

# **JLab Cavity EP Processing Parameters & Temperature Control Strategies**

**Charles Reece**

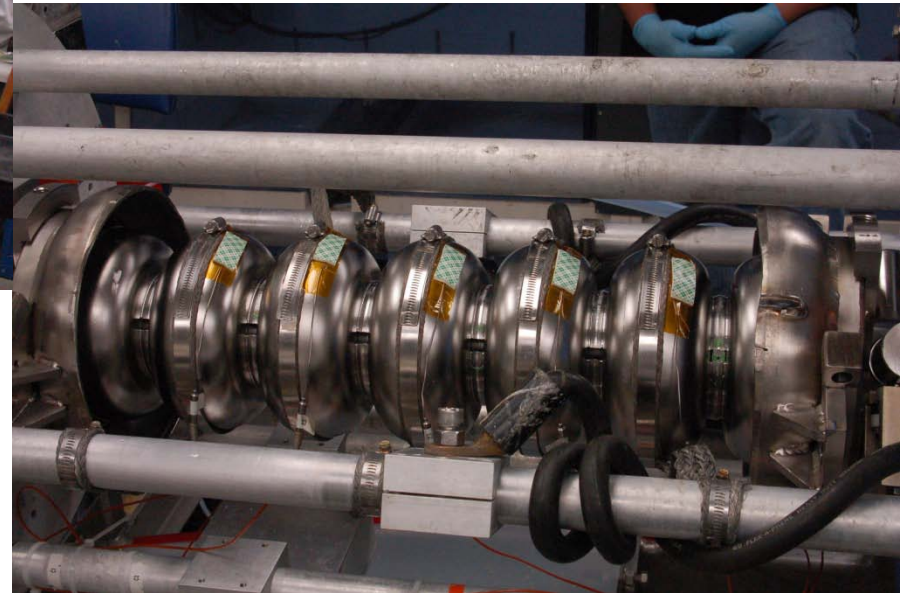
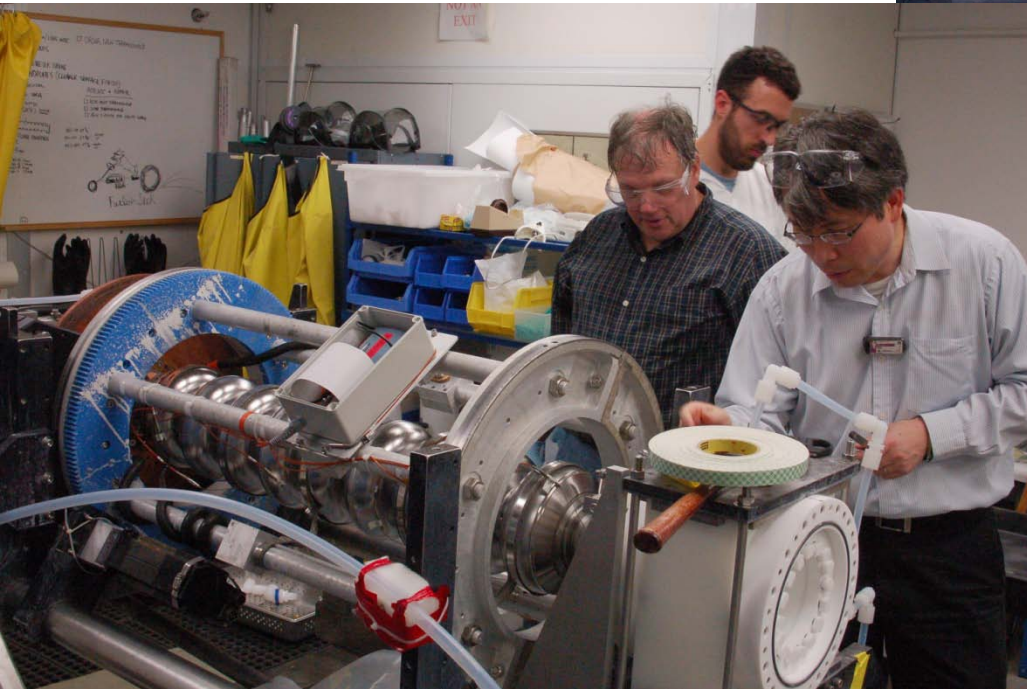
**SRF Materials Mtg, February 2010**

