

Study of Higher Gap Volts at Injection

E. Gill

April 1985

Collider Accelerator Department
Brookhaven National Laboratory

U.S. Department of Energy

USDOE Office of Science (SC)

Notice: This technical note has been authored by employees of Brookhaven Science Associates, LLC under Contract No. DE-AC02-76CH00016 with the U.S. Department of Energy. The publisher by accepting the technical note for publication acknowledges that the United States Government retains a non-exclusive, paid-up, irrevocable, world-wide license to publish or reproduce the published form of this technical note, or allow others to do so, for United States Government purposes.

DISCLAIMER

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, nor any of their contractors, subcontractors, or their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or any third party's use or the results of such use of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof or its contractors or subcontractors. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

5/2/85

Number 180

AGS Studies Report

Date(s) April 24, 1985

Time(s) 1500-1600

Experimenter(s) E. Gill, L. Ahrens, E. Raka, J. Woods, W. Frey

Reported by E. Gill

Subject Study of Higher Gap Volts at Injection

Observations and Conclusion

The purpose of this test was to see effect on capture of first 20 ms running the rf at higher voltages than normal operation. Reference to Plot A the sum gap volts were at 325 KV total average 7.38 KV/GAP it was noticed that some stations were running close to 9 KV. This limited us on going higher than we would like to reach, but good enough for a test. Plot B is normal running at 275 KV.

The plot of capture vs. time can be seen on Plots C & D. It was also noted that the bunch width at 20 ms was not changed by a large factor.

Some conclusions can be reached from looking at losses from the two plots. At 70 ms the intensity was 1.85×10^{13} with the highest voltage Plot C. It was also noted that maximum losses were over in 5 ms.

ld







