

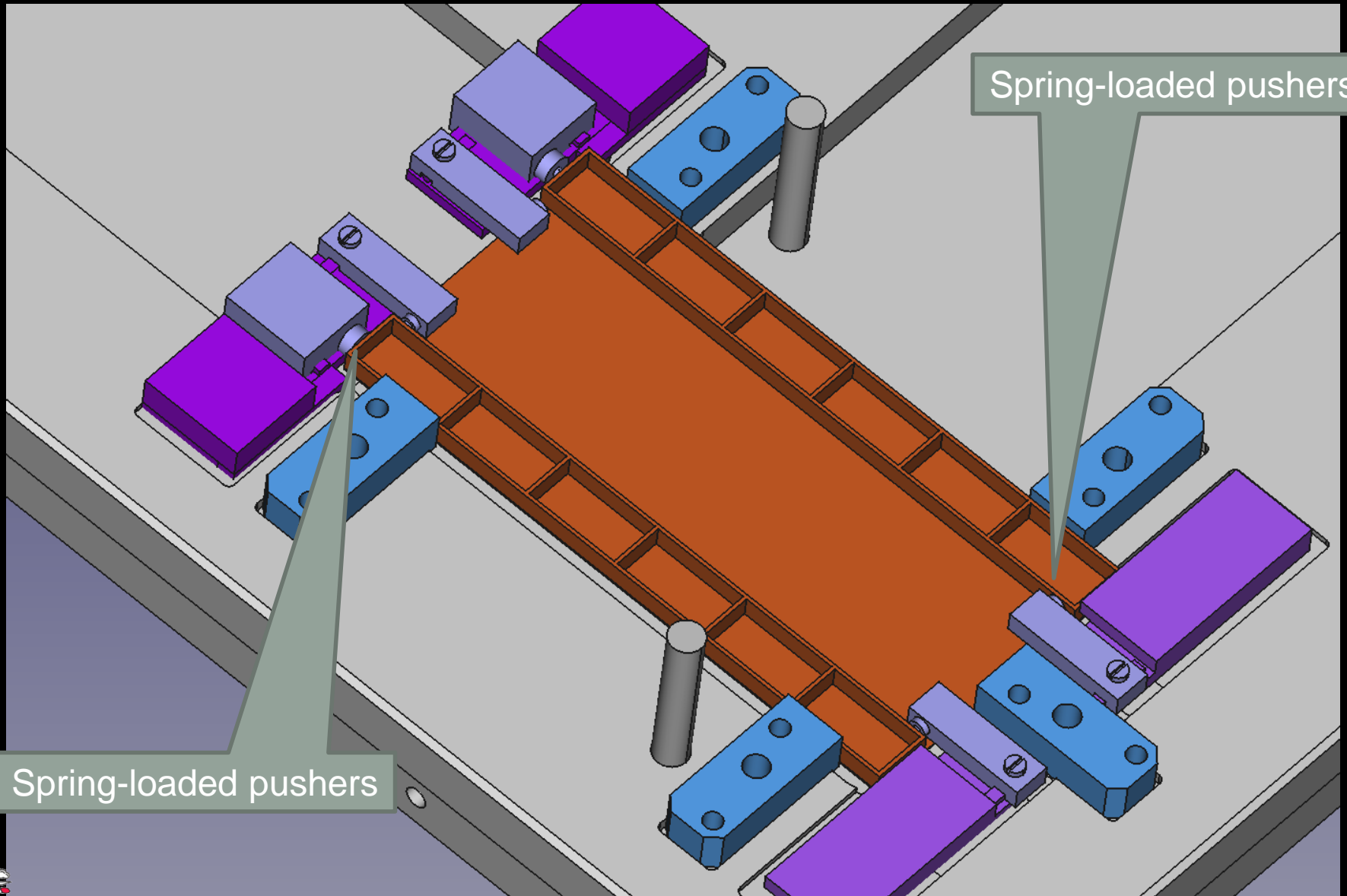
# PS module assembly

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*Brown University, Providence*



