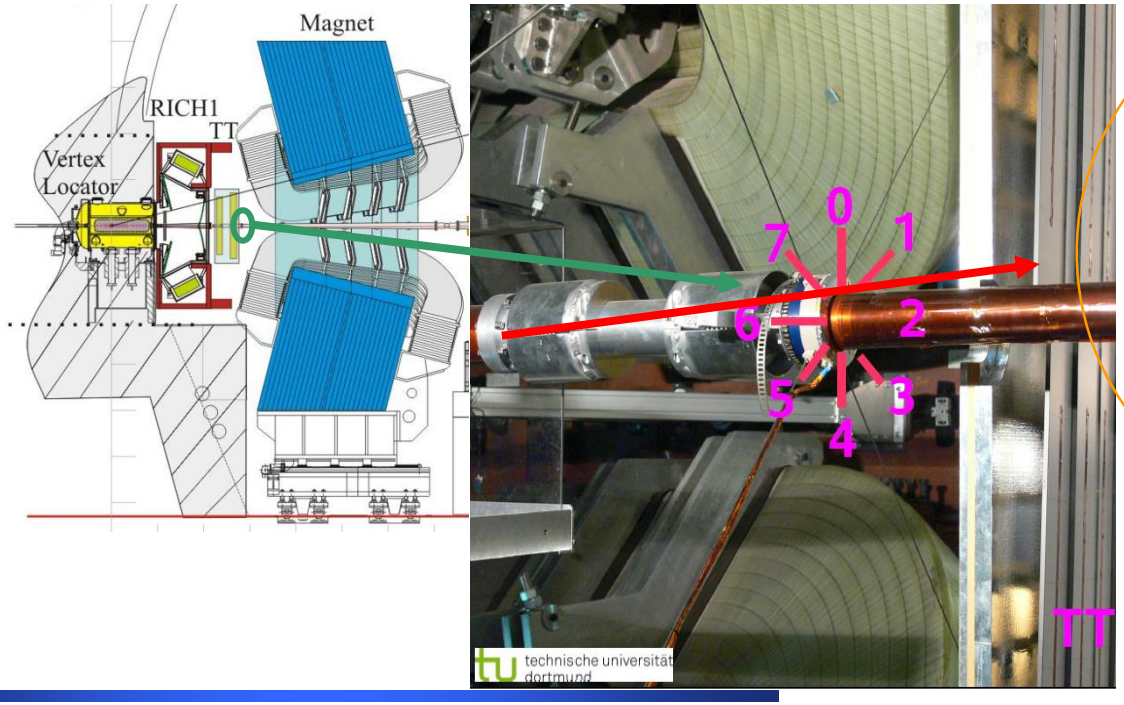
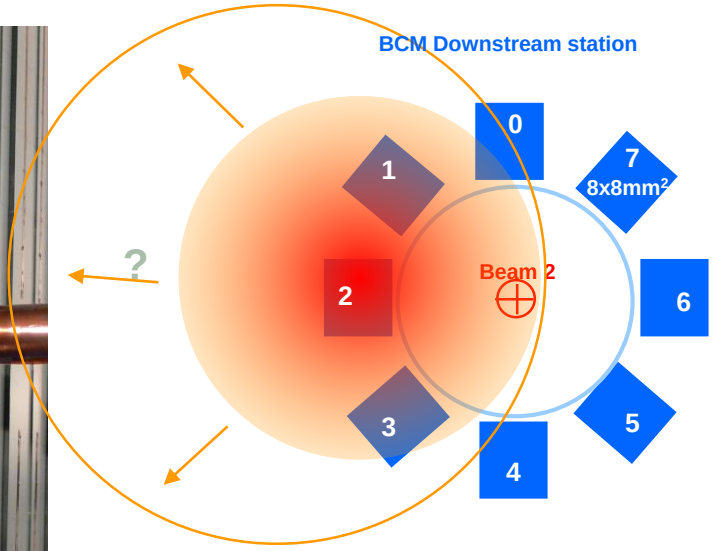
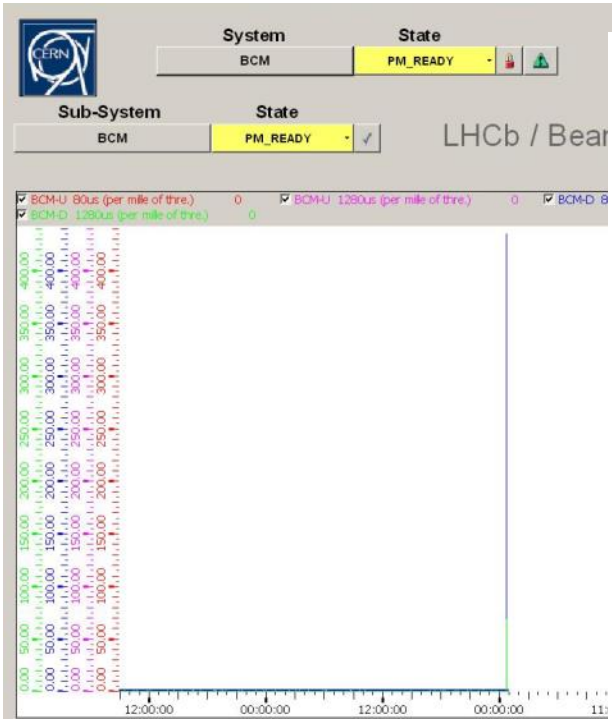
# Traditional annual LHCb dump

