

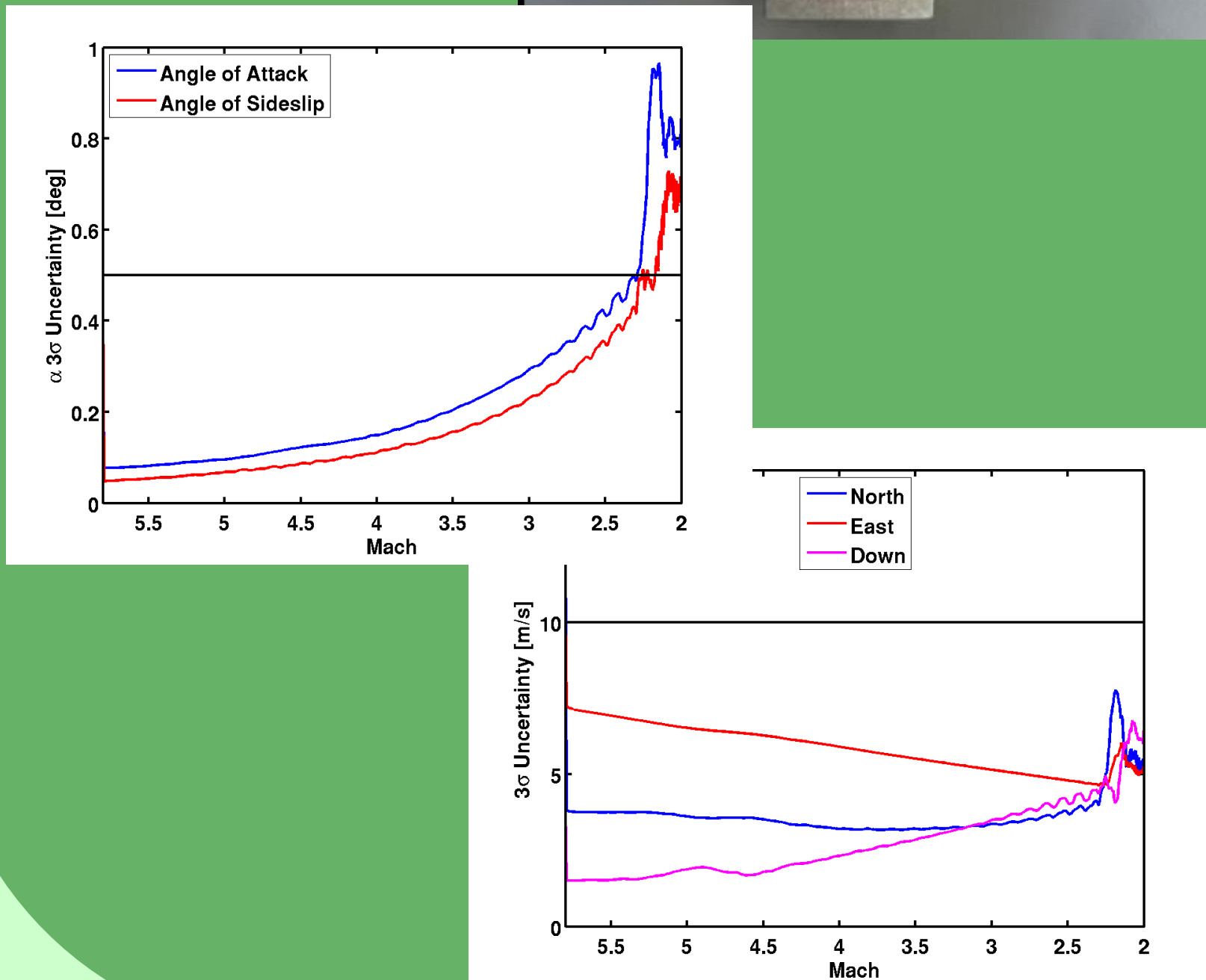
Mars 2020 Entry, Descent, and Landing Instrumentation 2 (MEDLI2) Sensor Suite

Helen Hwang,¹ Henry Wright,² Chris Kuhl,² Mark Schoenenberger,² Todd White,¹ Chris Karlgaard,³ Milad Mahzari,¹ Tomo Oishi,⁴ Steve Pennington,⁵ Nick Trombetta,² and Jose Santos⁶

¹NASA Ames Research Center, ²NASA Langley Research Center, ³Analytical Mechanics Associates, Inc., ⁴Jacobs Technology, Inc, ⁵Science Systems and Applications, Inc., ⁶Sierra Lobo, Inc.

