Sunday 07/03/2010

- 05:45 - Beams back in LHC
- 08:00 – Checked and corrected basic beam parameters
  - Orbit corrected in H and V : r.m.s. ~0.4 mm both beams
  - Tune B1 O.K, B2 slightly down (-0.005 both planes) – back to nominal
  - Chromaticity ~2 for both beams and planes
  - Coupling perfect (~0.002)

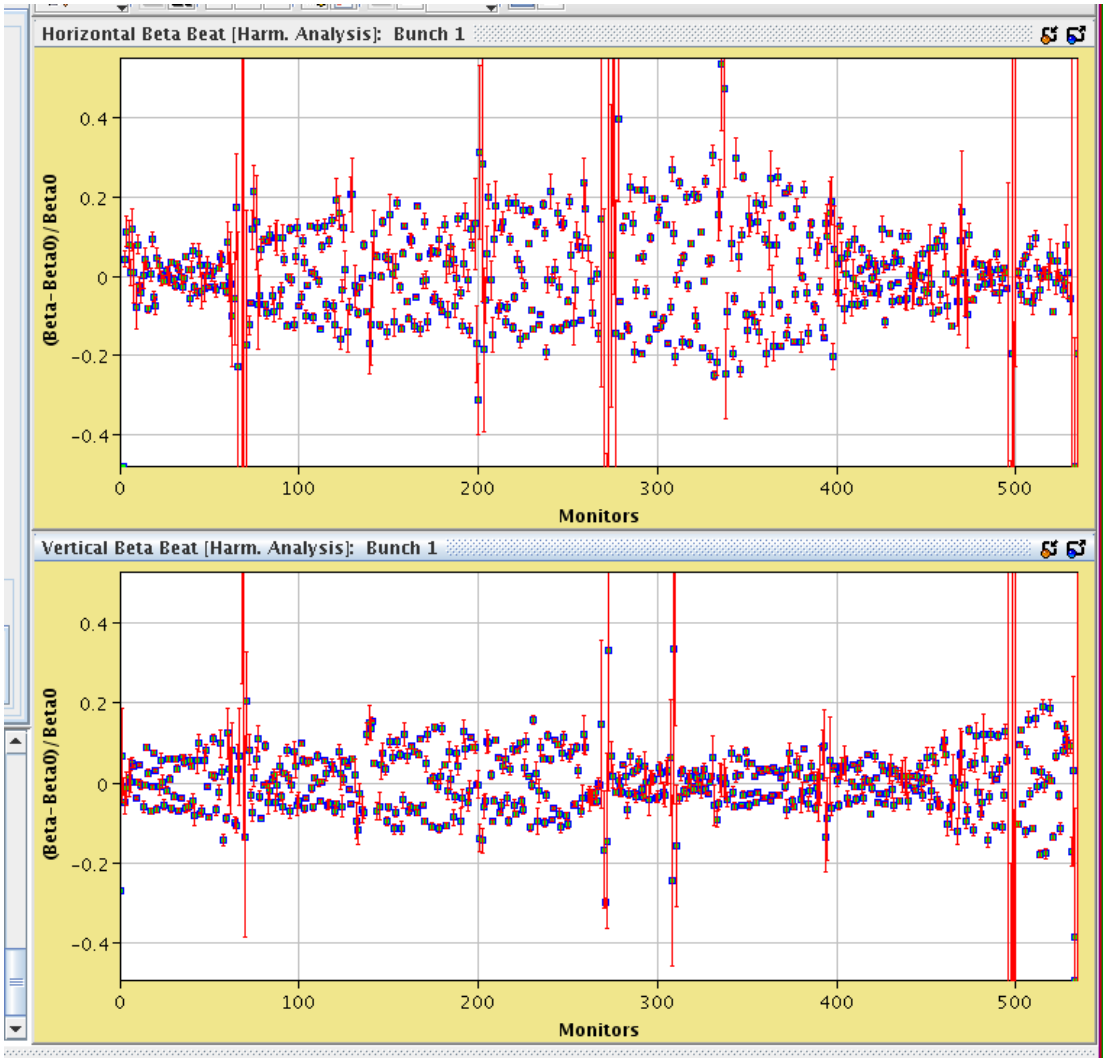
- Decided to delay LHCb polarity switch due to late and difficult start

MKQ checks - Sunday 08/03/2010

- Dumped and re-injected B1 for MKQ checks - with 100% and 1000 turns get a very clean beta measurement.

