

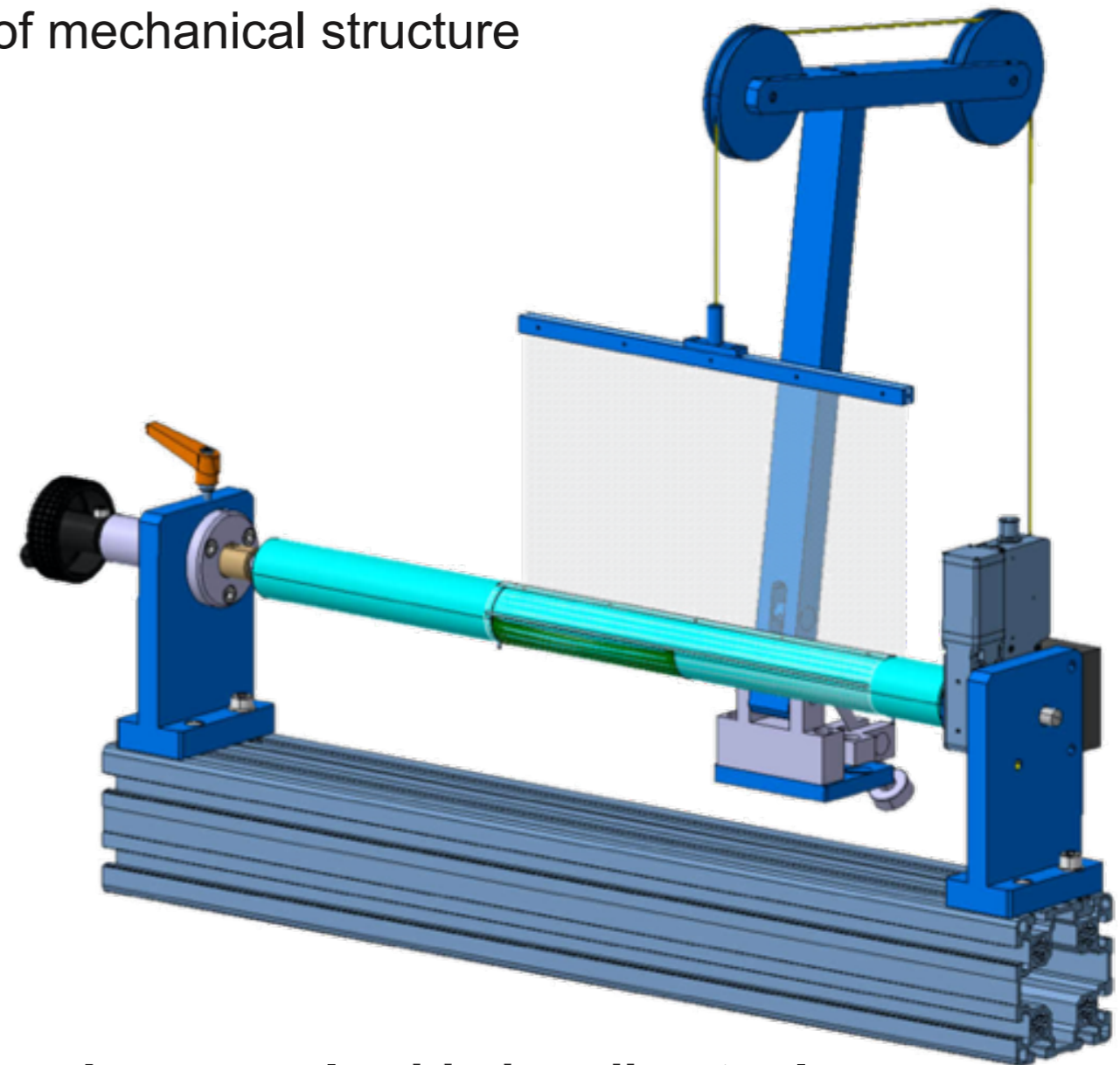
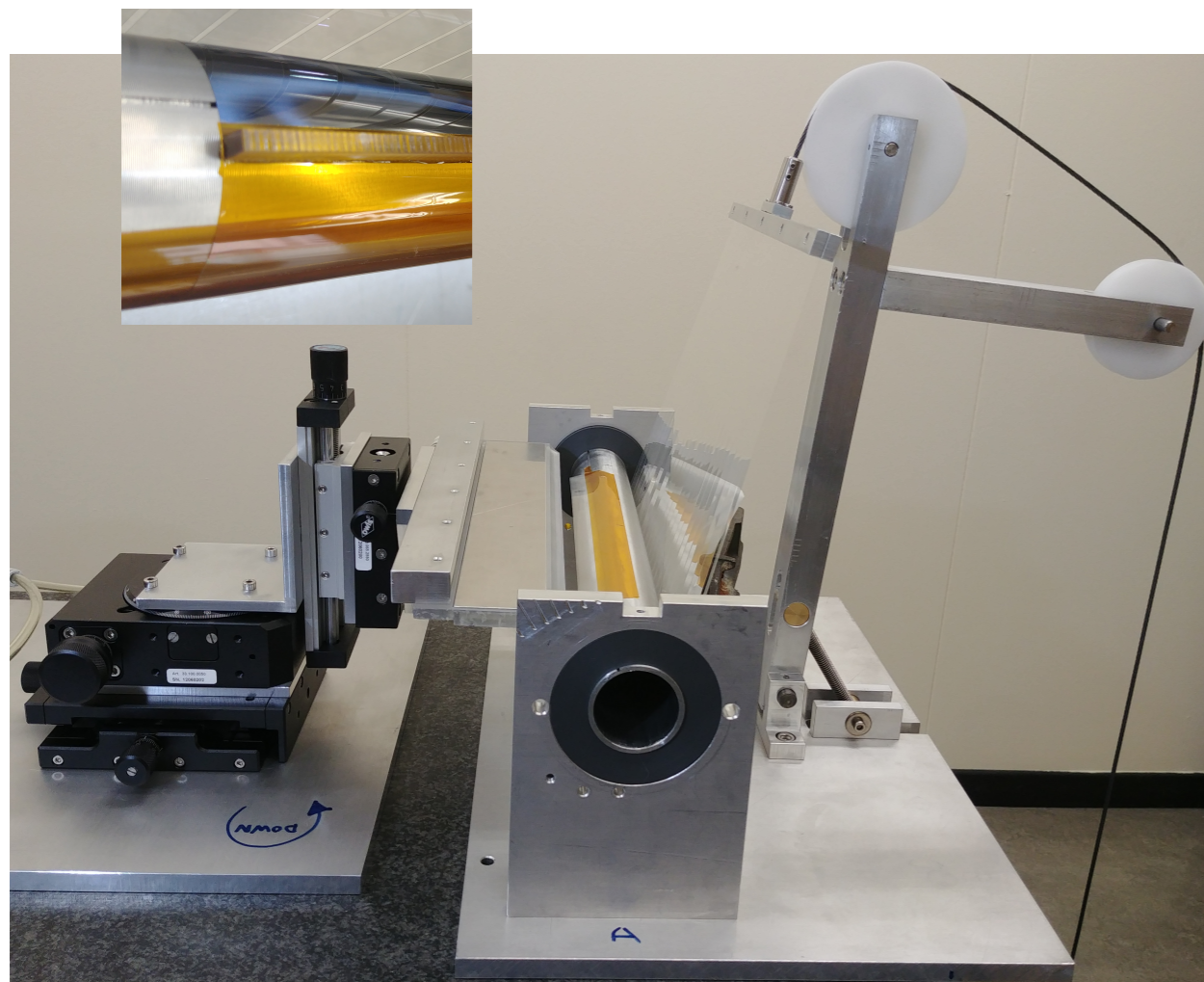
# R&D activities on Silicon detectors in Bari

