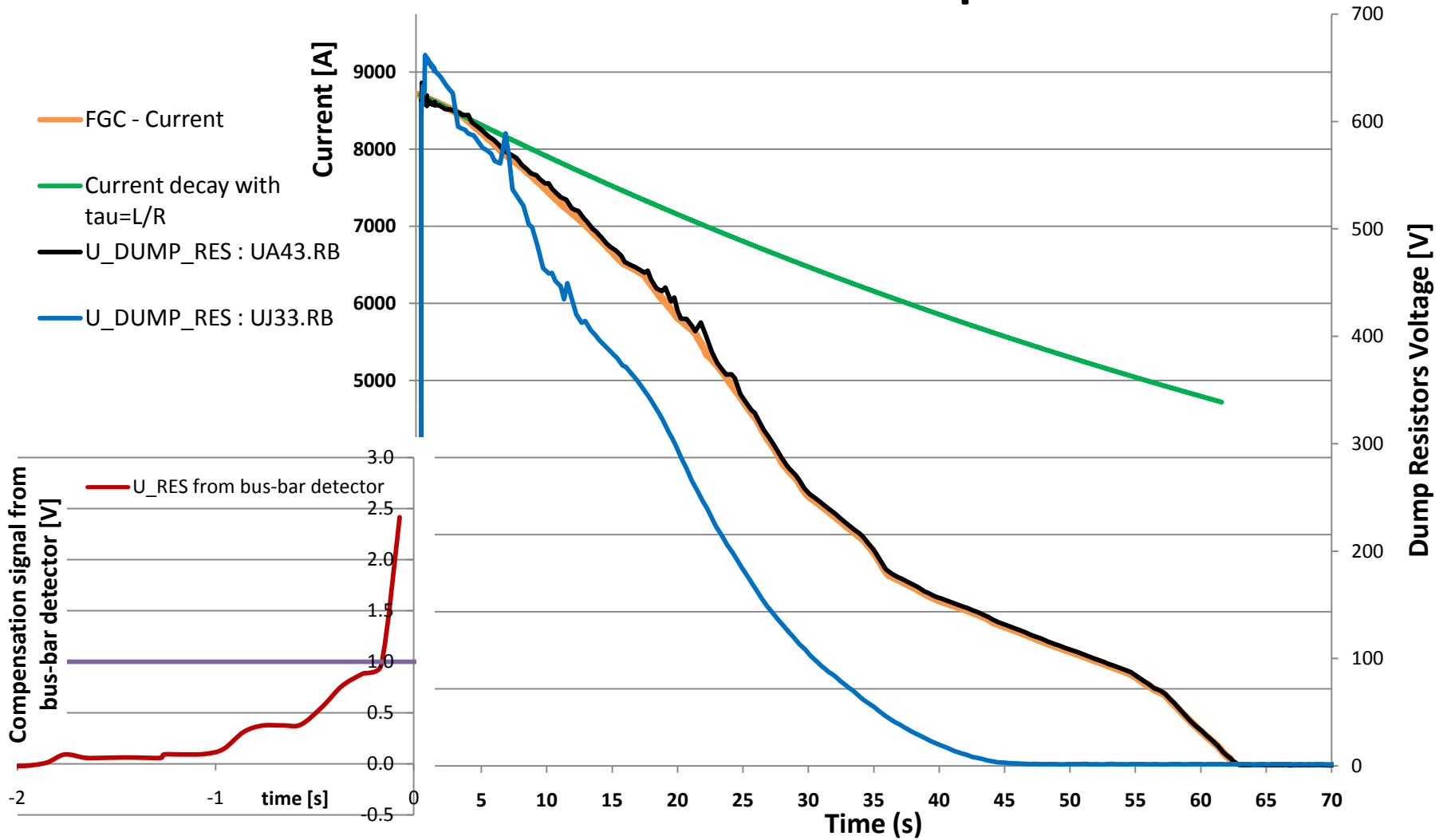


# Analysis of subsequent quenches

Sandrine Le Naour

# First constatation : Current in PC and Dump resistors

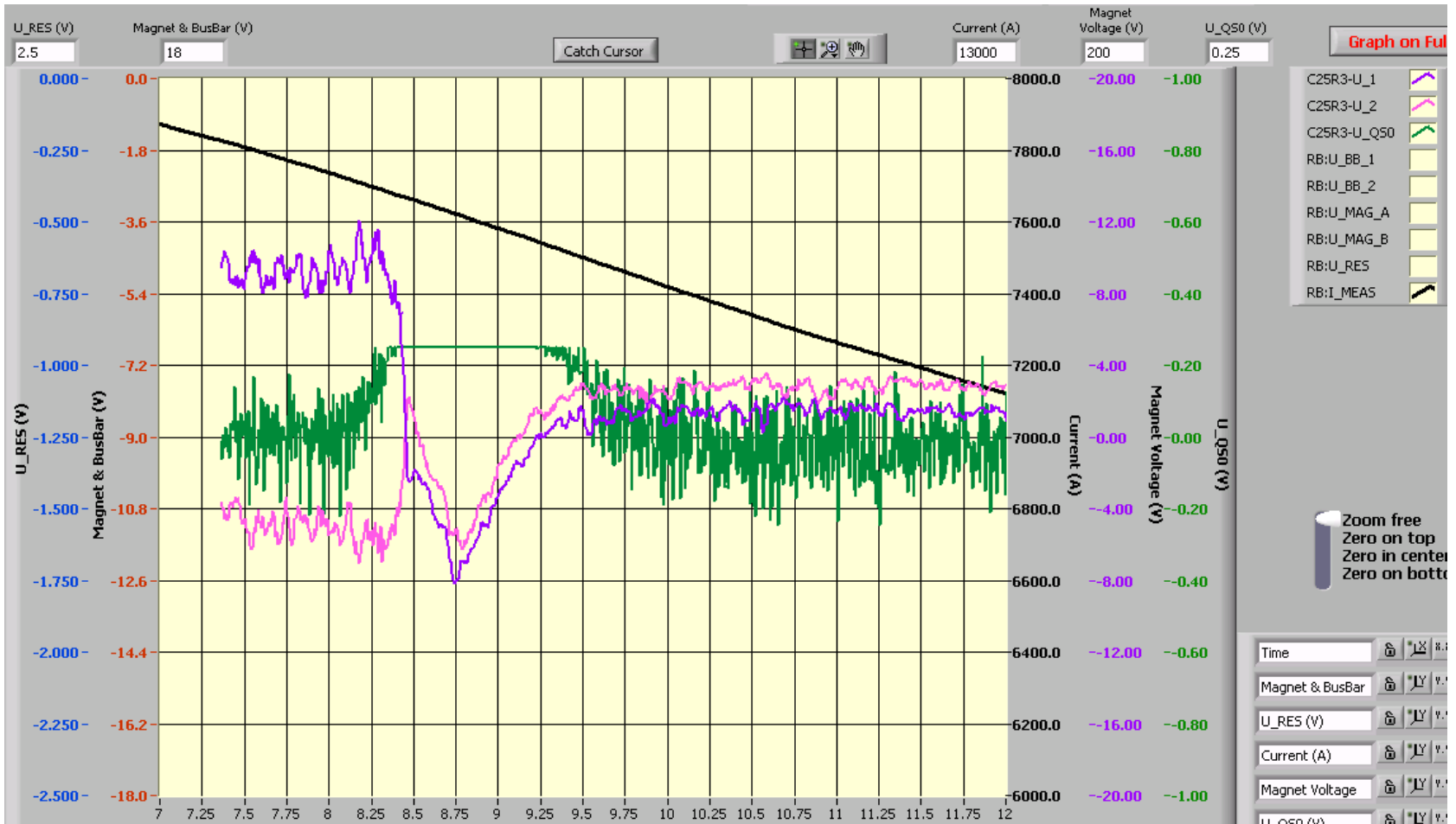


# Sequence of post mortem files

- 104 post-mortem files from individual magnets
  - 83 files : time stamp = time of quench heaters firing
  - 21 files triggered spuriously
    - 7PM : quench heaters fired during data collection
    - 12PM : quench heaters did not fire during the data collection, but fired later
    - 2 PM : quench heaters did not fired at all (threshold never reached)
- 2 post-mortem files were lost
  - ➔ 104 quench heaters triggered out of 154

