



Status of Torino-Dubna Production



Aluminum Plates production:

- **Torino:** 3503 plates cut, 258 chambers=60MB1 +62MB2+62MB3+74MB4), 96% of (total + spares) (no cutting in the last two months due to Dubna stock overflow). Next batch to be sent in Dubna september (last transportation).
- **Pechiney:** spare plates (amendment to contract F340/EP delivered). Pechiney produced and delivered by mistake 167+35 instead of 180+40 plates, but they agreed in delivering missing units.



MB4 assembly status



We have presently mechanically built 1 dummy SL + 1 complete SL + 1 almost complete (4 layers) SL

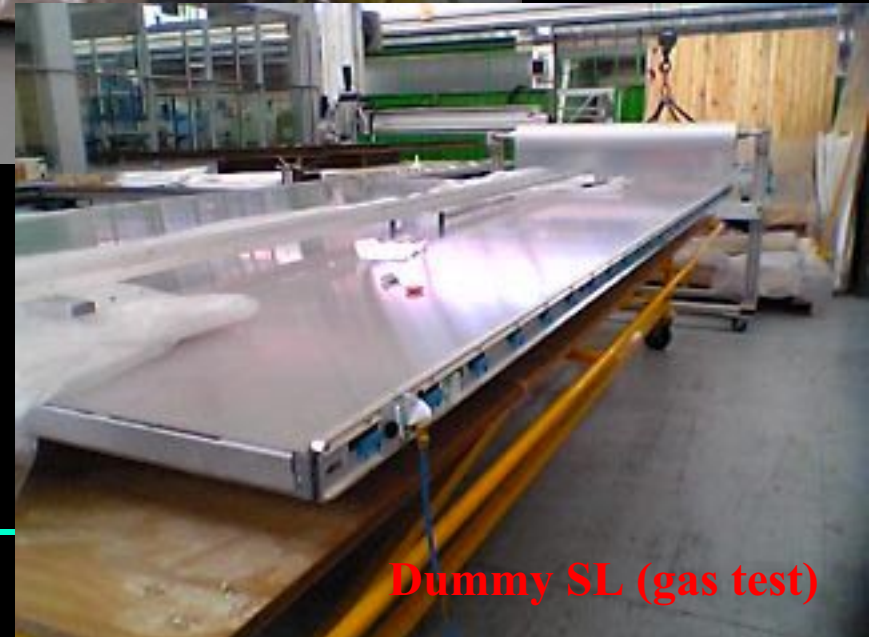


SL_002



SL_001

Gas test ok



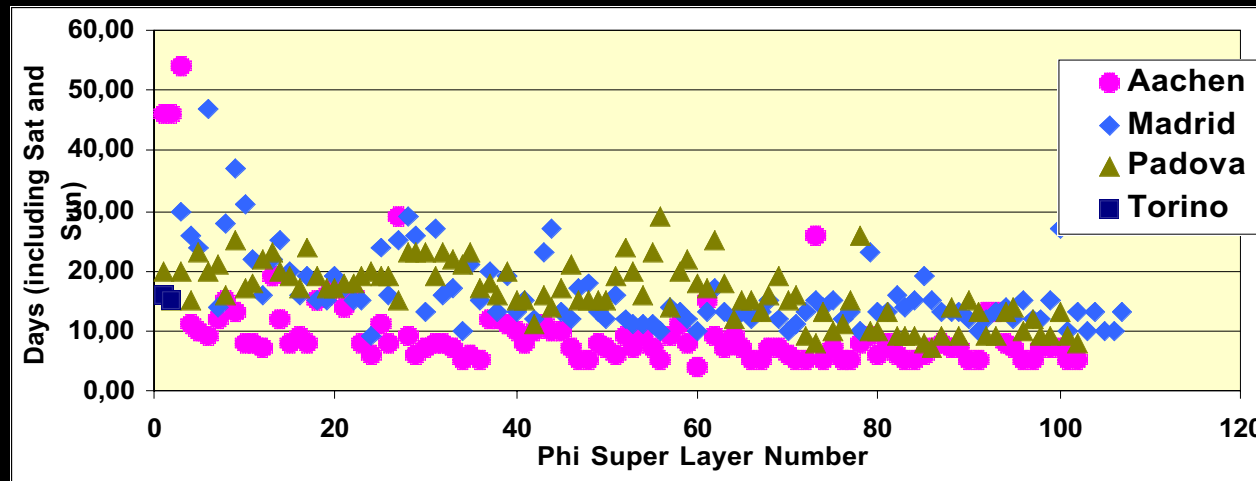
Dummy SL (gas test)



MB4 assembly status



- 2 mechanically finished SL (no covers) built in 5 weeks, one table. This is close to nominal build rate;



- no problems in making 2 glueing/day;
- actual limiting factors: time spent in dimensional measurements, software not in GUI format, experts still required, assembly of table 1 going on, electronics not in final shape, plate cutting not finished, time spent in Legnaro to make wires (two man-week/month).



MB4 assembly status



Wires

2 technicians from Torino can produce a maximum of 300wires/day in Legnaro.
At nominal rate we need 1600wires/month. This means that we need help/collaboration to produce at least 300wires/month, otherwise two technicians in Legnaro for > 1 week (weekend included), out of question.



Calibration of Torino table 2



E.Torassa in Torino for few days, helped us in

1. Cross check of assembly operation
2. Camera measurement calibration

Point 2 has been carried on in two ways:

1. Comparison with 3000mm long calibration meter (Padova)
2. Laser interferometer calibration

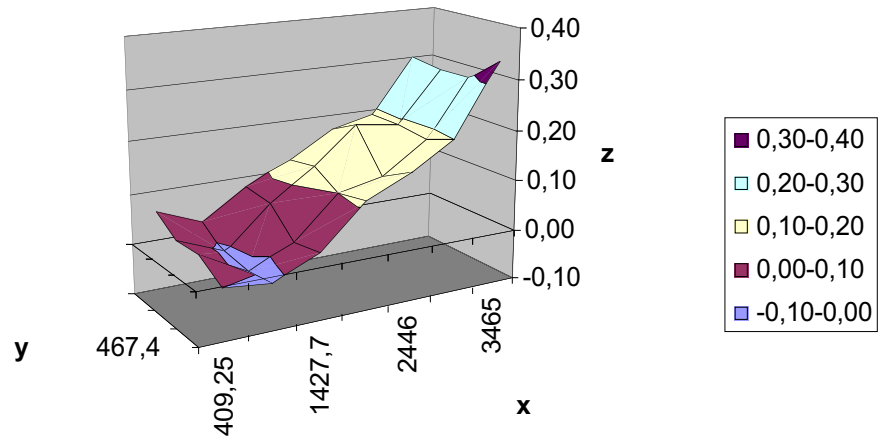
2 SL built since beginning of may (5 weeks)



Planarity

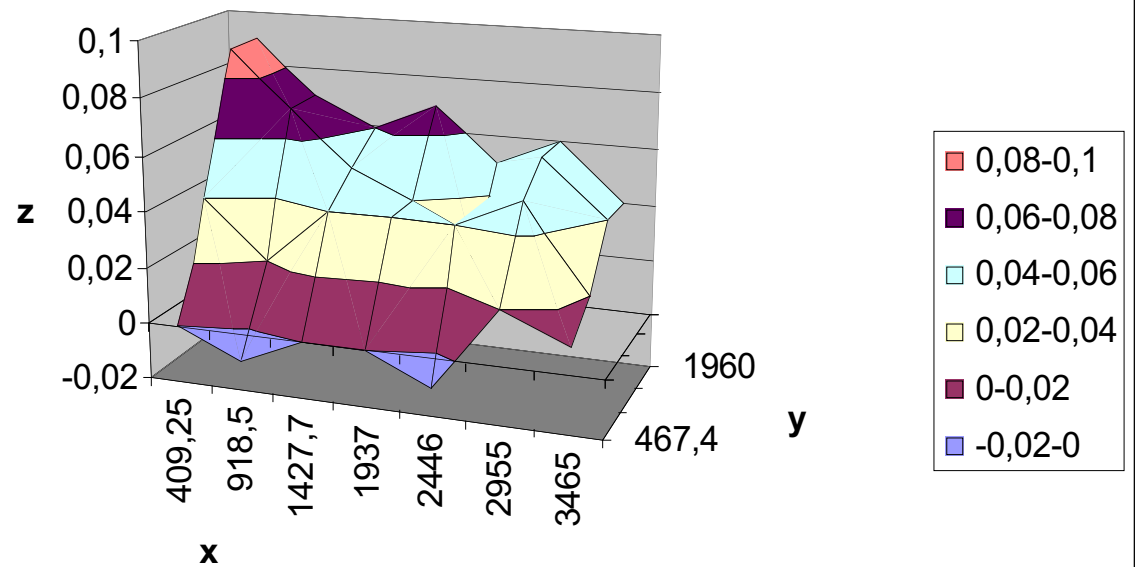


SL_001 planarity



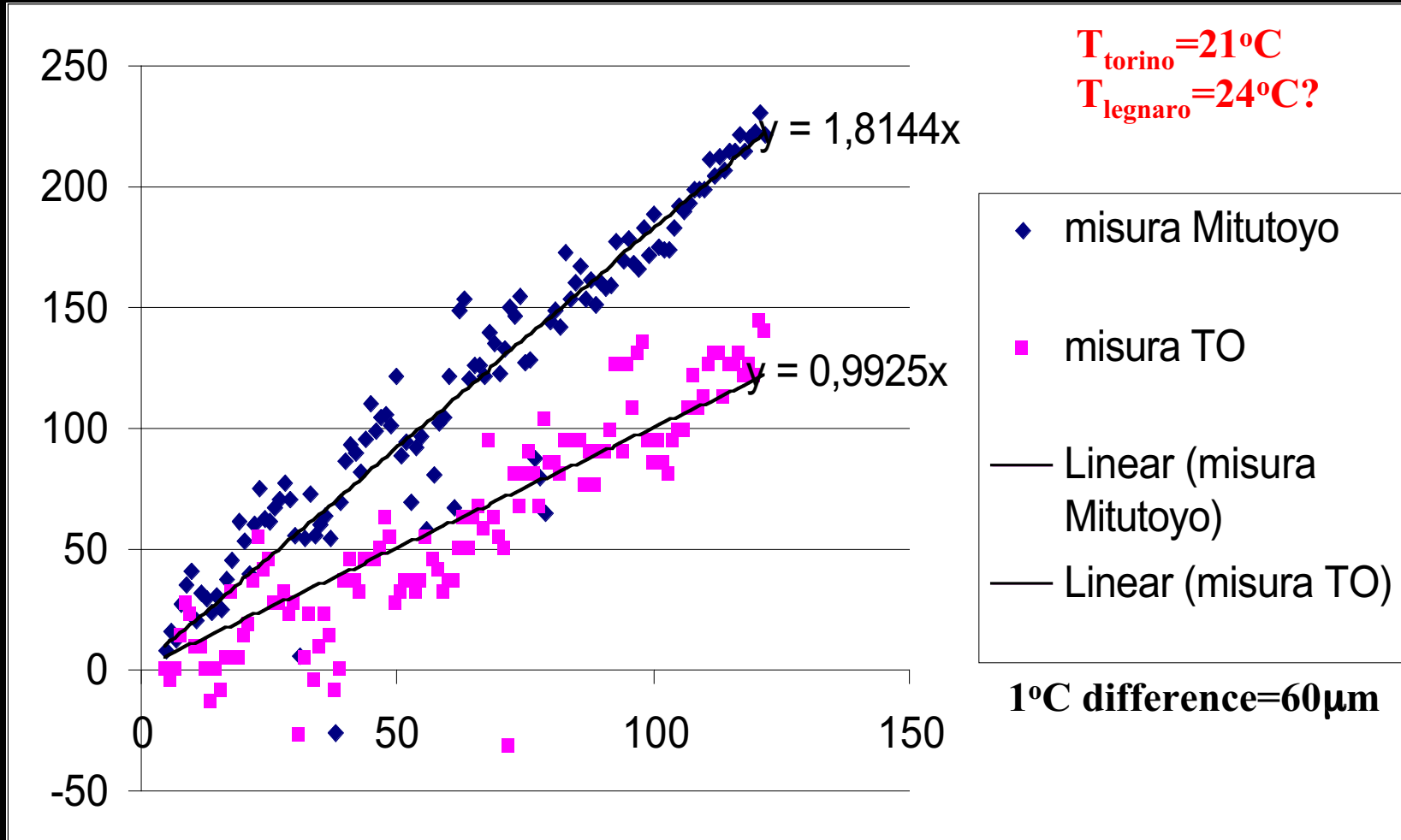
Planarity deviation most probably due to reglueing of one I-beam

