

Minutes, 4/07/04 Tevatron BPM Upgrade Meeting
Stephen Wolbers

This set of minutes, and all future minutes, are or will be deposited in the Beams Document Database as document number 792.

The agenda as announced consisted of:

1. Report from Steve and Bob.
2. Reports from L2 managers.
3. Report from Dehong on EchoTek testing.
4. AOB.

1. Report from Bob and Steve.

- Bob mentioned that he has one BPM reading out in the "Plan B" mode for measuring pbar position. The filter on the pbar cables of the A14 BPM was changed on 4/6/04 and the board readout and timing was changed about about 0930 on 4/7/04. The system is set up to look at 800 ns (2 bunches) of pbars and runs at about 100 Hz. The expected rms resolution of the protons in this setup is 20 microns and antiprotons is 50 microns.

- Bob Webber and Jim Steimel looked at the test-stand in FCC on Tuesday and offered suggestions on improvements. Many of these changes will be implemented.

- The monthly report is still waiting for various contributions from the level 2 subproject leaders. Please send them along soon.

- The requisition for the VME crates will go out for bid this week.

2. Reports from L2 Managers

Mike Martens:

- Mike is looking at the data from the BPMs VA14 and HA15. Bob suggested that he also look at those connected in the A2 service building. Mike is looking at helix-on helix-off conditions. This should help in sorting out the issues involved in measuring pbars.

Brian Hendricks:

- Brian is back from vacation and is catching up. He will respond to comments received on the online specification document. Any further comments should be sent/given to Brian as soon as possible.

Vince Pavlicek:

- Bill Haynes and Ken Treptow are working on the timing and diagnostics systems for the Tev BPM upgrade. Progress is being made and the timing subsystem schematics are about 90% finished. An internal review will be held and after that a full presentation of the system design will be made to the entire group. This should occur in the next two weeks.

- Bob Forster is planning to come to the meeting on Thursday with a mockup of the front panel.

Rob Kutschke:

- The first draft of the offline software specifications document has been placed in the documents DB. Rob plans to review it with Brian and then Mike M. to ensure that the content is consistent with the online and Tevatron operations and understandings.

- Rob has been thinking about calibrating the BPM system and has had some discussions with some people familiar with the current system. He plans to expand this to include others as he gets further along.

Luciano Piccoli:

- A design review of the front-end software design will occur sometime next week -- probably Thursday.

- A cvs repository for the new code has been established.

- Luciano is working on a software test environment.

3. Dehong -- Report about EchoTek testing

- Dehong will report weekly on the status of preparations for the EchoTek testing when the first modified boards arrive in early June. A quick turnaround is essential.

- Dehong mentioned 5 tests that are currently envisioned.

- = Check the input impedance.

- = Run the PREP test that was used for the Recycler EchoTek boards. This includes a full scale sin wave to check the ADC bits and a filter test for the DDC.

- = Check the new VME interface.

- = Check the FPGA firmware and our ability to access/change it.

= Check the SRAM

- Dehong will write up a plan and give weekly reports on the status.

Jim Steimel: Technical Coordinator Report

- Jim has been working on the commissioning plan. Looking at the crate space availability shows that the rack directly next to the current Tevatron BPM rack has space potentially available for the new system in almost all service buildings. There are a few buildings which may be troublesome in this regard and those we may have to treat as special cases. They are in F sector. All the rest look do-able. If this is the case we could plan to install the new hardware in the rack next to the current Tev BPM system during the shutdown in essentially all the service buildings. This would allow testing of the new system without disturbing the current system. After the shutdown we could commission the new systems house by house by moving the proton cables from the current to the new system.

- There is a beginning of a wbs plan to do this work. One issue which needs to be resolved is how to handle the use of both systems new and old at the same time. Brian will have to think about this and give advice on what the project options might be.

4. AOB.

- There will be a meeting Thursday, April 8 at 1:30 in the Loft to discuss the timing board and possibly the diagnostics system. There will also be a discussion of the updated commissioning plan.

- Brian asked about the BLM plans and in particular the idea of reading out the BLM with the current BPM system while reading the BPMs with the upgraded BPM system. No final decisions have been made yet with respect to the timing of these upgrades.

- Rob K. mentioned that the BTeV/C0 final focus will include new BPMs (8 of them) and wondered if there is capacity to read those out. We (the project) think that the number of spares is sufficient to allow this.

