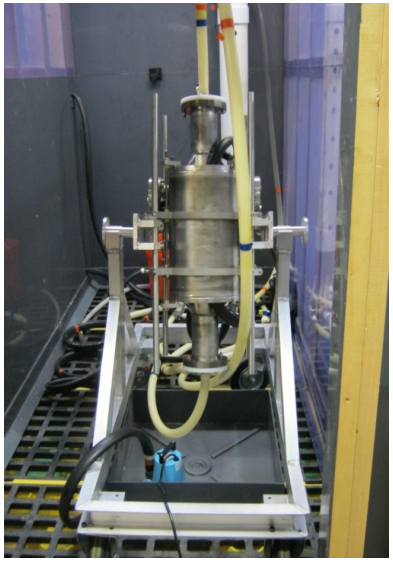
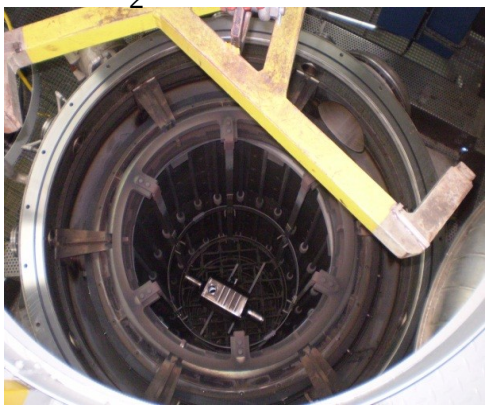
Cavity Treatment Summary

Surface Treatment

Niowave



H_2 Degassing



RF Measurements

SM18

High Press Rinsing

(Bldg 118)

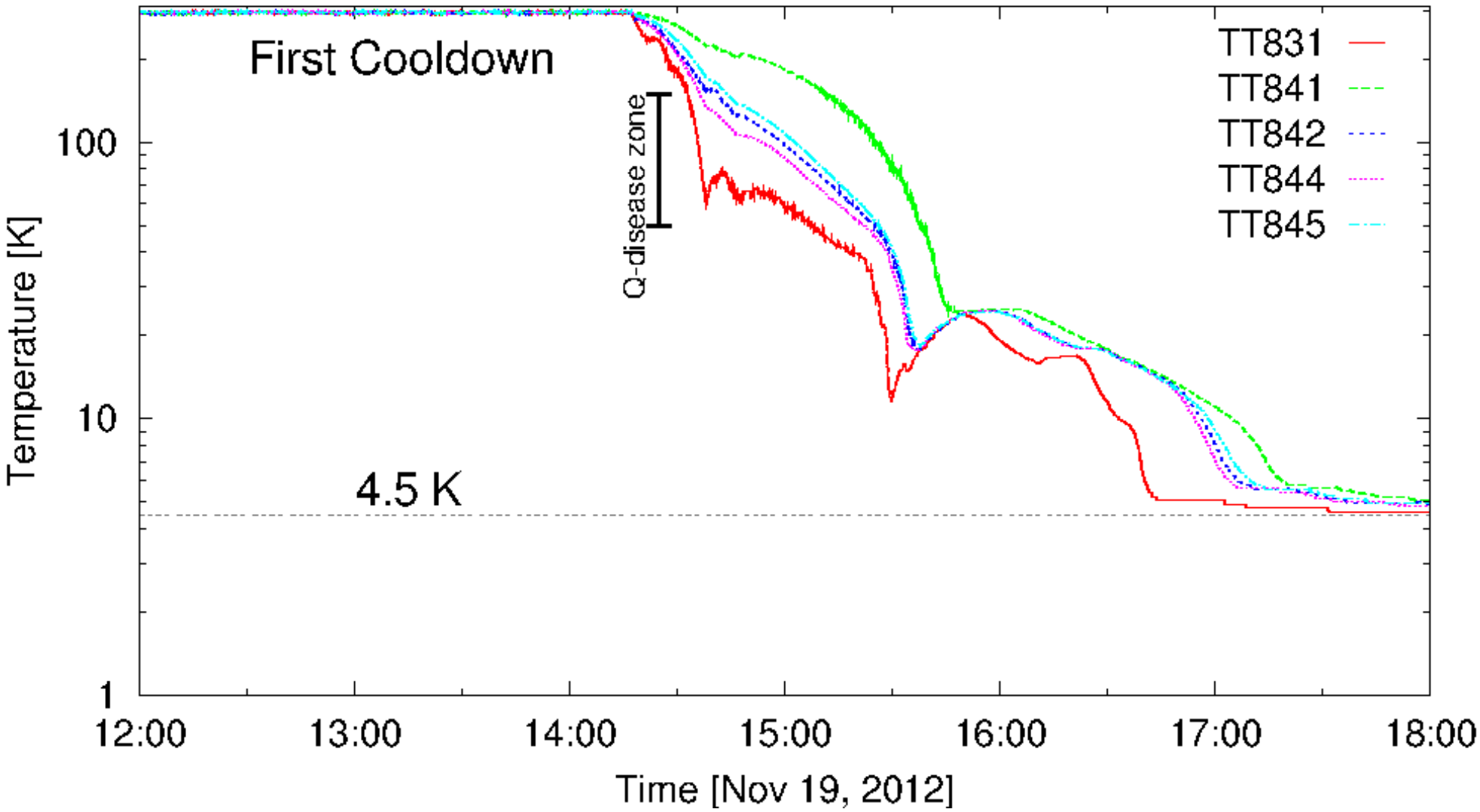
Missing step: Light surface chemistry after baking

