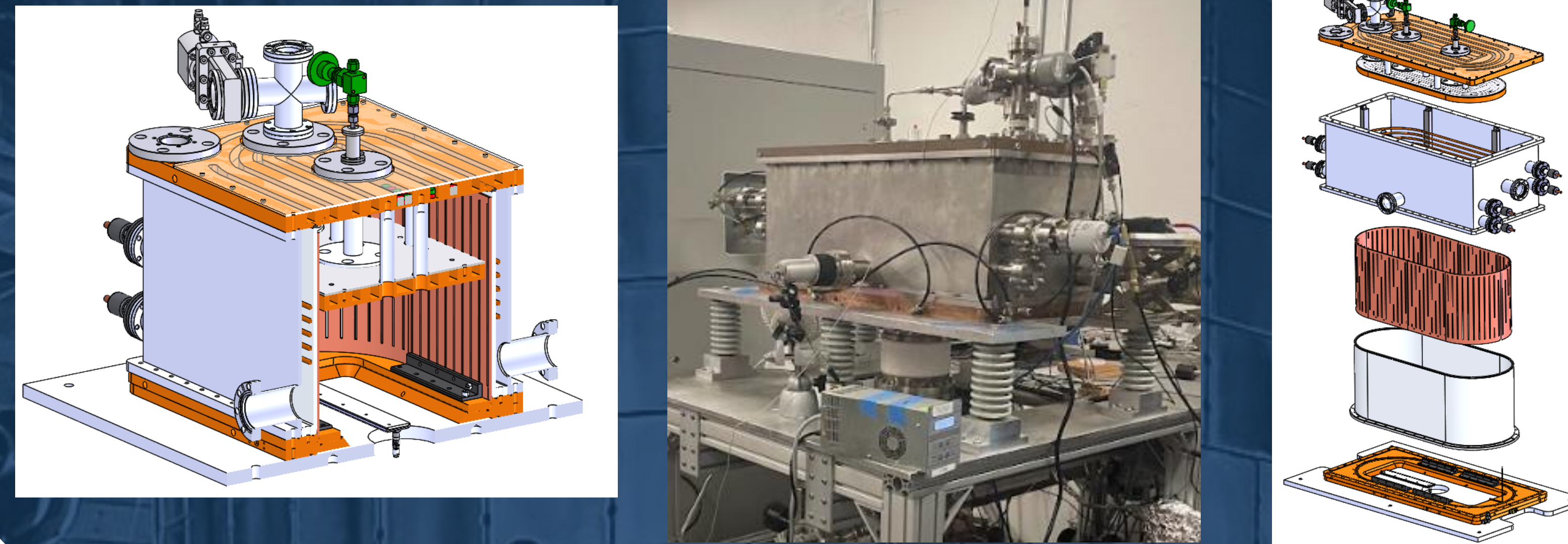


## ME & ECE Team

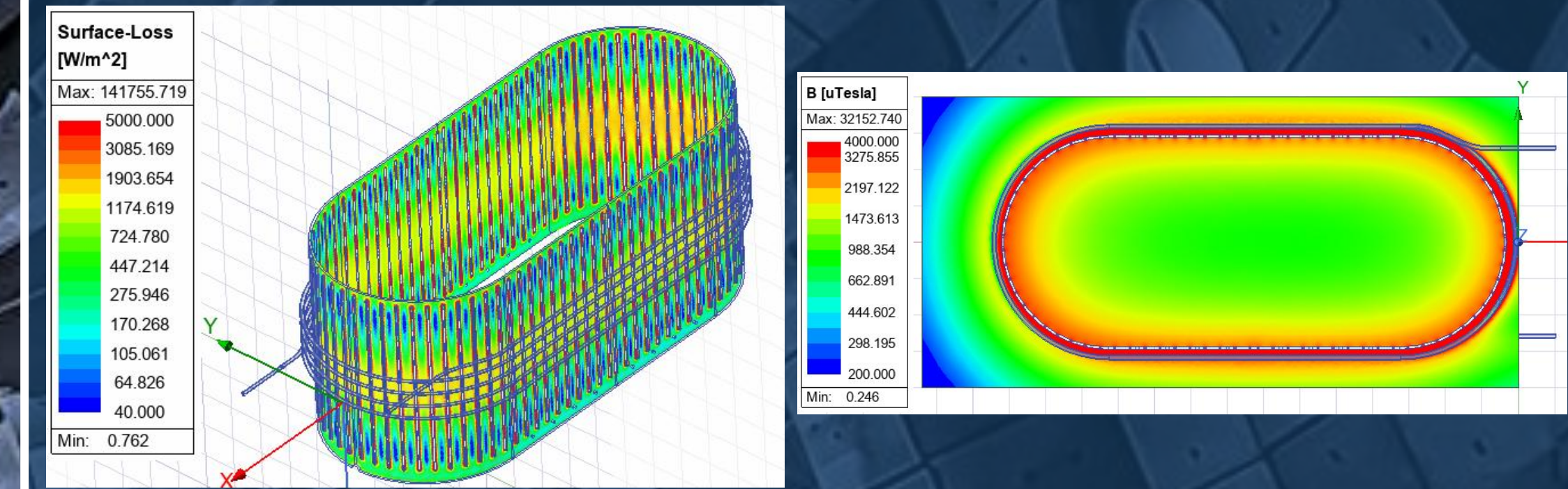


**Top row left to right:**  
Robert Adams, Jake Hooper, Khaled Mohaisen, Daniel Self, Clayton Alvarez  
**Bottom row left to right:**  
Ulises Urbina, Krista Patel, Avery Buehler, Jimin Chae, Son Huynh

