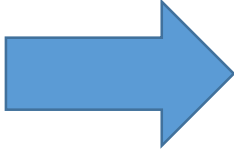


Xboxes Update

29/07/2020

Summary

- Stopped this week for Emergency Stop Tests
 - XBOX2:
 - Vacuum was ready by Thursday afternoon
 - HPSU broken in Modulator
 - XB3AB: T42 Structures
 - Setpoint increased to 27.1MW (120MV/M) on Wednesday afternoon
 - Ran from Wednesday until Sunday night at 27.1MW
 - (Stayed at 27.1MW because Line 2 was unhappy)
 - Modulator B interlocked and this needs investigating
- 
- XBOX1: klystron diode mode
 - XBOX2:
 - Back online, now at 23MW per structure (summary slide following).
 - XBOX3AB: T42 Structures
 - Flat running at 27.1MW
 - Increased DC thresholds after the meeting last week
 - Xbox3 might have to take a pause in the next few days as there is a problem with the computer

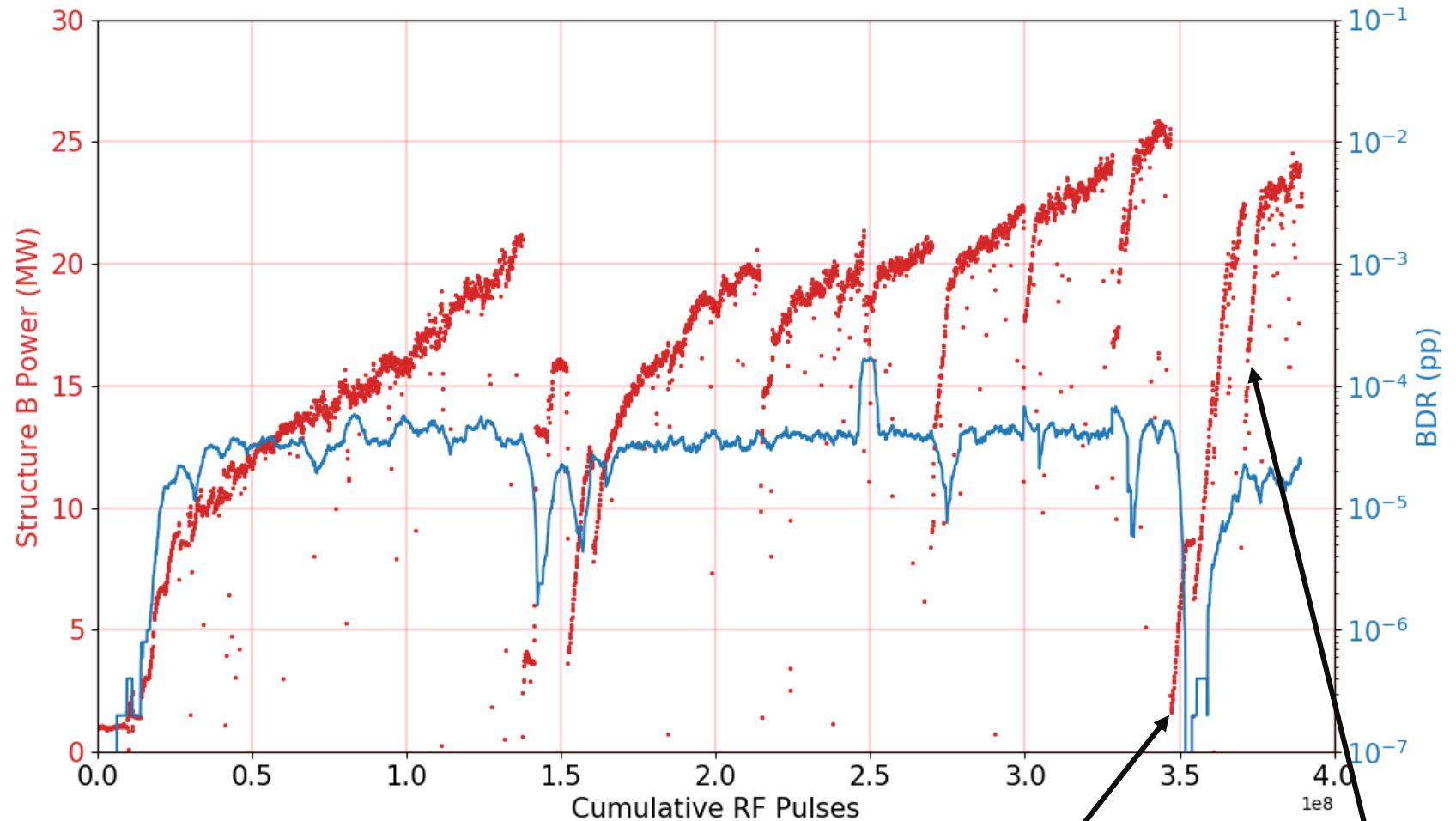
XBOX2

Ran over the weekend, reached saturation Monday evening. Modulator voltage has now been increased to 1100V.

Back up to **23MW** (again) and limited by BDs.

Parameters:

- 0.7us klystron pulse
- 50ns pulse
- 50Hz rep rate
- **Target Power:** 35MW
Peak in structure B
- **BDR Setpoint:** 3E-5



Restarted here.

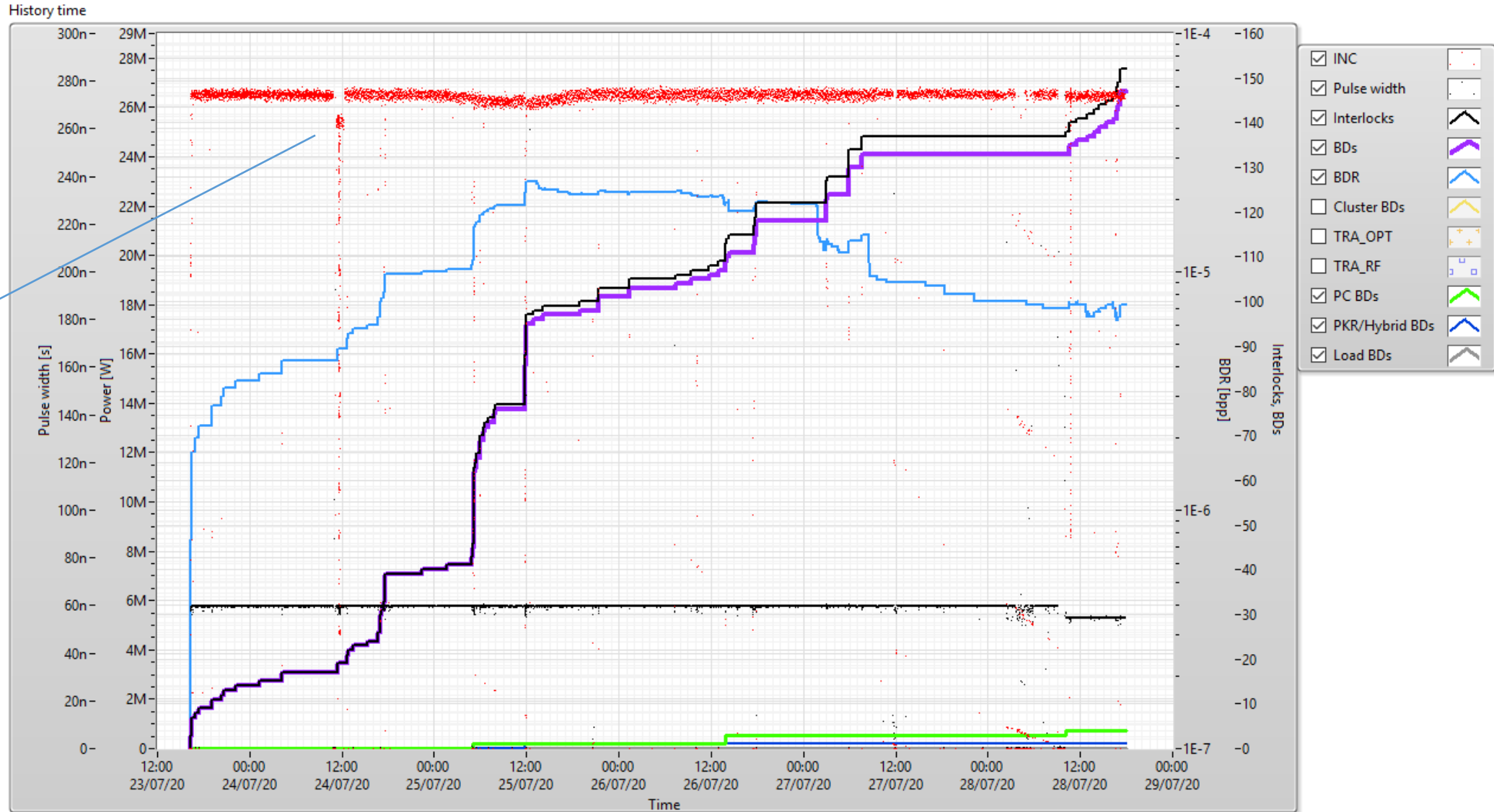
Replaced load here.

