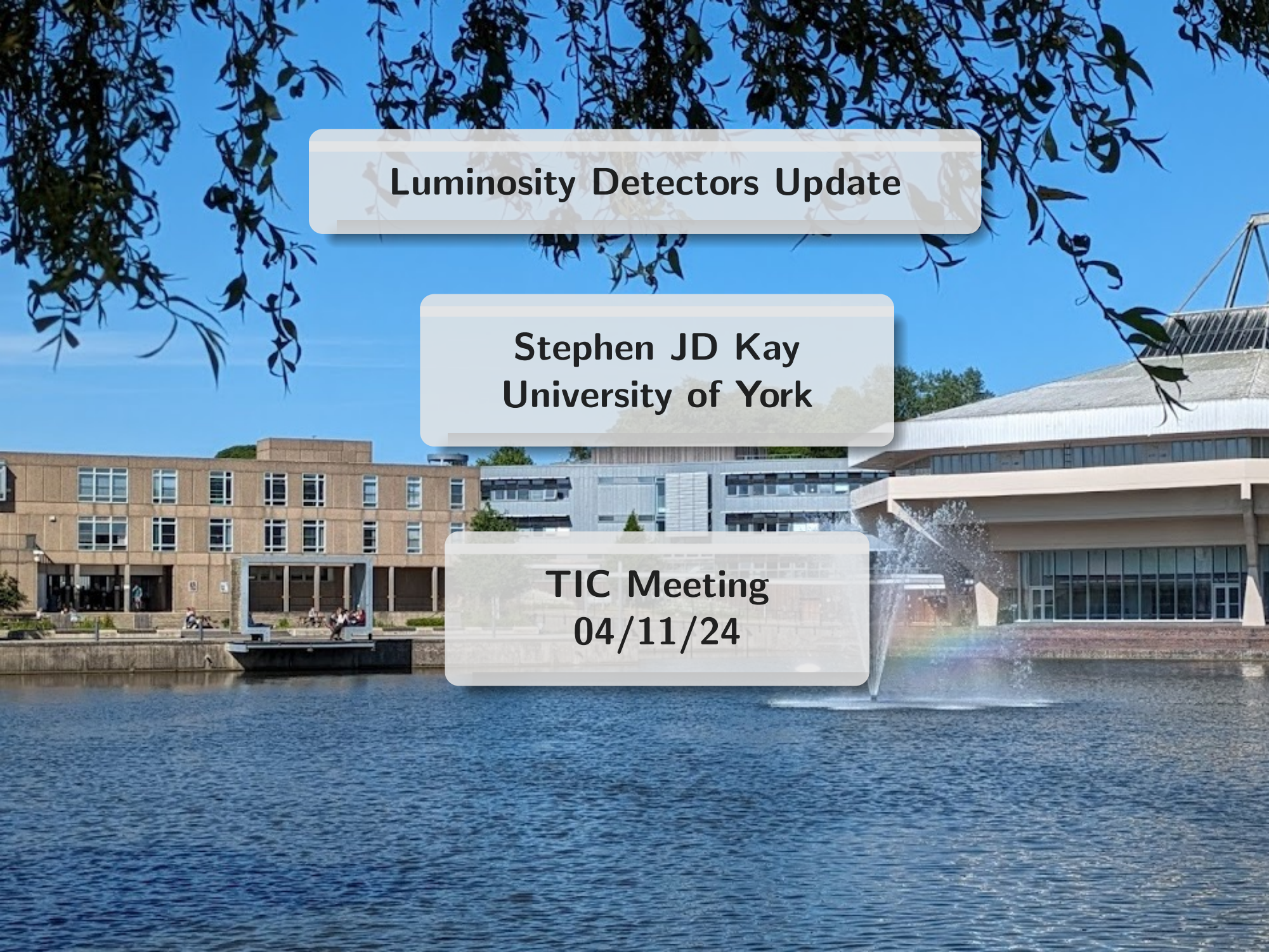

# Luminosity Detectors Update

Stephen JD Kay
University of York

TIC Meeting
04/11/24

# Pair Spec Construction - Meshes

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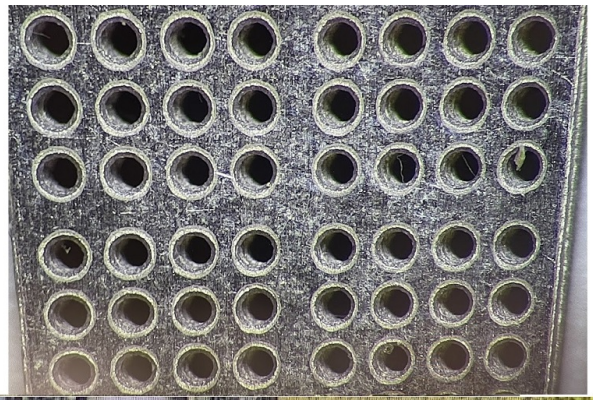

