



Friday 19/3/2010

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- Summary of damper studies:

Setting up of beam 1 Hor. Damper continued

Damper kicks time aligned with the beam. Then we closed the damper loop first for 100 turns, then for 500 turns with increasing gain. Took data.

Conclusion: feedback stable, data needs to be analyzed. Also the injection error was increased (transfer line) to gives us more error (and signal).

Beam 2 vertical front-end setting-up also started.

- 16:00-17:00 access for QPS crate for RQTF/D.A81 and BLM in point 1
  - Limitation of the ramp rate for RQTF/RQTD to 1.5 A/s to avoid spurious trips in case of large trims required by the tune feedback S. Page)
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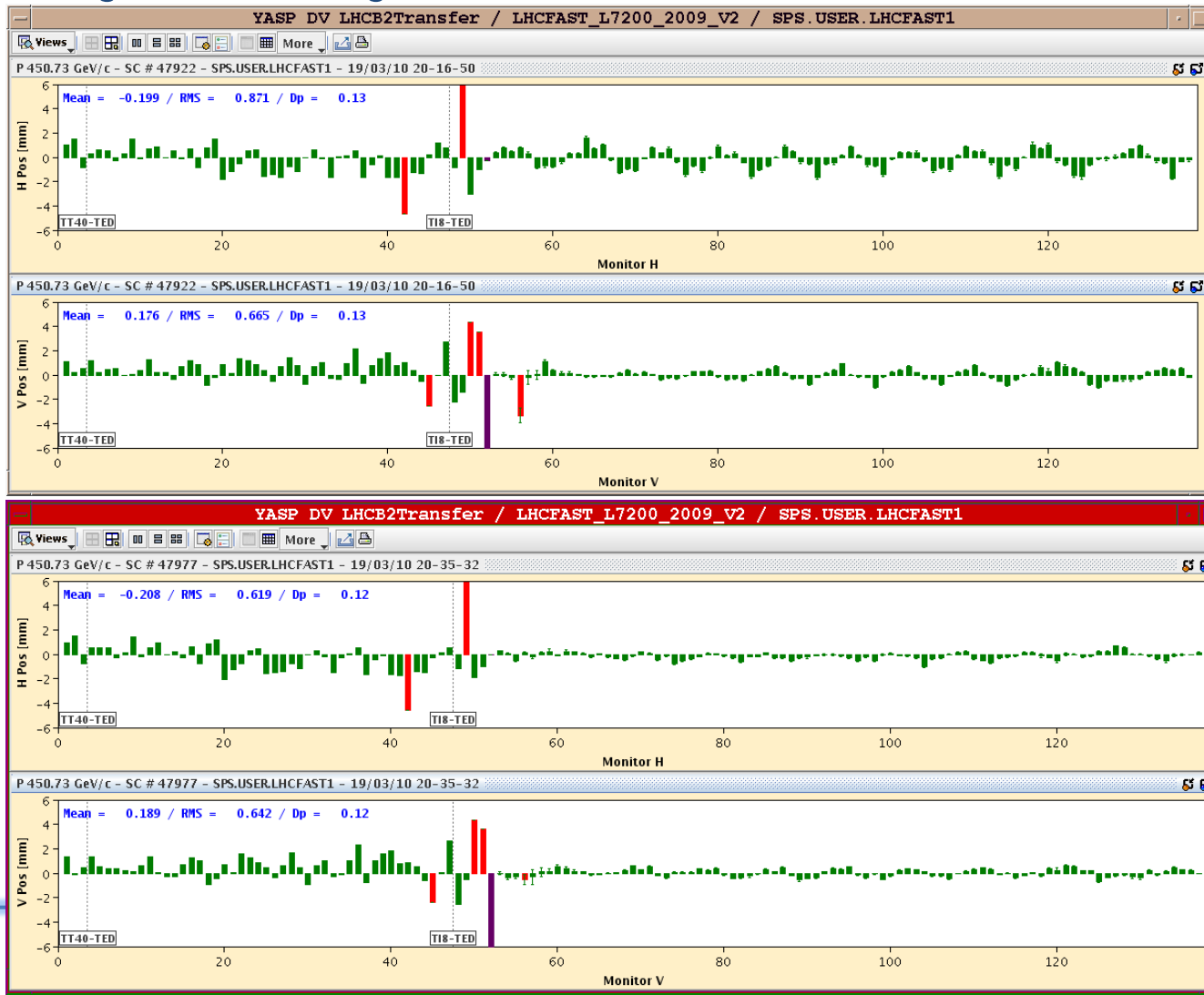
- 17:00 .... Operational pre-cycling. Multiple trips of RQTL11.L5B1/B2 - RQT12.L5B1
  - 20:00: Ready for injection of 2 beams
  - 20:00 - 21:30 : B1 and B2 measurements at 450 GeV : orbits, tunes, chromaticity, coupling
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- Tunes after pre-cycle to 2 kA (main circuits): Tunes checked and corrected -
  - B1 was  $H = .287$  ;  $V = 0.323$  and corrected to nominal
  - B2 was  $H = .297$  ;  $V = .322$  and corrected to nominal
- Chromaticity measured and corrected:
  - B1 was  $Q'h = -4.4$  ;  $Q'v = +8.2$  → trimmed by +14 in H
  - B2 was  $Q'h : -2.5$   $Q'v = +12.5$  → trimmed by +12 in H
- Chromaticity re measured:
  - B1 was  $Q'h = 8.9$  ;  $Q'v = 9.9$
  - B2 was  $Q'h = 11.2$  ;  $Q'v = 17.5$  → trimmed by -8 in V

