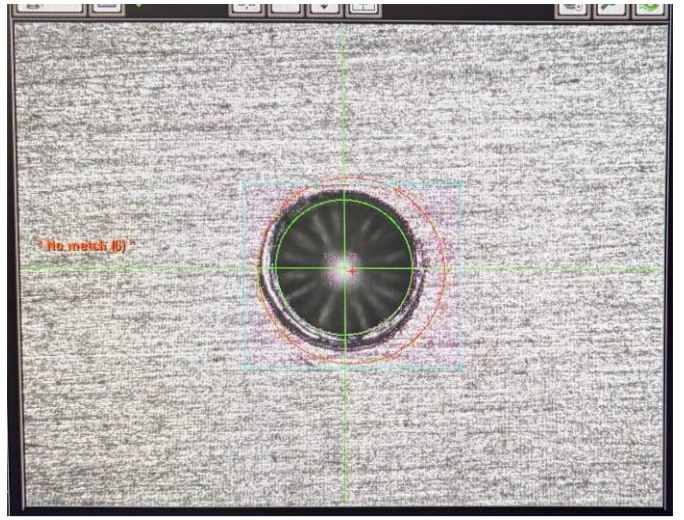
UNIVERSITY OF LIVERPOOL

Mighty Tracker -Assembly Trial II -

Maria Bazetto, Liam Boynton, Bilal Ganie, Thomas Lee, Sven Wonsak

• Quick Recap – Trial I

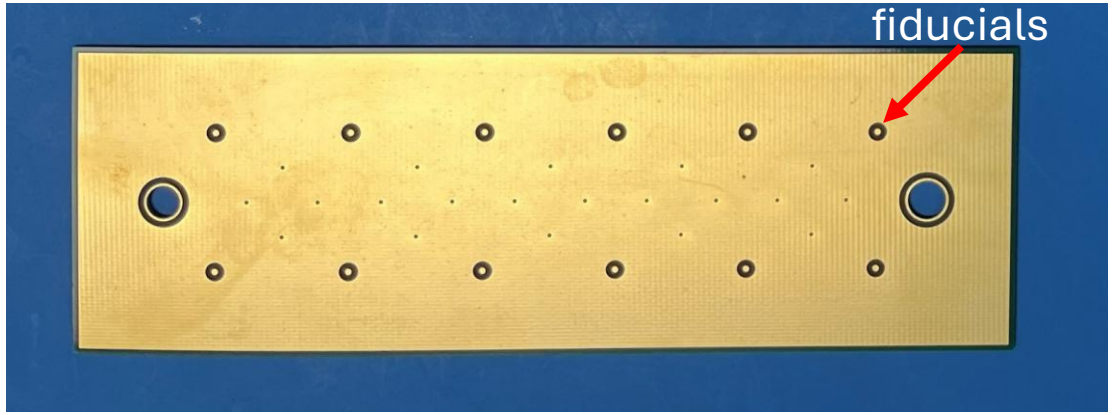




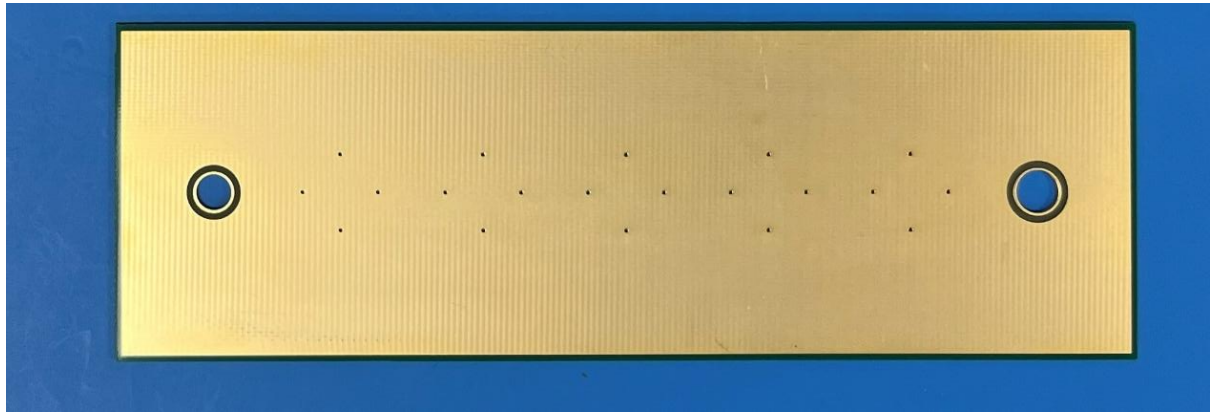
- Alignment slightly wrong, hole should be in centre of gap
- Each chip should be centred in a rectangle, shift to right side