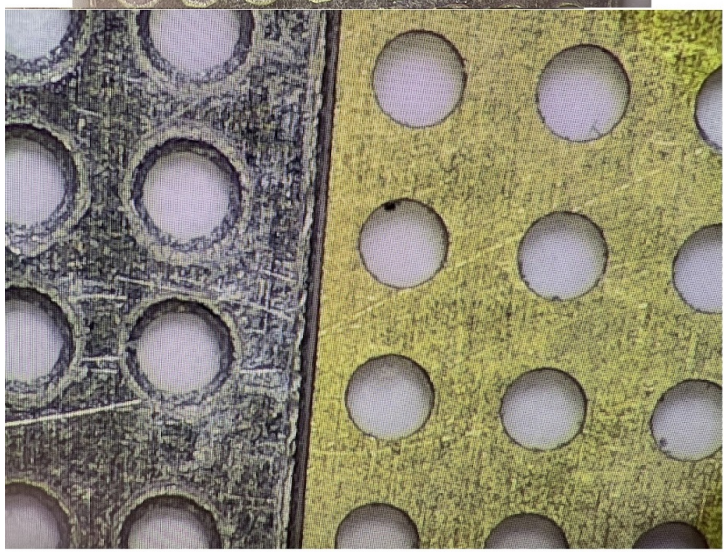

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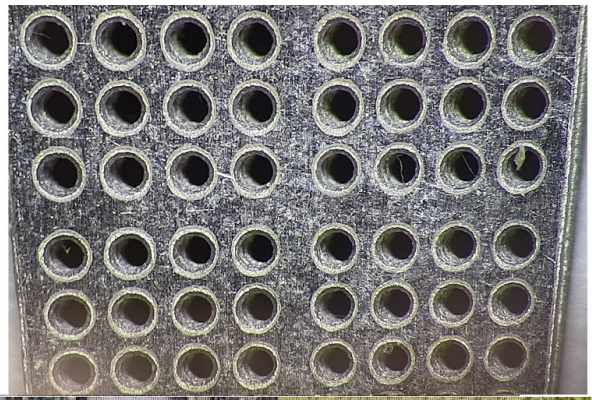
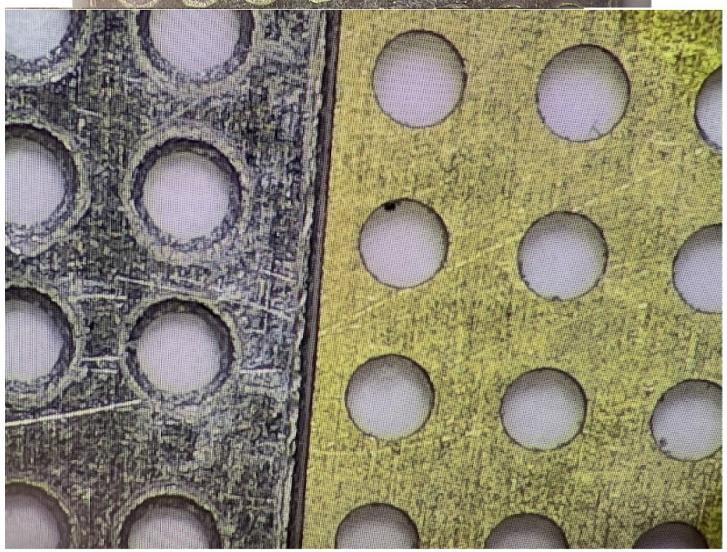
- But, good enough to work with!