(Informal contribution)

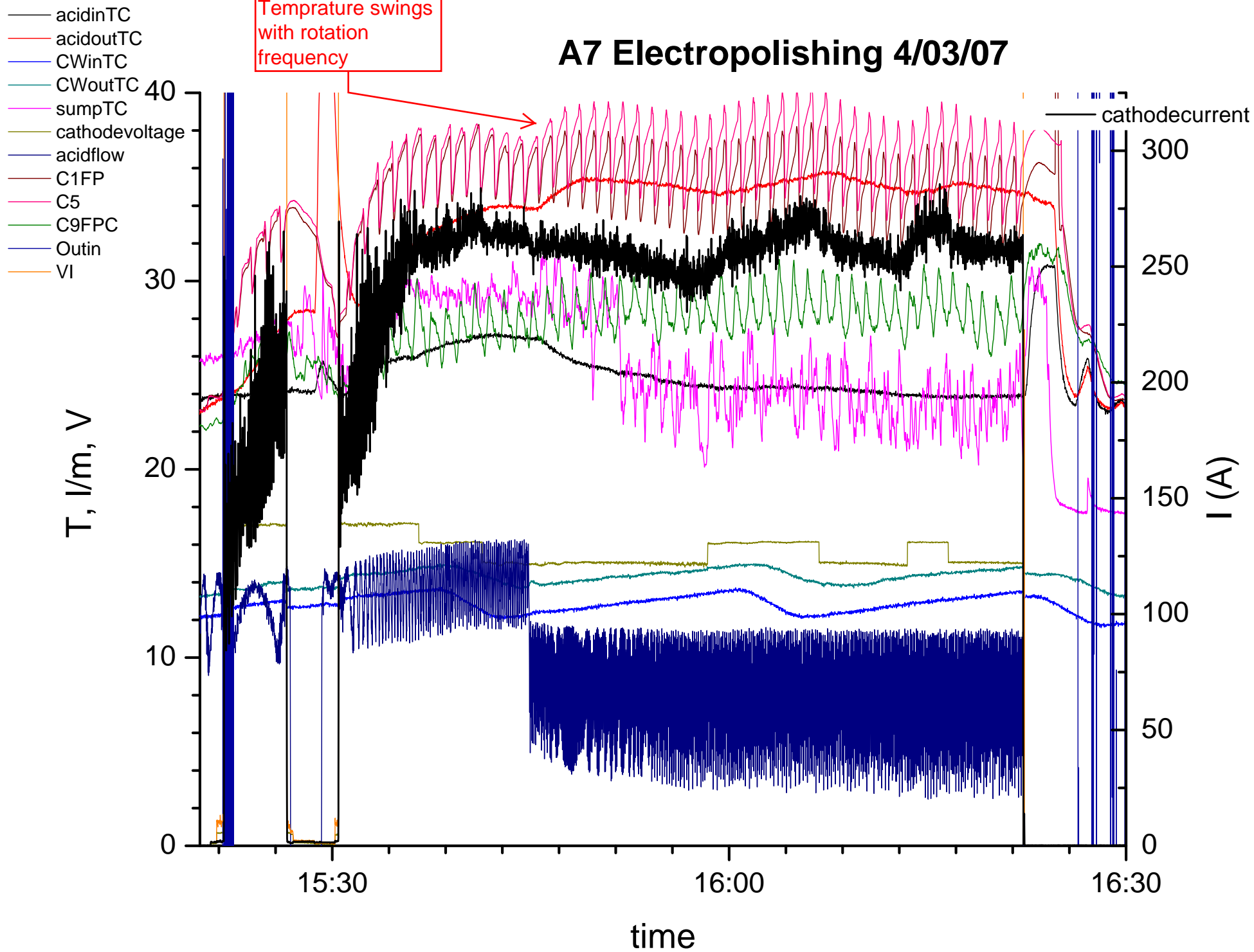
## The situation:

