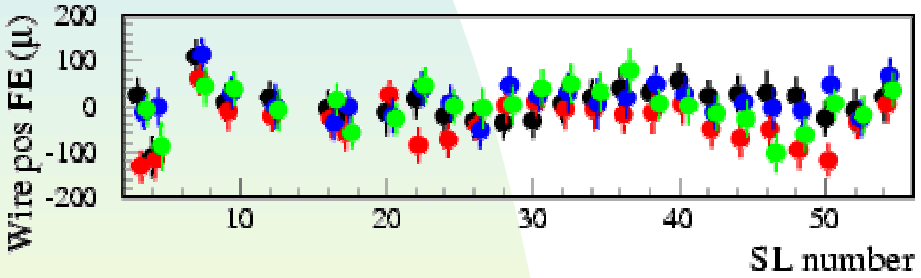
Wires Position & Tension

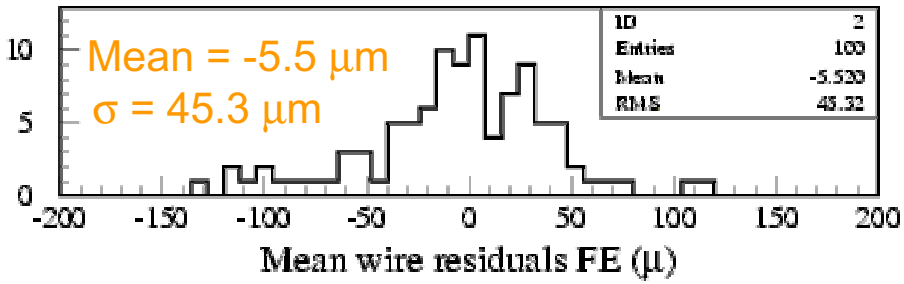
φ SL at table 2

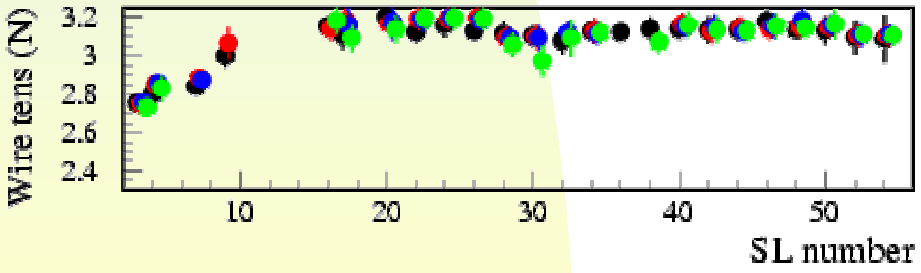
♦ Layer 1 ♦ Layer 2 ♦ Layer 3 ♦ Layer 4

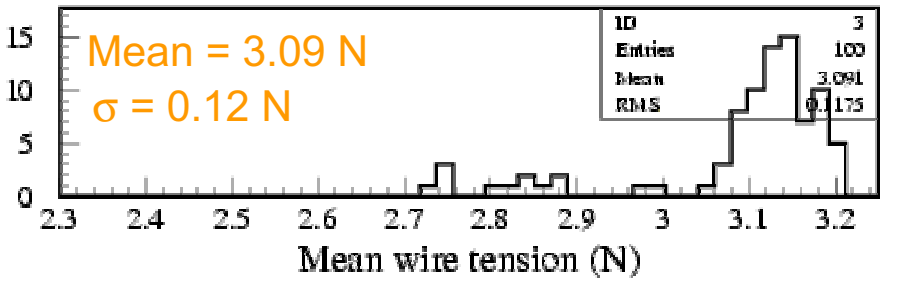








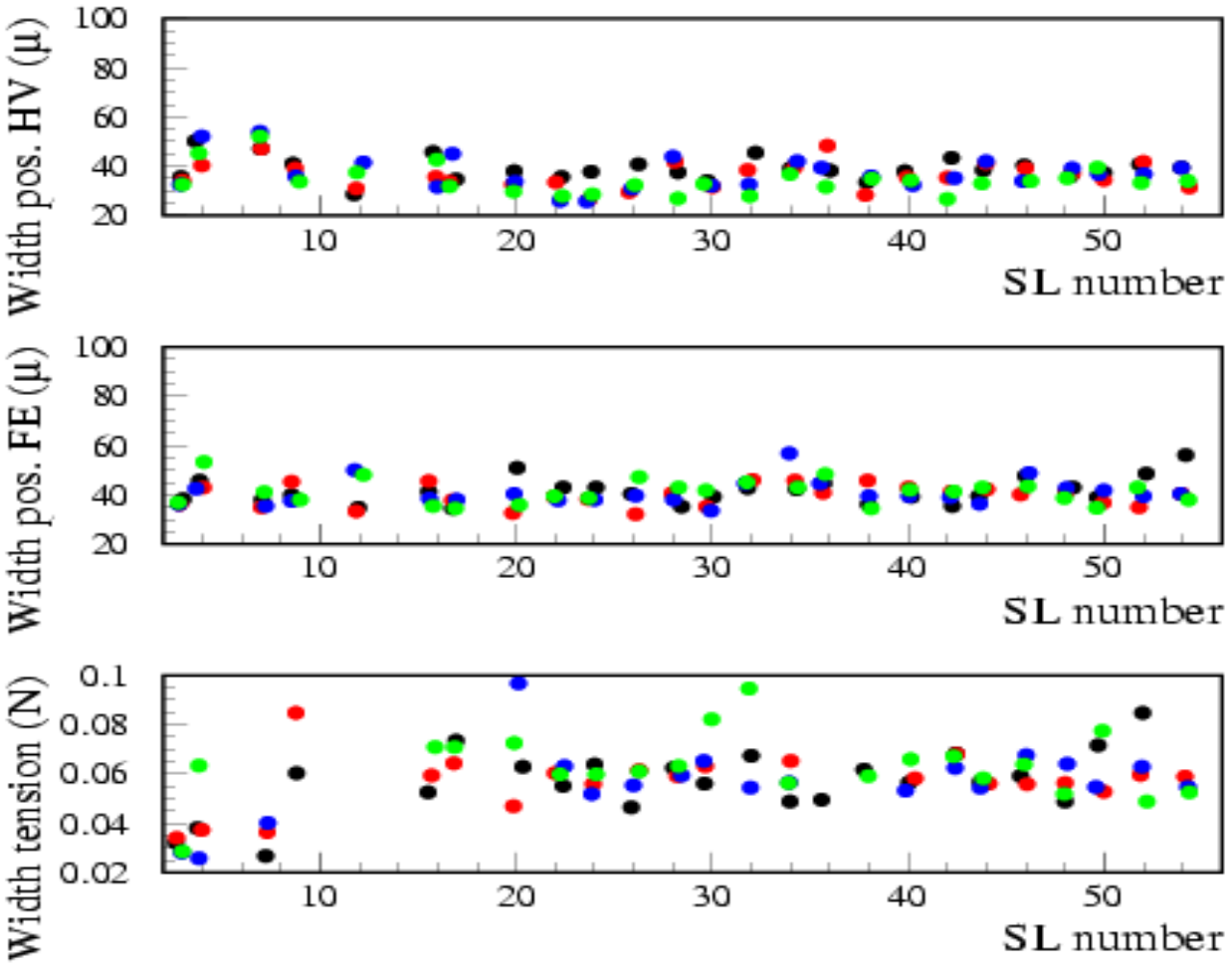




Wires Position & Tension

