

Are there some evidences of  
structure responses alterations  
during the pulses just before a BD ?

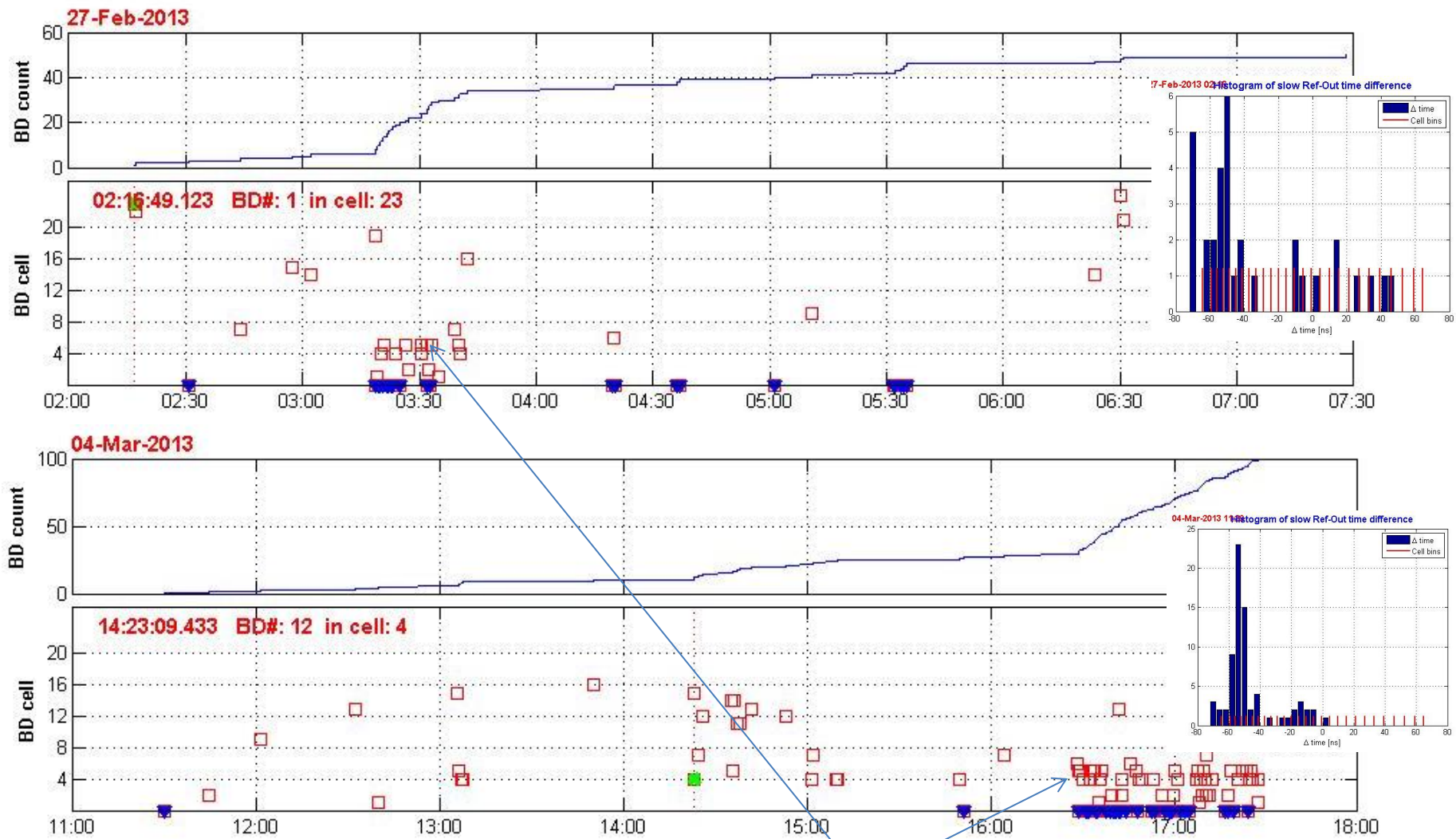
X-box1 experiments and data processing  
(Jan Kovermann, Ben Wolley, Joseph Tagg,  
Wilfrid Farabolini)

# Scope of the study

- BD signals (RF, Faraday Cup, Vacuum...) are data logged.
- But also some signals previous to the BD (20 ms and 40 ms before).
- Otherwise signals are data logged every 60 seconds.

