

MACHINES AND AREAS COMMITTEE

Summary of meeting No 20 - January 30, 1974

Present : O. Barbalat (Secretary), D. Bloess, E. Brouzet, D. Dekkers
C. Germain, M. Georgijevic, W. Hardt, L. Hoffmann, H. Koziol,
J.H.B. Madsen, C. Metzger, G.L. Munday (Chairman), G. Nassibian,
G. Plass, K.H. Reich, Ch. Rufer

* * * *

1. Work programme of BR Group

The details of this programme are given in a draft document (MPS/BR/Note 74-1), which was presented at the meeting. Only the highlights of the discussion are given here.

1.1 Operation (machine running and training)

This task will be co-ordinated by C. Metzger and the BOC^{*}, in close contact with the OP Group. Vacancies will allow to recruit and train 3 engineers who will later, at a date yet to be fixed, be transferred to OP Group.

1.2 Improvement of the machine understanding

The aim is to understand better the behaviour of the beam under various conditions and to push the machine performance and identify its limit. 10^{13} p/p with reasonable beam quality remains the objective for 1974 but should not lead to unbalanced efforts. Now that the running-in to intermediate intensity is completed, the activity of increasing the knowledge and understanding of the machine will be carried out further by the Booster Performance Committee^{**} (BPC), which will organize the machine studies and the experimental discussions. The main problems at this stage appear to be :

- understand and suppress the longitudinal instability;
- find out the transverse limitation of intensity with the presently available multipole corrections;

* (C. Carter, A. Faugier, B. Frammery, G. Benincasa, L. Magnani, C. Metzger, F. Pedersen, J.P. Potier, J.P. Riunaud, K. Schindl, P. Têtu)

** (J. Gareyte, H. Koziol, C. Metzger, F. Pedersen, F. Sacherer, K. Schindl)

- how far can one get with the present performance of the present Linac.

Support of the other groups (OP, CCI, MU) responsible for maintenance and minor improvement of specific Booster instrumentation was confirmed. As to targets, the work programme of the target section will be presented at a future MAC meeting.

A good collaboration exists with the MST for theoretical studies and it was felt that the amount of support devoted to the Booster is adequate.

1.3 Machine systems

The main tasks are to complete the various systems and improve their reliability (aiming at limiting the fault rate of the 3 machine complex below 10 %).

- A formal agreement should be made concerning the equipment to be transferred from the MAE Group (A. Asner).
- The responsibility for the equipment of the beam transfer line beyond the PS wall (starting with TQ6) is now with the SM Group. The operation and optics will be transferred to PS group(s) at a date yet to be agreed.
- It would be desirable to have guidelines to define a spare part vs repair policy for all machines of the PS complex but further thinking is needed on the subject.

1.4 Computer controls

The arrival of the Booster PDP-11/45, scheduled for this year (in step with the necessary building modifications) is eagerly awaited. The BR programmers, while keeping the 1800 application programs operational, will aim at using the improved facilities as soon as practical. In principle, all new programs will directly go onto the PDP-11/45.

2. 1974 PS machine development programme

A draft note prepared by O. Barbalat and E. Brouzet (MPS/DL/Note 74-4) was presented and approved.

The same number of hours for MD will be scheduled as before and excess time given back to NP when not requested. It appears that the amount of studies, which are becoming more complex and involve more people, is not so much set by the available time but by the limited number of people who can perform valid work. In particular, several Linac study problems useful for the Booster were proposed (emittance-current relationship, higher current, stability within pulses, debuncher operation). If the Linac people can carry out these studies, they will be granted the necessary time.

3. Miscellaneous

After W. Kubischta in 1973, O. Barbalat will serve in 1974 as MST spokesman.

4. Future meetings

- Thursday February 7 (14.30 p.m. Small PS Conference Room)

Review and follow-up of the recommendation of the operation meetings.

- February 28 : Work programme of AE and SM groups

- March 7 : Work programme of Linac group.

O. Barbalat

Distribution

PS Scientific Staff