MPS/CO Note 71-34/A
19 July, 1971

LINAC OPERATION

MCR OPERATIONAL REQUIREMENTS

The points mentioned below do not constitute a limitative list. One of the basic hypotheses is that the running of the 50 MeV beamline for the PSB will not reveal different problems to those already existing. We did not consider the injection processes themselves.

1. INFORMATION NEEDED IN MCR

1.1 Intensity

The present position of beam transformers (PS injection line) is satisfactory: an equivalent layout is expected for the PSB line.

Digital information from these transformers (two samples per pulse at selectable timing) should be available. One integrated measure is wanted (location to be selected).

Analogue observation must allow at least simultaneous observation of two signals at a time. The MCR selection of these two channels must have absolute priority.

1.2 Energy, energy spread

Standard measuring conditions must be established automatically. Straightforward numerical results should be available for quick check.

An elaborated graphical display should allow qualitative interpretation from the MCR (as, for instance, distribution at two selectable timings).

1.3 Beam emittance and brightness

As above, standard conditions must be set automatically and numerical figures presented. A graphical display is also wanted with the possibility to modify the threshold.

1.4 Position monitoring

Display of position and controls on steering and focusing elements is required.

2. CONTROL FROM MCR

If the linac beam qualities are satisfactory (stability) it is not desirable to increase the number of controls available in the MCR. This possibility must be retained in case the operation has to face new problems.

3. OPERATING CONDITIONS

The settings of the linac pulses used for the CPS must never be touched by other users without MCR agreement (allow - disallow switch in MCR?).

The linac tunings for the pulses not used by the CPS might be modified for studies but in case of an MCR request to use these pulses and any of the measuring lines, an absolute priority must be established with an automatic switching to the required measuring conditions.

Remark. If an independent control system, acting on an operational element, is implemented (satellite computer), an access availability of 100% from the MCR is necessary during the CPS running period.

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