Minutes, 2/09/05 Tevatron BPM Upgrade Meeting
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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 Bob and Steve
2. Report from subproject leaders
3. Report from Jim Steimel
4. AOB

1. Report from Bob and Steve

- Jean Slaughter mentioned that March 3 would be a good time to give a talk at the Run 2 Thursday afternoon meeting. We will discuss and decide who should give the talk and what the topic should be.

- Jim Steimel will report at the Tevatron Department meeting this Friday about the TeV BPM.

- Bob has looked at and compared the noise measurement done by Rob Kutschke with the current first turn measurements and compared to last year's measurement with the Recycler Echotek setup in A1. He believes that the noise is 4x higher with the TeV BPM system. Possible explanations include the 53 MHz filter being different and the attenuation being different. Still investigating.

- Bob will be looking at the first turn data that Mike sent around to study the Lebedev head/tail effect and to see if we can correct for it and make a measurement of the center of gravity of the beam.

2. Reports from L2 Managers

Tim Kasza:

- Echotek testing continues. See Beams docDB #1381-v19. All boards are tested. Working to put 50 ohm resistors on the SYNC input of all boards. 4 more boards were shipped to Echotek for repair. 3 more will likely be shipped there later. A handful of boards still do not have the latest firmware loaded and this is still being investigated.

- All 38 Timing boards are tested, repaired and are all working. The 10 boards for the transfer line BPMs are being completed and tested.

- Working on preparing the B3 crate for installation.

- One MVME processor board damaged in the filter board incident is waiting for a buffer chip replacement to see if it can be repaired. The backplane is fine (will be used as a spare/teststand), the filter and timing boards were repaired, the two Echotek boards are part of the next set of 3 to ship to Echotek for evaluation.

Vince Pavlicek/Ken Treptow:

- Vince showed data from the filter boards that failed the gain and phase-matching criteria. The gain distribution (averaged across the bandpass) shows gains above the maximum allowed of 0.15 dB ranging up to 0.012154 dB. The two filter pairs with the largest excursions above the maximum also have large phase differences. We decided that the gains are acceptable.

- For phase matching there is a distribution of phase mismatch above the allowed 3 degrees that extends to 7 degrees (above 3) and beyond that are 4 outliers at around 20 degrees or higher. We decided to reject the 4 pairs of filters above 7 degrees. Before contacting Lark for replacements the remaining filters will be tested to find other pairs with failures (there is one hard failure). This should be done soon.

- The timing board firmware is stable except for changes made on the teststand to debug the 500 Hz problem.

- The serial cables for the Optilogic boxes are on order and should arrive soon.

Margaret Votava:

- Luciano is working on debugging the 500 Hz limitation with Bill Haynes.

Brian Hendricks:

- Bob West has worked on W25 to enable power and reboot commands to the VME crate via the Optilogic boxes.

- Brian is working on implementing various requests for Jim for TBT including 8192 points and I&Q measurements. Some of these changes require changes to the raw data.

- Some changes being made to W68 as well.

Mike Martens:

- The A3 crate was left in diagnostic mode and thus did not take data properly at the beginning of the last store.

- The data that Mike has seen from the most recent shot looked good, behavior is as expected.

- Ezio Todesco (visitor from CERN) will be looking at the data as well.

Rob Kutschke:

- Rob showed plots (found in Beams docDB 1566) of uncoalesced injection and showed many many plots of position and fourier transforms of position information where one sees synchrotron and betatron motion. Also sees interesting information in the sum signals. See the note (and 1565) for all the details.

3. Jim Steimel:

- Jim asks that Ken Treptow give a status every week at the Wednesday meeting of the preparation for installation.

- The B3 crate will be installed Thursday February 10. Bill and Marv will be the team in charge of the installation. Others will certainly be involved as necessary. Though there will be ample time due to other reasons it will be good to see how long it takes for a complete install and then to use that in planning for future installations where we may be constrained to the time between stores (or as Mike suggested the last hour of the previous store where the potential for lost beam is minimized).

- Jim will be working on the test stand integration plan. This he hopes will be ready for the C3 installation.

- Marv Olson is the TeV BPM project liason to the Main Control Room. Jim and Mike are backups.

- Jim is thinking about getting the diagnostics (53 MHz signal) checked out on the A3 setup.

4. AOB.

- No meeting Thursday February 10.

- No decision yet on Monday February 14 meeting. We will decide late this week or Monday morning.