table-axis parallelism





Calibration of Torino table 2: Padova caliber

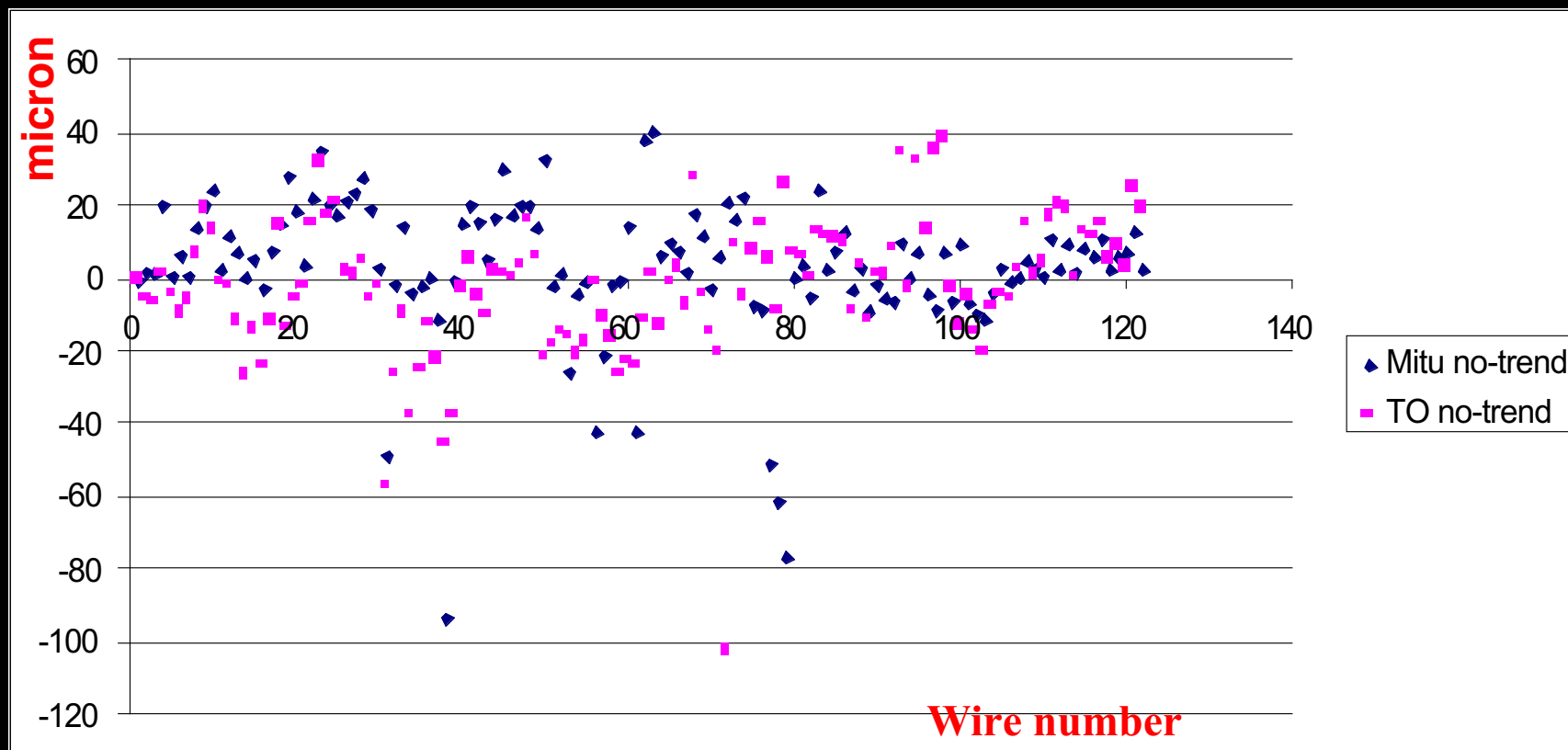




Calibration of Torino table 2: Padova caliber

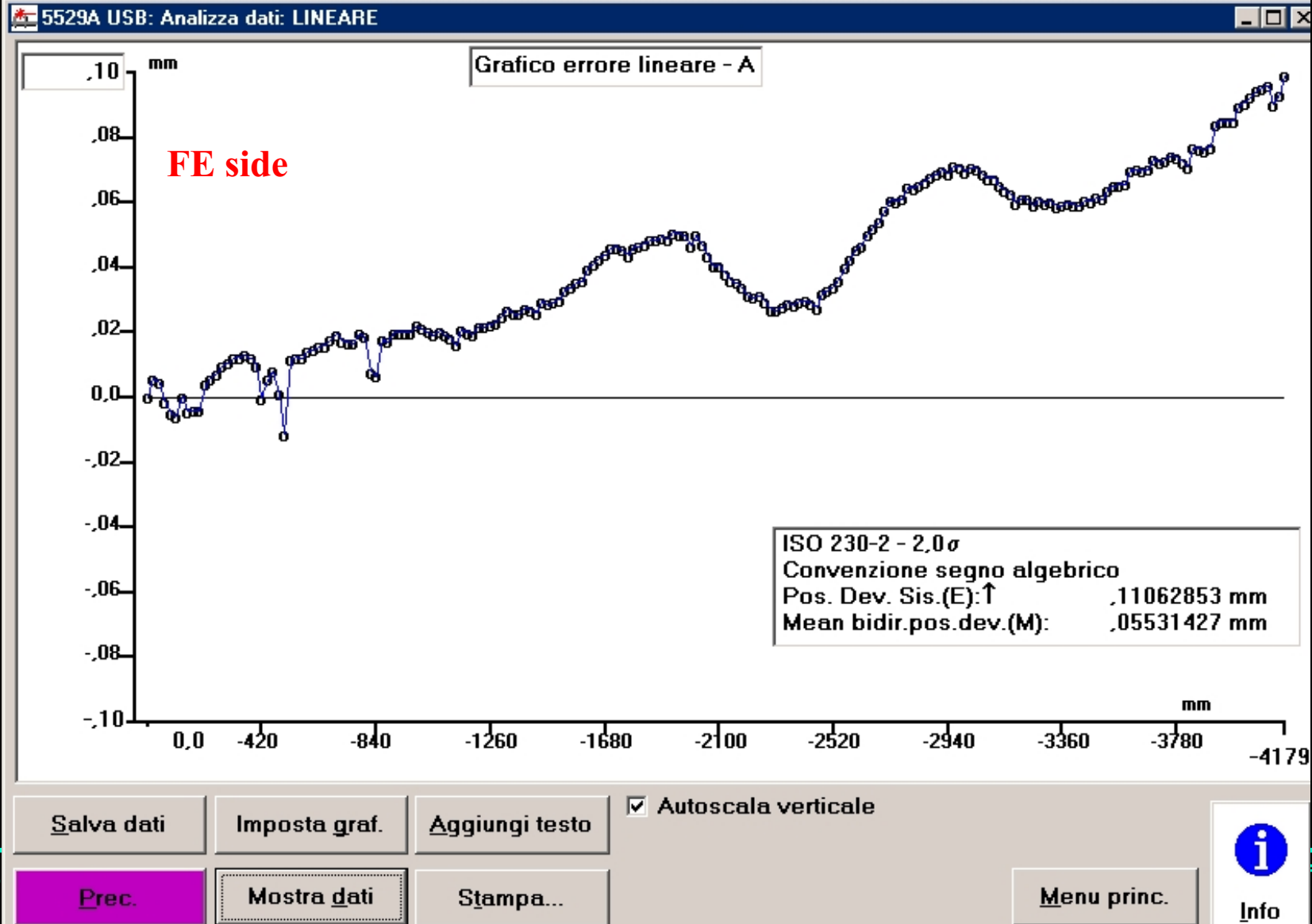


Fit residuals



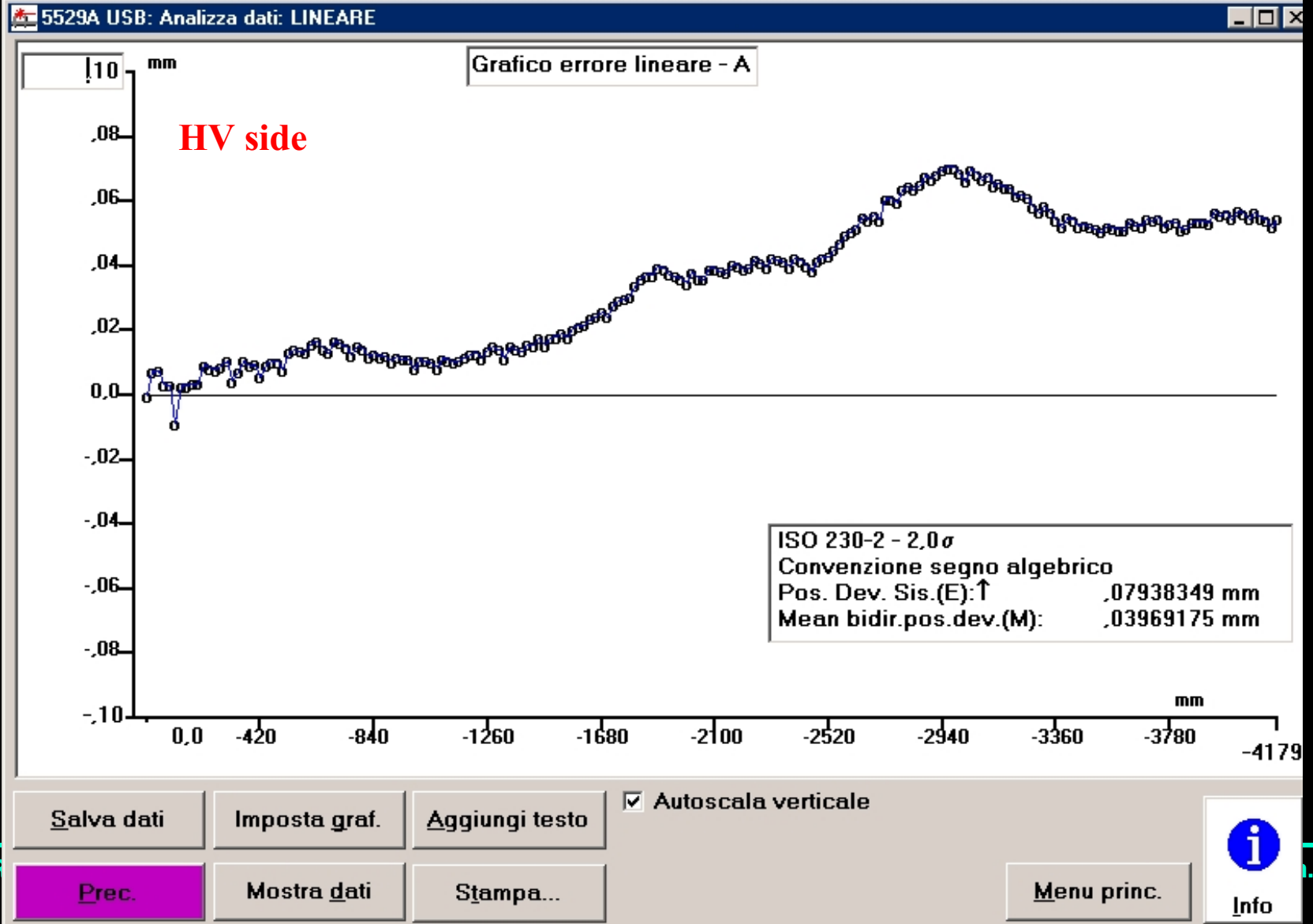


Calibration of Torino table 2:laser





Calibration of Torino table 2:laser

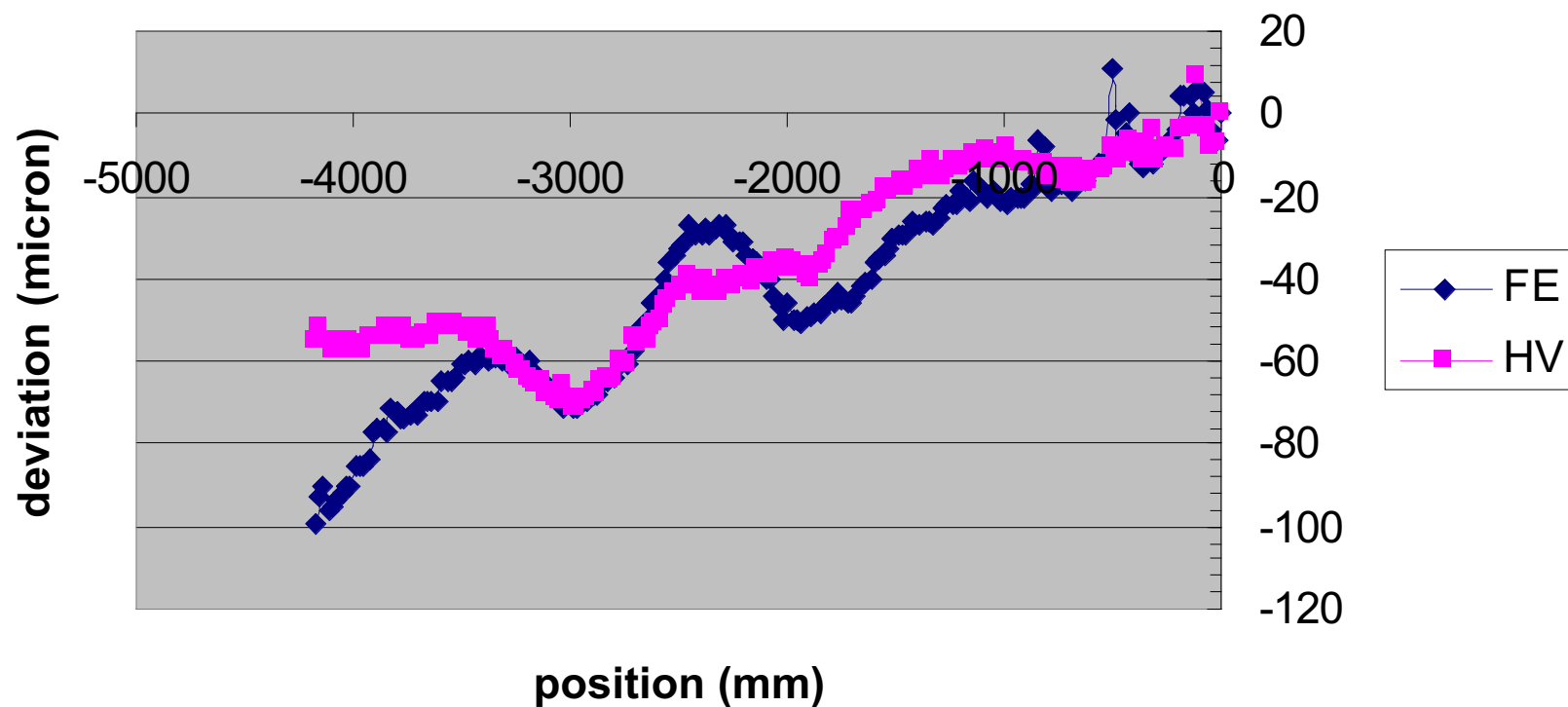




Calibration of Torino table 2:laser