The holes are not of sufficient quality for automated detection by the machine

- PCB jig



Top side



Bottom side

• Trial II - pick and place machine 21/10/2026

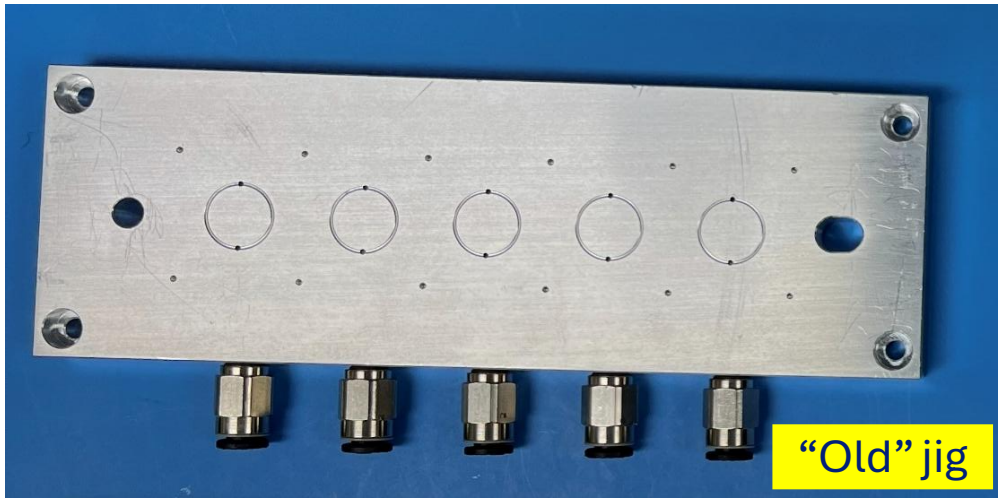
Target:

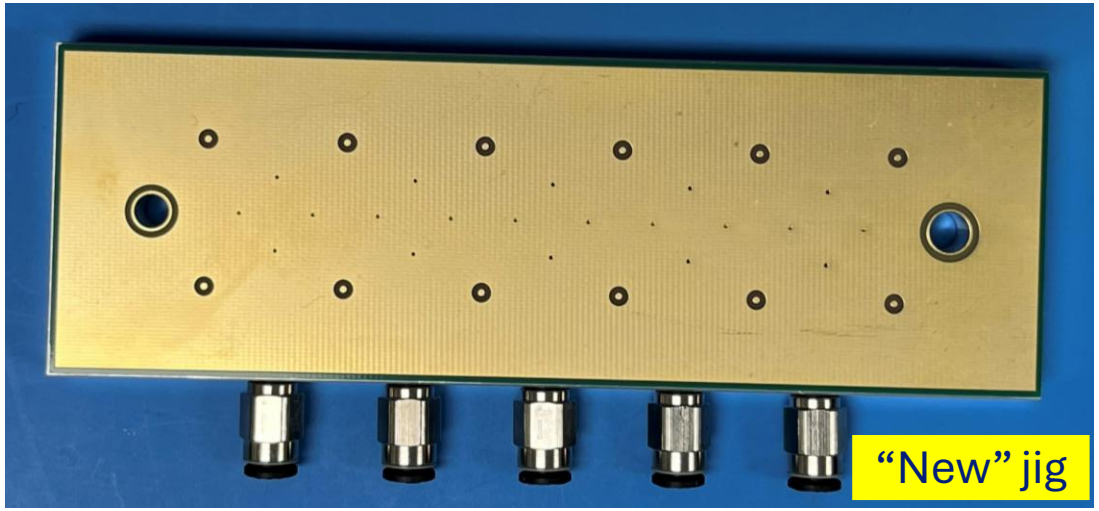
- Modify existing program for the new PCB jig
- Figure out issue with chip placement alignment and correct it
- Glue another dummy test object

