



SBF for ions - BCT

- Present SBF limit at 3.5 TeV is $3.1E10$ p (charges).
- Ion bunch : $\sim 6E9$ charges.
- DC BCT noise: $3-4E9$ charges.
 - Minimum useful SBF is $\sim 1.2E10$ charges to be able to operate with one bunch and avoid SBF glitches !
 - If we reduce the SBF for ions to take into account surface damage 'risk', then not much more than a **factor 2-2.5**.

- Option 1: leave SBF as it is for protons.
 - Could have up to ~4 bunches at 3.5 TeV with SBF=TRUE.
 - Rely on discipline to ensure that commissioning steps are always made with a single bunch.
 - Should also cover collimation demands for loss maps. May not even need the relaxed mode.
 - **No change to the SMP !**

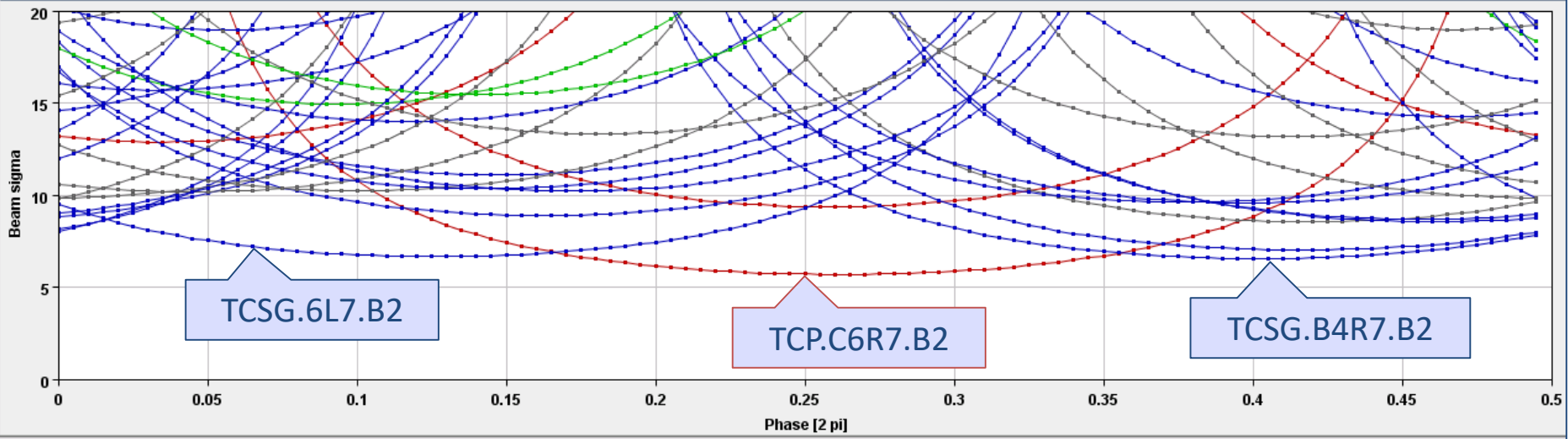
- Option 2: lower SBF by a factor 2.
 - Could have 1 bunch at 3.5 TeV with SBF TRUE. Possibly 2 bunches if they are not too fat.
 - In relaxed mode (x4) we could have up to ~8 bunches with SBF=TRUE.

- Proposals were made to ‘retract’ the secondary collimators since with ions we have a single stage cleaning (due to the way the ions interact).
- TCSG’s should stay ‘in’ to cover phase space, even if of no use for cleaning – could consider retracting a little more (1-2 sigma?).
 - See presentation by T.Baer 03.09.2010

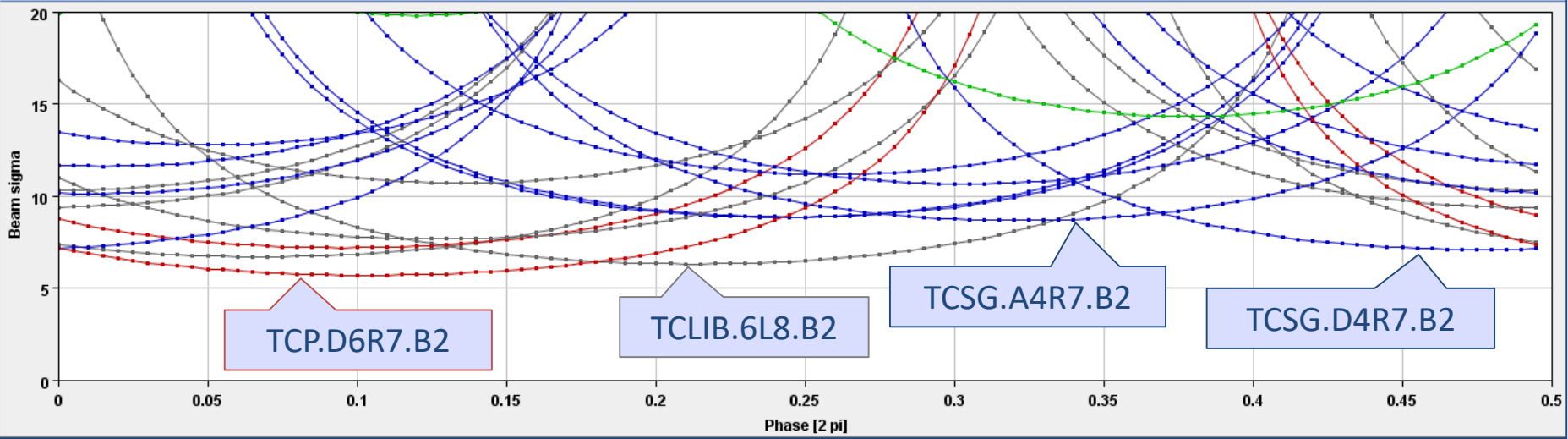


Injection B2

Beam 2 Horizontal [05/08/10 14:37:03]

