Liquid helium cooling preparation for a foam core SiC mirror test

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Mirror tech days

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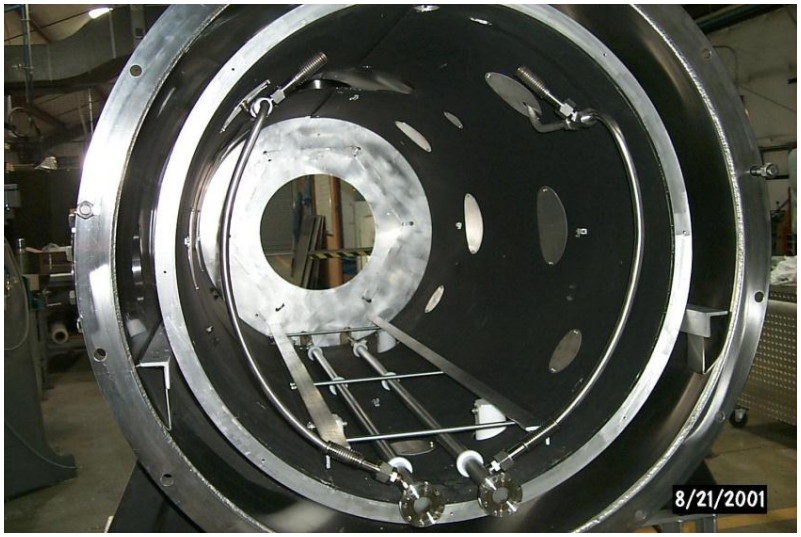
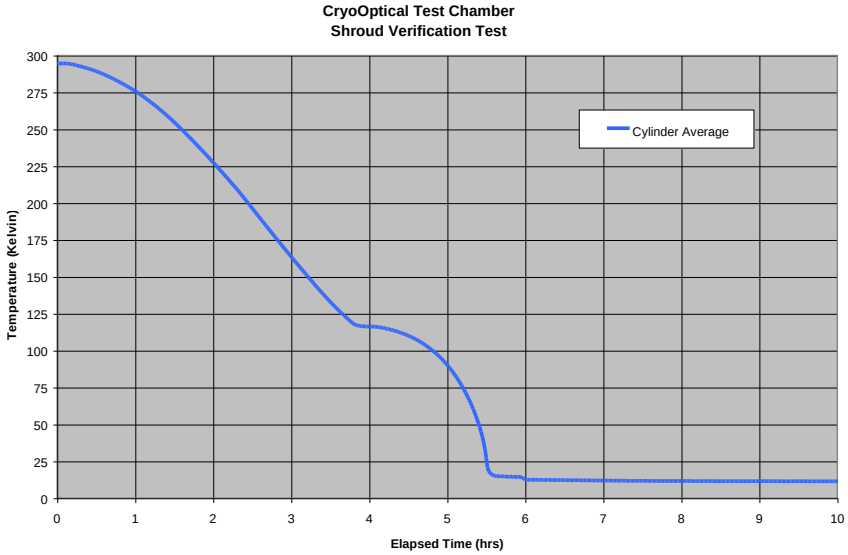
Objective

- Cooling a 300 mm foam core SiC mirror to 5 deg. Kelvin.
- Thermal characterization.
- Test temp: 293 to 5 deg Kelvin.

