MPS/CO Note 70-11
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Draft for approval

Additions, comments to:
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J. Bosser

DECISIONS TAKEN ON THE CONTROLS FOR THE INJECTION LINE LINAC - BOOSTER; NEXT STEPS TO BE MADE

J.H.B. Madsen

A discussion on MPS/CO Note 69-61, "A second note on the controls for the transfer Linac - Booster" took place on 22.1.70. Present: G. Baribaud, H. van der Beken, J. Bosser, A. Cheretakis, J. H.B. Madsen, K.H. Reich, U. Tallgren and T.R. Sherwood.

I. Decisions made

1. The power supplies of all beam elements in the injection line will be controllable via the IBM 1800.

2. For the following beam elements a manual and thus computer-independent control system will be provided in addition to the computer control system:

   - the elements between Linac and shielding wall, thus: I-BH 1, 2; I-DHV 1, 2, 3, 4, 5; I-Q 1, 2, 3, 4, 5, 6 (injection line) and all elements in the two measuring lines
   - the elements for inflecting the beam into the Booster, thus: I-NFH 1, 2, 3, 4; R-DH 1, 2, 3, 4, 5 (4 x).

3. Each power supply will have facilities to allow local manual testing.

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4. A complete data acquisition via the computer for all beam elements and monitors will be installed.

5. Pulsed analog signals will be available for display in the MCR, but this facility will in general not be provided for the DC signals. Four signals from PU stations may be requested for simultaneous display. A simple selection system for the display of these pulsed signals on a 4-beam oscilloscope is recommended. A selection via the computer is not needed.

6. One TV receiver with a selector is considered as being sufficient.

7. Computer applications will be discussed in more detail at a forthcoming meeting, but the following ideas were developed:

   - emittance and energy spread measurements can be initiated in the MCR via a program select; special program options can be entered via the typewriter on the console
   - data storage for playback
   - a beam steering program, besides beam position including beam losses, will fix the beam position before the entrance of the measuring line
   - a program matching the beam to the PSB is under consideration (matching function of Linac current, single or multiturn injection).

II. Distribution of work between LI and CO

1. The required STAR data and control systems by CO.

2. The remote controls in the LCP for the injection line up to the shielding wall and the measuring lines by LI.

Note: these controls need to be built so as to accommodate system mentioned below.

3. Remote controls in MCR designed by CO.

Contact man LI : Sherwood
CO : Bosser

4. To be decided: who makes remote video signal selection system.

III. People in charge for individual hardware (controls aspects only)
(List for facilitating contacts)

-	power supply I-BH 1, 2	: Godenzi
-	" supplies I-Q 1 ... 10	: Sherwood
-	" " I-DHV 1 ... 10	: Haseroth
-	" " I-BV 1 ... 6	: Godenzi
-	" " I-EV	:
-	" " I-NFH 1 ... 4	:
-	" " R-DH 1 ... 5	:
-	position PU's	: Cheretakis
-	beam current transformers	:
-	television	:
-	beam dump	: Vriens
-	vacuum controls	:
-	beam loss monitors	: Koziol

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