- Basic EP studies point the way toward optimum smoothness and process definition
- Detailed cavity surface requirements remain obscure –
  - *What topography matters for what surface fields?*
- We press for increasing process control for cavity treatments.  
>> **reliability**
- Basic studies point to process **temperature** as the most critical parameter for assuring uniform, repeatable leveling

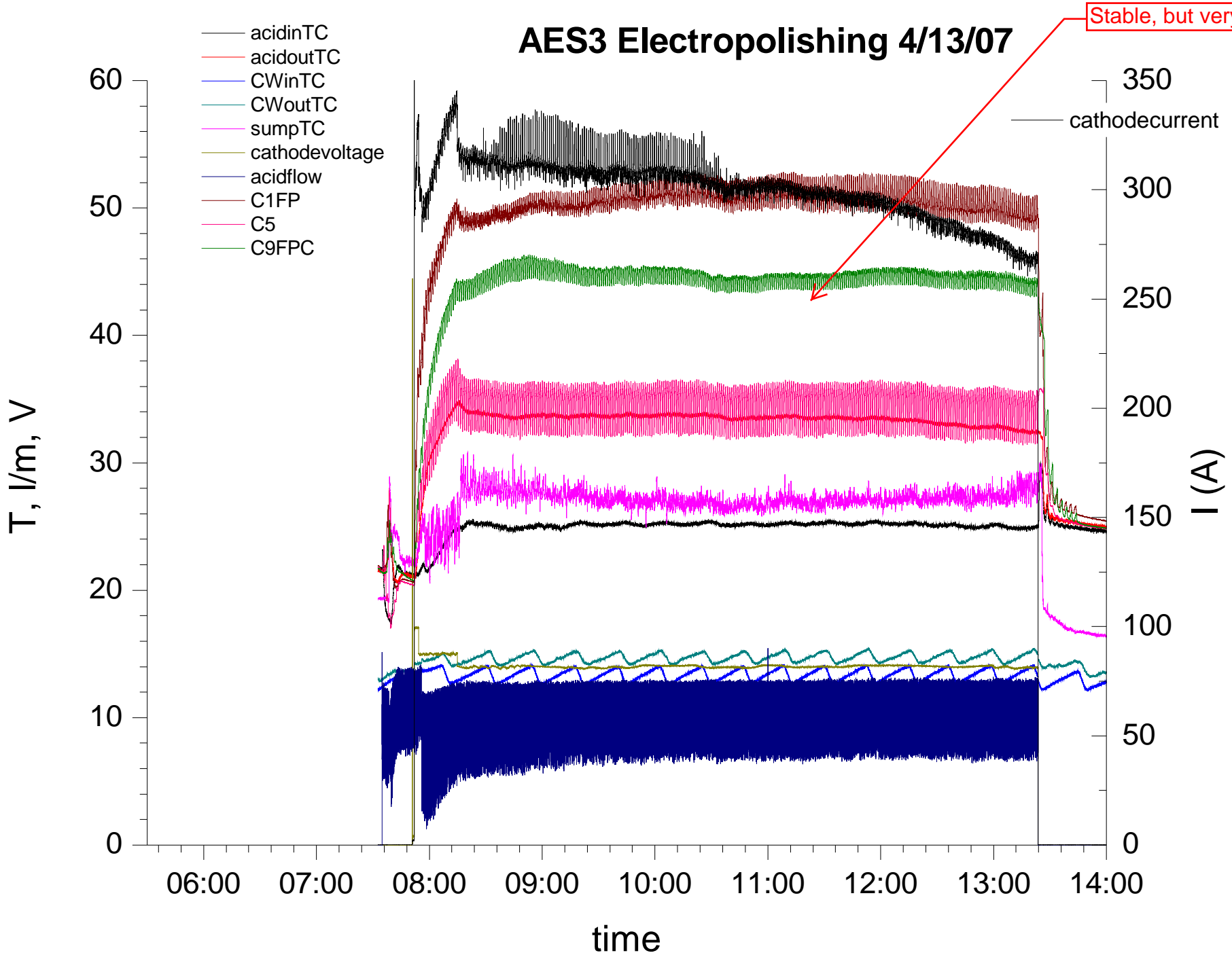
Here, I address **Process** only, not cavity performance