# improved spacer assembly jig – CAD model

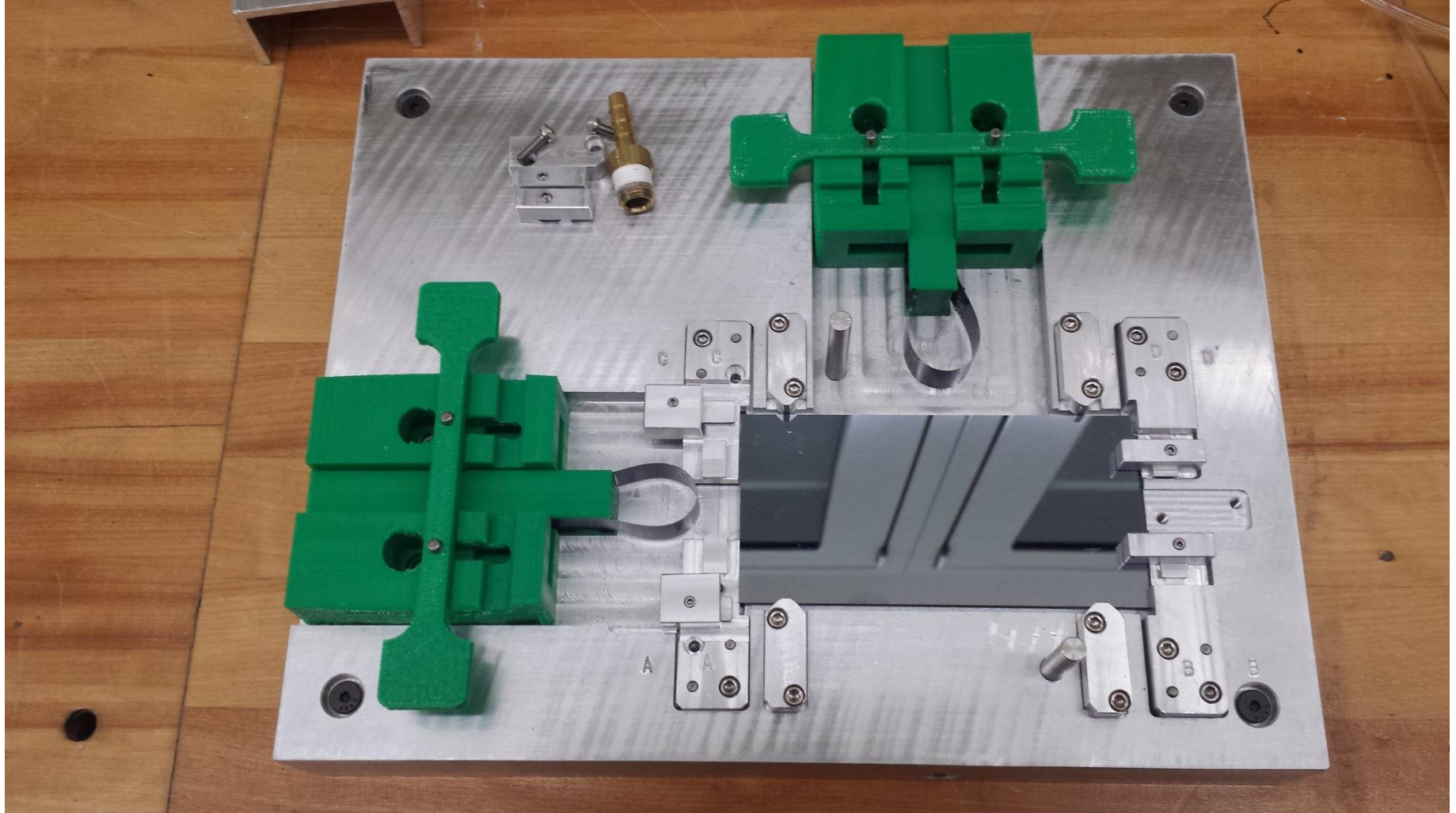


Spring-loaded pushers

Spring-loaded pushers

