

# Hydrogen Absorber

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## MICE Analysis Workshop

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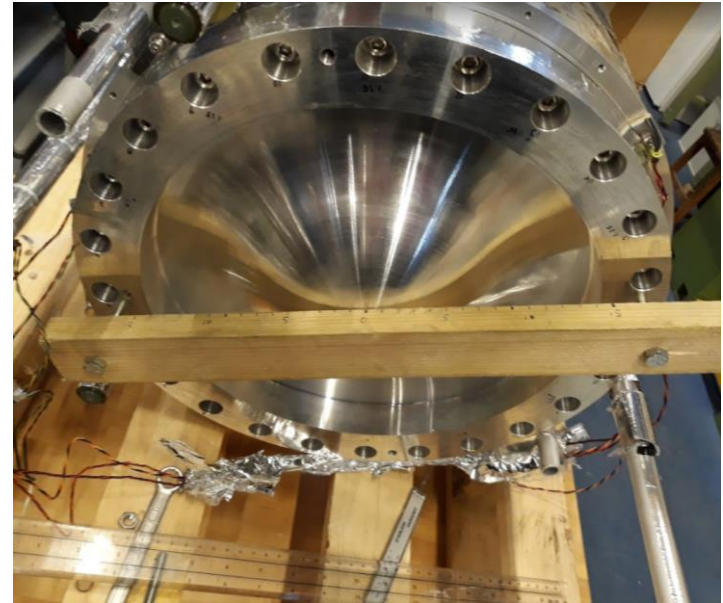
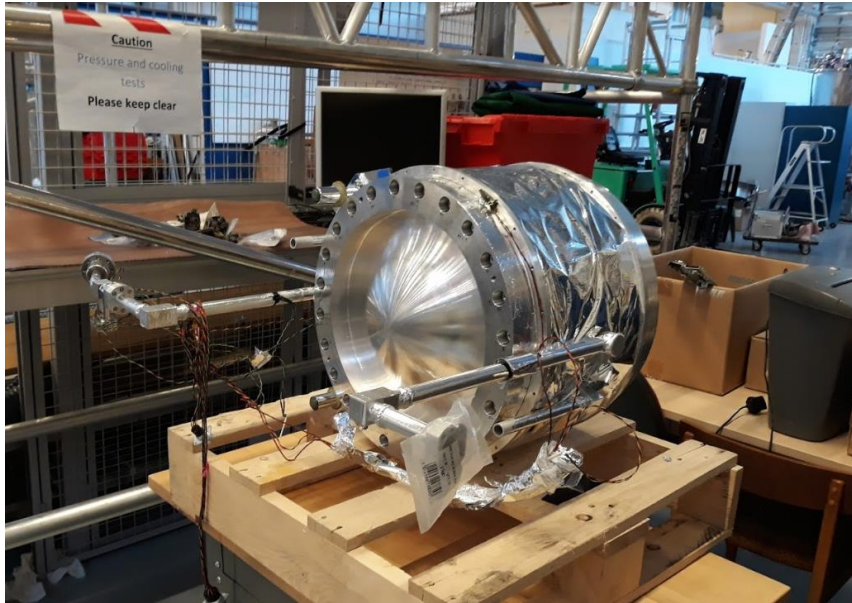
# Outline

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- Measurements of absorber.
  - Verify geometry description of hydrogen absorber in MAUS is accurate.
- Comparison with the geometry used in MAUS.
  - Look at shape of absorber windows.