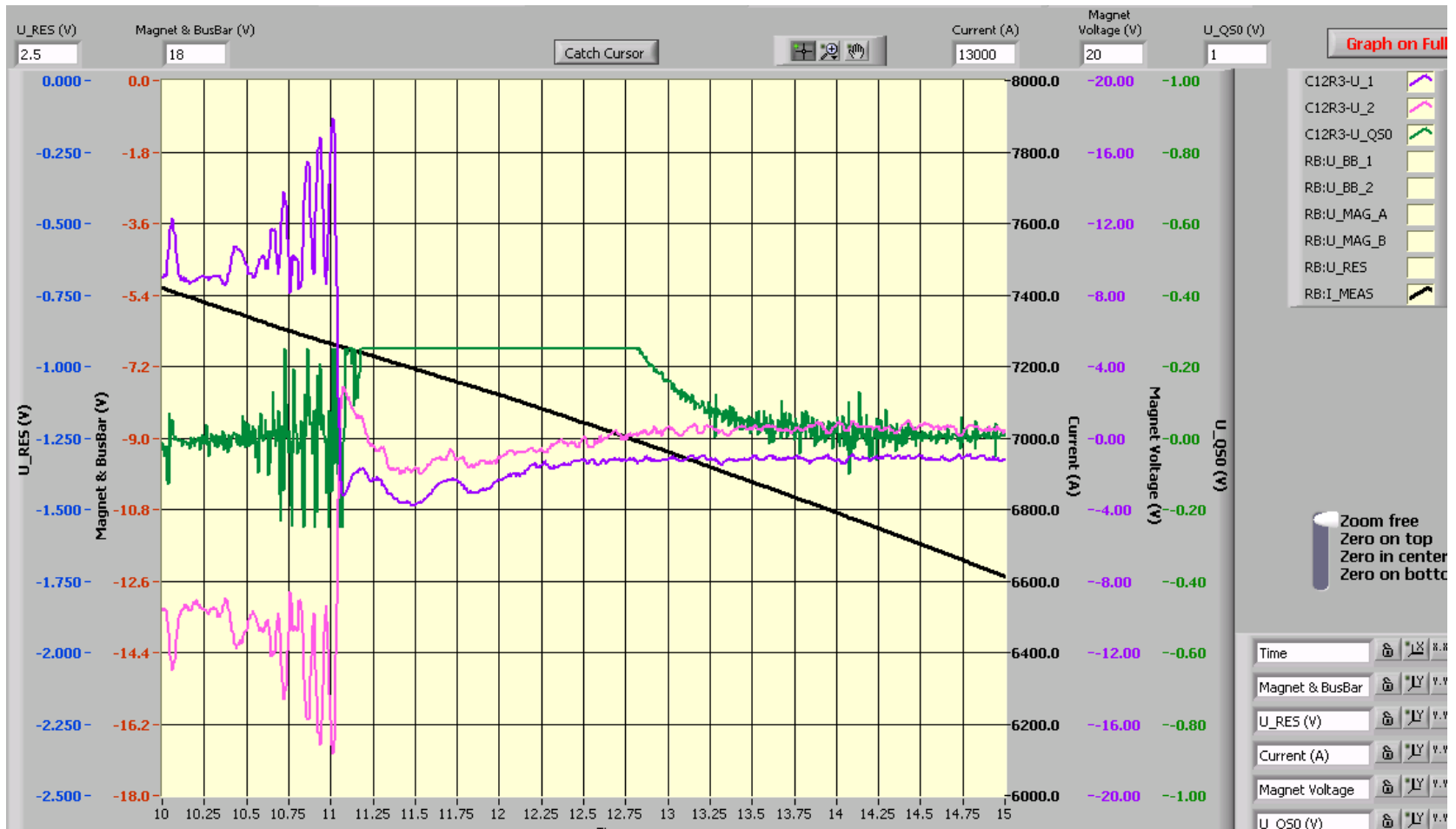
# Sequence of quenches in magnets

Quench heaters triggered due to a resistive development



# Sequence of quenches in magnets

Quench heaters triggered due to an external excitation