Laser Int. Measurement





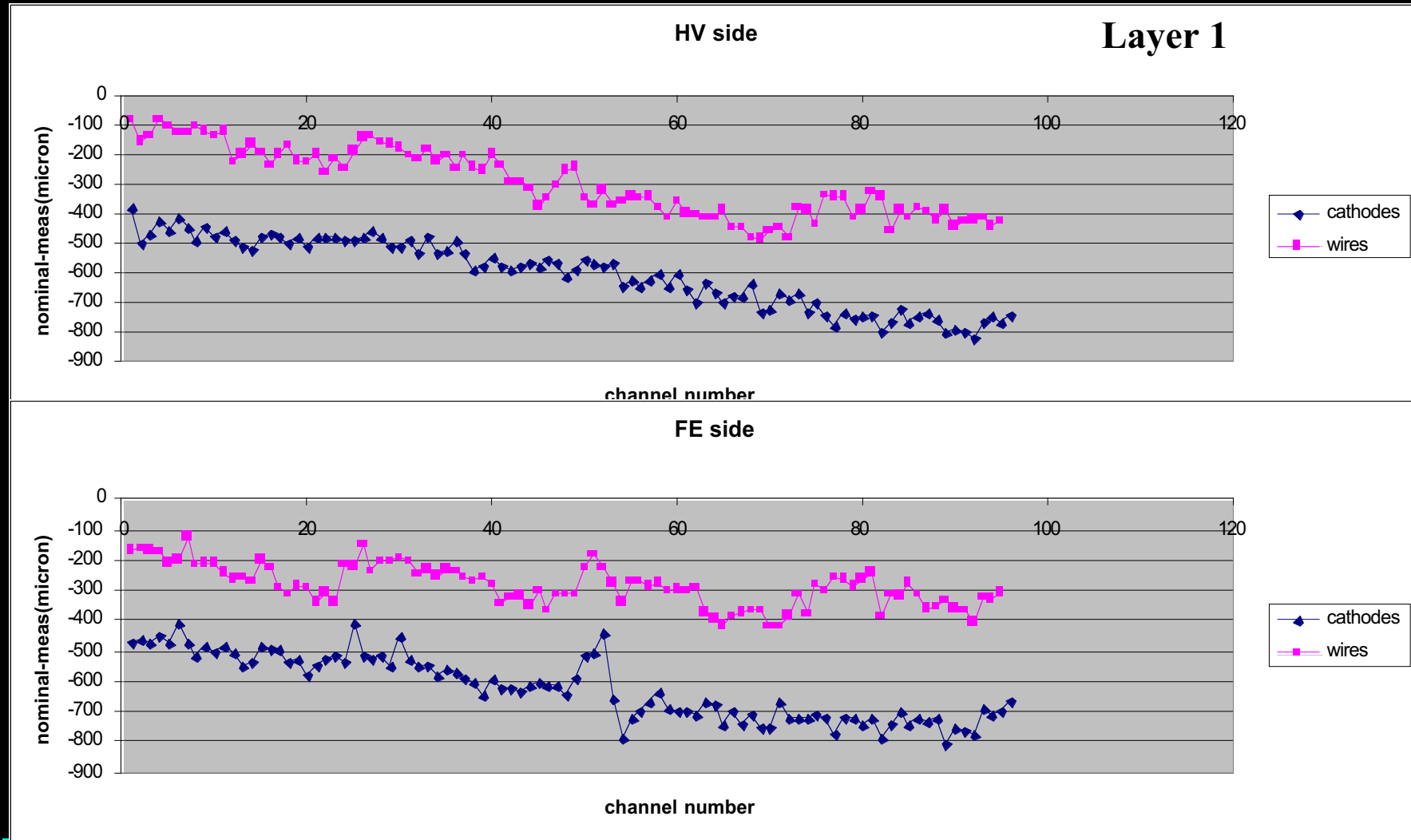
Conclusions on calibration of Torino table 2



- We have a good comparison with Padova measurement provided we confirm that Padova caliber was measured at a temperature of 24 °C.
- We have to better understand (in order to use the numbers to correct absolute measurements) environment conditions and laser interferometer tuning.
- Measurements will improve....