FOREBODY PRESSURE MEASUREMENTS

- Supersonic pressures
- Aerodynamic performance vs winds

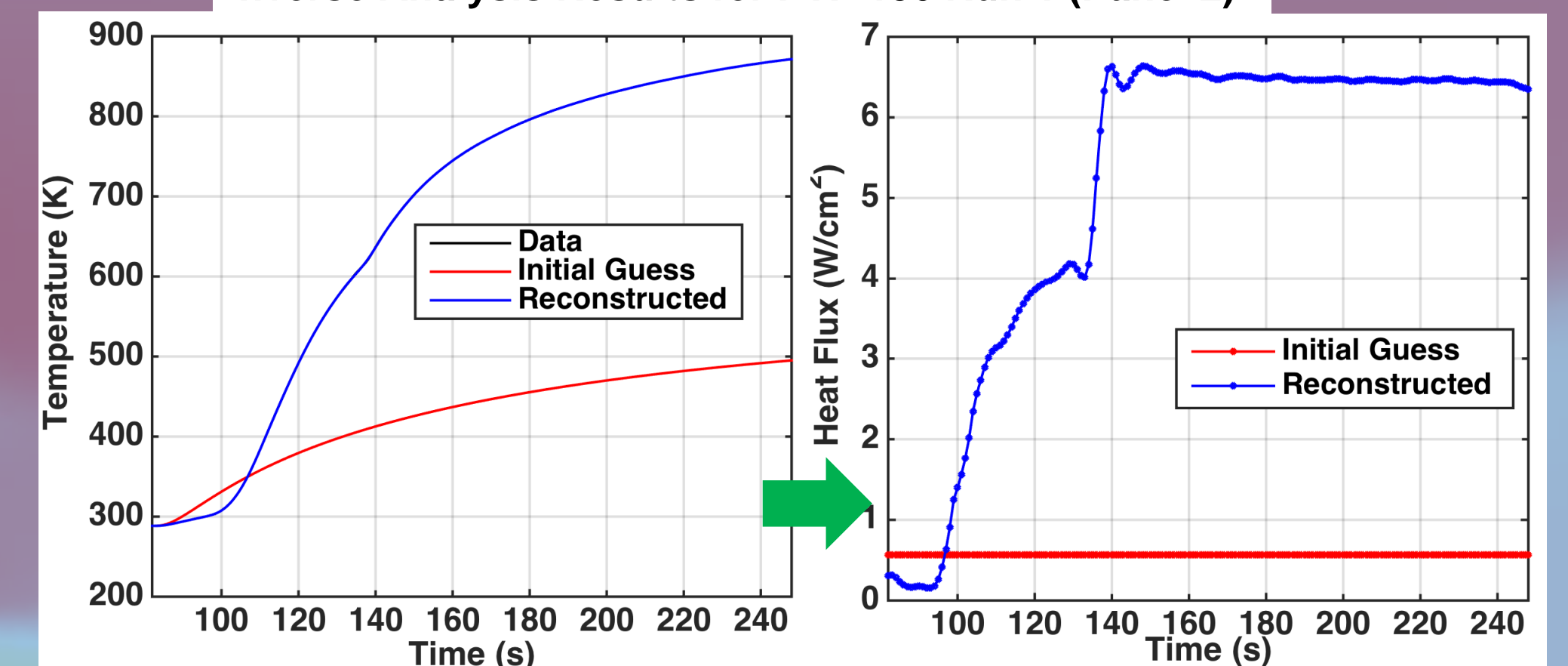