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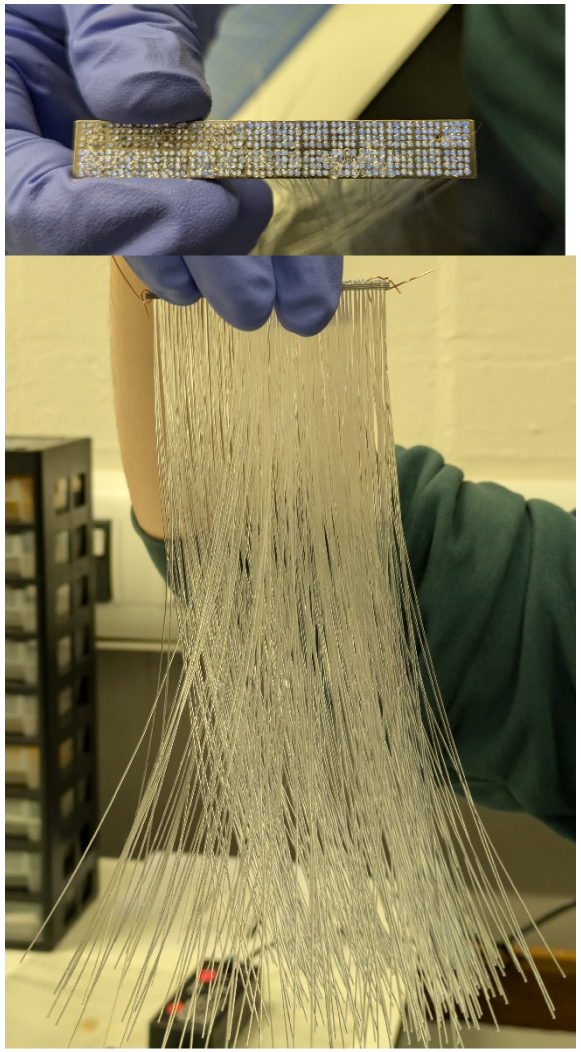

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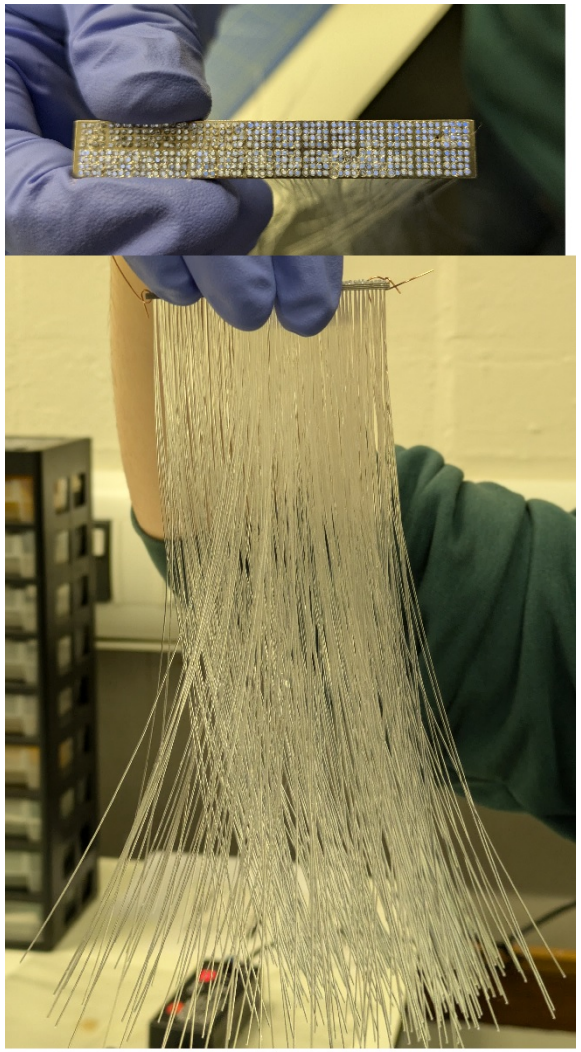
- End result looks good though!
- Next step is to separate meshes