φ SL at table 2

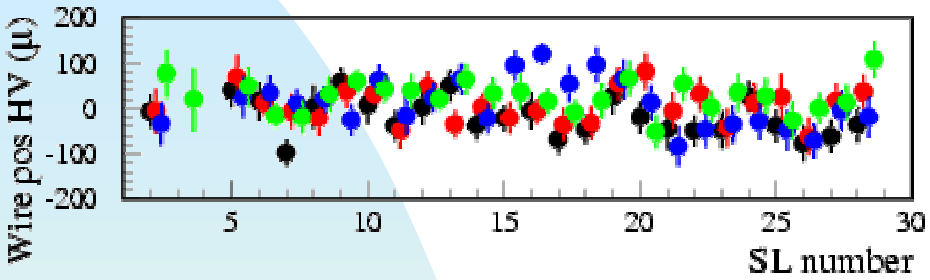
Layer 1 Layer 2 Layer 3 Layer 4

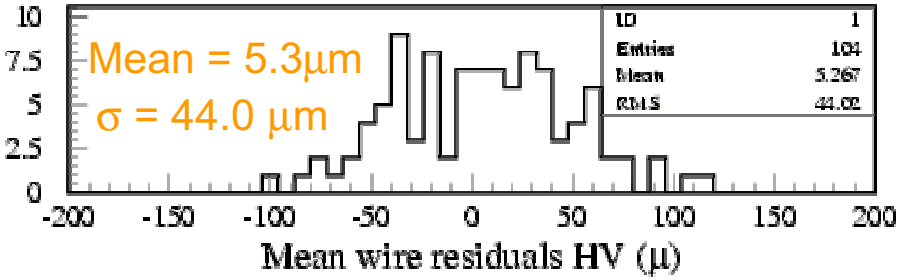


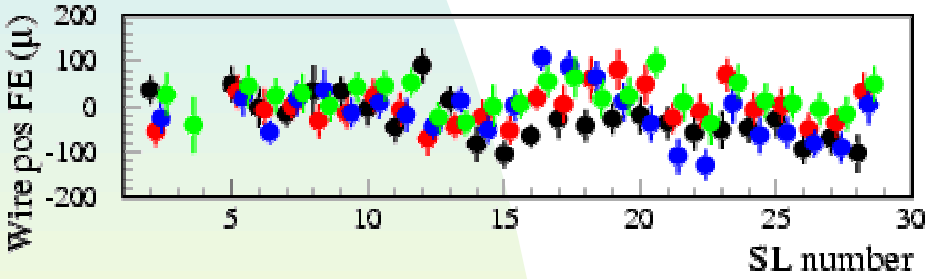
Wires Position & Tension

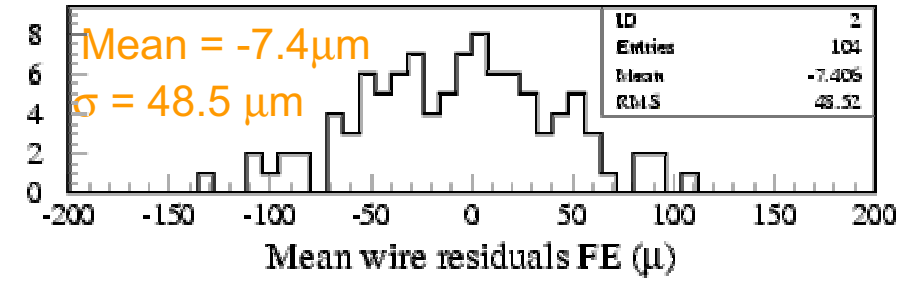
Z SL at table 3

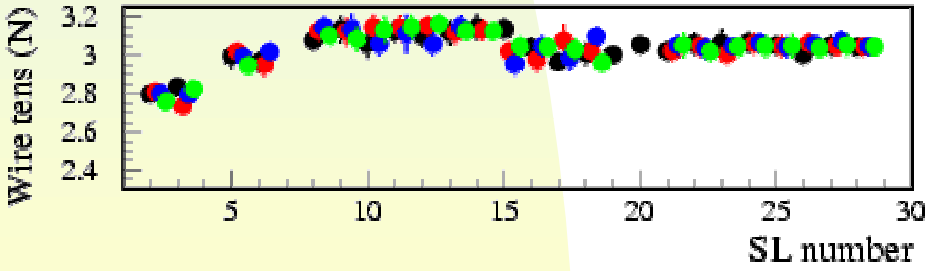