AFTERBODY THERMAL MEASUREMENTS

- Radiative heating
- Near-surface temperature
- Direct heat fluxes

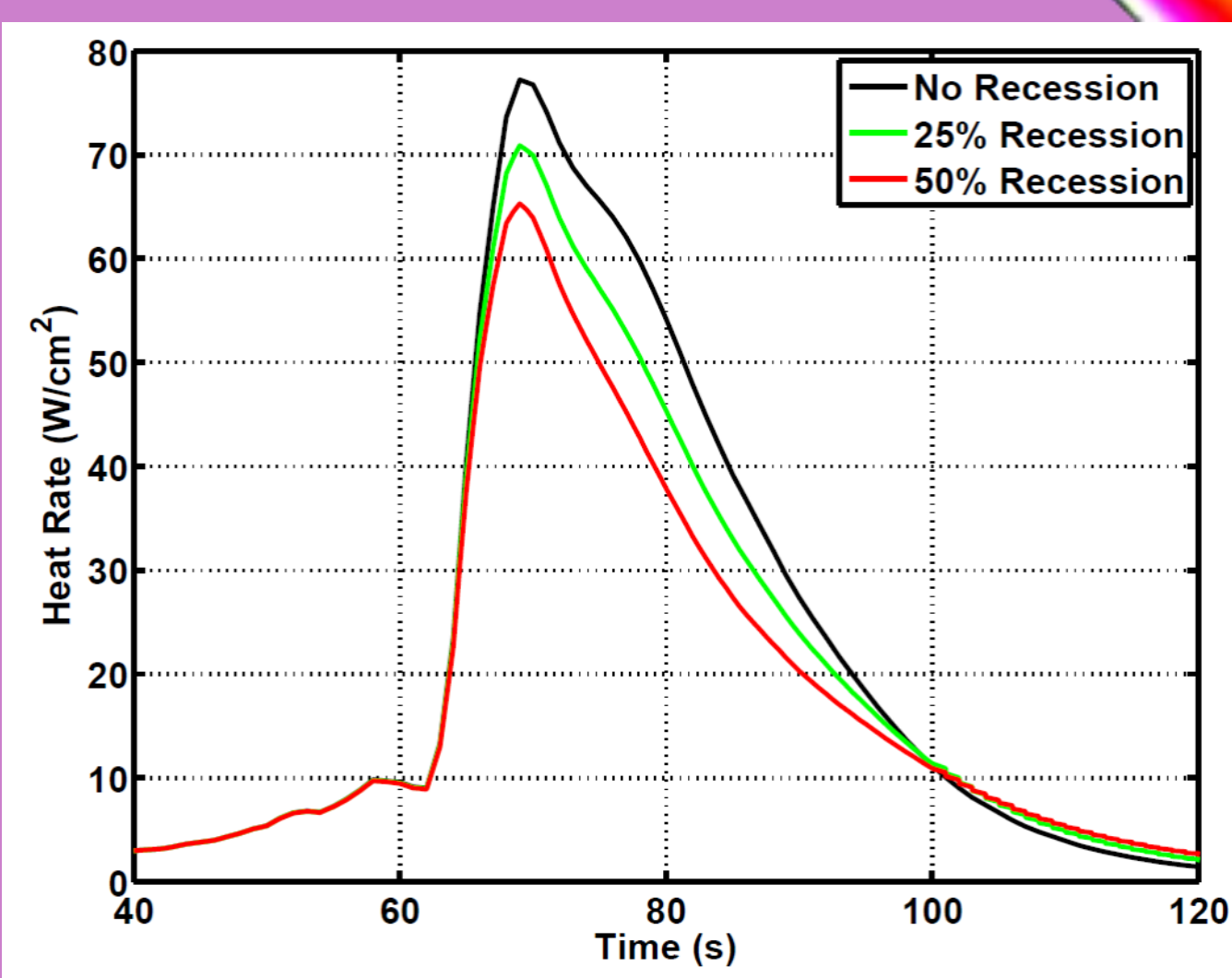
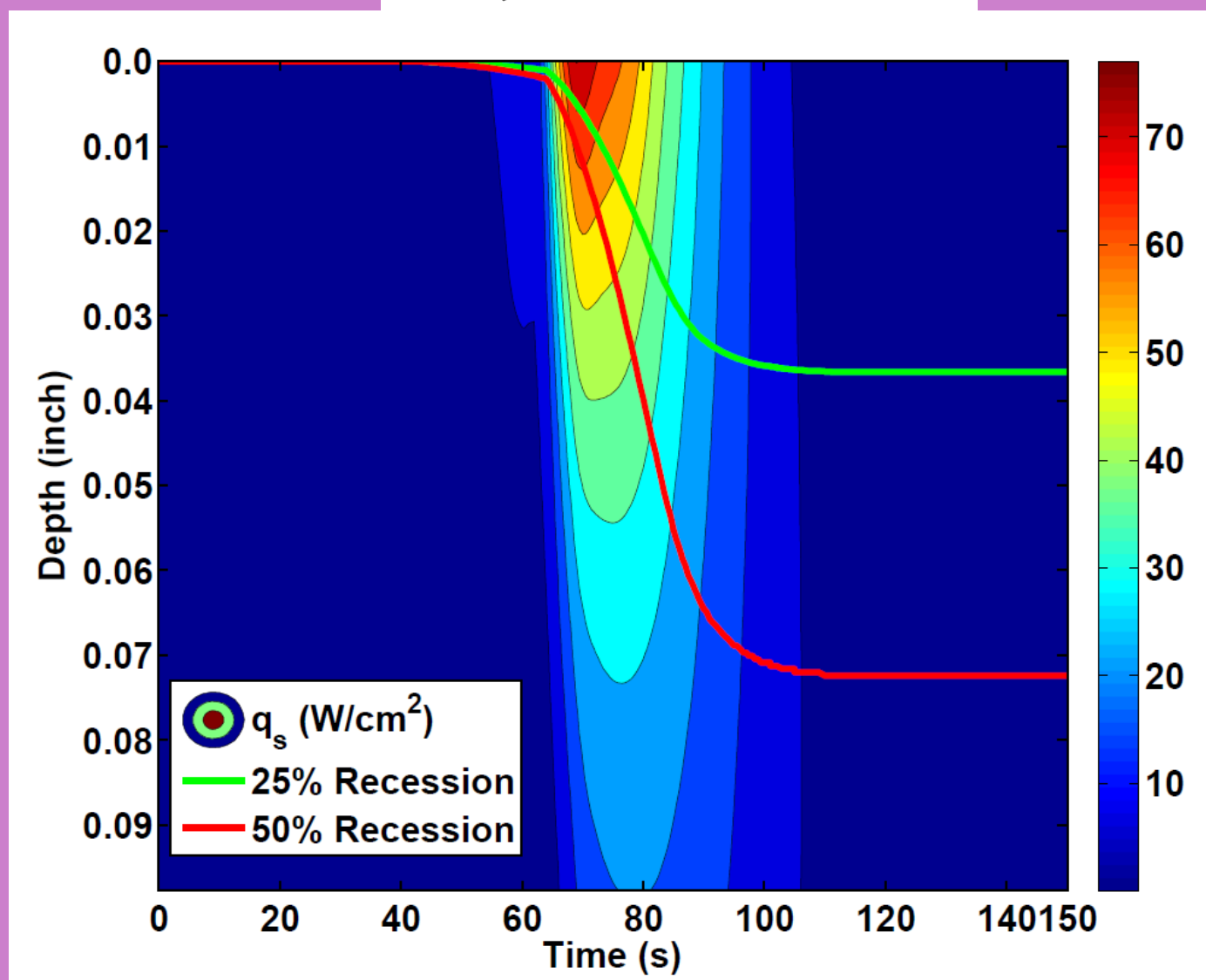
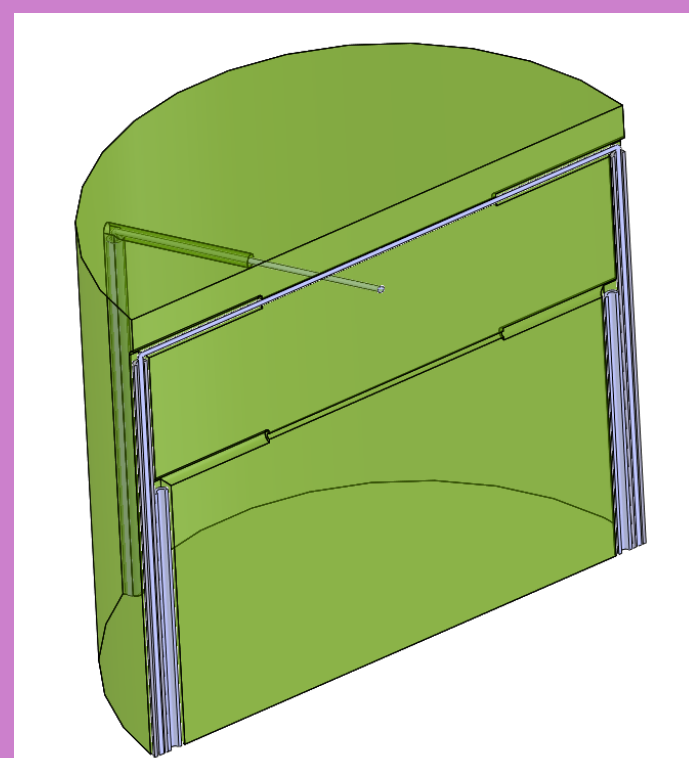


