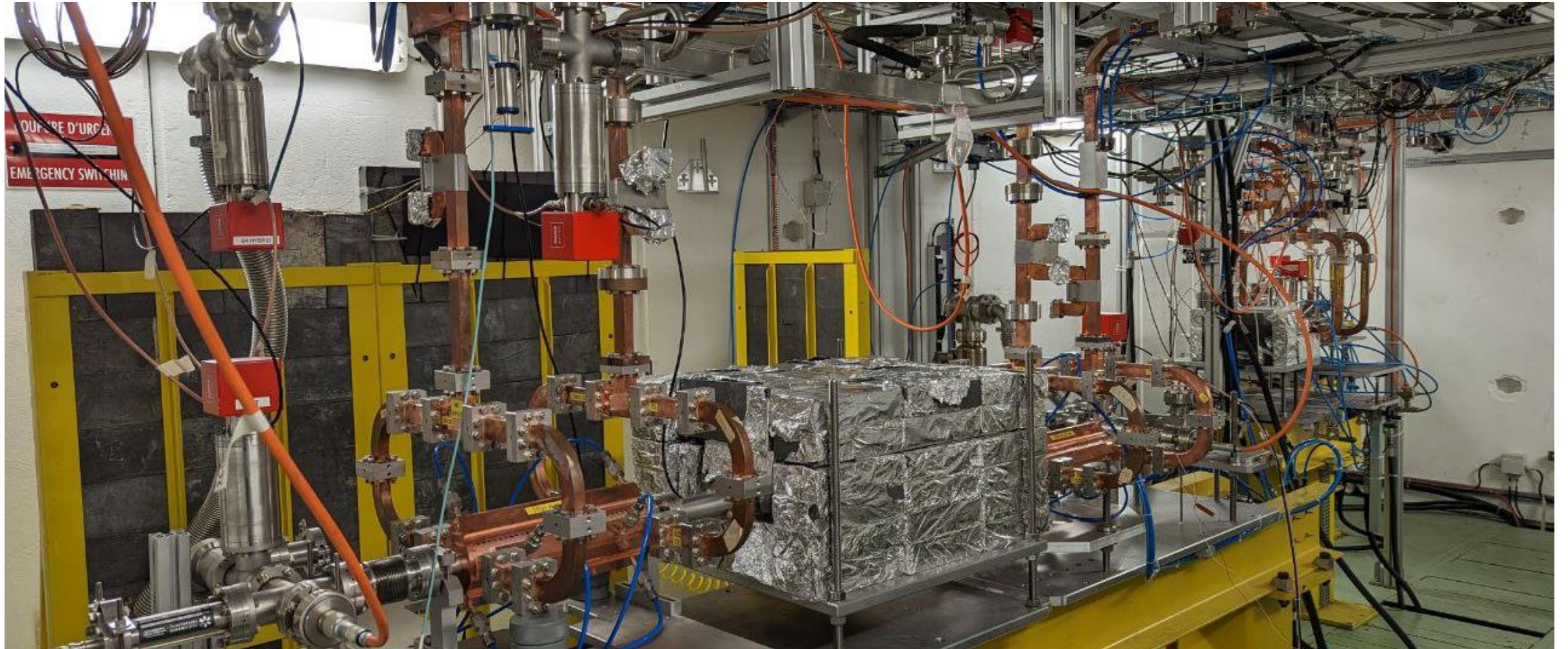




# **X-Box Update**

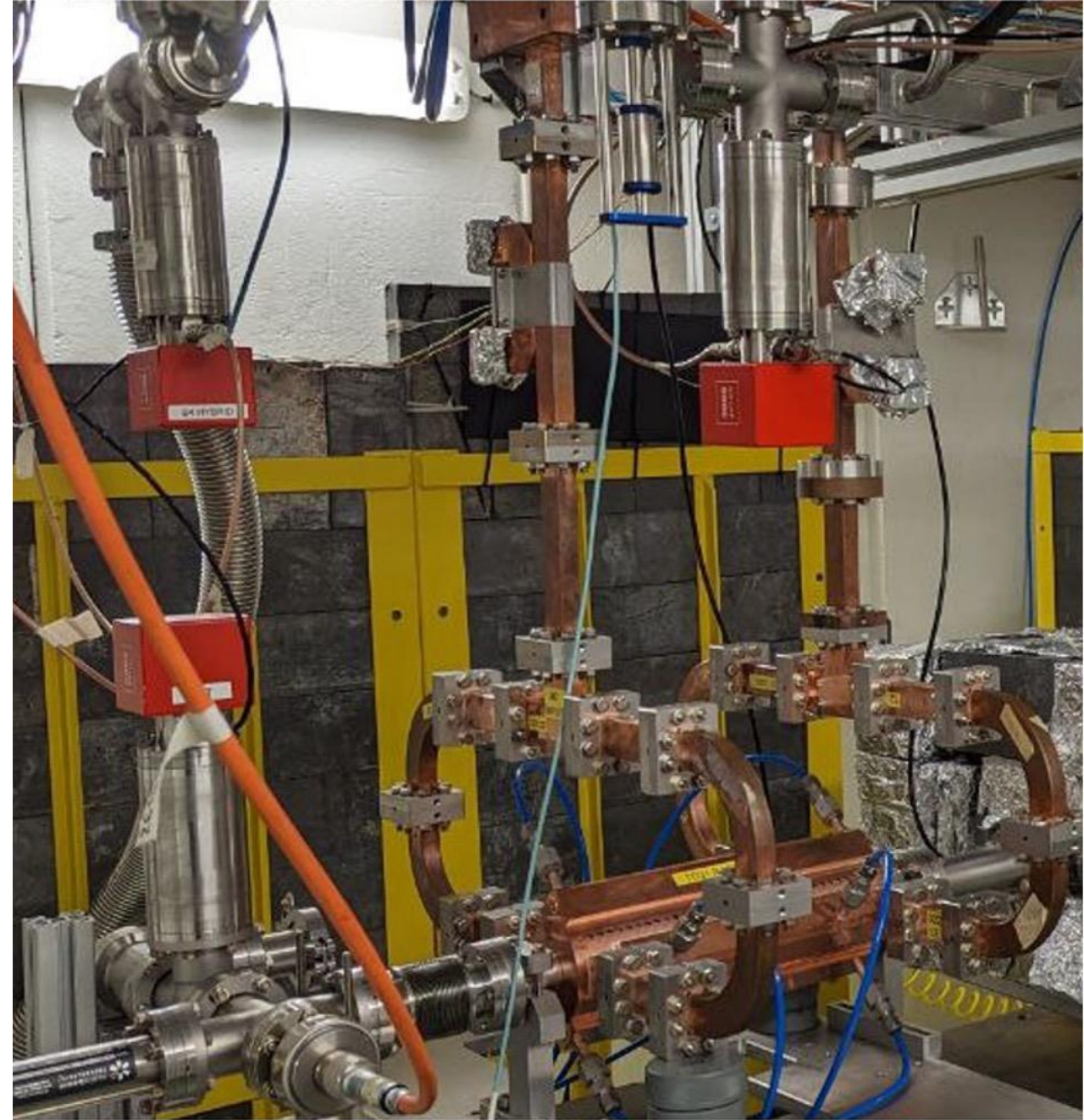
**20.09.2023**

# X-Box 2: TD31 N3 N4

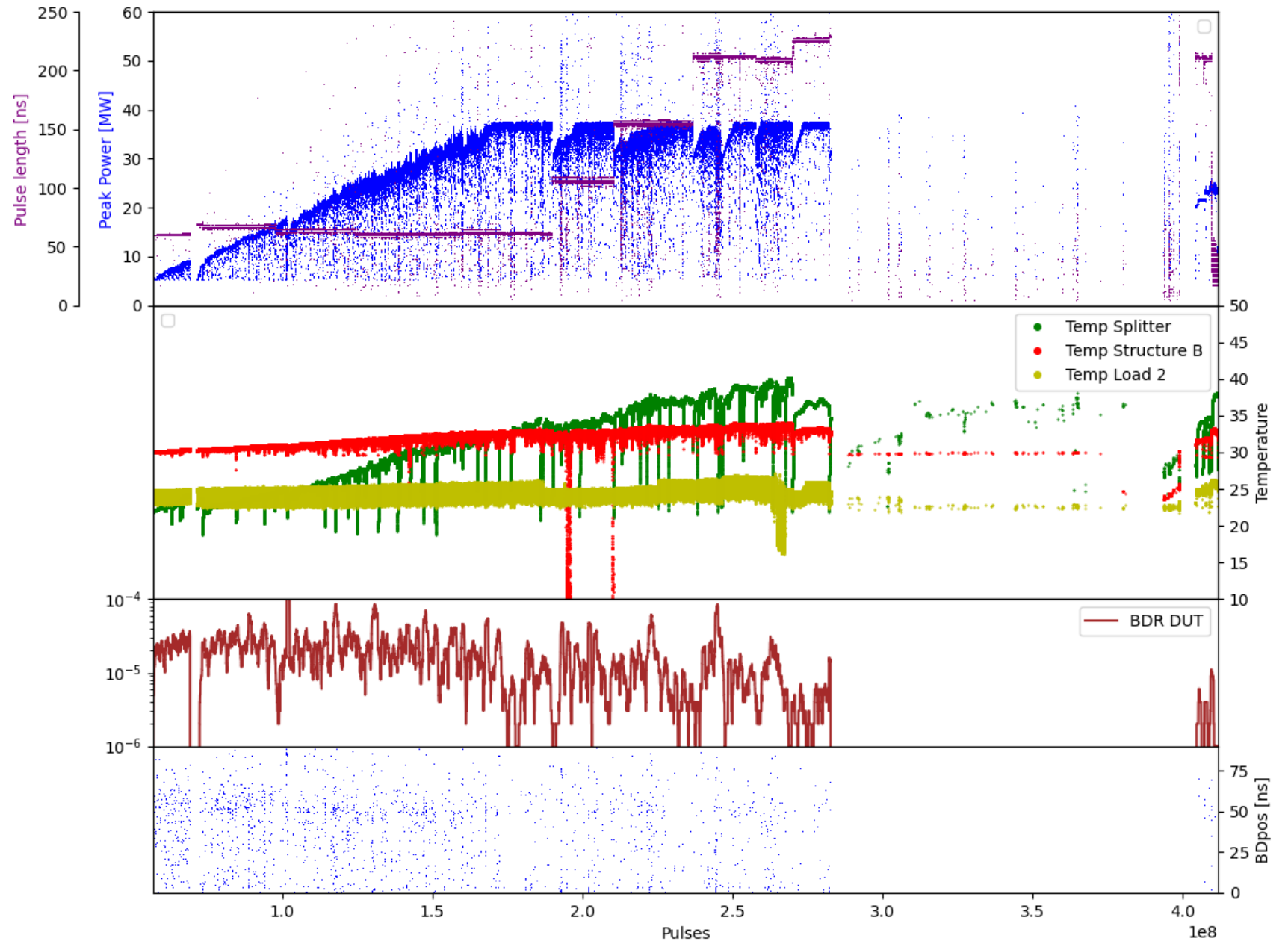