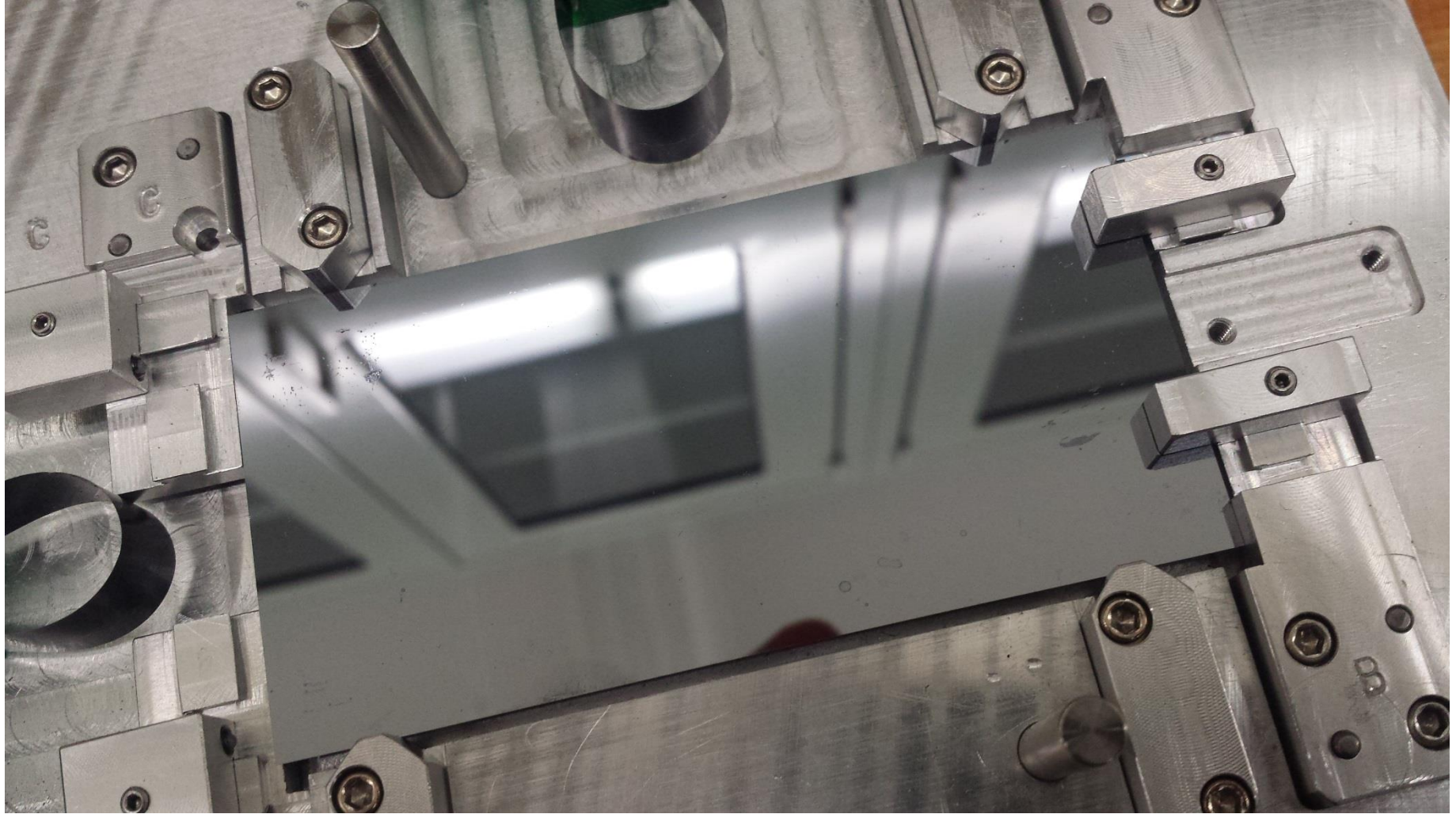


# The actual thing machined at Brown

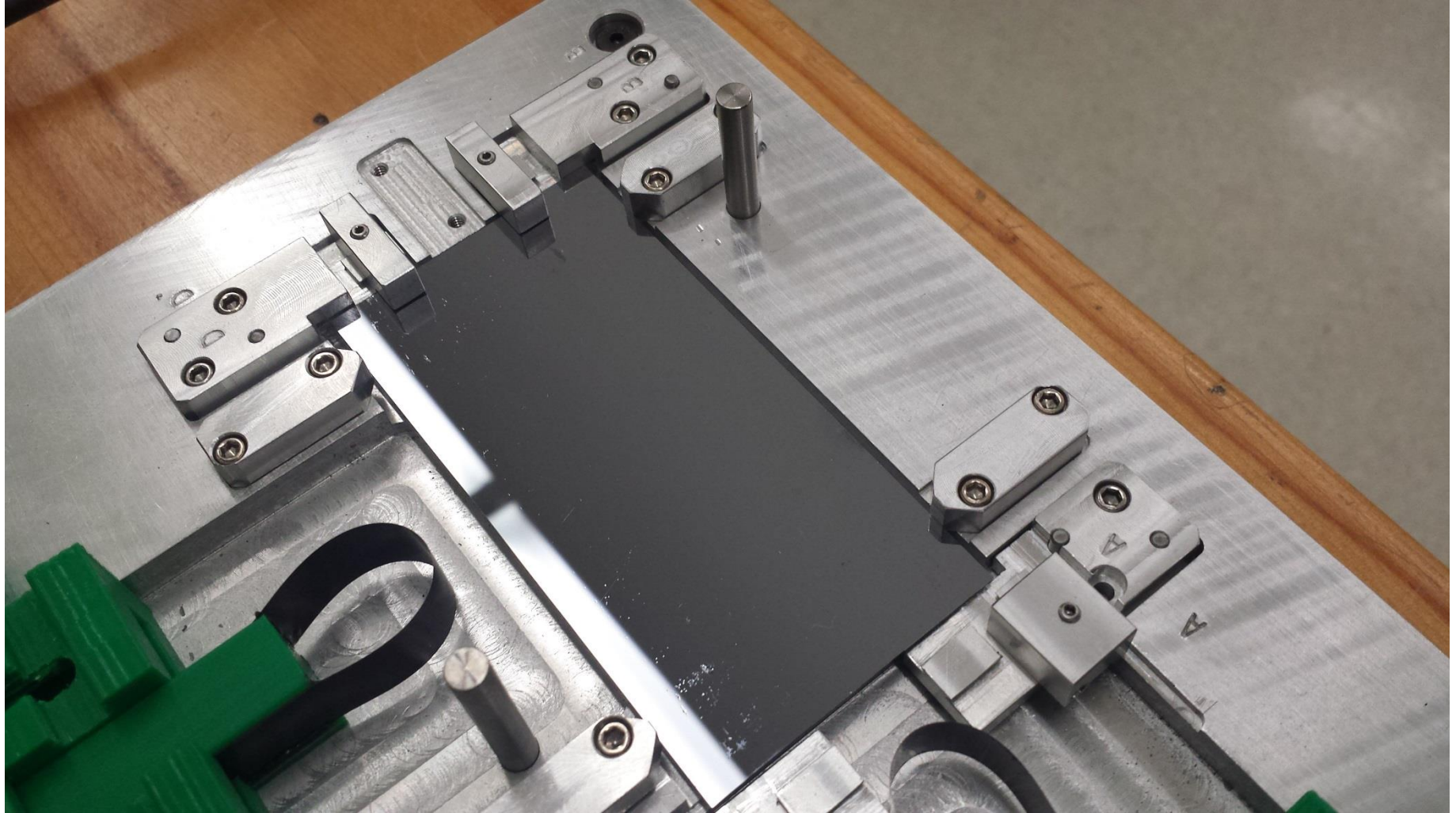




# The actual thing