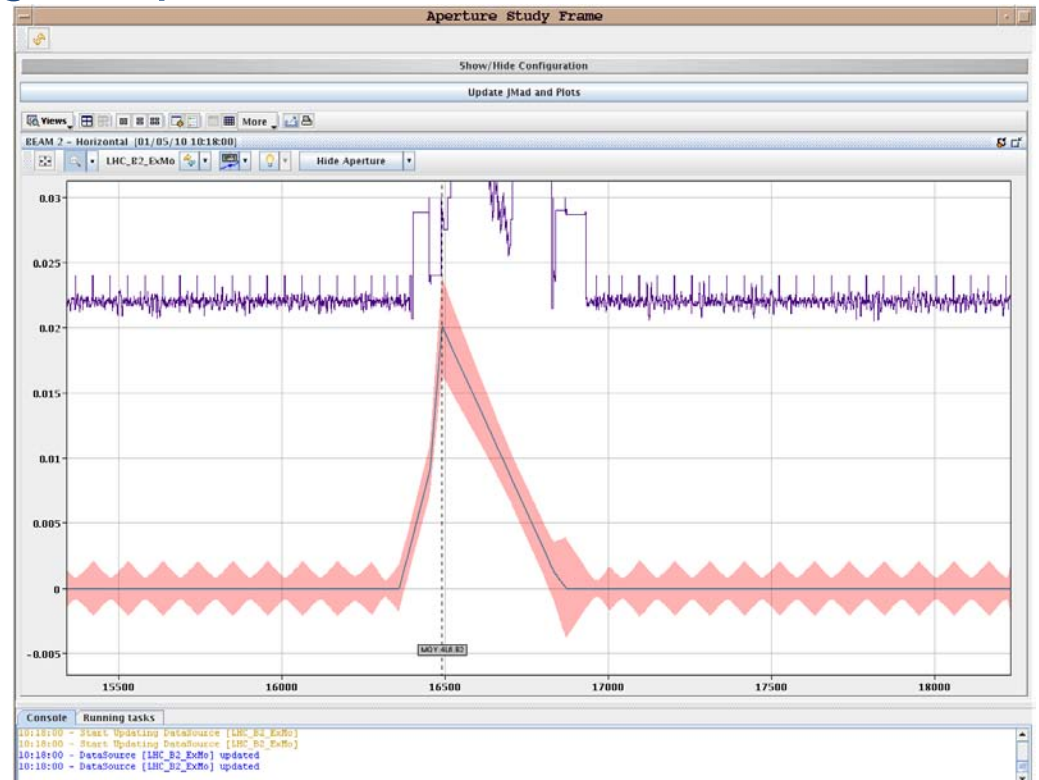


01/05/2010

- 10:30 End of aperture measurements
- Local Bumps at suspicious magnets which had been identified during measurements in March verified and aperture looks according to specs



01/05/2010

- Start preparation of collimation set-up but problem with control of 2 collimators in point 7, unknown position → Access from 12:00 to 14:00
- Found faulty power supply on collimator controller → Replaced
- In the mean time:
  - tried to get in touch with BLM experts (no success) → decided to progress with verification of the setting-up of the collimators
  - diagnosis for the QPS communication problem (FIP problem with CO and FIP expert)
  - Investigation in PS and SPS to identify and eliminate satellite bunches → PS RF expert intervention
- Re-injected at 16:20 for setting-up of collimation

