

Tevatron Beam Position Monitor Upgrade Specifications

Beam Current Specifications

Peak Current vs Bunch Intensity

Spectral Component

RF Hardware

BPM Plates Specification

Physical Dimensions

Coupling Equations (Impedance)

Linear

Non-linear

Directivity

Bandpass Filters

Bandwidth

Reflection Coefficients

Justification

Error on 1st turn orbits

Turn-by-turn measurements

Cabling

Foam-8 Specifications

Reflection Coefficients

Connectors

Filters

Digitizer input

Digitizer

Sampling Rate

Input Range

Number of Bits

Non-linearity

Integral

Differential

Effective Number of Bits (ENOB)

Justification

Dynamic Range

Resolution

Linearity

Gain Accuracy

Digital Downconverter

Sampling Rate

Number of Input Bits

NCO Frequency Granularity

Justification

Compatibility with Digitizer

Changes in Center Frequency

Digital Filters

Clock Rate

Interpolation

Dissemination

Bandwidth

Modes

Closed Orbit

Turn-by-Turn

First turn

Mode Switching

Delay

Repeatability

Tracking with Mode Changes

Justification

Operating Scenarios

Resolution

Compatibility with Digital Downconverter

Compatibility with Proton/Pbar Cross Correlation

DSP

Crate & Local Control

Timing & Synchronization

Slot0 Controller

Calibration

Diagnostics

Acnet Data Acquisition Routines

Acnet Control & Diagnostics Routines

User Application Programs

Archive Routines

Data Analysis Routines