Same: Flex Pick-up Tools, Dummy Silicon, Waffle Pack, Glue, Pick-and-Place Machine
What changed: PCB jig

• Modify existing program for the new PCB jig

- Create a new program based on the previous and re-trace the new PCB jig

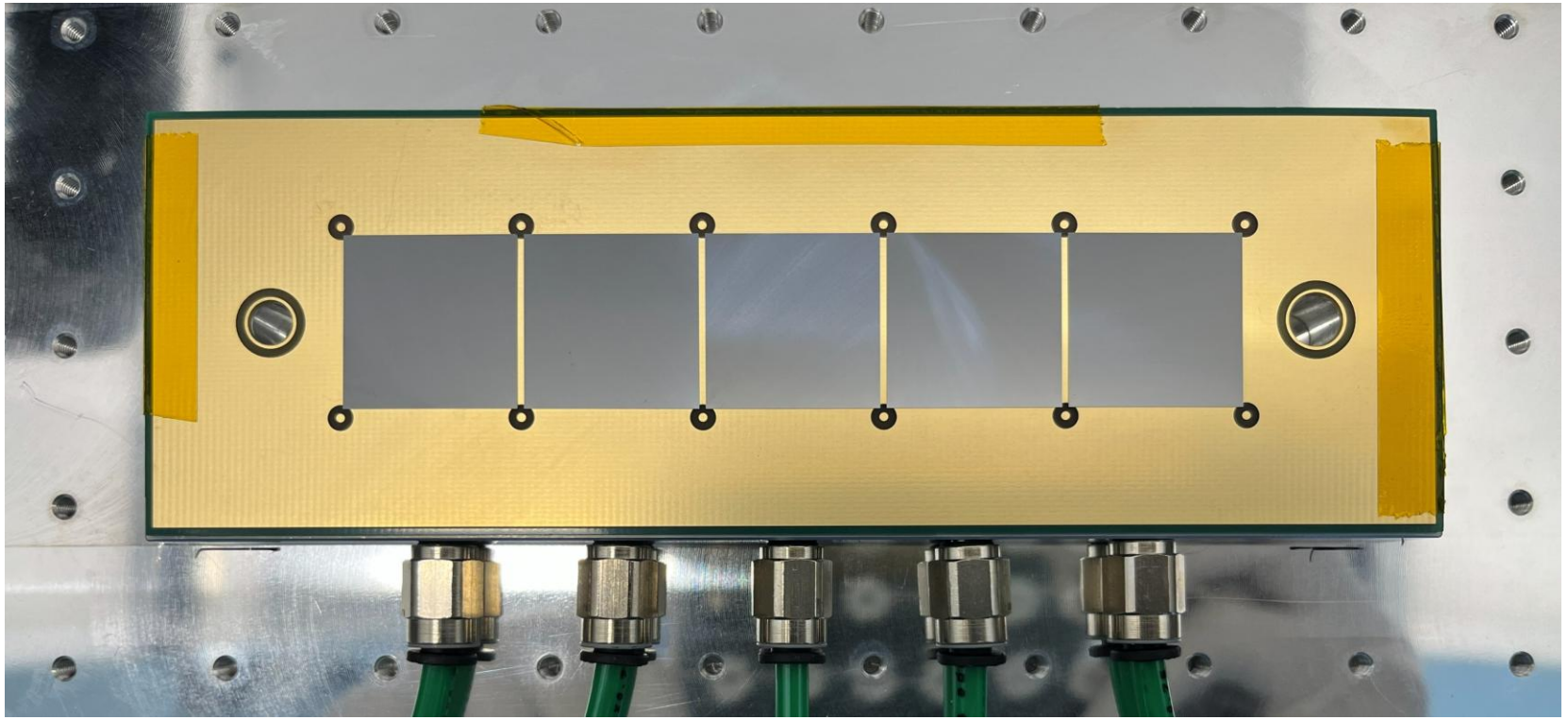




Good quality for automated detection by the machine

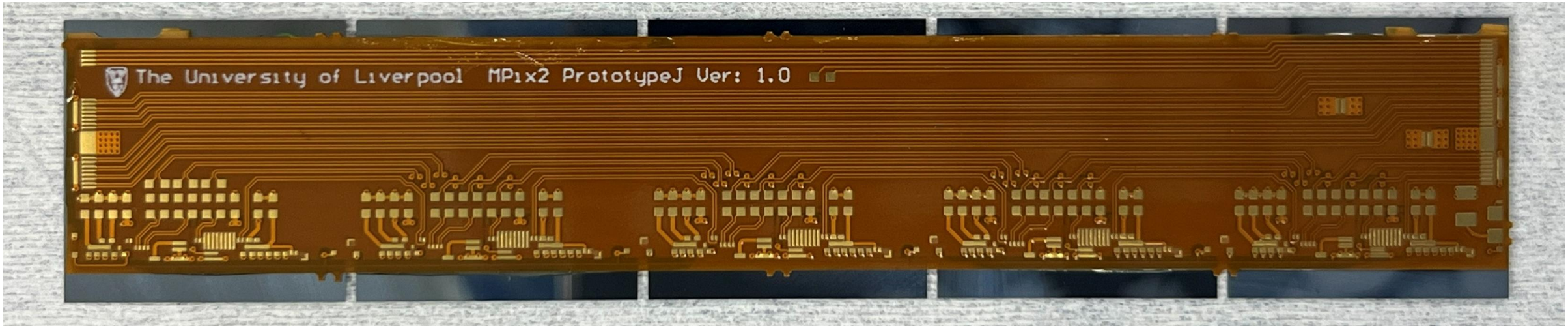
- Figure out issue with chip placement alignment and correct it