D. Colella, D. Elia, R. Perrino  
(Politecnico and INFN Bari)

## Ongoing activities in the framework of the ALICE ITS3 project

### Two main areas of contribution/involvement:

- Development of techniques and tools for bending and interconnecting wafer-scale chips [ITS3-WP4]
- Study aspects connected to the development of mechanical structure [ITS3-WP5]

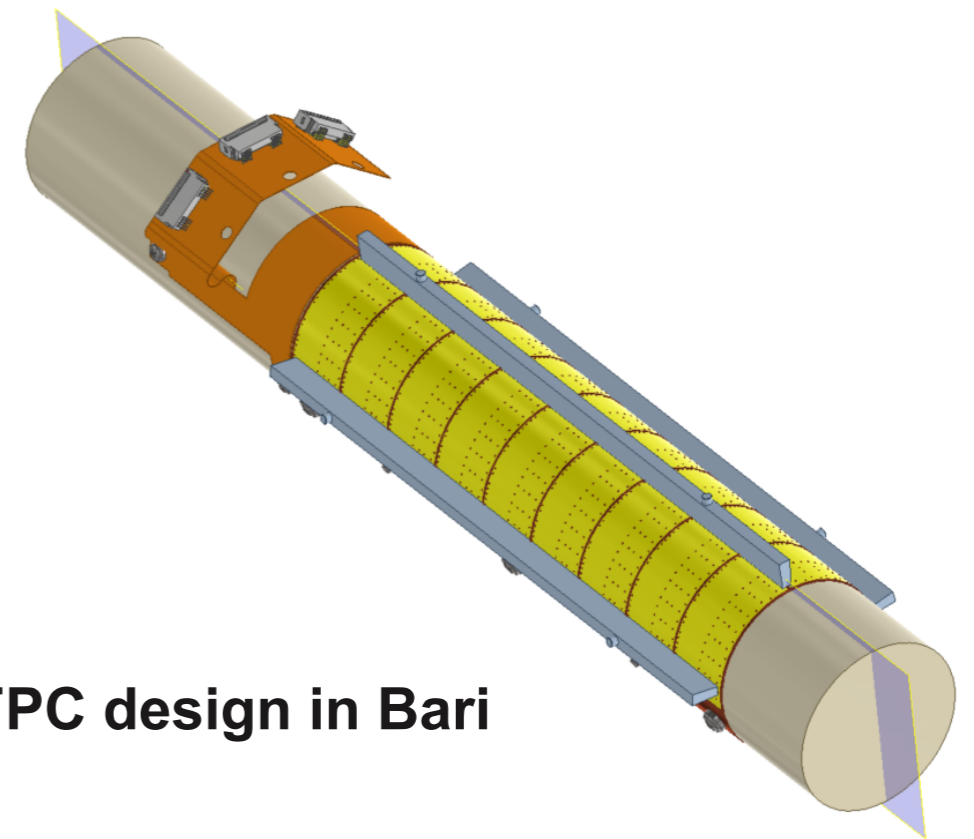
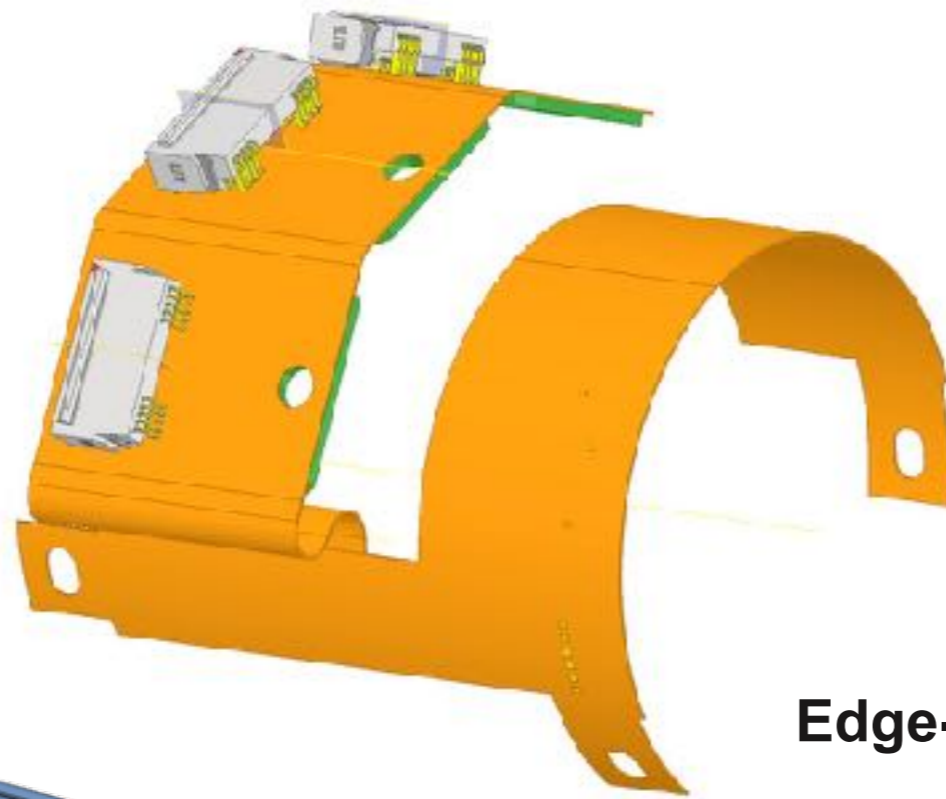