Cavity Treatment Summary

Procedure	**Date**	**Specs**	**Comment**
1^{st} BCP	Aug 2012	150 μm	Vertical/Rotated
H_2 Degassing	Sep 2012	T~650^0 C	>24 hrs, P=3.5x10^{-7} mbar
RF Measure	Oct 2012	Qext not measured	Fr=399.5 MHz, Q0=5000
HP Rinsing	Nov 2012	TOC=30ppb ρ ~16MΩcm	Limited wand height
RF Testing	**Nov 2012**	**~1.3 MV**	**Vacuum leak, P=10^{-5} mbar**

Note: Temp Gauge names maybe different

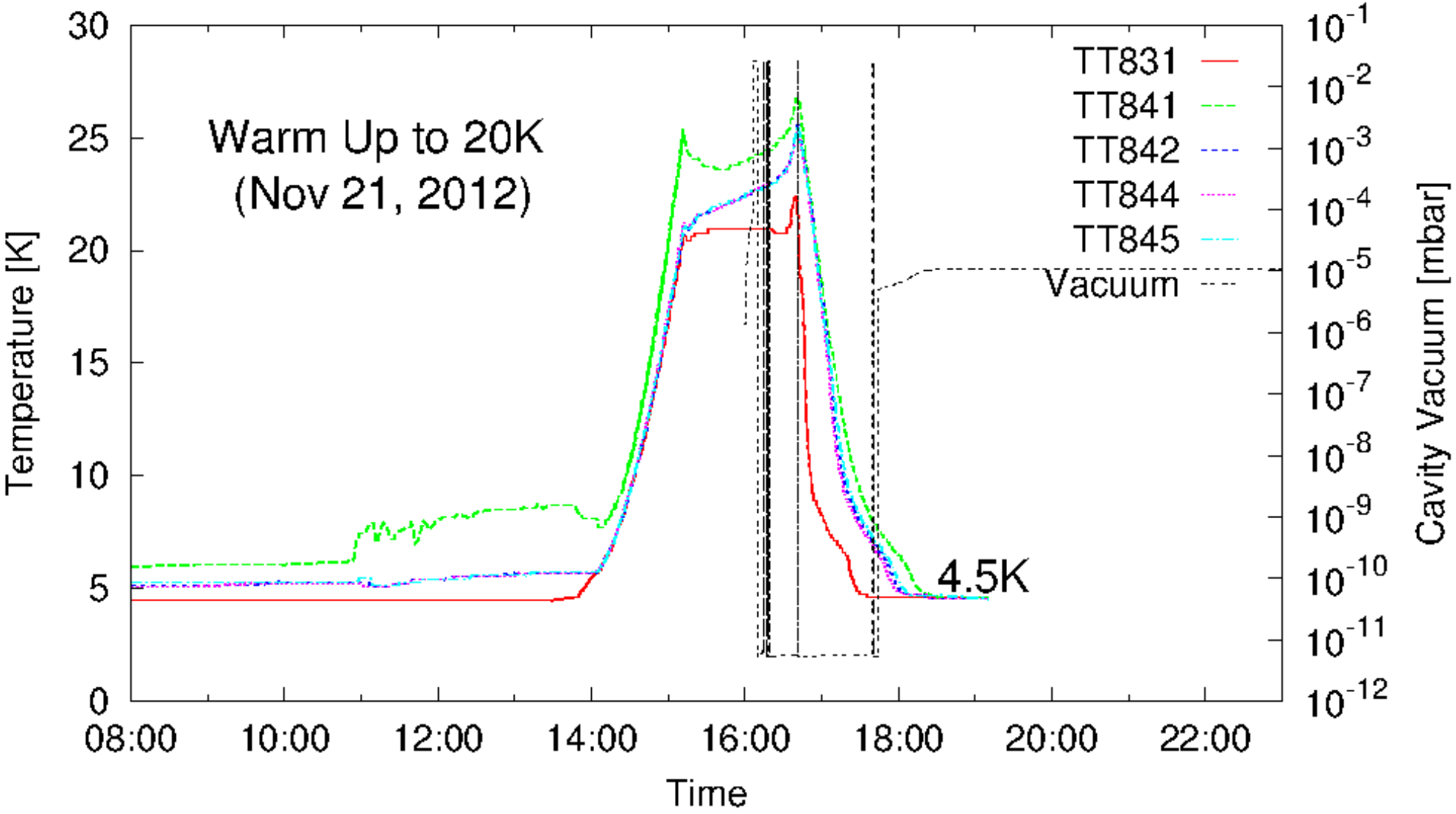
Q-disease zone (150-50K) $\rightarrow$ Approx ½ hr