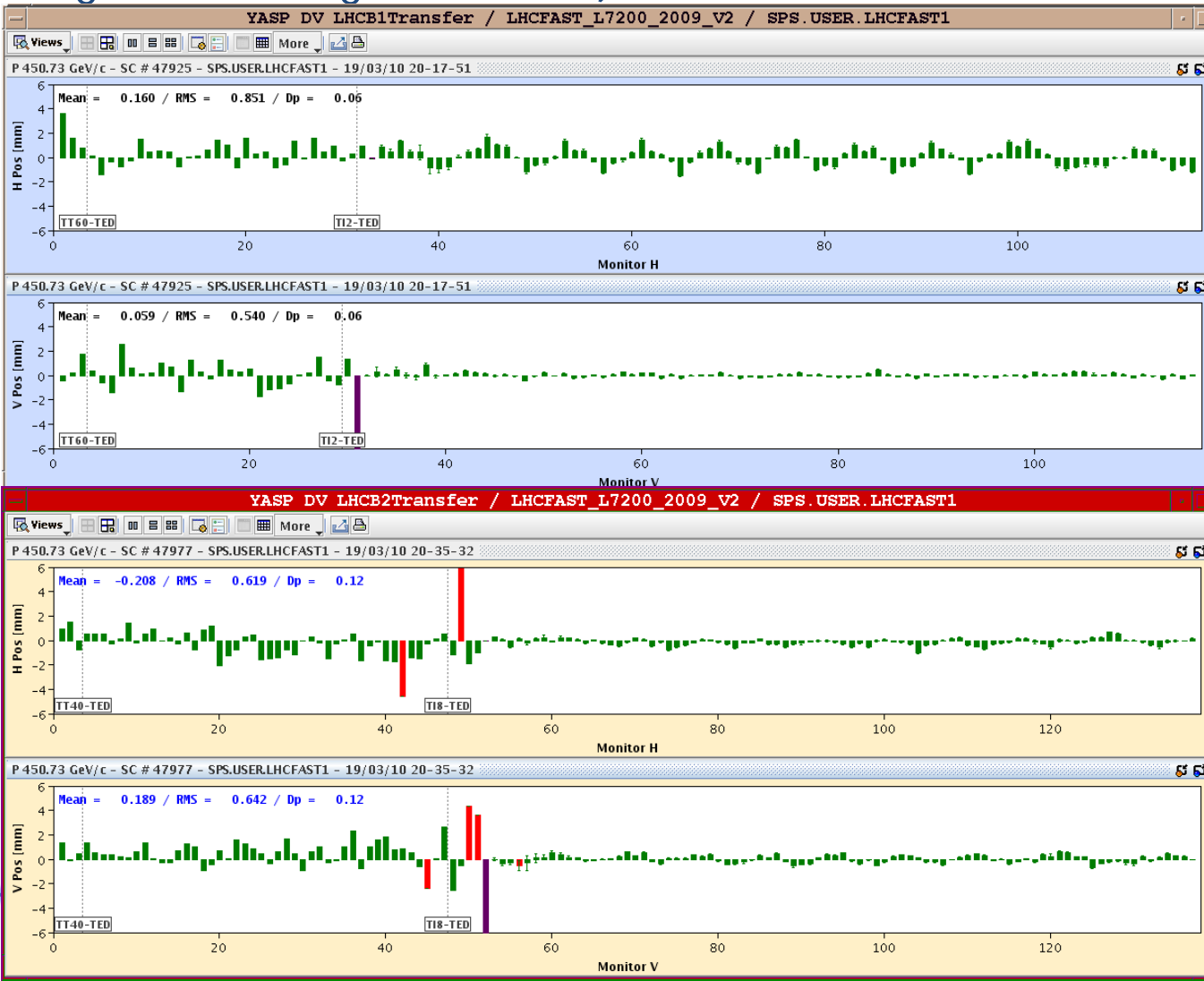
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- Injection oscillations: B2 corrected by MClAH.87408 = -10.51 urad (reducing the existing correction)



