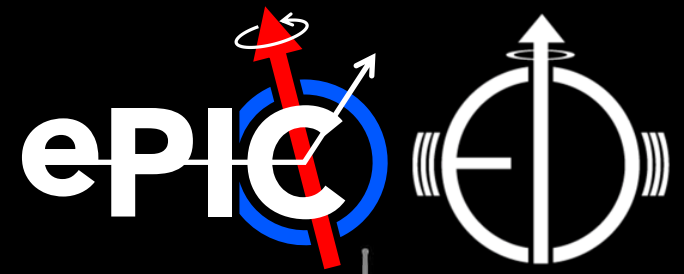




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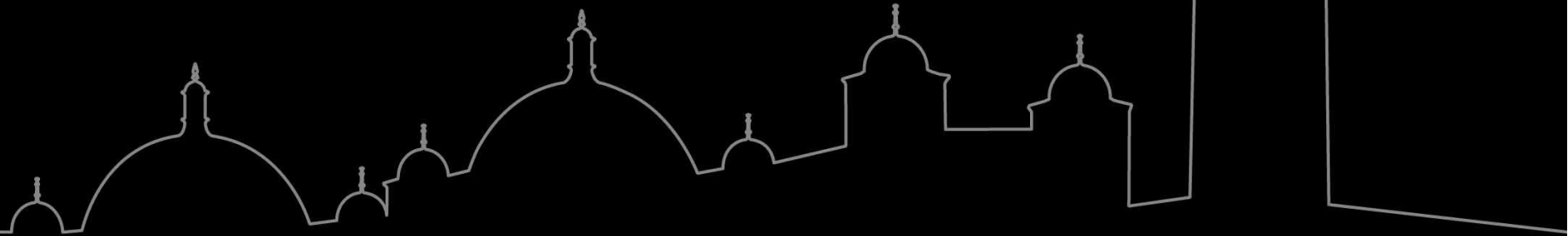


Thin, Diced Dummy Silicon (Delivered from CERN to B'ham) Removing from the GelPaks

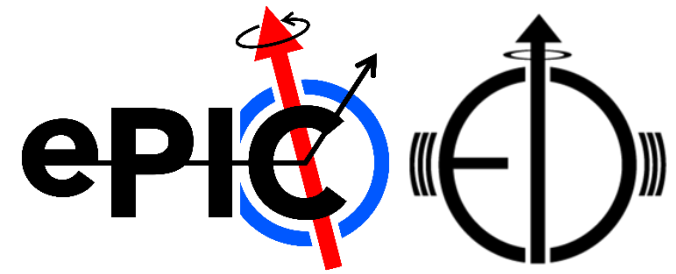
James Glover

EIC-UK WP1 meeting

Wed, 13th Aug 2025



Dummy silicon for ePIC SVT

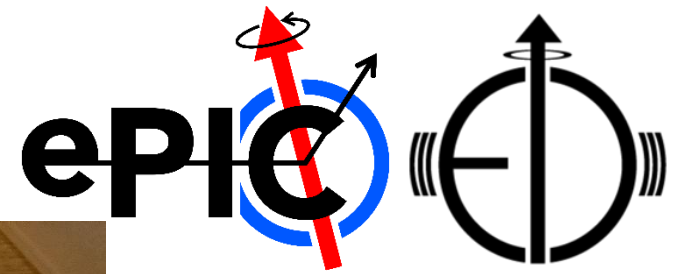


- Prepared, thinned and diced by DISCO.
- Delivered as full wafers with adhesive foil (to hold chips in place).
- Chips removed from backing foils at CERN, as [reported by Georg Viehhauser](#) @ SVT general meeting (13th May '25).
- Samples prepared for SVT IB, OB and Discs.
- Only OB samples and off-cuts shipped to UK.
 - 5RSU_LAS and 6RSU_LAS.
- A mixture of shipping containers trialled.
 - Membrane boxes (preferred by CERN who don't ship via courier, no adhesive).
 - GelPaks (Good experience from ATLAS for international shipping but not trialled with 50 μm silicon, removal is a worry).

Detailed report given during
[10th June OB Module](#) meeting.



Opening the membrane boxes



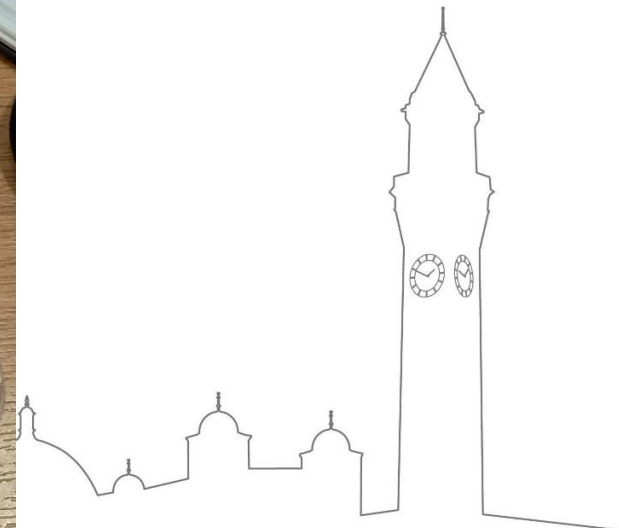
Silicon
appears to
have moved
during
shipment!



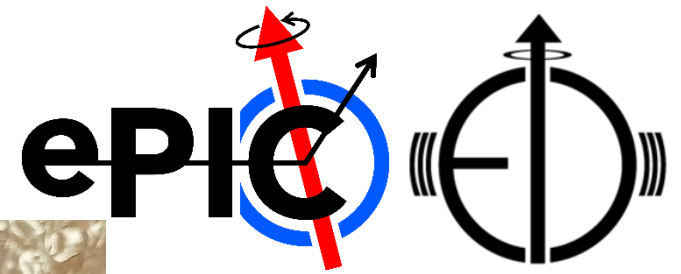
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13 Aug 2025

