Temperature Uniformity for a Blanket Prototype

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Overview

1. The Challenge and the Prototype
2. Temperature 'on side' of an OT Module
3. Temperature 'between' the OT Modules
4. Conclusion & Outlook

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The Challenge and the Prototype

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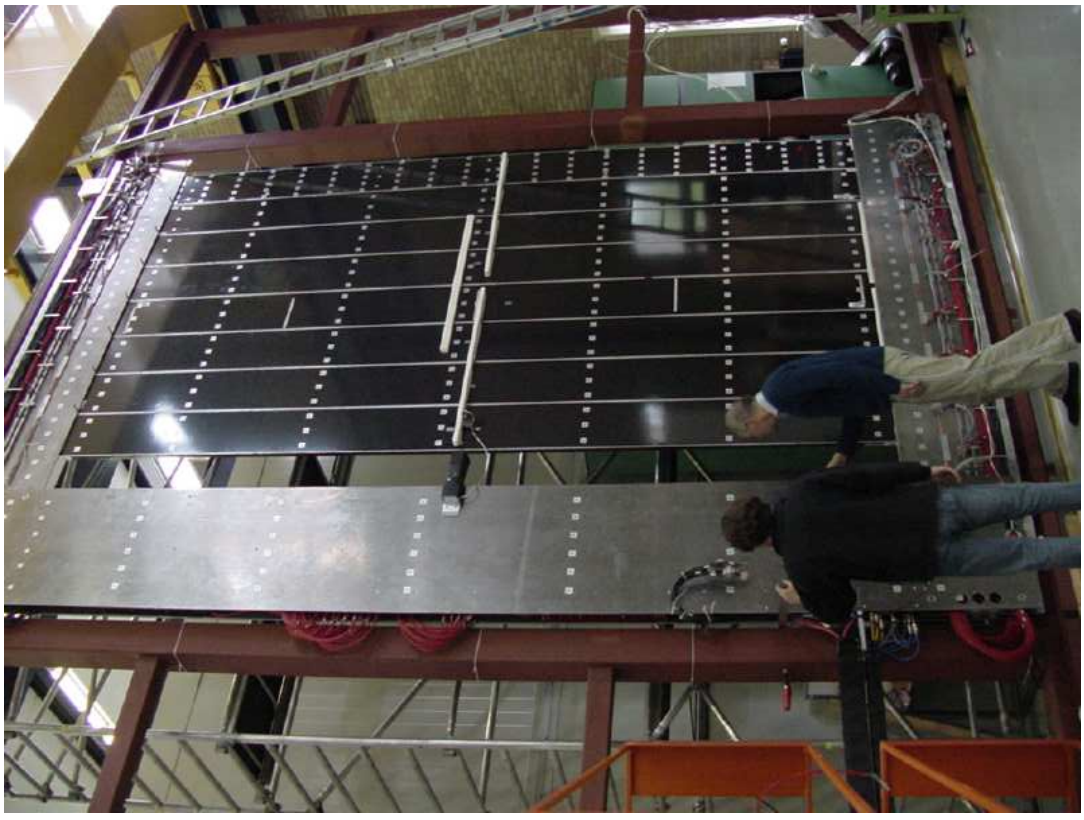
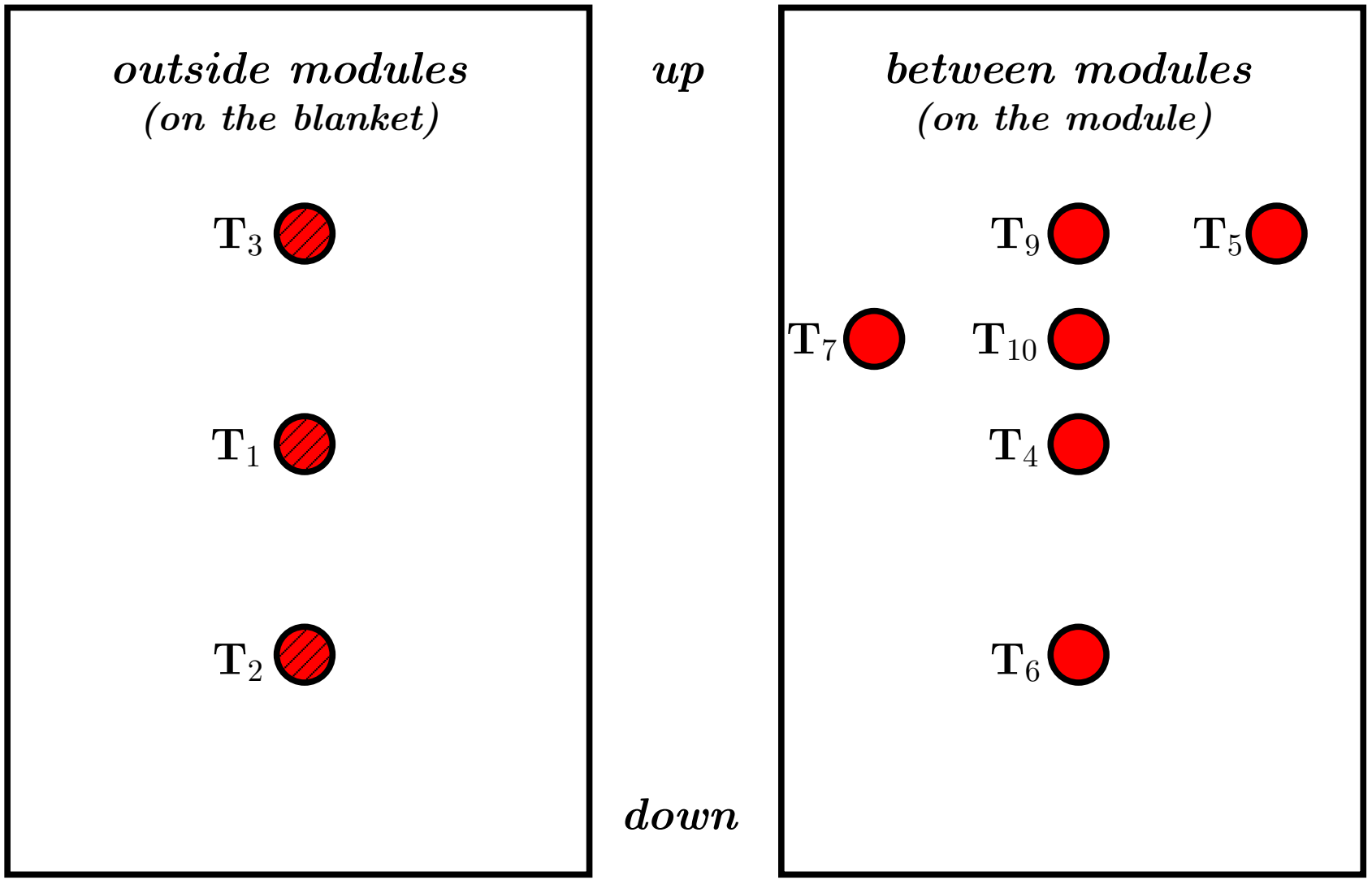
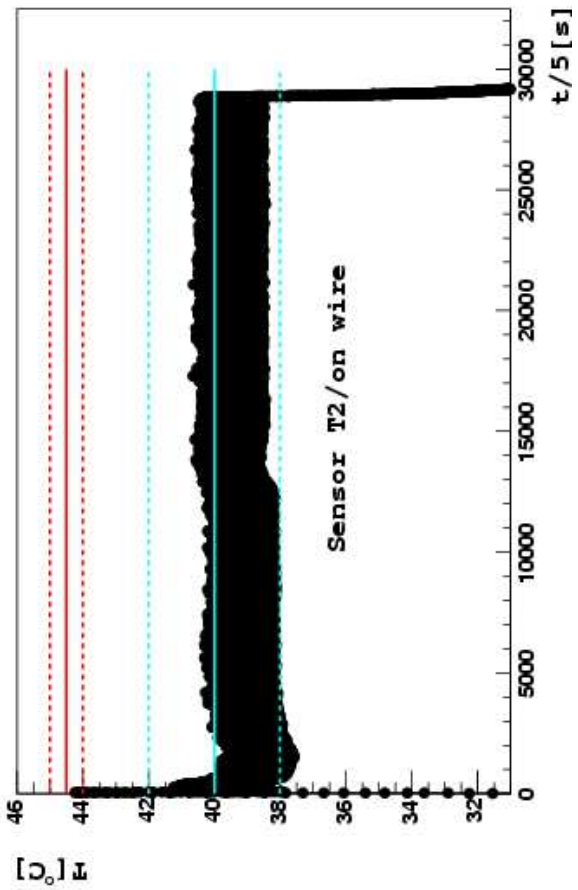


