



ALICE

ITS3

Tuesday 18<sup>th</sup> April 2022

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# WP5 progress report

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**WP5 collaboration**

# Outline

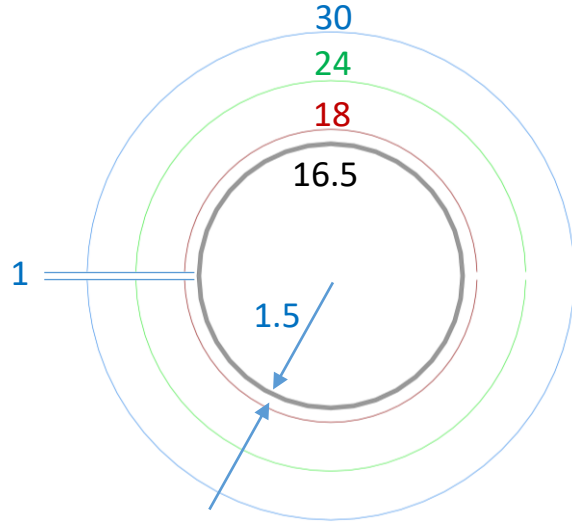
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ALICE ITS3 WP5



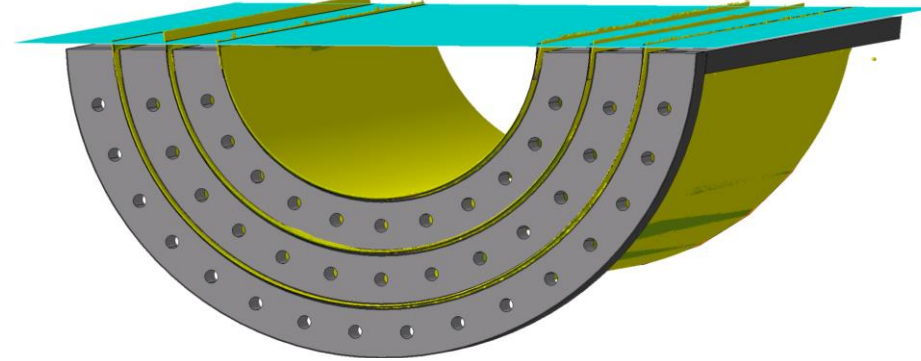
- Detector layout: tolerances
- Next wind-tunnel tests

# Detector layout: tolerances at equatorial gap

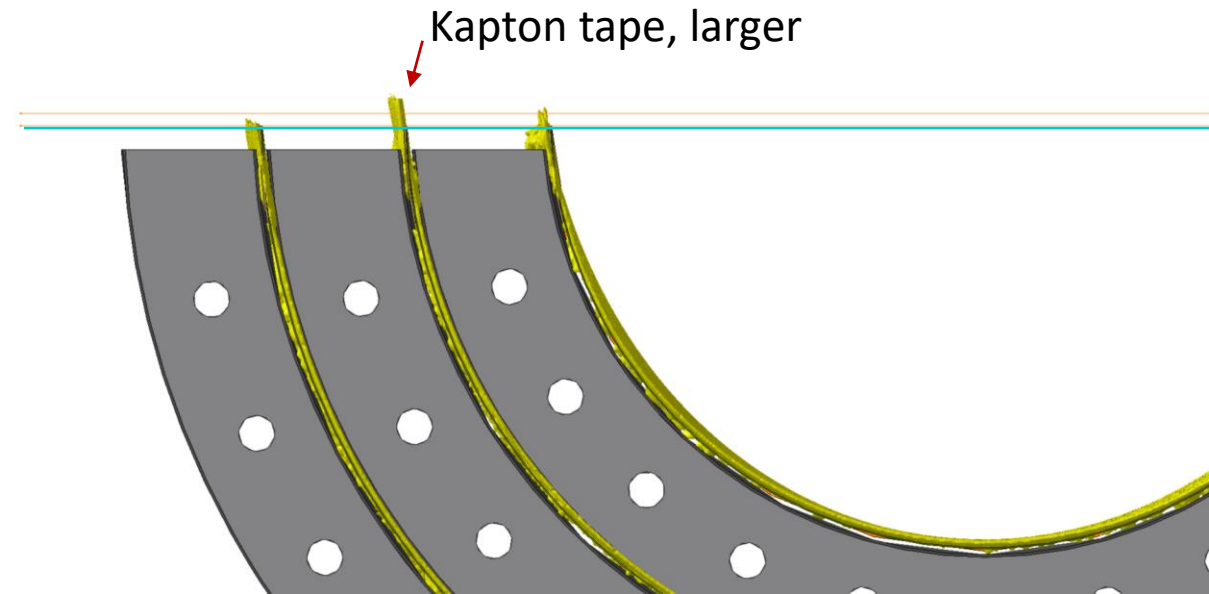
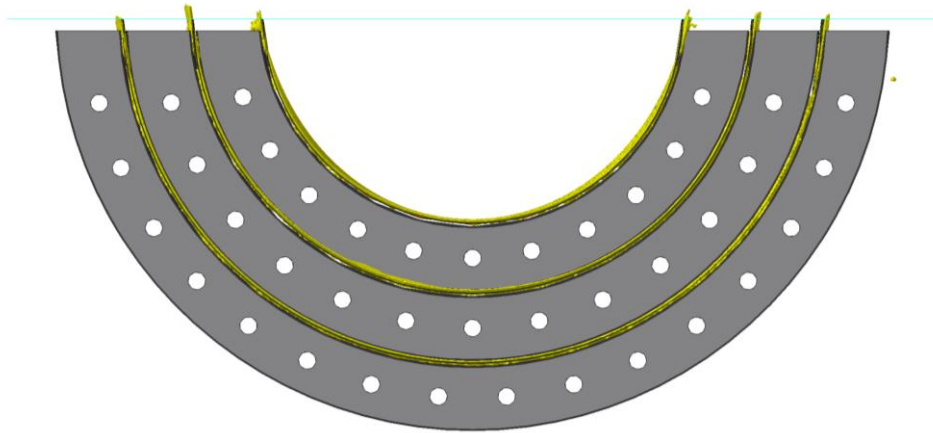