# X-Box 2 TD31 N3 N4- Structure B

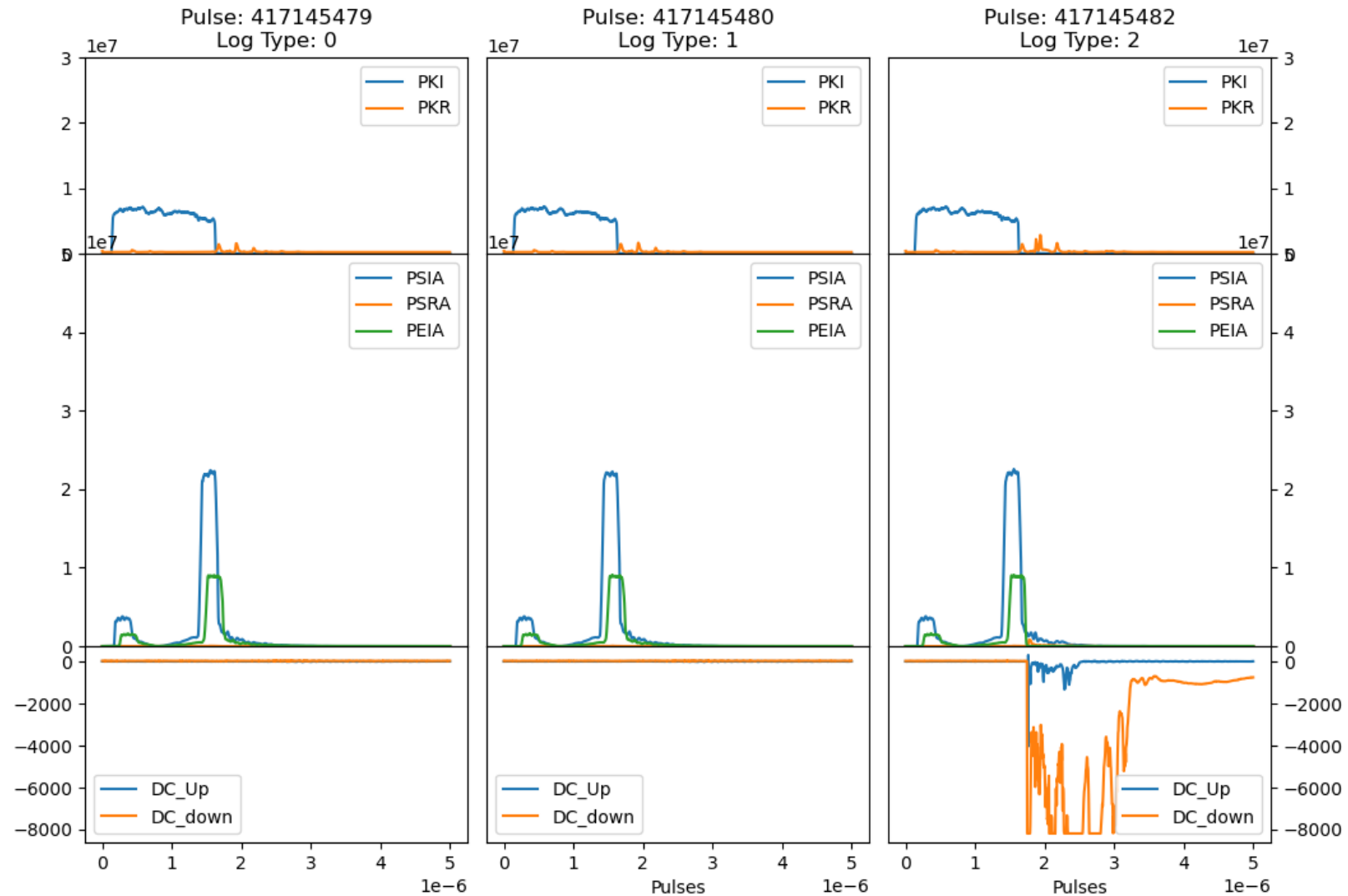
- Restarted 22.08.2023
- 100% power going to Structure B
- Calibration lines B – checked
- Currently: 25MW
  
