# Monday - recovery

- **0**1:40
  - □ AUG point 7
  - □ Just about everything off: vacuum, collimators, power converters, 18 kV...
  - □ replace the PC of the 60A corrector RCBH18.L7B1
  - □ Fix Q5.LR7

#### Access

- □ BLMs point 6
- □ QPS point 8, point 5, undulator point 4

### Recovery

- □ Vacuum valves, sirens
- □ Quench q7.17 during pre-cycle

- 18:53 beam back, dump
  - □ No BPMs
- Injecting B1, emergency dump
  - ☐ Triggered by BLM in P6. We mask it to continue.
  - □ It seems that the TCDQ setup is not corrected with respect to injection. Needs to be revised.
- 20:30 back in business
- Checked basic machine parameters after restart tune, orbit corrected back to nominal, optics OK, injection steered, reasonable emittances for circulating beam



# Monday evening - aarly Tuesday morning

- Injection and beam dump studies
- Tune and orbit feedback
- 05:10 cryogenics lost worldFIP communication to half of sector 34 – reset by expert – back by 07:00
- 07:00 sector 45
  - □ SD1.A45.B1 current lead heater

LHC status

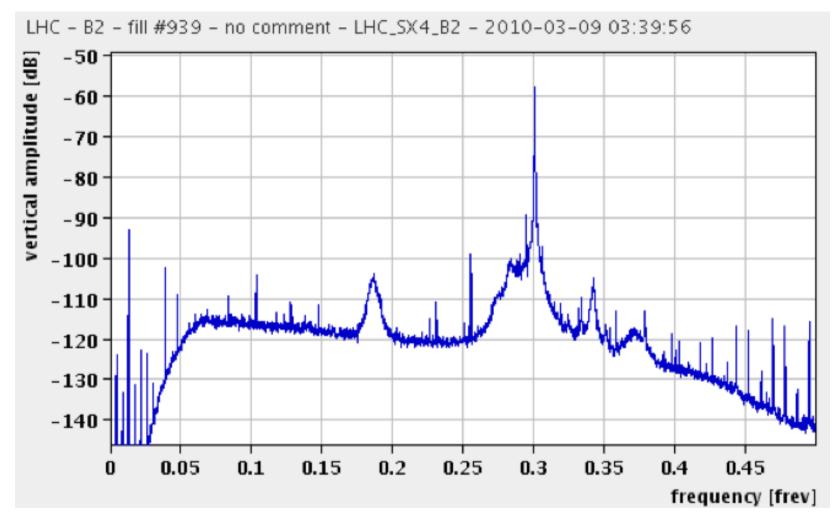


### Summary of injection and dump work

- Finished checks of dumping bunched beam from extreme H and V orbits in P6, and taking interlock BPM measurements for thresholds, with parallel and angled bumps. Dumps were all clean, at first glance. Did not set thresholds as small prob on BPM offset to solve.
- Scanned TDI.B1 jaws across beam for ALICE BCM studies need to repeat with grazing shot from injection.
- Setup TCDQ and TCSGs in P6 wrt beam halo edge and cross-checked retractions and settings. Tried angle scans of TCDQ but had a SW problem with the motor driver - fixed tonight by expert by restarting FEC, but to solve.
- Checked injection losses with all collimators and TCDQ/TCSG in position.
  To revisit in detail.
- Asynch dump checks with TCDQs in position, from central orbit and from extreme +/-4mm orbits in P6, with parallel and angled bumps. At first glance all extractions were as expected, with all beam losses on TCDS, TCDQ and in cleaning insertions. Data to be checked in detail.



## High resolution hump



Tune feedback works, orbit feedback cruelly curtailed by cryogenics



8	TUE	M	5	Aperture
9	TUE	Α	4	BETS test ramps without beam and pre-cycle
9	TUE	Α	4	Trial ramp to 1.2 TeV - test Q and orbit feedback
9	TUE	N	8	Measurements at 1.2 TeV (beating etc optics development with energy - test rampdown combo
10	WED	M	4	Injection/LBDS checks
10	WED	M	4	MPS - powering failures
10	WED	Α	8	High intensity setup (IQC limits) High single bunch intensity - emittance blow-up on flat bottom etc, loss maps,
10	WED	N	4	Damper setting-up
11	THU	M	12	nQPS re-parameterization part 1/Cryogenics
11	THU	Α	8	nQPS re-parameterization part 1/Cryogenics
11	THU	N	8	nQPS re-parameterization part 1/Cryogenics
12	FRI	M	4	Recovery.
12	FRI	M	4	Q'/b3 cross-check
12	FRI	Α	8	Trial ramp to 1.2 TeV - test Q and orbit feedback
12	FRI	N	8	TOTEM interlock tests (2 hours - no beam). Aperture continued - IRs



15	MO		24	nQPS re-parameterization part 2/TECHNICAL STOP
16	TU		24	nQPS re-parameterization part 2/TECHNICAL STOP
17	WE	M	8	RECOVERY
17	WE	A	8	3.5 TeV ramp commissioning
17	WE	N	8	3.5 TeV ramp commissioning
18	THU	M	8	3.5 TeV ramp commissioning
18	THU	Α	8	3.5 TeV ramp commissioning
18	THU	N	8	450 GeV collisions
19	FRI	M	8	MPS and beam dumping system - extracted pilot, b1: 0.45 - 3.5 TeV
19	FRI	Α	8	Protection device and collimator setting-up - b1 ramp
19	FRI	N	8	SF Control of the con