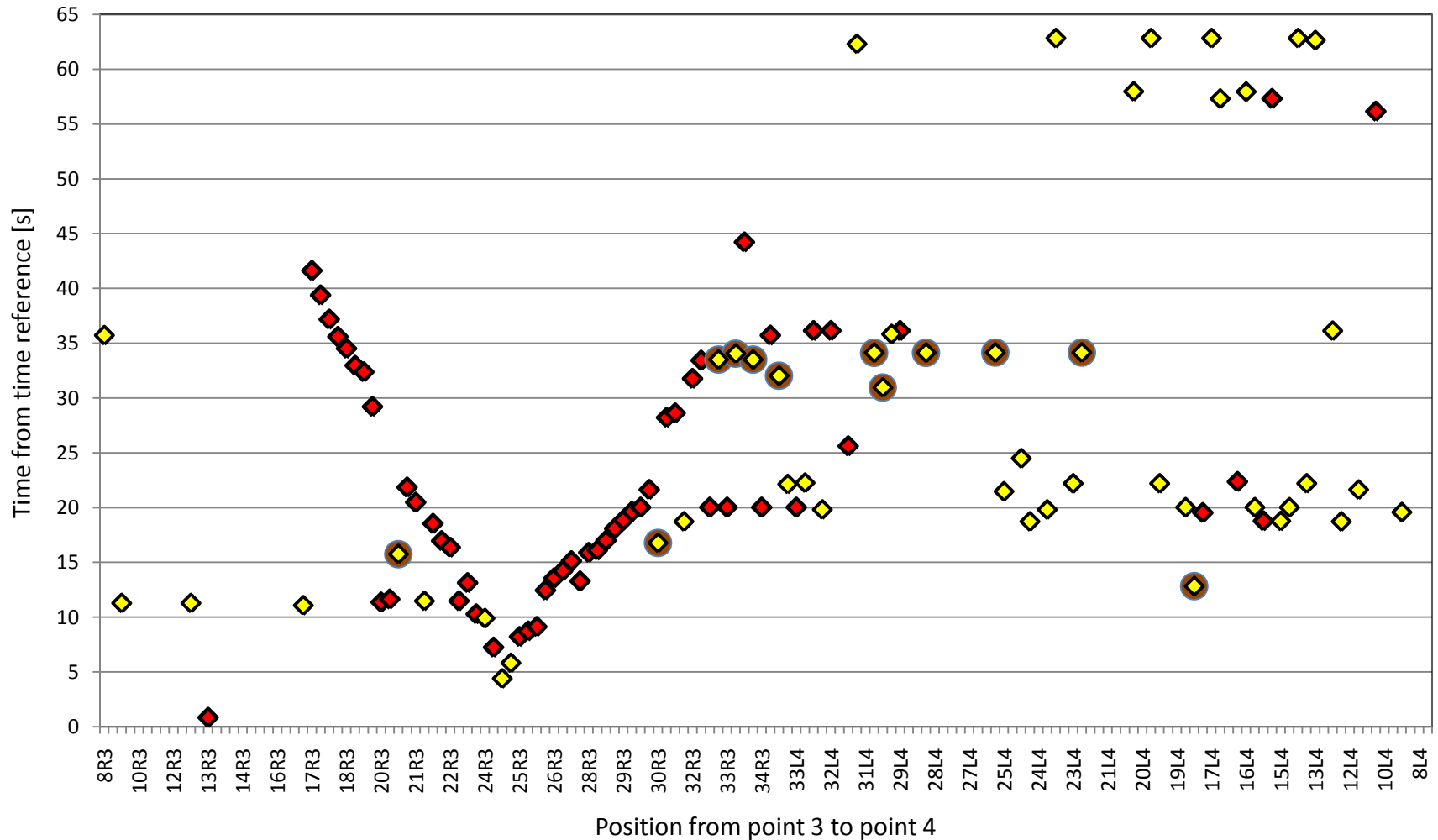


# Sequence of quenches in magnets

◆ Quench Heater triggered due to a resistive development

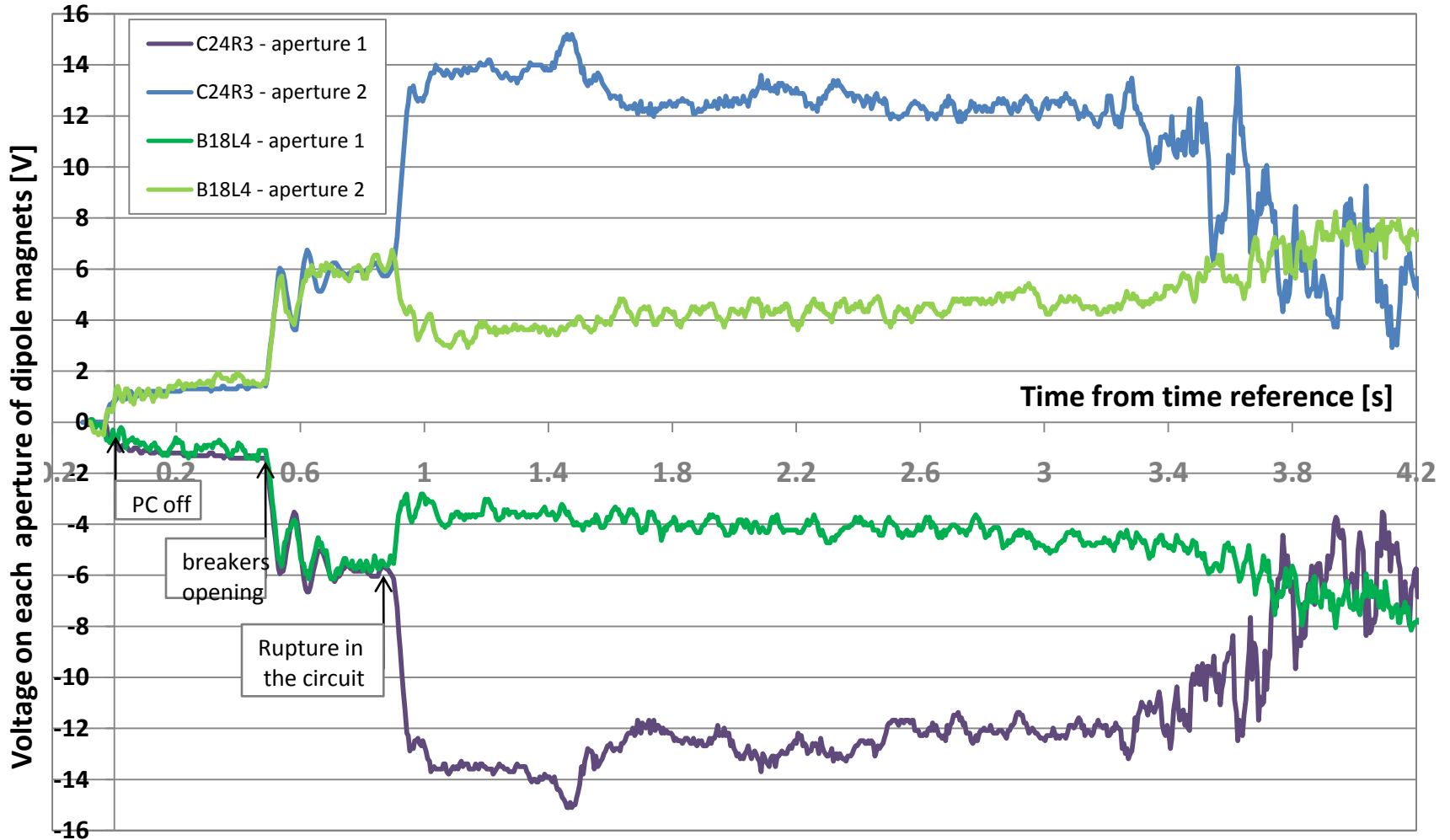
● No quench during the acquisition time of the post mortem file