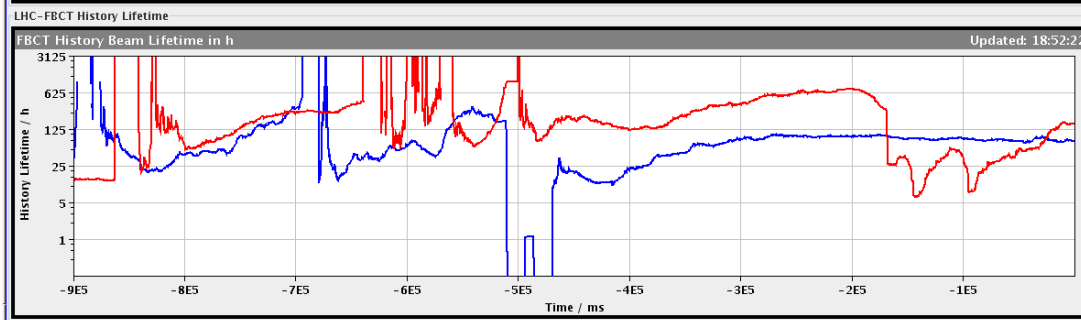
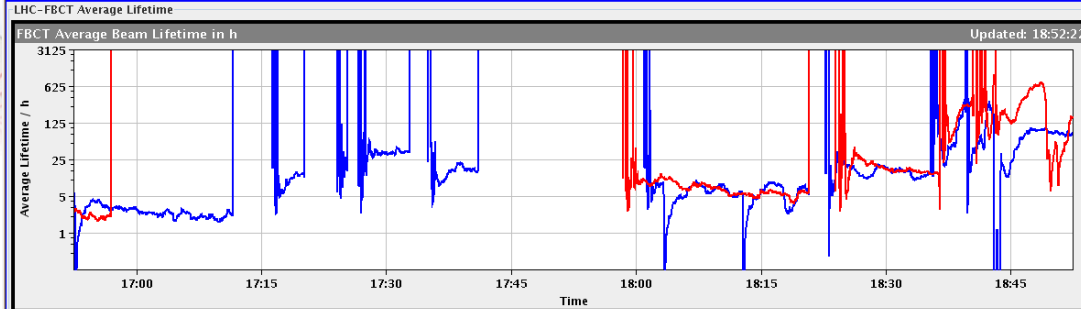
01/05/2010

- 18:00 Completed loss maps and temporary set-up for collimation
  - Observation of last night might be either due to orbit out of tolerance for the collimation or due to noise in BLM's
  - As a temporary measure opened TCLA.7R3.B1 by  $\pm 1$  sigma (sigma as determined in collimator beam-based alignment).
  - Collimation OK for stable beams at 450GeV. This assumes that golden orbit and reference optics is well re-established.
  - More accurate set-up with higher bunch intensity (planned for next days) will provide more accurate set-up.
- In the mean time diagnosis of the QPS communication problem completed → problem in the tunnel identified on a repeater → decided to plan access at 19:00 as all experts (CO/MPE/FIP) were in CCC

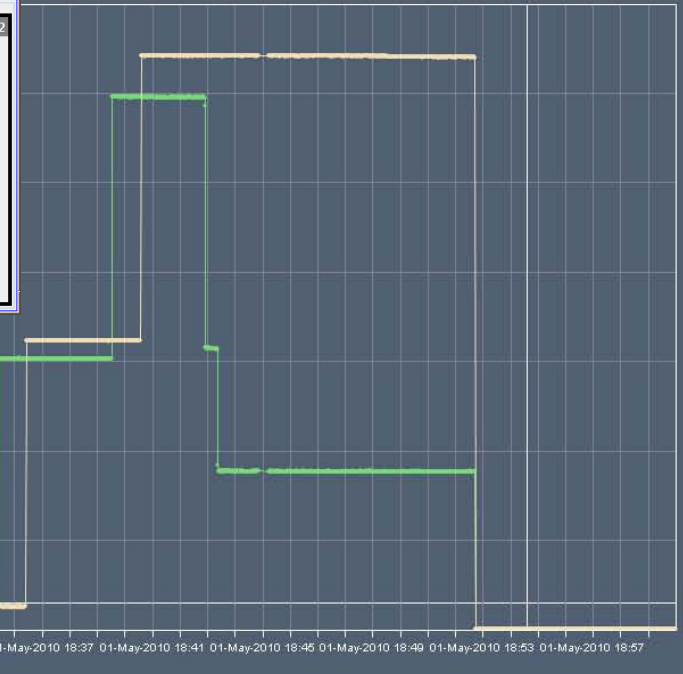
- While preparation of the material for access test injection of two bunches with  $6 \times 10^{10}$  p:
  - injected pilots B1 and B2 at  $5-6 \times 10^9$  - all O.K.
  - overinjected LHCINDIV  $6 \times 10^{10}$  into pilots - all O.K. (but BLMs in IP2 and IP8 were masked)
  - injected 2nd bunch of each beam bucket 17851 and bucket 8911 with  $6 \times 10^{10}$  for each one - All O.K.
  - Good lifetime at injection tunes
  - Set tunes to collision values in the process lost some beam 1 due to mistyping in the trim editor...otherwise 25 hours lifetime
  - Issues remaining: calibration of BPMs in LSS6 vs. intensity and BLMs at TDI
- During the afternoon we had also two trips of the ALICE solenoid. ALICE in contact with piquet