R nominal

EM2:  
Blank silicon h-layers



Equatorial plane  
-0.5 mm

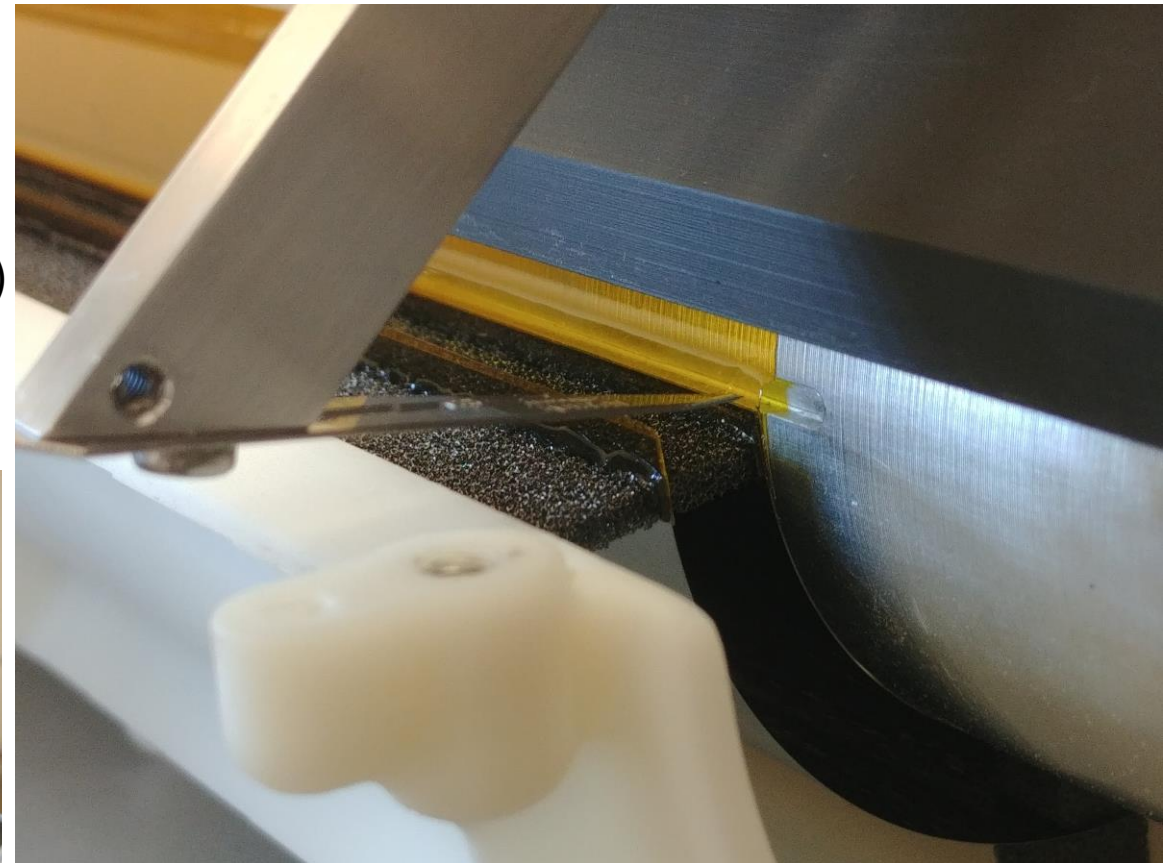
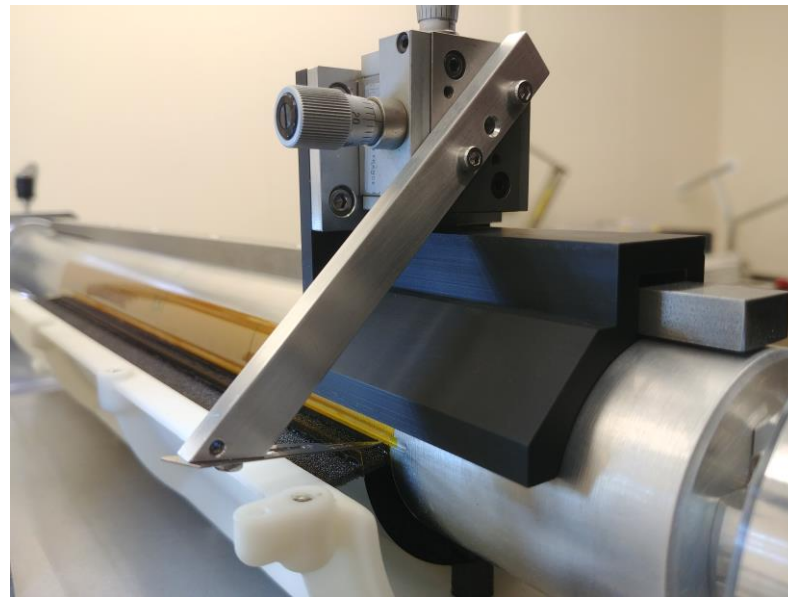
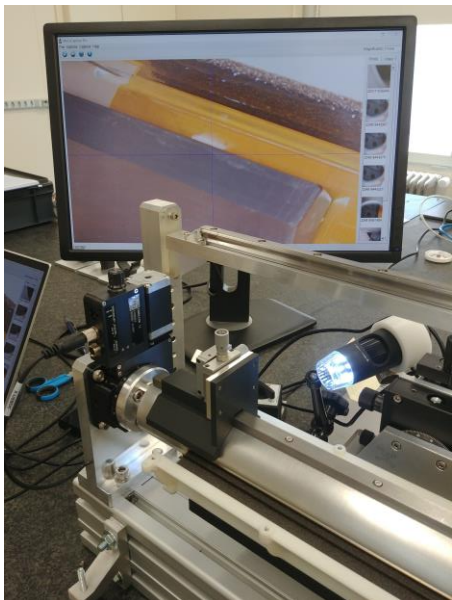


Within 0.5mm, if Kapton tape cut is improved

- Improvement of the cut of the Kapton tape: **NEXT, Pieter**
  - ➔ **Target:** fine cut  $\pm 0.1$  mm accuracy over 270 mm length, reasonable?
  - ➔ **Target:** Distance from the Silicon as small as possible according to the above target