XBOX3 AB – Line 1

Parameters:

- 1.3us klystron pulse
- **50ns pulse**
- 50Hz rep rate
- **Current Setpoint:
27.1MW Peak**

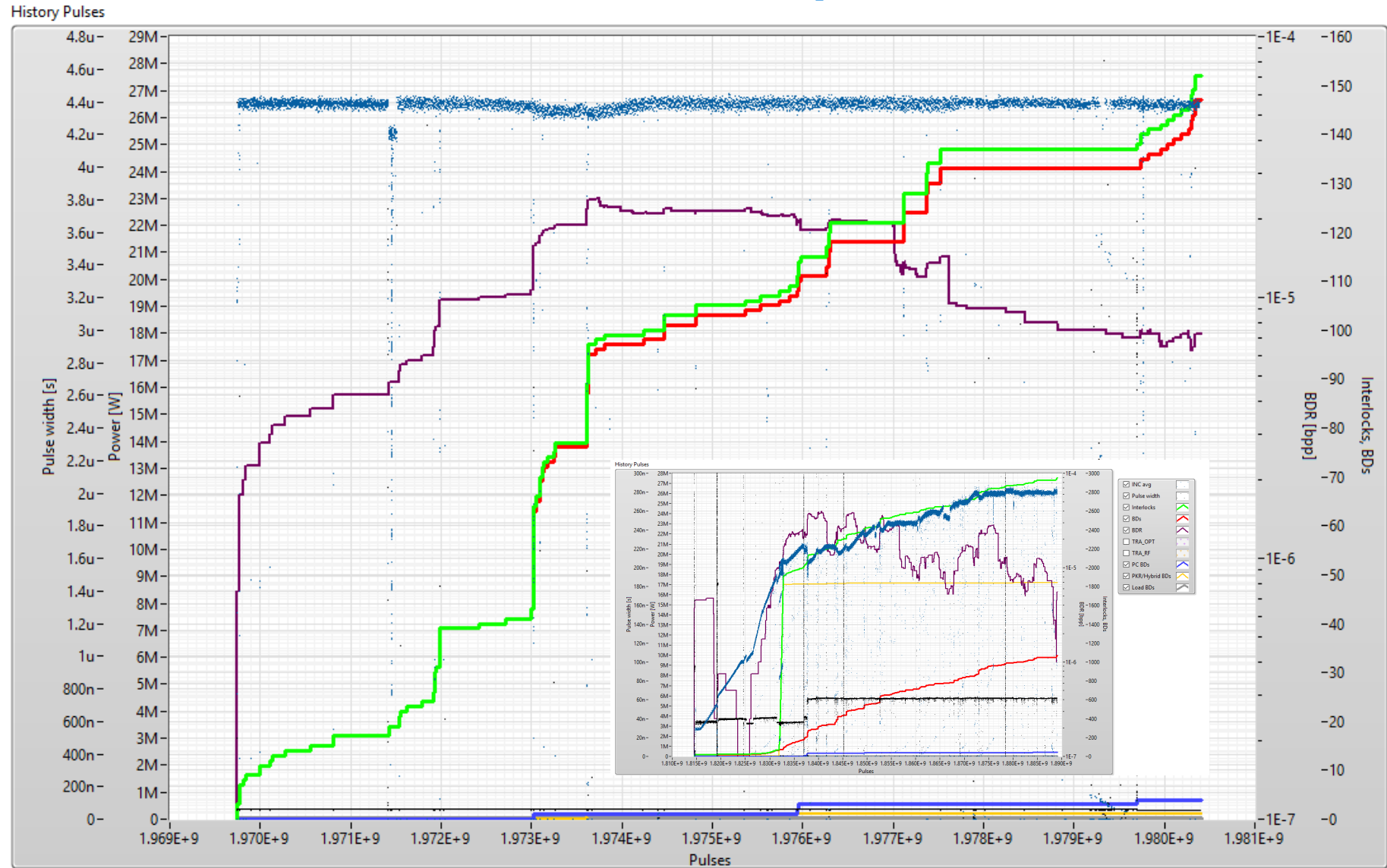
Loaded
wrong
config file!



XBOX3 AB – Line 1

Parameters:

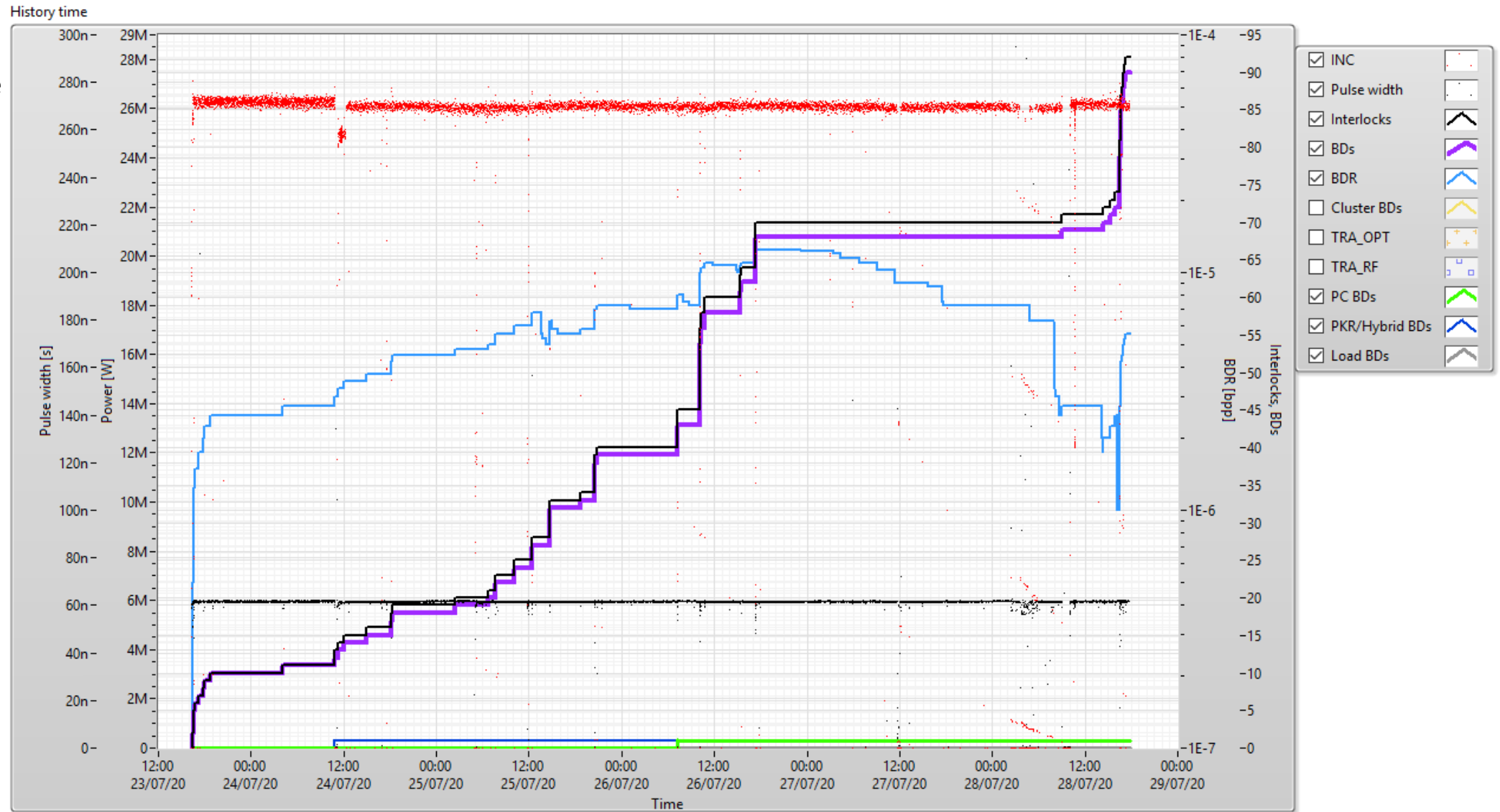
- 1.3us klystron pulse
- **50ns pulse**
- 50Hz rep rate
- **Current Setpoint:
27.1MW Peak**