- New electrical installation is ready



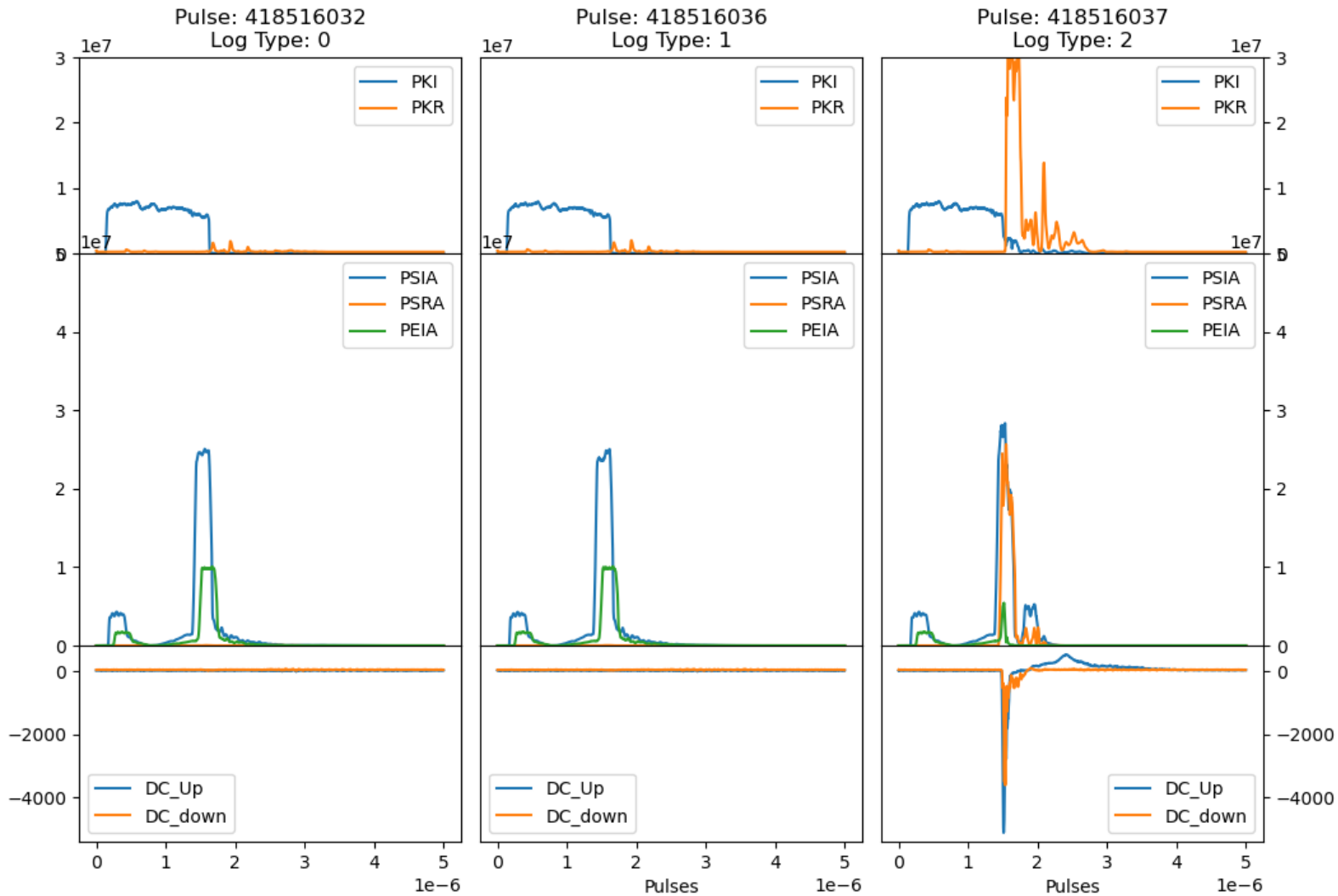
# X-Box 2 TD31 N3 N: Peak power



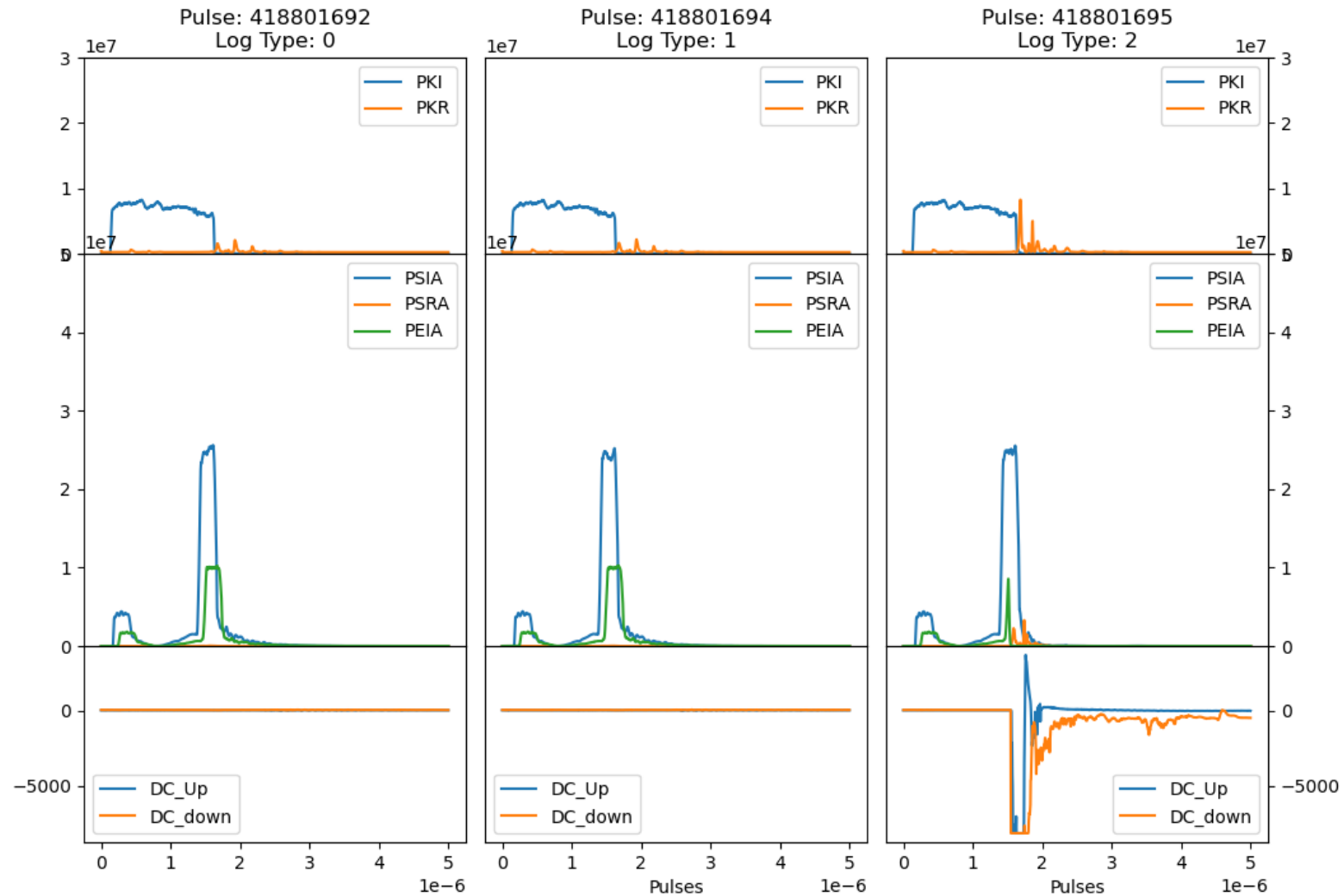