SL measurements: SL_001



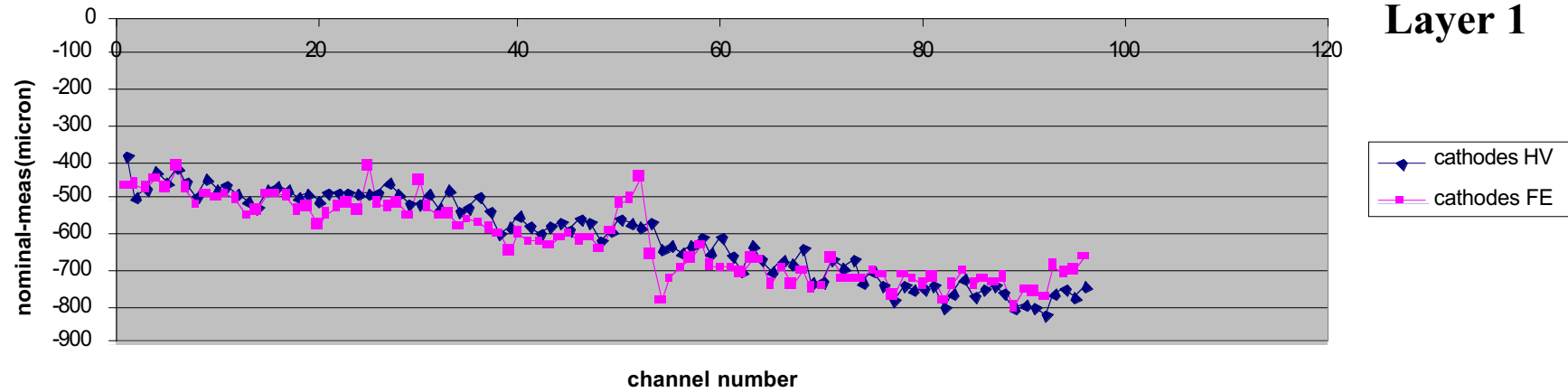


SL measurements: SL_001

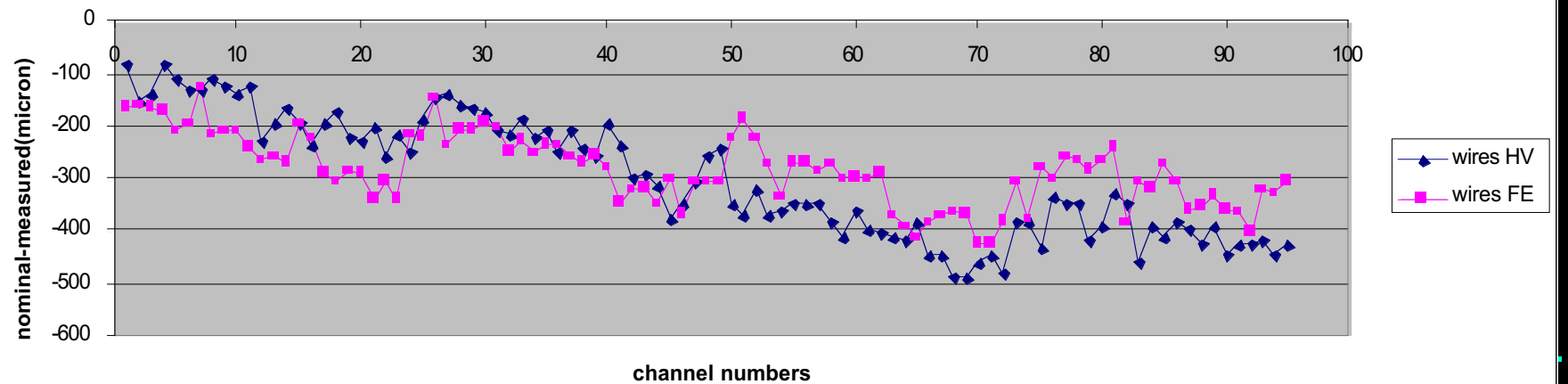


cathodes residuals **Parallelism of cathodes and wires**

Layer 1

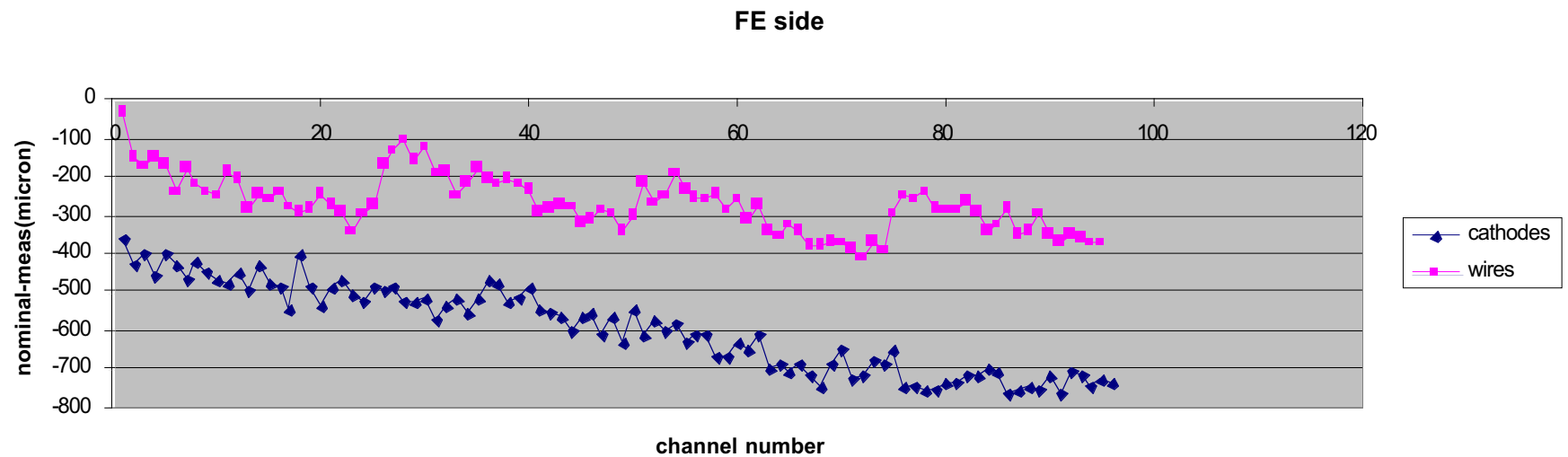
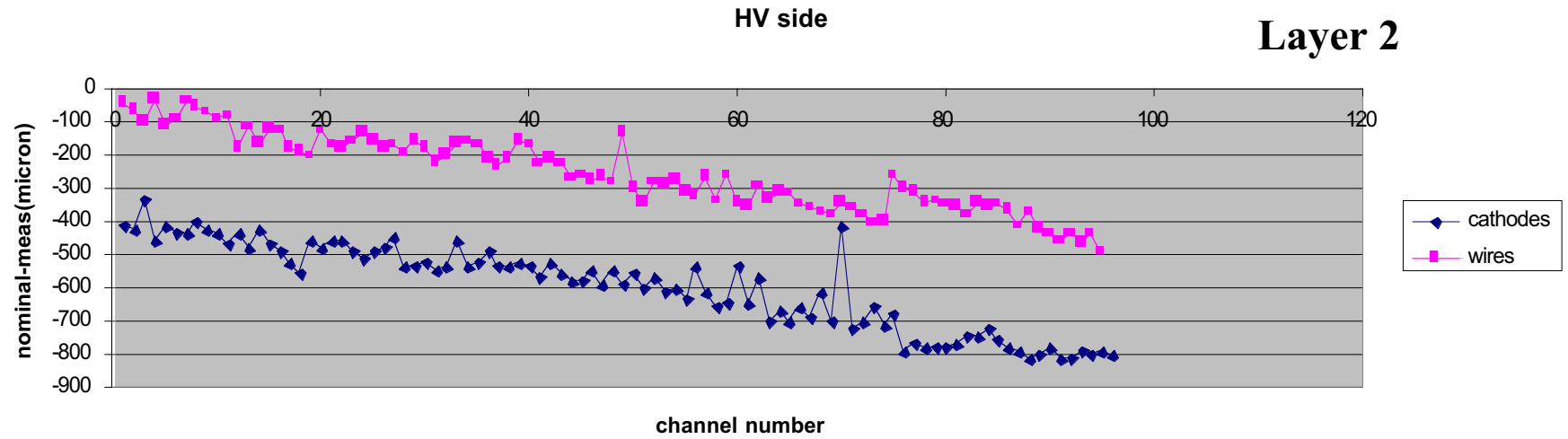


wires residuals



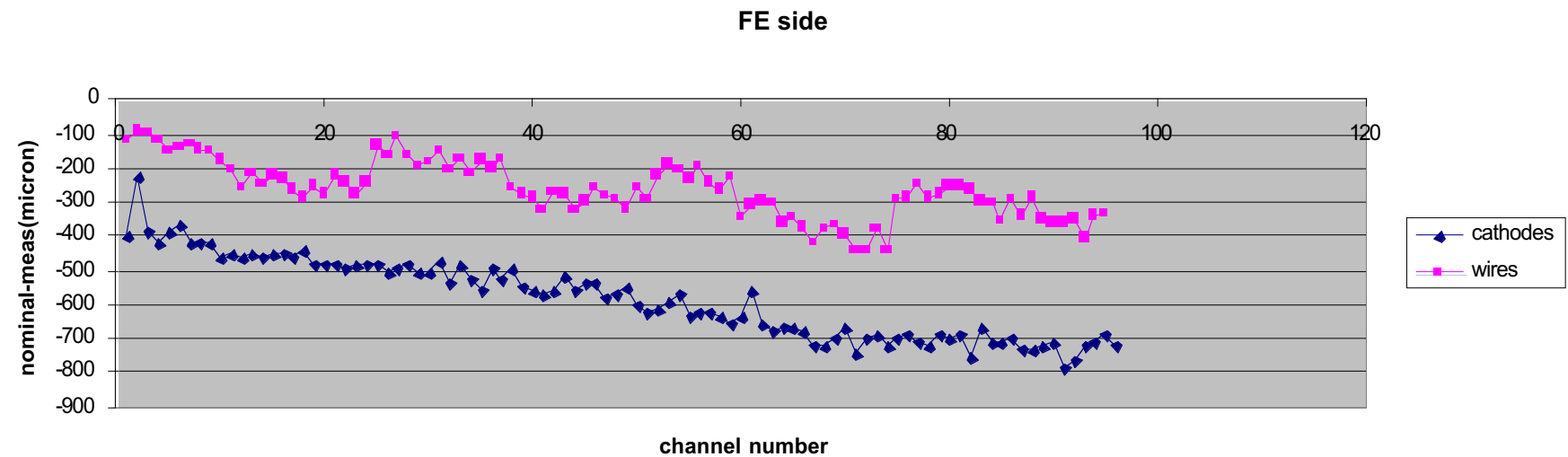
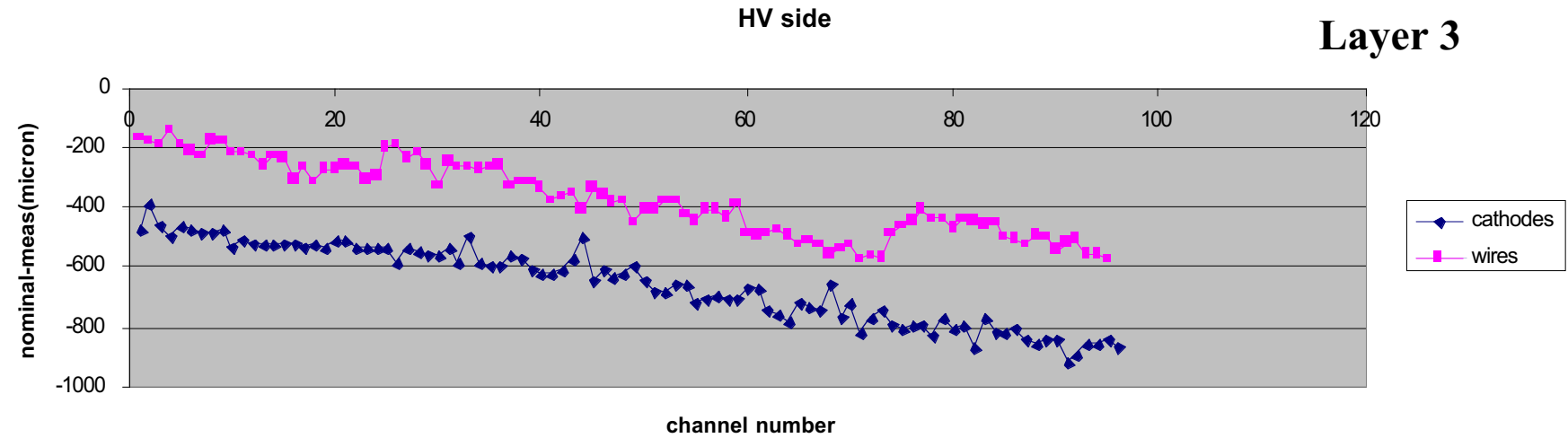


