

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

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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	Current point 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)

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- 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 —
- ⑦ No loss at initial bunching
- ⑧ Early bunching — on frequency
- ⑨ Vertical orbit harmonic correction (9th)
- ⑩ Ratio of low level sum signal, $\frac{THUR}{WED} = \frac{6.2}{4.8} = 1.3$
- ⑪ Early monitor did not increase.
- ⑫ B15 transformer check — (2:1) and 1.22 turns ratio