# X-Box 2 TD31 N3 N



# X-Box 2 TD31 N3 N

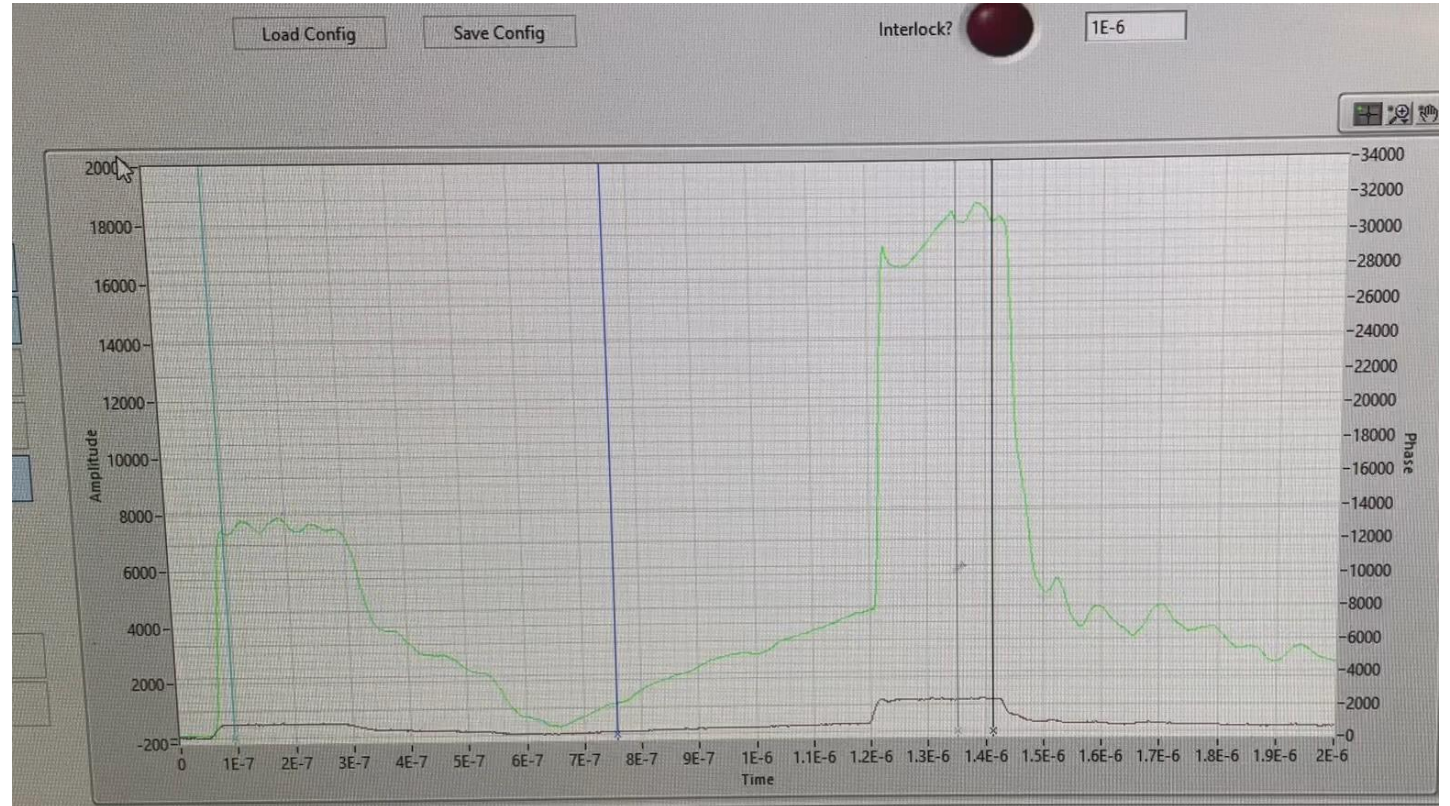


# X-Box 2 TD31 N3 N



# X-Box 2 TD31 N3 N

- **Weird behaviour >26 MW**
  - Structure B / Phase shifter / Power splitter / Pulse compressor