XBOX3 AB – Line 2

Parameters:

- 1.3us klystron pulse
- **50ns pulse**
- 50Hz rep rate
- **Current Setpoint: 27.1MW**

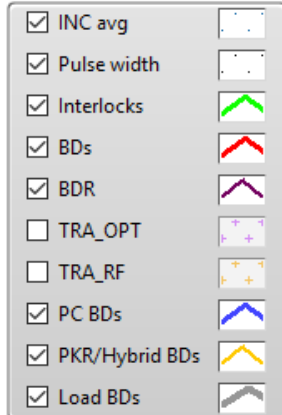
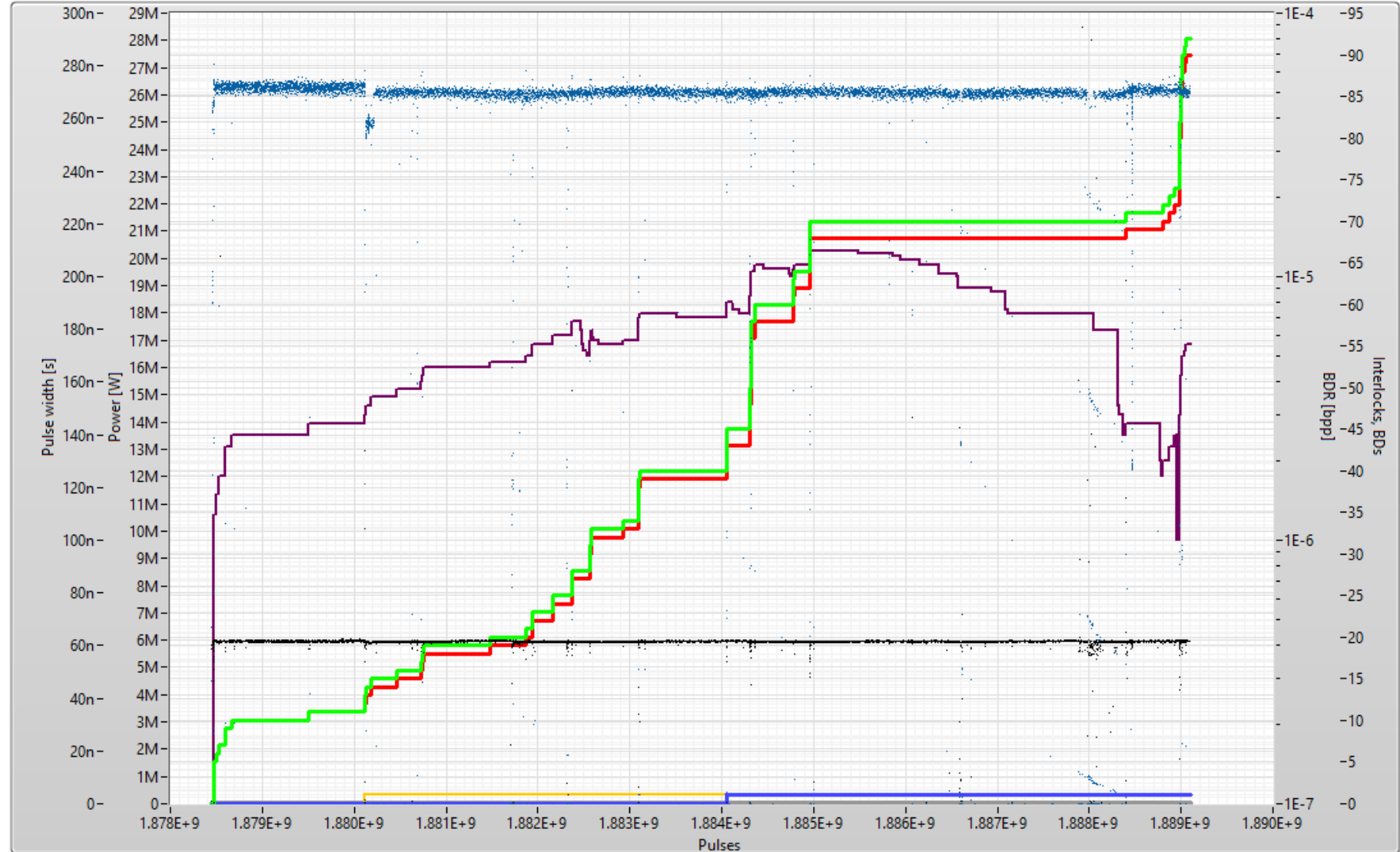


XBOX3 AB – Line 2

Parameters:

- 1.3us klystron pulse
- **50ns pulse**
- 50Hz rep rate
- **Current Setpoint:**
27.1MW

