

Non-deterministic Heater Response

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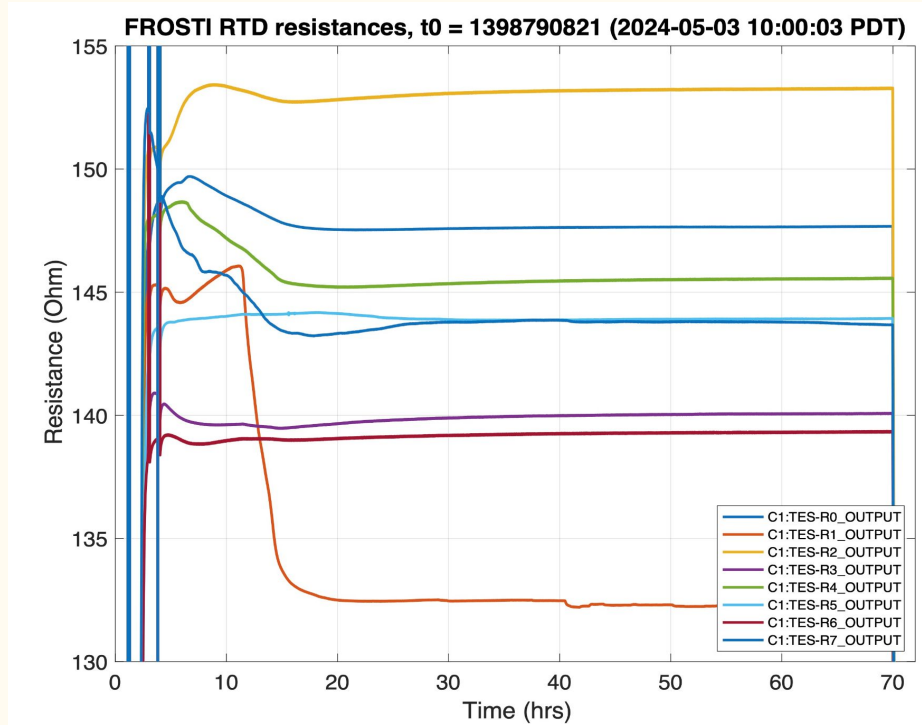
UCR Group Meeting

General View

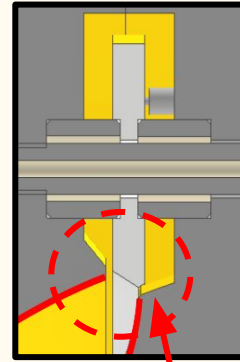
Issue	Motivation	Status	Significance
Non-deterministic heater response	Observed sudden and non-deterministic changes in some heater responses	In progress: probable thermal contact between heater and reflector; UCR in-vacuum thermal-cycling test planned	Severe

- During the most recent FROSTI test at Caltech, the non-deterministic heater response emerged as a significant issue for us.

General View



- The TES-R1 heater element dropped significantly after 4 hours of testing, despite no changes in electric power input.



Most likely point of thermal contact with aluminum

General View

- Further in-vacuum thermal cycling tests on the heater element



Heater elements pictured in UCR chamber in early 2024, prior to prototype assembly

General View

- Bring the vacuum chamber to normal pressure, with the RTD stand ready for insertion. [Luke]
- Disassemble the FROSTI system. [Taylor, Luke, Luis]
- Assemble the heater element in the chamber and power it on. [Luke]
- Ensure Cymac is ready for use. [Taylor, Shane]
- Begin data collection.

Special thanks to everyone involved in the process.

Questions

- How long will the vacuum chamber need to remain under vacuum?
- Can you record the temperature and power readouts into a data sheet?
- When is the optimal time to disassemble the FROSTI?