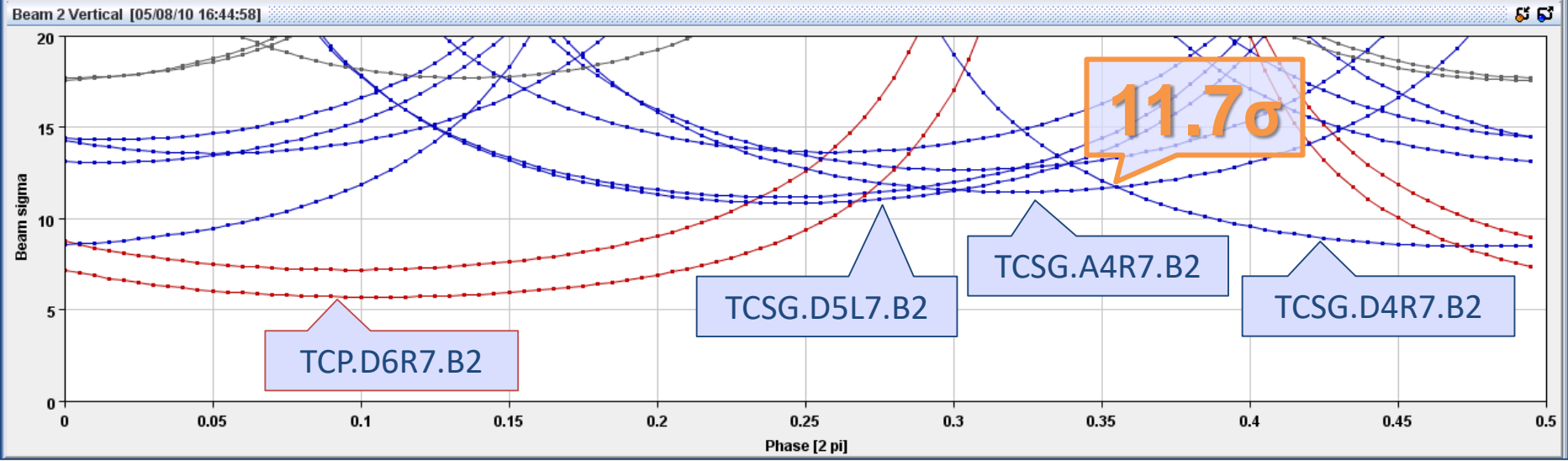
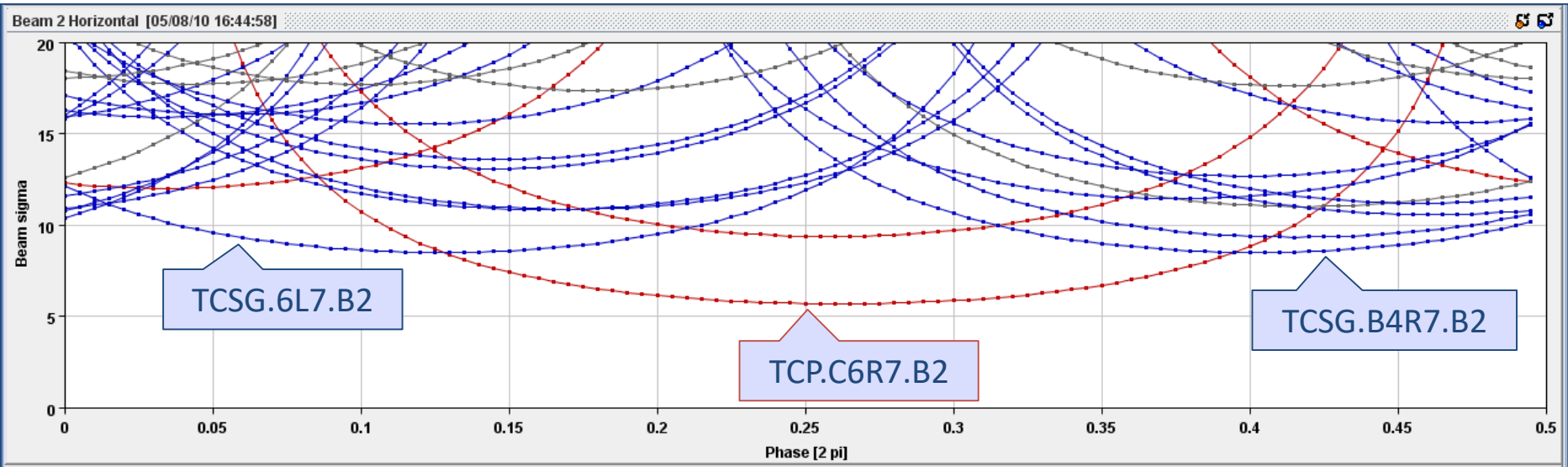


Beam 2 Vertical [05/08/10 14:37:03]





3.5 TeV, $\beta^*=11$ m B2



- **SMP SPS:**
 - Extraction master BIC LSS6 (beam1) changes to accommodate HIRADMAT.
 - (small) changes to the SPS energy flags.
- **SMP LHC:**
 - SMP V3.
 - SBF tables (extra ion table)
 - BPF logic
 - Redundancy
- **New BPF system based on BPMs**

- PIC:
 - Electronics for PIC AR8 to be exchanged – part of HWC.
 - PIC-BIC configuration to revise?
- LBDS:
 - MSD calibration curve update → BETS setup, energy tracking tests and test dumps at various energies – would have been done anyhow.
 - MKD generators.
- TCDQ:
 - Expect some changes in controls SW.