Layer 1 Layer 2 Layer 3 Layer 4

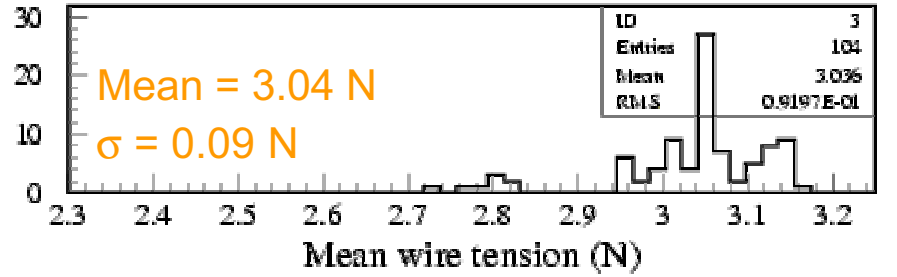








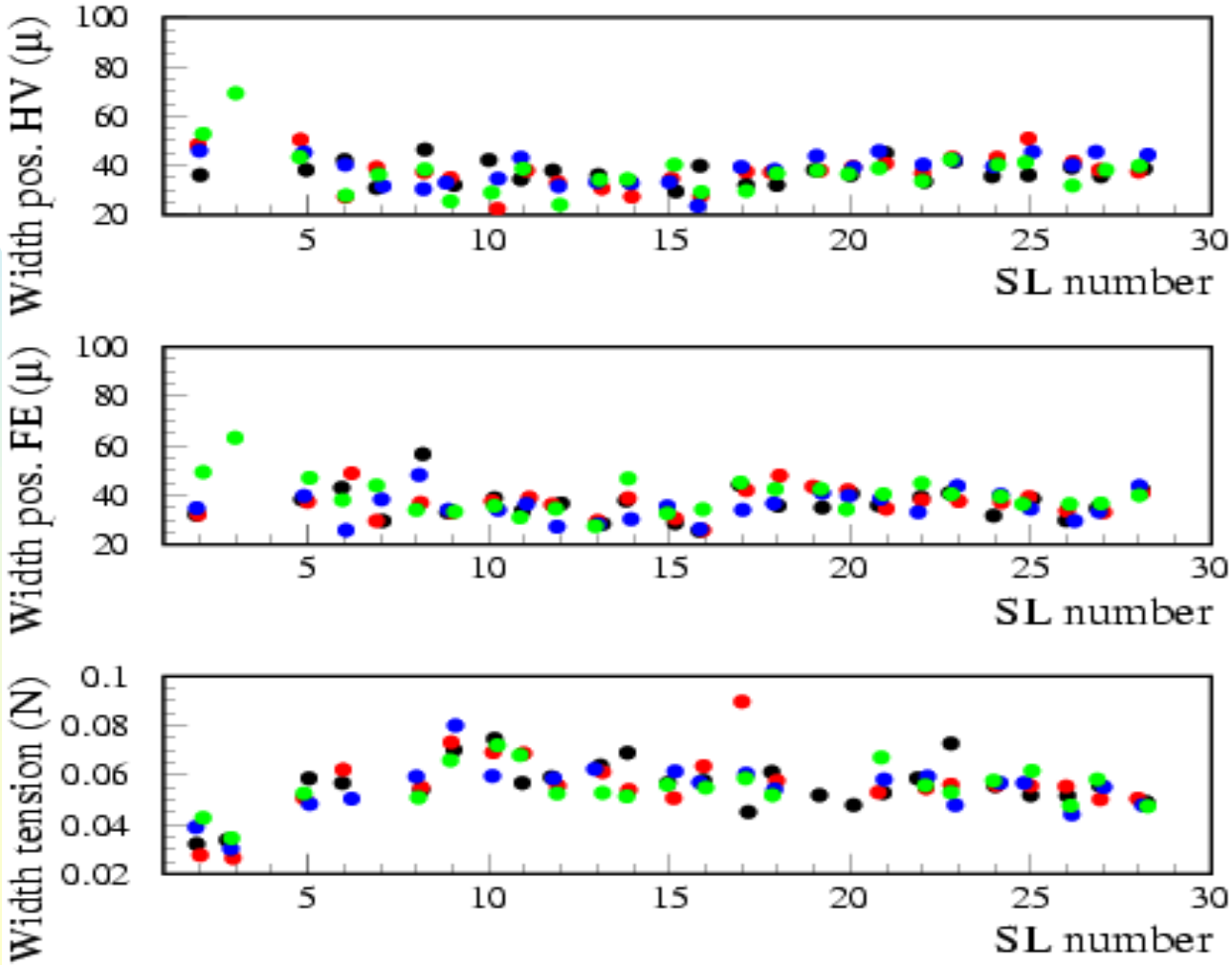




Wires Position & Tension

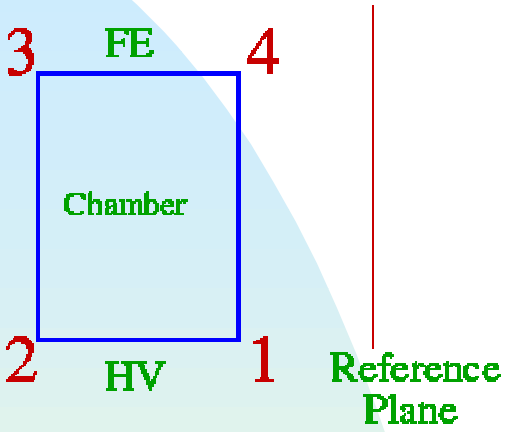
Z SL at table 3

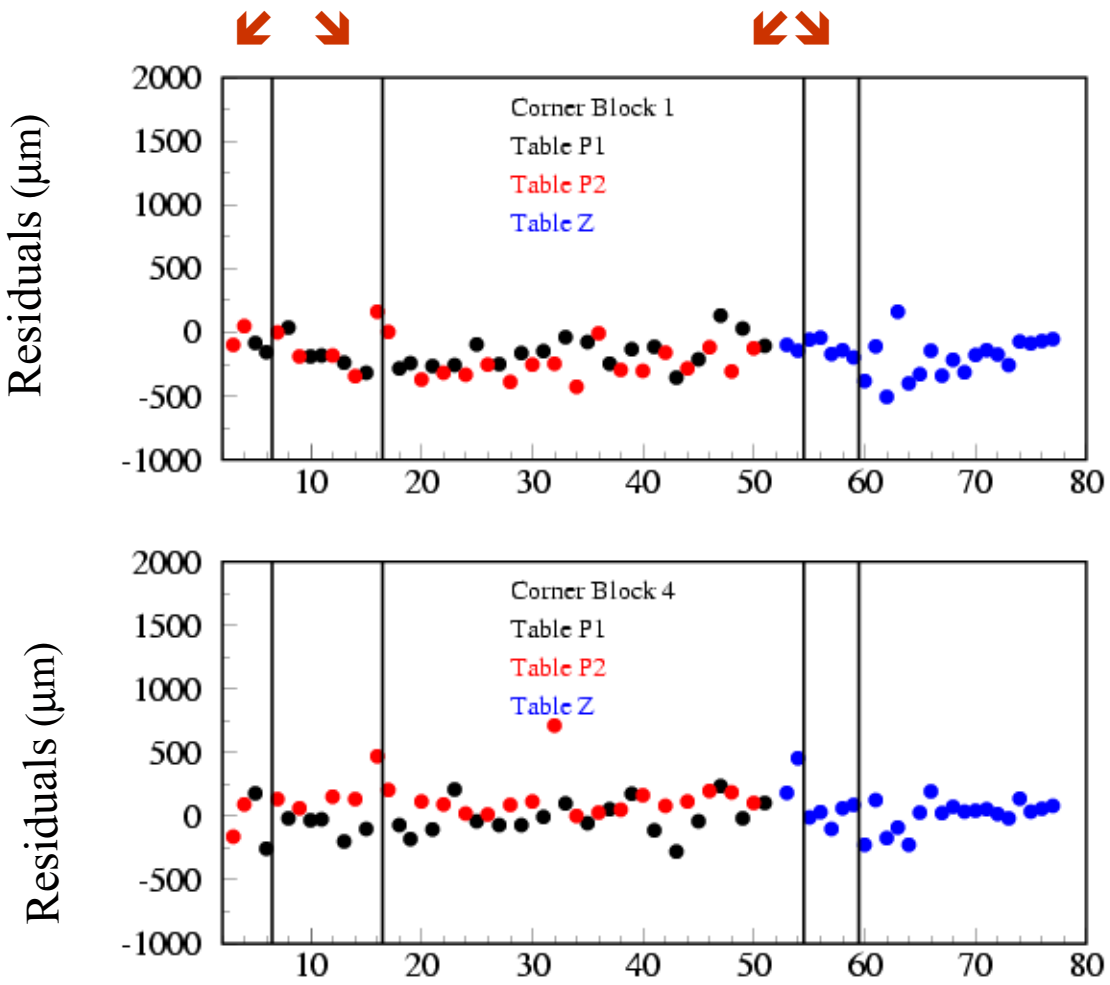
Layer 1 Layer 2 Layer 3 Layer 4



Corner Blocks Positions (1 & 4)