SL measurements: SL_001





SL measurements: SL_001



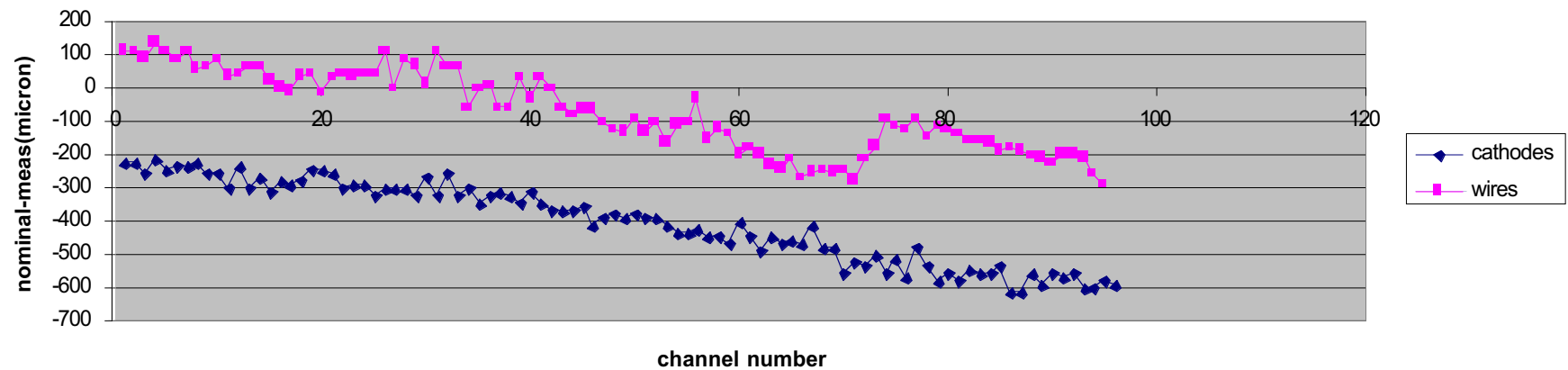


SL measurements: SL_001

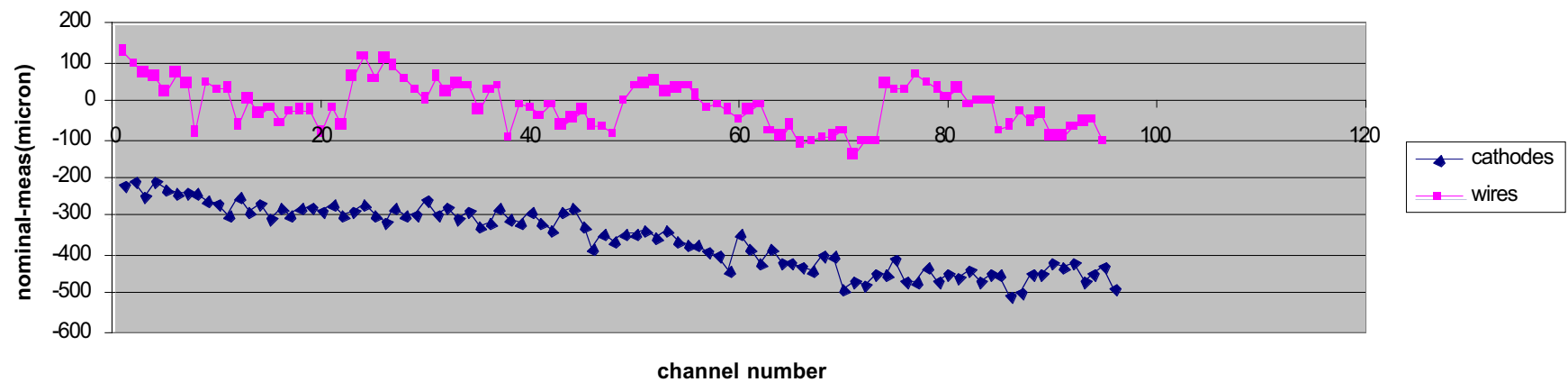


HV side

Layer 4



FE side



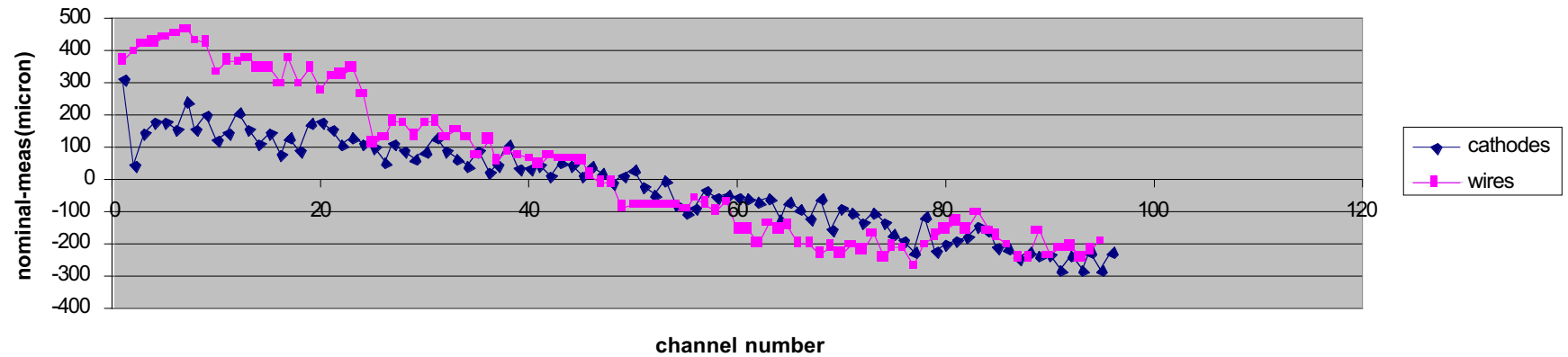


SL measurements: SL_002

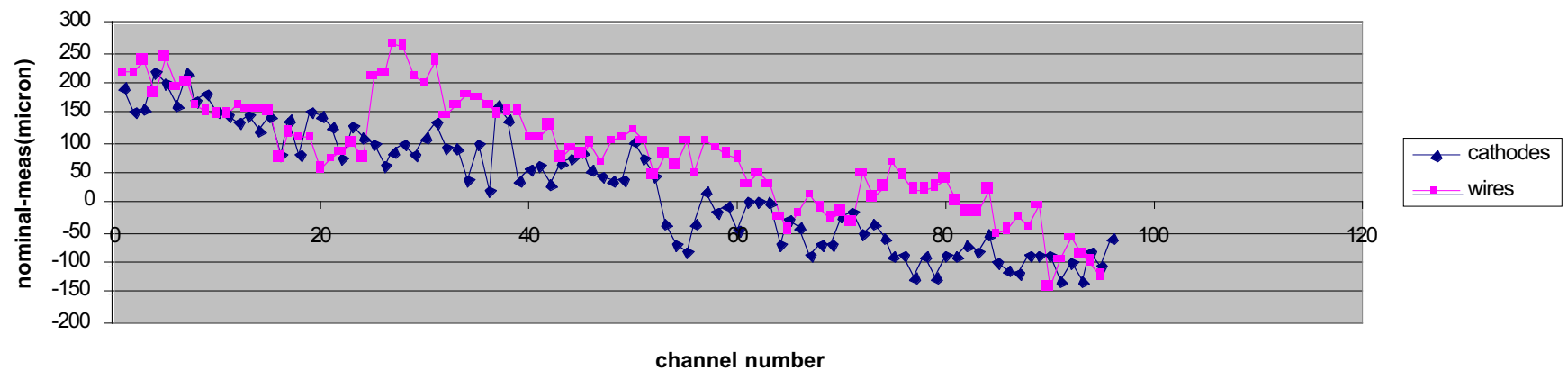


HV side

Layer 1



FE side

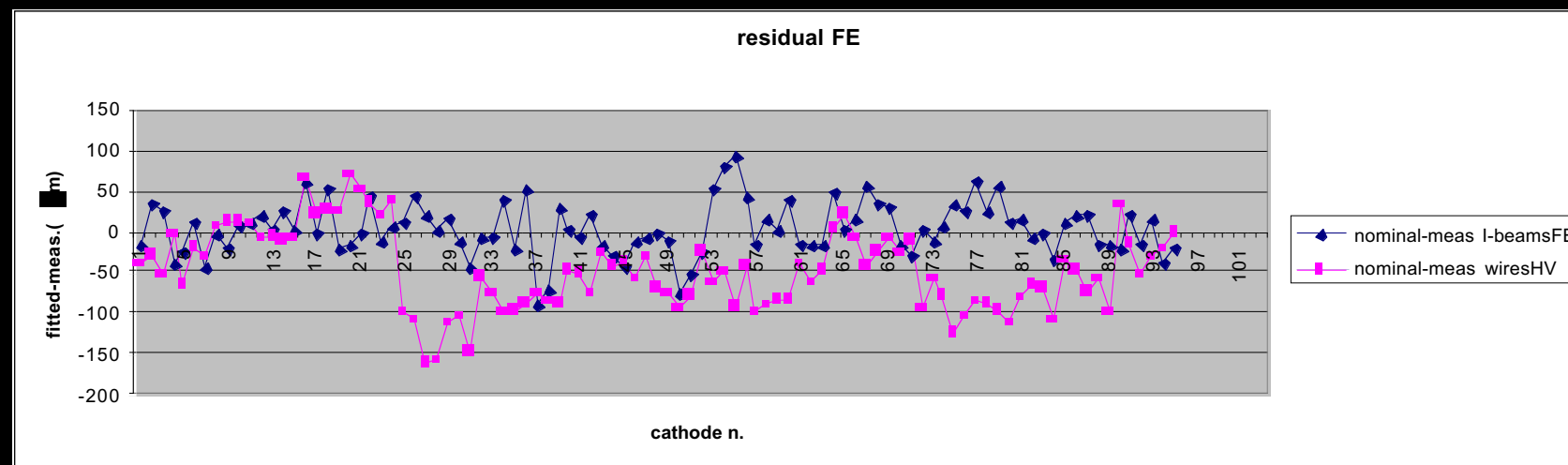
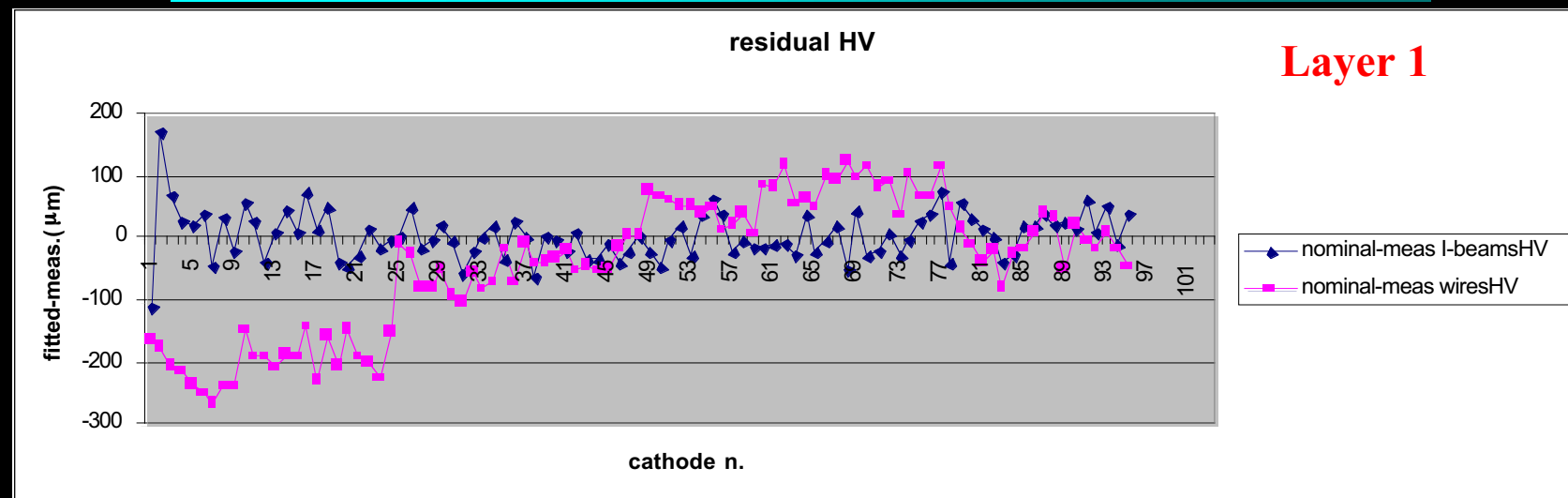




