

Upgraded Bunch length monitoring system for CEBAF

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The existing bunch length monitoring system was designed and installed more than thirty years ago. This system measures the beam induced signal from a 5.988 GHz cavity. This phase is compared to a reference signal using a double balanced mixer/phase detector. The data are acquired using a Computer Automated Measurement and Control (CAMAC) system for bunch length determination and analysis. This system can only measure one such signal at a time. Upgraded system has three downconverters to measure signals from three cavities simultaneously and an FPGA based system acquires and displays the phase information in EPICS for analysis. This poster describes the architecture and the implementation details of the new system

Keyword

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