ISR-OP/RJC-DN/1s 12th July, 1971

ISR RUNNING-IN

Ion chambers developed in our own group have been placed in both rings in the following positions :

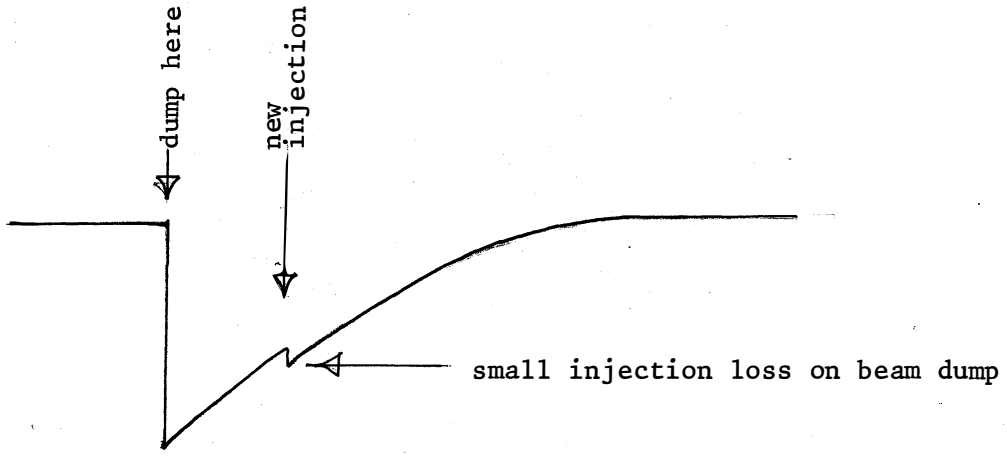
Middle of septum; end of septum; end of fast kicker; adjacent to scrapers; next to beam dump.

A temporary arrangement of cables bring all signals up to the SRC, whereby any two signals can be displayed simultaneously on an oscilloscope. Oscilloscope gain and time base can thus be adjusted at will to accomodate the signals being viewed. The oscilloscope can be triggered internally for random event viewing (i.e., dumping) or externally from a pre-arranged pulse provided by the ISR general timing.

Calibration figures for some of these chambers were taken during Run 77 (4 bunches, 15 GeV) although reliable figures still remain to be determined for some chambers. Useful figures were however found for beam/luminescent screen interactions.

Also as a result of observations during these tests (see below) the Ring 1 dump has been repositioned by 1 mm.

Chamber on dump 1 (normal rep. injection and dumping)



Dump nominal position adjusted so that no loss was visible at injection.

Conclusions

Chamber position	Ring 1	Ring 2
Dump	1V/1 mA circulating	1V/4 mA circulating
Kicker magnet	Probably 1V/1mA	not measured, should be same as Ring 1
Septum (end)	not measured	same as Ring 1
Septum (centre)	" "	" "
Scrapers	between 0.3 - 0.5 V/mA	" "

The effect of luminescent screen grids is negligible. The effect of the plates at LS 352/452 is 140 mV at the chamber on the end of the septum magnet, and 30 mV at the chamber on the kicker magnet (probably due to beam blow-up) both for a beam of 2.5×10^{11} protons.

The LS plates 7174/2486 give about 40 mV, and LS plates 7175/2485 about 100 mV measured at the fast kicker under similar beam conditions to above.

All the results need to be verified at 20 bunches.

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Distribution

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