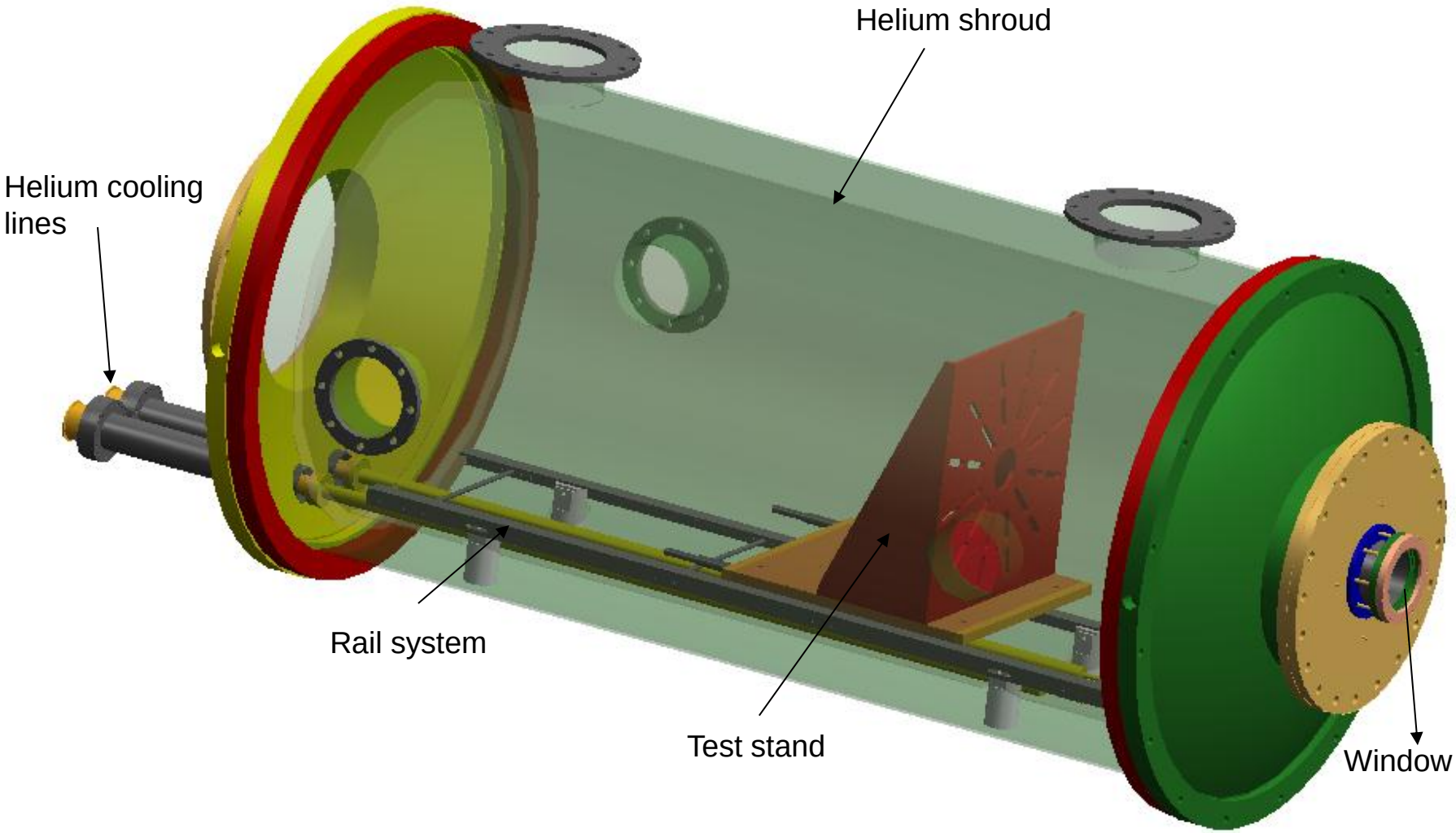
1x3 m optical test chamber

Vacuum Chamber: 1x3 m cylinder with helium shroud.
Optical View Ports: BK7 window; 150 mm dia. clear aperture.
Precision stage to provide interferometer pointing and alignment.
Operational Pressure: < 5 E-6 Torr
Temperature Range: 300 to 12K
Typical cryo optical test: 290, 200, 100, 70, 50, 30K, 2 cycles; 3 weeks duration.