Change in positioning/measuring methods

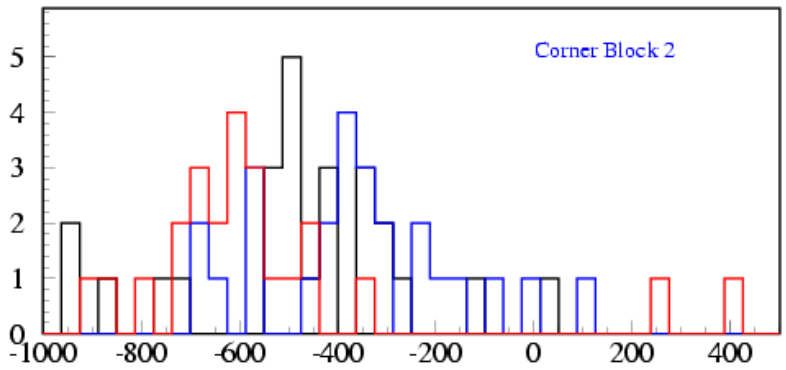


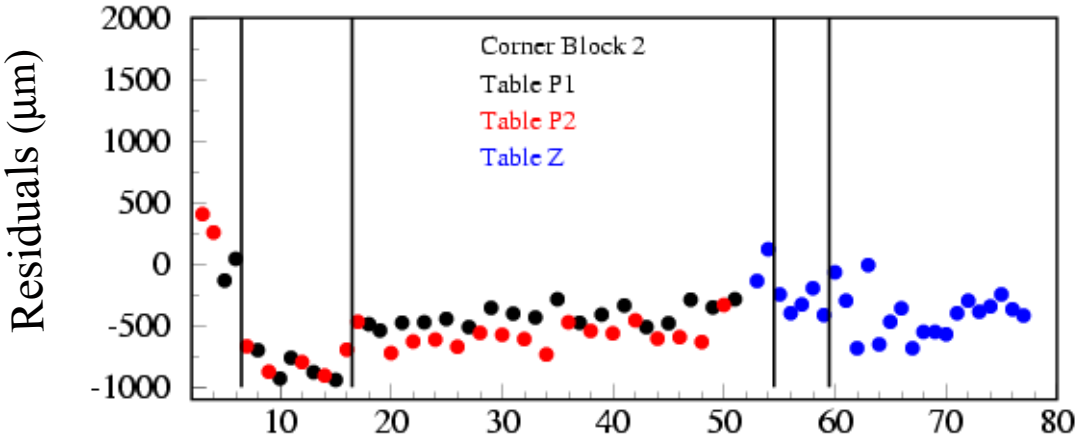


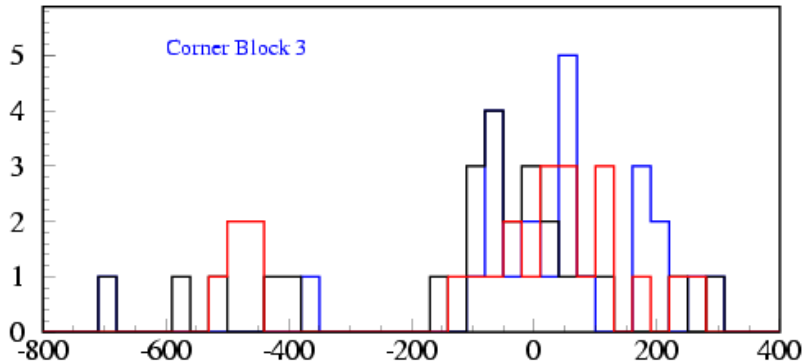
- Rather uniform corner block position for the different SL at the different construction tables.

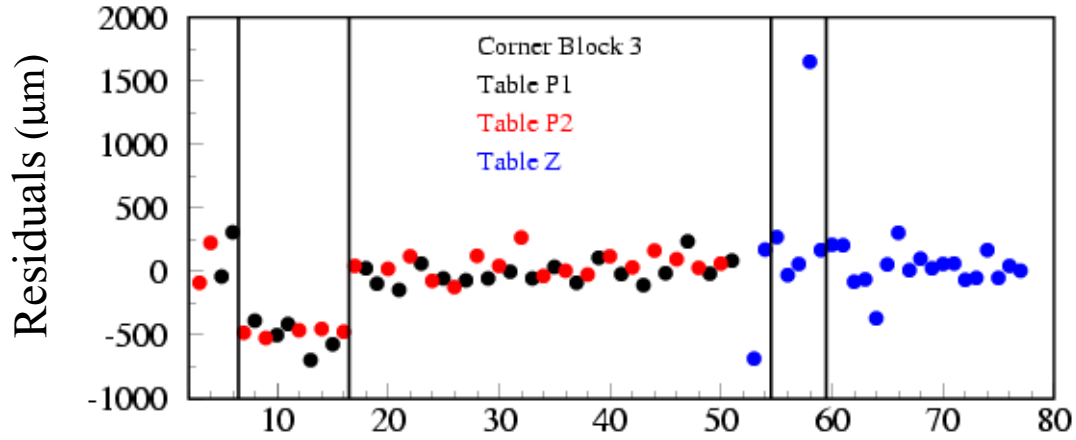
B. de la Cruz
CIEMAT (Madrid)

