

An Apparatus for Nuclotron Beam Orbit Measurement

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Abstract

This paper presents the closed orbit measuring system of the superconducting synchrotron Nuclotron, concerning the hardware set-up and data processing. A substantial hardware enables one to acquire beam signals with turn-by-turn and bunch-by-bunch capabilities. The system consists of 20 BPM, 20 preamplifiers, 40 ADC (8 bit, 50 MPS with 64k RAM per channel) and RF multiplexer/combiner with waveform digitizers (DSO-2125 from CyberResearch).