Note: Temp Gauge names maybe different

To initiate the external B-field compensation

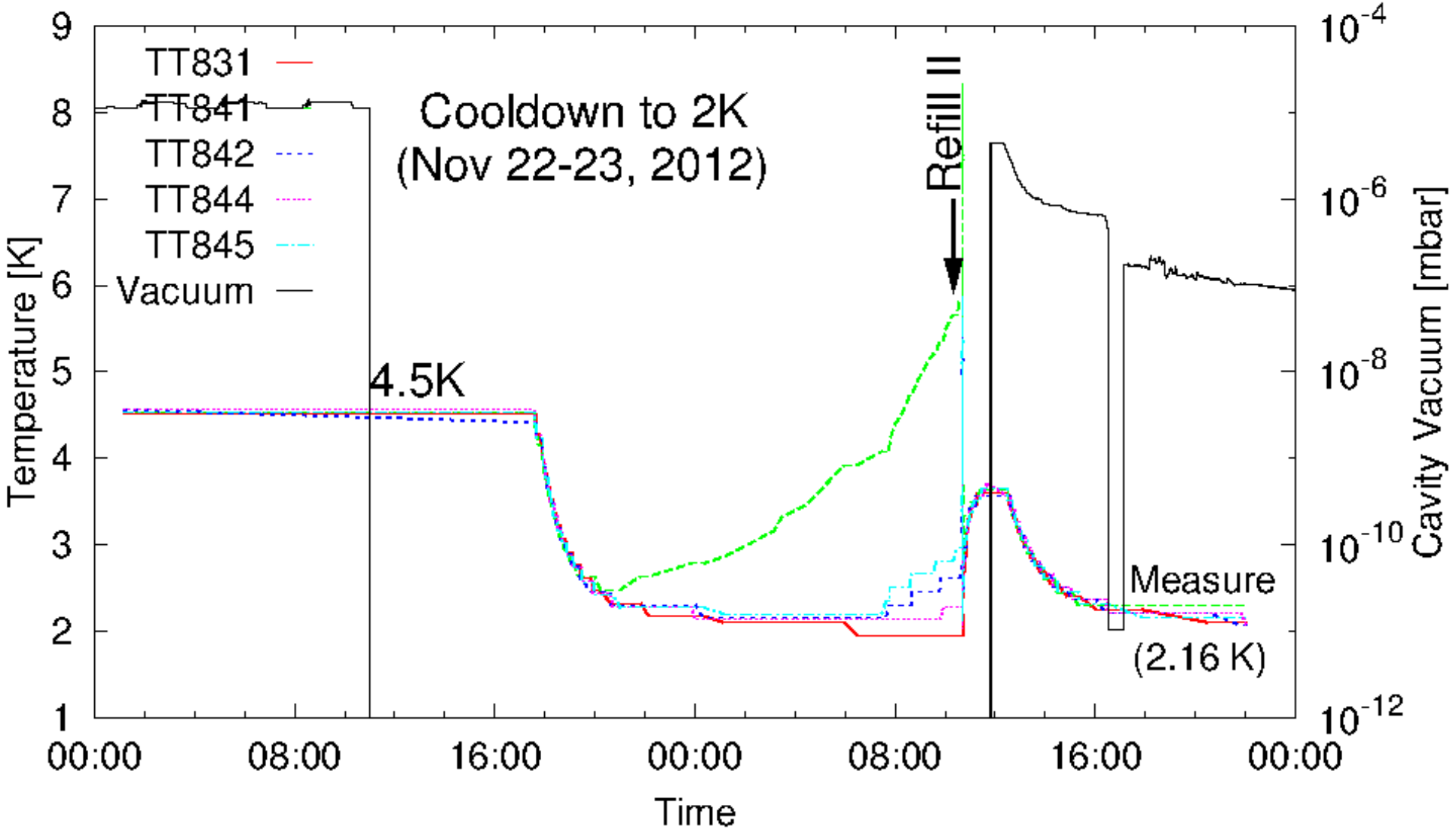
(Turbo pump on)



