IFIC status report for the TB2025

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Inventory – available at IFIC

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- **Sensors – characterized-**
  - **20 from TAU are in the dry cabinet** **OK**
  - In the process of been cleaned. **- ongoing**
- **Adhesive – OK**
  - Different types of conductive glue + non-conductive
- **CF**
  - ~15 low quality CF (made by ClipCarbono – being used for tests)
  - **20 better quality CF** (made by ClipCarbono but machined by WorkShape (FR) **– OK**

Inventory – available at IFIC

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- **Signal Fanouts**
  - **10 FO kaptons with connectors:** **Not OK** (but 20 more are in production by TAU)
  - + 2 in Krakow
  - + 2 used for CF glue tests
  - +5 being used for glueing/curing/deformation studies tests today and tomorrow
- **HV kaptons Fanouts**
  - **15 HV kaptons with connectors:** **Almost OK** (but 20 more are in production by TAU)
  - 5 being used in tests

Ongoing tests

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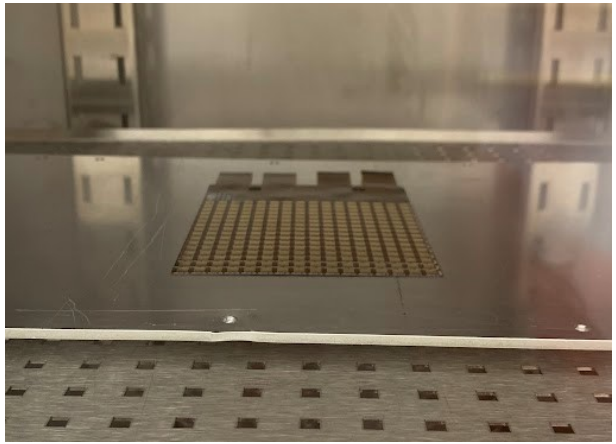
- Last week tests (CF+real Fanout using siliconne glue)



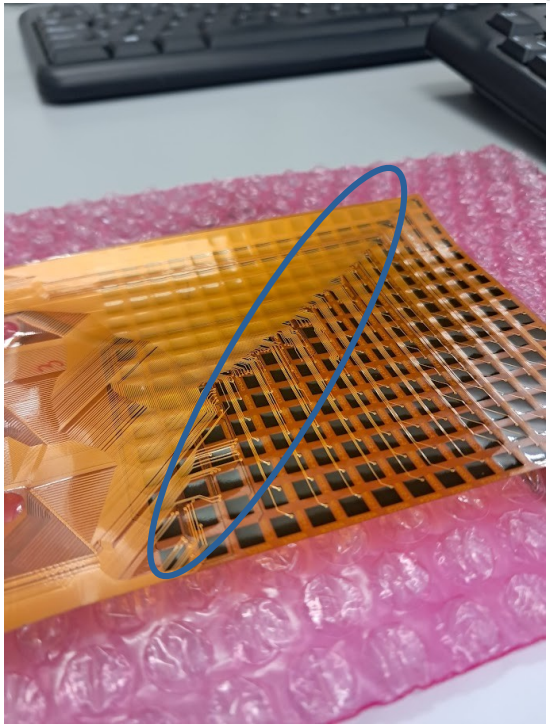
before curing

During curing

- **This week we are validating the procedure of glueing the CF only at the end**
  - **To avoid deformations in the oven**

(real) Material budget

- **CF: 225um +-10um**
- **Siliconne glue:** 100um (+-?)
- **Fanout:** 115-135um
  - depends on the “accumulation” of routing lines
- **Sensor:** 320um
- **HV kapton:** 55-60um
- Total (no conductive glue) = 805-850
- **Total (with two layers of conductive glue) = 905-950um**



- Notes:
  - the siliconne layer thickness cannot be improved with “manual” pressure because we do this step at the end, with sensors attached
  - Thin double tape can be a possibility for replacement of the siliconne (under study)