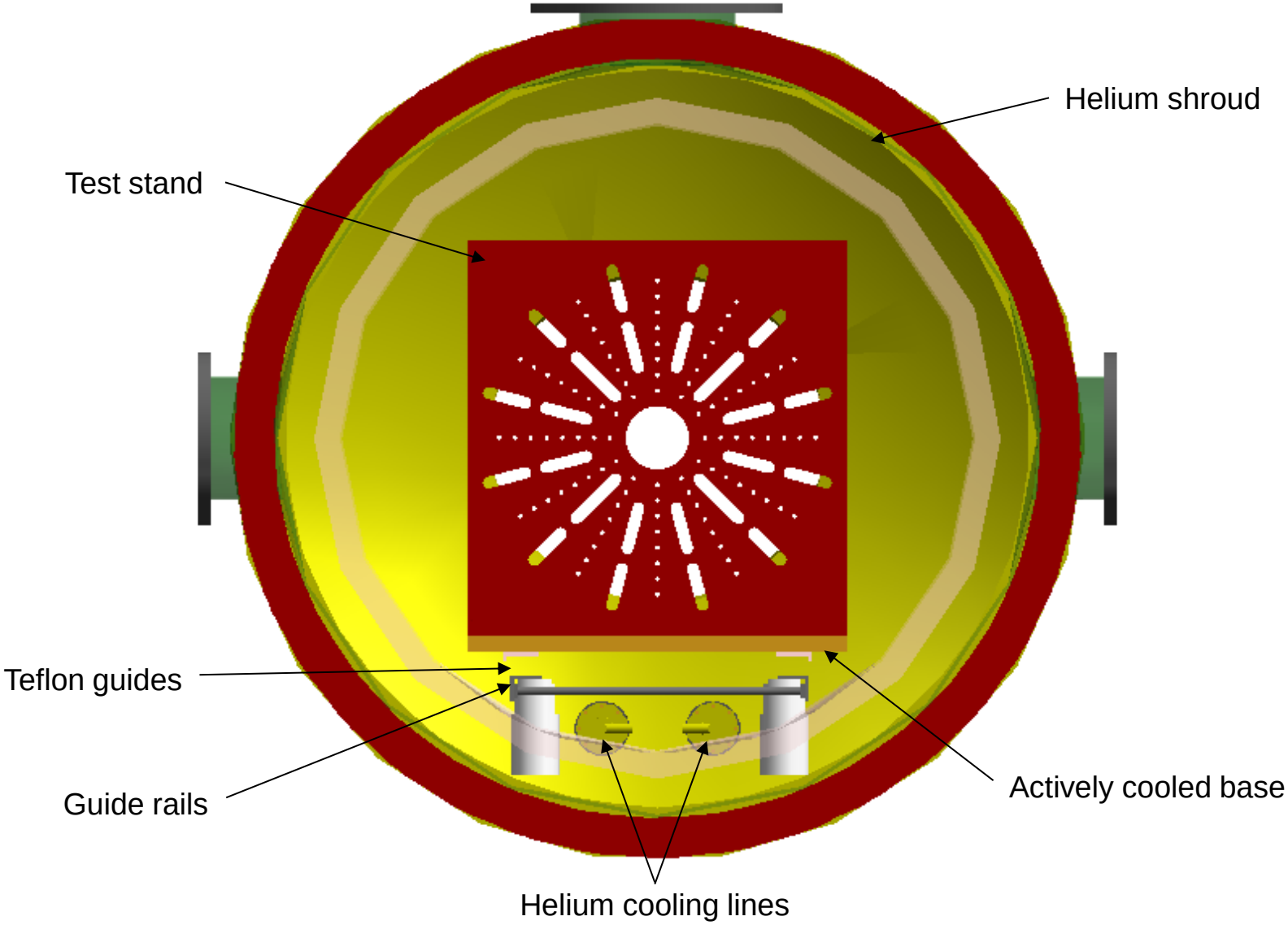




Side view of cryogenic chamber



Front view of cryogenic chamber