- Contact with the engineer and all parts were re-traced

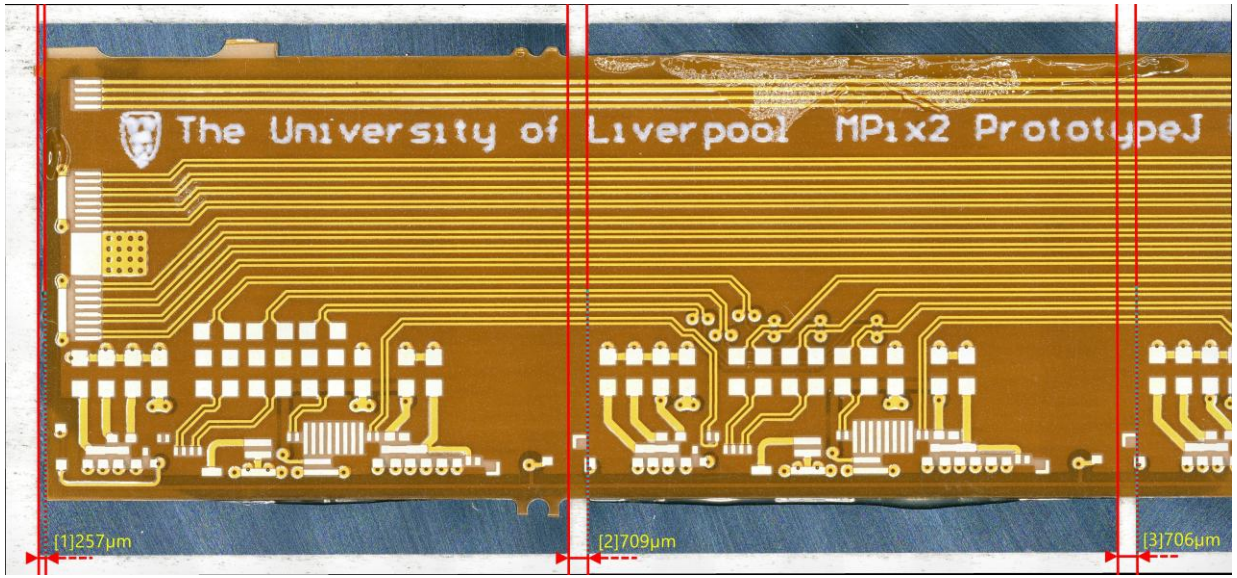


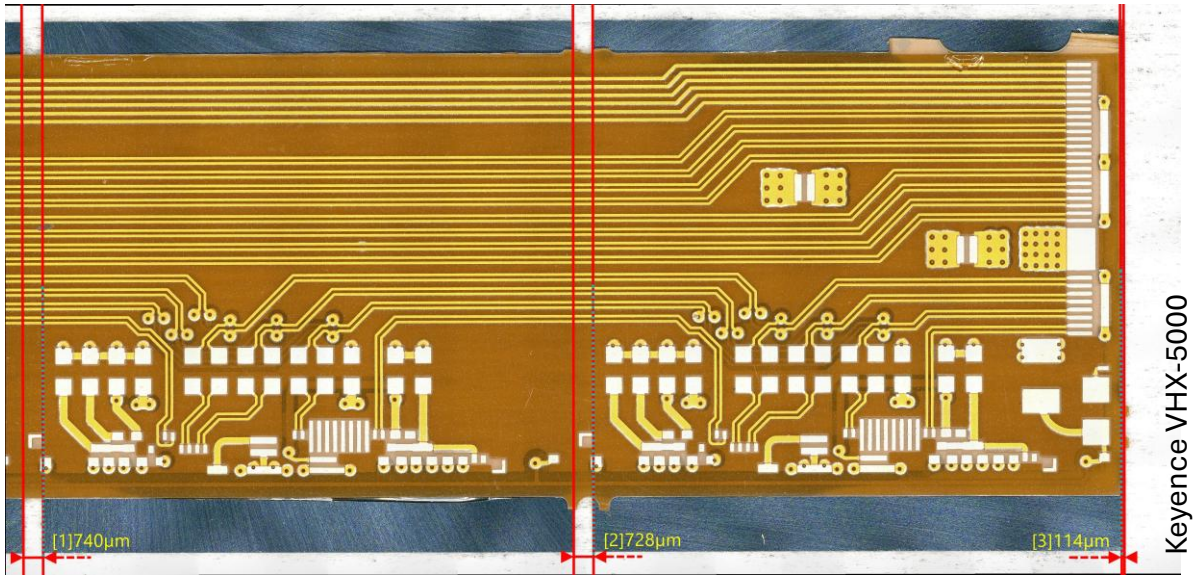
- Glue another dummy test object

  - Use Araldite, manual deposition on flex, glue seepage onto jig and tool