Note: Temp Gauge names maybe different

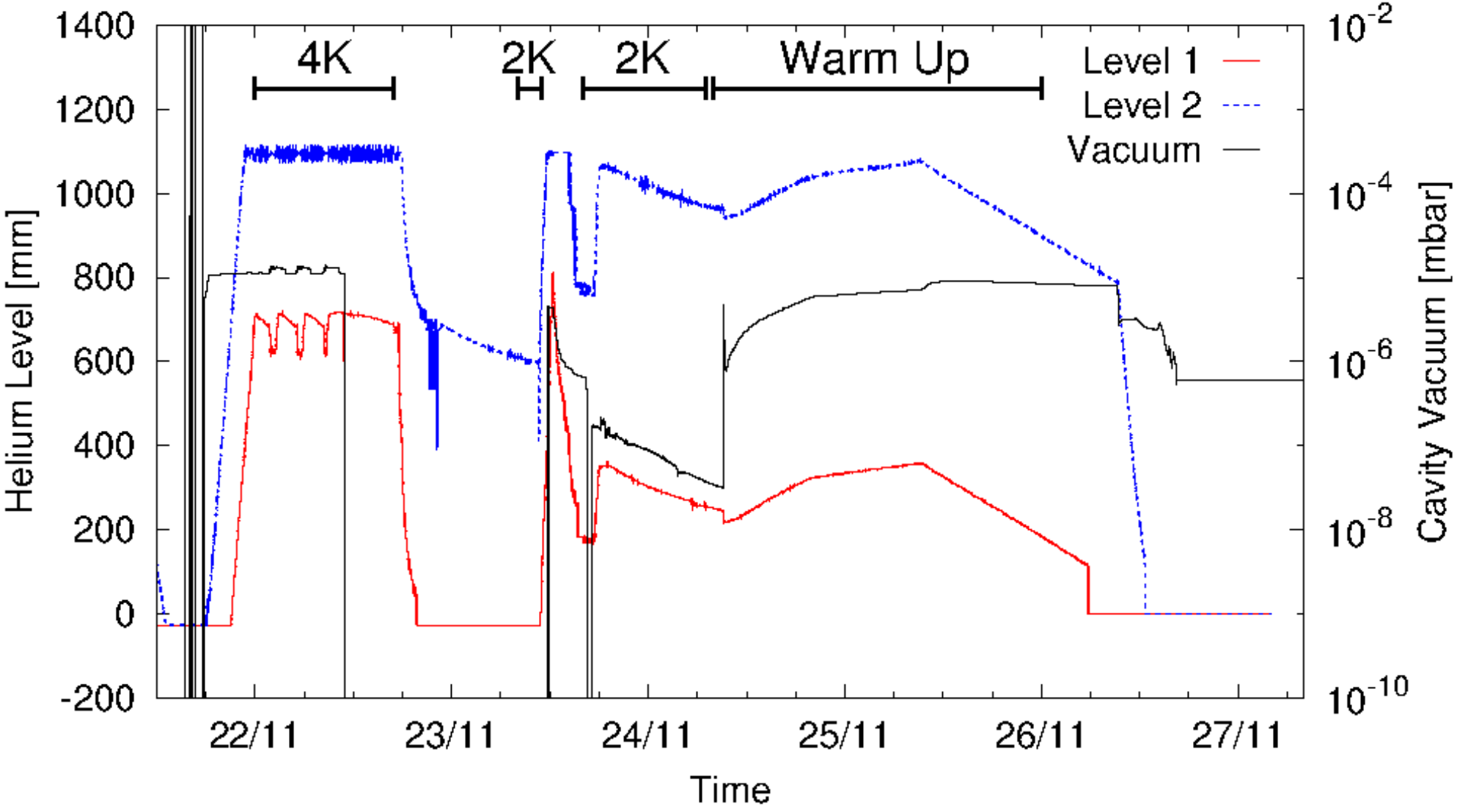
Cool down to 2K → Refill → Cool down to 2K