EM2 , L1 during Kapton cut

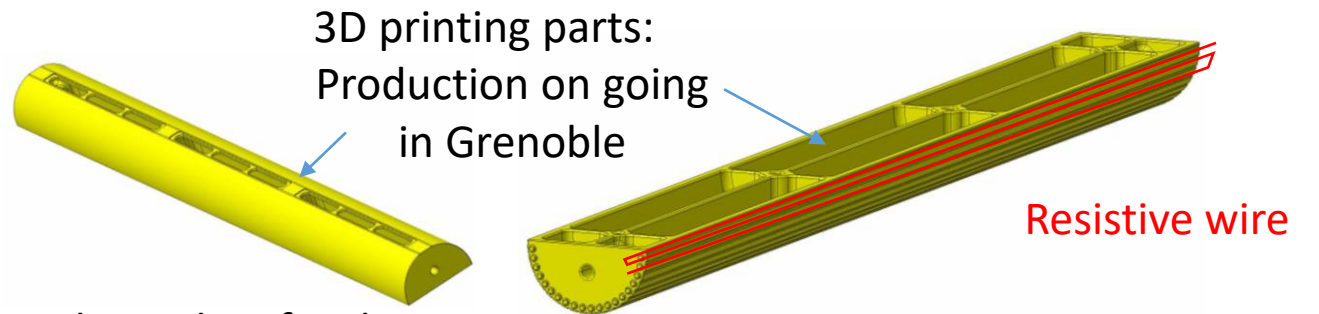
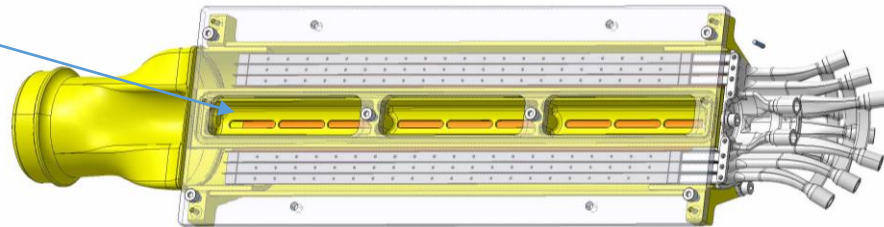
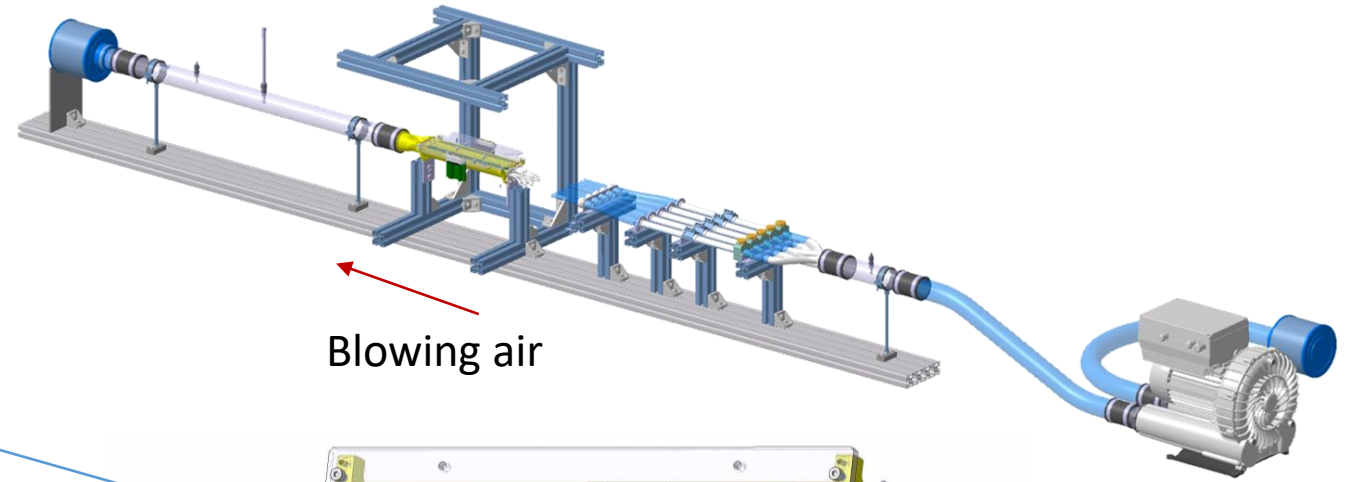
- **Define procedure**
- Improvement:
  - Alignment (mandrel and cutter)
  - Fine cut
    - Surgery knife ? (Diamond knives for eyes surgery)
    - Laser cut? (FS laser , other ..)
    - **Any suggestions?**



First vibration campaign conclude

**NEXT:**

- Reverse flow direction
- Thermal test (similar to previous one).
- Vibrational tests
  
- Upgrade of the prototype (target in 2 weeks)
- Thermal test and vibrational tests both air flow direction
  
- Improvement of the test set-up



BP with window for the displacement sensor,  
For vibration measuring of layer0

BP with integrated heater for additional thermal test considering heat coming from BP