machined at Brown



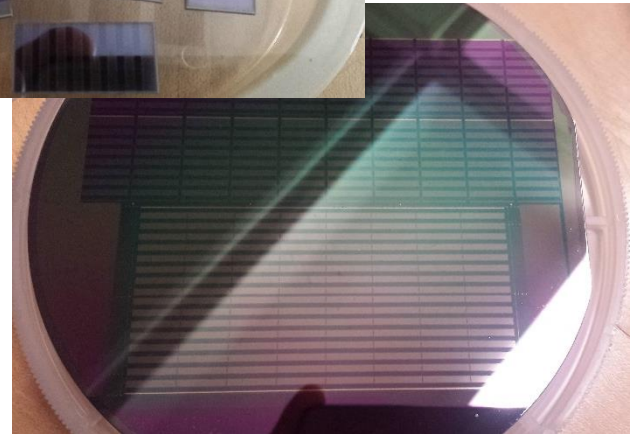
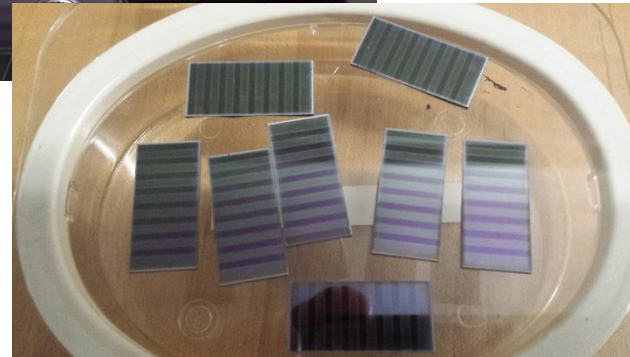
# The actual thing machined at Brown





