Feedback on the Summary of the Cryo meeting of 4th January 2005

Given 6th January to Serge Claudet et al.

Some points, minor corrections, additions:

Heat loads
Nominal 275W = 150W static + 25W reserve + 100 dynamic at 5,5 MV/m (= nominal 2MV / cavity in coast)
950W is absolute maximum >11 MV/m in all cavities, probably conditioning only - unlikely to be a stable operating condition !
More realistic maximum is running with 50% extra field, 8.25 MV/m, probably the limit of what would be stable
8.25 MV/m would make 175W + 225W = 400W (Sorry, we guessed 700W in the meeting!)

Ramping transients: We start with only 8 MV at injection, 1/2 nominal field = 25W dynamic, Total 200W not much difference from nominal and also a slow variation.
(BUT What is difficult to predict is the effect of transients produced by the feedback systems at injection!)

Pressure levels: 1350 mbar nominal, Interlocks: 1450mbar=>RF cut, 1500mbar=>HV cut 1550mbar=>beam dump. (These are estimates within+- 50mbar)

Tolerance +- 15 mbar: we would even like better tolerance:
a) to minimise tuner operation
b) to keep any 'switched off' cavities at a fixed defined frequency
i.e. **< 5mbar**. We have this in SM18.

Discussion:

Main fear is continuous reliance on auto pressure valve in D line to avoid >2bar in modules, especially if we expect this to be exceeded frequently !!

Need to have possibility of doing RF work if machine is down for some time due to magnet replacement. For P4 need redundancy, if no separate supply then switch between sectors.

(Stability)