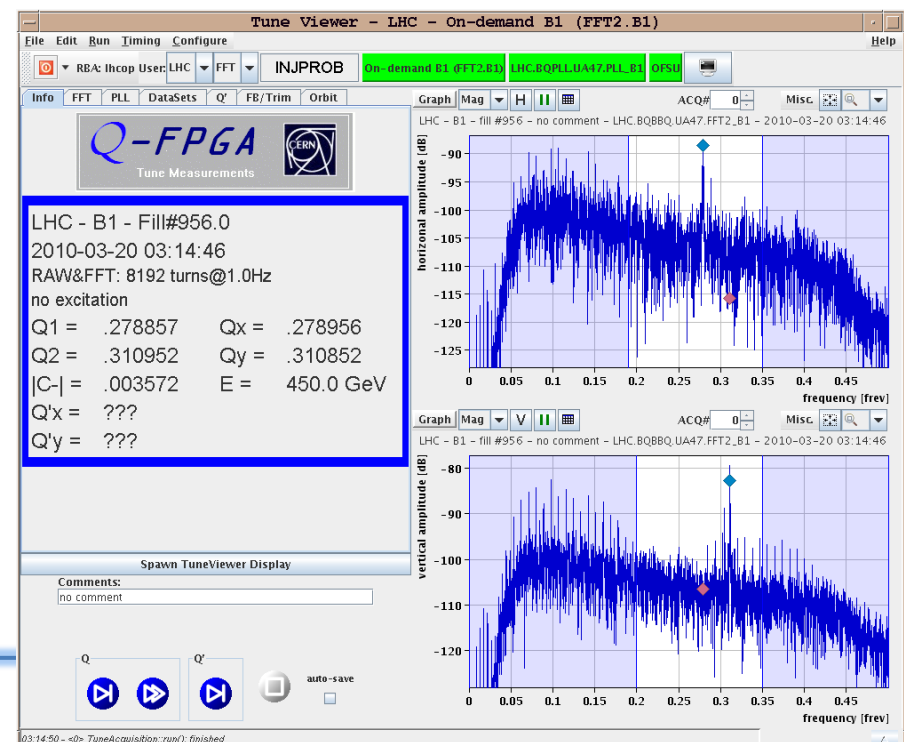
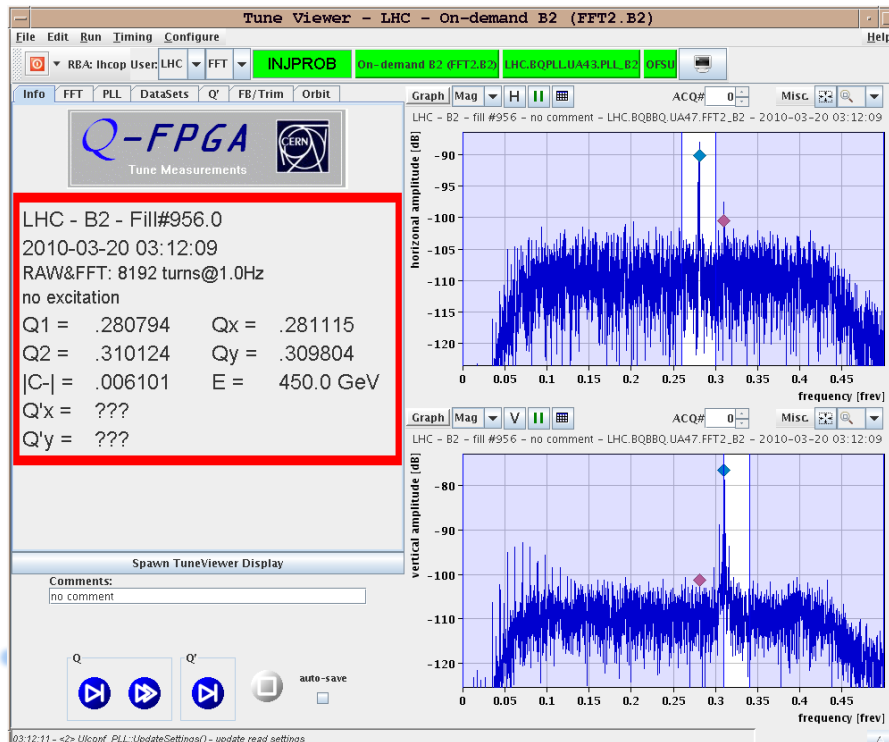
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- Injection oscillations: B1 corrected by MClAH.2880 = 9.28 urad (reducing the existing correction)