Inverse Analysis Results for PTF-150 Run 1 (Panel 2)

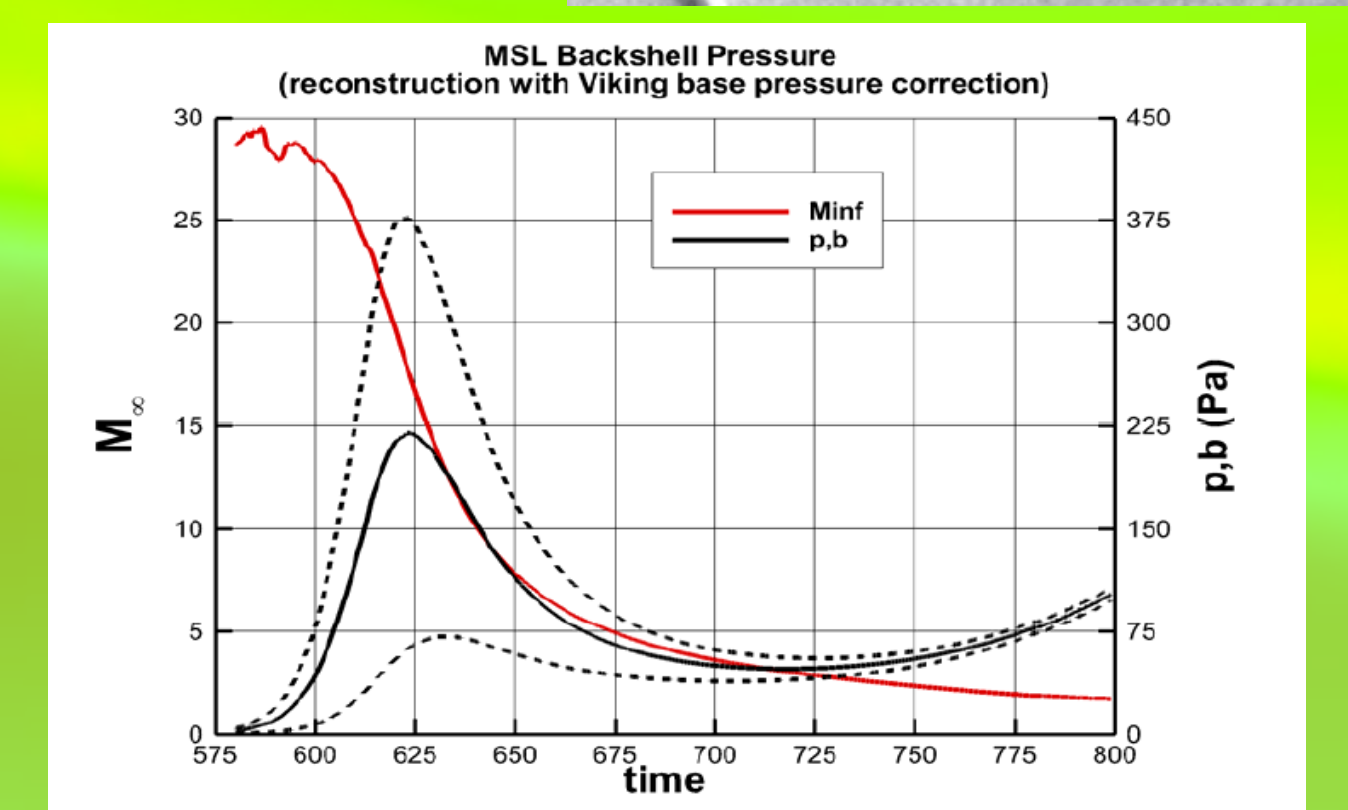
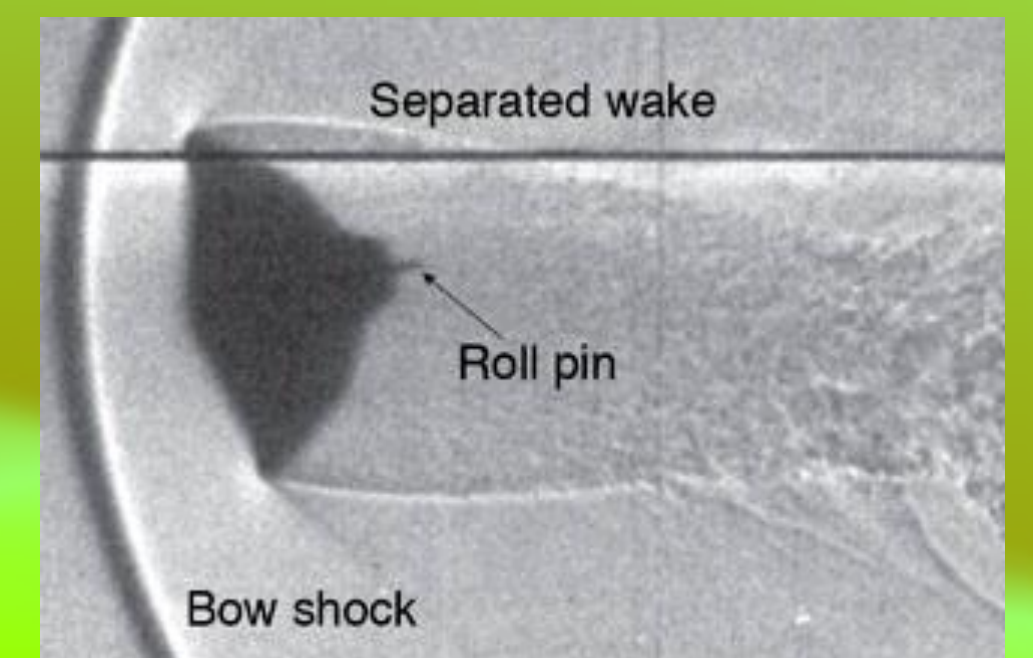


