

Notes, 4/05/04 Tevatron BPM Upgrade/BLM Upgrade Meeting  
Stephen Wolbers

All errors, omissions, misunderstandings are the fault of Steve Wolbers and should be reported to him.

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

The meeting was called by Stephen Wolbers to provide a forum for the discussion of issues common to the BPM and BLM upgrades and those BLM upgrade issues that could potentially affect the BPM upgrade. The exact wording in the email was:

"Today, Monday April 5 at 11 A.M. in the Penthouse we will have a special meeting with BLM upgrade experts to discuss some of the issues we have identified (and probably some we have not yet identified) with respect to the BPM and BLM upgrade projects. You or your designees are invited to this meeting. If for some reason you cannot attend you should send someone else who can represent you."

I did not write down all of the names of all of the people there but it was a good representation of both projects. Please pass these notes along to anyone who might be interested.

There were many issues addressed. In no particular order I will write them down.

- The new BLM system will look much like the old BLM system for the readout. The connector will change and we will have to use the proper connector for the ribbon cable on the new BPM timing card (also used as the input to the BLM).

- Cable length is a possible issue as we need to address/test. The current BPM system and BLM systems share the same rack. The new Tevatron BPM electronics might be in a different rack, possibly the old MR BPM rack. This could be as much as 25 feet away.

- One option being considered is to bring up the new BPM electronics and at the same time leave the old BLM system connected to the old BPM electronics. The new BLM could then come later and connect to the new BPM electronics. This depends on the timescales of the various upgrades and when they will be ready. It is thought to be possible to run in this way. As we proceed toward completion and commissioning of these systems we will

have to come up with a plan that details when and how these transitions will occur.

- The new BLM system will use an "enhanced external device bus" which is 16 bit addressible and 16 bit data. The front-end software of the BPM system will have to be able to handle this new scheme.
- The new BLM system is aiming for a crate test by the end of the current beam run.
- There were many questions about the ability to correlate BPM and BLM data, especially at an abort. It was thought that the timestamps of the two systems are good enough to allow this correlation and that the data does not have to be together in the same readout.
- The masks and thresholds of the BLM system will be set via the external device bus through the BPM front end. The states of the BLM are not controlled through this bus but instead are set by listening to TCLK, MDAT, whatever. This is still being discussed by the BLM project.
- There is a cable plugged into the back of the current BPM electronics called the AIP (abort in progress). There is some question of what it is used for and how and whether the new BPM electronics needs to have it and use it.
- It was a useful meeting. Contacts were made between the two projects that will be most helpful in ensuring that the two systems will be upgraded in a compatible manner.
- Future meetings will be called when and if required.