(Turbo pump on)

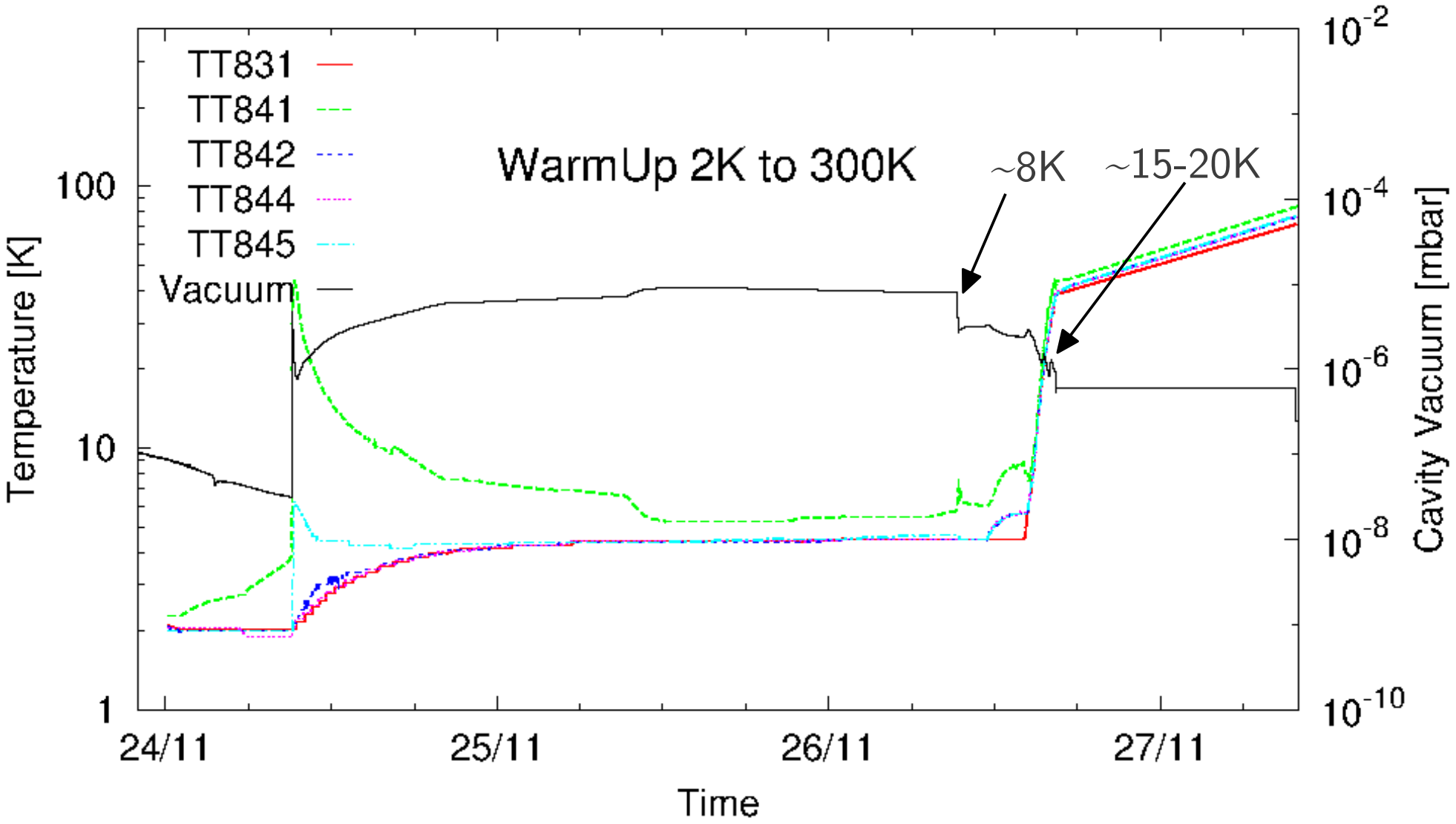


4K $\rightarrow$ 10^{-5} mbar

2K $\rightarrow$ 10^{-8} to 10^{-7} mbar (no evidence of leak from level)