Corner Blocks Positions (2 & 3)





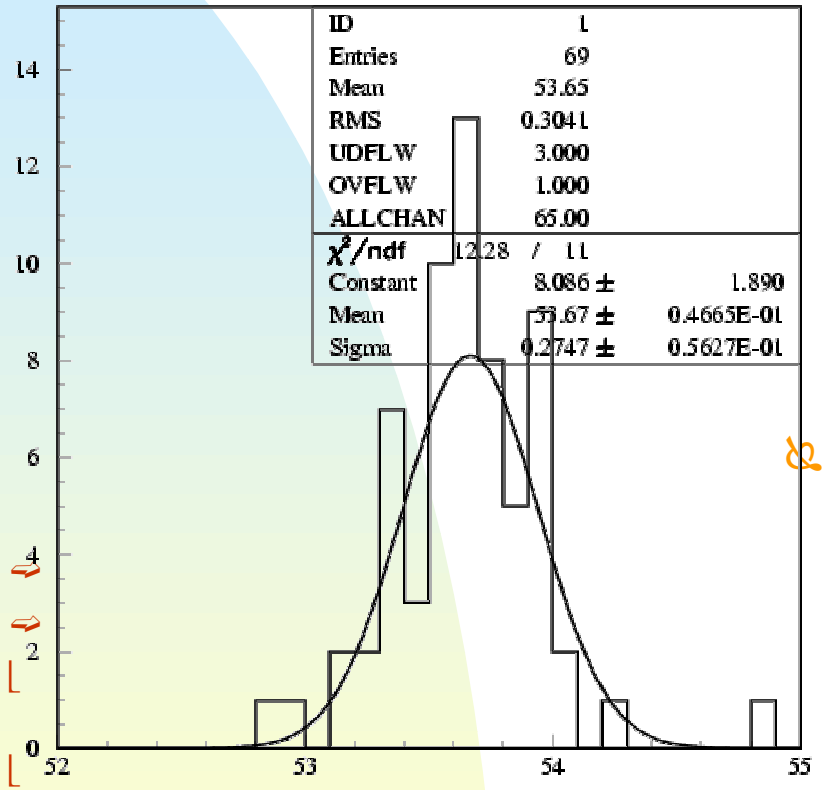




B. de la Cruz
CIEMAT (Madrid)

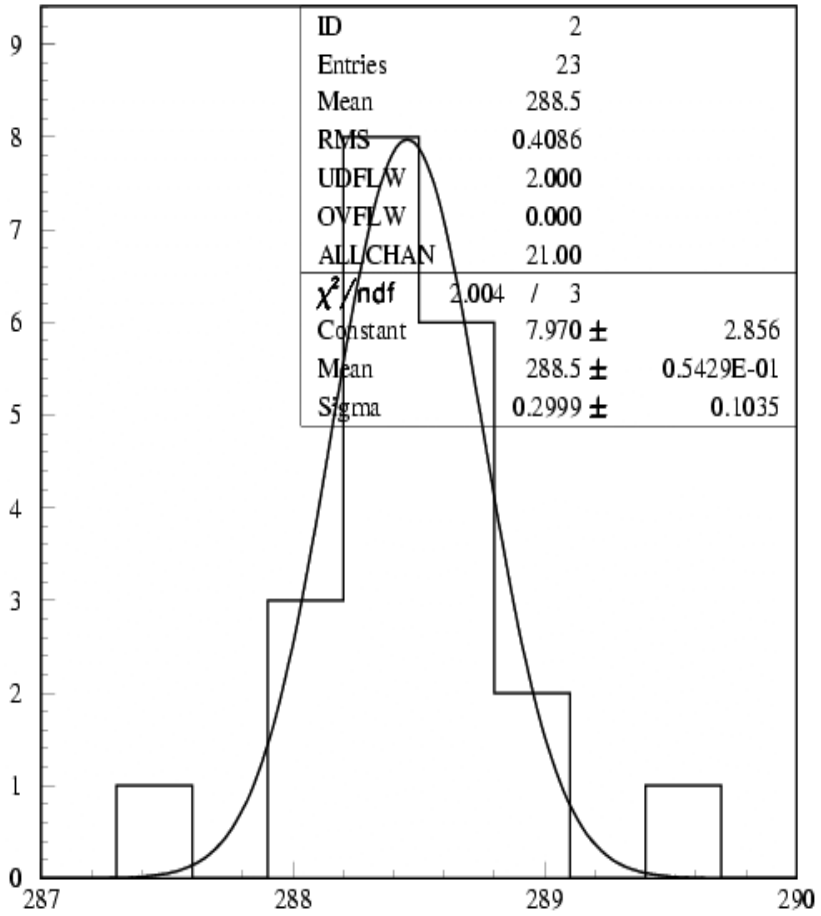
Chamber Thickness

- SL thickness measured wl
- Results on 23



SL (φ1, φ2,Z) Thickness(mm)

Mean value= 53.7 mm
Width = 0.3 mm



Chamber Thickness (mm)