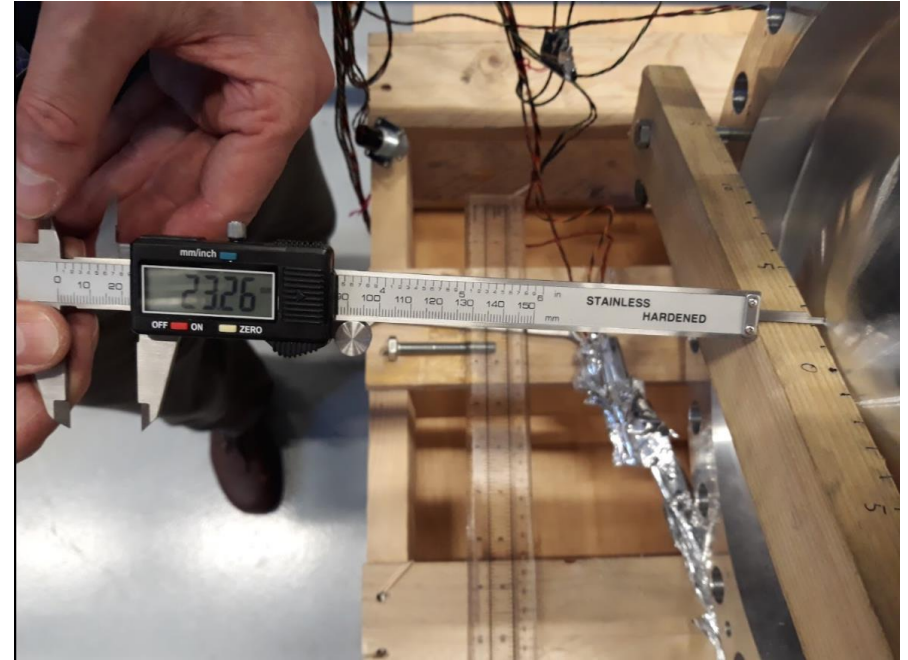
# Absorber measurements

- Absorber was removed from focus coil and measurements done on 23/1/18.
  - Many thanks to Josef.
- Make-shift measurement rig centred on the peak of the absorber window.
  - Aligned with the flange surface.