FOREBODY THERMAL MEASUREMENTS

- Near-surface and in-depth temperature
- Wider coverage across heatshield to capture transition front

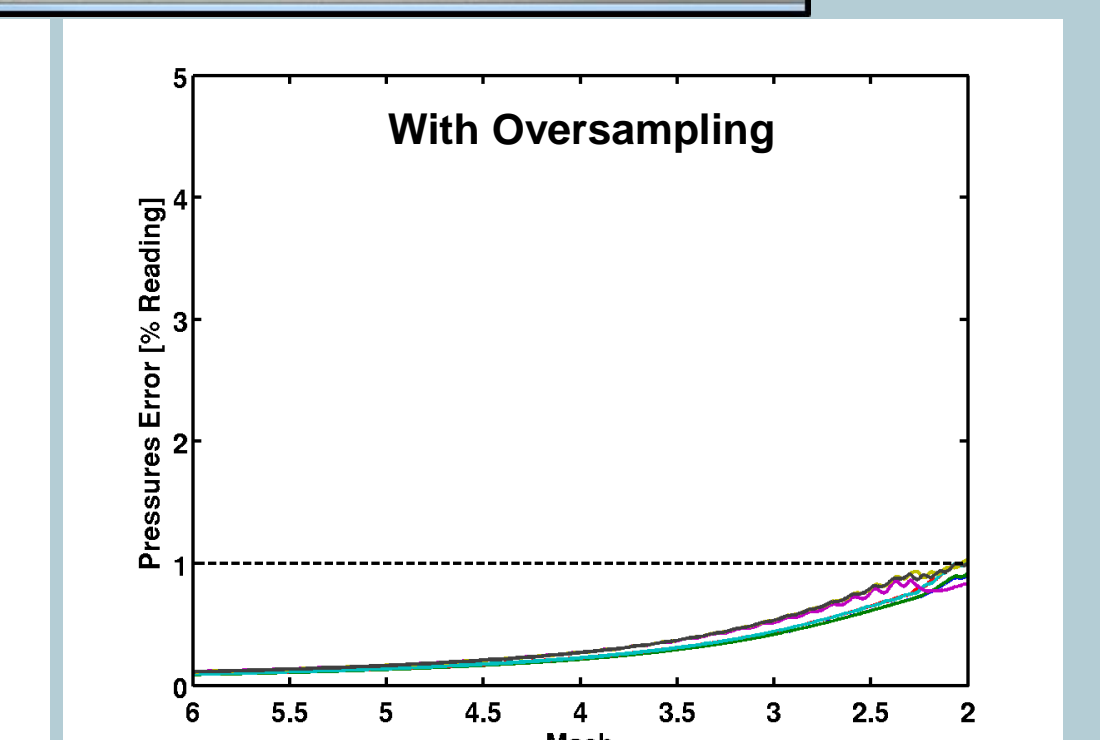
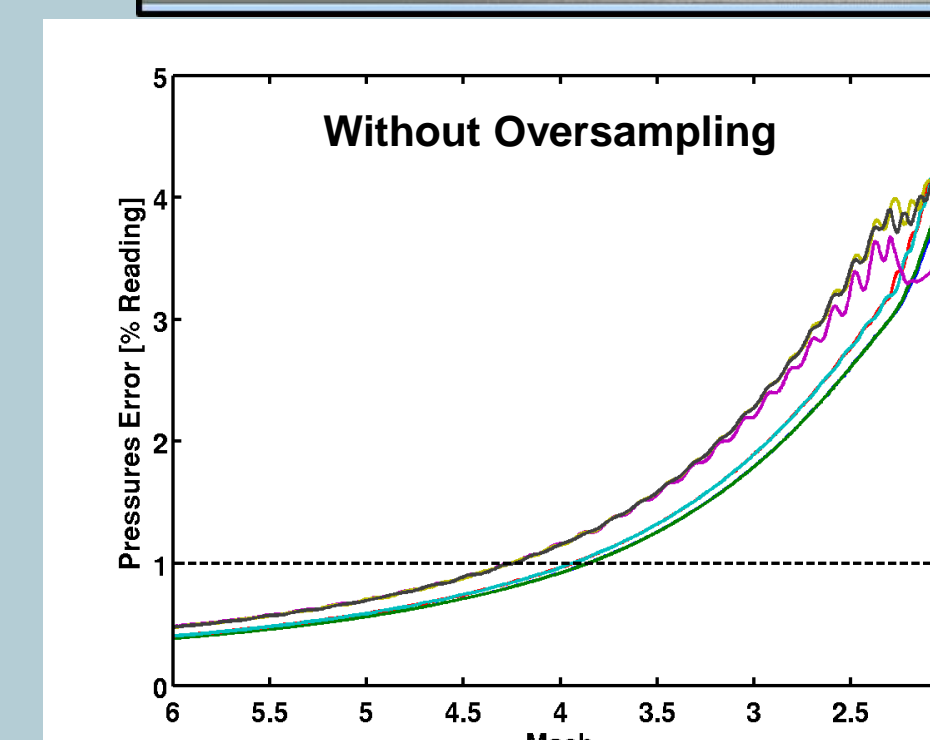
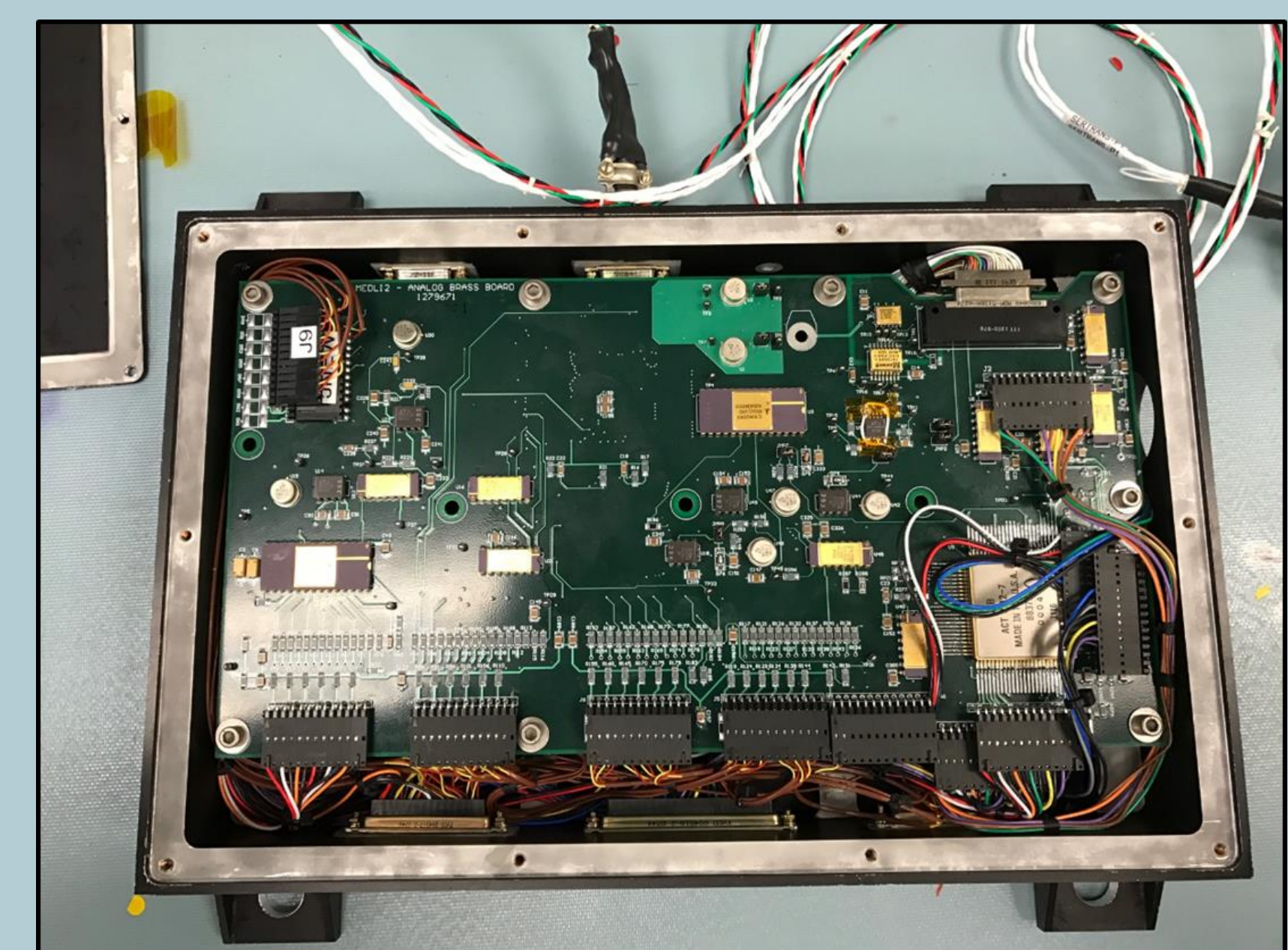


