

OFFICE MEMORANDUM

TO : L. Rosen - MP-DO

DATE: January 15, 1973

FROM : D. F. Petersen

SUBJECT: PRELIMINARY BEAM SCHEDULING

SYMBOL : H-4

MFS-200

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In an effort to establish a tentative schedule for early beam utilization, a meeting was held Tuesday, January 9, with the following conclusions:

(1) Beam intensity during 1- μ amp operation will be inadequate to perform most of the high priority biological experiments. Therefore, we feel that the beam characterization and channel adjustments could be made most efficiently without interruption for biological experiments of questionable value on a schedule most convenient for the staff involved in the various aspects of physical measurement.

(2) During the period of operation at 10 to 100 μ amp, the beam will be adequate for preclinical cellular radiobiology experiments, and the preliminary schedule will involve cycles of the RBE, OER, and cycle-dependent radiosensitivity experiments and, because of the time required for development of clinical symptoms, late effects studies of spinal cord and kidney. These experiments will require between 16 and 20 weeks, depending on beam intensity and operating schedule. We have tentatively scheduled animal exposures daily when animal technicians are available, with the cell exposures to follow. However, all exposures are acute, and the schedule can be interrupted between exposure sets in order to achieve maximum flexibility. The logistics of individual experiments suggest that approximately 25 percent of the beam time on each day, starting about noon, or 50 percent of the time with prior arrangement could be made available to outside users. No attempt has been made to schedule beyond the first 20 weeks, and no attempt to schedule fractionated studies will be made pending actual experience with the maximum intensity beam. At the moment we feel that between 25 and 30 percent beam utilization efficiency is optimistic except for the animal exposures, which should develop high efficiency within a short period.

Those involved in establishing the tentative 10- to 100- μ amp beam schedule were M. M. Kligerman, M. R. Raju, and D. F. Petersen.

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D. F. Petersen

DFP:ES

CC:C. R. Richmond - H-4
M. M. Kligerman - ADRT

1/15/73

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