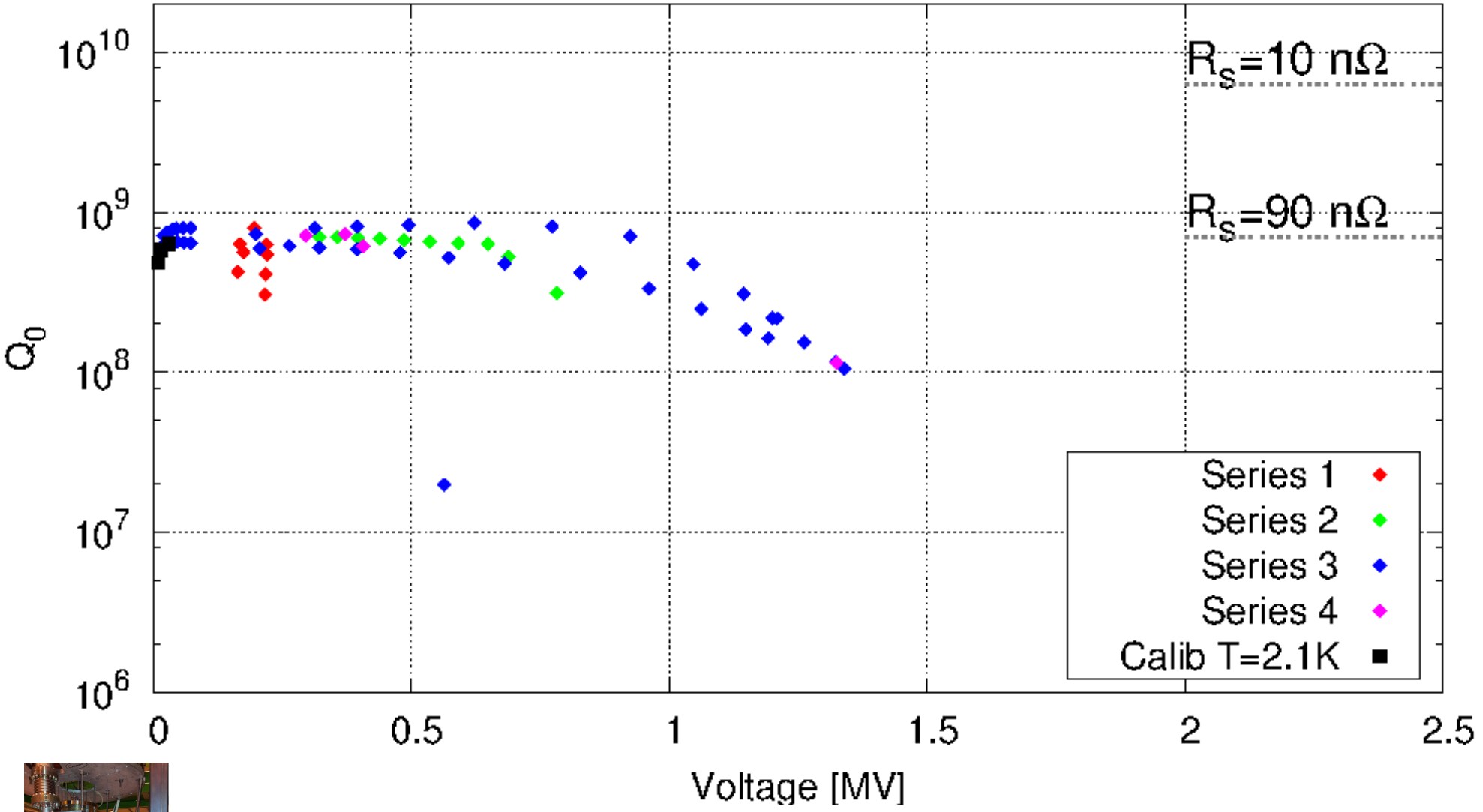


Vacuum steps visible around and above Tc



Cavity Q vs. $V_{\perp}$

Overcoupled, $\beta \sim 4$



Note: Q_0 including flanges to be confirmed

Discussion

Tentative schedule proposal (conflicts ?)

- Week 2-5 (Jan 7-31): Leak test, RF meas, Support Modification
- Week 9-10 (Feb25-Mar8): Light BCP, HPR & Assembly
- Week 11 (Mar11-15): Conditioning & 2K cavity tests

To do

- Additional 2nd sound transducers & assembly
- Cavity temperature measurements (resistive)
- Microphonics & Lorentz force detuning?
- Calorimetric measurements for Q0 ?