  - PXI / ADC





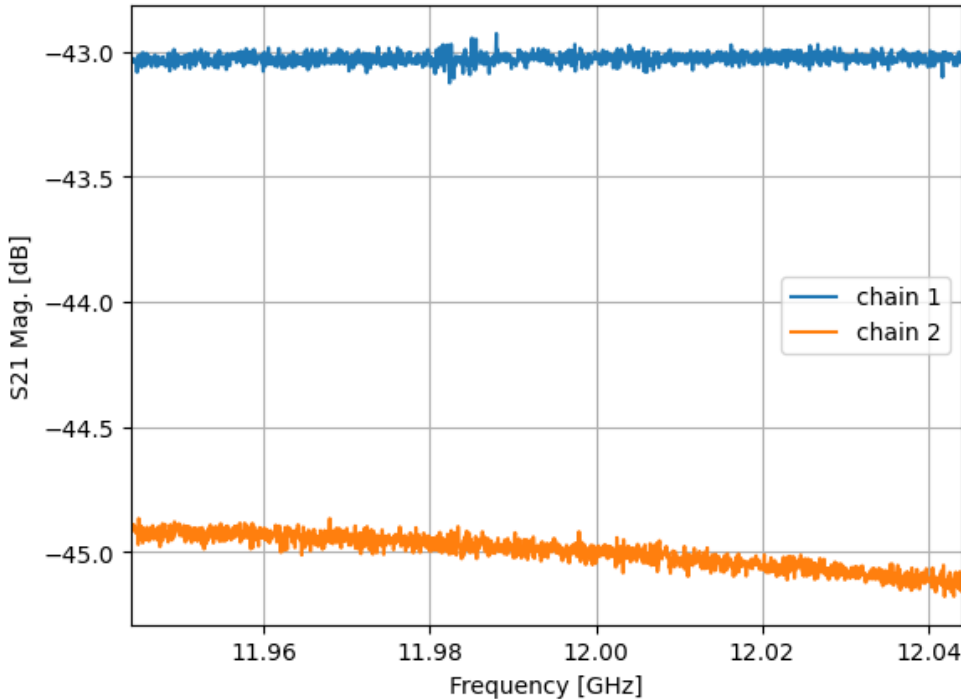
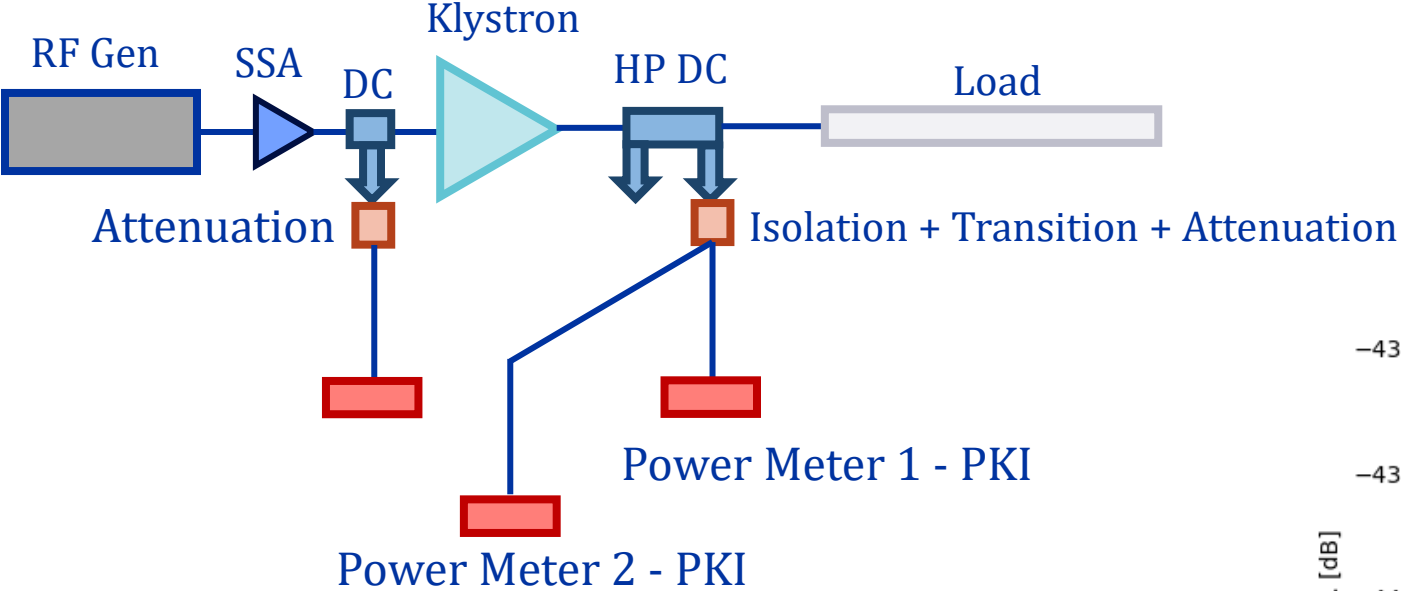
# X-Box 3: High Efficiency Tubes Characterisation