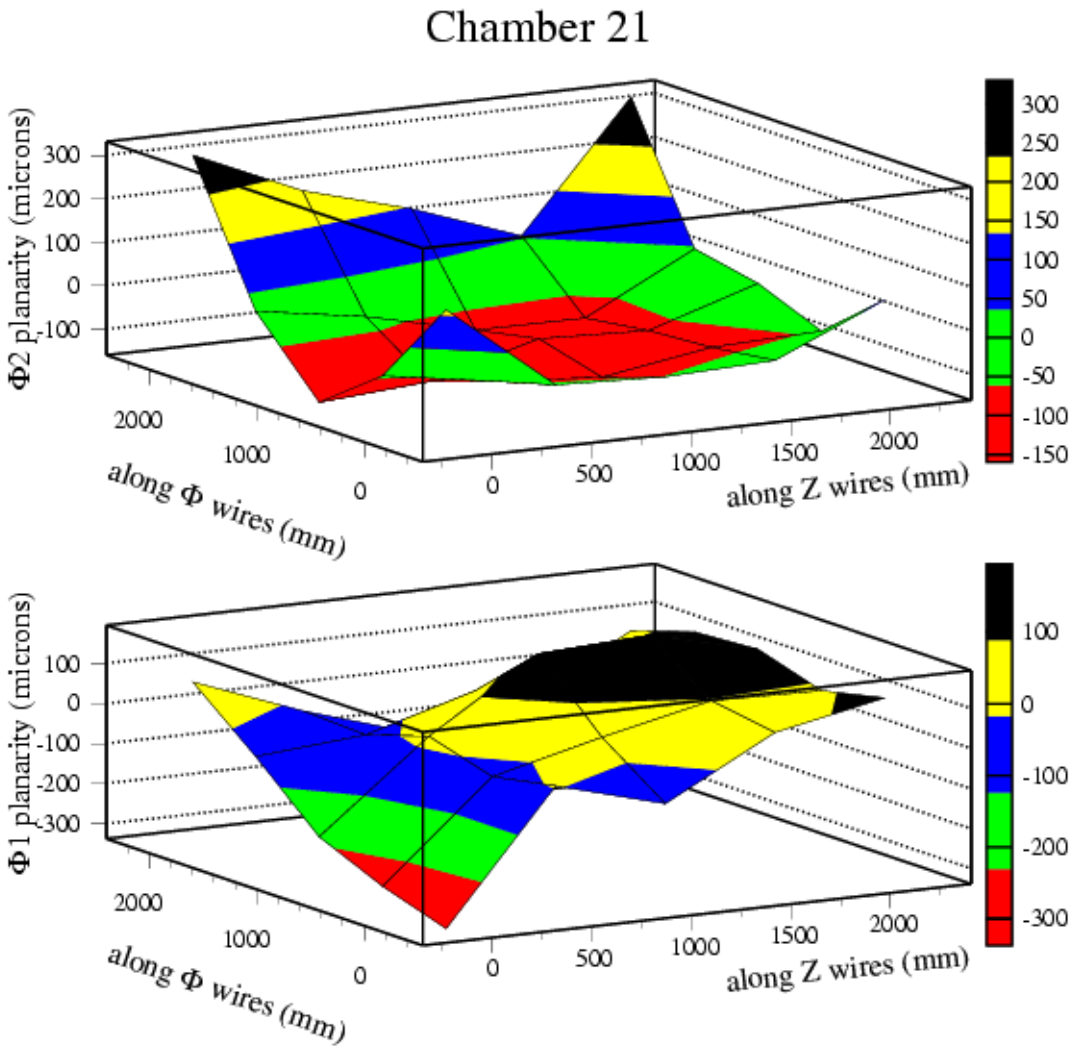
Mean value = 288.5 mm
Width = 0.3 mm

B. de la Cruz
CIEMAT (Madrid)

Chamber Planarity (μm)

φ_2 Planarity

φ_1 Planarity

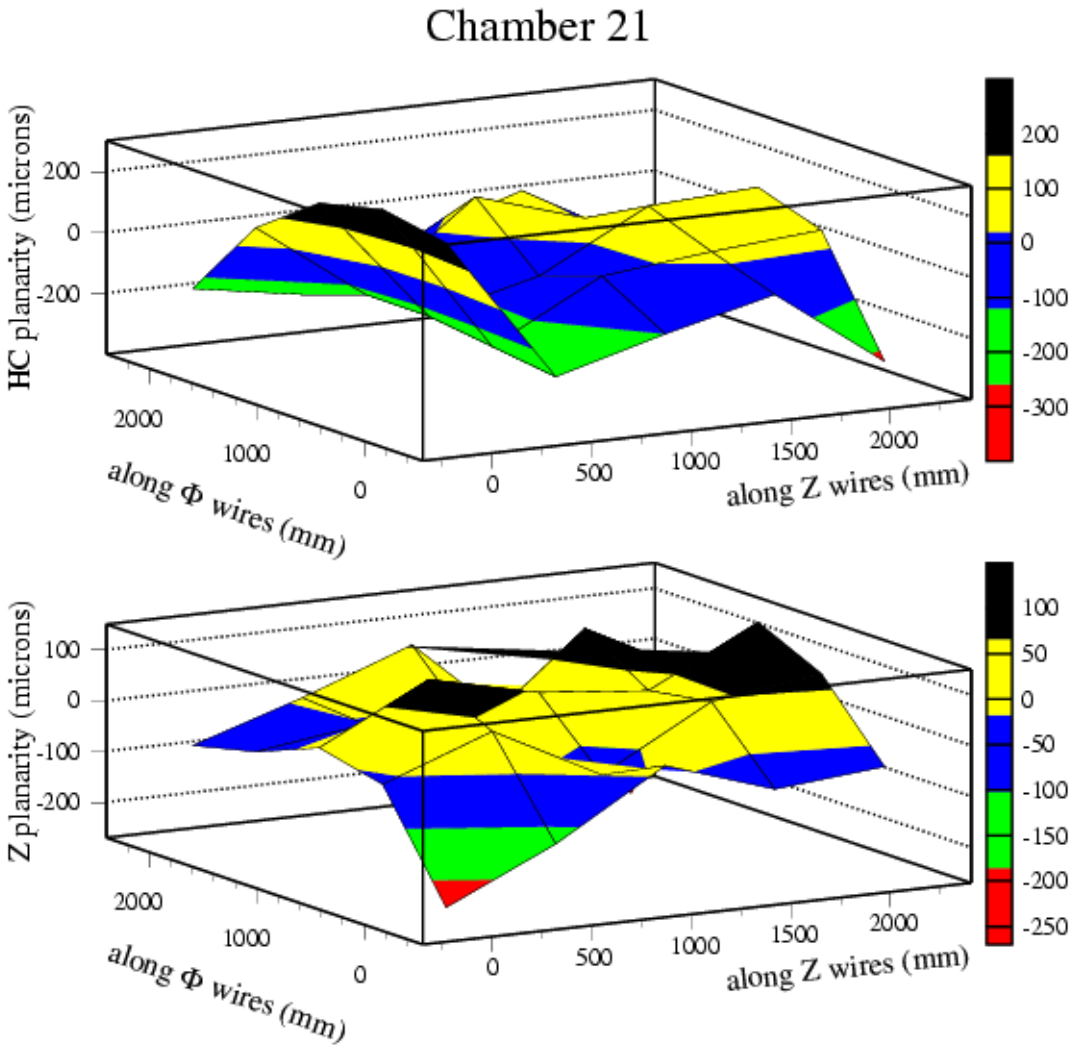


B. de la Cruz
CIEMAT (Madrid)

Chamber Planarity (µm)