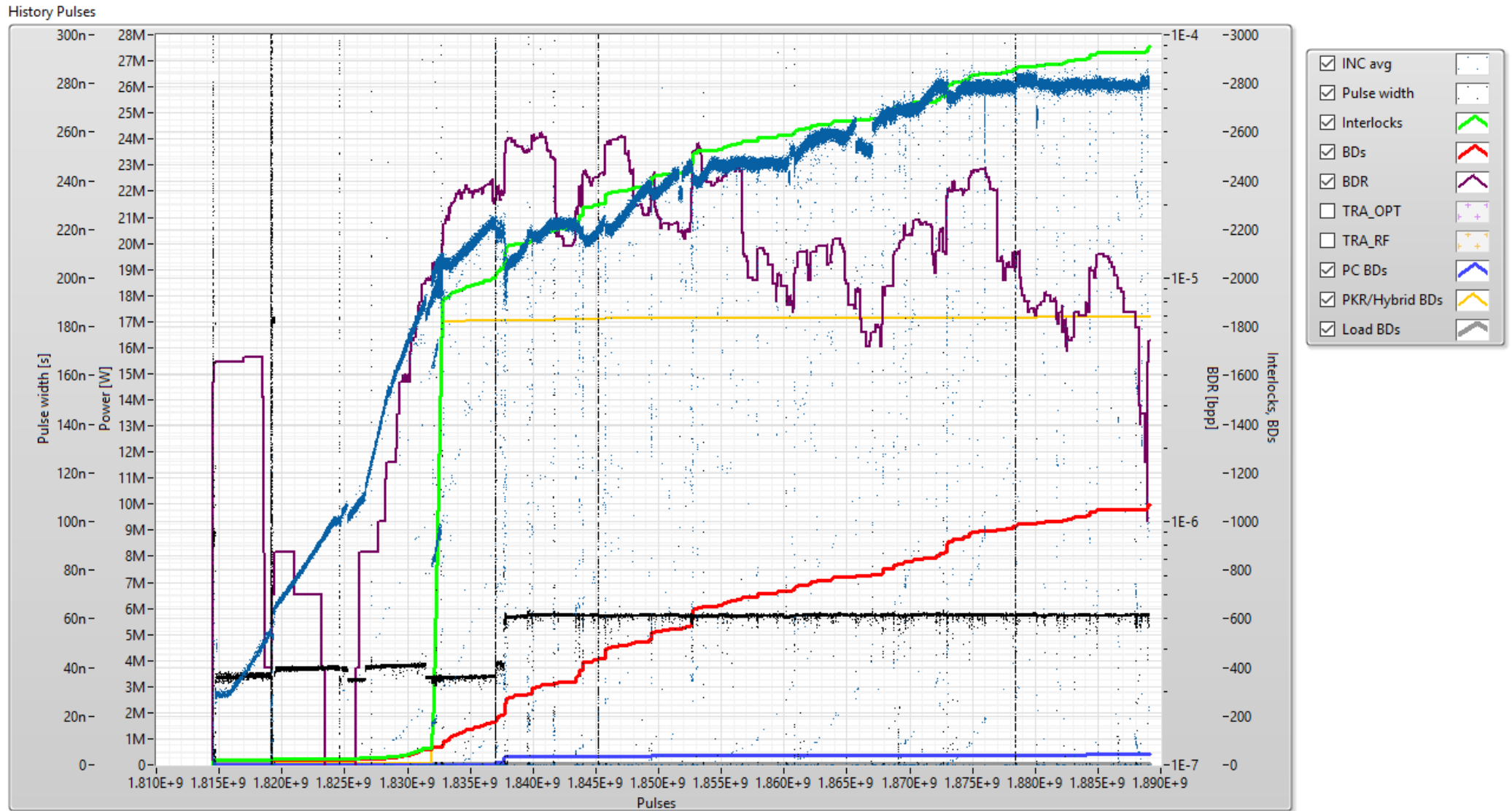
History Pulses



XBOX3 AB – Line 2

Parameters:

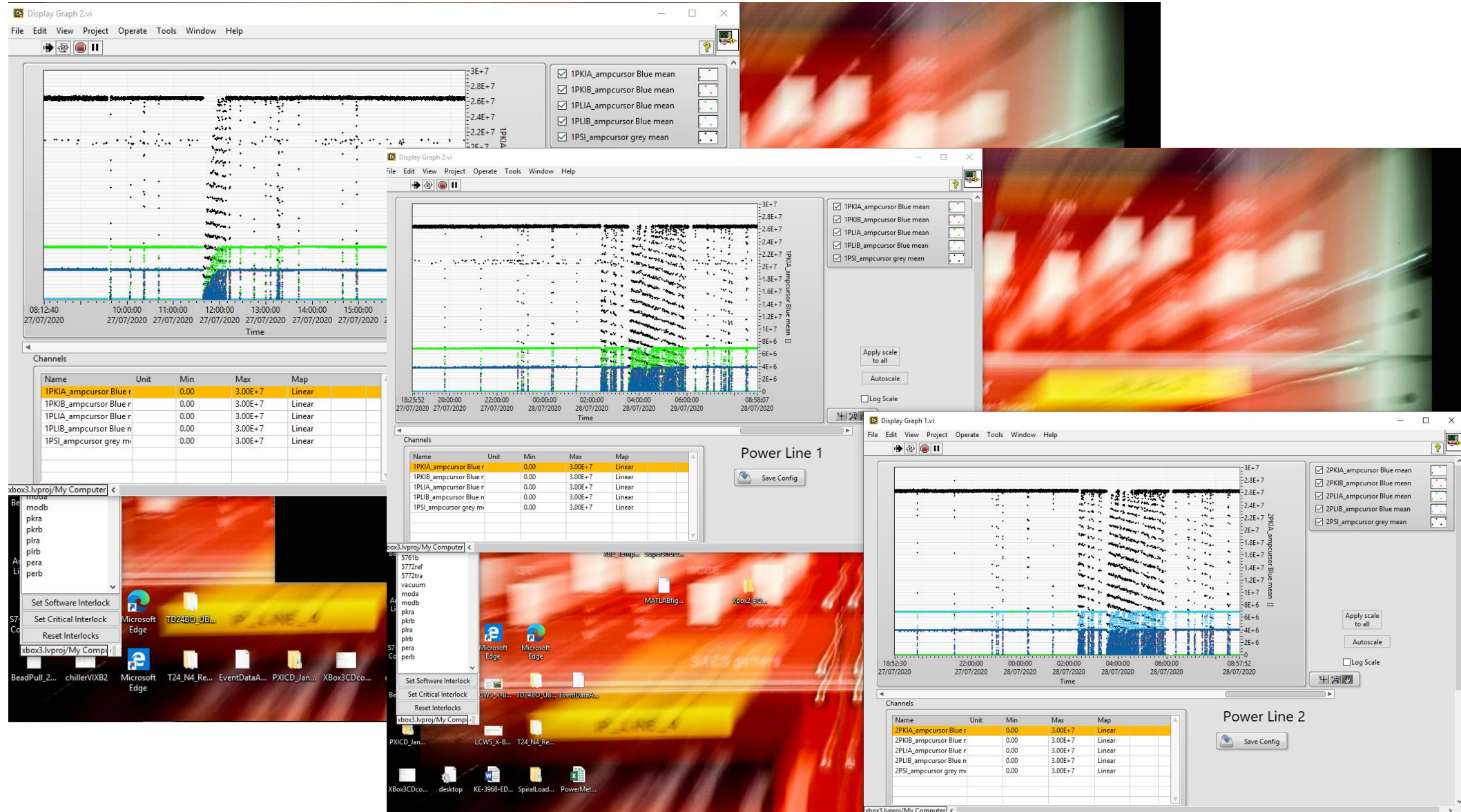
- 1.3us klystron pulse
- **50ns pulse**
- 50Hz rep rate
- **Current Setpoint:
27.1MW Peak**