# Friday 19/3/2010

- 21:30 - 22:30 : RF cogging → completed. Parasitic measurements will be done.
- 22:00 - 01:00 : Problem with RSF1: a power module with a earth fault. Access in UA87.
- 03:00 : Beam back at 450 GeV - Checks of parameters. Chromaticity measured and indeed back to 10 both beams both planes (where they were put at before the beam dump).





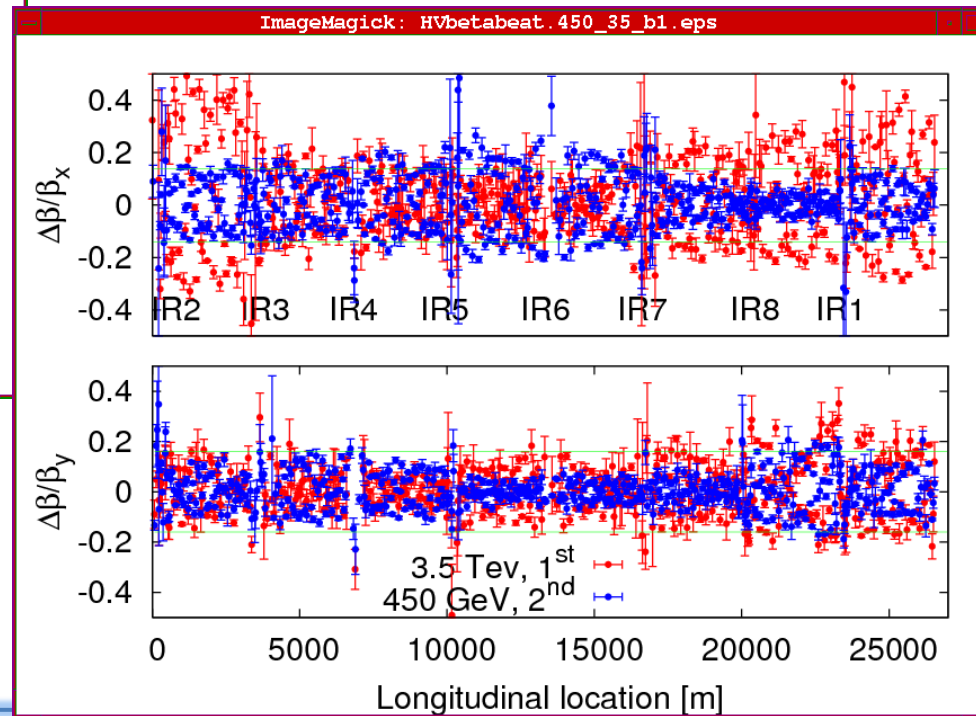
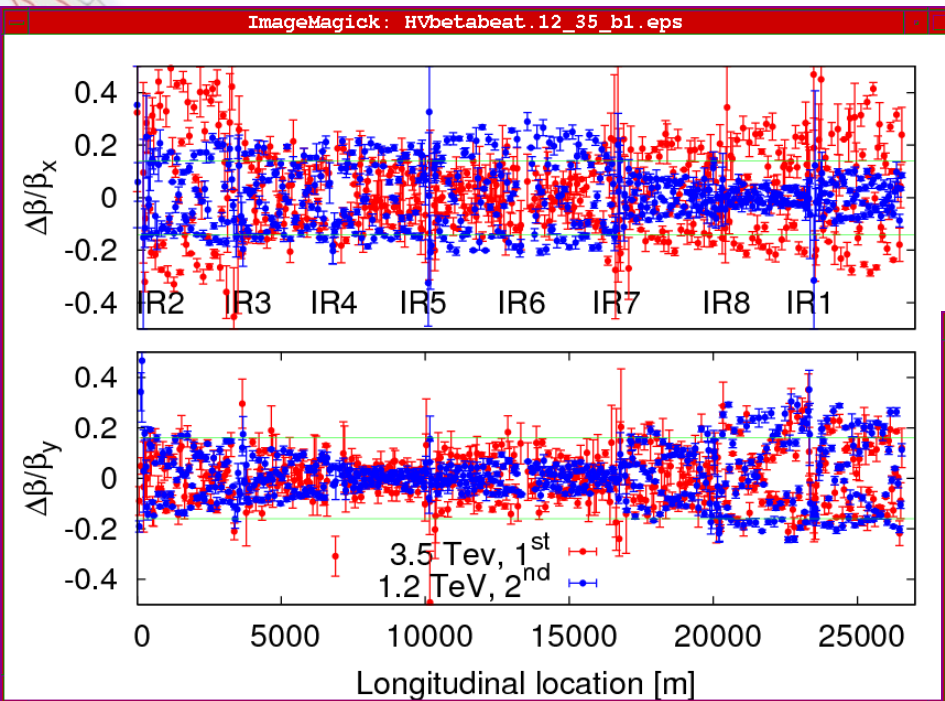
# Saturday 20/3/2010

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- 04:00: Incorporate the parameters KNOB for tune and Chromaticity, parameters K for Orbit H and V, cavity Q and total voltage
  - 04:07 - 05:21 : Both beams ramped at 3.5 TeV: coupling for B2 still to be corrected
  - 3.5 TeV measurements:
    - Orbit left as found at 3.5 TeV
    - Chromaticity measurement of B1 (hand made):  $Q'H=7.9$ ;  $Q'V=10.6$
    - Wire scan: B2 H : 3.2 ; B2 V : 2.8 ; B1 H : 1.5 ; B1 V : 1.6
  - 06:20 : start B1 beta beat measurements
  - 06:36 : beam dump: RCBYHS4.R2B2 tripped
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# Saturday 20/3/2010

- Preliminary Beta beating measurements on beam 1:







# Plans for Saturday 20/3/2010

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- 07:00 - 11:00 : back to 450 GeV and optics measurements
  - 11:00 - 15:00 : Loss maps at 450 GeV
  - 15:00 - 21:00 : Injection and Beam dump commissioning (continued at 450 GeV: 14/15 MKD dump and TI2 collimator + LSS6 BPMS)
  - 21:00 - 23:00 : 3.5 TeV ramp
  - 23:00 - 07:00 : 3.5 TeV optics measurements
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Sunday 21/3/2010

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- 23:00 - 07:00 : 3.5 TeV optics measurements
  - 07:00 - 15:00 : Protection device and collimator setting-up at 3.5 TeV (beam based alignment after verification of orbit and optics)
  - 15:00 - 23:00 : Beam dumping system- extracted pilot, b1, b2: ramp to 3.5 TeV (trigger dump at 2 TeV)
  - 23:00 - 07:00 : Damper setting up at 450 GeV
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