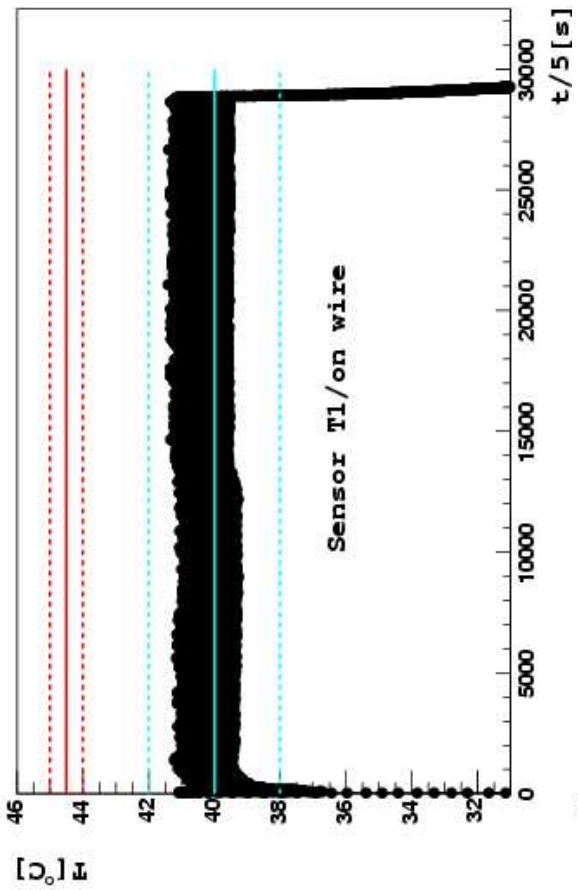
The Sensors Setup

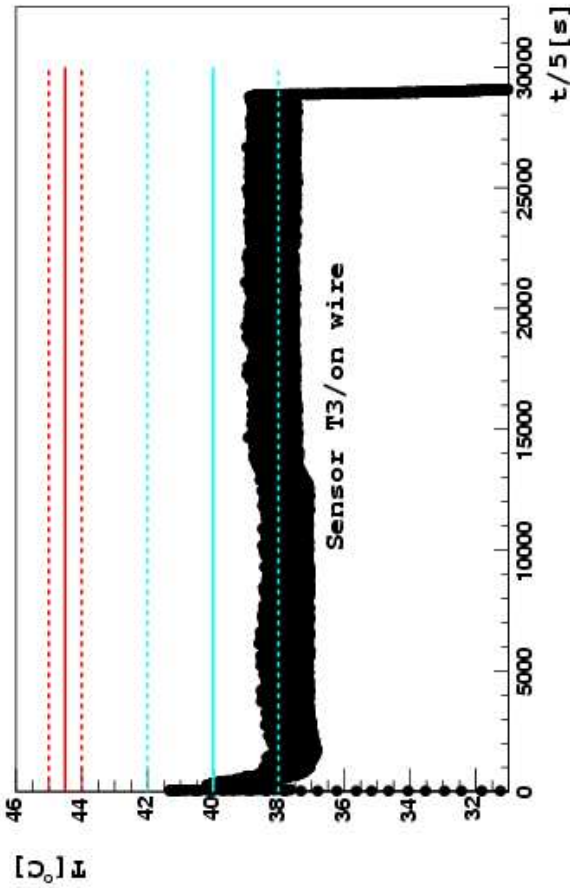