◆ Quench Heaters triggered due to an external excitation



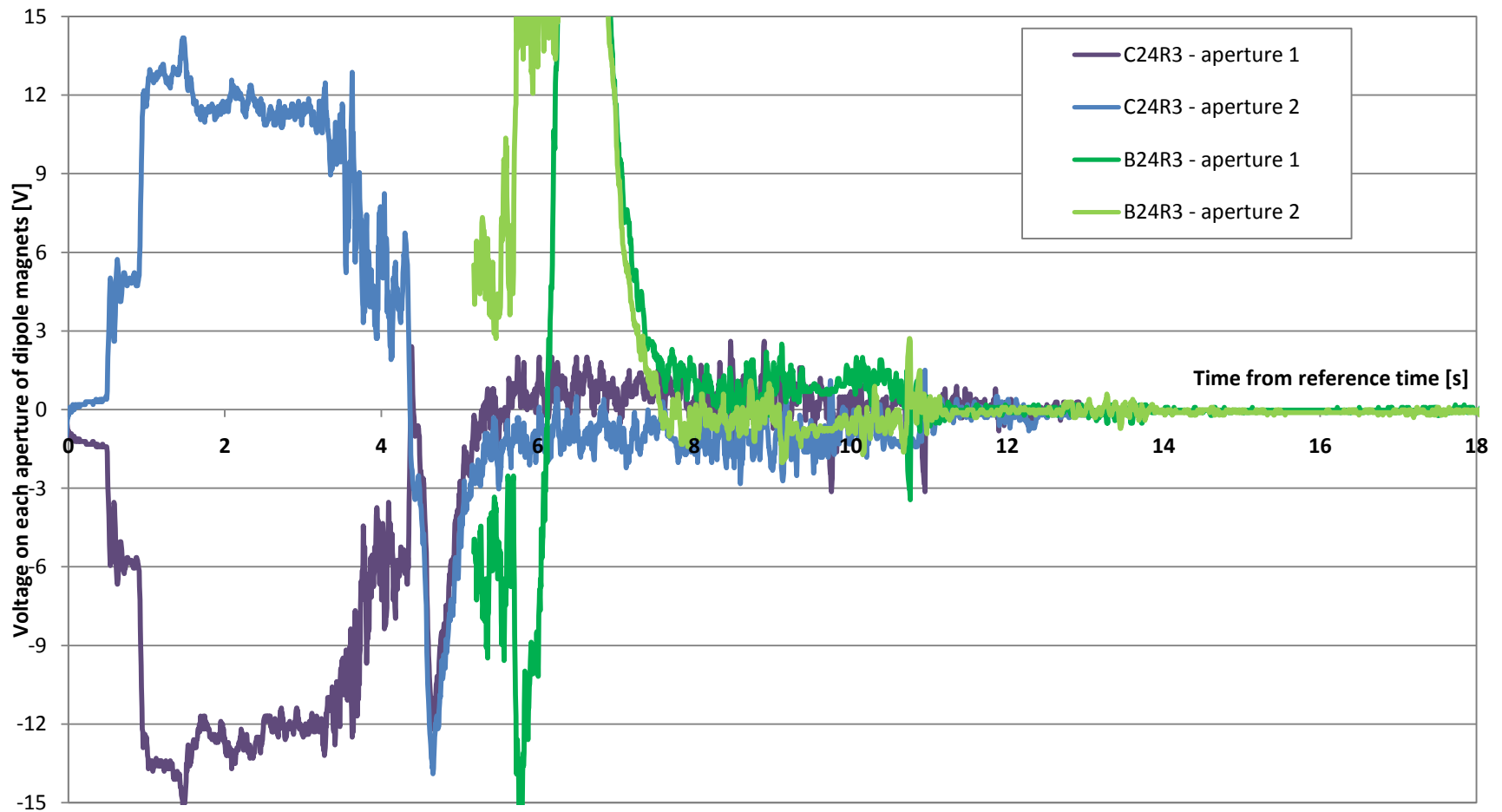
# Ruptures in the circuit

First : between