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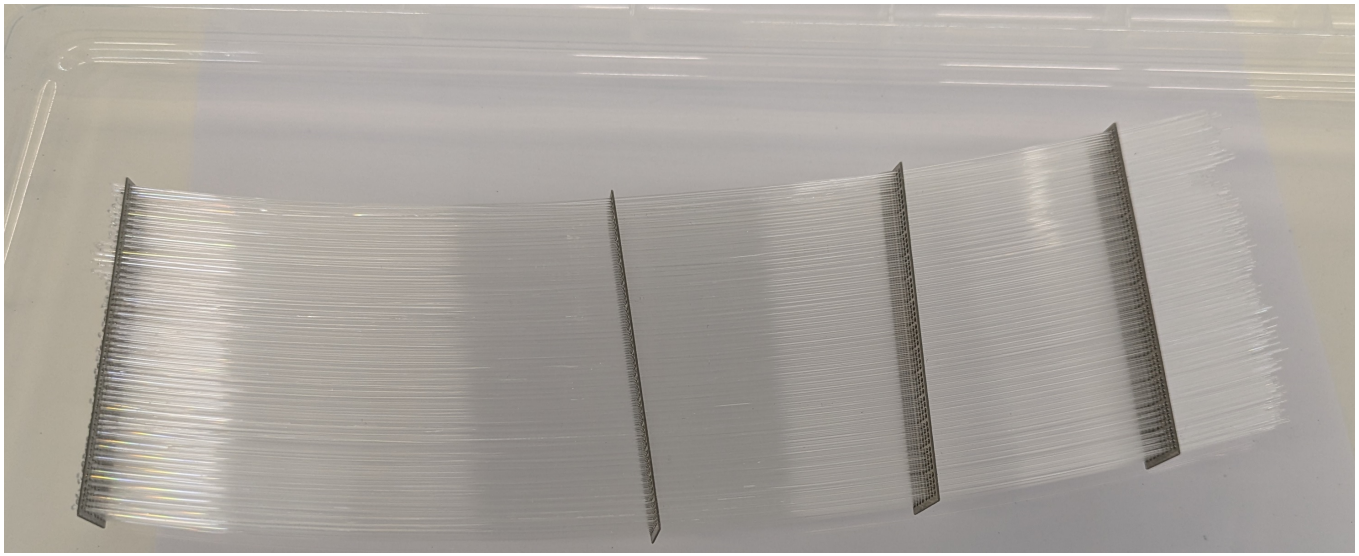

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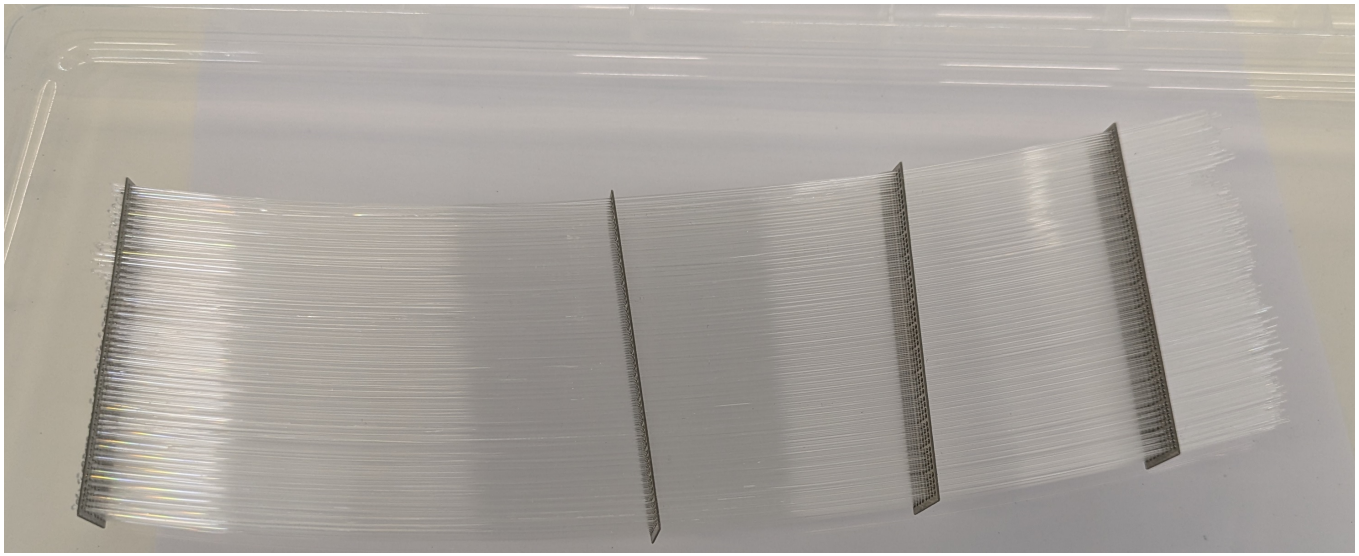