Adrian Periceanu

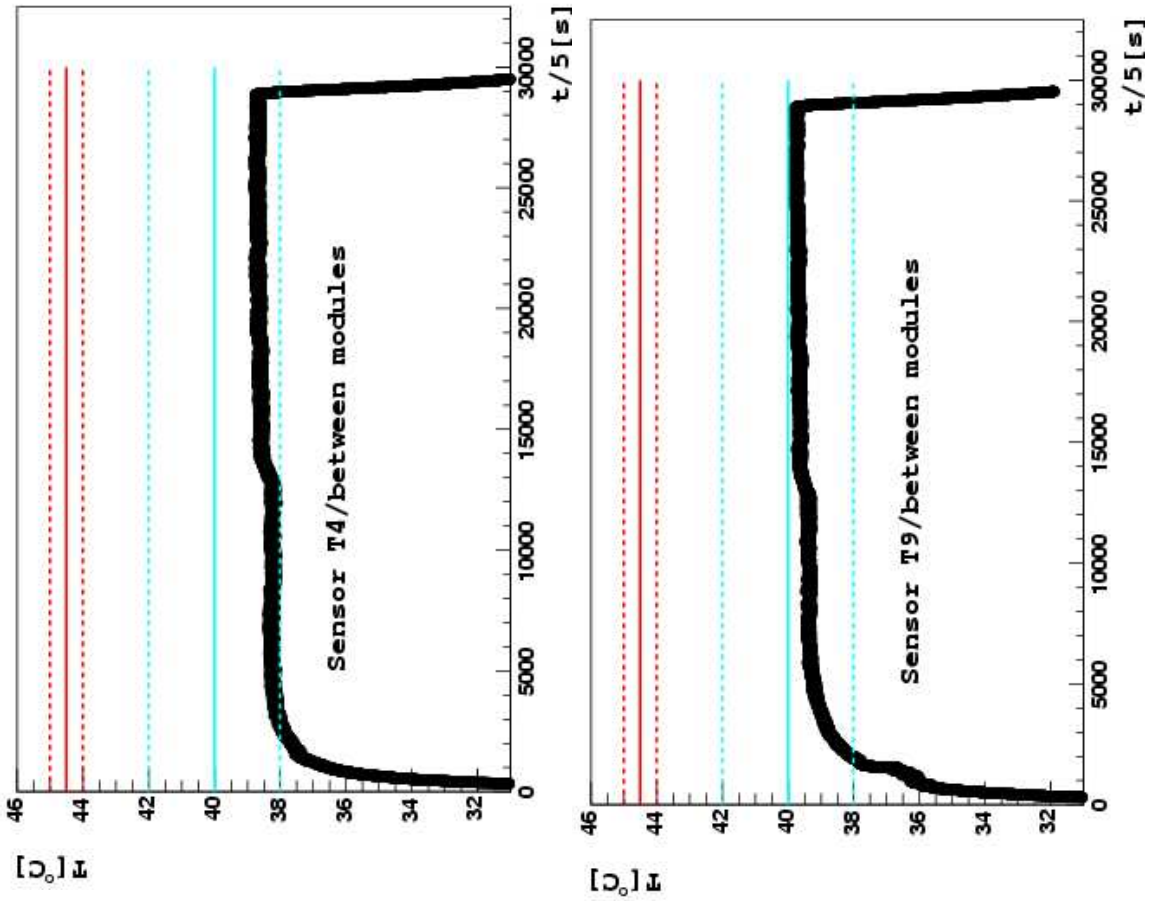
$\mathcal{T} = f(t)$ – profile 'on side' of an OT Module