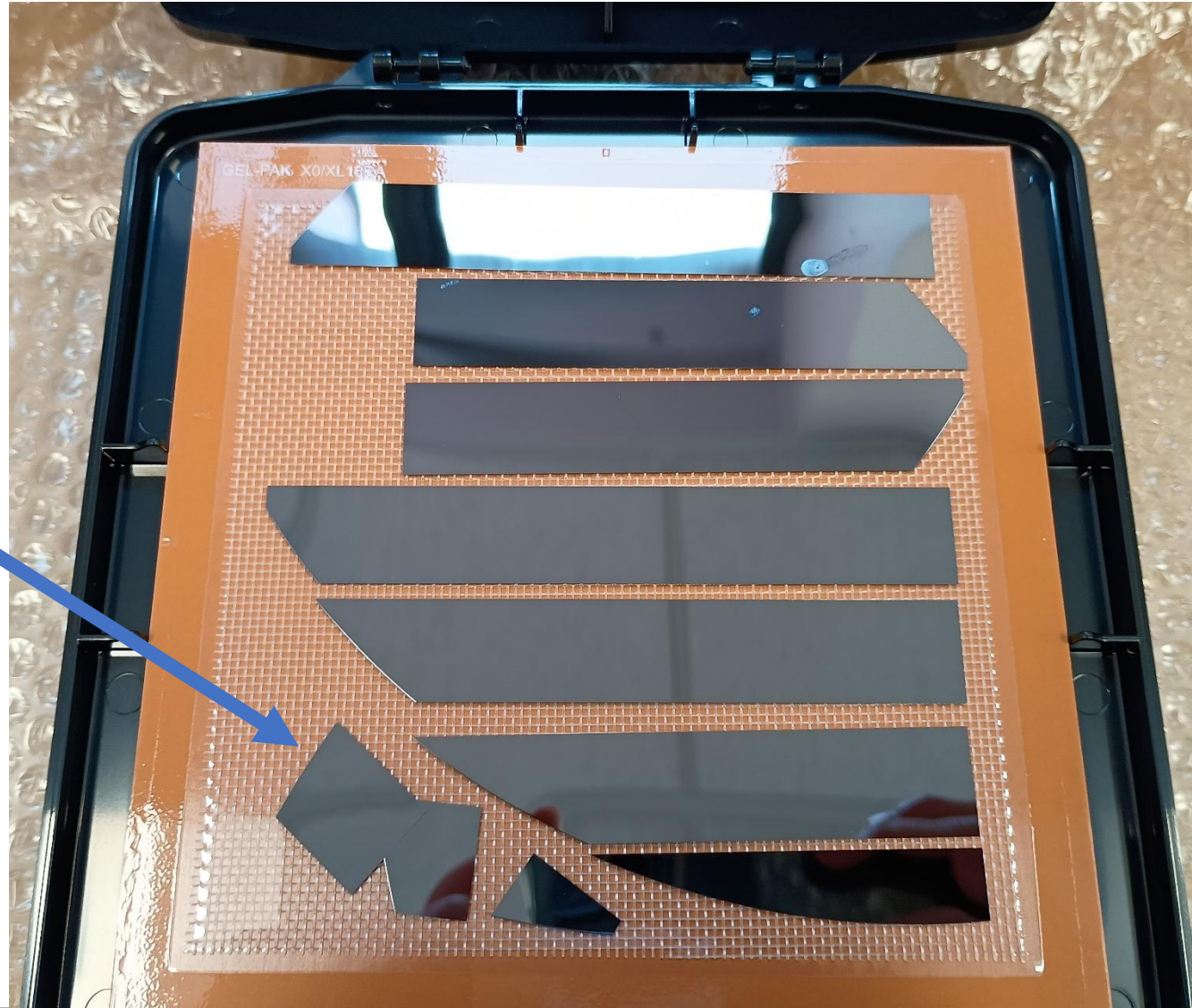
EIC-UK WP1



Opening the GelPaks



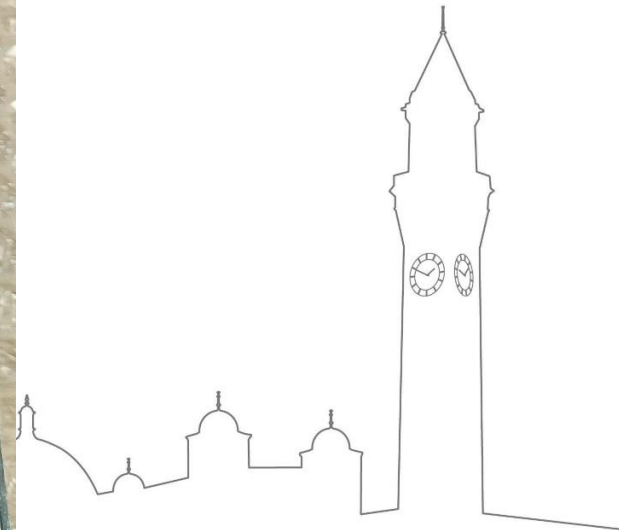
One small off-cut appears to have moved. Could this just have been misplaced?



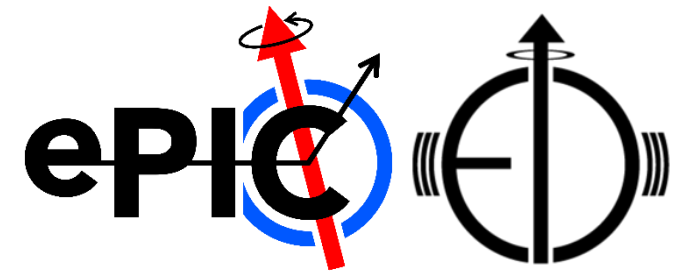
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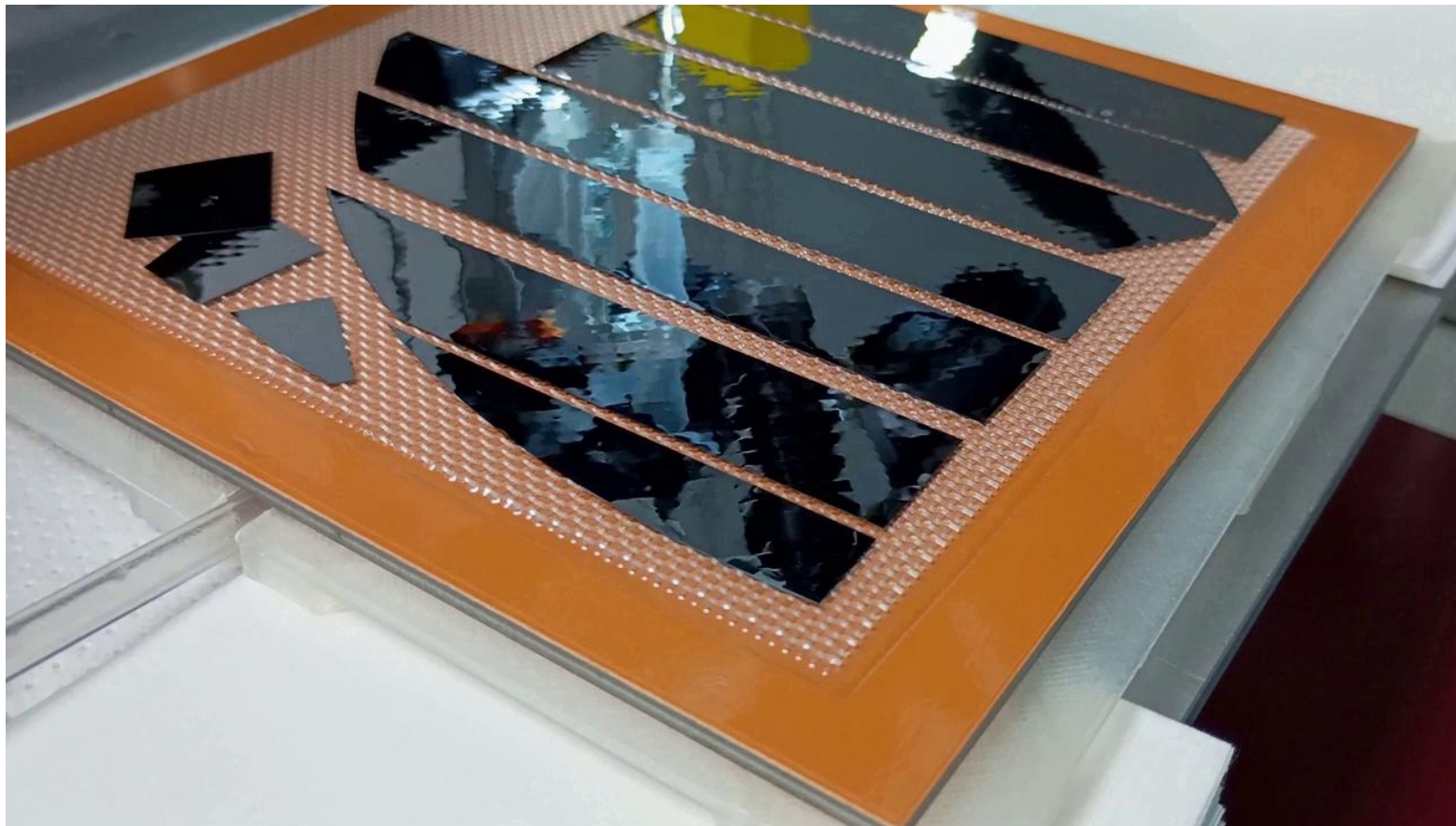
EIC-UK WP1



GelPak vacuuming



GelPak plate is placed into vacuum jig. Applying vacuum, sucks down the adhesive gel membrane to release the silicon (mostly).



