



# Main Injector BPM Upgrade

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CD Accelerator Activities Coordination  
Meeting

January 25, 2005

# MI Beam Position Monitor (BPM) Upgrade Project

- Status and Plans:
- First unofficial meeting with MI department:
  - December 10, 2004
  - Steve Wolbers, Bob Webber, Alberto Marchionni, Dave Capista, Brian Hendricks
  - We decided to initiate weekly meetings in January to discuss/update the requirements for the MI BPM upgrade.

# January discussions

- Meeting Jan 11, 18, 25 (so far)
- Jan 11:
  - General discussion of requirements
    - Resolutions, precision, stability, modes of operation, user access, calibration
  - Well attended by MI department, Instrumentation department, Controls Department, CD interested parties.
  - Agreement to update requirements document (Beams docDB #471, Feb 26, 2003)
  - Alberto's slides Beams docDB #1523.
  - Notes from the meetings (Beams docDB #1526)

## January discussions (2)

- **January 18, 2005**
  - Dave Johnson speaking about Recycler BPM experience from a user perspective.
  - Beams doc #1533.
  - Nice perspective and lessons for the future.

## January discussions (3)

- **January 25, 2005**
  - Review of TeV BPM Upgrade by Jim Steimel
  - System requirements and implementation were emphasized

## What's Next - Goals

- Need to update, review and approve the requirements for the MI BPM system.
- This drives the scope of work for:
  - Front-end programming.
  - Analog system engineering.
  - Online and application modifications and creation.

# Main Injector BPMs - Next steps

- Then it will be time to form a project
- Many aspects of the upgrade - lots of work!
  - Project organization and management
  - Requirements
  - Design
  - Front-end electronics
  - Digitizers/timing system/front-ends
  - Front-end software
  - Online/controls software
  - Applications/console programs
  - Calibration
  - Diagnostics
  - Purchasing/acquisition
  - Hardware checkout
  - Integration and installation
  - Commissioning
  - Documentation

# Timescales

- Still too early to build a full project plan
- However, the requirements update should occur as soon as possible and hopefully by March, 2005.
- As people are freed up from other projects (in both AD and CD) ramp-up can proceed on the MI BPM upgrades.
- Given the scope of probable work and the probable availability of people this project should take on order 1-1.5 years to complete.

# Interest and Support

- Strong interest and support from:
  - Ioanis Kourbanis and Alberto Marchionni from the MI Department
  - Bob Webber of Instrumentation
  - Jim Patrick and Brian Hendricks from the Controls Department
  - Vince Pavlicek and Margaret Votava from CEPA Department
  - Others from various AD and CD departments have attended the Tuesday discussions.

# Conclusions

- MI BPM Upgrade project requires the following:
  - Updated requirements.
  - Scope and estimated effort and timescales.
  - Identified people to do the work
  - Project planning, management, reviews, documents, etc.
  - Work by dedicated, competent people.