## Final Assembly of System

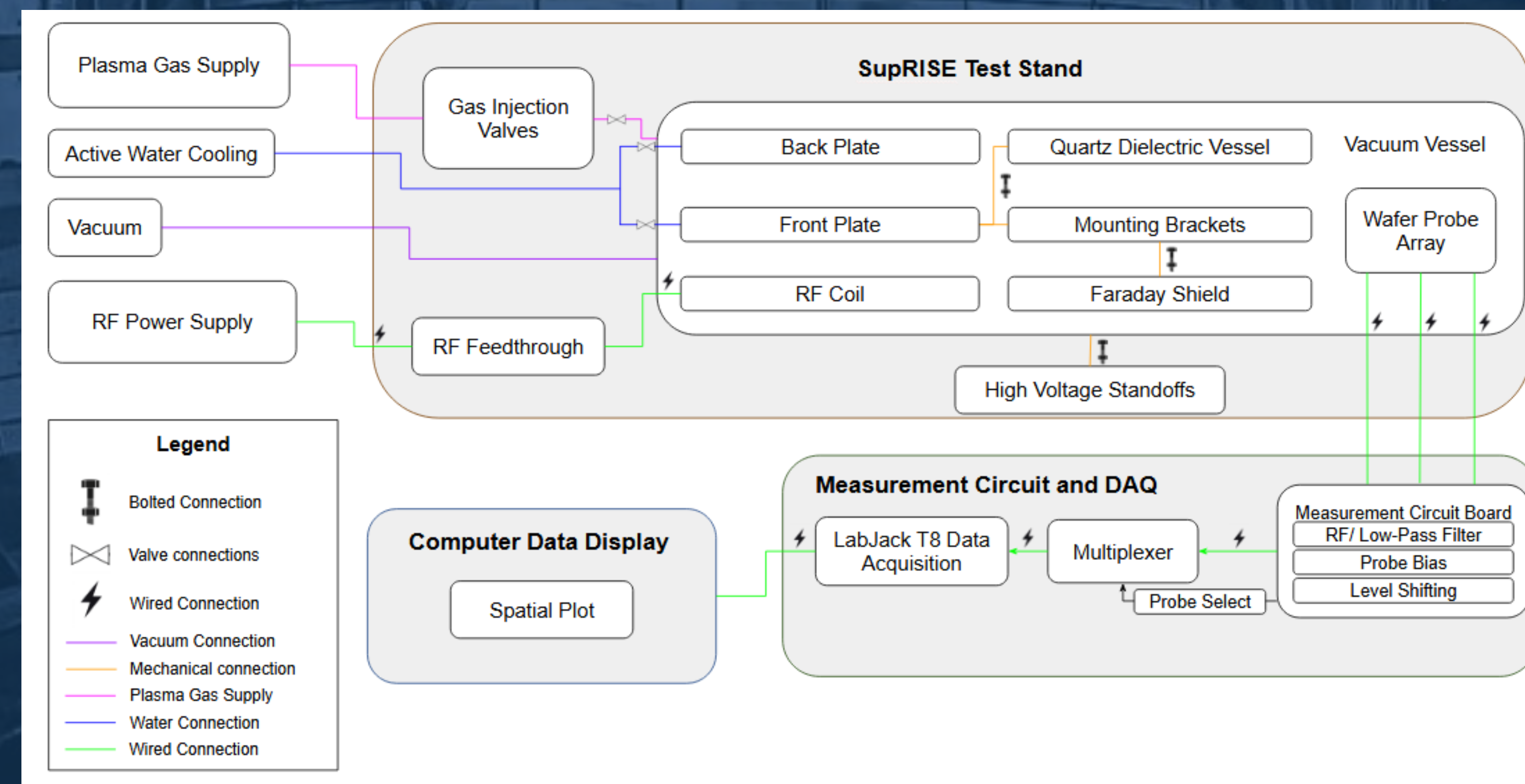


## Faraday Shield



The Faraday Shield underwent electromagnetic and thermal simulations in ANSYS to investigate the ohmic heating distribution within the shield prior to integration. The surface loss distribution is then taken from the EM simulation ( $W/m^2$ ) and imported into a transient thermal analysis to map temperature change due to these loadings.

## System Level Diagram



## Project Overview

DIII-D is testing an RF-coupled plasma source called SupRISE for Neutral Beam Injection (NBI), while developing diagnostics to measure plasma parameters and a Faraday shield to support higher-power operation.