- **Calibrated setup – problems with VNA -> recalibrated using VNA with coaxial type N ports**
- **Measured curves of first TUBE (mod A)**
- **Now – no tension in filament (under investigation)**

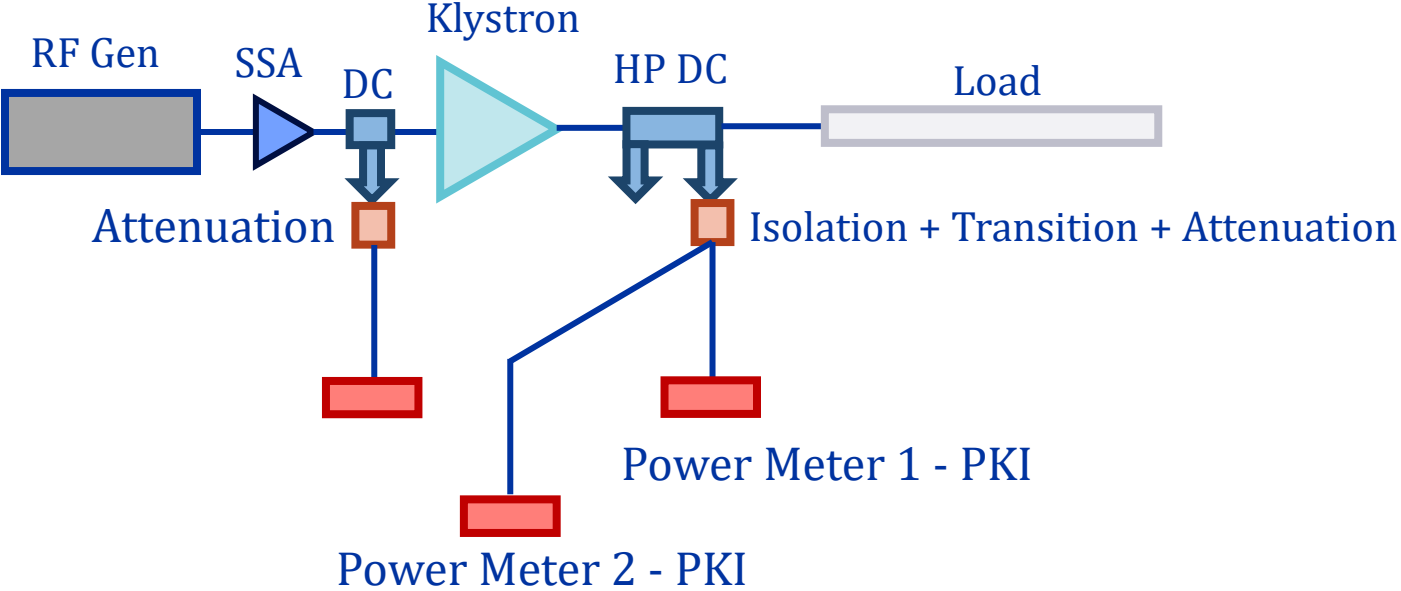
# High Efficiency Klystron ER37117 TUBE1