Research for some differences in the immediate signals previous to a BD.

# 2 examples of 8 hours sequences

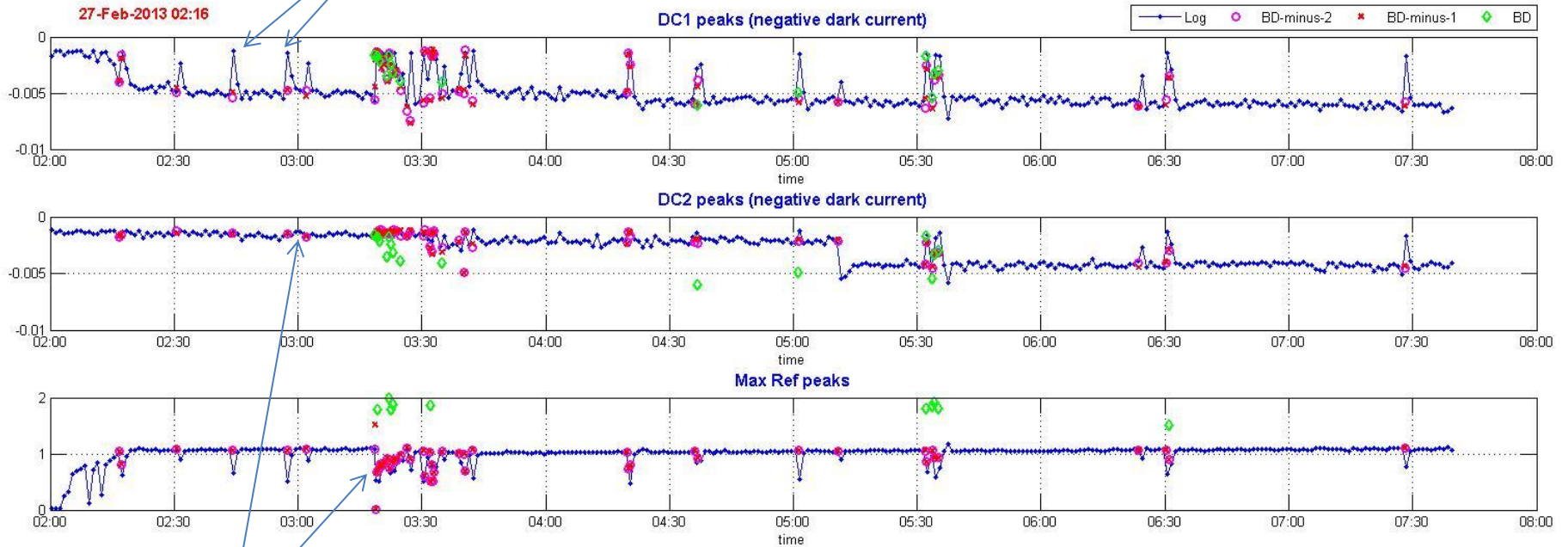


- During BD cluster a hot cell (# 4 or # 5) appears
- Blue marks show failures in BD location (delta time out of range)