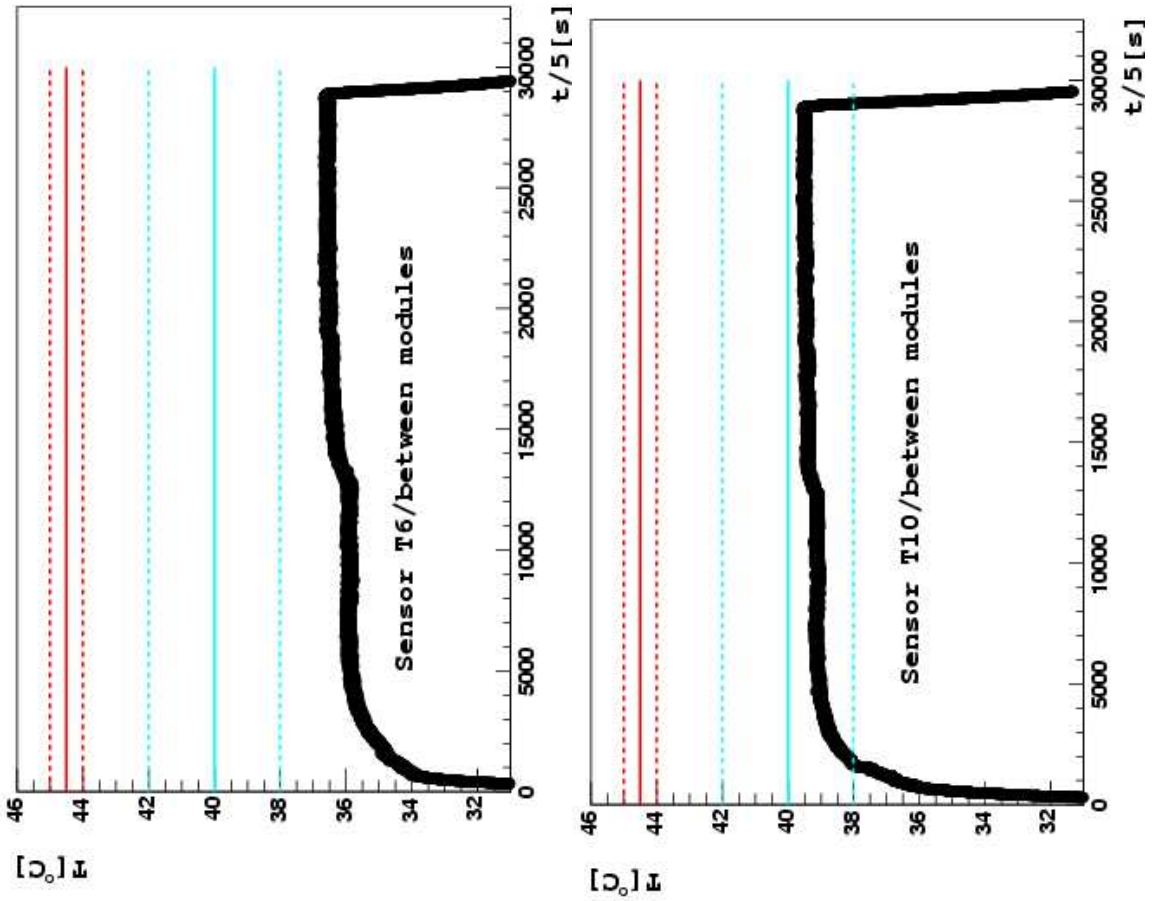






$T = f(t)$ – profile 'between' the OT Modules





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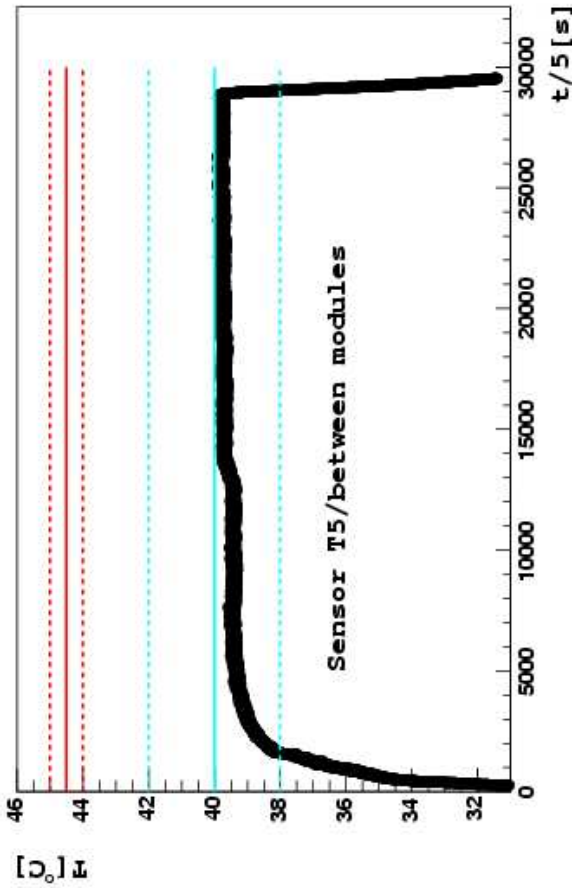

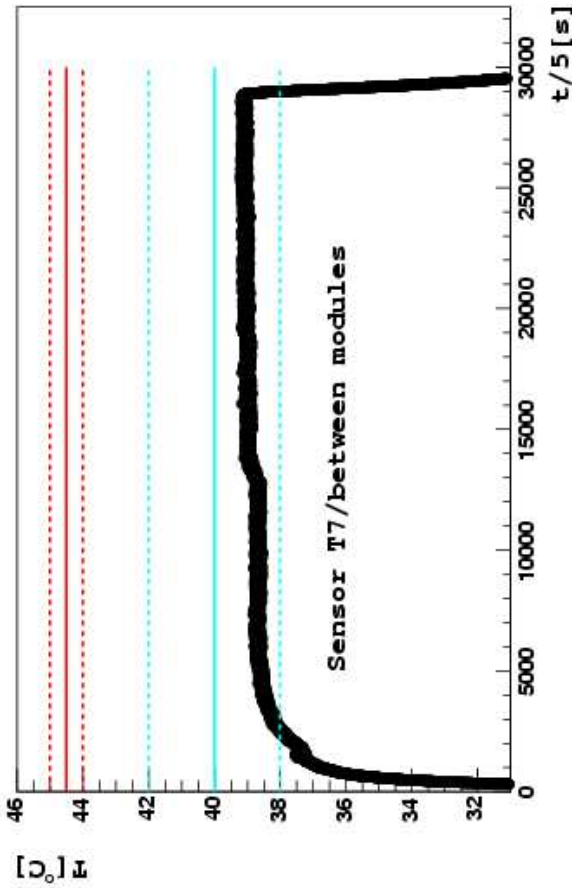

Conclusion & Outlook

• a first heating blanket prototype was tested on a 2 - OT modules setup;

• the ***T=f(t)*** profiles show a stable behaviour;

• 'on side' of an OT module one can obtain an uniform $T = f(t)$ – profile with $\Delta T < 2^o$C;

• 'between' the OT modules the $T = f(t)$ – profiles show a gradient between the most lower and upper position of $\Delta T/\Delta y \approx 3^o$C/55 cm.

$\Rightarrow$ test a 6x1 m long blanket;
$\Rightarrow$ study how to get the best insulation;
$\Rightarrow$ put a heating wire between modules in the lower side.