SL measurements: SL_002



Layer 1



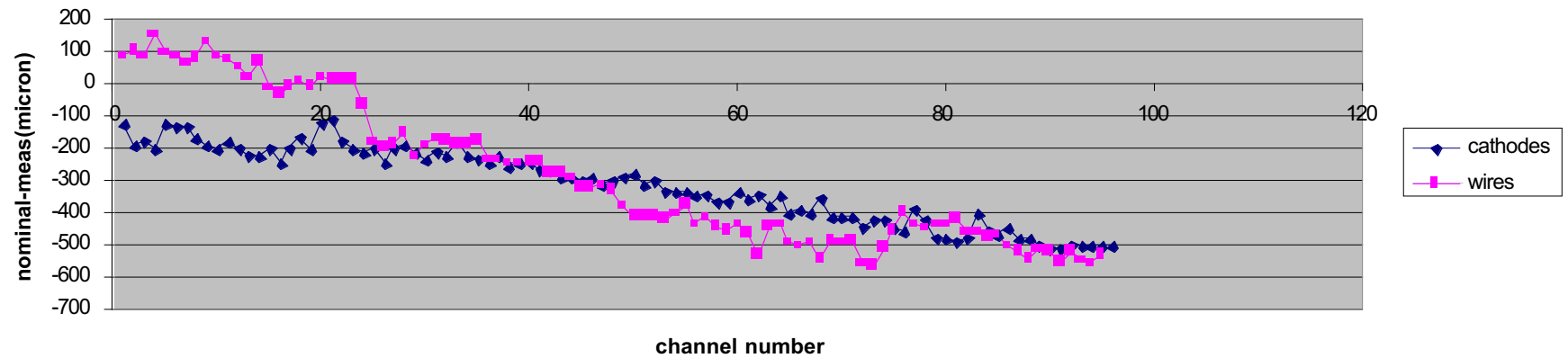


SL measurements: SL_002

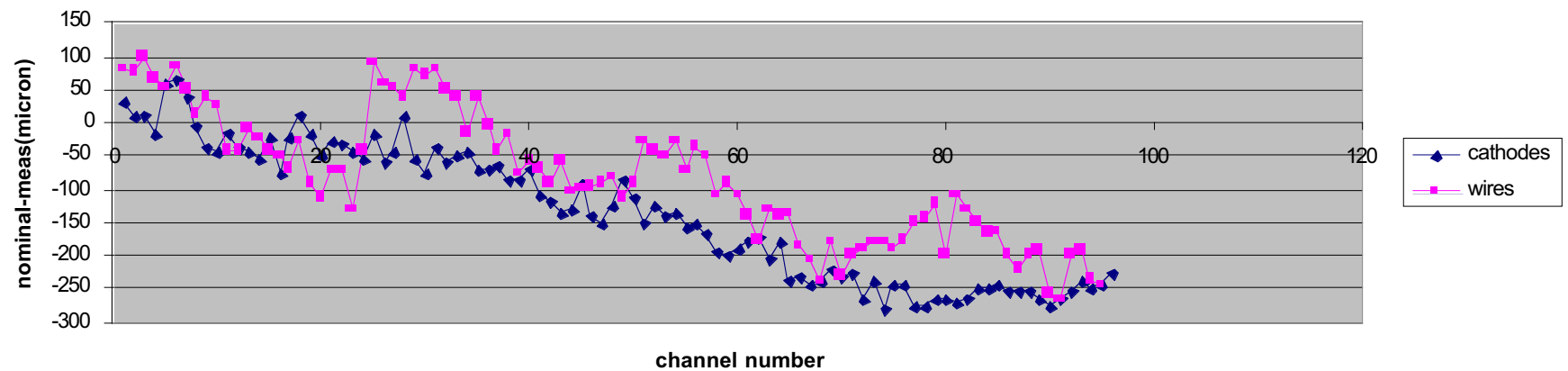


HV side

Layer 2



FE side

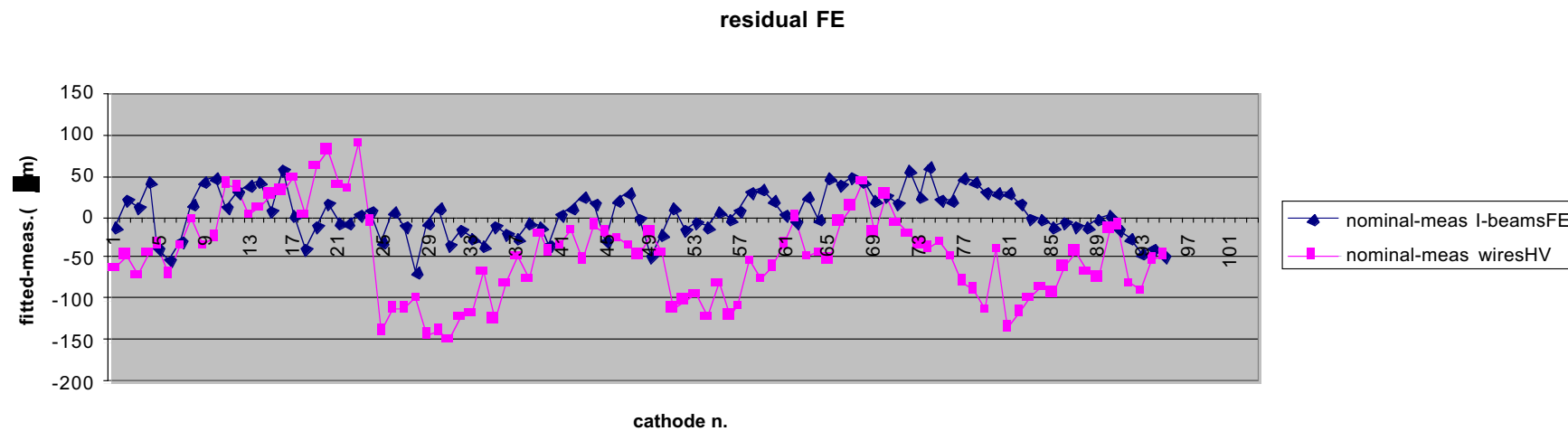
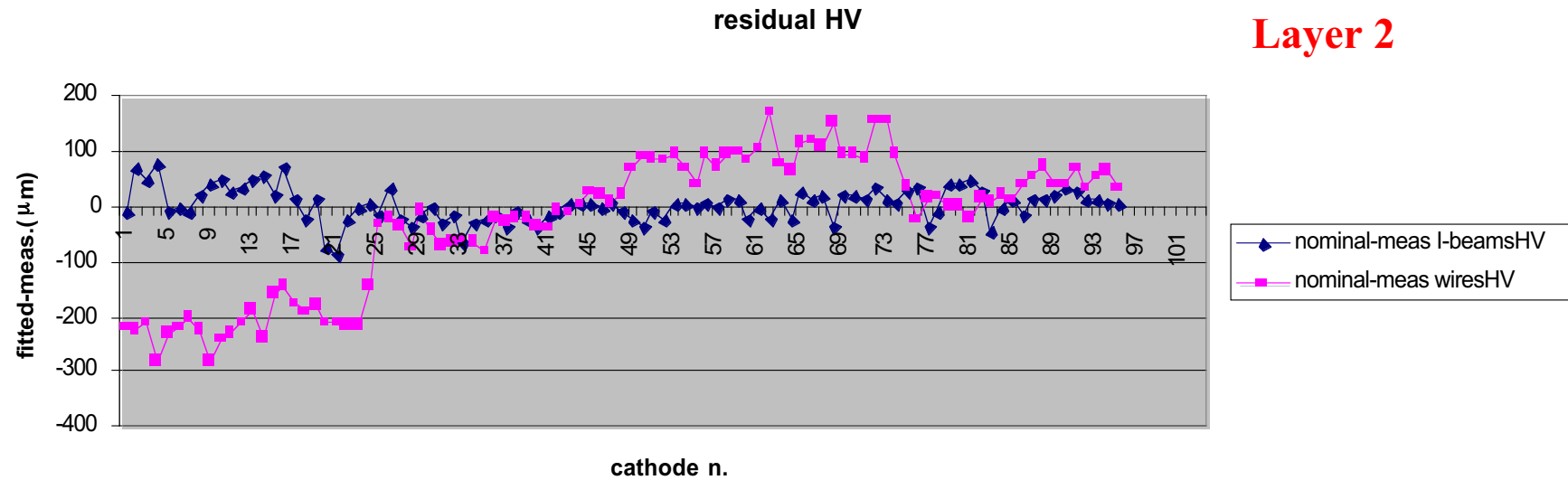