Video speed slowed down by 16 times.

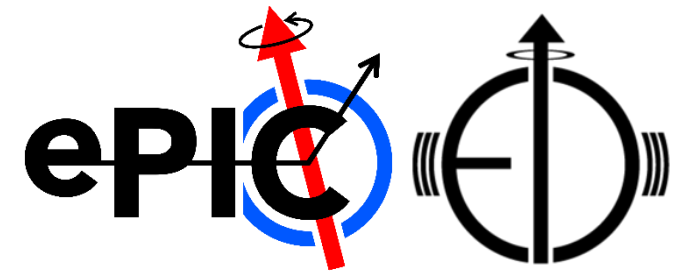


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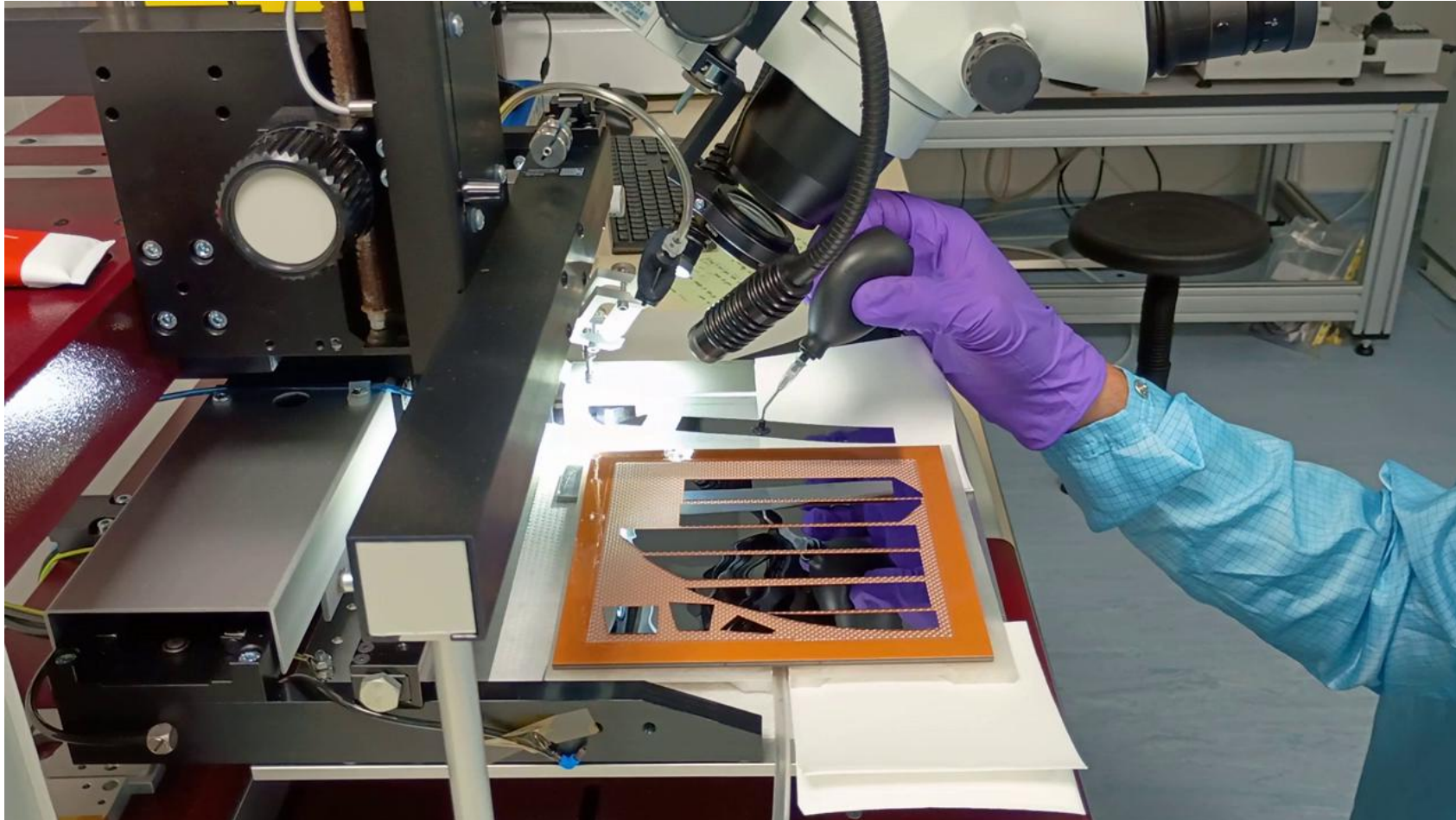
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GelPak – Hand pick-up tool



Initial trials done with a hand-held vacuum tool.