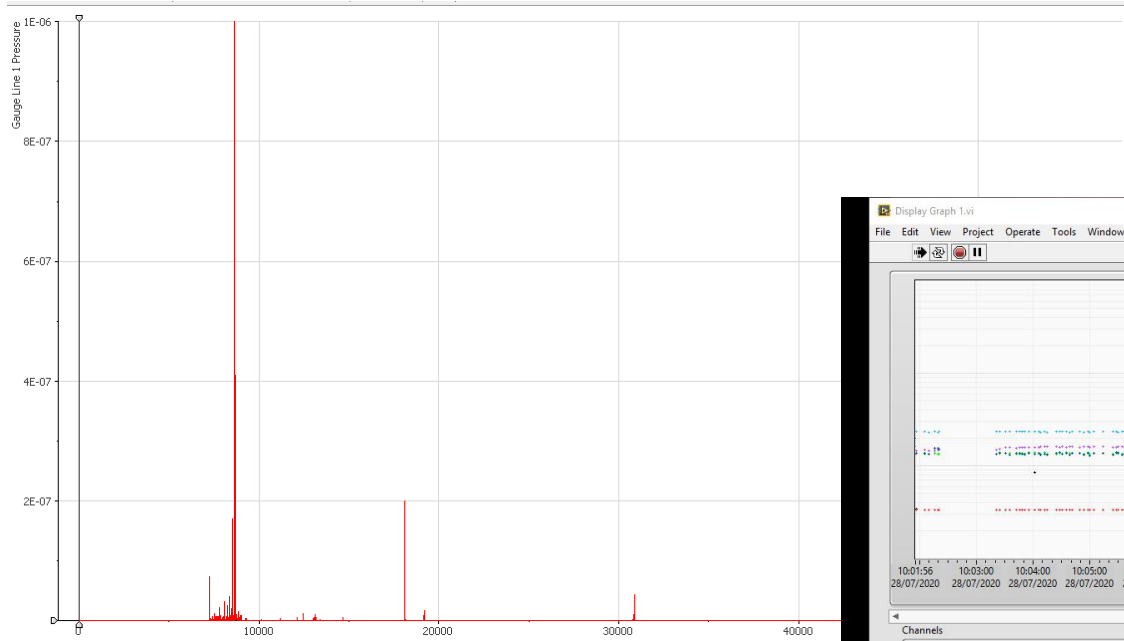
XBOX3 AB – Interlocks

Parameters:

- 1.3us klystron pulse
- **50ns pulse**
- 50Hz rep rate
- **Current Setpoint: 27.1MW**



XBOX3 AB – Interlocks



Display Graph 1.vxi

File Edit View Project Operate Tools Window Help

Klystron A Pressure

- Klystron A Pressure
- Hybrid 1 Pressure
- Pulse Compressor 1 Pressure
- Line 1 Pressure
- Load 1 Pressure
- DUT 1 Pressure
- Klystron Internal A Pressure

Apply scale to all

Autoscale

Log Scale

Channels

Name	Unit	Min	Max	Map
Klystron A Pressure	1.00E-10	1.00E-7	Log	
Hybrid 1 Pressure	1.00E-10	1.00E-7	Log	
Pulse Compressor 1 Pre	1.00E-10	1.00E-7	Log	
Line 1 Pressure	1.00E-10	1.00E-7	Log	
Load 1 Pressure	1.00E-10	1.00E-7	Log	
DUT 1 Pressure	1.00E-10	1.00E-7	Log	
Klystron Internal A Press	1.00E-10	1.00E-7	Log	

Ion Pumps A

Save Config

Display Graph 2.vxi

File Edit View Project Operate Tools Window Help

Gauge Klystron A Pressure

- Gauge Klystron A Pressure
- Gauge PC 1 Pressure
- Gauge Line 1 Pressure
- Gauge Load 1 Pressure
- Gauge DUT 1 Pressure

Apply scale to all

Autoscale

Log Scale

Channels

Name	Unit	Min	Max	Map
Gauge Klystron A Press	1.00E-10	2.00E-7	Linear	
Gauge PC 1 Pressure	1.00E-10	2.00E-7	Linear	
Gauge Line 1 Pressure	1.00E-10	2.00E-7	Linear	
Gauge Load 1 Pressure	1.00E-10	2.00E-7	Linear	
Gauge DUT 1 Pressure	1.00E-10	2.00E-7	Linear	

Gauges_line1

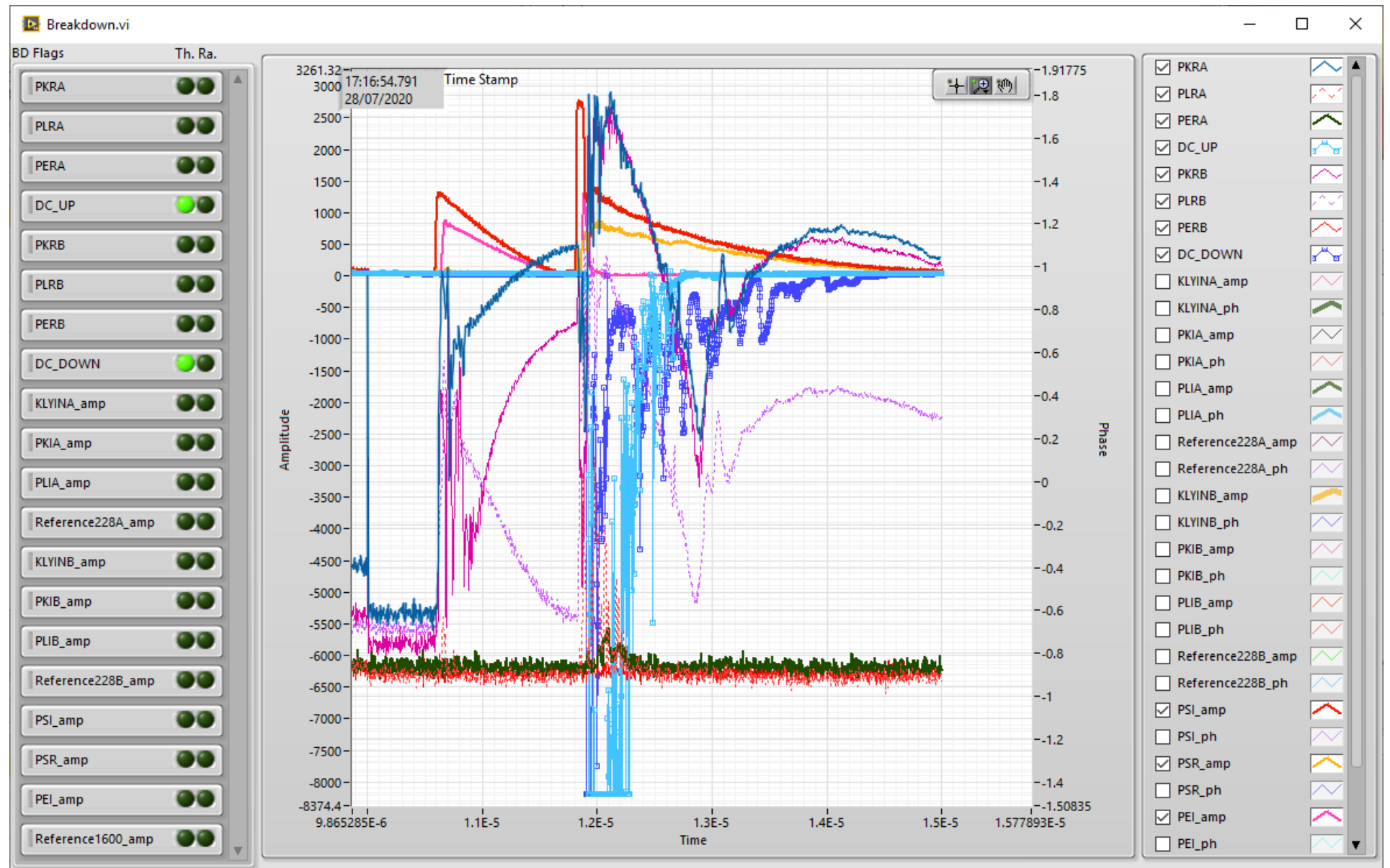
Save Config

A pink arrow points from the top right towards the 'Gauge Klystron A Pressure' channel in the bottom window.

