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ISR PERFORMANCE REPORTTESTS ON COMPUTER CONTROLLED BEAM PROBESConclusion

The beam probes located at the end of the transfer line TT2 have been successfully tried out with good results.

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Secondary emission beam probes, 2 mm wide, have been installed in positions 352 and 452 in TT2 and TT1, just after the septum magnets. The principal use of these probes will be to act as a "beam microswitch" to detect drifts of beam position into the wall of the narrow beam pipe near the septum or beam blow-up during transfer.

The probes are wholly controlled via the computer, through a CAMAC interface. On command from a computer console, pulses are sent out to step the selected probe into or out of the beam. A fast integrator mounted in the ring tunnel measures the charge picked up by the probe, and converts the impedance and output voltage to a level suitable for the analog scanner. The probe end stops are checked via the digital scanner, and probe position read-out in the SRC is given by CAMAC output registers.

The tests were done using PR 352 only, as the electronics for PR 452 is not yet complete.

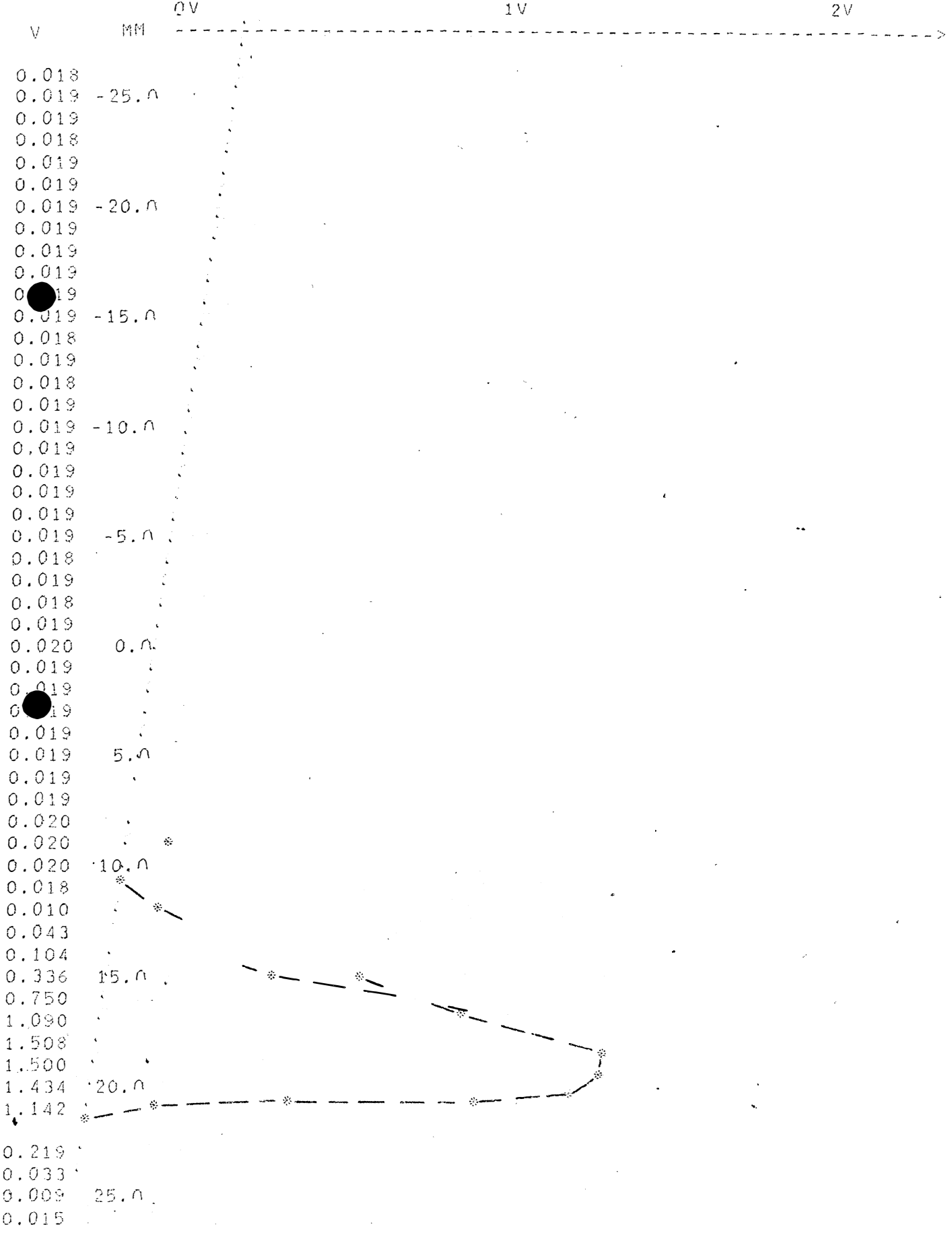
Scans were made through a 20 bunch beam in both vertical and horizontal planes. The beam profiles are shown in Figs. 1 and 2. The positions agree to within 1 mm to the positions seen on LS 352, which is mounted in the same tank.

I. Barnett

--- RT BEAM PROBES ---  
 BEAM PROFILE --

FIG. 1

E: 721118      TIME: 1647      PR352 HORIZONTAL      Y=1 MM  
 AL EJECTIONS 53  
 EPTED 53



BT BEAM PROBES  
BEAM PROFILE

FIG. 2

E: 721118

TIME: 1656

PR352 VERTICAL

Y=1 NM

AL EJECTIONS 53  
EPTED 53