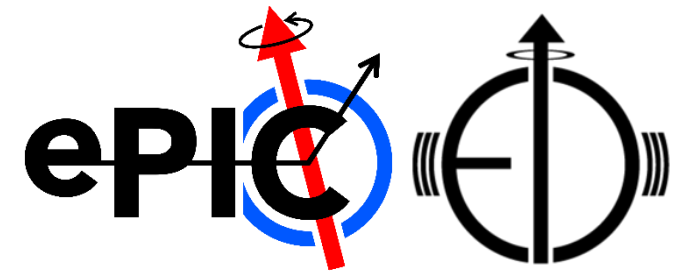
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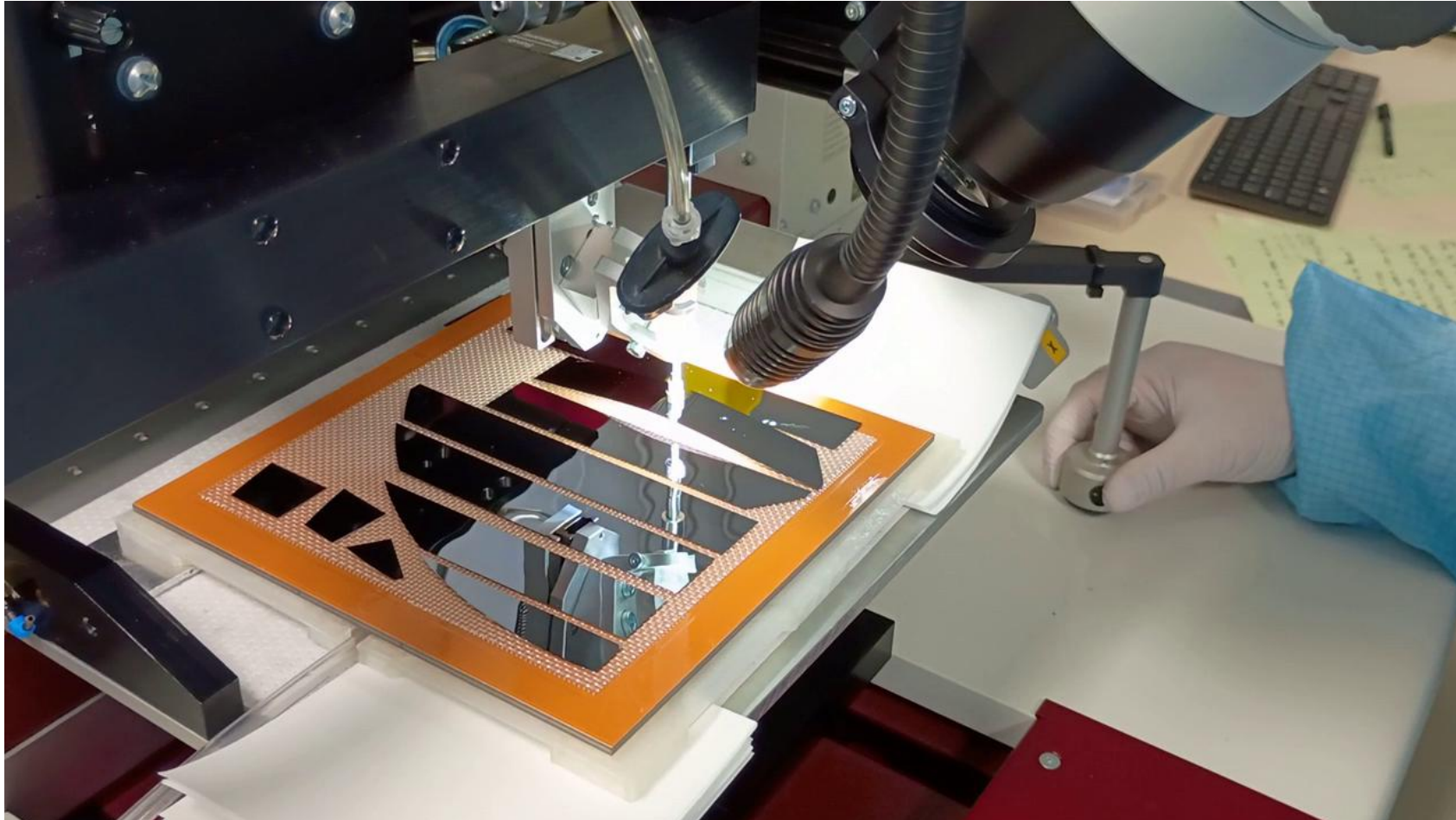
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5

GelPak – Manual pick and place



A manual pick and place was also trialled.



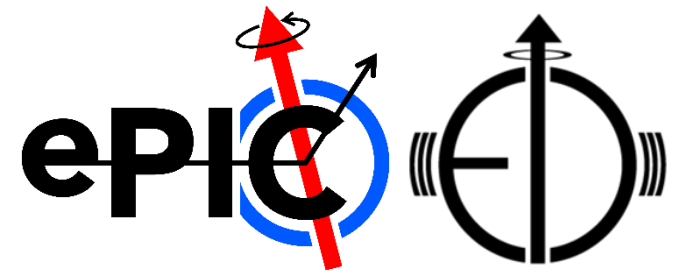
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13 Aug 2025

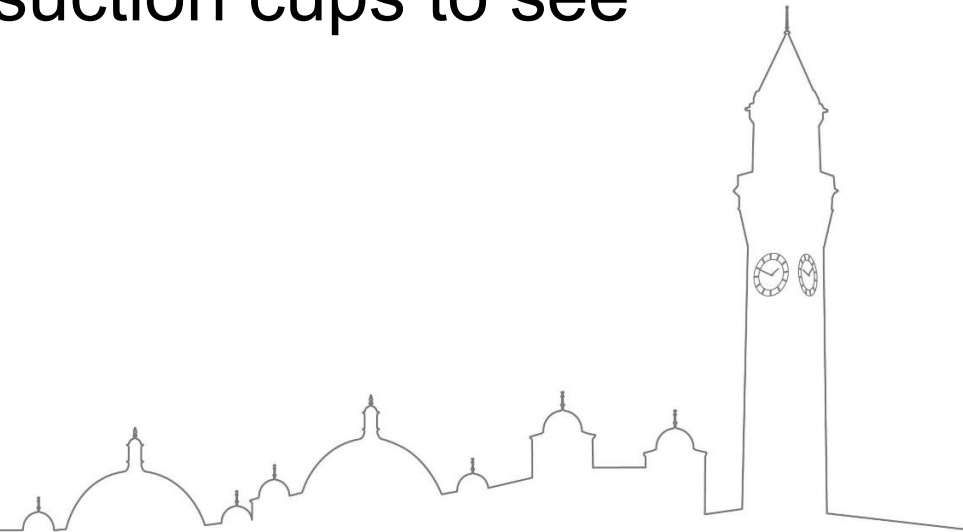
EIC-UK WP1

6

Summary

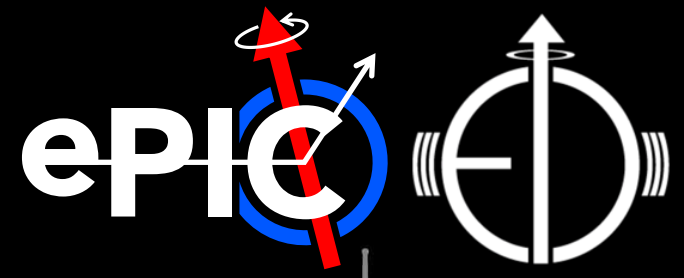


- Removal of 50 μm silicon from the GelPaks is achievable.
- Not damage to the silicon samples was noticed.
- A single suction cup based pick-up system is less than ideal.
 - Silicon want to adhere to the GelPak membrane at the edges.
 - Springboards when it is finally released.
- Looking to trial pick-up tools with multiple suction cups to see how much the silicon bends.



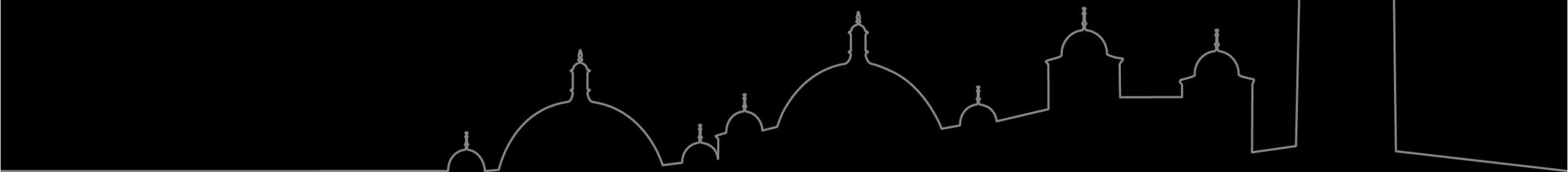


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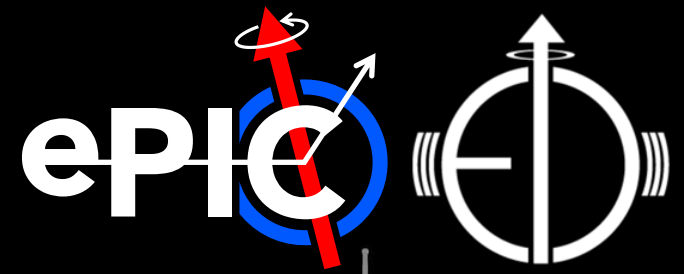
Thank you very much!