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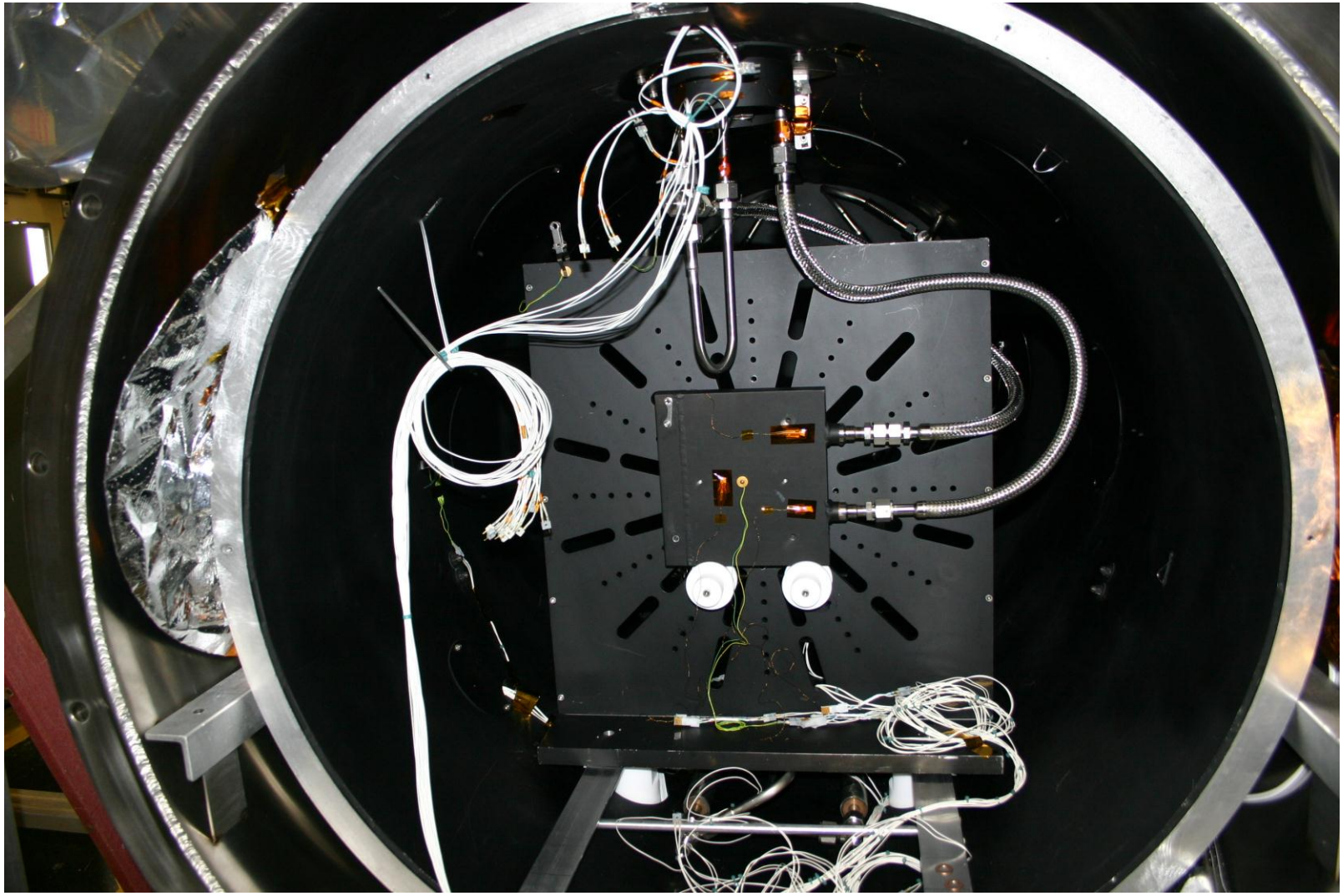