01/05/2010

LHC FBCT Beam Lifetime				
I(total) B1:	3.53e+10	I(total) B2:	1.28e+11	01-05-2010
Average lifetime B1:	73.15 h	Average lifetime B2:	156.56 h	18:52:22



M\_INTENSITY



02/05/2010

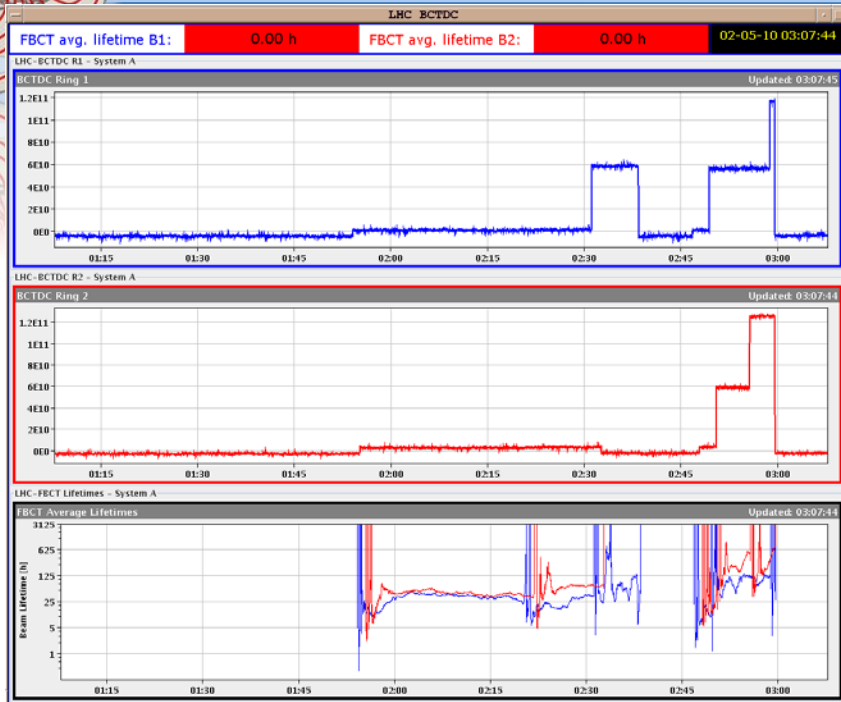
- Access for QPS FIP 19:00-23:00:
  - Initially diagnosed as problem on repeater
  - Turned out to be a problem on a bad connector
- In the shadow access to fix problem with triggers for bunch length measurements on beam 1 (CO+RF) → thought to be fixed - stopped working for beam 1 later during the next fill
- 01:50 Start injection for preparation run 2 x 2 after some problem with handshake (re-publishing of DIP data into CMW not working → CO) and QPS OK status for RQF.A23.
- Injected 2 x 2  $\sim 6 \times 10^{10}$  p/bunch just before 03:00 → very good conditions
- 03:00 400 kV drop. From TI: Perturbation on one of the phases

