

Findings

Except for the simultaneous measurement of closed orbits for p's and p bars, we believe that the proposed system using the Echotek boards will work adequately.

The Echotek board appears to be the only feasible path to delivering a working system by October 1, 2004.

No commissioning plan was presented.

Concerns

The presentations did not demonstrate that the pbars could be measured in the presence of the proton signal. This will be a problem for the p signal when the p bar intensity reaches 50% of the proton signal.

There are a number of associated system (timing for single turn measurements, calibrations systems and so on) that have no designs and no one assigned to the design. These are likely to be technically demanding projects so manpower should be assigned as soon as possible.

The physical sensors (mechanical accuracy and inherent non linearity of the BPM pickups) affects the system accuracy. This should be reflected in the requirements document.

Recommendations.

The BPM group should move as quickly as possible to install a single complete BPM system using the existing Echotek boards.. This system should be running before the next DOE review in February. Release of the purchase order for the Echotek boards should be contingent on the successful demonstration of this system

Allow the option for a second signal path so that some subset of the BPMS could make additional time domain measurements of the closed orbit positions.

There should be a person designated as a system integrator. This person should not have any other major responsibilities.