Any questions?

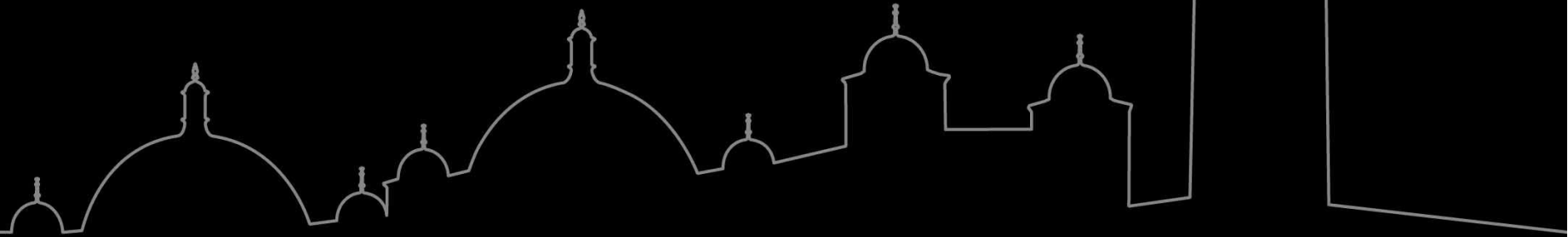




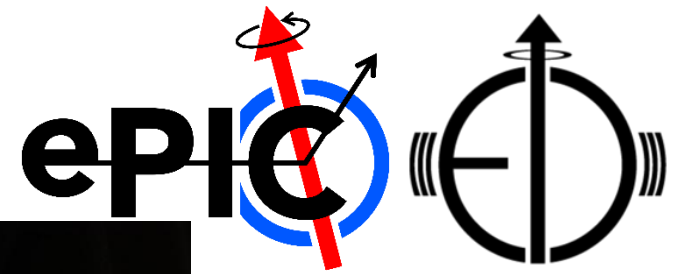
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Additional (support) slides



Package received



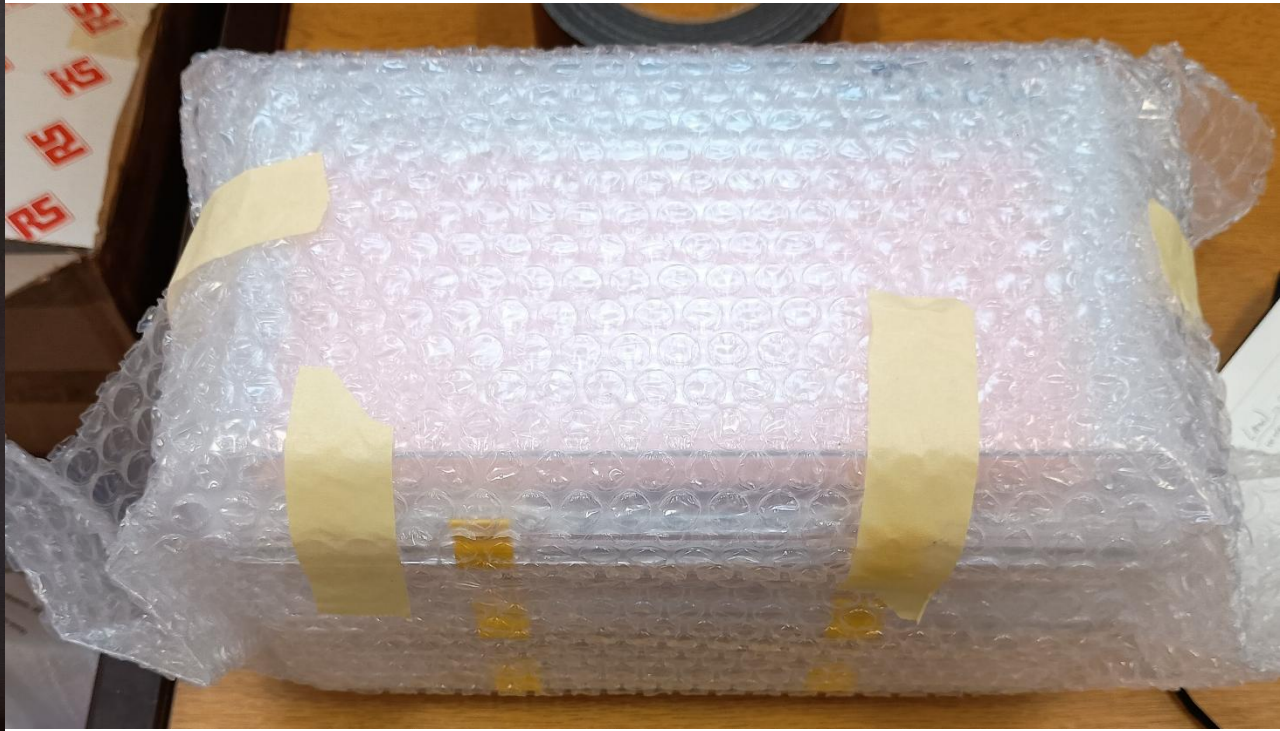
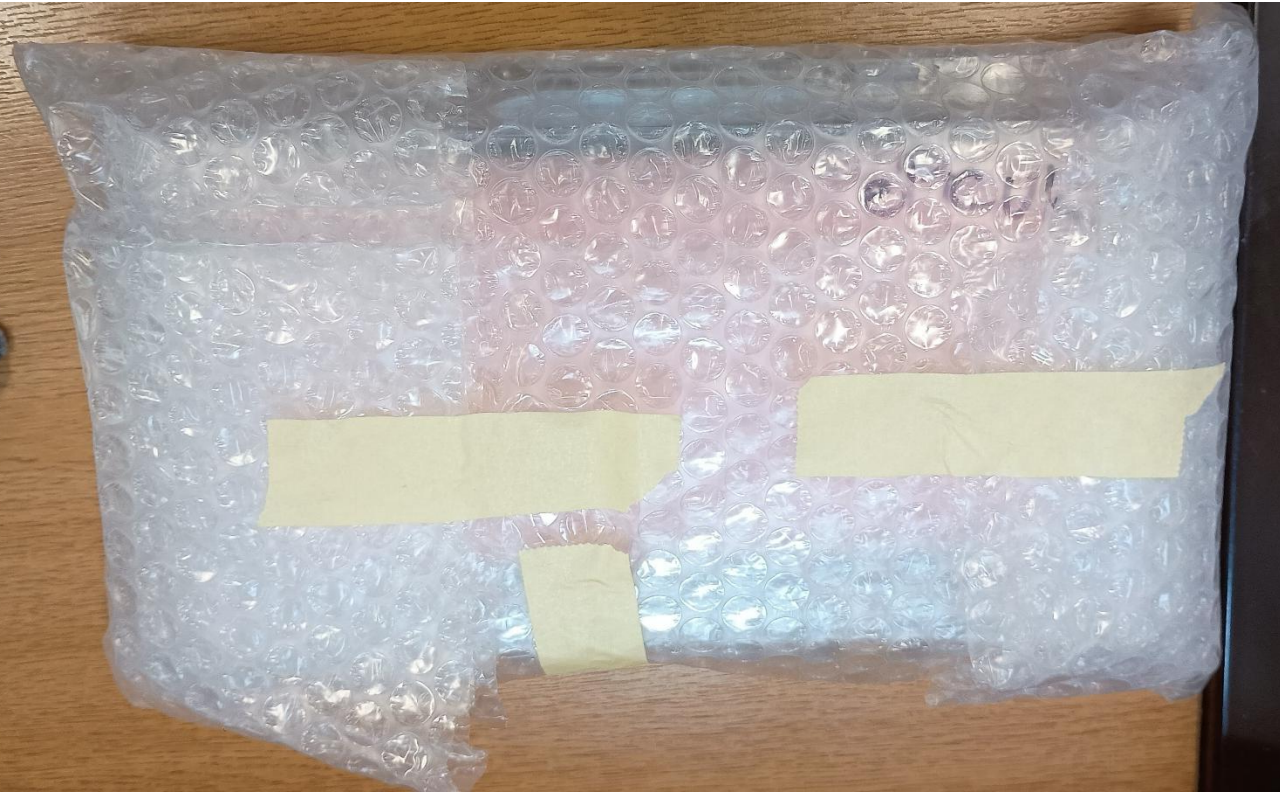
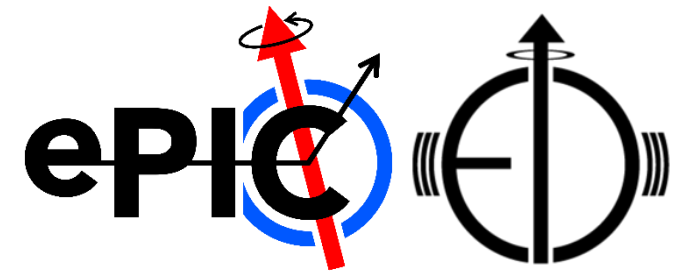
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10