• Measurements





Gap between flex and chip; left side: 257 and right side:114 µm

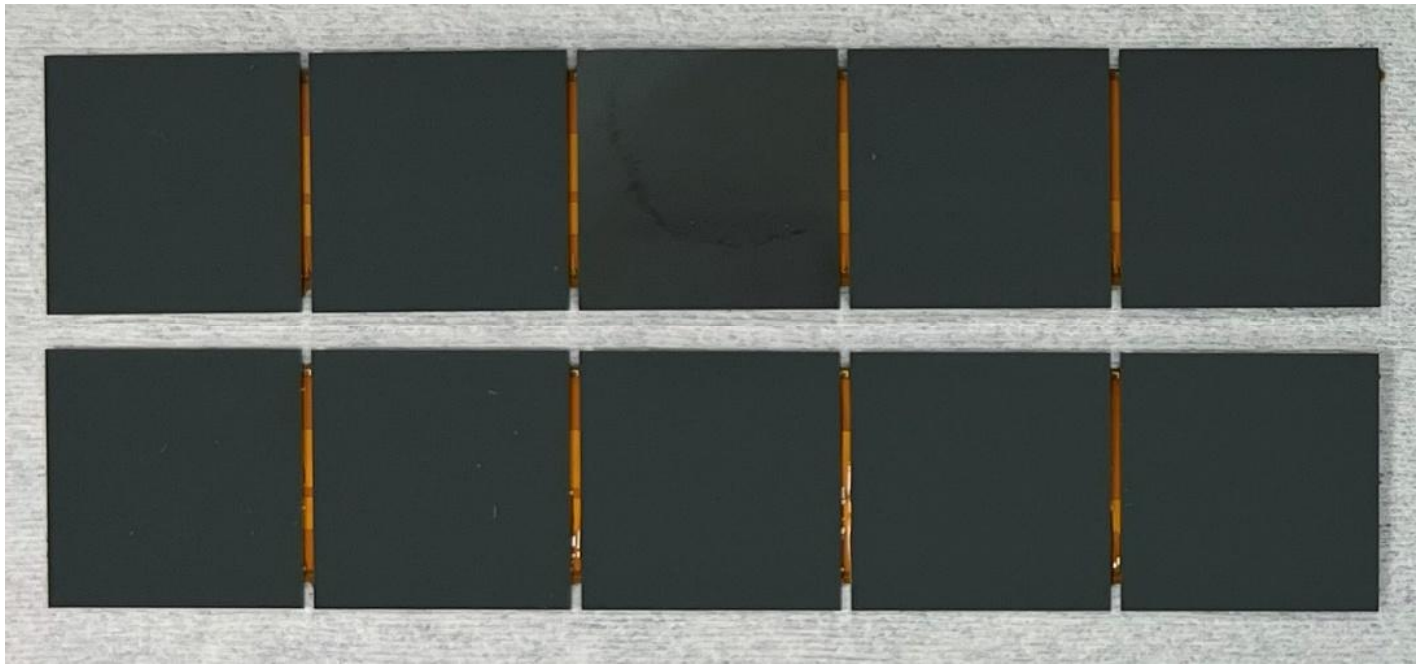
Gaps left to right: 709, 706, 740, 728 µm (glue? bend the flex? ≠ chip size)