**Large-scale chip bending tool  
Developed at CERN**

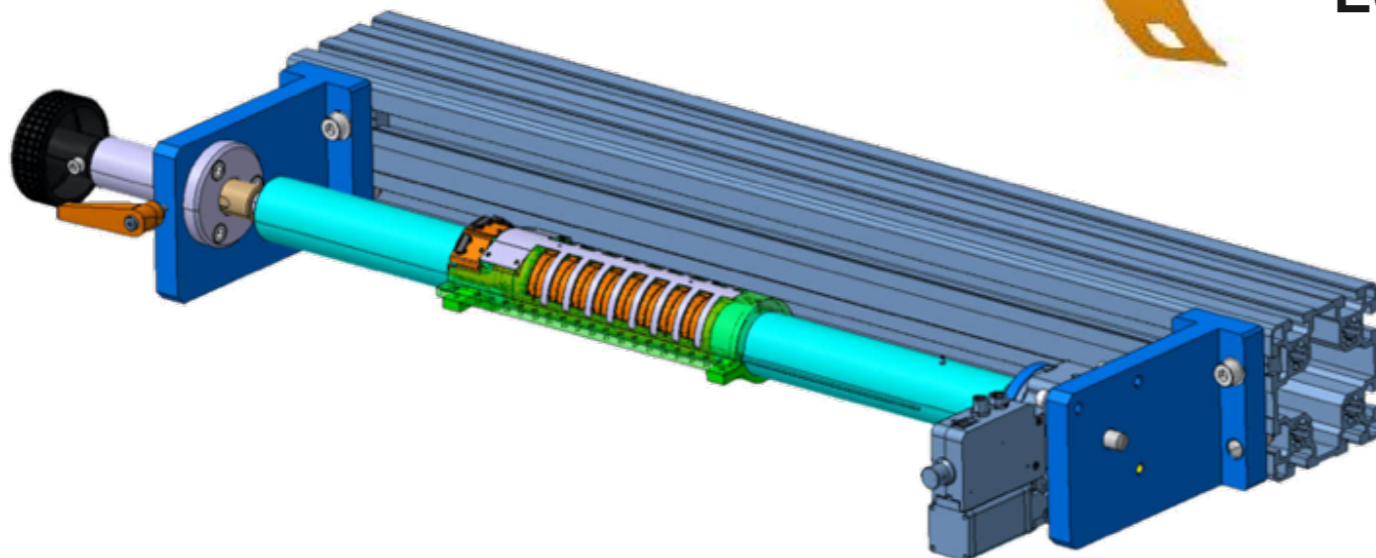
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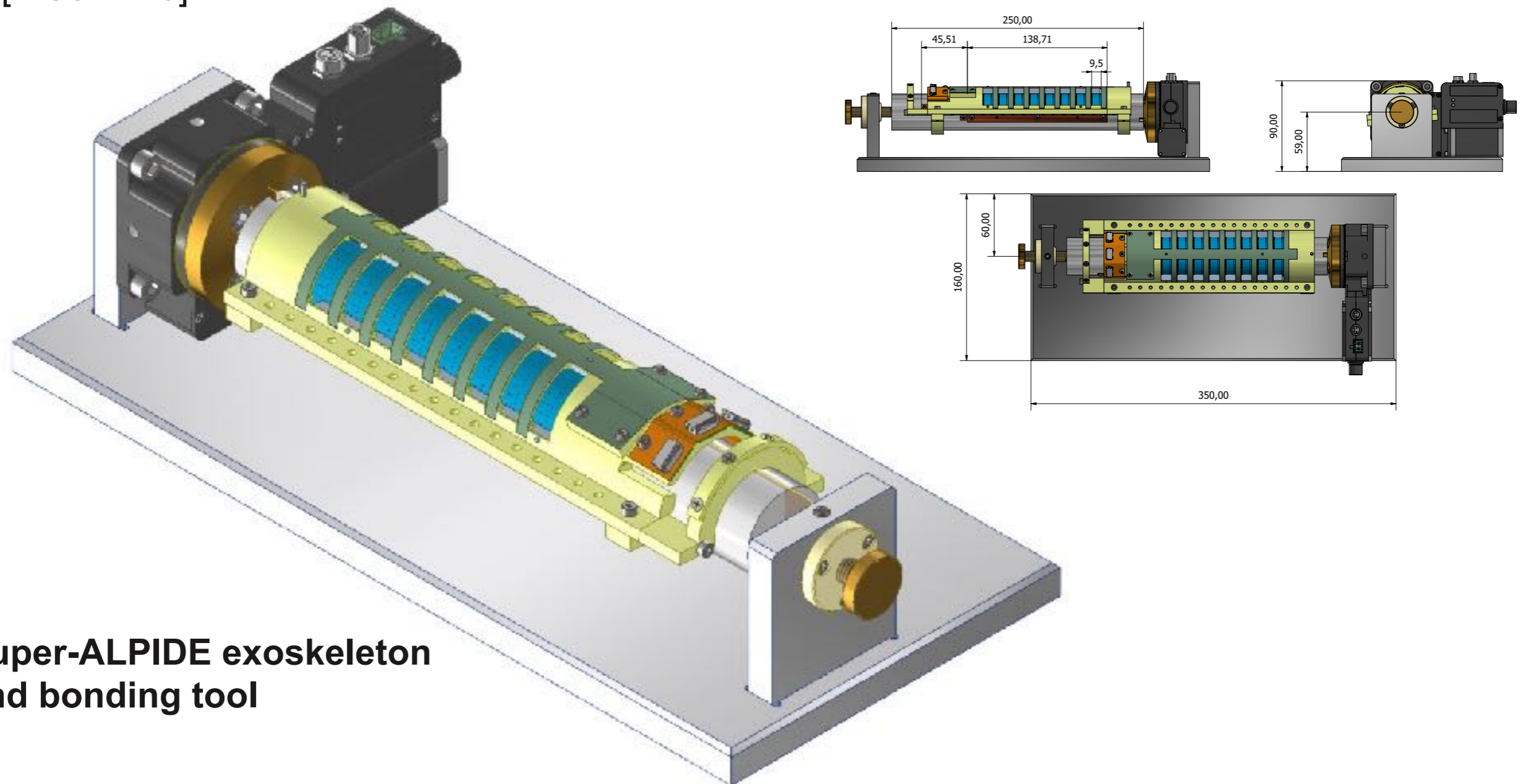
**Edge-FPC design in Bari**



