

Minutes, 4/13/05 Tevatron BPM Upgrade Meeting
Stephen Wolbers

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The agenda as announced consisted of:

Report from Bob and Steve
Reports from subproject leaders
Report from Jim Steimel
AOB

1. Report from Bob and Steve

- Nothing special. The meeting launched right into a discussion of the TBT 6000 turn problem.

2. Reports from subproject leaders

Margaret Votava:

- Margaret described some of the recent work done by Luciano, Jim, Rob, Bill, Margaret to understand the "6000 turn" problem. She described (and wrote on the board) some work that has been done on crates with 4 Echotek boards (A3 and the teststand). The 8K buffer is zeroed (actually 10K) and a value of aabbccdd is written at the 8K location in memory. While testing extra entries are seen occasionally and the 6000 turn problem shows up more or less at turn 7800. Other odd features are seen as well. All of this has been good clues but there are not yet solutions and debugging continues.

- The missing TCLK problem will be investigated with a reload of the timing board firmware in the C2 house.

- Margaret made two requests:

1. Load new front-end software/driver code that loads 0's into the Echotek modules to allow for debugging in the accelerator houses.

2. Load timing board firmware into C2.

- Another piece of information is that the TBT problem does not appear if the system never goes from closed orbit to TBT mode. It may

be wise to try that in the accelerator to see what happens.

Mike Martens:

- C2 is missing TCLKs consistently. B2 and C2 both failed diagnostic test on the most recent shot.
- PROFILE data is good when it is there and in the right places.
- Mike would not be opposed to using a patch or workaround to get data from the "turn 6000" problem houses. It would look for good data in the TBT buffer, find the first good turn and fill the FLASH, then average the remaining good data points.
- Mike would also like the missing TCLK problem to be patched or worked around if possible.

Rob Kutschke:

- Rob looked at data from 4/12/05 and compared the "first turn" and the next couple of thousand turns from HE32, HD32 and HC32 after correcting HE32 for the 6000 turn problem. On a gross level things look good and HE32 looks reasonable. It is not clear that the first turn is really the first turn but it does not look wrong.
- Rob looked at the pbar signals on the 8 crates that are installed but only connected to pbar cables. There are problems on most of them (6 of them). 2 systems seem to be working well.
- The 600 turn problem occurred on D3 on 4/12 and D0 on 4/13.
- Rob has been doing some work on getting information into SDA for pbar measurement/proton subtraction. He talked to Jean about SDA and will talk to Brian and Mike about TCLK and other issues related to gathering the required data.

Tim Kasza:

- 3 CPU's have been identified for use in the final 3 BPM systems. This will leave the project with 4 teststands.
- There is a question of who should be listed as system administrators for the 27 front-ends in the TeV BPM project. This will have to be decided as part of the discussions that will be held to move the project into operations.
- 6 bad filter pairs were shipped to Lark for replacement.

- Some filter boards that were repaired had higher gains/different quality of signals for the diagnostic signal. A larger attenuation was added to make those boards similar to all others.

- Tim's group continues to help out with the installations.

Brian Hendricks:

- T117 was returning errors. The program was relinked and this fixed the problem.

- Profile frame 15 problem reported earlier has been fixed in T39.

- W68 has been modified to handle the test stand changes.

- Lin Winterowd will be Brian's backup for Monday-Tuesday next week if we put more crates into production next week.

- Jim (or someone) asked for Optilogic assignments for the 8 crates that have been installed during the past couple of weeks.

3. Jim Steimel

- Jim is focussing efforts on the debugging of the TBT and other problems.

4. AOB

- Marv mentioned that some of the Lemo connectors out in the houses have been falling off or are not tight enough. A crew of people will be going out to tighten them up.

- No meeting Thursday April 14.

- May meet Monday April 18 to catch up on/strategize on TBT and missing TCLK problems