• Next Steps

- Waffle pack smooth for machine vacuum to hold it down
- Not dummy silicon (heat loads)
- New glue Loctite SI 5145; Check how long to cure before tools can be removed
- Think about other ways to apply the glue
- Change the program to better control the chip gap

I -

II -

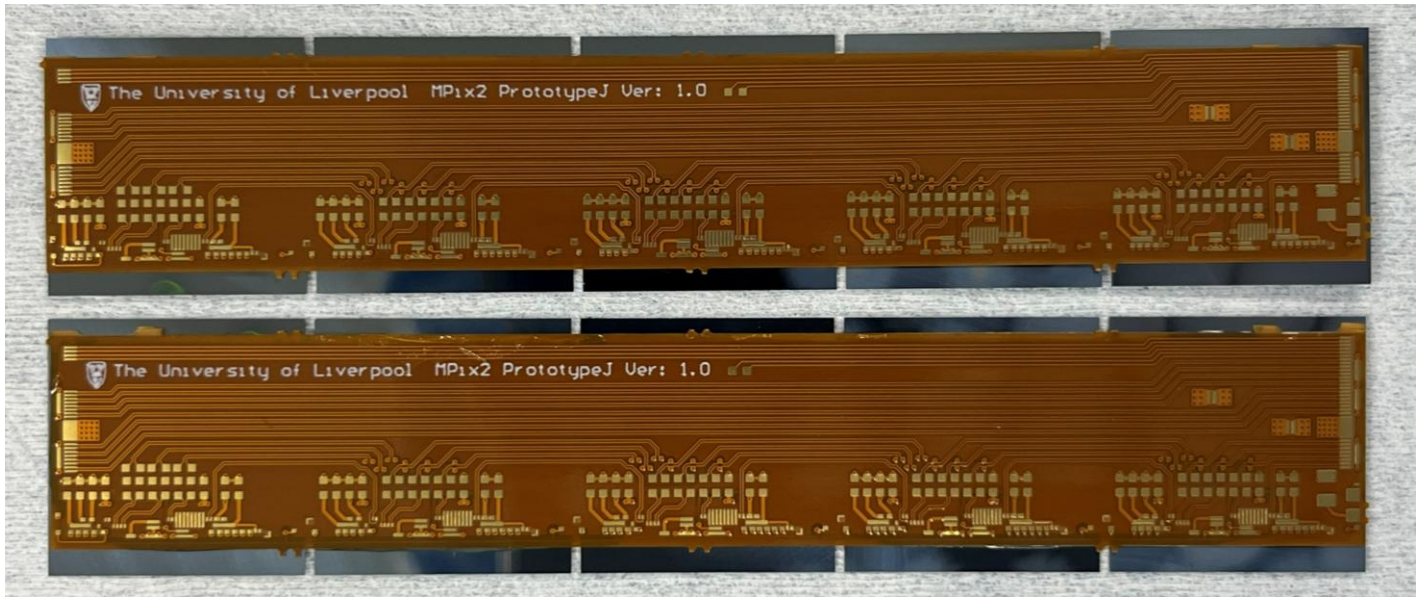


08/07/2026

21/10/2026

I -

II -



08/07/2026

21/10/2026