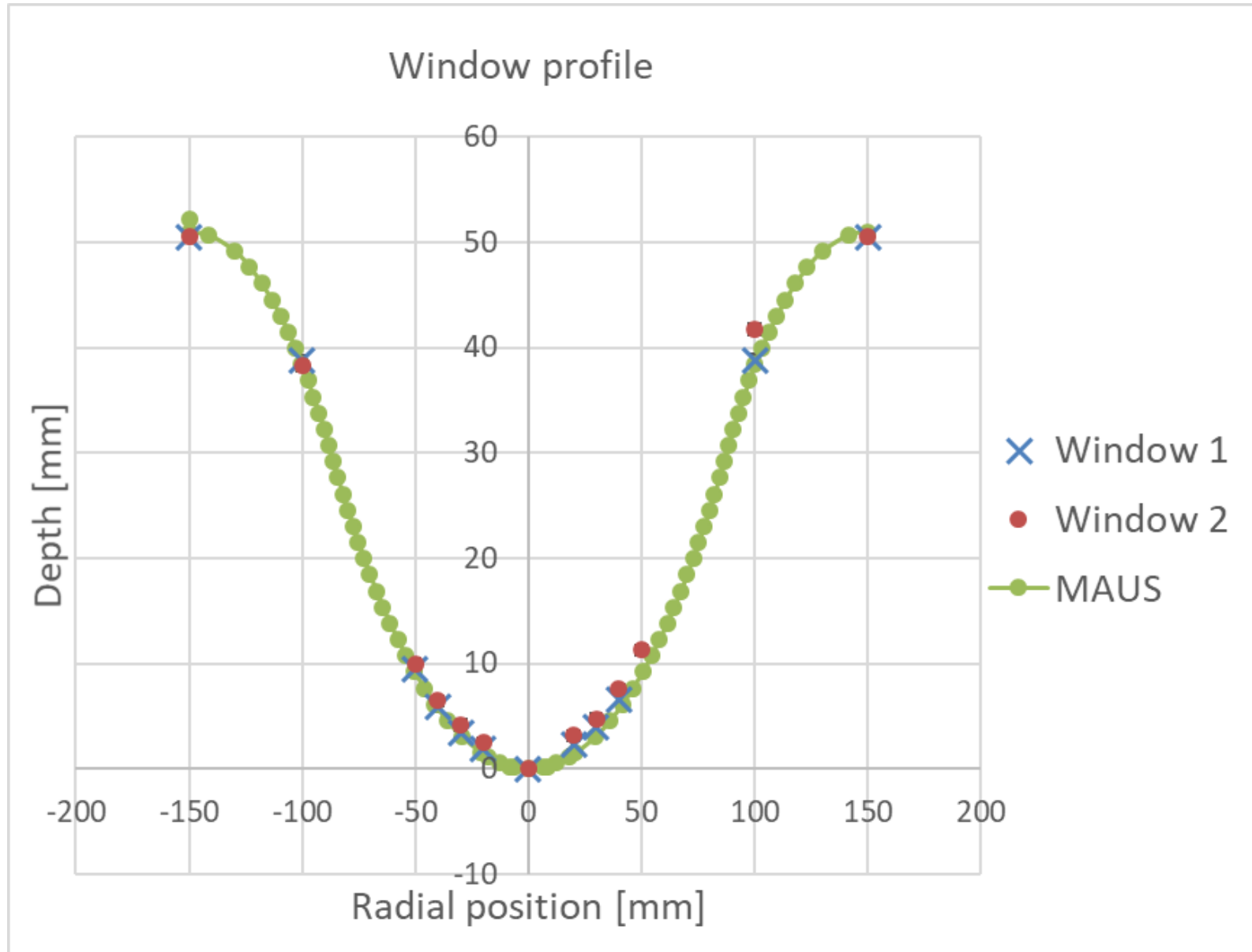


# Absorber measurements

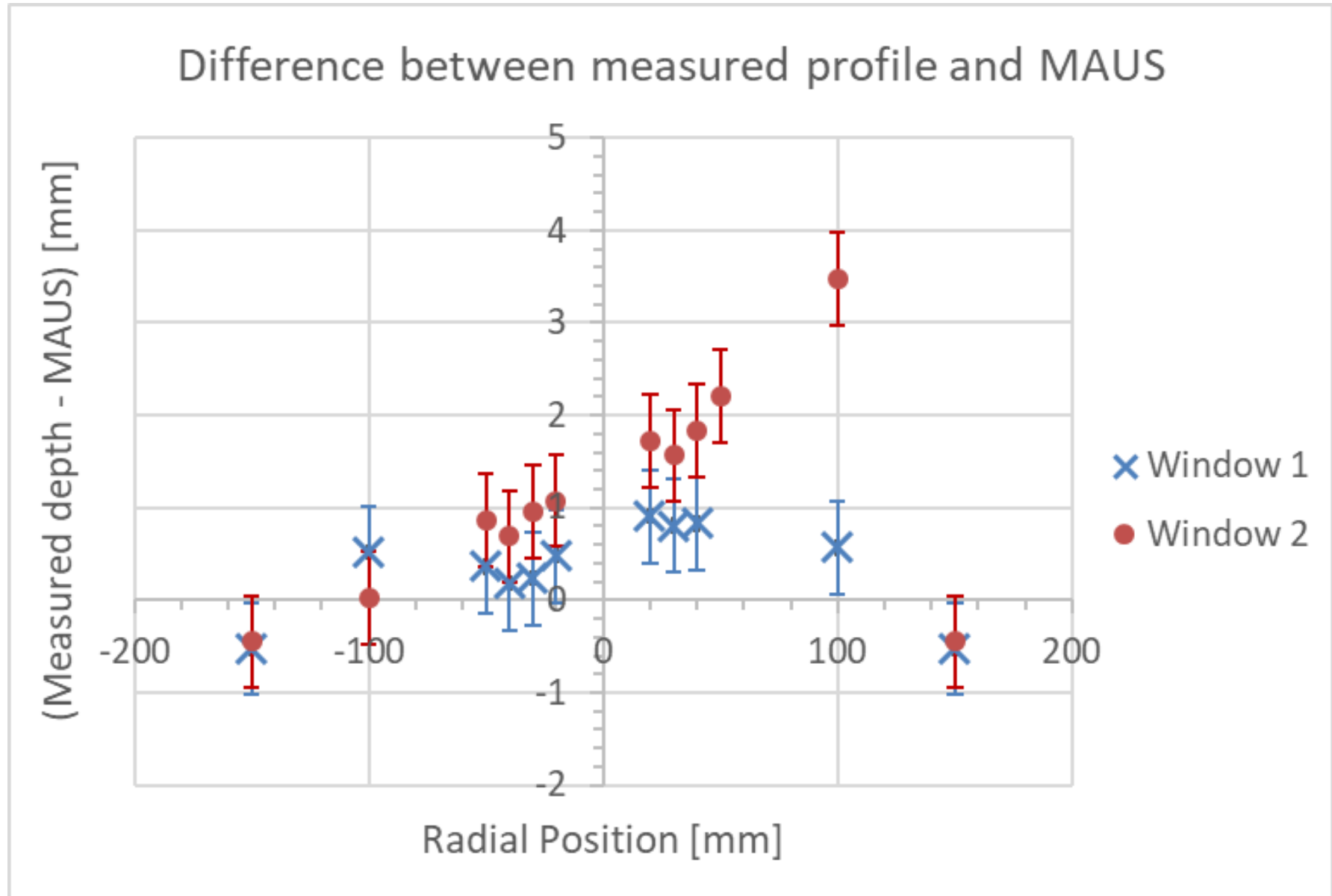
- Depth measurements made using callipers.
- Conservative error estimate on each point taken to be 0.5mm taken from the maximum rms of repeated measurements.
  - Assume the major source of error is due to positioning of the callipers.



# Depth profiles of absorber windows



# Measured Depth profiles compared with MAUS



# Summary

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- Measurements taken of hydrogen absorber have been analysed.
  - Small deformation of window 2.
- Temperature data in Archiver.
  - Data in the archiver is for pairs of sensors at 4 locations around the absorber, accuracy is 0.1K. There are variations between the sensors of around 1K. The average of all 8 sensors will be used to determine the average density of the absorber.
  - Data archived every second.
  - Averaging data.
    - Daily averaging using ArchiveExport command.