02/05/2010

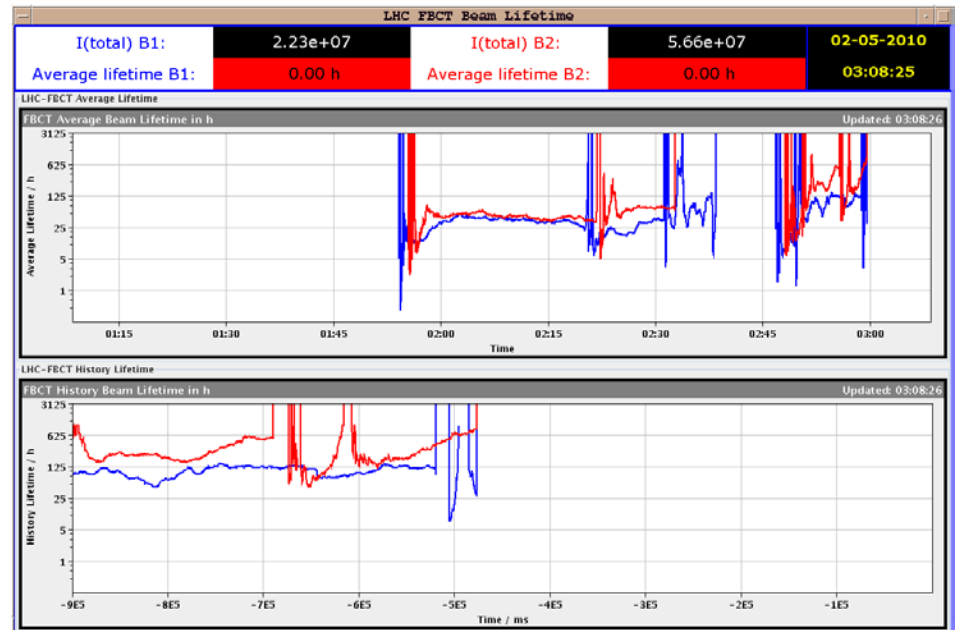
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- Trip of warm separation magnets, RF and LHCb and ALICE spectroeters
  - Unable to reset the collimators which gave interlocks after the power cut. Alessandro Masi : Collimators now all reset and correct.
  - LHC recovered at 5:30, ready to take beam
  - SPS injection kicker fault. Intervention required finished at 08:30
-

02/05/2010



## B1 and B2 intensity and lifetime





02/05/2010

VLC media player

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BEAM DUMP

LBDS <BEAM1 DUMPED>

REMOTE	KICKER	BETS	IPOC
ON	LASS	RETRIG	TSU

INJECTION

REMOTE	ACOND.	TIMING	IPOC
ON	76 min	IQC	02:58:48.680

POC

XPOC	IPOC	02:59:37.340	
LASS	MAINS	RETRIG	BETS

BTVDD

BPMD

LBDS Losses

LHCBEAM1-02/05/2010 03:12:45.772

BEAM DUMP

LBDS <BEAM2 DUMPED>

REMOTE	KICKER	BETS	IPOC
ON	LASS	RETRIG	TSU

INJECTION

REMOTE	ACOND.	TIMING	IPOC
ON	73 min	IQC	02:55:41.480

POC

XPOC	IPOC	02:59:37.340	
LASS	MAINS	RETRIG	BETS

BTVDD

BPMD

LBDS Losses

LHCBEAM2-02/05/2010 03:12:45.309

0:00:00 / 0:00: x1.00 "LHC Beam Dump System"

Power cut:

Beams were dumped correctly: FMCM triggered first.

- Injecting  $10^{11}$  p/bunch
- ATLAS ramping up
- Preparation for high intensity “test” fills 2X2
- When ready, move on to STABLE BEAMS with intensity as close as possible to  $10^{11}$  p/bunch