## Measurement setup

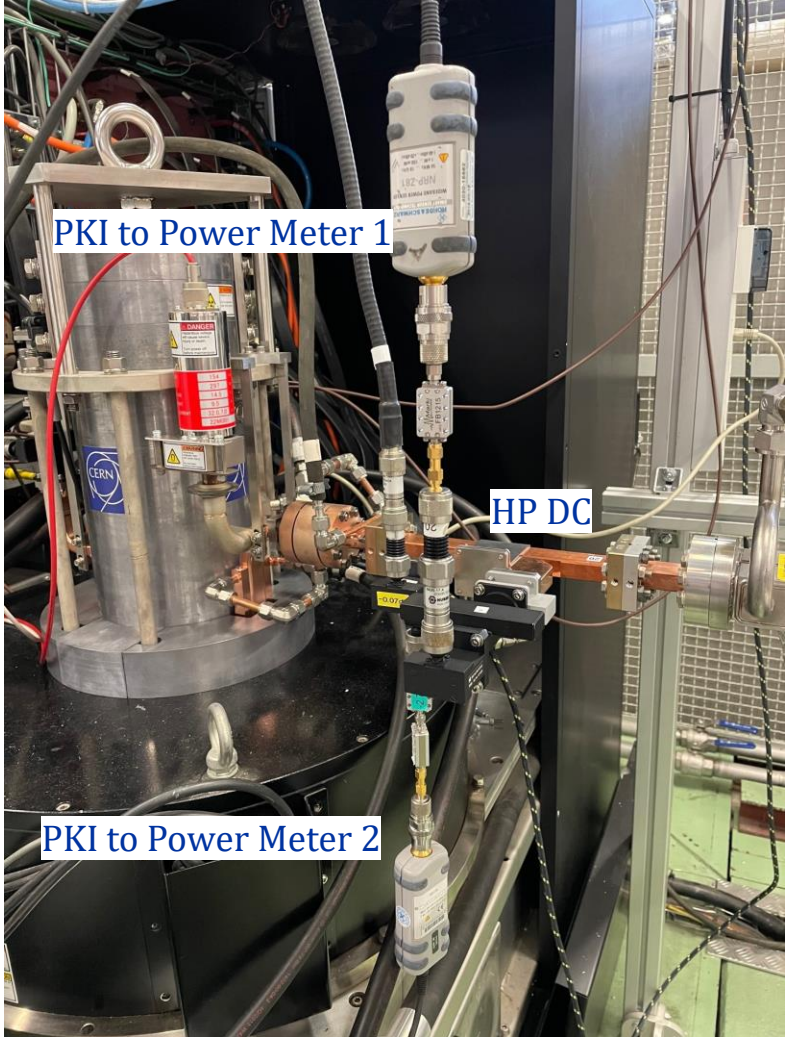


# High Efficiency Klystron ER37117 TUBE1

## Measurement setup

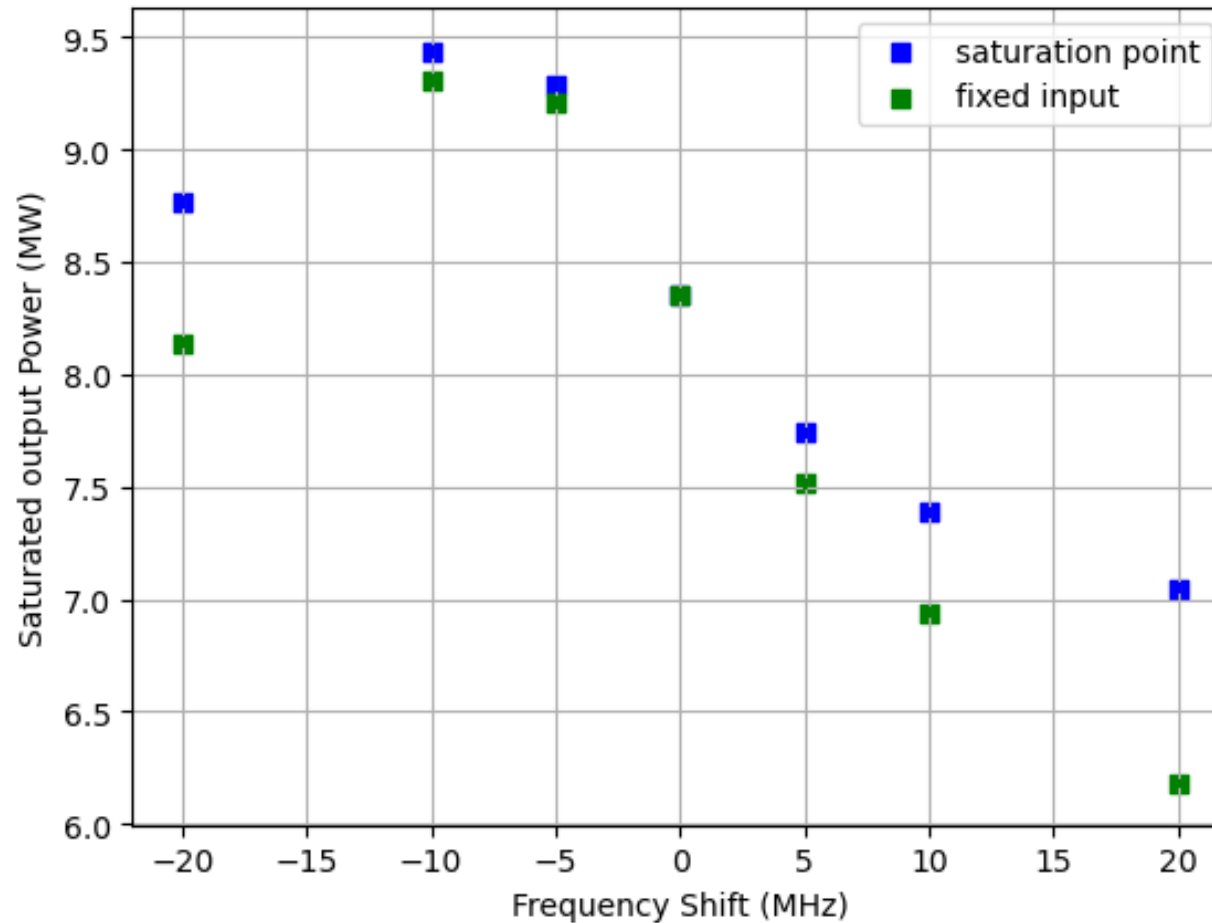


Chain	Att(dB)@11.994GHz
PKI, chain 1	43.04
PKI, chain 2	45.0
KLYIN	49.68



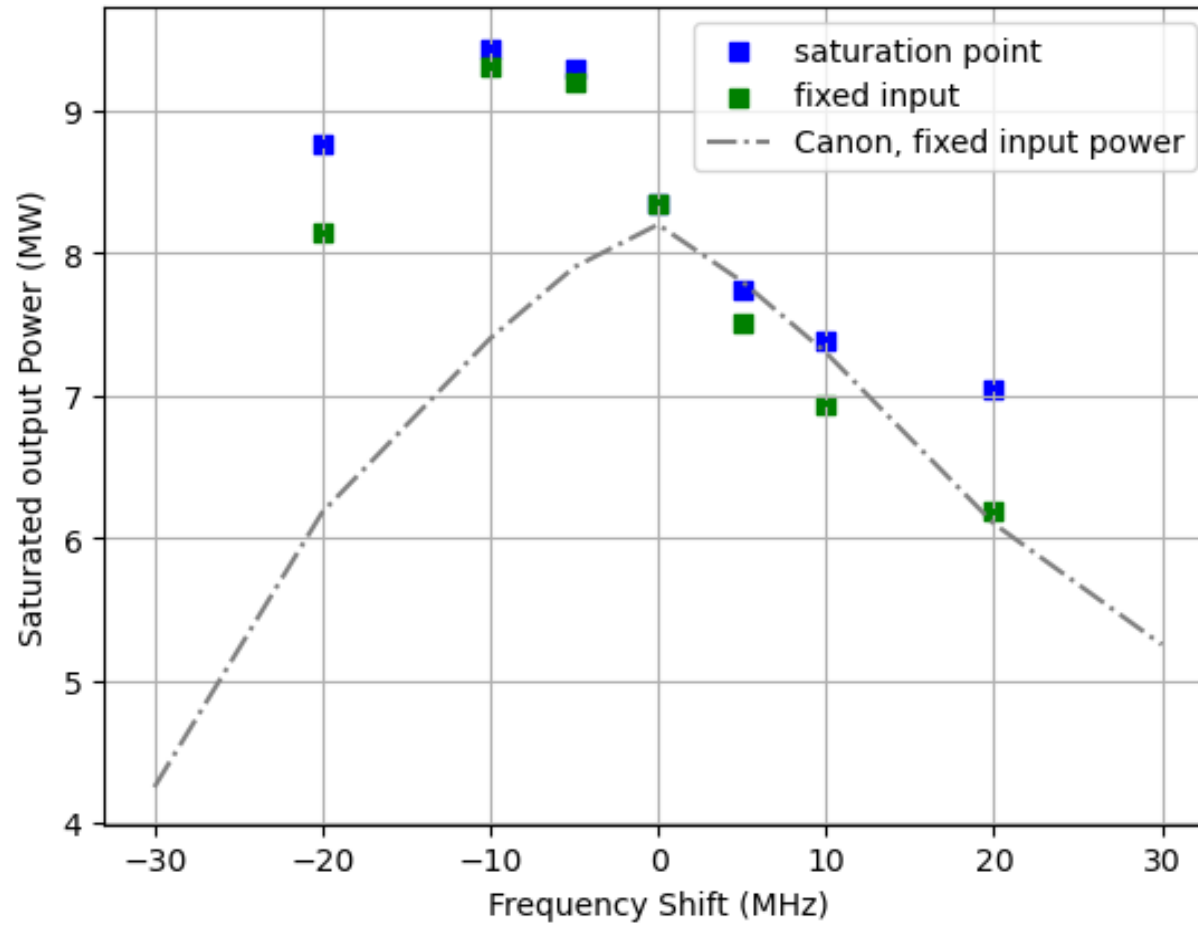
