

# News from Poland - work for T3000

Agnieszka Zalewska

ICARUS EC meeting, 16.01.2004

- Preparations for the production of the anode wires (in contact with the Pavia group)
- Cross checks of the T3000 mechanical designs (in contact with Elio Calligarich and Air Liquide)

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# Wire production -division of work

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**Goal: be ready to start the production in April**

- Main table, control of the wires - the Warsaw group
- Small moving tables and their control electronics - the Cracow group (redoing the Pavia equipment) - administrative problem with sending part of the equipment to Cracow has to be solved.
- Auxiliary table, other small equipment, equipment purchases - the Katowice group
- Communication through the web - a special www page for wire production is under construction

**Problem???! Delivery time (>6 months) of some crucial components. We should order them now. Is it safe?**

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# Main table - concept

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Warsaw, 30.05.2003

Dear Elio,

I am sending you a few drawings concerning the concept of the assembling table for producing wires for the Icarus experiment. A scheme of the 11 metres long table is shown in figure 1. The table consists of:

1. Carrying beam (see Figs. 2 and 3) made of duralumin beam 160×80.
2. Seven supports (see Figs. 1 and 3) fastened to the floor by screws.
3. Trolley (see Figs. 2, 3 and 4) moving on the carrying beam.  
A plate with electric motors is attached to the trolley.
4. Fixed plate (see Fig. 2) attached to the main beam.
5. Ruler (10 m long) equipped with measuring head (see Figs. 5a, 5b, 5c and 5d) for checking position of the trolley with respect to the fixed plate with resolution of 5  $\mu\text{m}/\text{m}$ .
6. Coarse and precise adjustment of the trolley's position will be done manually.

**Author: H.Czyrkowski from Warsaw**

# Main table - under construction

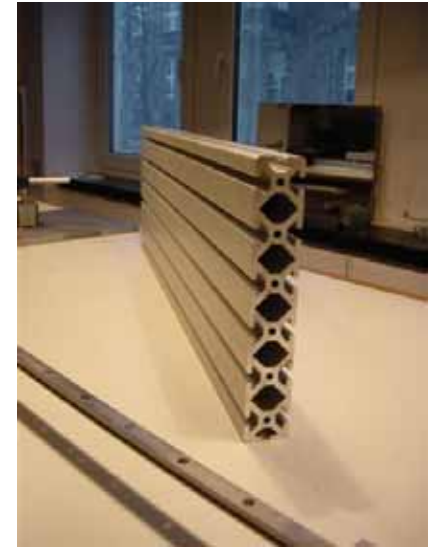
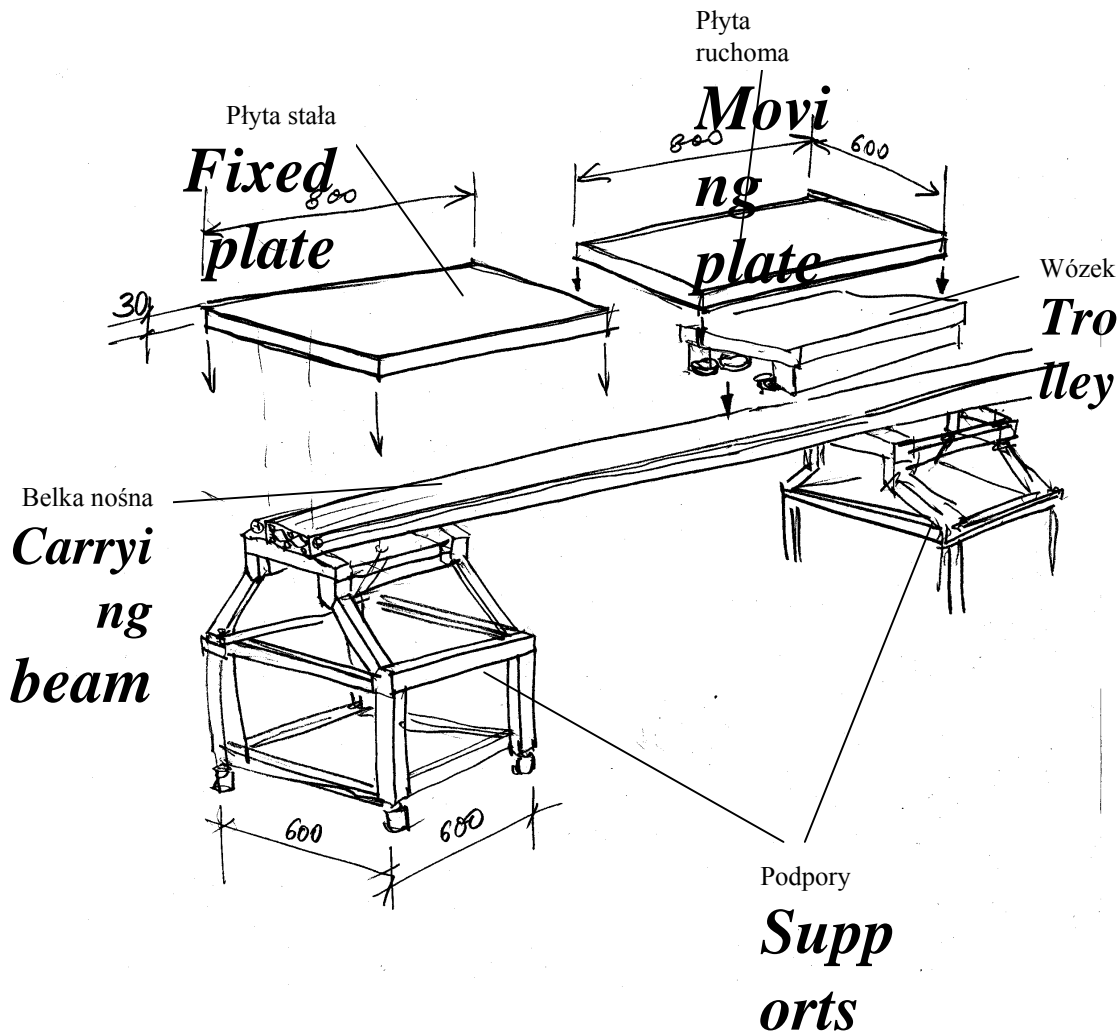


