

# Minutes of the SPS Studies Working Group (SSWG)

4<sup>th</sup> meeting -25<sup>th</sup> April 2000

**Present:** G. Arduini, T. Bohl, H. Burkhardt, K. Cornelis (chairman), W. Hofle, E. Shaposhnikova, J. Tuckmantel, L. Vos, M.P. Zorzano (secretary)

**Excused:** R. Cappi, T. Linnecar, D. Manglunki

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## 1 Setting up of proton cycle and LHC cycle (K. Cornelis)

- Today: set up of LHC cycle (P1 part of the cycle) (short description: ramp from 26 GeV to 450 GeV, with a 2 s long plateau, 82 bunches of 25 ns).
- Tomorrow: set up of Physics or “fixed target” cycle (P1 part of the cycle) (short description: ramp from 14 GeV to 450 GeV, with a 2.5 s long plateau).
- Next week: Physics cycle on P1 and LHC beam (or “TSTLHC” beam) on the P2 part of the cycle (at 26 GeV).
- From the 11th of May: LHC cycle will be used for physics with 82 bunches and  $2 \times 10^{12}$  protons/batch. The P2 part of the cycle is still to be defined.

## 2 Preliminary results from scrubbing tests (G. Arduini)

The “economy cycle” was operated for the last 10 days, with leptons and a 6 s long plateau of protons at 26 GeV, to test the efficiency of the proton beam on scrubbing the surface of the chamber. The typical intensity was  $6 \times 10^{12}$  protons per batch (2/3 of the nominal LHC intensity). The duty factor for the beam was about 40%. Vacuum data shows that there is a clear effect of conditioning, observable already after 10 hours, nonetheless there is always a remanent component due to remaining electron desorption. There is an improvement of about a factor 10 in the pressure in those areas that were opened during the shut-down and almost no effect on places that were closed. The signal was also measured on the dampers pick-ups 212, 213, 214 and 215 (those without solenoidal field), getting better from day to day. In general

the vertical plane seems to be slightly worse. The threshold as a function of bunch intensity and as a function of the number of bunches (for a given bunch intensity) is still to be analysed.

### **3 Status of instruments (K. Cornelis)**

Further work should be done on:

- Dampers for the LHC beam, implementation and test of the 120 MHz filter. (W. Hoffe)
- six-channel slices
- wire-scanner, the fast scanner (slice option) is not working yet
- head-tail monitor, problems with the alignment of bunch to bunch phase jitter

AOB: The BCT monitor can already save the intensity data on a common directory (for further information: L. Normann and M. Albert).

### **4 Next meeting**

The next meeting is scheduled for Tuesday 9th May, at 09:15, Room 865-1D17. A reminder will be sent by email in due time and the agenda will be announced on the web page of the working group

<http://home.cern.ch/~ghislain/sswg/sswg.html>

M.P. Zorzano 25th April 2000