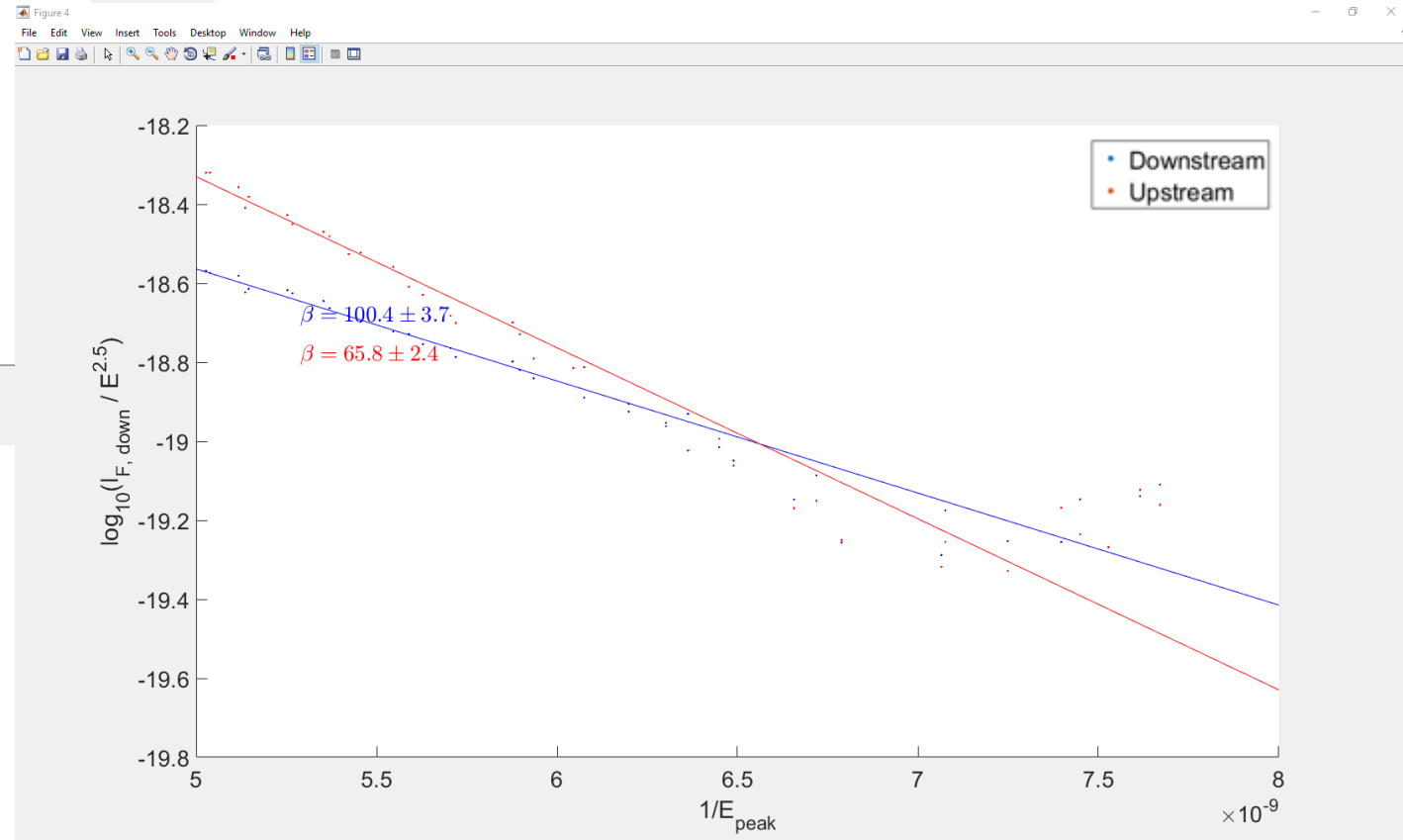
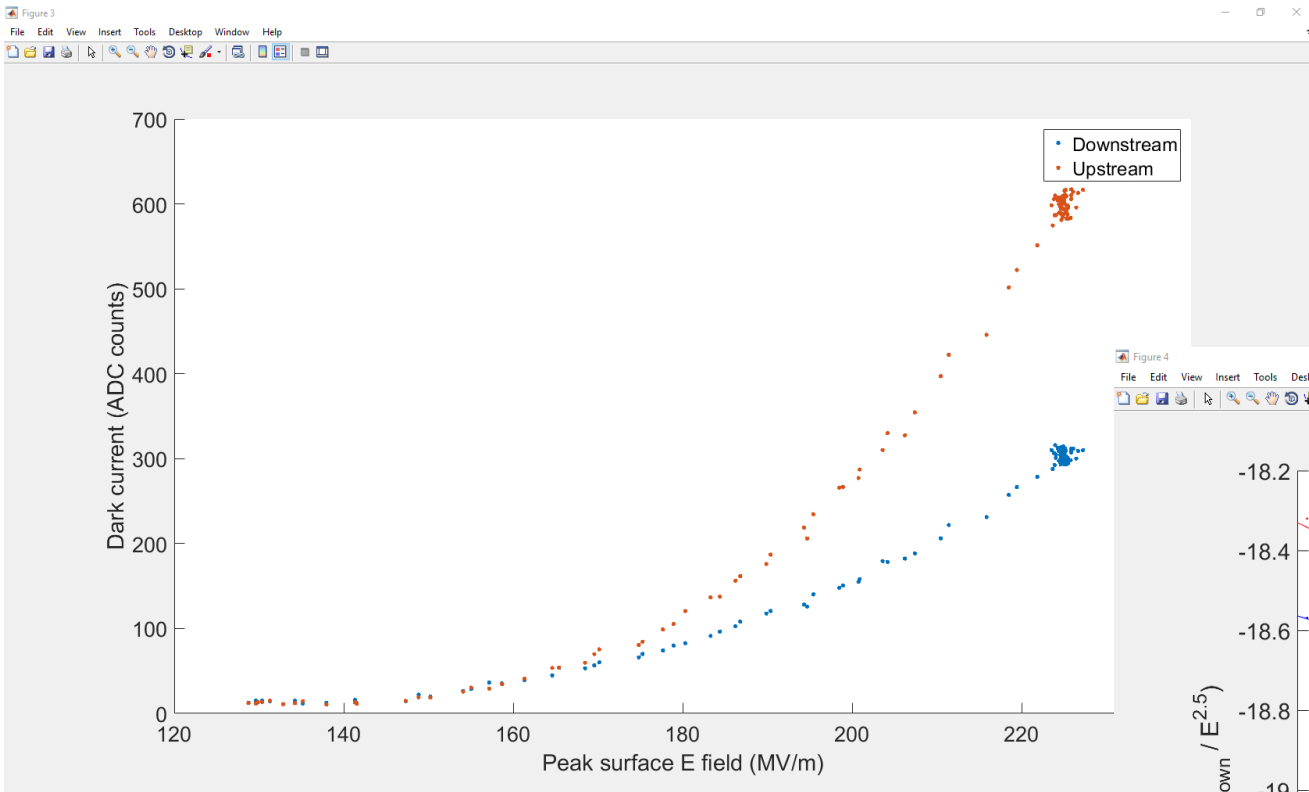
XBOX3 AB – DC Only Events

Parameters:

- 1.3us klystron pulse
- **50ns pulse**
- 50Hz rep rate
- **Current Setpoint:**
27.1MW