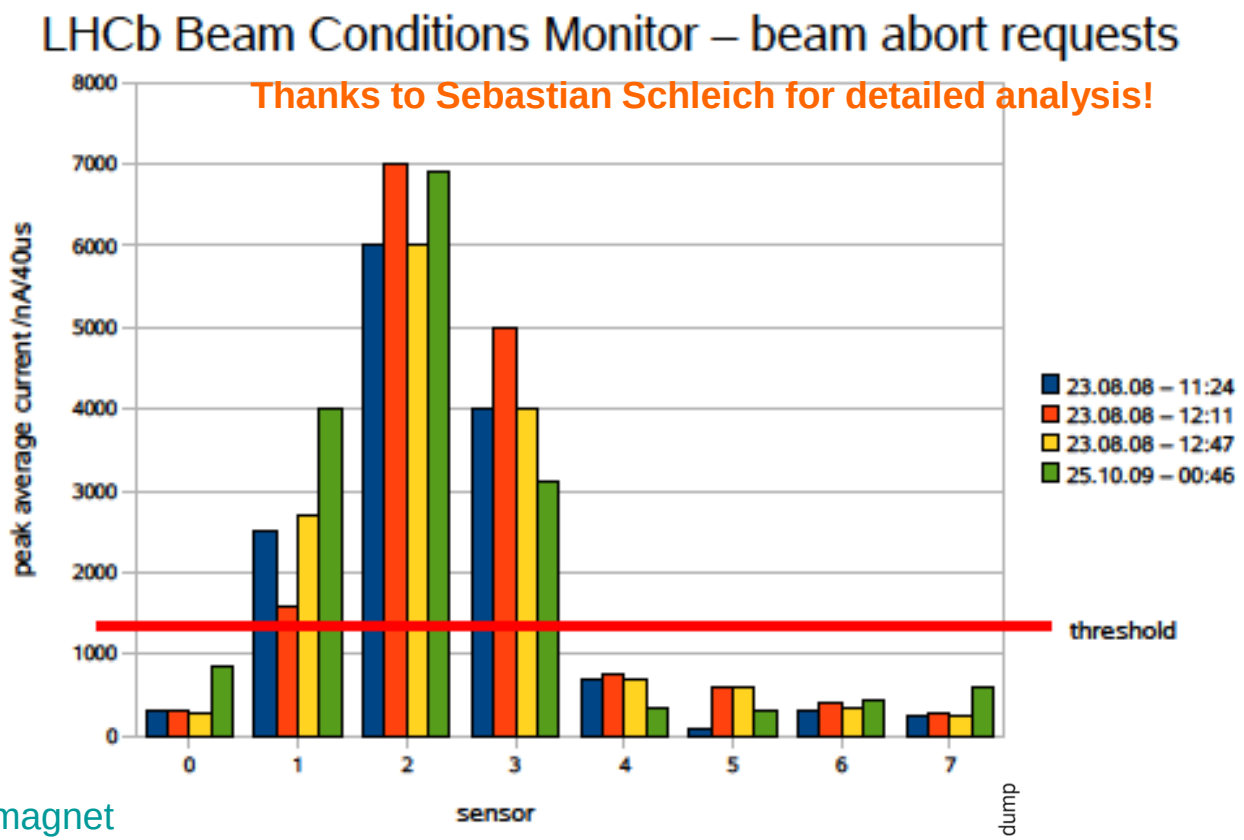
- TDI shot with MKI and jaws at -2.4/-5.9 mm @ Sunday 00:46:10
  - All previous shots typical “TDI levels”
  - Loss appeared as a concentrated shower at ~9 o’clock in BCM as seen along Beam 2
    - 7000 nA max seen in sensor 2 as compared to <200 nA typical TDI
    - 36 pA/mips ➔ >2x10$^5$ particles in sensor 2 ➔ >10$^7$ particles assuming an area of 10x10cm$^2$



