

## Continue Check of Linac and HEBT Parameters

J. Claus

October 1973

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.AT(30-1)-16 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.

AGS Studies

Blumberg  
NO. 40

Beam Transfer and Low Field Correction Studies

Claus, Herrera, Gill, Raka, van Steenberg

Oct. 3, 1973

1000-2400

Objective: Continuation of check on performance reproducibility using May 24 low field correction values.

Results: Following replacement of the anode pulser in the Cockcroft-Walton, the beam was tuned to  $5.75 \times 10^{12}$  p/p. Most of the intensity study period was devoted to resetting up the May 24 low field corrections and the analysis of the resulting parameters. Again early stacked beam intensity increased by about 10% (to approximately  $1.6 \times 10^{12}$  ppp stacked), but the basic spiraling beam behavior was unsatisfactory. No amount of gradient correction variation did improve this. The  $v$  values and closed orbits were measured for these conditions. The resulting parameters did not explain the spiraling beam behavior. By 9:00 o'clock p.m. the machine was reset to optimized post shutdown low field corrections and the final intensity brought back to approximately  $5.3 \times 10^{12}$  ppp.