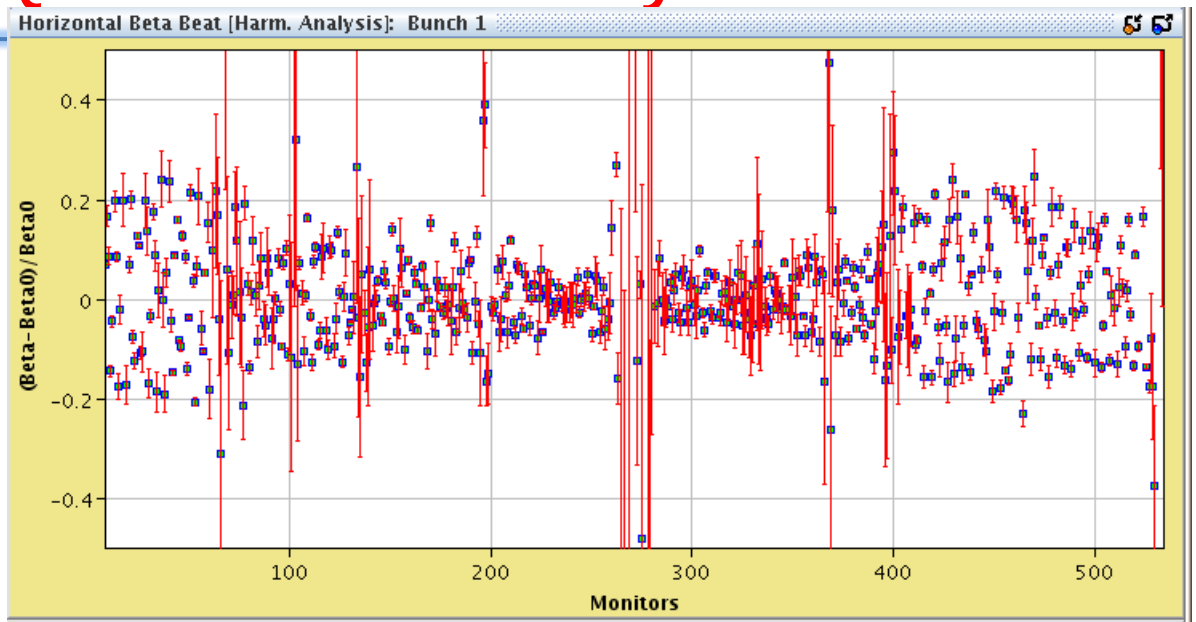
  Beta beat about 25-30% for B1.H, 15-20% for B1.V