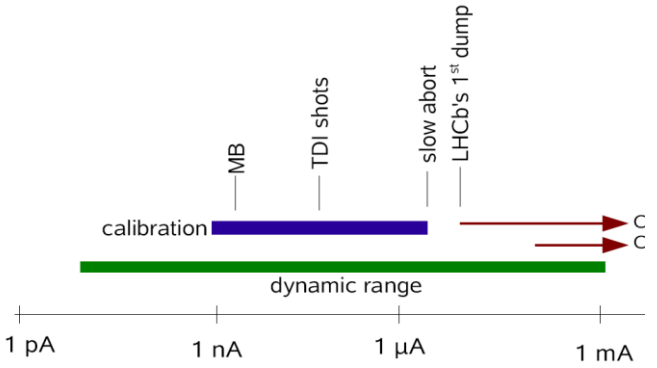
# BCM response



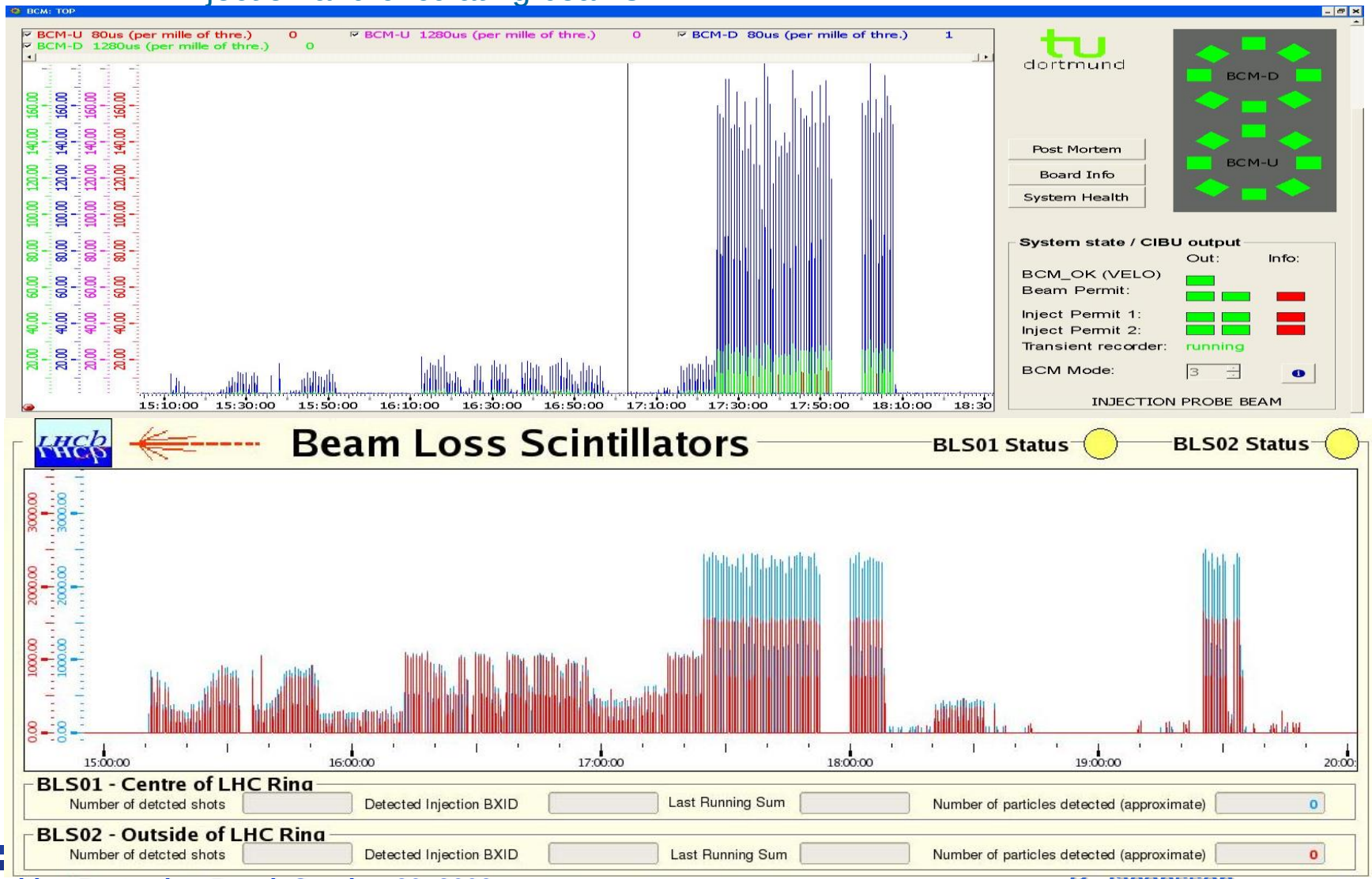

- Full chain worked perfectly:
  - Dump at point 6 with kicker magnet
  - Automatic injection inhibit
  - Automatic PM processing
  - Rearming after discussion with LHC
  - Confidence in dump level and functioning

  but not to be repeated routinely…



# Beam Loss Scintillator and BCM

- High resolution (25ns/50ns) and high sensitivity background monitor
  - Injection and circulating beams



# Beam Loss Scintillator

Estimation of centre of beam, adjustments of TI8 collimators

TI8 collimators jaws set at +/- 4.5mm (NOMINAL BETATRON)