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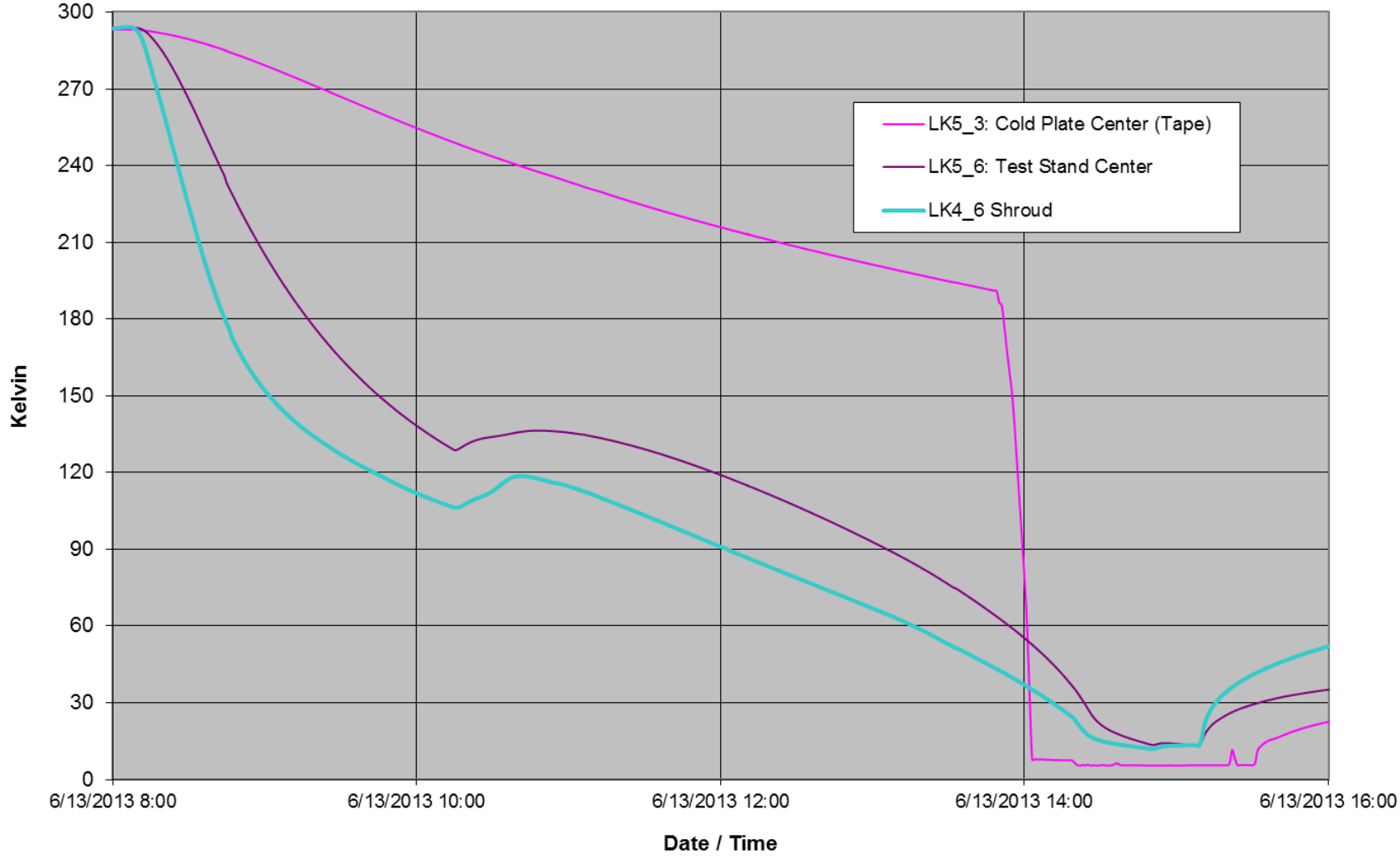

Thank you

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