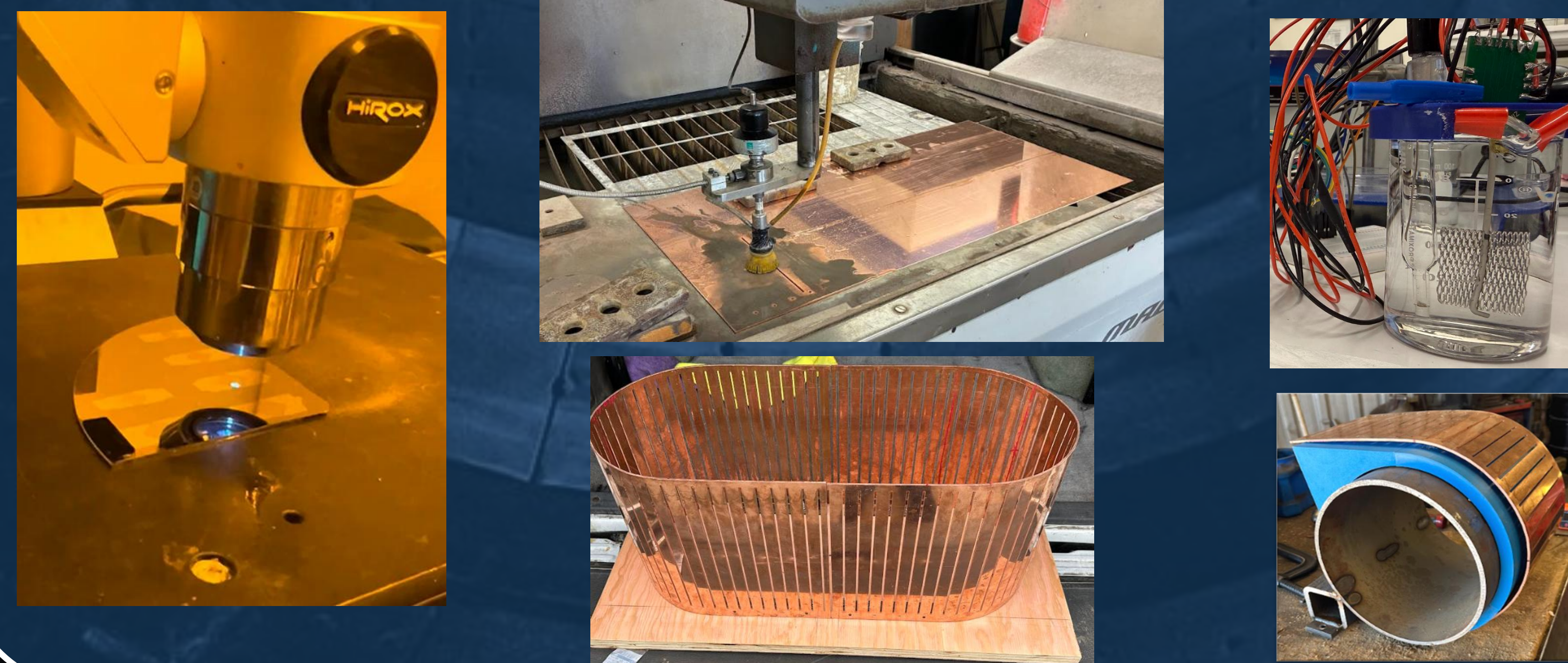
## General Atomics DIII-D

At the DIII-D Fusion Energy Research Facility, advanced fusion technologies are being developed using a tokamak that magnetically confines high-temperature plasma. Neutral Beam Injection is one