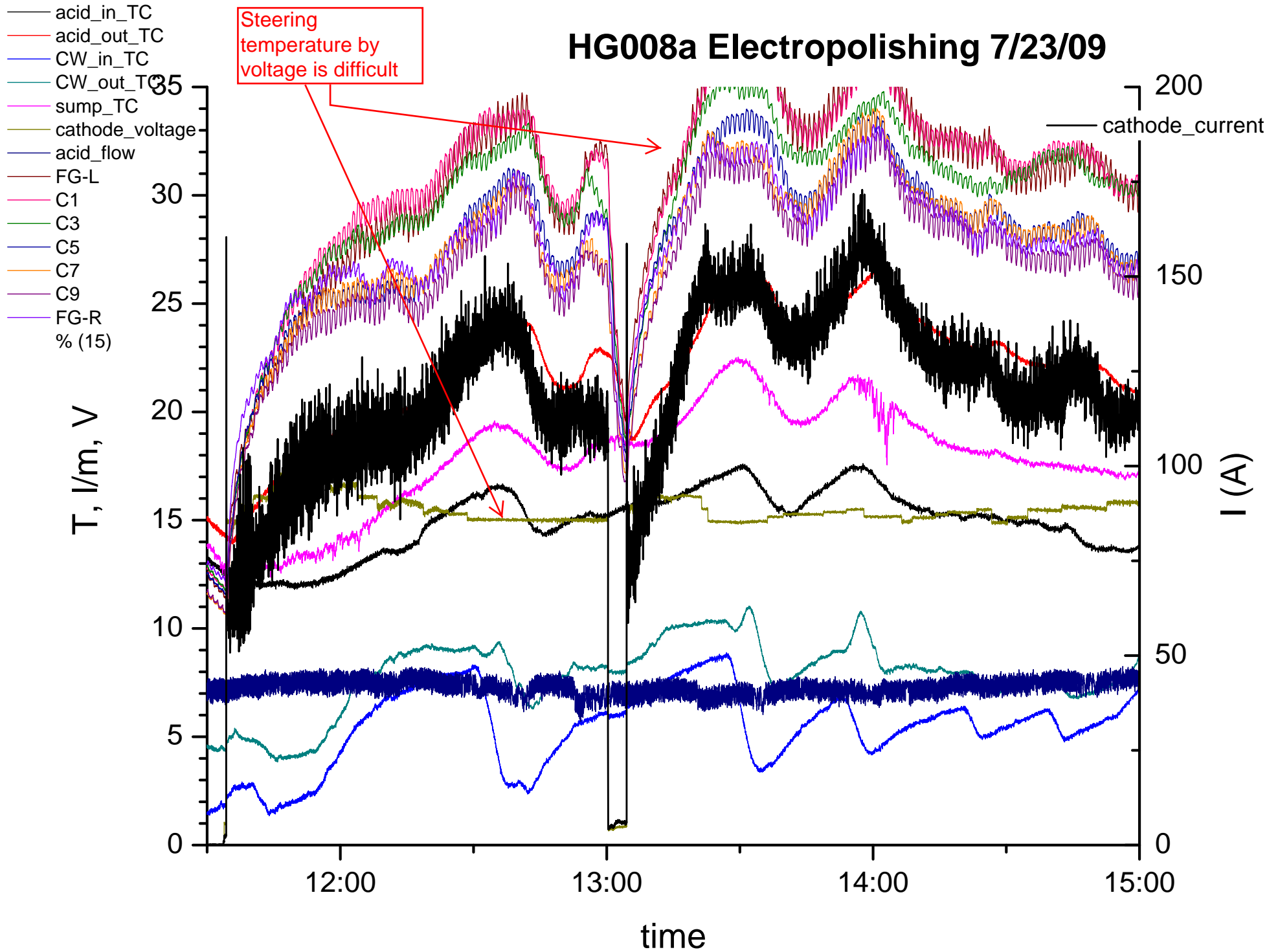
# A7 Electropolishing 4/03/07



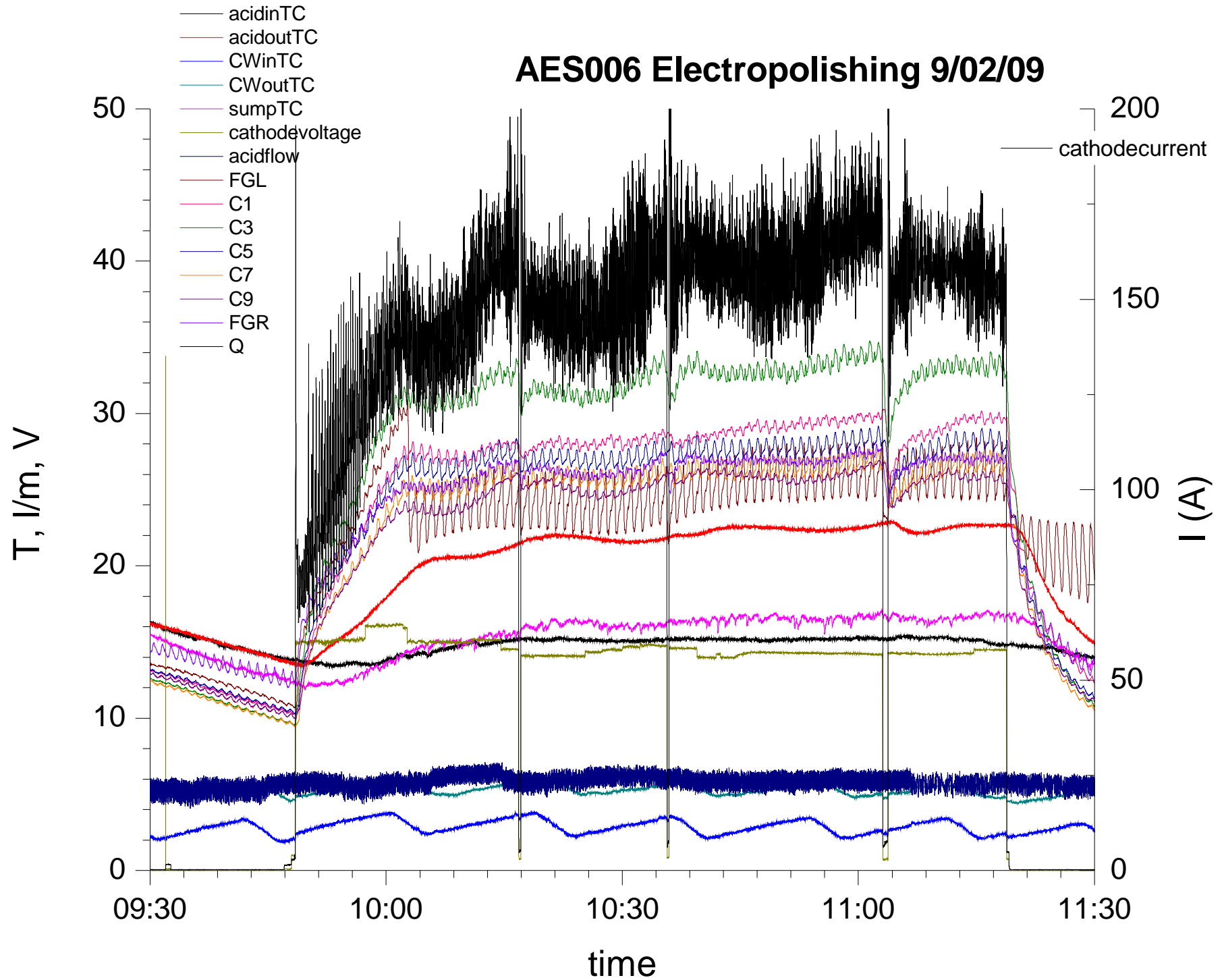
# AES3 Electropolishing 4/13/07



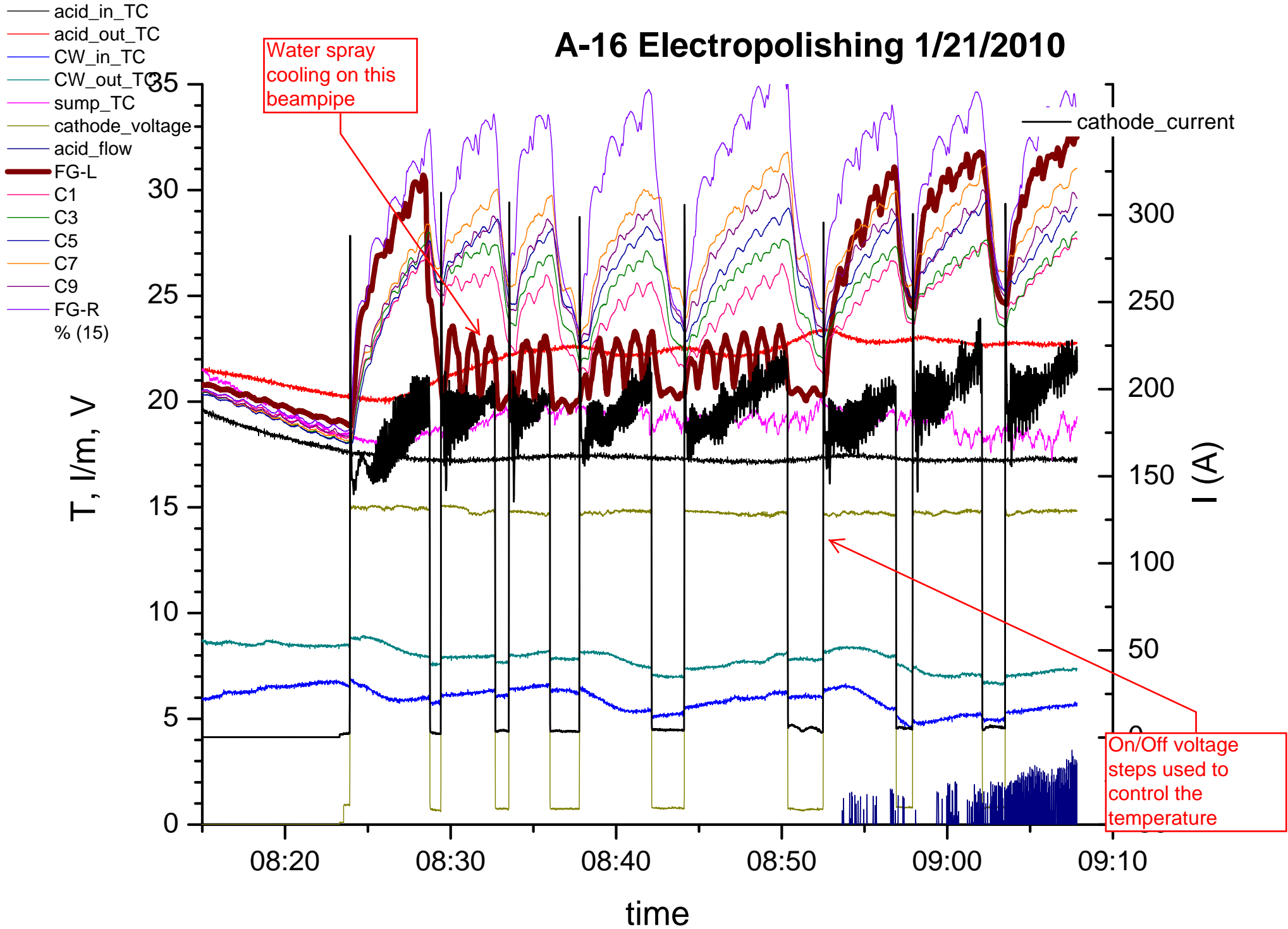