SL measurements: SL_002



Layer 2



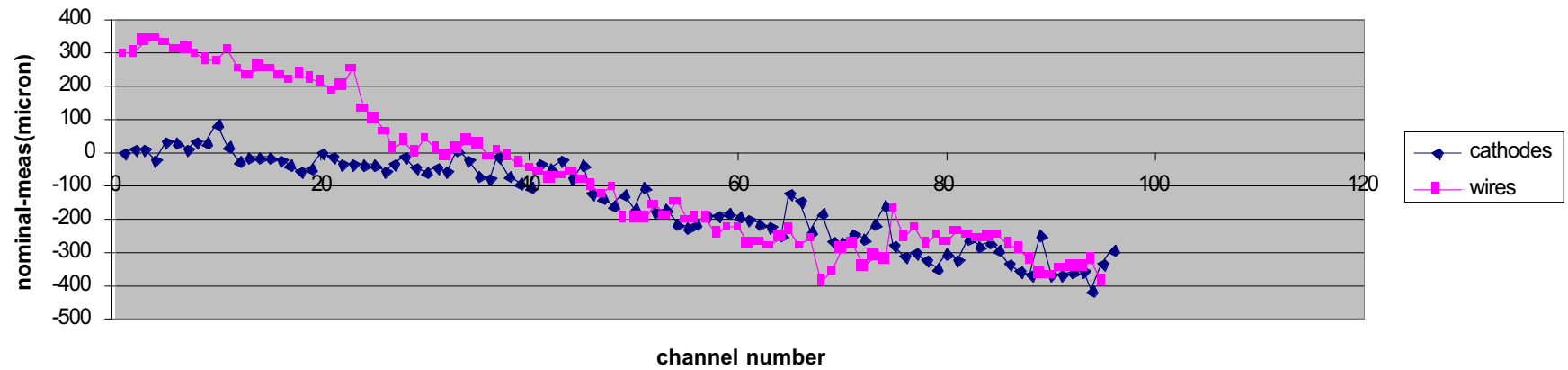


SL measurements: SL_002

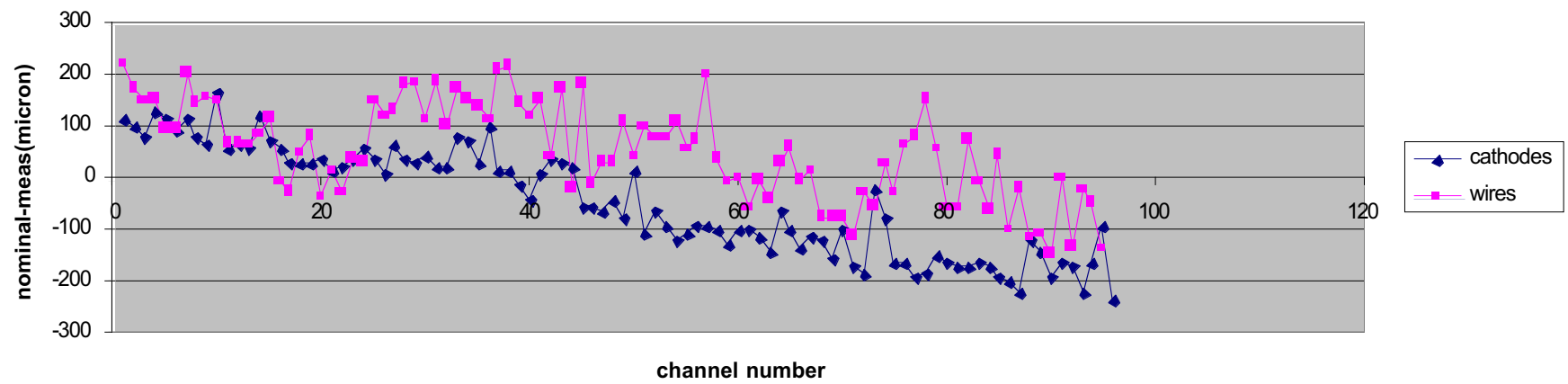


HV side

Layer 3



FE side

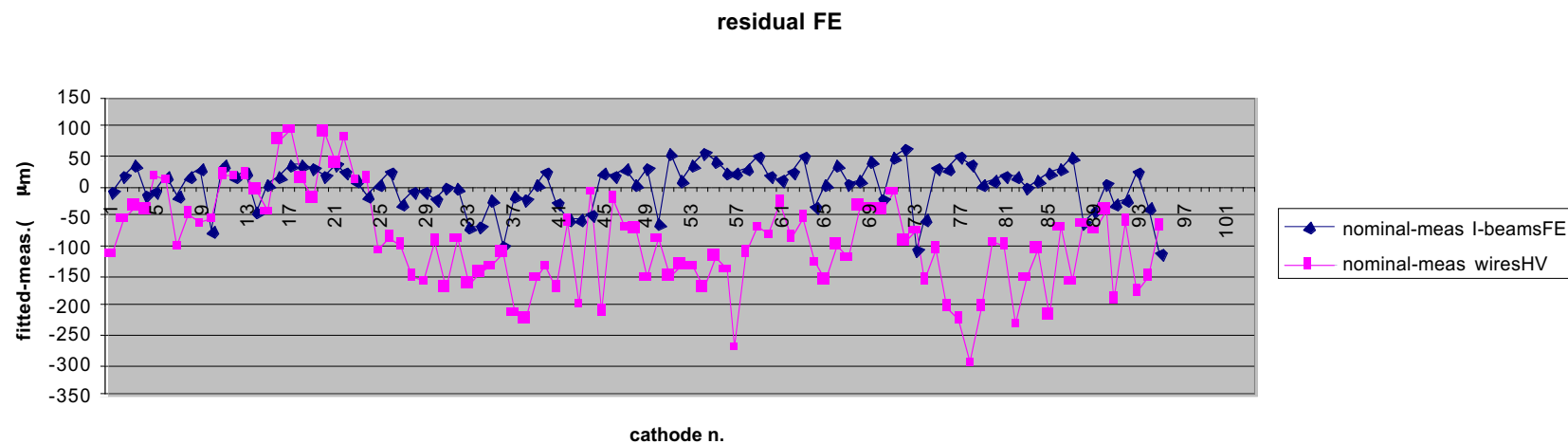
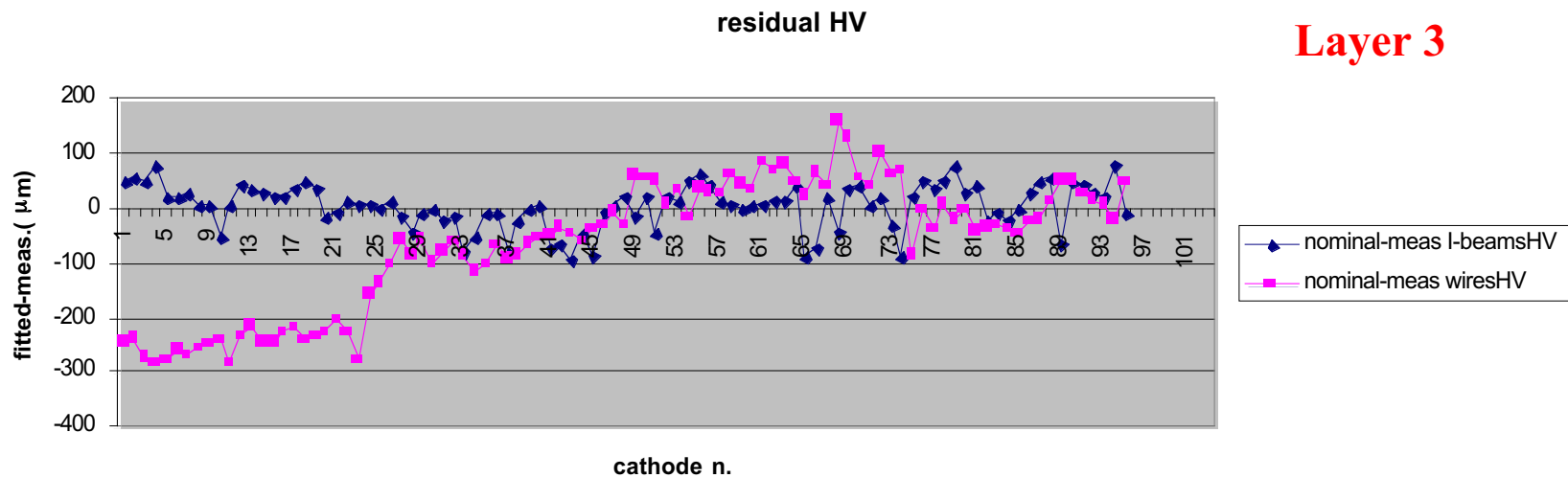




SL measurements: SL_002

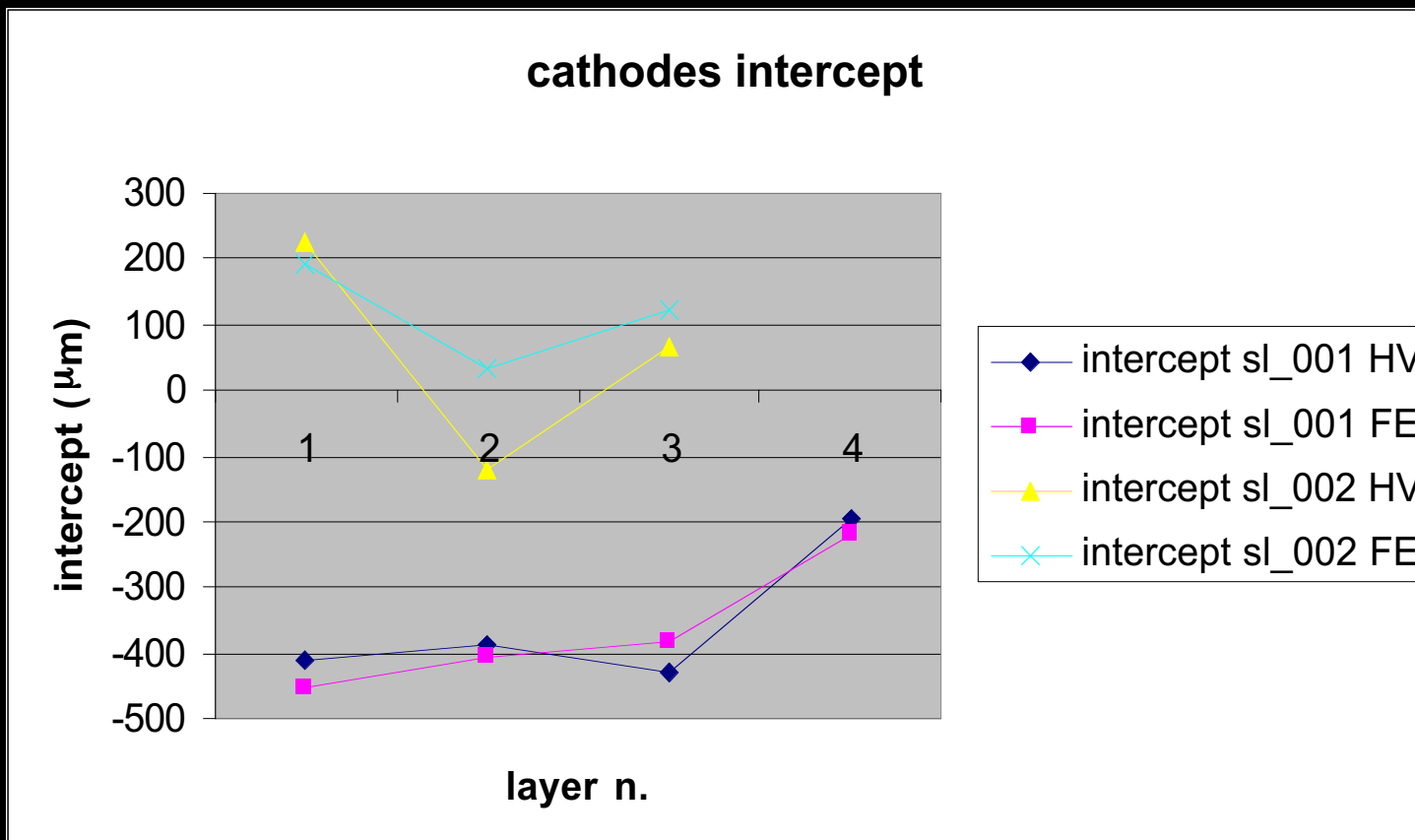


Layer 3





SL measurements: SL_002



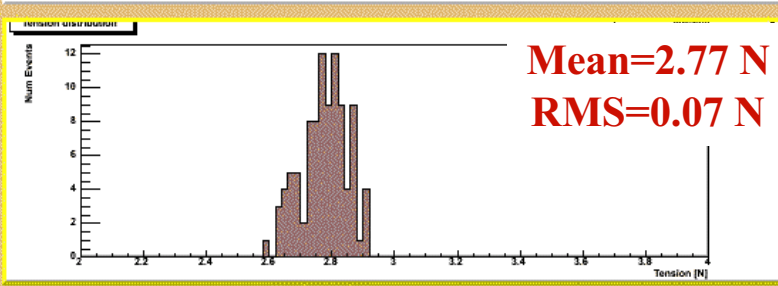
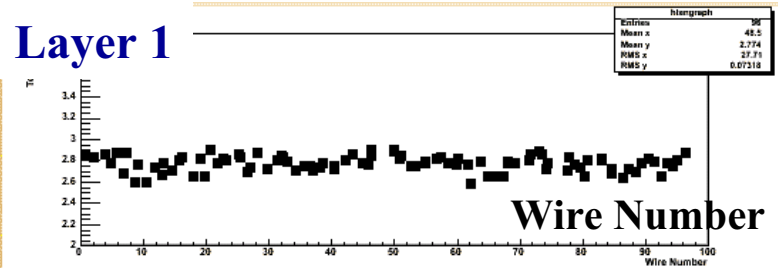
SL_002 centered w/r to SL_001 but zero stability is to be checked.

