



ISR-RF/JB/1s

CM-P00072581

14th July, 1971

ISR RUNNING-INRuns 83 - 85, 7.7.1971 - 9.7.1971INSTABILITIES IN RING I

For about 2 weeks, we have noticed instabilities in Ring 1 which have resulted in the average orbit on the same P.U. presenting variations of a few millimeters (mainly radially) from pulse to pulse. We have observed this phenomenon with 4 (7.7.1971) and 20 bunches (9.7.1971) at 22 GeV/c. We have noticed that this effect depends partially on the injection tuning, and that Ring 1 presented a small amount of beam loss. For comparison, the same measurement of position, pulse after pulse, was done in Ring 2 and there the stability is normal. The measurement system is the same for both rings. Therefore, there is something in Ring 1 which either has an erratic influence on the average orbit (the measurement system is insensitive to betatronic oscillations) or creates a spurious signal which disturbs the signal processing. Such a signal can be small and has not yet been observed. We need more repetitive injection time to study this phenomenon which at present prevents the measurement of orbits in Ring 1.

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