AFTERBODY PRESSURE

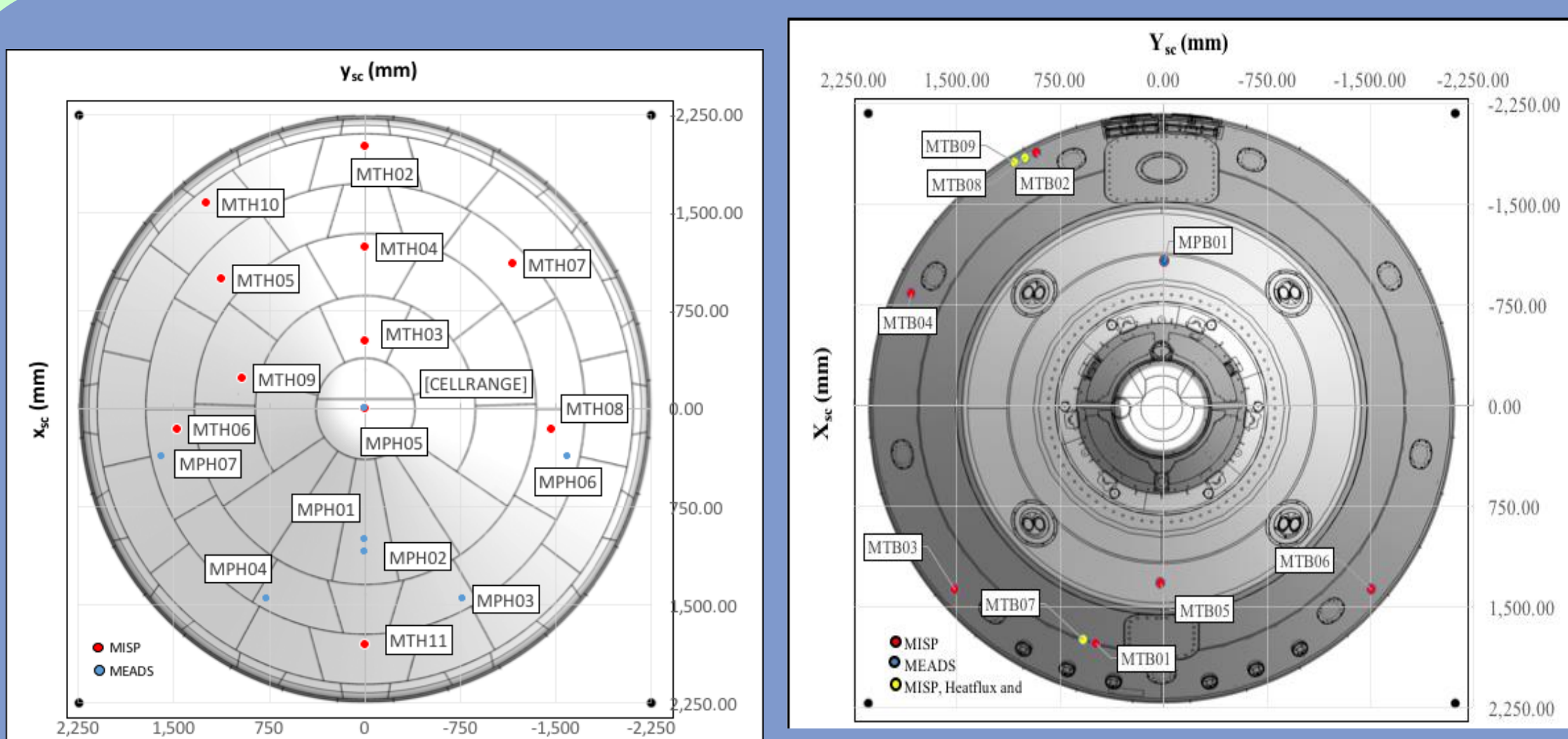


SENSOR SUPPORT ELECTRONICS

- New oversampling method for pressure measurements



SENSOR LAYOUT





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Learn about the new sensors that will be flown on the Mars 2020 aeroshell (supersonic pressure transducers, direct heat flux gauges and radiometer), new techniques (oversampling), and plans for post-flight analysis