C24R3 and A25R3



# Ruptures in the circuit :

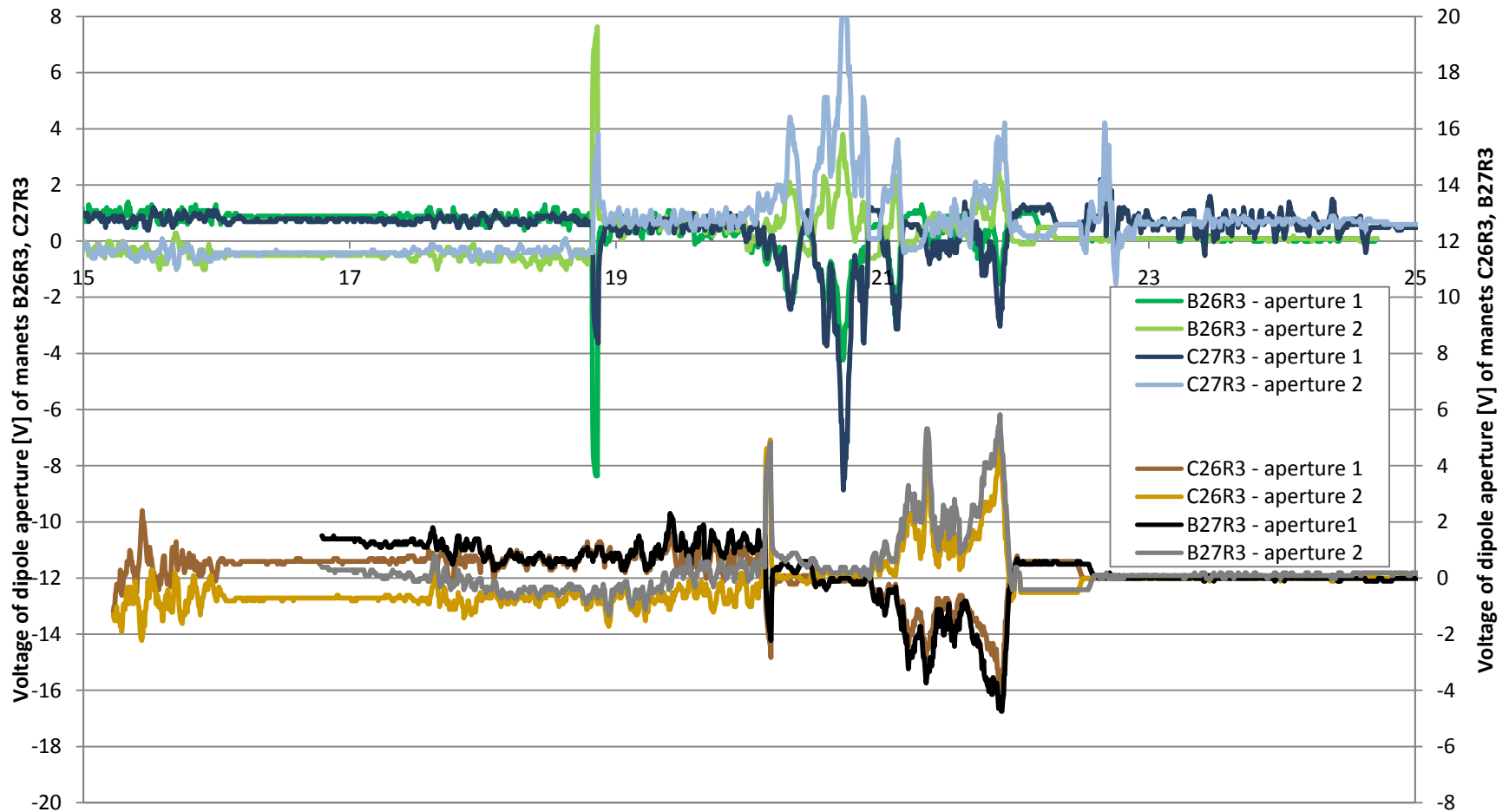
between C23R3 and A24R3 or A24R3 and B24R3



