Minutes, 2/16/05 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 Bob and Steve
2. Report from subproject leaders
3. Report from Jim Steimel
4. AOB

1. Report from Bob and Steve

   - Steve showed a schedule which assumes that C3 goes in this week
and that we install at 2/week starting next week. Under that scenario
we finish the week of May 9. We do not know yet what the ultimate rate
of installation will be, nor how quickly we can ramp up to 2/week.

   - Rob Kutschke will speak at the Tevatron meeting this Friday.

2. Reports from L2 Managers

Tim Kasza:

   - Echotek preparation continues. See Beams docDB #1381-v20. All
boards are cycling through to get the 50 ohm resistor installed on the
SYNC input. To date 47 boards have been finished. 7 boards have been
sent to Echotek for repair. A set of 11 boards still have not been
upgraded to the current firmware for various reasons.

   - The complete filter boards are all tested. A few have filters that
do not pass the matching requirements. Testing will proceed on all
remaining untested filter pairs to determine the full set of filters
that need to be returned to Lark. The unfinished filter boards will be
fully tested once they have attenuators and filters attached.

   - The timing boards are all ready for installation.

   - Tim's group helped with B3 crate installation and cable
installations in C3 and D3. Further prep work in service buildings
should occur when the accelerator running conditions allow.

   - All MVME processors will be upgraded to VxWorks 5.5.

Vince Pavlicek/Ken Treptow/Bill Haynes:

   - Vince showed the design for the diagnostic signal. The
schematics shown can be found in Beams doc #1260 and #1244 for the
timing and filter board. Using these one can trace where the signals
are generated, how they are propagated to the filter boards and where in
the filter boards the signals are amplified and where they can be
switched to using the two relays per channel.

   - Bill Haynes' slides can be found as Beams doc #1586. Bill showed
some of the capabilities of the timing board in generating 53 MHz CW and
pulsed (7 pulses now) 53 MHz signals. The signals can be routed to
any/all channels of any/all filter boards in a crate. Bill showed the
registers that control the operation of the diagnostics.

   - Ken showed plots that can be found in Beams docDB #1384 and they
showed the signal level and shape on the VME backplane (TTL 53 MHz), at
the input of the Echotek (100 or 150 mV) and driving into the BPM
pickups (1 and 1.5 V). These plots can be found on the last page of
#1384 Excel spreadsheet named "Diag Scope 1".

   - Questions arose about the 53 MHz CW signal saturating the Echotek
filters. Using the 7 pulse train could certainly alleviate that concern.

Brian Hendricks:

   - Brian has made changes Jim requested for W68.

   - W25 has support for both B3 and C3.

   - SDA devices and the configuration database has been finished for B3.

Luciano Piccoli:

   - Working on the 500 Hz closed orbit problem. During testing a
couple of problems were fixed but not yet certain that this
explains/solves the 500 Hz problem.

   - Found a problem in B3 at injection.

   - Kurt is working on alarms for the software system.

   - Luciano has been working on the W25 exits/BPM debug mode problems
and has made some progress.

Rob Kutschke:

  - Rob mentioned some work that he has done on pbar measurements. He classified the problems into various categories. One BPM had very bad pbar data and the p subtraction did not work at all. In other cases there are 6 phases (not 5 as expected). In some of those the instances of the 6th phase is rare. In others they are common (on order 1/6 of the time). All of this is being investigated.

  - Rob showed some data from the middle of store (TBT) and the plots can be found in Beams docDB #1582. Some structure is seen at low frequencies.

  - Rob asked whether pbar positions are being logged. The answer was no but they will be.

3. Jim Steimel:

  - B3 was installed last week.

  - C3 is setup and is being prepped for installation. It took many steps and many people to get the C3 crate together. Jim is thinking about streamlining and preparing as much in advance as possible. This includes:

    - IP addresses for all crates
    - Nova .rhost entries
    - MVME VxWorks upgrade to 5.5
    - ACNET devices
    - ACNET numbers

  - Jim identified that Brian is needed for updating libraries when a new crate is going into the system. Brian will have a backup if he is away on vacation.

  - Also need to understand who can enable ports for new crates if Tim Zingelman is not available.

  - Jim will call on people when needed to get crates ready.

  - Jim described a problem with C3 with the first Echotek board in the crate. This needs to be debugged fix before this crate can be installed.

4. AOB.

  - No meeting Thursday February 17.

  - Will likely meet Monday February 21 at 11:00 in the Penthouse to discuss status, diagnostic signals, strategy.