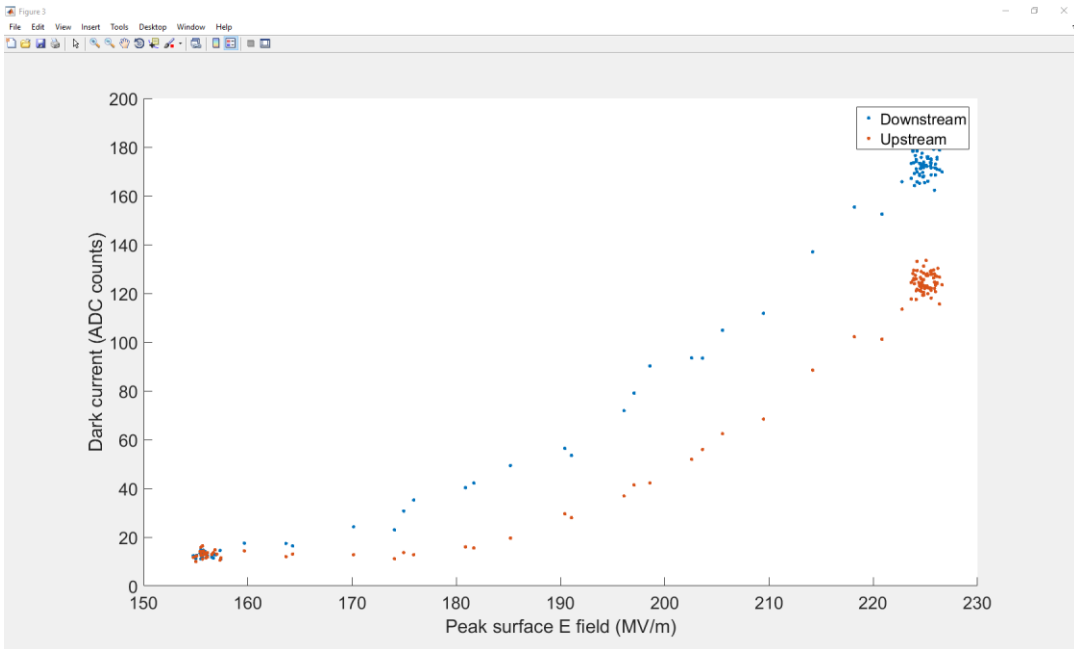
XBOX3 AB – DC Scan Line 1 -28.08.2020



Parameters:

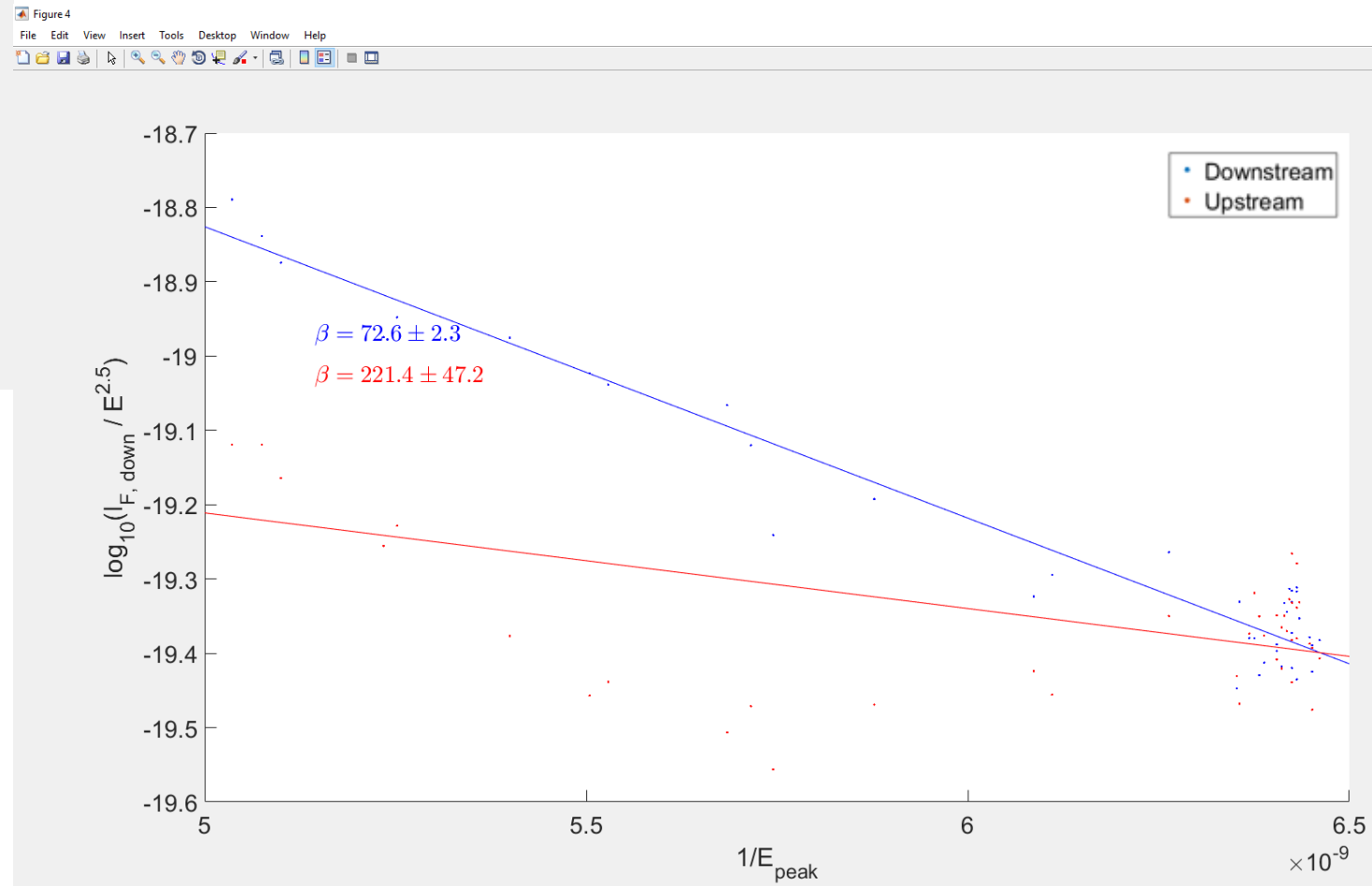
- 1.3us klystron pulse
- **50ns pulse**
- 50Hz rep rate
- **Current Setpoint: 27.1MW**
- **Nominal for 100MV/M: 21.4MW**

XBOX3 AB – DC Scan Line 2 - 28.08.2020

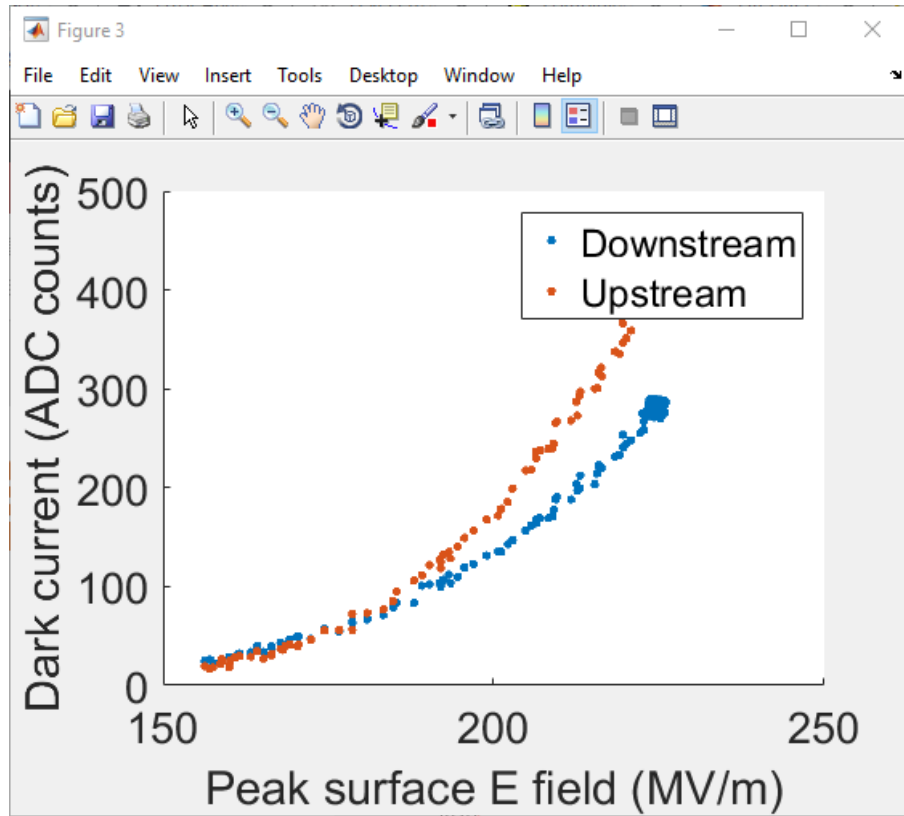


Parameters:

- 1.3us klystron pulse
- **50ns pulse**
- 50Hz rep rate
- **Current Setpoint: 27.1MW**
- **Nominal for 100MV/M: 21.4MW**

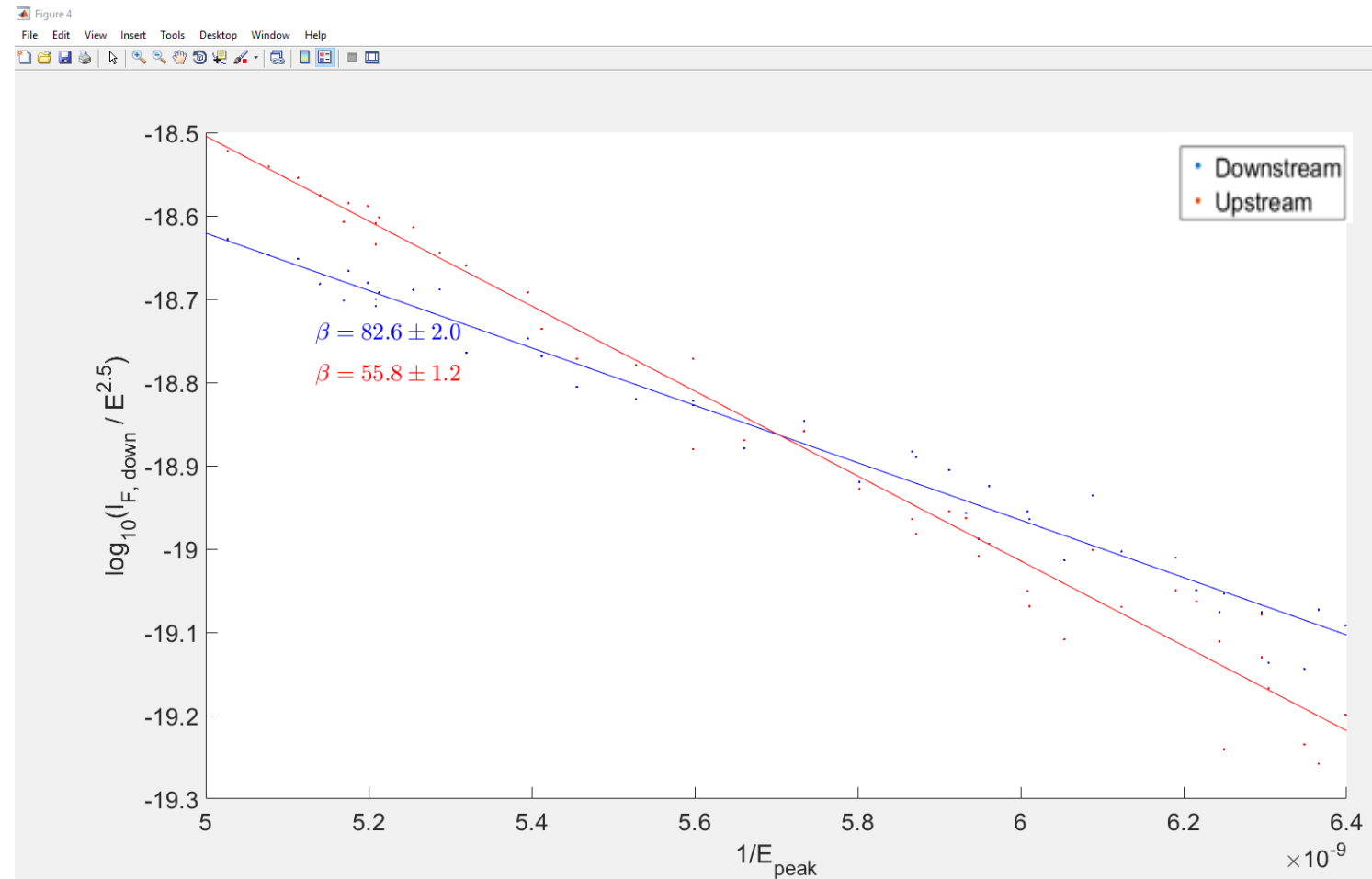


XBOX3 AB – DC Scan Line 1 - 29.08.2020

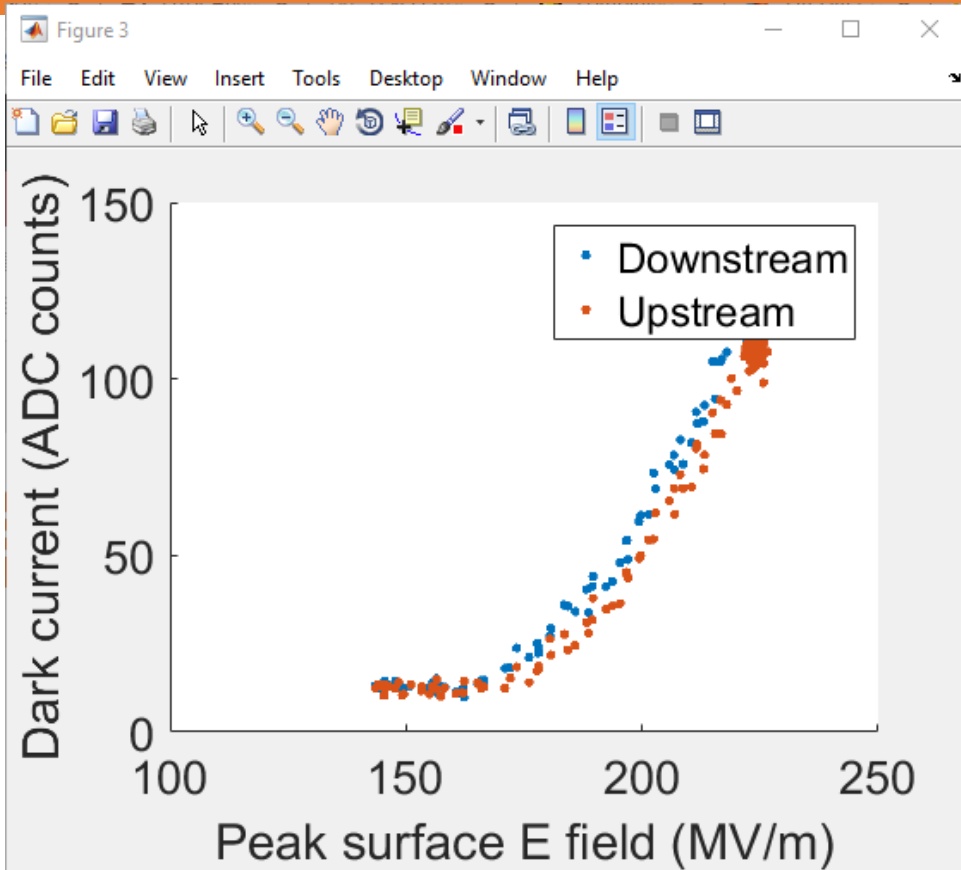


Parameters:

- 1.3us klystron pulse
- **50ns pulse**
- 50Hz rep rate
- **Current Setpoint: 27.1MW**
- **Nominal for 100MV/M: 21.4MW**



XBOX3 AB – DC Scan Line 2 - 29.08.2020



Parameters:

- 1.3us klystron pulse
- **50ns pulse**
- 50Hz rep rate
- **Current Setpoint: 27.1MW**
- **Nominal for 100MV/M: 21.4MW**