Fig. 2

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Author: H.Czyrkowski from Warsaw

# Wires - laboratory in Cracow

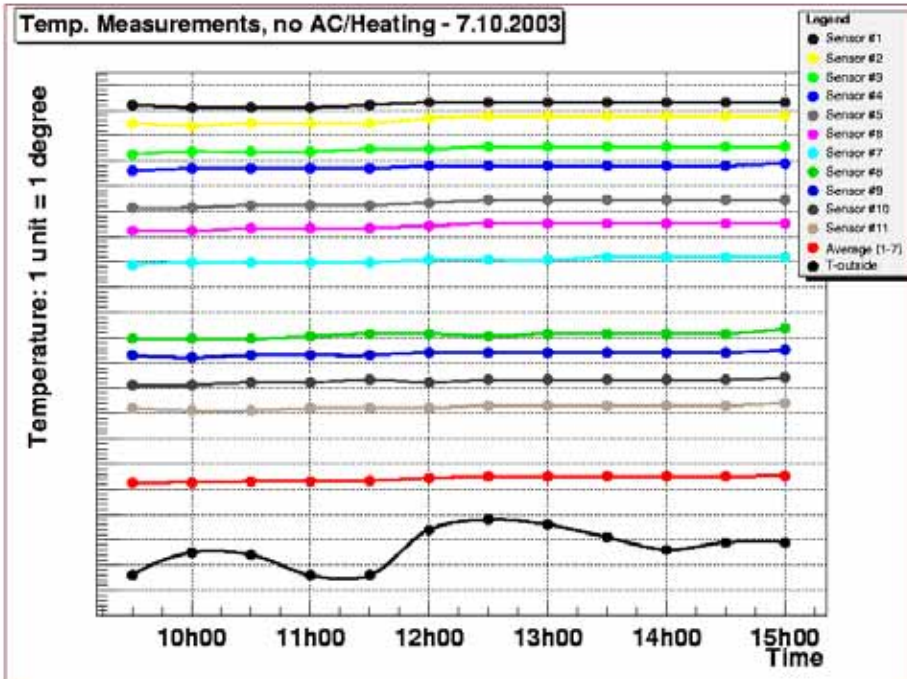


Completely renovated laboratory: 12x5.5 m<sup>2</sup>, removed wall, new windows, renewed electrical installation lighting according to the Polish industrial norms