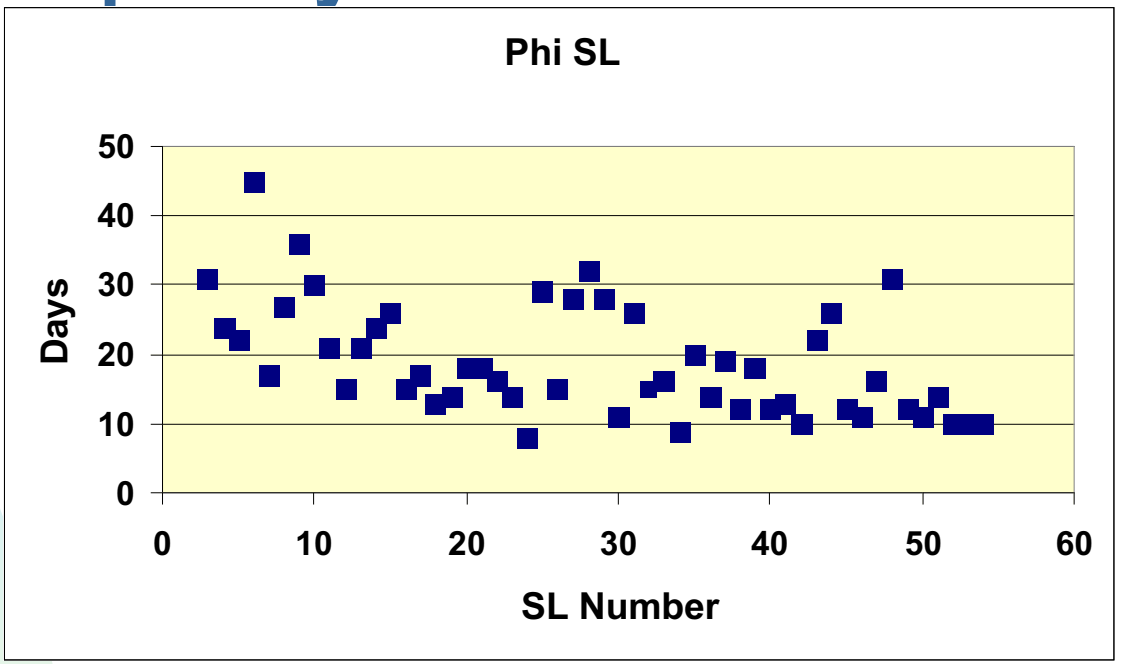
HC Planarity

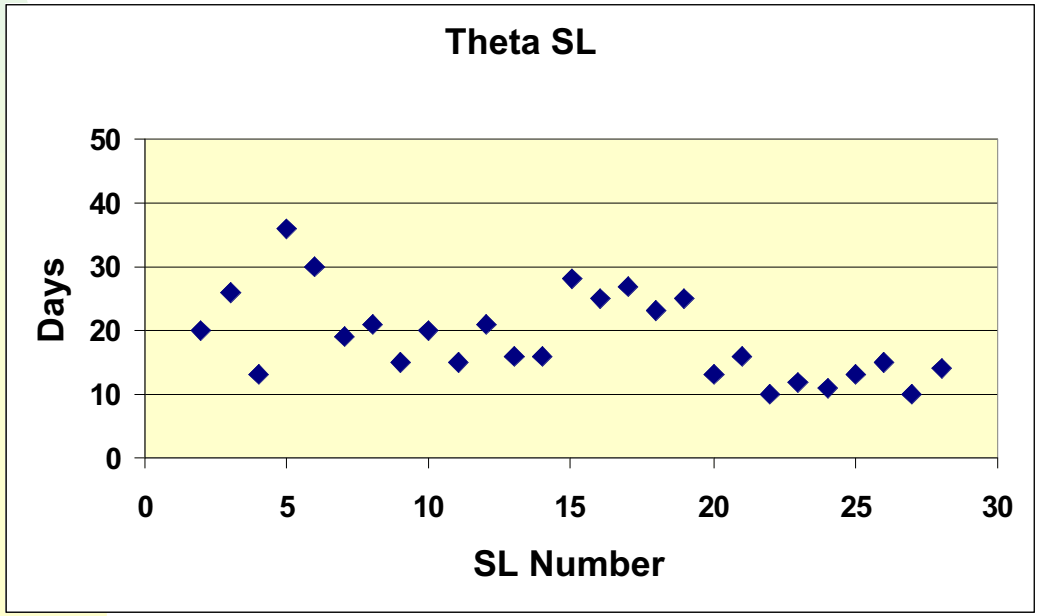
Z Planarity



B. de la Cruz
CIEMAT (Madrid)

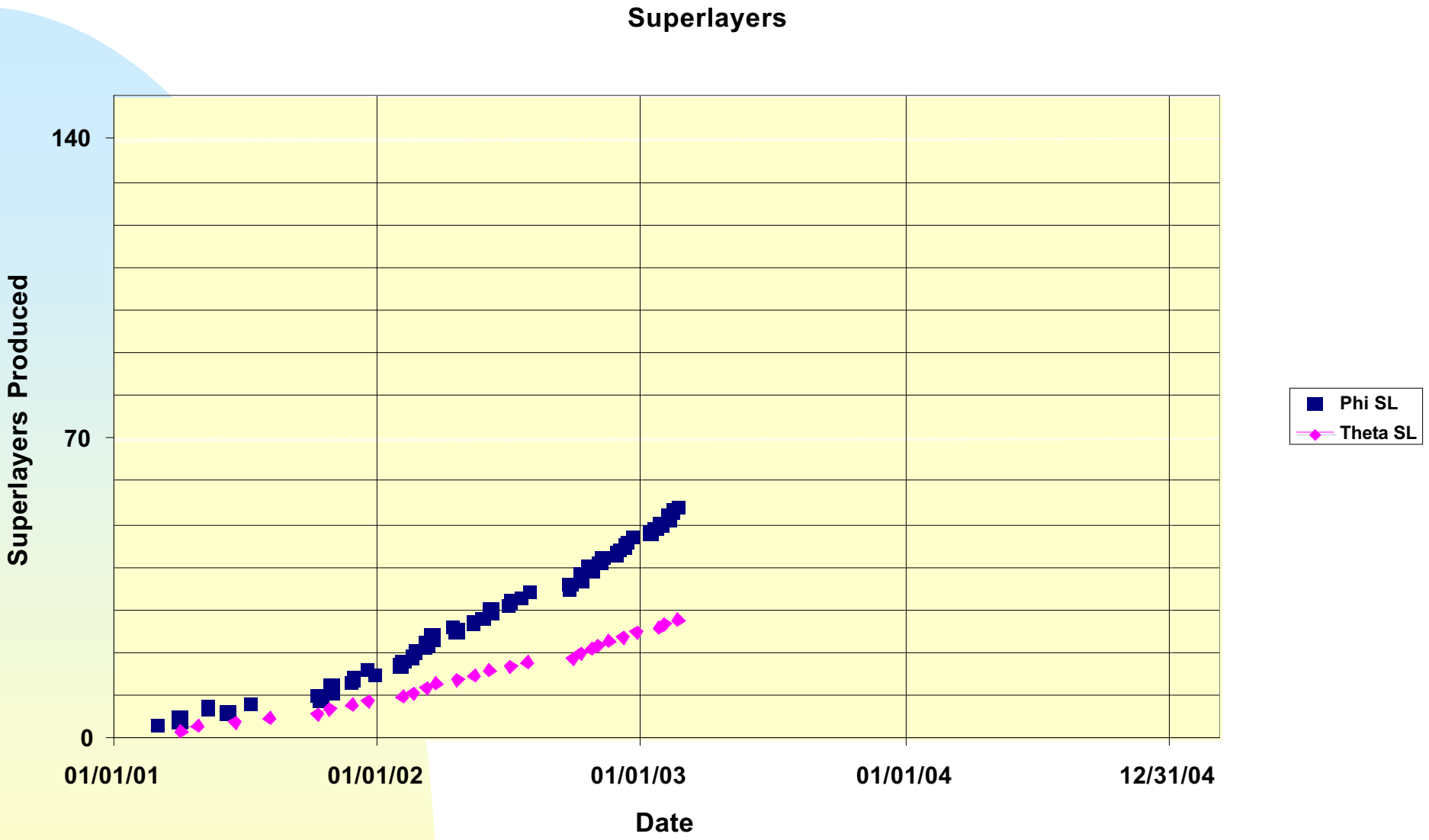
SuperLayer Production





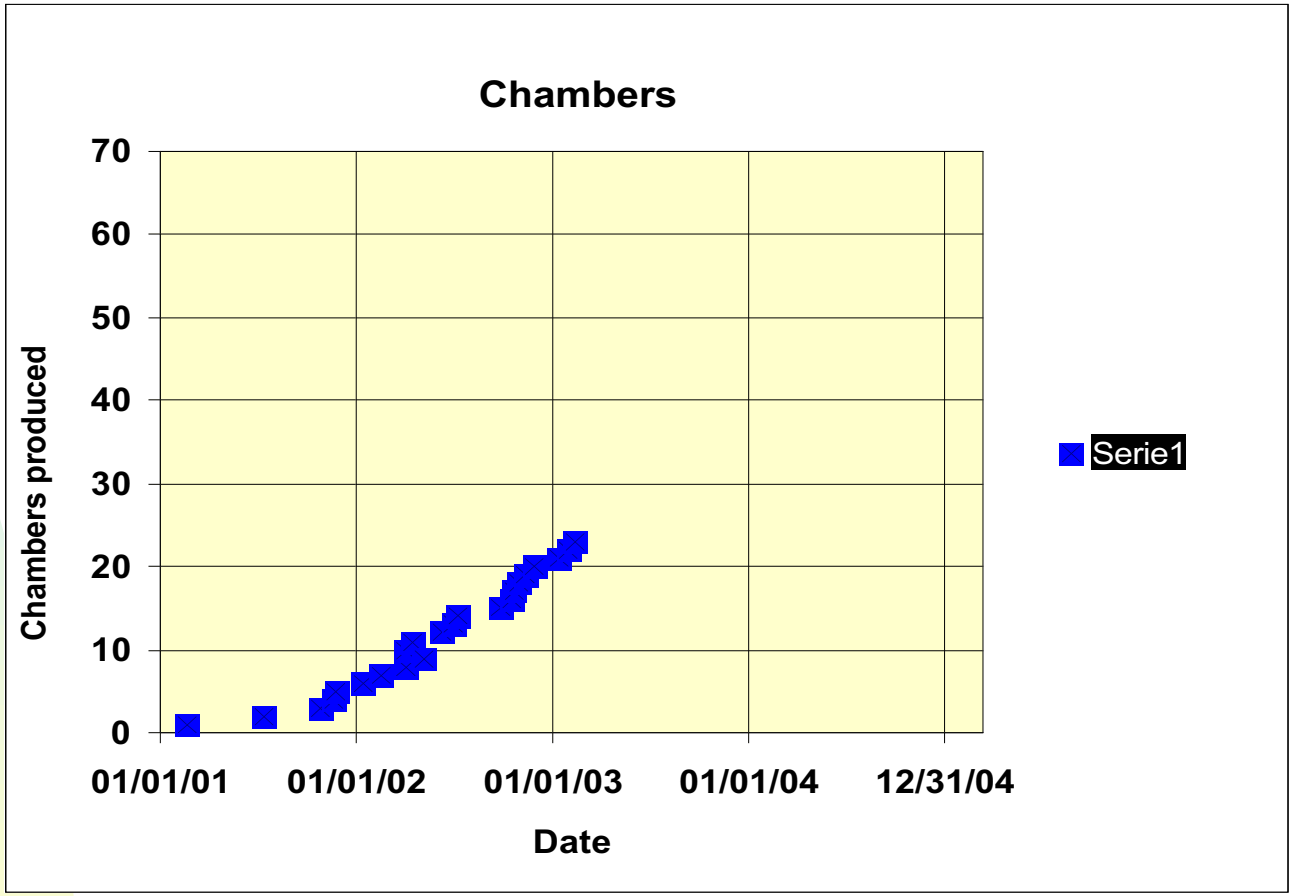
B. de la Cruz
CIEMAT (Madrid)

SuperLayer Production



B. de la Cruz
CIEMAT (Madrid)

Chamber Production



B. de la Cruz
CIEMAT (Madrid)

Public Info

- Public Information on chamber construction and tests is available at http://wwwae.ciemat.es/cms/QC.html

- At the moment we are moving our information on DT construction into the Oracle DT Production Database at CERN, proposed by Pablo, see:

http://oraweb03.cern.ch:9000/pls/cms_mb_prod/chambers.main

Shortly this will be our unique reference database.

Asccii files, if needed, will be automatically produced from it.

B. de la Cruz
CIEMAT (Madrid)