

Notes from 11/24/03 Tevatron BPM Upgrade Hardware discussion. These are kept in BD Doc 906.

Stephen Wolbers

Present: Jim Steimel, Vince Pavlicek, Ken Treptow, Brian Chase, Stephen Wolbers, Bakul Banerjee, Rob Kutschke, Mark Bowden

Main Topics: Time and Schedule estimates for the different solutions being considered.

Jim Steimel:

- Jim presented a spreadsheet with a large number of columns giving the cost (M&S), timescales (in months) and effort (in FTE-months and time), and risks and benefits of each of the five solutions that are being considered. Jim has done some very nice work here and it is much appreciated.

- The total number of BPMs is 236 giving a total number of channels of 944. 15% spares gives 142 additional channels for a total of 1086 channels. There are 27 service buildings that have Tevatron BPM cables from the tunnel. So we will need 27 crates for the BPMs plus 2 spares (teststands). The maximum number of BPM's per service building is 12 (48 channels).

- The discussion consisted of going through each of the columns to look at the estimates and to suggest any changes. The effort categories are Engineering Design, Technical Drafting, FPGA programming, DSP programming, "slot 0" programming.

- A column for procurement time was also given.

- We forgot the cost of the analog filters and that will be added.

- The FTEs needed to accomplish the commissioning will

be pulled out into separate columns of effort.

- We talked about the technical risks and special features column. It was felt that this could be enhanced with more explanation and might be pulled out and edited as a separate word document with change bars to allow many of us to work on it simultaneously.

- We talked about how to proceed. Jim will update the spreadsheet and send it to Steve who will work on formatting and presentation. Others will think about the numbers and the technical risks and special features and Steve will collect and collate the new information.

- There was a short discussion after the meeting concerning beam measurements that are planned as soon as possible, depending on the Tevatron schedule.

We will next meet on Monday, December 1, 11:00 A.M., Penthouse.