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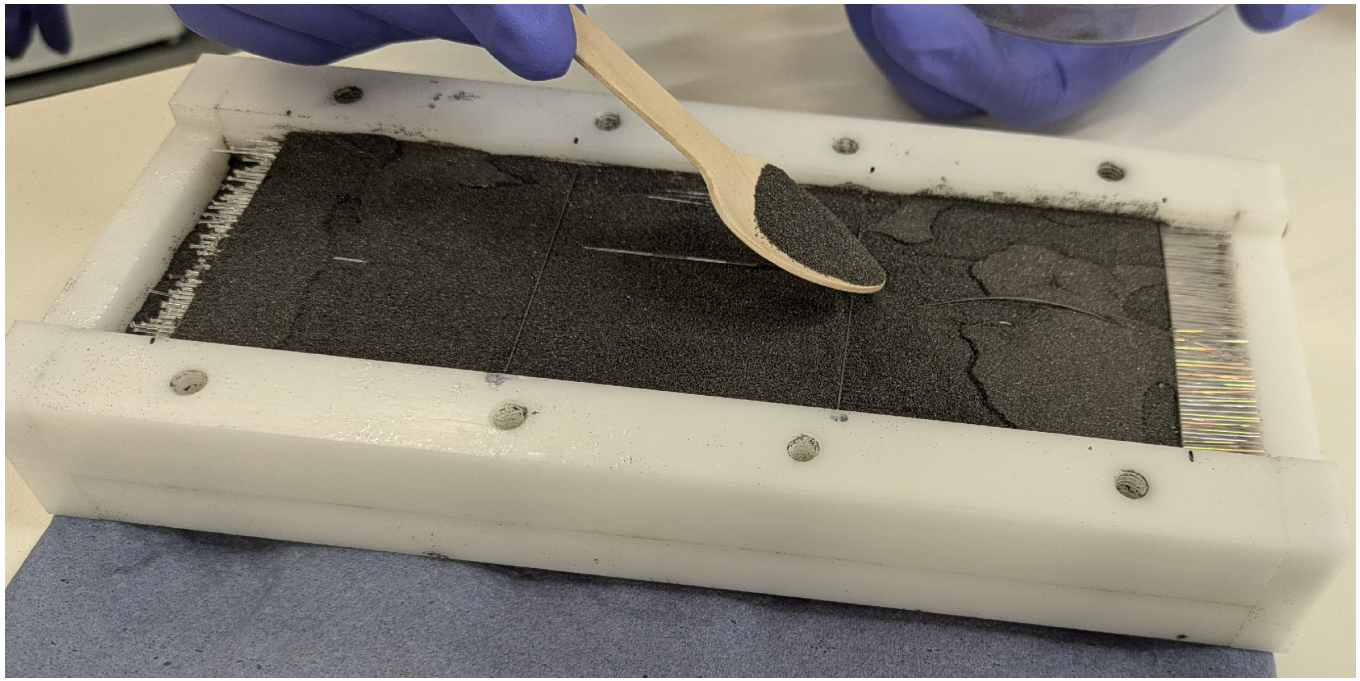
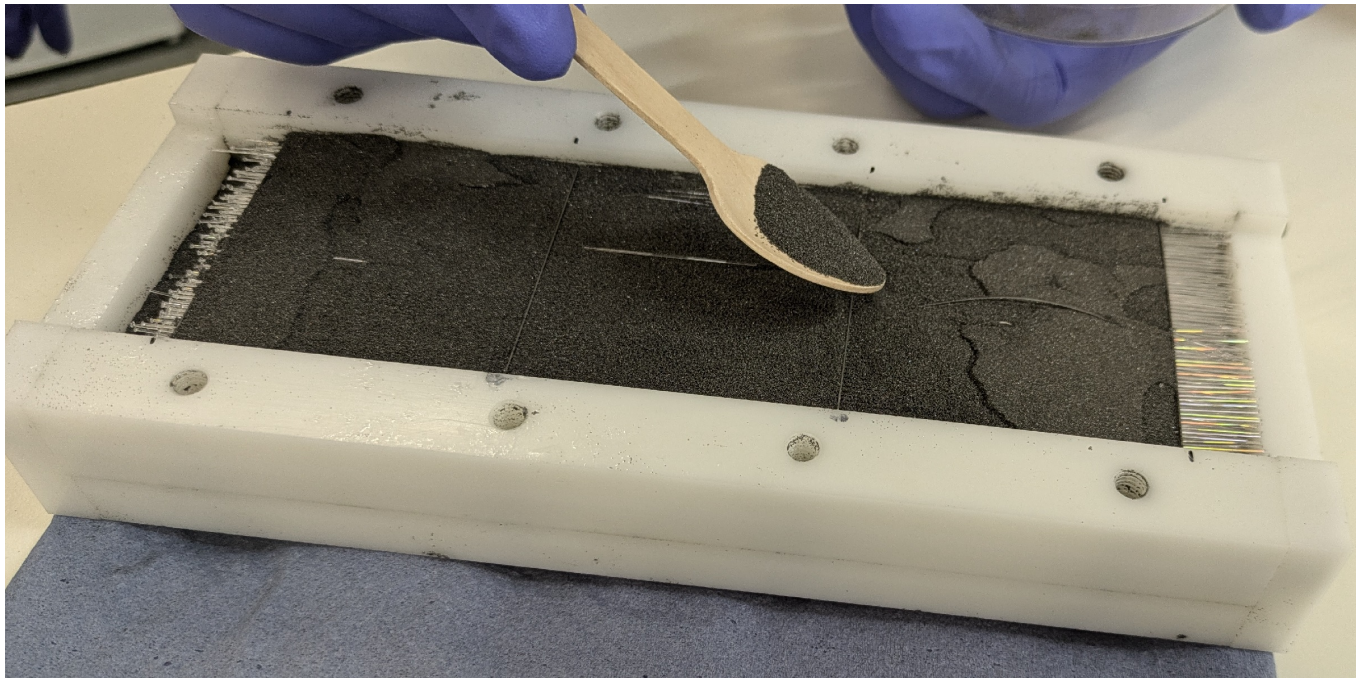