# Silicon dummies

- 9 × blanks (for assembly tests)
- 1 × dummy P sensor
- 16 × diced dummy ROICs
- 4 × undiced wafer with dummy P sensor



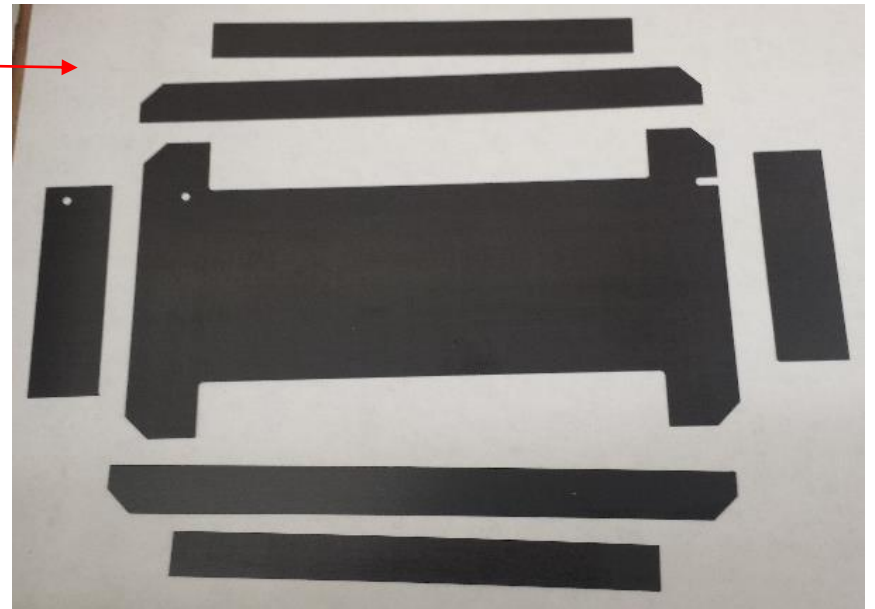
# CF plates

- Baseplates

- several  $\times$  baseplate (0.5 mm material) – made at Brown (all but 1 used up in glue tests)



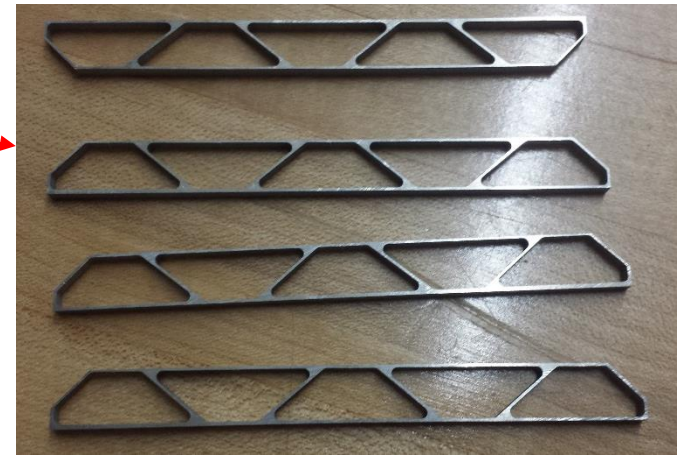
- 1  $\times$  set for PS module (0.2 mm) - Fermilab



- 2  $\times$  baseplate (0.2 mm) - CERN

# Spacers

- Sensor spacers
  - 1 (AICF, old design) Fermilab
  - 2 (AICF, old design) Brown – glued to Si
  - 4 (Al, old design) Brown
  - 4 (Al, new design) Brown
- Electronics hybrid spacers
  - 2 (AICF without shelf) Fermilab
  - 3 (AICF, with shelf) Brown
- Power hybrid spacers
  - 3 (AICF) Fermilab/Brown





# Conceptual design of jig for sensor stack