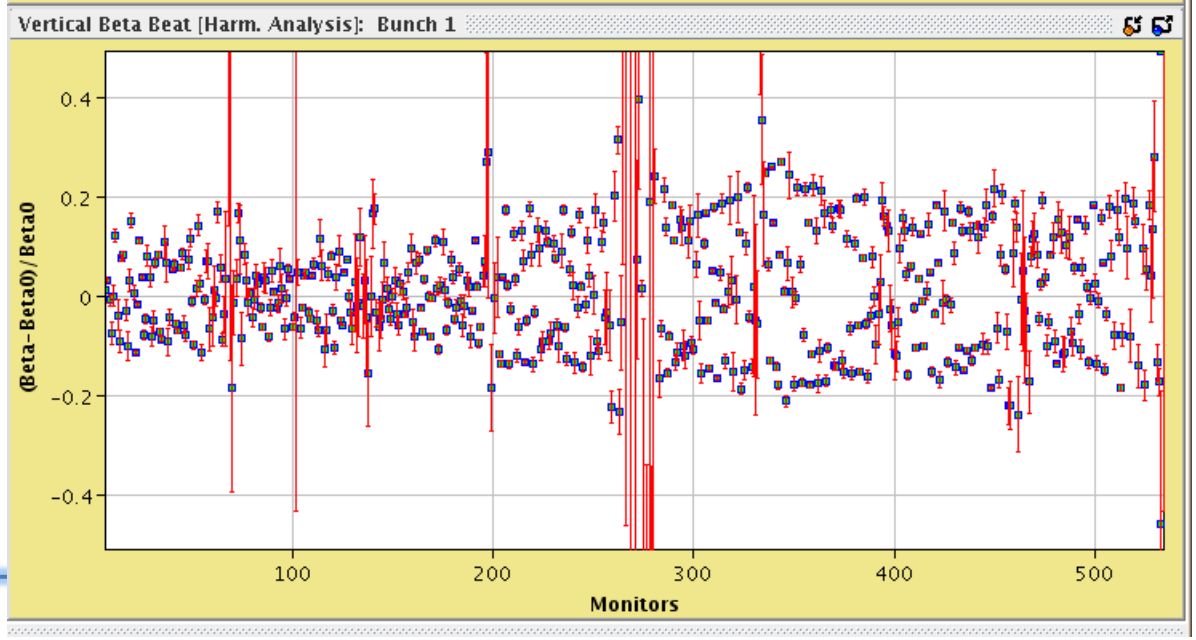
- Procedure put in elog for tonight damper studies with MKQ