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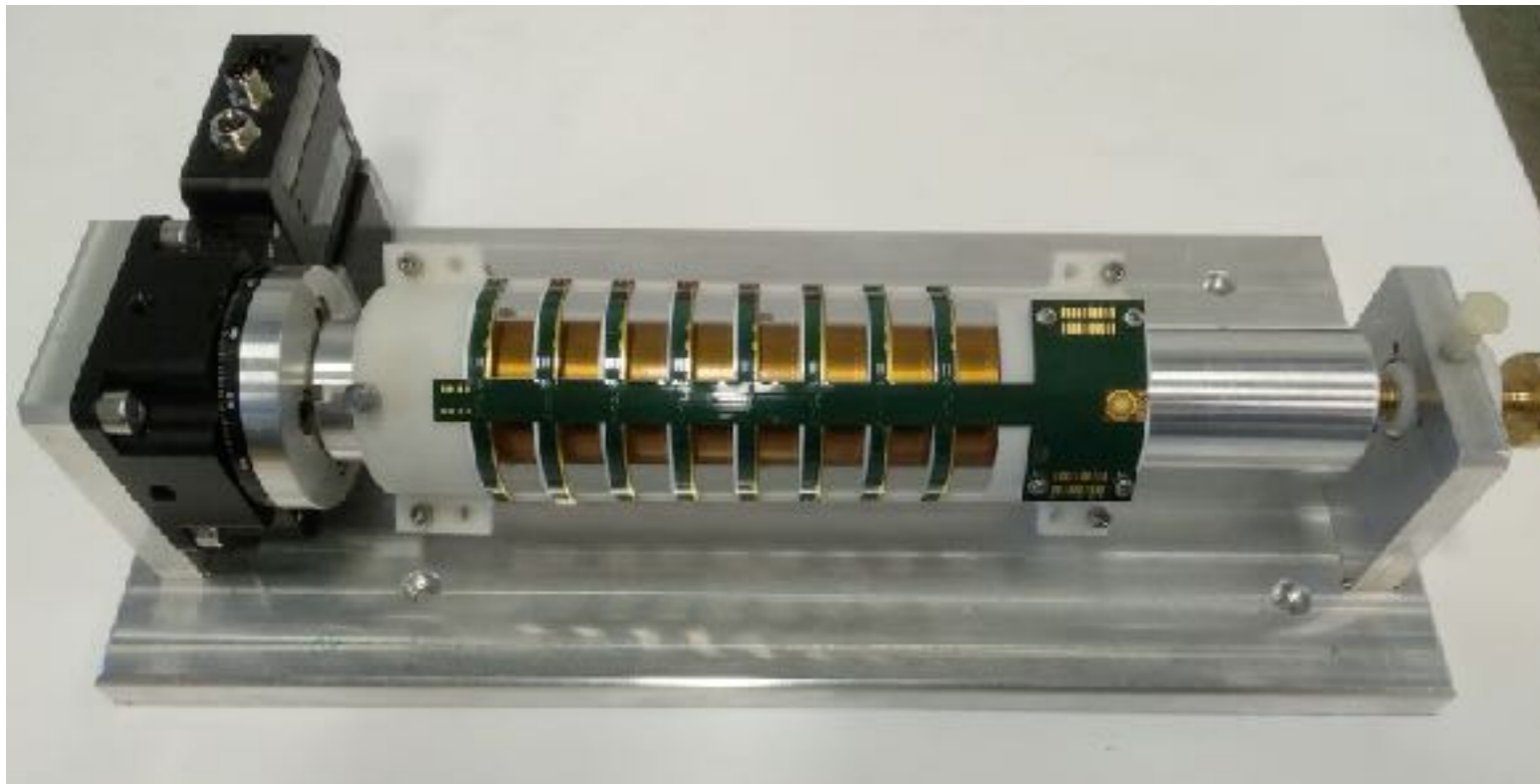


**Super-ALPIDE exoskeleton  
and bonding tool**

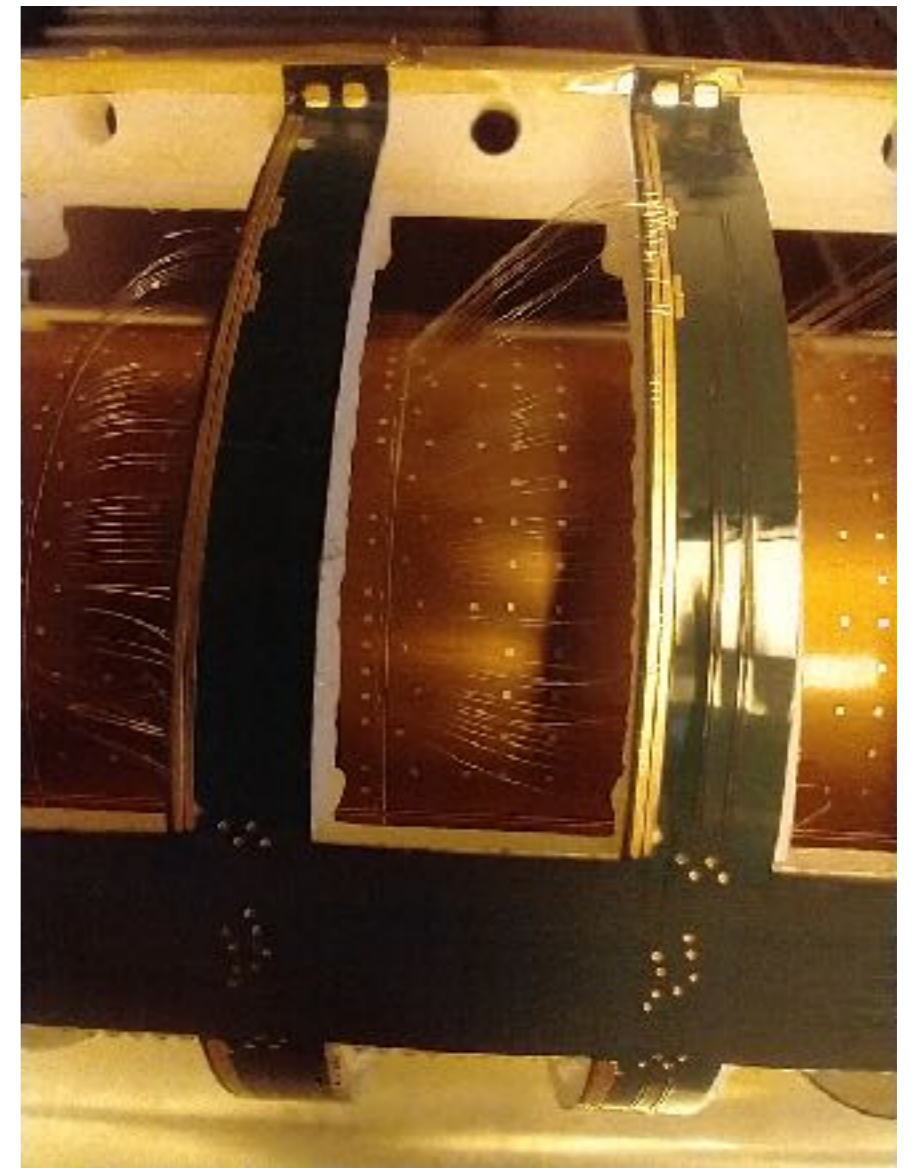
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**Super-ALPIDE exoskeleton  
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## Ongoing activities in the framework of the ALICE ITS3 project

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### Future plan

- Assemble super-ALPIDE setup (working chips)
- Perform wire-bonding Edge-FPC to chip and provide feedback to mechanics design
- Develop edge-FPC for final detector
  