# High Efficiency Klystron ER37117 TUBE1

## Frequency behaviour



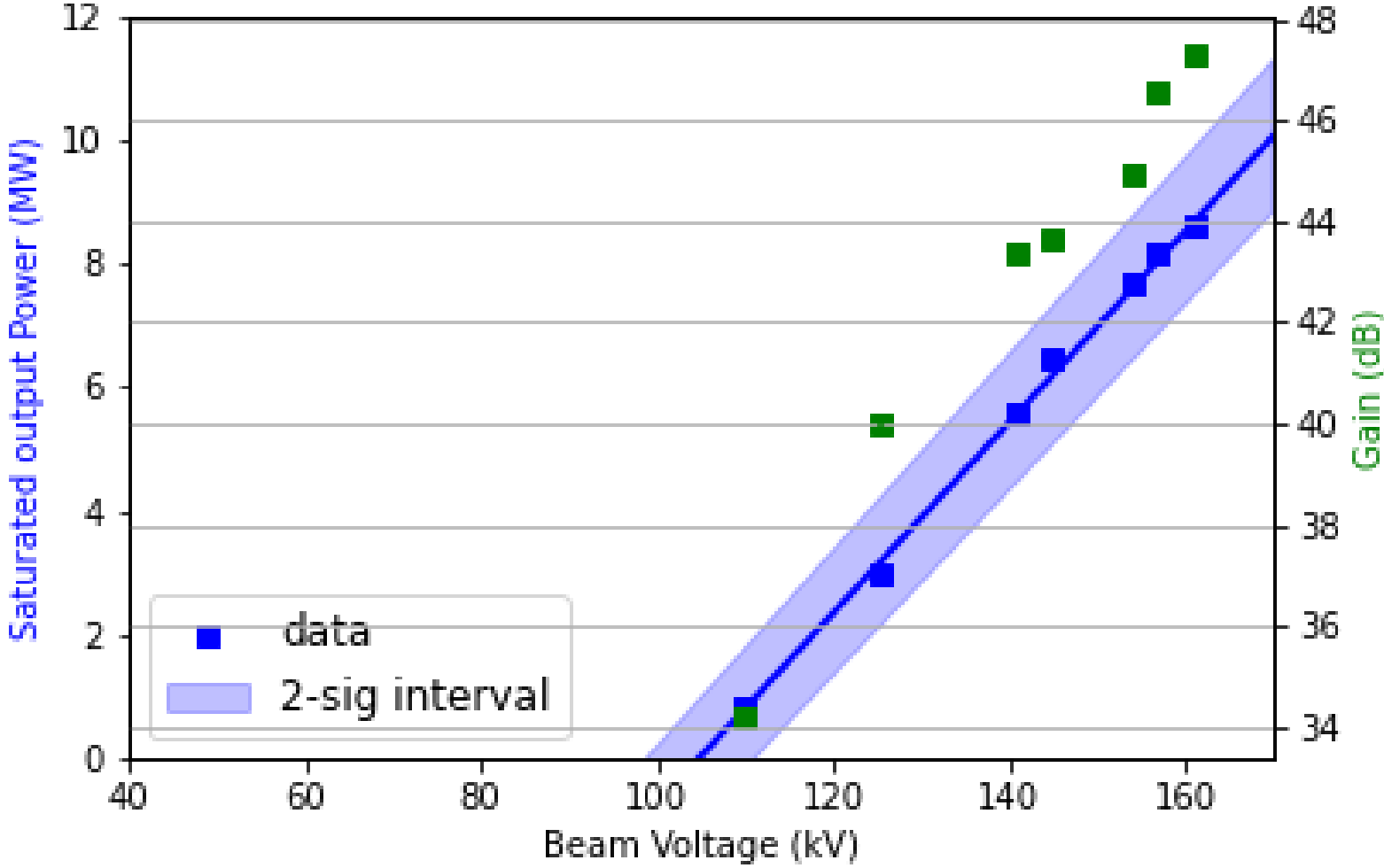
# High Efficiency Klystron ER37117 TUBE1

## Frequency behaviour



# High Efficiency Klystron ER37117 TUBE1

## Beam voltage dependency





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