of the primary heating mechanisms for the confined plasma.

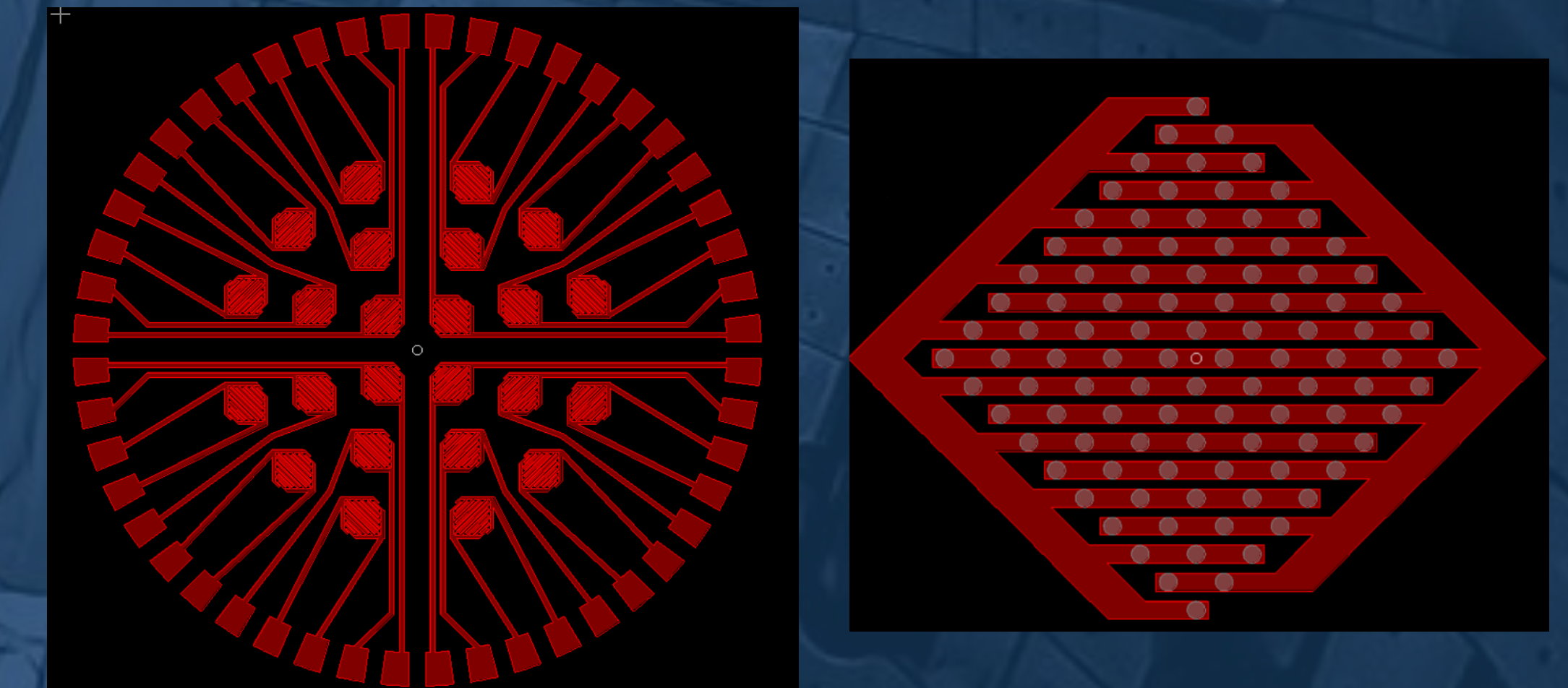
## Acknowledgements

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## Assembly and Manufacturing



## Plasma Eater (Probe Array)



## Measurement Circuit