- Tracking/vertexing physics performance simulation studies

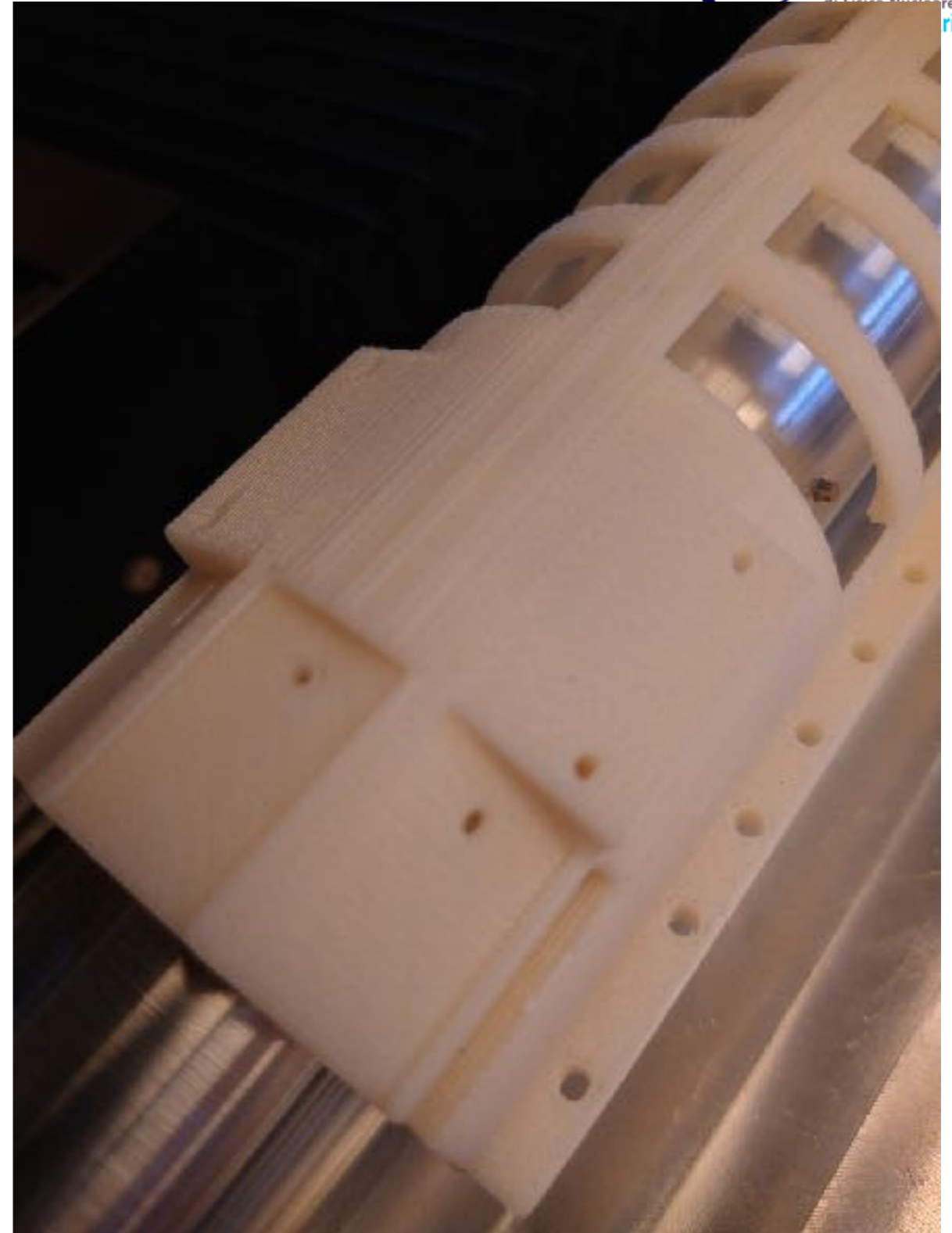
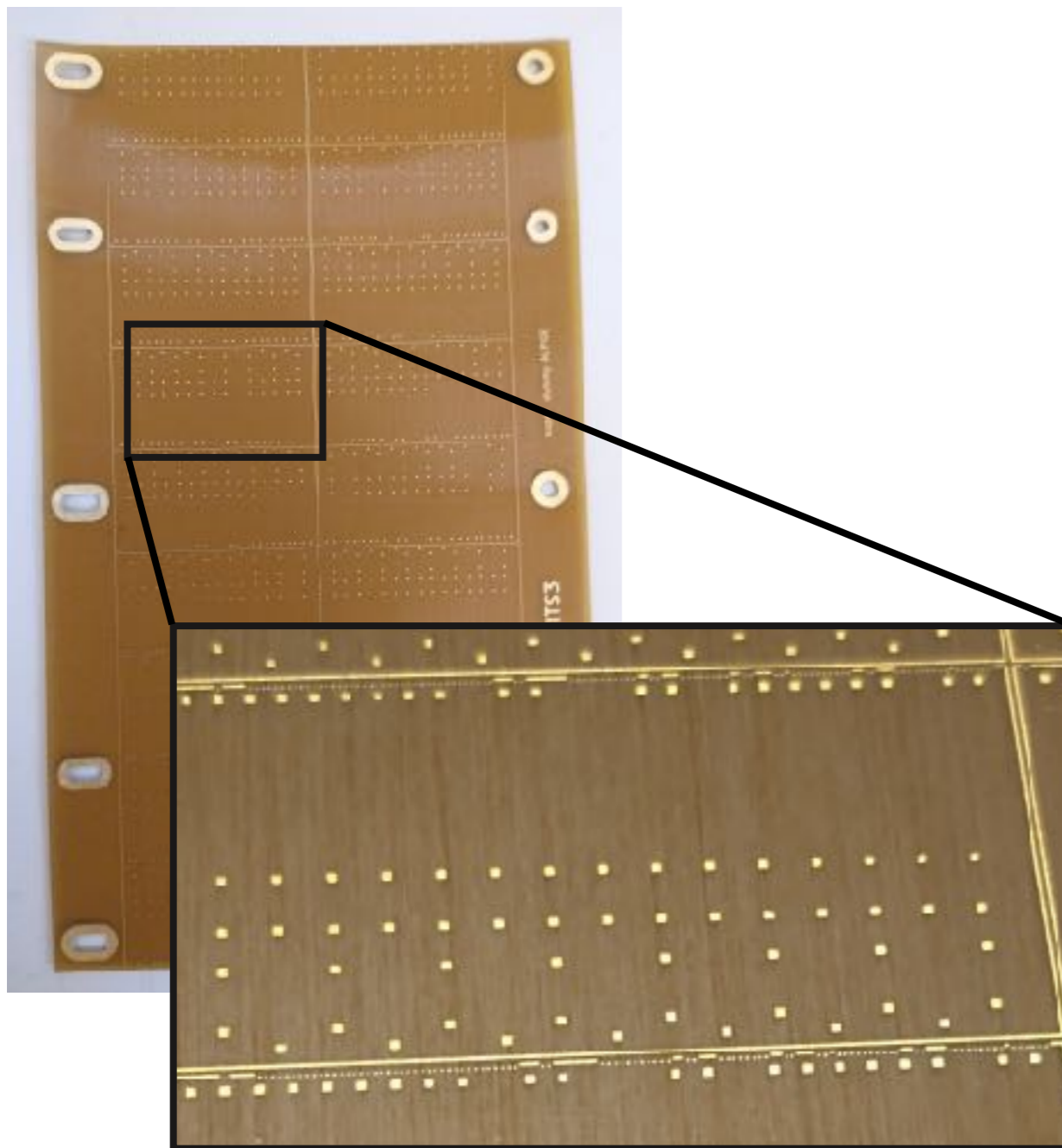
**Expect to profit of the strong synergy between EIC and ALICE ITS3 projects**