Phase adjustments H0-H90-H150

Left jaw moved in by 8 mm

Left jaw moved out by 10 mm

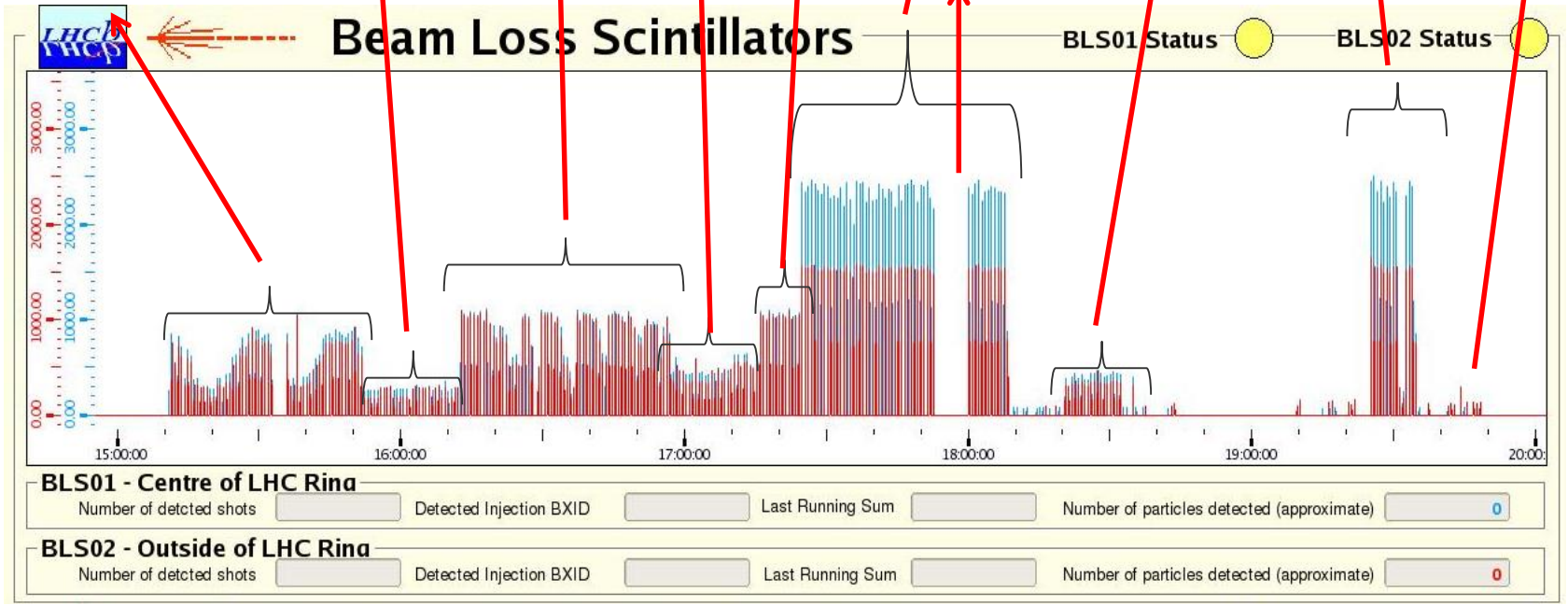
Both jaws retracted at +/- 20 mm

No beam…

Jaws back at +/- 4.5 mm

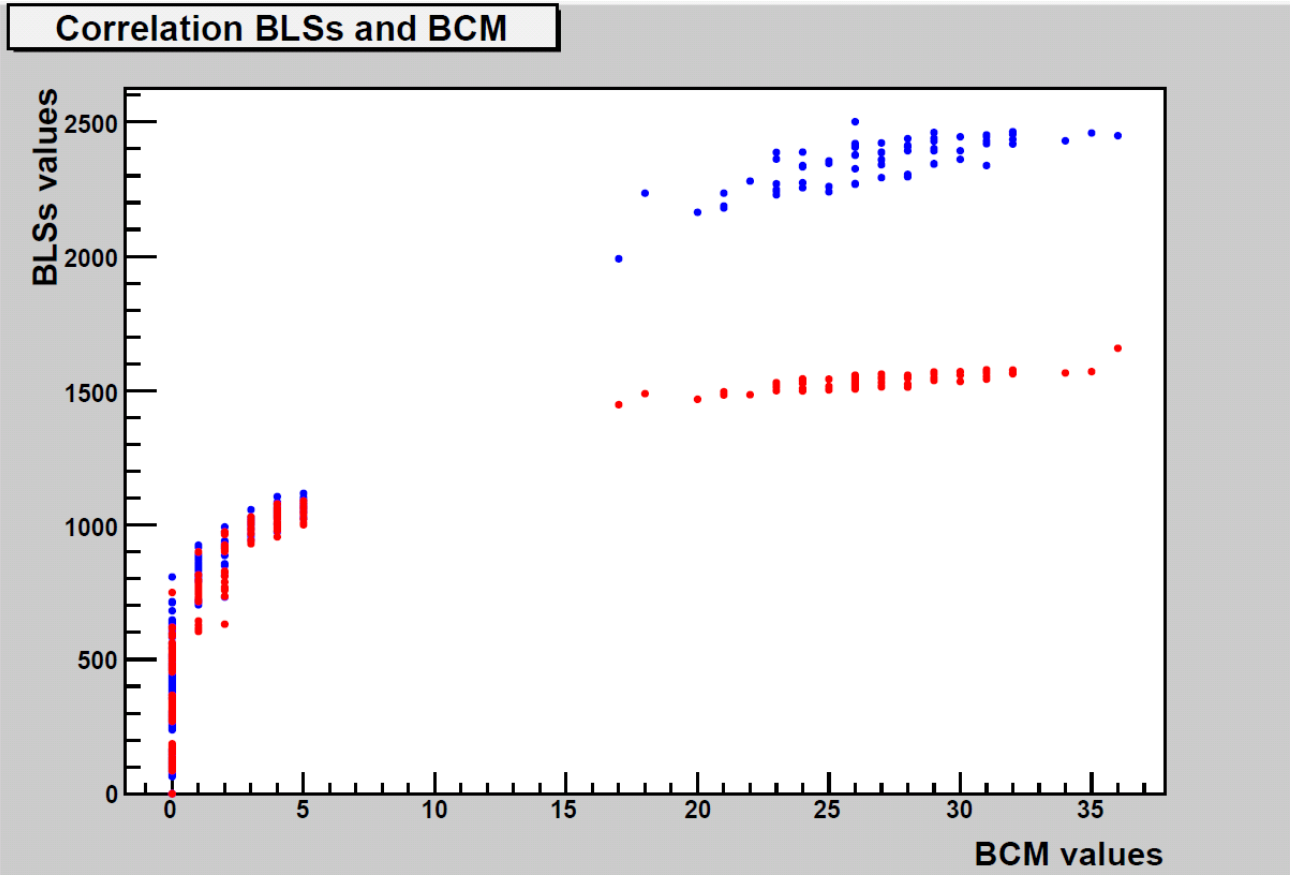
Aperture Scans

Kicker did not fire – shot on TDI. Stop beam 2 for LHCb




**Thanks to Federico for detailed analysis!**

# BCM/BLS correlations




- Sector Test allowed setting proper gain
- Very good correlation between BCM and BLS
- Higher sensitivity to see background changes and variations