Membrane boxes



Multiple bundles of boxes packed.



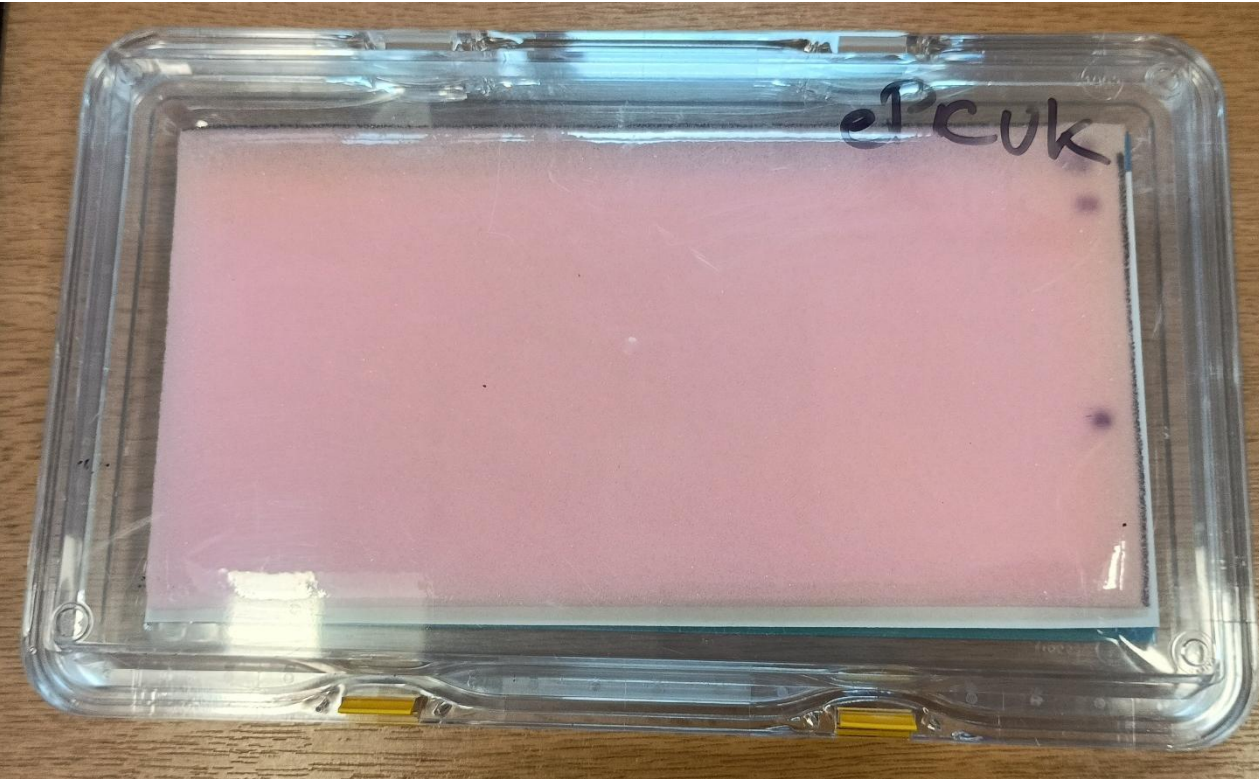
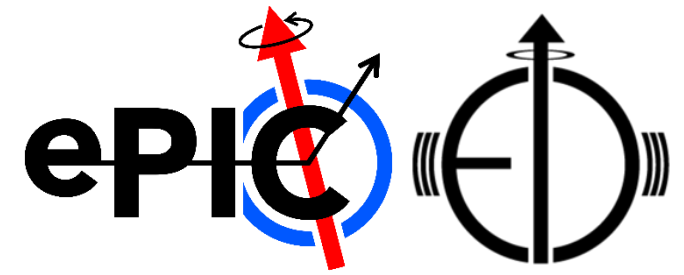
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11

Membrane boxes



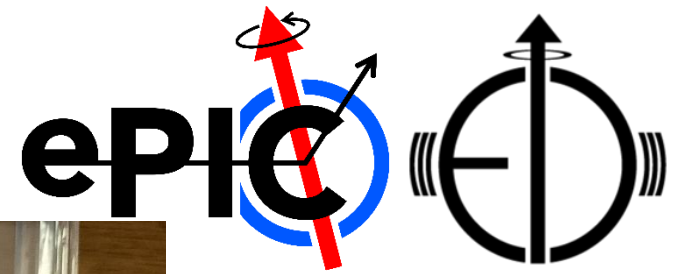
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12

Opening the membrane boxes



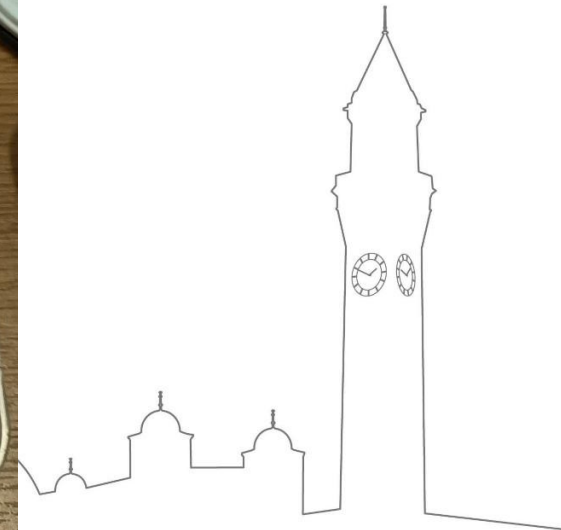
Layer of ESD safe foam and lint-free paper on the top of the silicon.