# Tungsten Pouring

- Amount of tungsten required per module roughly in line with estimates ($\sim 800$ g)
- Even steel meshes flexed slightly
  - Lost a few more fibres



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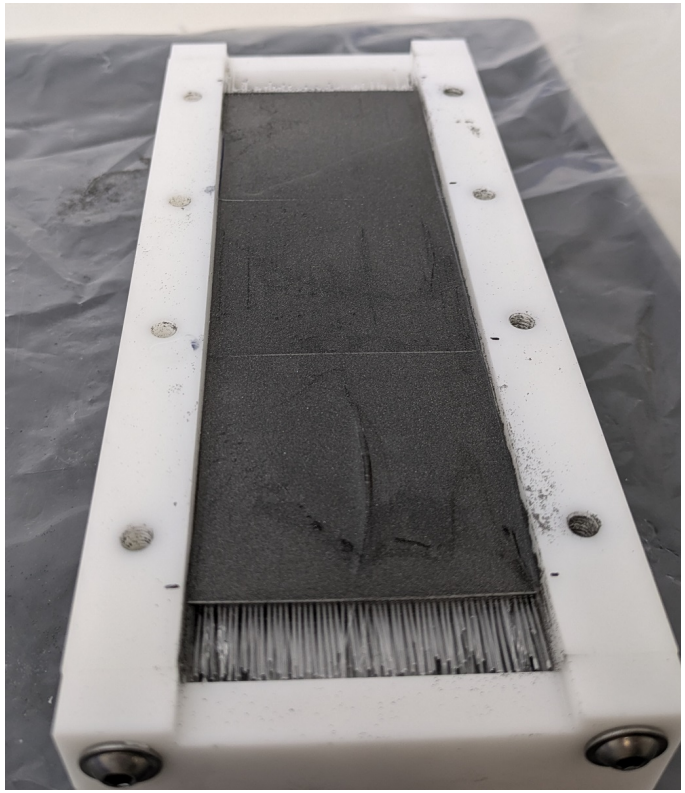
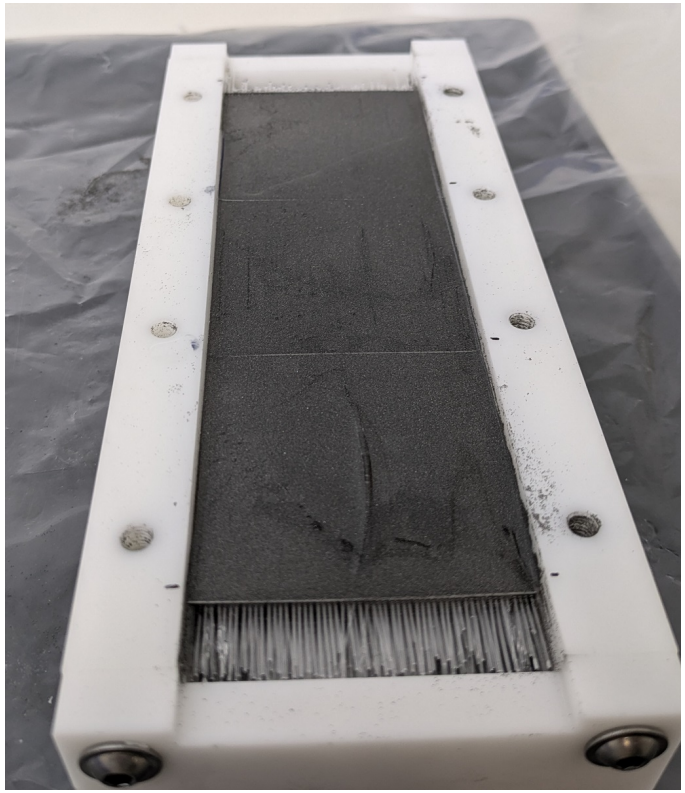


# Tungsten Pouring Part 2

- Once nearly full, placed on vibrating table
- Remaining tungsten added slowly
- Module then ready to add epoxy
- Epoxy mixed and poured slowly whilst mould vibrated on table
  - No pictures of that, sorry!
- $\sim 75\ \mathrm{ml}$ of epoxy used per module
- Cure in low temp oven



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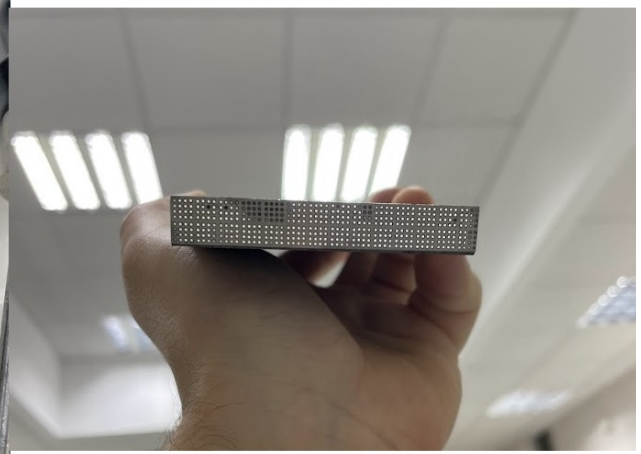

# "Here's one we made earlier!"

- Even with mesh issues, finished module came out nicely
- Removable from mould quite easily
- Excess was machined off
- Eagle eyed viewers may have noticed the area of missing fibres

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  - Length/width consistent, meet design
  - Minor variations in thickness of module
    - Likely due to levelling of vibrating table/bench


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- Once readout board ready, will test in labs at York immediately
  - **May** be ready for testing in Mainz in early December

# TDR Updates

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- Need update on magnets section from BNL (?)
- Current focus is on prototype production
  - TDR being updated in parallel