

Minutes, 4/01/04 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. Service Building Task Force : Ken Treptow, Marv Olson, Bakul, Banerjee, Stew Bledsoe
2. Front-end design: Mark Bowden, Ken Treptow
3. AOB.

1. Ken Treptow presented the results of the service building task force work. The task force was charged with looking at all the 27 service buildings that have BPM cables and old electronics, and do a site survey for space, power, cooling, cable locations, networking, availability of clock and other signals, etc. The transparencies for his talk can be found in the doc DB as part of doc 792.

Power is not a problem. All the racks have adequate power.

All of the cables are located inside air conditioned spaces except for F1, where the antiproton cables are strung to a rack outside of the air conditioned room due to space limitations.

All of the buildings have 5-17 ports available on the network.

The cable locations are all documented.

If we want to use the space currently occupied by the Tevatron BPM electronics then we have a large amount of space.

There is space for new electronics in the main ring BPM racks in all buildings except for E1, F1 and F2. F2 is a temporary problem and should be available later. E1 and F1 are real problems because the racks are quite full.

We discussed whether there might be space in the rack adjacent to the Tev BPM system. This will be investigated further.

Clock signals are all available.

Many (6) of the current Tevatron BPM electronics modules have connections on their fronts to other equipment. The project will have

to determine what those are to decide whether they can be safely unplugged.

We had a short discussion of installation ideas. There are three main periods in question. The first is before the beam goes off August 23. During this period there is some thought of having at least one house reading out to the new system, probably in parallel with the old system. The second period is the shutdown. It is likely that we will install the majority of the hardware during that period, including the extension cables that are required. The final period is after the shutdown when we want to commission the new systems. The project will work with the Tevatron Department to understand when and how we can make the transitions.

## 2. Front-end design - Mark Bowden and Ken Treptow

Mark gave a quick update on the front-end design, specifically the diagnostics board. The board has as input the raw signals from the pickups and the diagnostic signal pattern coming from the timing board. A set of 8 relays switches between the two inputs and the output is fed into the EchoTek board. Though this is generally felt to be sufficient for diagnostics the final specification and design is not yet established.

Ken mentioned that he has 2 each of 2 different relays to test. Bob Webber is working on the electrical specification for the filters. Packaging is yet to be decided. More updates will be given next week.

## 3. AOB.