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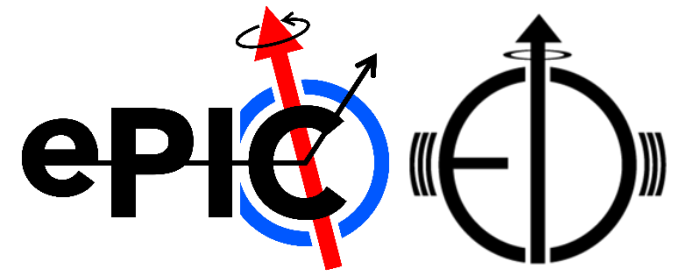
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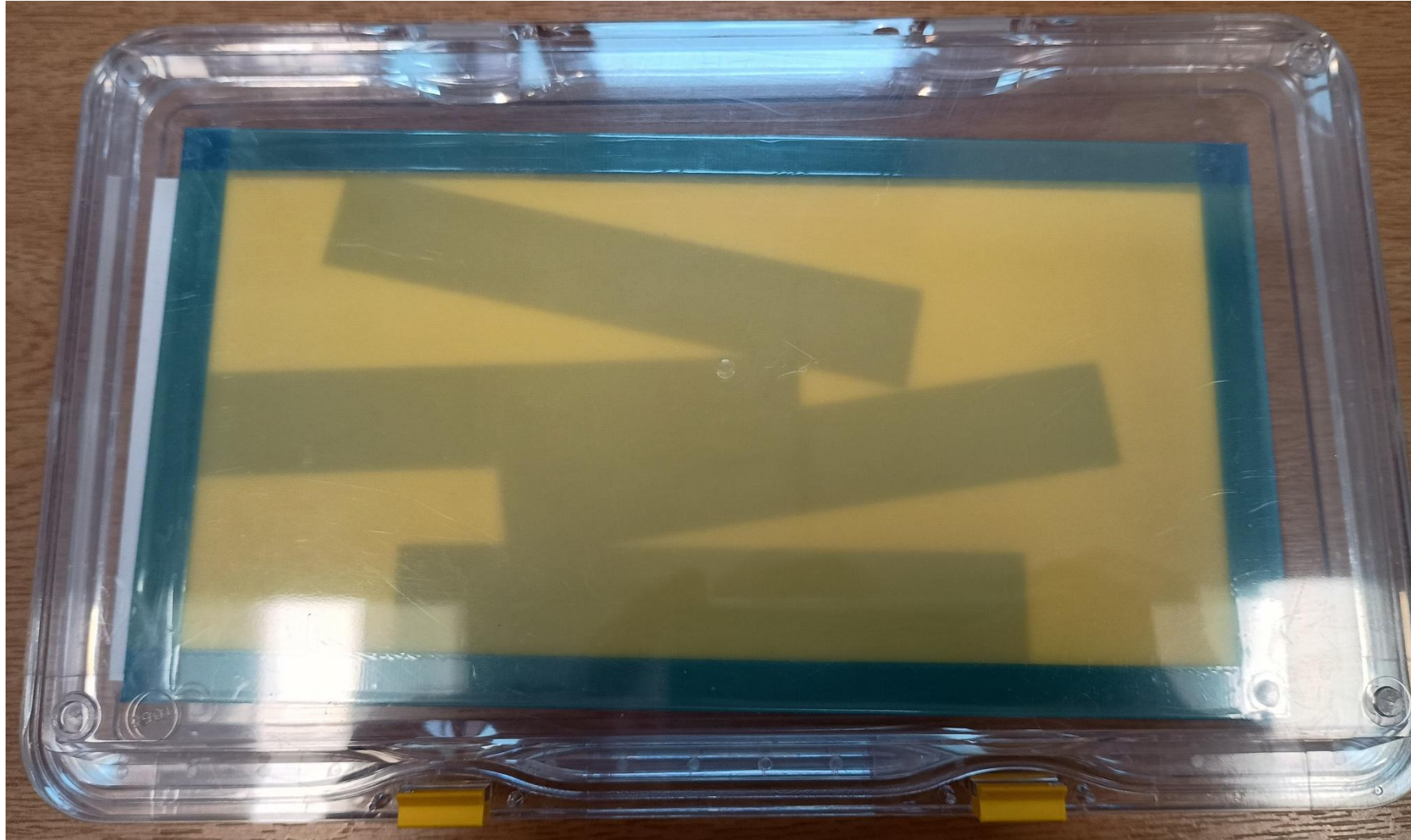


13

Sanity check



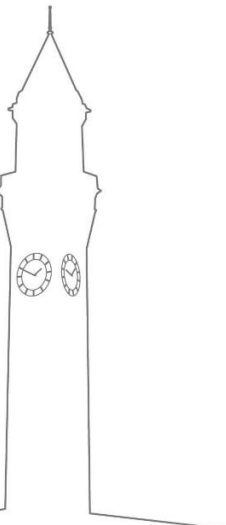
Confirmed that opening of box and/or removal of foam and paper did not move the silicon.



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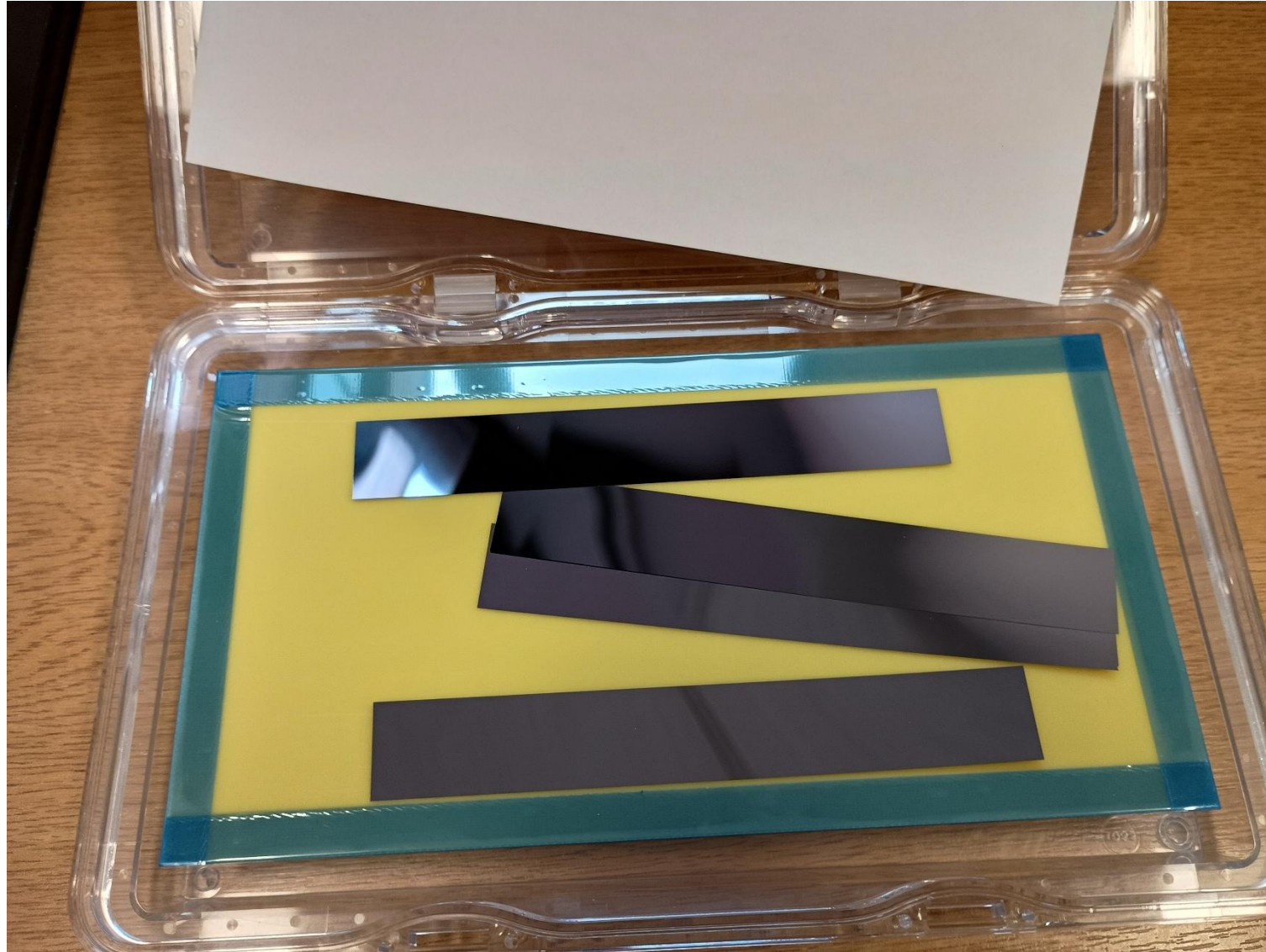
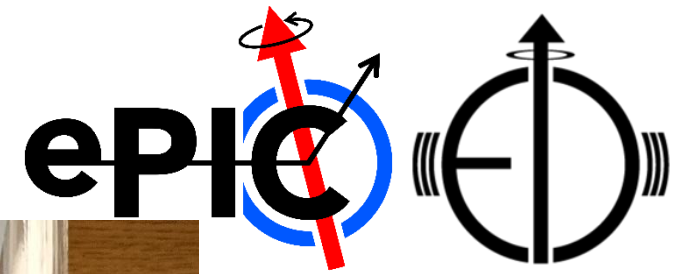
13 Aug 2025