MKQ checks - Sunday 08/03/2010

Beta beat B2, 25% H, 25% V



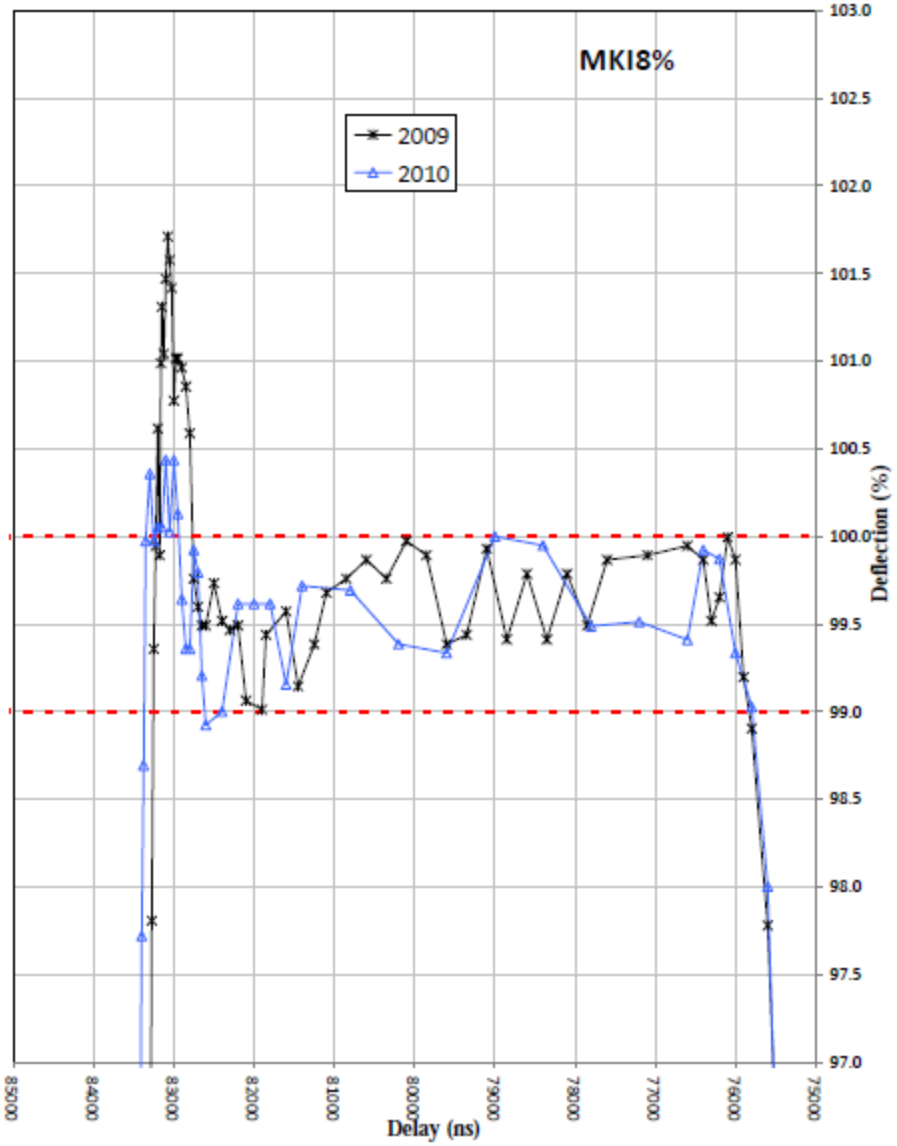


Injection and beam dump studies 07/03/10

Brennann Goddard and ABT team

1. Re-checked I&D on turn 0 - still beam coming out at falling edge of MKD kick with 1 turn error.
2. Checked B2 TCDQ movement with adjacent TCSG - found the beam edge at +10.0 mm and +9.0 mm, with 0.5 mm steps, so now fully consistent .
3. Checked all BTVSE and BTVD screens in TD dump lines and checked Al2O3 and Ti screens - no signal from Ti, nice spots from Al2O3.
4. Updated the MKQ procedure and tested on W.Hofle, for damper studies later today.
5. Measured B1 and B2 betabeat with MKQ Multiturn data, found max betabeat B1.H 30%, B1.V 20%, B2.H 25%, B2.V 25%.
6. Set TDI in P8 to about +/- 10 sigma V around beam for the MKI scans.
7. Measured MKI.B2 waveform with adjustment of kick delay. Maximum overshoot now improved from 2009, and is at about +/-0.75 (from +/-1.5% in 2009).

Injection and beam dump studies



Brennann Goddard and ABT team

Injection and beam dump studies

Brennann Goddard and ABT team

8. With MKI scan took some grazing incidence shots on the TDI.P8, for LHCb to calibrate their BCM-. Tripped off a few times with this, and saw values increasing slowly as the beam got closer to the TDI jaw edge.
9. Checked the Q3 spike for beam injected onto TDI.P8 with different positions - still present, but for beam grazing the TDI (e.g. when injecting normally) this spike looks qualatively small - data to analyse to check this in detail.
10. Started to investigate 'safe' dump thresholds for beam position in P6 - dumped from +/-4 mm in H and V at TCDQM, recording positions on interlock BPMs and beam losses during dumps. All dumps seemed clean losses to check in detail

07/03/2010

- 14:00 – 24:00 : Collimator setting-up – BLM
- 24:00 - 07:00 : Damper setting-up

Plans for Monday 08/03/2010

Monday 08/03/2010 (TBC)

- 07:00 – 15:00 : Aperture measurements
- 15:00 – 21:00 : Protection device checks and setting-up
- 21:00 – 23:00 : Ramp trial without beam – collimator & BETS checks
- 23:00 – 01:00 : Pre-cycle
- 01:00 – 07:00 : Tune and orbit feedback

Remaining:

- Switch to LHCb positive polarity
- Switch on undulator RU.R4
- Ramp with beam and feedback systems

- RF vs Hump ?
- Beta beat measurements (includes pre-cycle) and require MKQA