Finished in September,  
supervised by M.Markiewicz



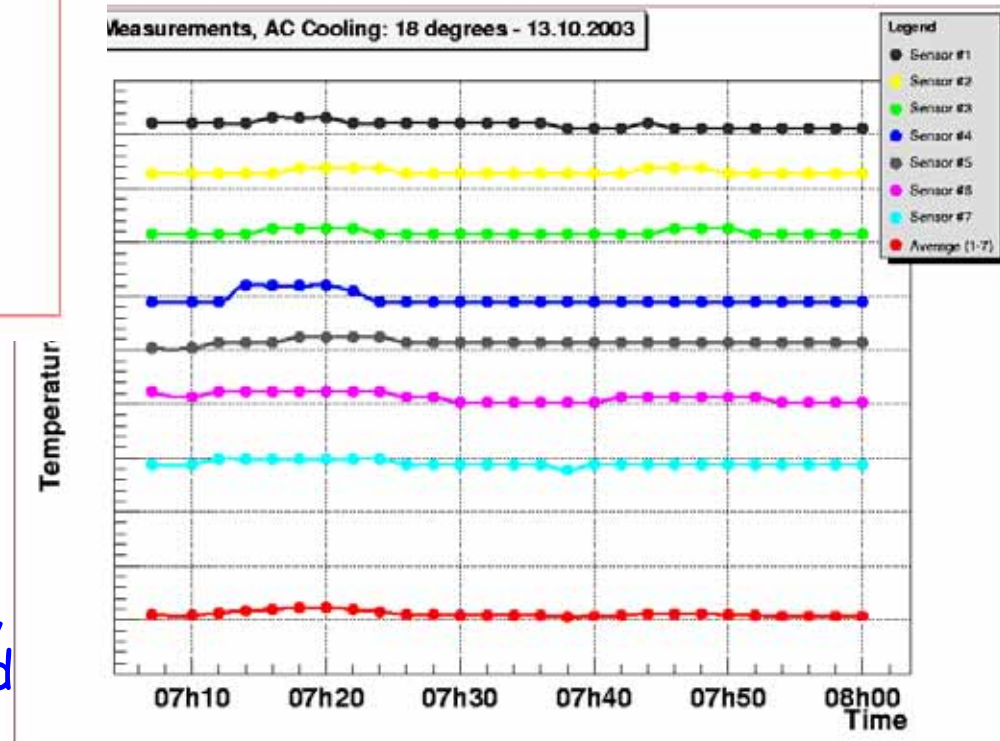
# Temperature stabilisation



Checks for no cooling/heating, cooling to 18°, heating to 27° - temperature stable well within one degree but in autumn small changes of external temperature, temperature monitoring envisaged

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Measurements performed by M.Markiewicz during one week in October  
12 temperature sensors, relative calibration





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# Checks of mechanical drawings from AirLiq

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- H.Kuna-Ciskał (mechanics engineer), M.Maślak (civil engineer) and PhD student from Technical University in Cracow - finite elements analysis of the cryostat constituents under vacuum and under hydrostatic pressure,
- Based on CAD drawings from AirLiquide, coordinated by Elio Calligarich
- The work has started in September - for an initial drawing of the cryostat corner structure weak points had been found, corrected by Air Liquide on the next drawing of this structure (included into big folder)
- New CAD drawings sent to Cracow in October, construction looks safe now but cross-checks have been done assuming an uniform support - possible deformations due to local supports should be checked when exact drawings of the supports are available
- A short summary sent to Elio before Christmas, a more extensive description is available now

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## Other contributions

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- Work on the data compression - started by W.Pótcłtopek during his stay in Padova, to be continued in Cracow
- Other possible contributions to the work on DAQ are discussed with Sandro Centro - electronics engineers from Warsaw could help