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# BACKUP

## Super-ALPIDE mockup assembly

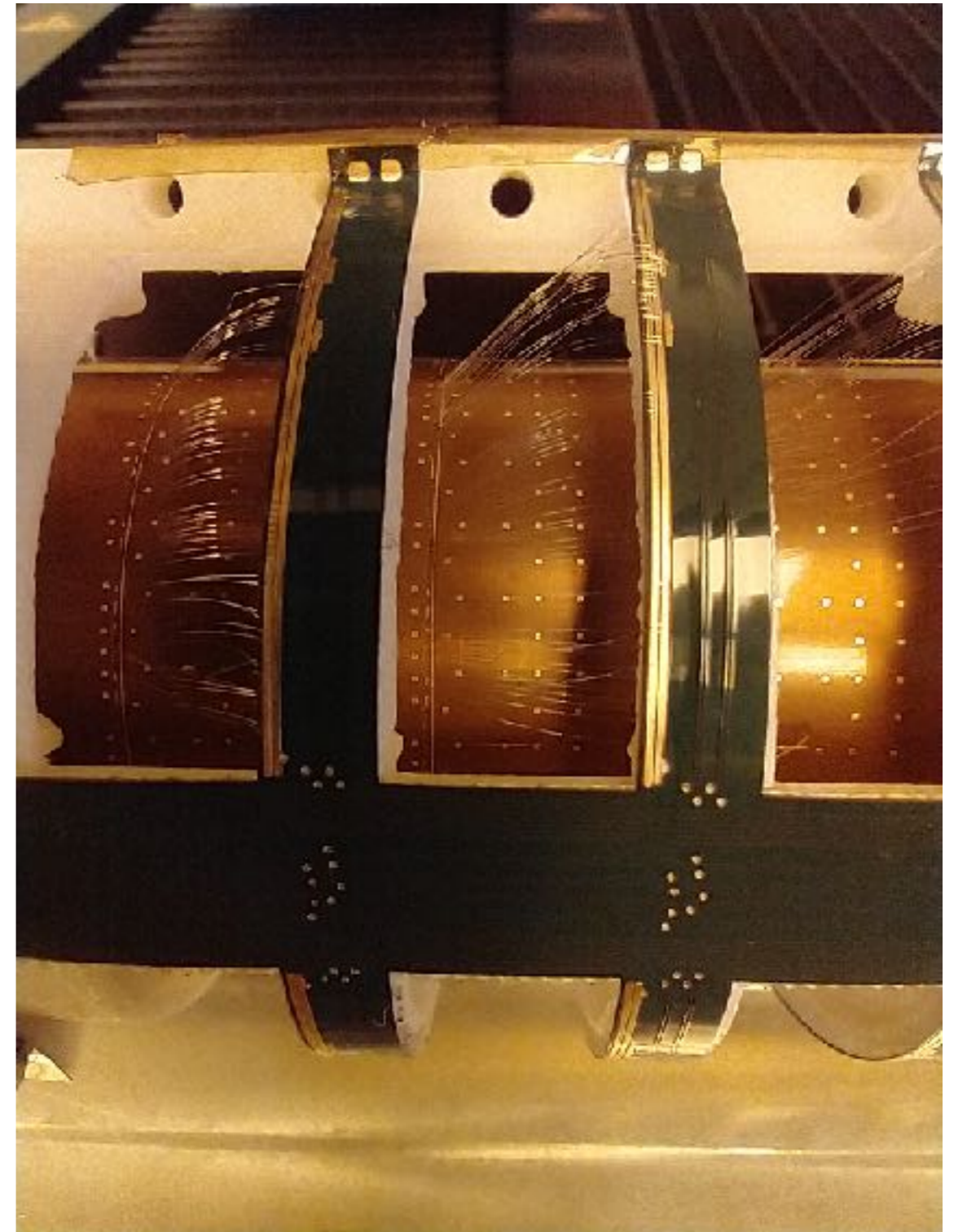
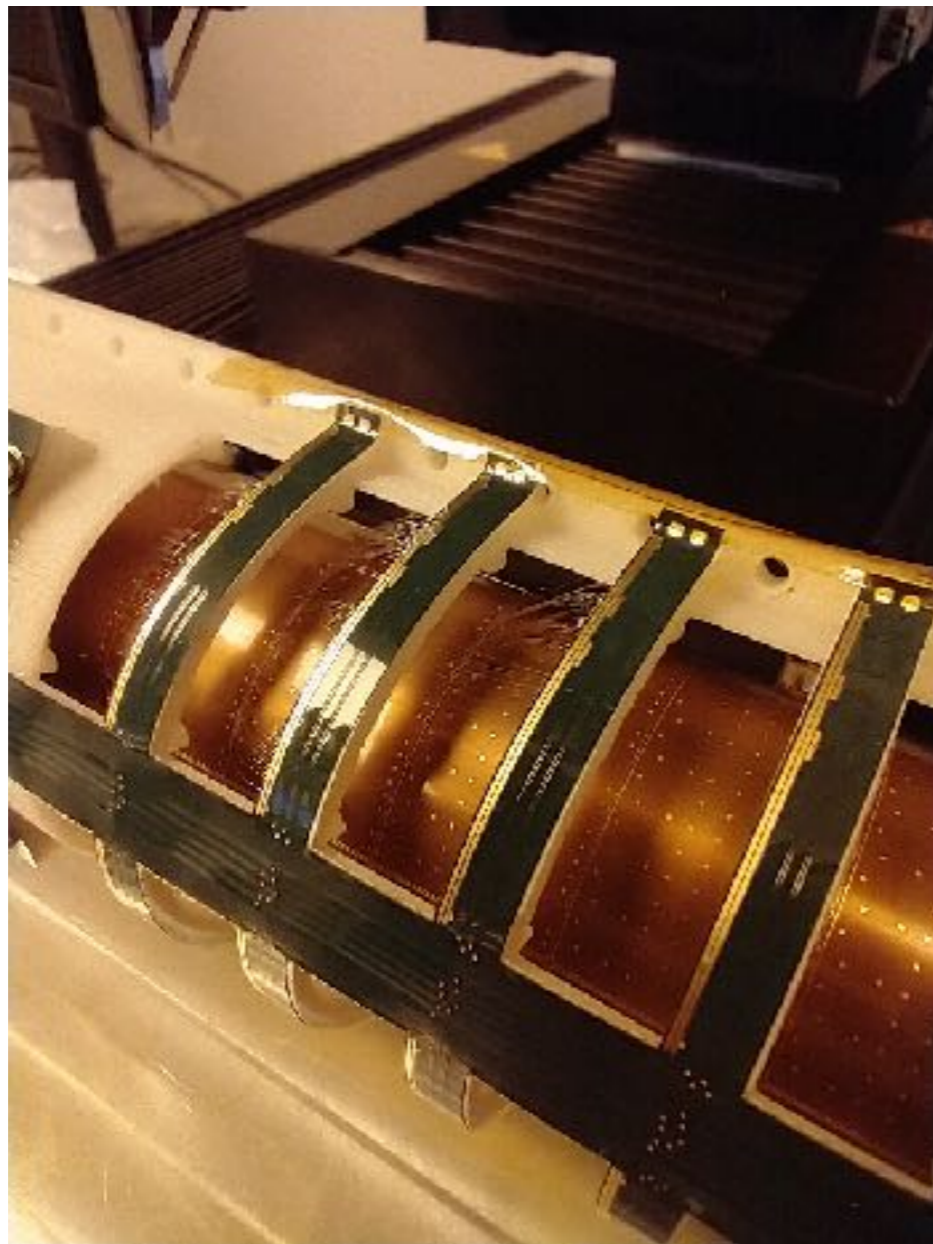
- Dummy-super-ALPIDE (using mini-pad)
- Exoskeleton (V2, first printed in Bari)
- Exo-FPC