# HG008a Electropolishing 7/23/09



# AES006 Electropolishing 9/02/09



# A-16 Electropolishing 1/21/2010

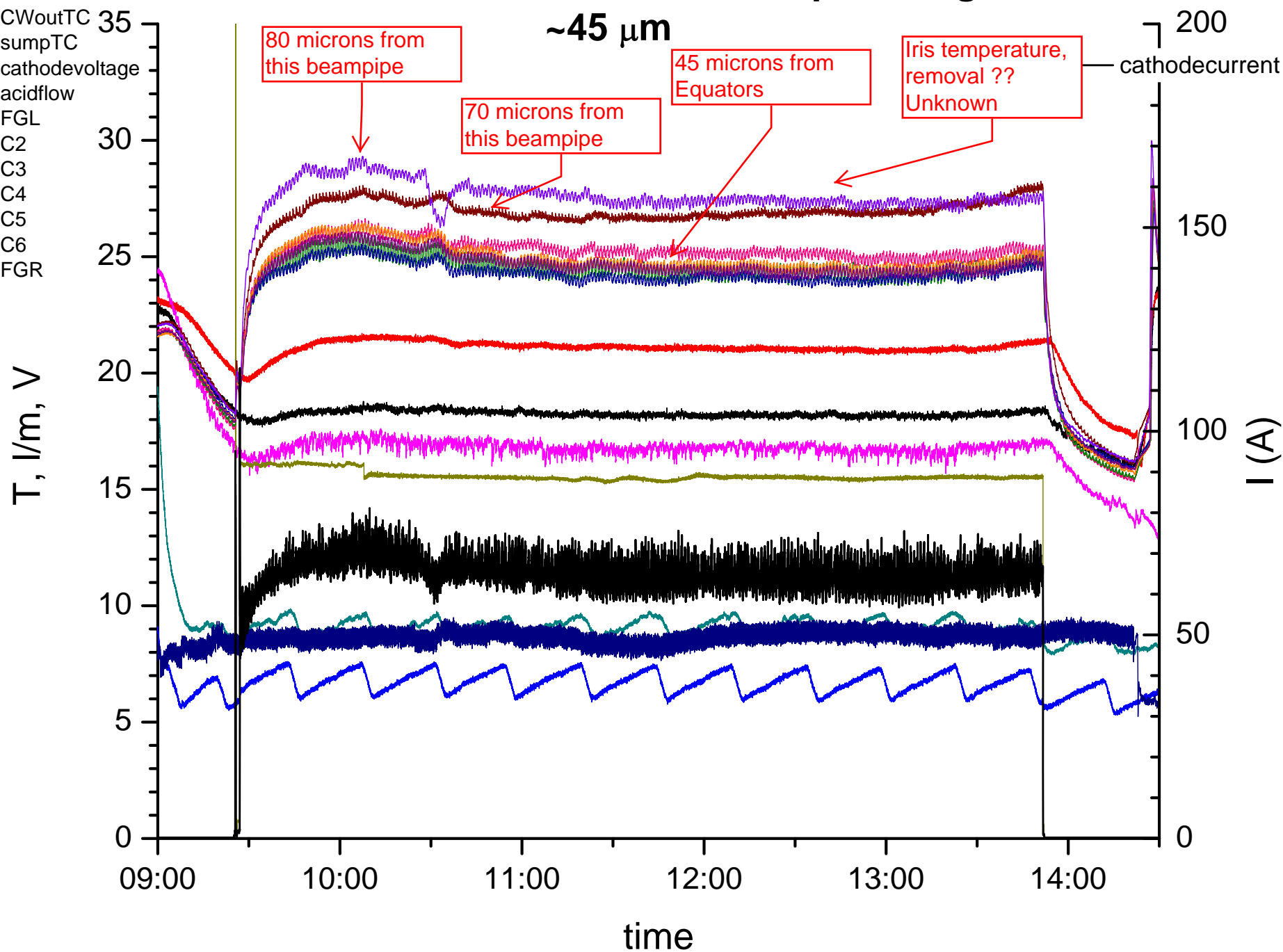




# LL003a Electropolishing 12/16/2009

~45  $\mu\text{m}$

- acidinTC
- acidoutTC
- CWinTC
- CWoutTC
- sumpTC
- cathodevoltage
- acidflow
- FGL
- C2
- C3
- C4
- C5
- C6
- FGR



# J100-2 Electropolishing 2/11/2010

- acidinTC
- acidoutTC
- CWinTC
- CWoutTC
- sumpTC
- cathodevoltage
- acidflow
- FGL
- C2
- C3
- C4
- C5
- C6
- FGR

