Aperture model: update since LOC meeting on 22 Feb 2005

- Information available at
  - http://proj-lhc-optics-web.web.cern.ch/proj-lhc-optics-web/V6.5/ApertureModel/readme.html
- Non-uniform aperture in MBXWs found by JBJ
  - Fixed by small change of algorithms
  - All files re-generated
- Very short beam screens (few mm) found by my analysis of data from Functional Layout Database
  - Due to error in database, related to DFBA shuffling modules, will be corrected
  - Doesn't affect usability of present model too much
- Request for aperture at the beginning and end of each element = aperture at the end of every element including drifts. Available as
  - LHCB1FullApertureWithDrifts.csv LHCB2FullApertureWithDrifts.csv

Aperture by element type

- Original request was aperture given separately for every element in LHC
  - This was provided
  - JBJ also asked for aperture assignment by element type
- Algorithm written to do this
  - Tests that all elements of a given type have same aperture and eliminates them from list
  - Works well for Ring 1 (5893 definitions reduce to 729), less well for Ring 2
  - But use of these files means cutting present sequence file into many pieces (not done yet ...)

Vacuum chamber data

- Present model based on beam screen data from Functional Layout Database supplemented (in gaps > 7 m) with aperture derived from sequence file **`V6.5.aperture.seq`.**
- Vacuum chambers need to be added
  - Meeting held with S. Chemli and S. Redaelli
  - Data not available from same Web interface, but accessible in a different way (need to install software ...)
  - Should be possible to treat in the same way as beam screens and add into the model
  - May not be complete, may still have to rely on **`V6.5.aperture.seq`** for some parts of ring.