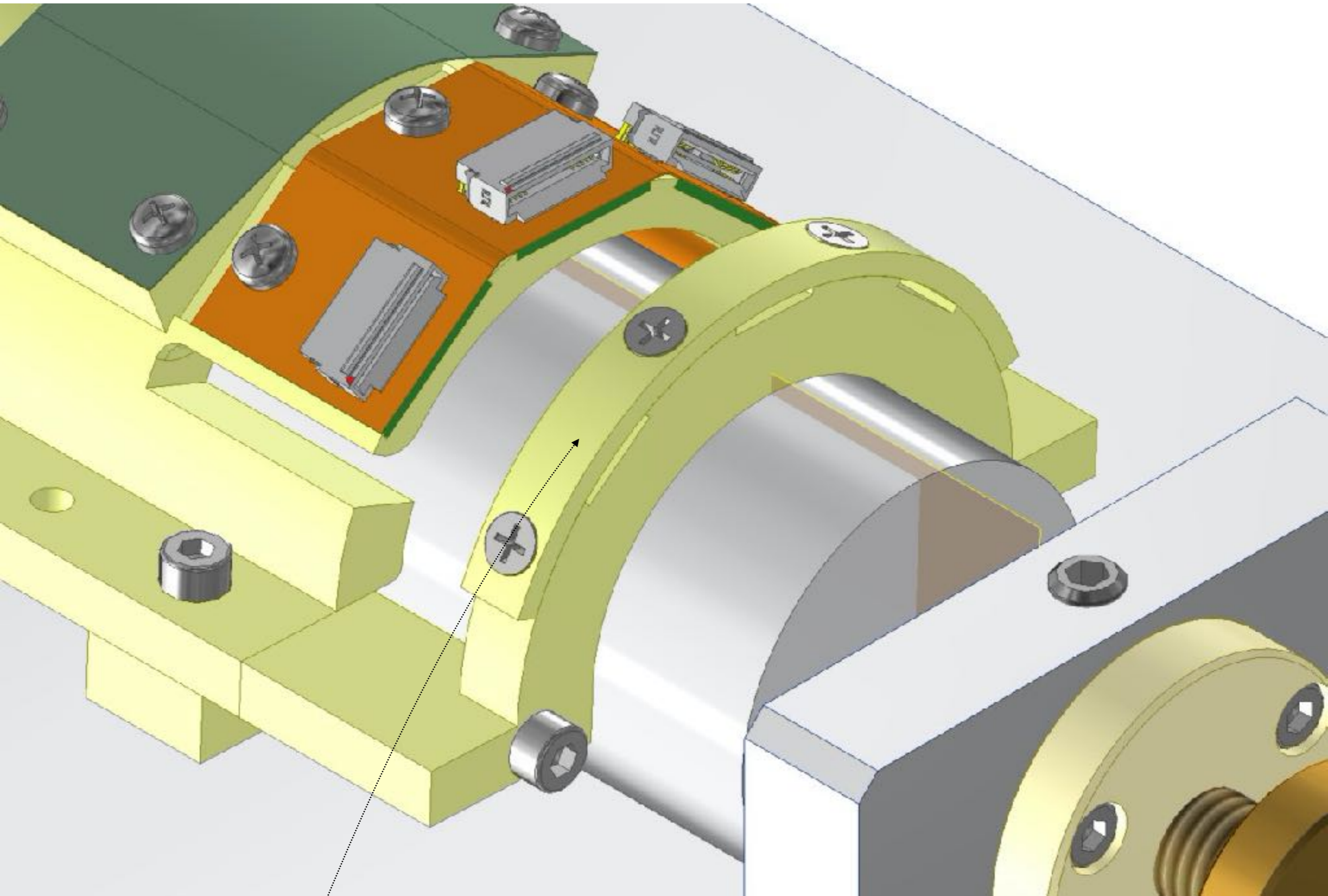




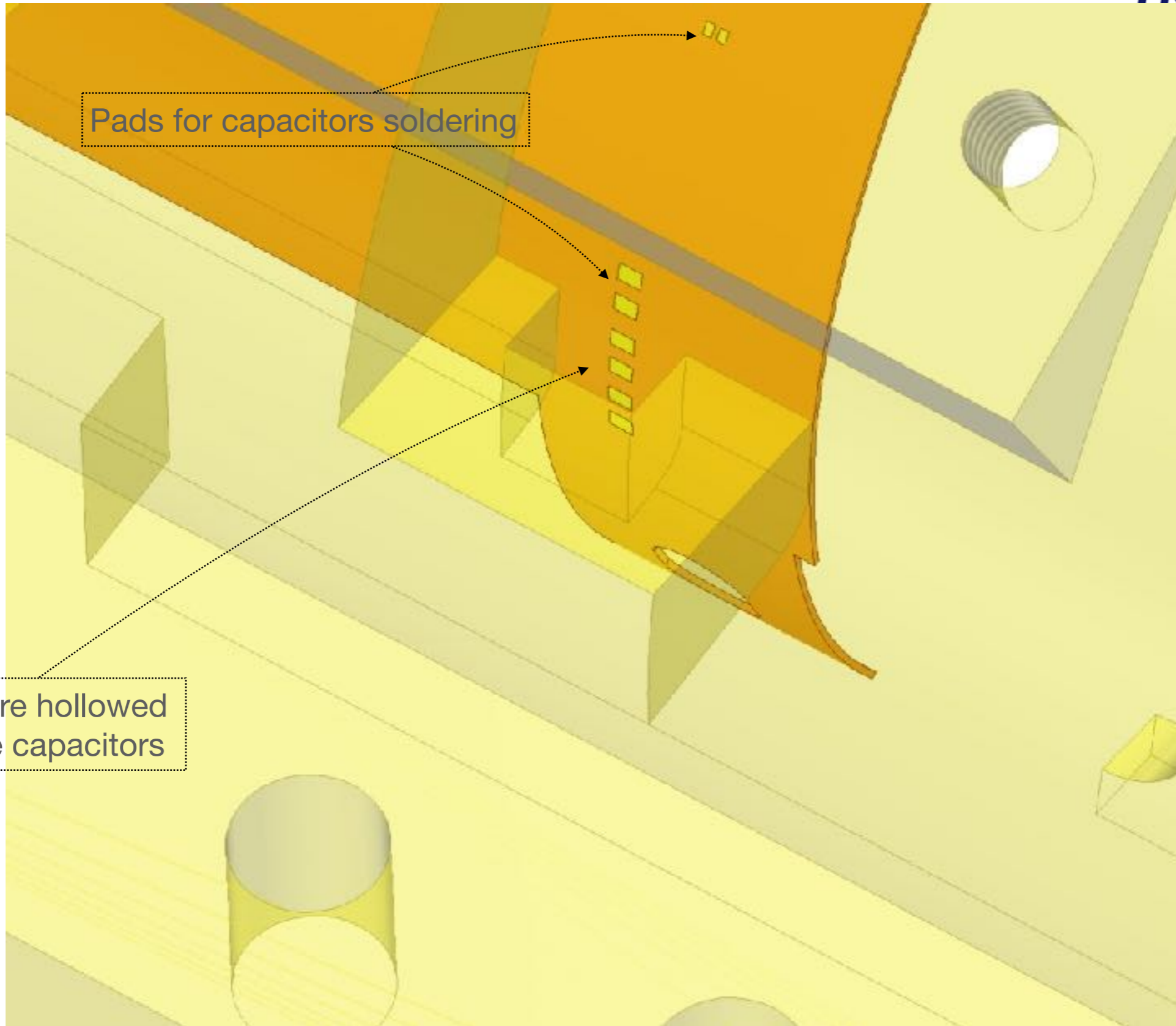
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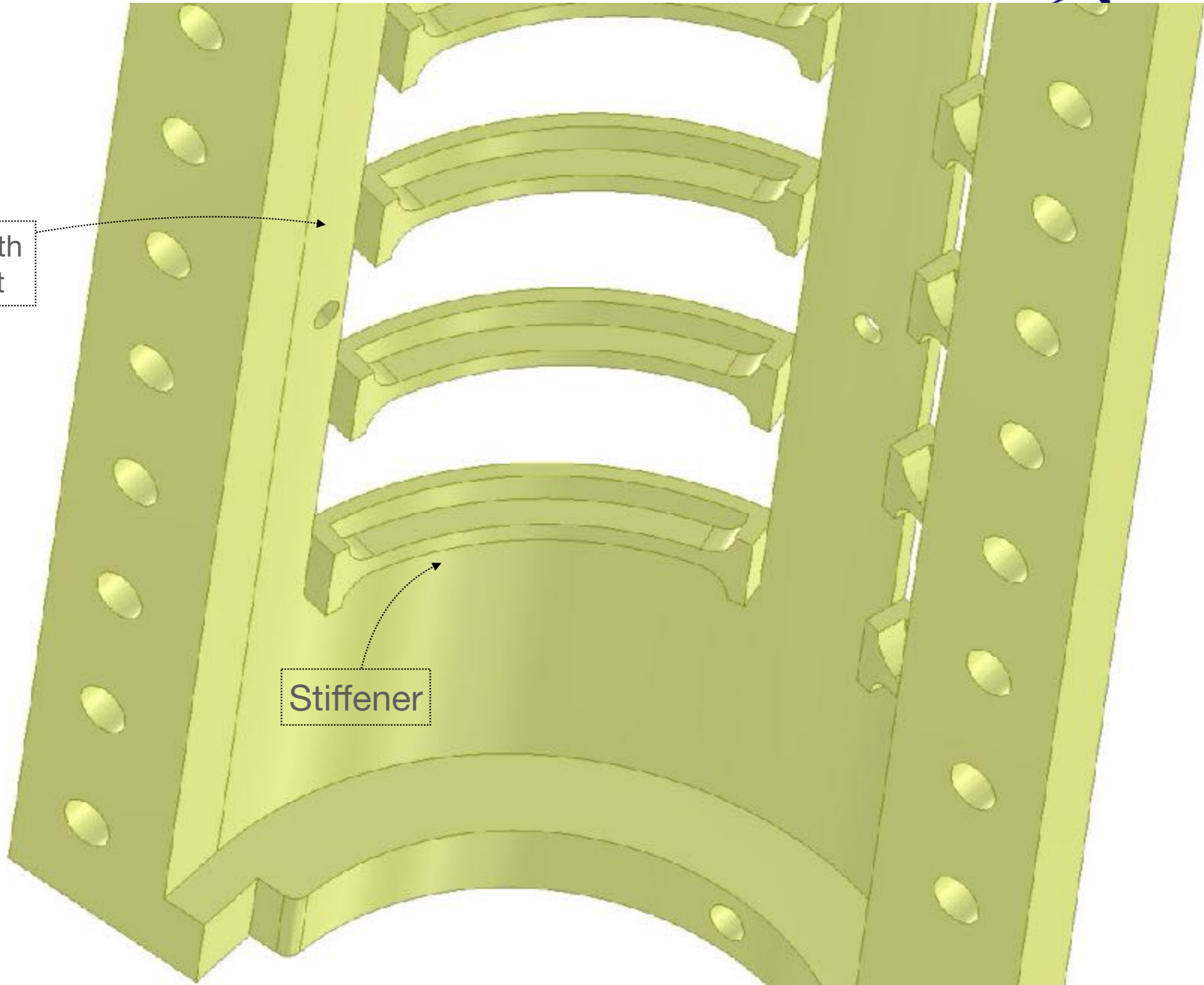
SAMTEC cables support and holder



Pads for capacitors soldering

Support structure hollered to not touch the capacitors

Do not interfere with wedges placement



Stiffener

Support structure glued on the FPC (with coverlay)