Testing the connectivity

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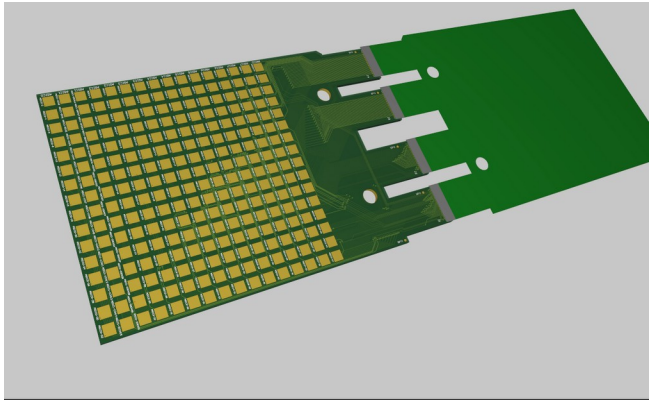
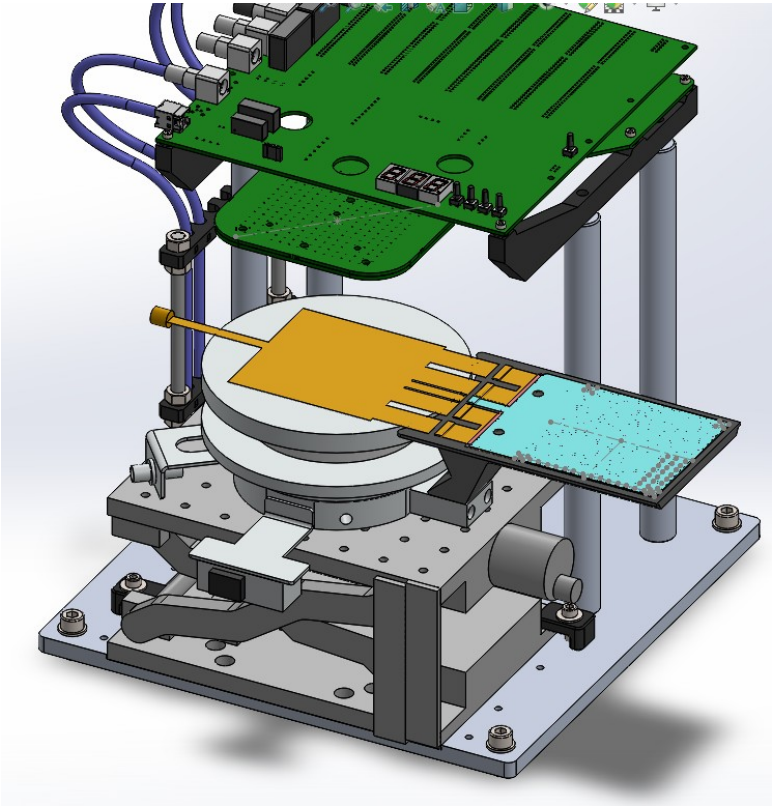
- **We have the gerbers from Yan but still we had no chance to discuss it with our electronics service (everyone is in holidays)**
  - I will make this my priority next week...





How any CSIS?

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- from IFIC **we hope that we can stick to 10 layers (i.e. 20 CSIS**) agreed originally because:
  - we **don't have the material for more** (and part of the material for the 20 is still to come). This includes, for example, the CF sheets.
  - **some of the items still do not meet the tight mechanical** requirements that we initially planned for the final detector (for instance the CF or the separation between the CSIS).
  - for the sake of the beam test running, we are postponing some R&D initiatives that we hope will benefit the **next iteration of CSIS production/design** and make it through the final design. For example: replacing the CF by a thicker fanout
  - **How to test the mounted CSIS?** is still not claryfied. I rather do a small production now (~5 CSIS and wait until this is claryfied for the final production)

- I hope that **20 CSIS is already a good number** that allow us to extract physics measurements and at the same time allow us to keep untouched all the remaining **90 sensors that are in our cabinets (70 from TAU and 20 from IFIC).**