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14

Membrane box #2



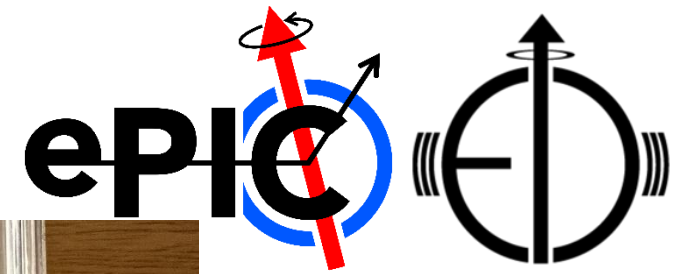
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15

Membrane box #3



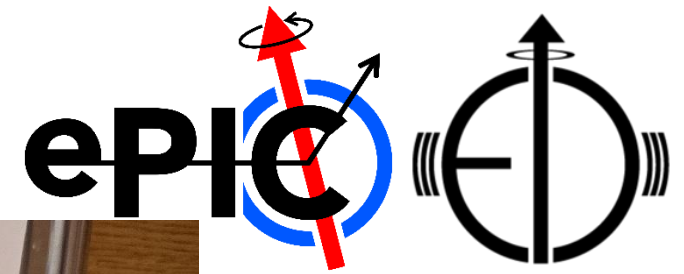
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16

Membrane box #4



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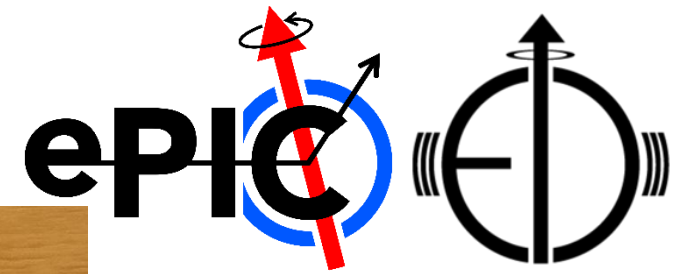
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17

GelPaks

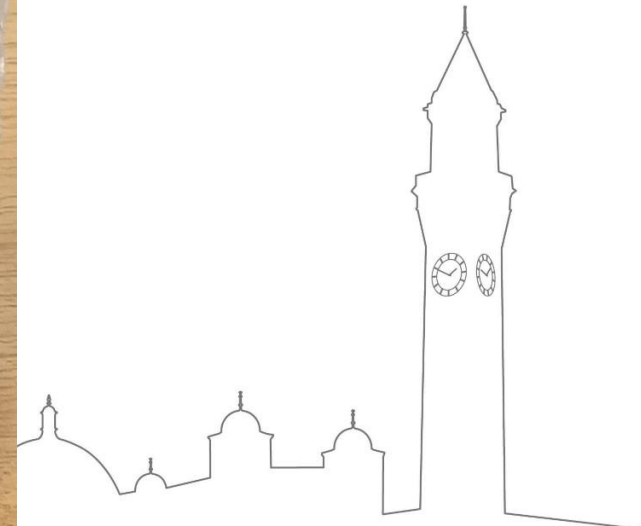
Two bundles received, one with 2 empty GelPaks and the other with off-cuts and edge pieces.



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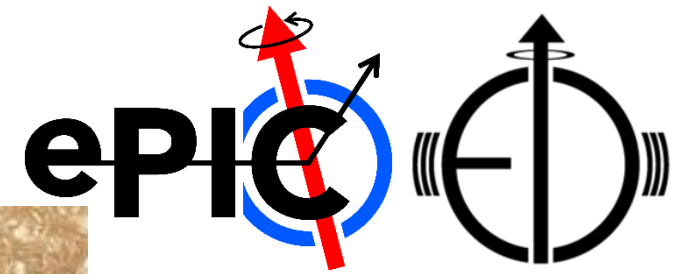
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18

GelPaks

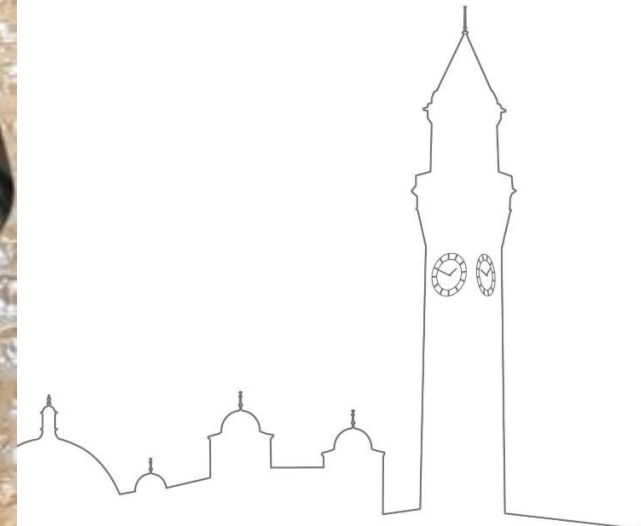
One bundles
of 4 GelPaks
received, 2
empty and 2
with off-cuts
and edge
pieces.



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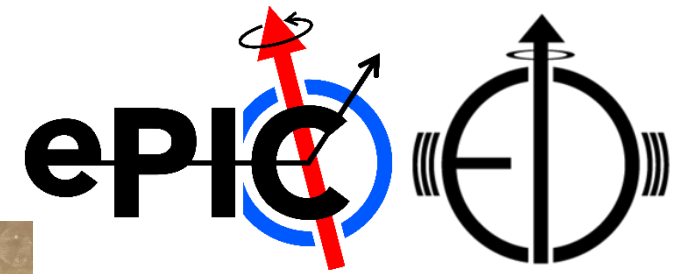
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19

GelPak #2



No issues seen!



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13 Aug 2025

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20