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## Run II PMG

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## Stacking Progress

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- The cornerstone of the Run II upgrades is antiproton production.
- The FY05 goal for the zero-stack stack rate is  $24 \times 10^{10}$  pbars/hour.
- Our best value to date is  $17 \times 10^{10}$  pbars/hour and recently we have not been able to reach above  $15 \times 10^{10}$  pbars/hour.
- There has been essentially no progress in increasing the stacking rate since February 2005.

## Stacking Rapid Response Team

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- I propose to address the lack of progress with the stacking rate by forming a Stacking Rate Rapid Response team.
- The goal of the rapid response team is to:
  - Document the current state of the complex for antiproton stacking.
  - Formulate a study plan and needed instrumentation to reach  $24 \times 10^{10}$  pbars/hour
  - Successfully execute the plan by October 2005.
- Because of my experience in the Antiproton Source and the Proton Source, I would lead this team.
  - Valeri Lebedev would serve as my deputy.
  - Jim Morgan would run the collider complex
    - Brian Drendel and Saleh Chaurize serving as his deputies

# Stacking Rapid Response Team Groups

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## ■ Booster Extraction

### ➤ Team:

- Jim Steimel, C. Y. Tan, X. Yang, F. Garcia
- Leader: - Jim Steimel

### ➤ Goal:

- $4.5e12$ /batch with a longitudinal emittance of  $0.12$  eV-sec/bucket and a momentum spread of  $18$  MeV

## ■ Main Injector Slip Stacking

### ➤ Team:

- K. Seiya, P. Adamson, V. Wu, J. Dey
- Leader: K. Seiya

### ➤ Goal:

- $8e12$  protons on target with a  $1.5$  nS bunch length and an acceleration efficiency of  $95\%$  and single point Rad limit of  $1$  Rad/hr in the MI tunnel.

# Stacking Rapid Response Team Groups

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## ■ Antiproton Source

### ➤ Team:

- K. Gollwitzer, S. Werkema, P. Derwent, D. Vander Meulen, D. Broemmelsiek
- Leader: K. Gollwitzer

### ➤ Goal:

- $8e12$  protons on target every 2.0 secs with a production of  $17e-6$

## ■ Instrumentation

### ➤ Team:

- W. Ashmanskas, D. Peterson, N. Eddy, Sten Hansen (PPD), C. Drennan
- Leader: W. Ashmanskas

## Stacking Rapid Response Team

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- The people on the Stacking Rapid Response Team would be assigned to the team 100% of the time until the goals are accomplished.
- Members of the rapid response team to be cannot be machine coordinators, so the departments will have to pick up the slack.
- The Booster, Main Injector, and Antiproton Source departments will focus on operational aspects and other programs
  - Booster: MiniBoone and NUMI
  - Main Injector: NUMI and SY120
  - Antiproton Source: Rapid transfers to the Recycler.

# Organization

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- The team will meet twice a week at Tuesdays and Thursdays at 9 am in the Huddle to discuss overall progress and integration with collider operations.
  - Jim Morgan will attend the Tuesday-Thursday 9am meetings.
  - The Booster, Main Injector, and Antiproton Source department heads should attend the Tues-Thurs 9am meetings.
  - The Run II Upgrade Project Manager and technical coordinator should attend these meetings
    - This team will most likely identify and correct deficiencies in some of the operational aspects of the Run II Upgrades.
    - Some of these corrections might require re-scoping the Run II upgrades.