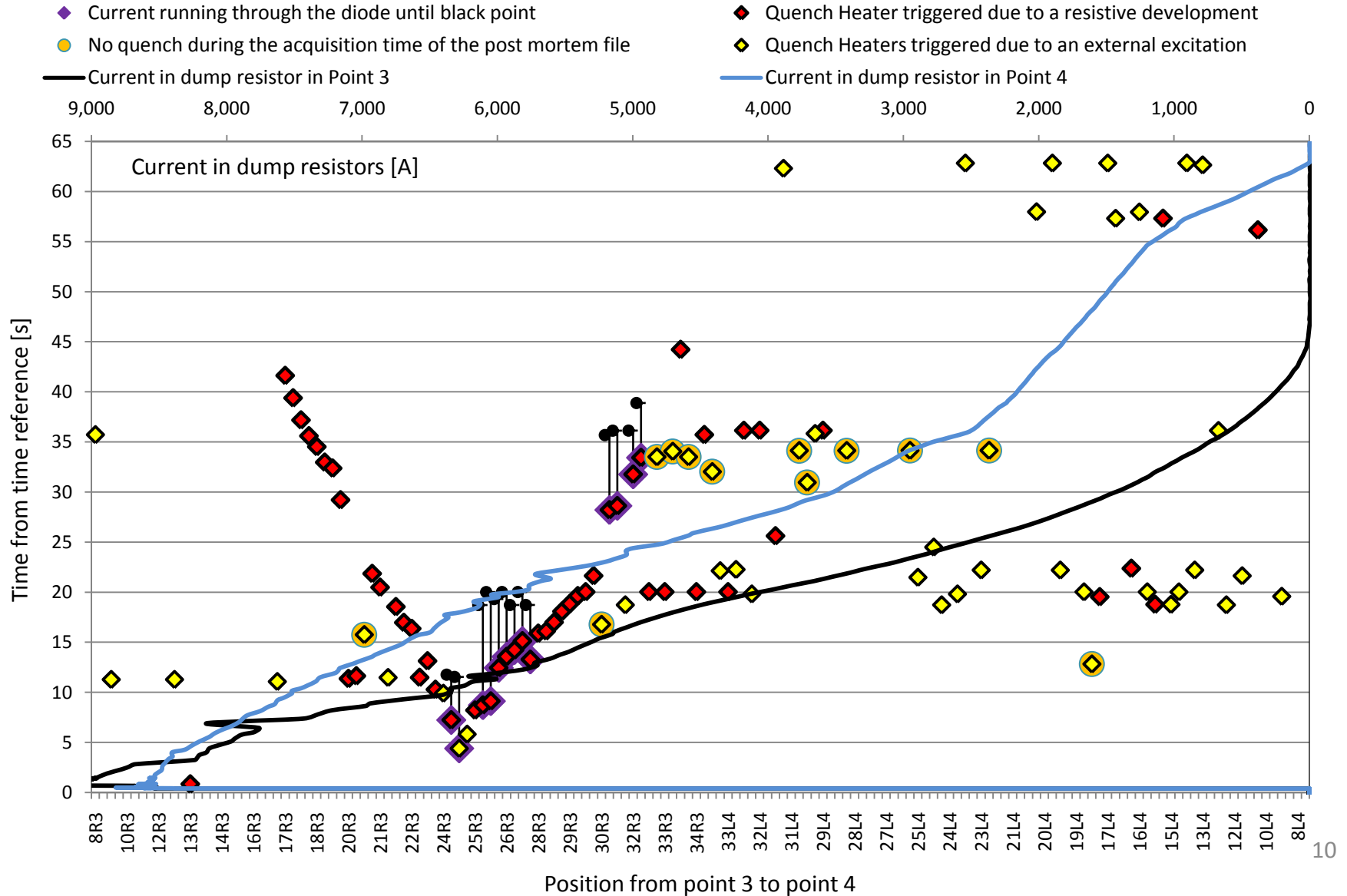


# Ruptures in the circuit :

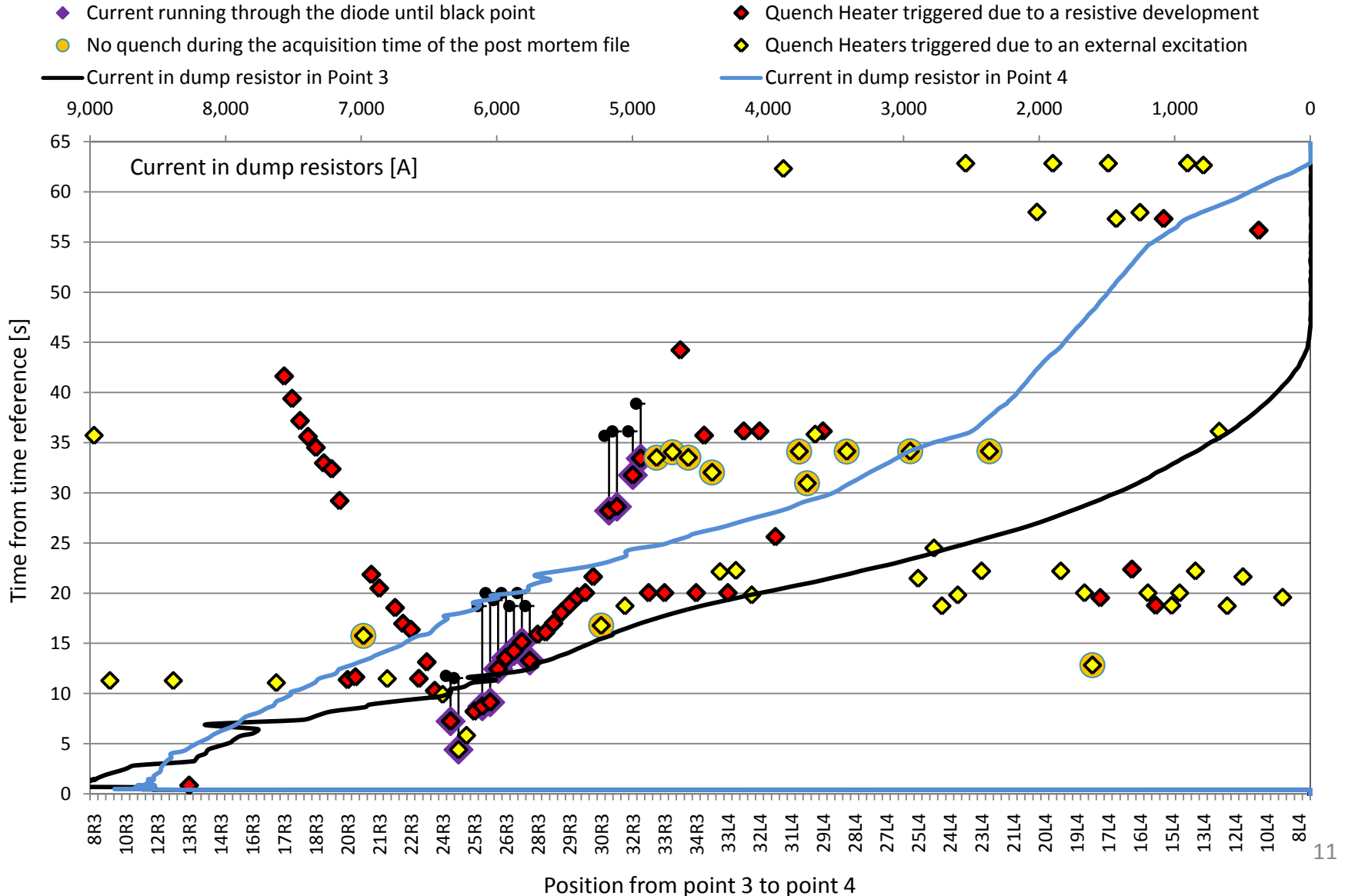
## between C27R3 and A28R3



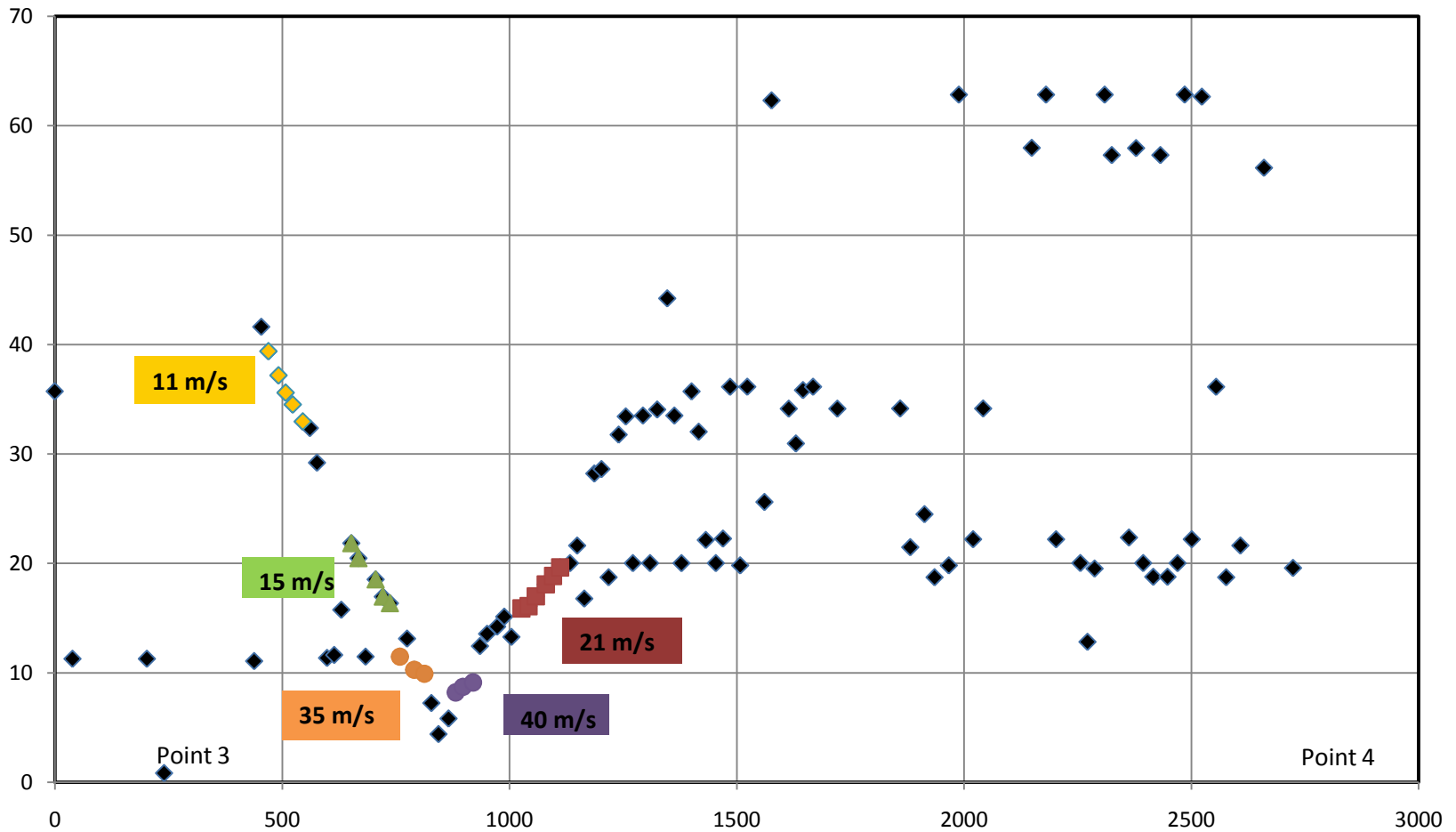
# Sequence of quenches in magnets



# Sequence of quenches in magnets



# Quench propagation



# Energy dissipated during the incident

