

Minutes, 2/21/05 Tevatron BPM Upgrade Meeting
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The agenda as announced consisted of:

1. Diagnostic signals, non-uniformity, possible modifications.
2. Status of installation/commissioning
3. AOB

1. Diagnostic signals, non-uniformity, possible modifications.

- It has been recently discovered that the diagnostic signal varies in peak voltage depending on the location of the filter board in the VME crate. This is coming from reflections on the backplane.

- Bill, Ken, Vince others are looking at the problem and some possible solutions to creating a more uniform signal. The signals vary by up to a factor of 2. Possibilities include using more than one line on the backplane, putting an oscillator on the filter board, terminate a line on the filter board, etc.

- Jim mentioned that a variation of less than or about 5% would be a goal.

- We agreed that this has high priority and we should find a solution (or set of possible solutions), test it and install it as soon as possible to prevent too much retrofitting of filter boards.

- An update will be given at the Wednesday meeting.

2. Status of installation/commissioning

Mike Martens:

- Mike reported that Vladimir is very interested in seeing the installation and commissioning of the BPMs moving forward. There is a meeting of the TeV BPM project with the Run Coordinator and the Tevatron Coordinator Tuesday morning to discuss issues and strategy for installation.

- Mike reported problems with HPB32 BPM -- the signals are wandering.

It was tracked down to the B plate by Rob Kutschke. Interestingly, this BPM passed the diagnostic tests.

- A question came up of who fixes problems like this (it turned out to be a bad cable, probably) and the project needs to come up with a strategy for doing this without overloading Jim.

- Most of the BPMs passed most of the beginning of store diagnostics tests over the past few days.

- Mike has been looking at the offsets of orbits comparing B3 before and after the new system was installed. A 2mm shift was seen in both the horizontal and vertical coordinates. Mike is working with Brian and others to understand what offsets were applied to the old system and what is applied to the new system. The goal is to change the reference orbit so the new and old systems give the same result. We have to understand which offsets we want to apply to the new system and where to apply them. Brian, Luciano, Rob will be involved in putting together a plan for applying offsets (survey, electrical, whatever).

Rob Kutschke:

- Rob showed some plots on two topics. I assume that these will be inserted into Beams docDB soon, if they haven't been already.

- The first topic was pbar position and proton deconvolution ideas. Trying a different subtraction scheme did not produce better pbar position measurements.

- The second topic was a comparison of TBT with closed orbit during injections. There is a shift of about 200 microns and this may be caused by relaxation of the injection bump. This size of shift is more or less consistent with other measurements of TBT and closed orbit measurement differences.

4. AOB.

- We discussed the 500 Hz problem. We propose to test 500 Hz in A3 soon to see if the problem is still there.