Wire Tension Test

SL(1,7)_001

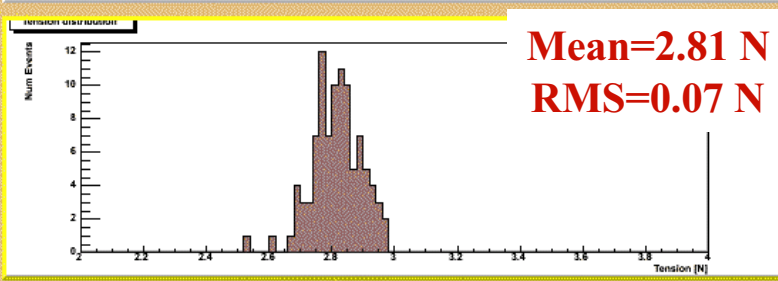
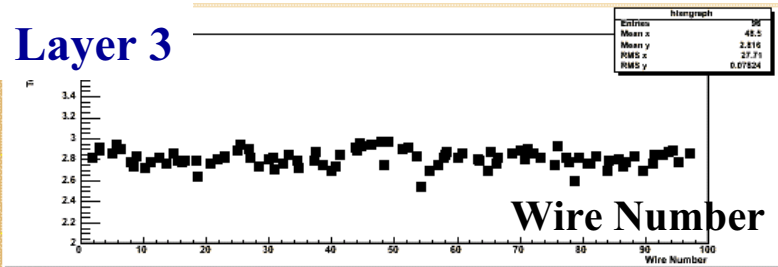
Tension [N]

Layer 1

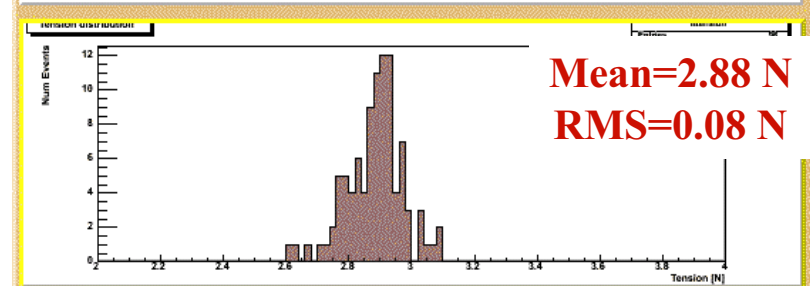
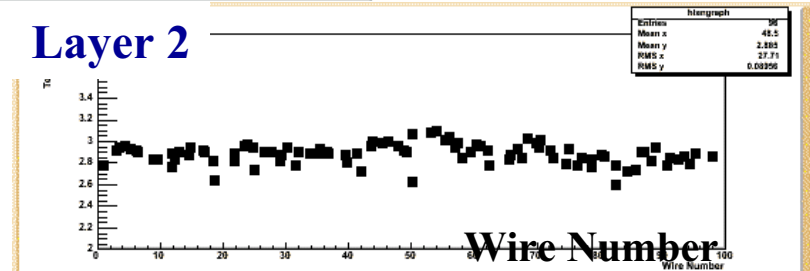


Tension [N]

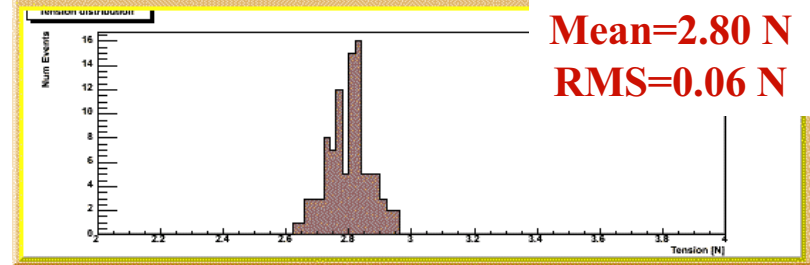
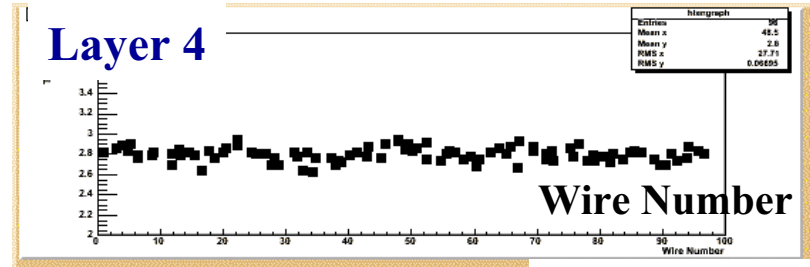
Layer 3



Layer 2

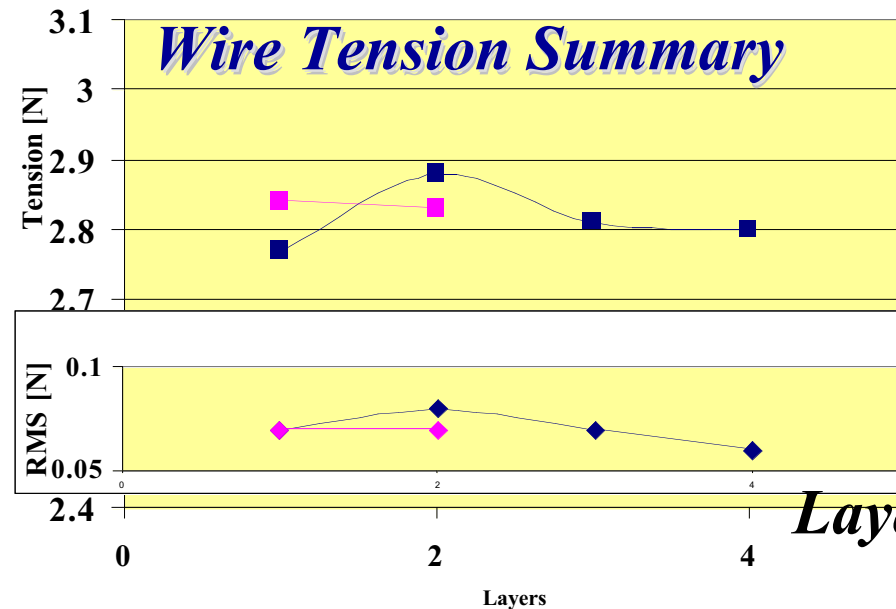
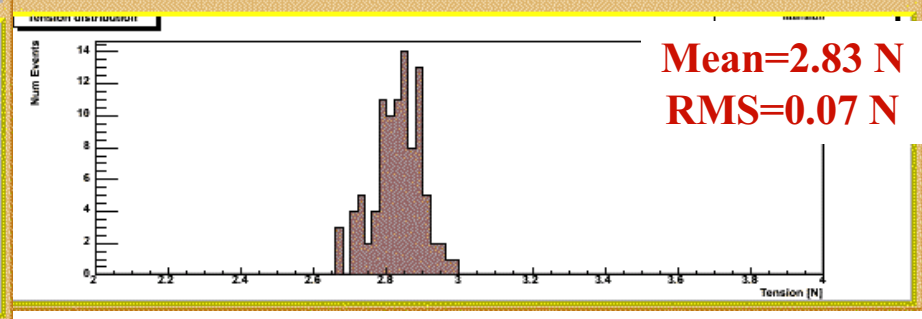
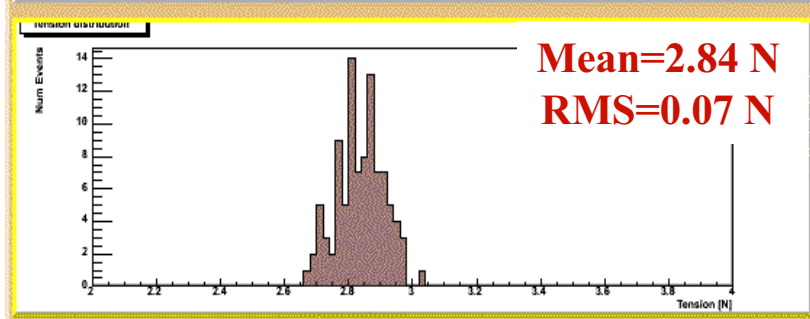
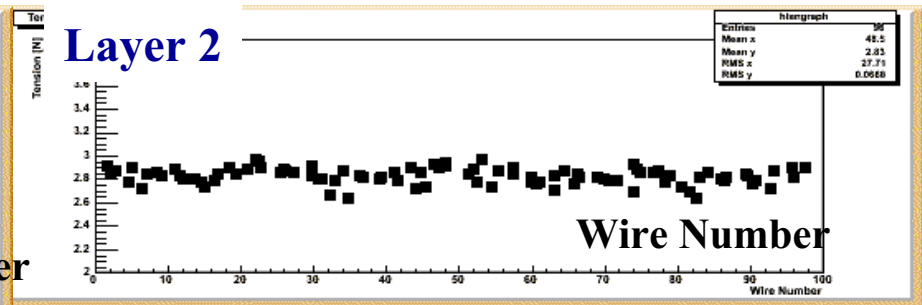
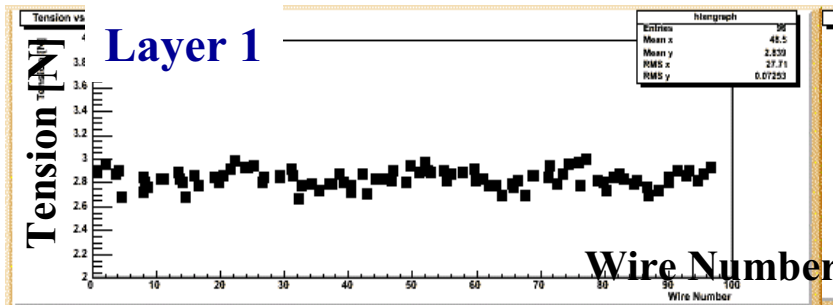


Layer 4



Wire Tension Test

SL(1,7)_002





Status of Torino-Dubna Production



Plates for n.chambers

MB1-S	57
MB4(9,11)	<u>11</u>
MB2-S	<u>62</u>
MB4(10)	6
MB3-S	53
MB4(4)	5
MB4(8,12)	<u>11</u>
MB4-S	3

Completion in march 2005. Last spare plates produced in may 2005.



Status of Torino-Dubna Production



Next transportations:

7-6-04	Aachen	6 MB1, 3MB4(9,11), 3MB3 (Legnaro)	MB4(9,11) completed
23-7-04	Legnaro-Torino	5 MB4(4), 3MB3, 6MB4	
23-9-04	Aachen	6 MB1	MB1 completed
8-11-04	Torino	9 MB4	
1-12-04	CERN	5MB4(10)	MB4(10) completed
26-1-05	Legnaro	3 MB4(4),9MB3,9MB4	MB4(4) completed MB3 completed
23-3-05	Torino	6MB4, 3MB4(8,12)	MB4(8,12)completed MB4 completed
26-5-05	CERN	spares 4MB1,2MB2,1MB3, spare plates	