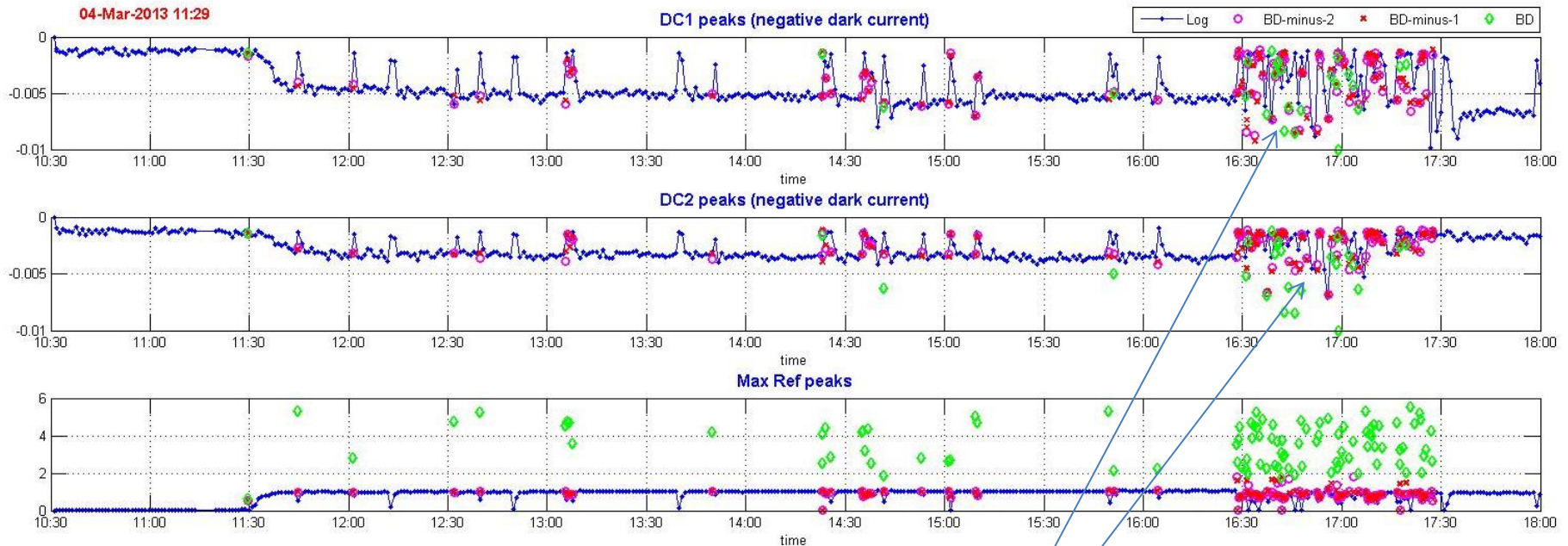
# Zoomed data of the previous slide

Klystron interruption and RF ramping after a BD detection



FCU and FCU peak values of the pulses just before a BD are identical to the continuous data logged signals.

