



Brookhaven
National Laboratory

BNL-103911-2014-TECH

AGS.SN31;BNL-103911-2014-IR

Intensity of Early and Late CBM vs. Multi-turn Intensity

J. Herrera

June 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.

Summary of Study (Intensity)

NO. 31



	MULTITURN	EARLY MONITOR 4 ms	LATE MONITOR	COMMENT
BEFORE STUDY	$1-1.2 \times 10^{12}$ P/P	7×10^{12} P/P	5×10^{12} P/P	checked present without danger
TUES. 5/22	1.4×10^{12} (5), (6)	$8-8.5 \times 10^{12}$	$\leq 6.3 \times 10^{12}$ P/P	LATE MONITOR SATURATING (1), (2), (3), (4) (1.25)
WED. 5/23	1.4×10^{12} (5), (6)	8.5×10^{12}	$\leq 8.27 \times 10^{12}$ P/P	LATE MONITOR SATURATING (7), (8)
THURS 5/24	$1.8-2 \times 10^{12}$ (5), (6)	$8.5-9 \times 10^{12}$ (11)	$\leq 9.78 \times 10^{12}$ (10) (12)	LATE MONITOR (1.7) (7), (8), (9)

Just
6/15/73

Code for page ①

②

- ① clamp raised - 1×10^{12}
- ② off frequency on flat top eliminated
- ③ dwell time lengthened
- ④ all magnets retracted - E10
- ⑤ Linac improvement
- ⑥ Injection improvement - 10^{12}
- ⑦ No loss of initial bunching
- ⑧ Early bunching - on frequency
- ⑨ Vertical orbit harmonic correction (9th)
- ⑩ Rates of low level run signal, $\frac{\text{THUR}}{\text{WED}} = \frac{6.2}{4.8} = 1.3$
- ⑪ Early monitor did not increase.
- ⑫ B15 transformer check - (2:1) and 1.22 turns ratio