

Two additional comments :

- 1) Items 4 and 7 in the hardware list may be studied together and a choice made. As I said, 7 may be easier / more relevant.
- 2) Many of the items in the software list are presently done off-line. What I mean by listing them here is to have them supported in the control room software (FS, V-system).
  
- 3) Concerning rotating the septum magnets (presumably just one, the easiest, should be chosen) to reduce vertical dispersion, this is an excellent idea and we should prepare to do it with high priority. However, can we be sure that we will have the same issue in October - November, after a lot of access / installations, potential ground movement, etc... ? Personally I would indeed make sure we are prepared to rotate the septum, but that we really do it only after we measure the dispersion again in the Autumn.
- 4) We should add background simulation to the software list.

Hardware:

- 1) EXT stripline electronics upgrade to enable restoring reference orbits and reliable dispersion and orbit corrections (work Summer 2009, use Fall 2009 ?)
- 2) EXT multi-OTR for improved / speedier 4d phase-space determination (work Summer and Fall 2009, use Winter 2010)
- 3) BSM screen and knife-edge, for easier 3 beam overlapping, and additional collimator, for bkgd reduction (work Summer 2009, use Fall 2009)
- 4) EXT dispersion correction for both  $\eta$  and  $\eta'$ : may require additional skew quad (needs simulation study Summer 2009, possible use Winter 2010)
- 5) BSM UK LW transport and interfacing, for future upgrading (work summer 2009, perspective for use Fall 2010 ?)
- 6) BSM bkgd for smaller  $\beta_{IP}$ : may require enlarged beam pipe before/after IP (needs simulation study Summer 2009, possible use Winter 2010)
- 7) FFS optical correction with additional skew quads (3?) to supplement vertical sextupole motions (needs study Summer/Fall 2009, possible use Spring 2010)

## Software:

- 1) IP auto-scan to measure dispersion and effective Twiss / emittance
- 2) IP-EXT Twiss propagation and beta rematch
- 3) BPM-based BBA mimicking present manual scheme
- 4) EXT injection orbit restauration with BPMs measurements and first set of correctors
- 5) automation of present EXT dispersion / emittance / coupling wire-scanner based measurements and corrections
- 6) multi-OTR beam size and correlation fitting and extraction of Twiss and coupling parameters
- 7)  $x, x', y, y', E$  stability monitor based on best choice of DR last turn and EXT + FFS BPMs

## Organization, staff, procedures:

- 1) 3 beam tuning shifts + 3 BSM shifts in one continuous block, with other ATF2 work clustered before / after (+combined where relevant)
- 2) must plan rotations of shift crews, with typically one senior and one junior forming teams addressing items in task sequence
- 3) detailed shift plans with task sequence discussed / reviewed each week in commissioning group, later posted on beam time schedule / wiki
- 4) reporting of results in brief memos with analysis results, to complement "quasi-online" oral reports given at Friday operation meetings: needs web repository