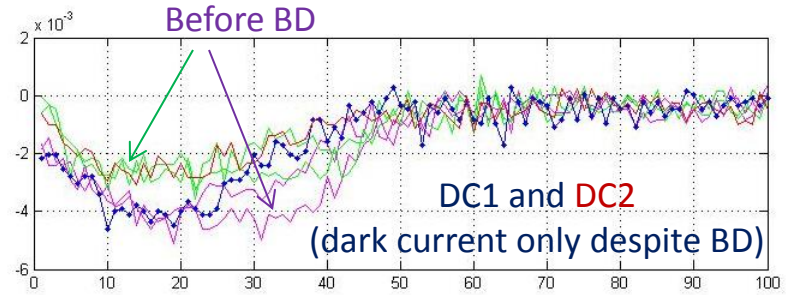
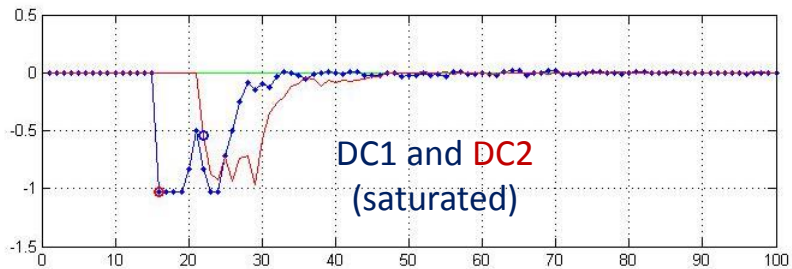
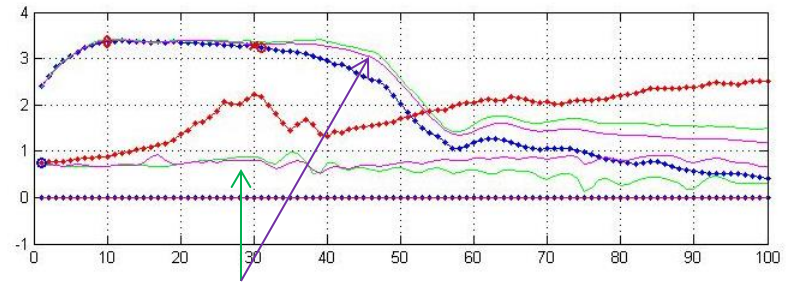
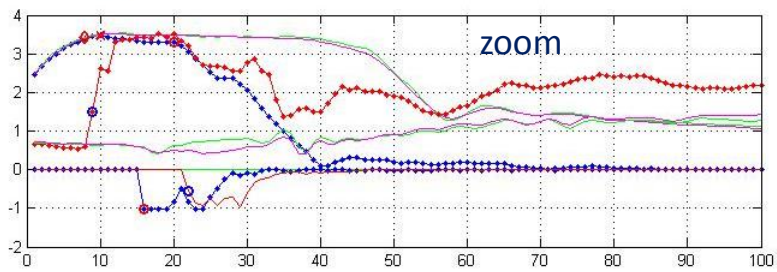
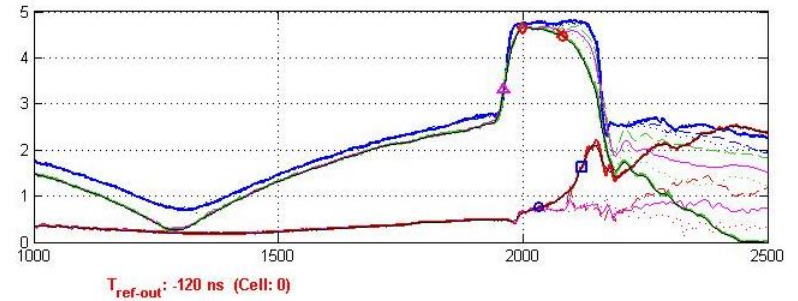
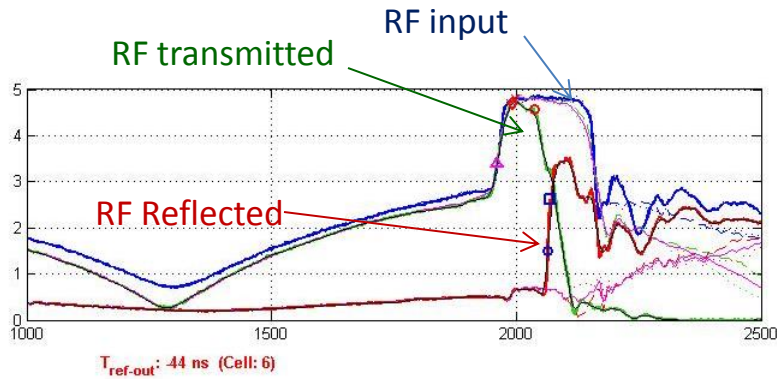
# Zoomed data from the 4<sup>th</sup> March



- Still no evidence of any precursor.
- During cluster FCU signals are frequently weak.
- Can be due to BD when RF power is still ramping on.



# Signals





# Conclusion

- We have found no evidence of any precursor to a BD in the immediate pulses before the this BD.
- It seems that the BD occurs suddenly without signs of progressive degradation of the structure (or at least not yet visible)