

Set-up of PEP-II Longitudinal Feedback Systems for Even/Odd Bunch Spacings

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Abstract

Feedback systems installed for control of coupled-bunch longitudinal instabilities in PEP-II collider have been designed to process bunch data at 238 MHz or one half of the ring RF frequency. As a result these systems are configured for sampling only even or only odd populated RF buckets (even bunch spacings). However commissioning of PEP-II have required fill patterns that alternately populate even and odd buckets. In this paper we present a technique that allows the use of existing hardware to provide feedback control of all bunches in such fills. The method utilizes analog pulse stretching in the front-end electronics prior to sampling at 238 MHz. The technique will be illustrated by the experimental results from PEP-II.