

The Proton Source Committee (aka The Director's Proton Team)

- Proton Team Workings
 - Charge and Membership
 - Assignments and Interviews
 - Schedule (of the Team's workings)
- Mid-Stream Perspective
- Chaired by ... finley@fnal.gov

Charge

(Witherell to Finley 2/19/03)

- 1) Identify users of protons over the period 2003-2010 and the **demands** represented by each.
- 2) Establish technical **goals** for delivery of protons, both from the Booster and Main Injector, over the period.
- 3) Identify major **modifications** to the Proton Source and Main Injector that will be required to meet these goals assuming availability of Fermilab resources at the **few x \$10M** level over the period.
- 4) Identify possible resources and opportunities for **collaboration** by institutions outside Fermilab.
- 5) Suggest an **organization** for implementing a program of modifications, including opportunities for integration of collaborators outside Fermilab.

Chair's Direction at Initial Meeting

- This is what I think we are doing:
 - Gather the information into one place and present it to the Director.
 - Finish ASAP so that management can get on with directing the resources where they are needed. (And management is not waiting.)

A Couple of the Chair's Ground Rules

- I do not want to halt ongoing activities, so we heard first from:
 - Eric Prebys: Ongoing activities in Booster
 - Shekhar Mishra: Ongoing activities in MI ... and Greg Bock's plans (Greg is the NuMI project manager)
- We will not defer to a “New Proton Source” as the solution.
 - But its possibility will likely influence our thinking as we come up with modifications.

Membership

- David Finley Chair
- Janet Conrad Co-spokesperson of MiniBooNE
- Doug Michael Co-spokesperson of MINOS

- Chuck Ankenbrandt Booster and Beam Physics
- Peter Kasper Booster
- Alberto Marchionni Main Injector Beam

- Eric Prebys Head of Booster
- Shekhar Mishra Head of Main Injector
- Greg Bock* NuMI Project Leader

- Ray Stefanski Secretary

*Note: Greg Bock has a standing conflict

Honorary Membership

- **Some Contacts and Kibitzers**

- Greg Bock NuMI Project Leader
- Elliott McCrory Head of Proton Source
- Roger Dixon Head of Beams Division
- Mike Church Deputy Head of Beams Division

- Steve Holmes Associate Director for Accelerators
- Hugh Montgomery Associate Director for Physics
- Jeff Appel Head of Program Planning

These people and many others will be “interviewed” for their input.

Assignments: Beam Demands & Goals

- Primary / Helpers
 - Linac: Finley / Ankenbrandt, McCrory
 - Booster, NTF, MUCOOL, Studies ...
 - Booster: Prebys / Kasper, Conrad, Ankenbrandt
 - MiniBooNE, Main Injector, Radiation Facility, Studies ...
 - Main Injector: Mishra / Marchionni, Michael
 - Run II, NuMI, SY120, Studies ...

Interviews on March 20 Agenda

- Dave on Jeff Spalding
- Alberto on SY120 (Chuck Brown, Raja Rajendran etc)
- Janet and Peter on Peter Cooper
- Dave on Craig Moore
- Janet on Jeff Appel
- Janet and Doug on Hugh Montgomery
- Dave on Mike Church
- Dave on Panagiotis Spentzouris
- Dave and Doug on Roger Dixon

Upcoming Interviews (as of March 20)

- Ioanis Kourbanis: All things Main Injector, especially longitudinal
- Paul Czarapata: Linac Tubes
- Bill Foster: All things ... in particular dampers
- Greg Bock: NuMI project plans
- Nancy Grossman: NuMI ground water limits
- Mary Anne Cummings and Alan Bross: MUCOOL revisited
- Weiren Chou: Space Charge
- Panagiotis Spentzouris: Space Charge
- Francois Ostiguy: Collaborations
- Steve Holmes: Missing Information
- Etc etc etc including follow-up interviews as necessary

Schedule

(as seen on April 7, 2003)

- Timeline

- February 20, 2003: Initial meeting; then weekly
- March 13: 1st Witherell Briefing
- March 29: Chair briefs Physics Advisory Committee*
- April 3: 2nd Witherell Briefing
- April 7: Chair briefs All Experimenters Meeting
- May 1: Draft Written Report (I hope ...)
- ~ June 1 Final Written Report (We'll see ...)
- ~ June 15 Aspen PAC Briefing (If necessary ...
 - but I'd rather it come from management ... we'll see.)

* For a copy, email me at finley@fnal.gov or it is also posted at http://www.fnal.gov/directorate/program_planning/PAC03_03_Talks/PAC_Finley.pdf

Mid-Stream Technical Perspective

- Running both MiniBooNE and NuMI
 - Was suspected to be a technical problem, but need not be a technical problem ... given sufficient priority to implement some improvements in the Booster.
- One Main Injector ... Three Physics Programs
 - Collider, Neutrinos (for NuMI), SY120
 - Multibatch injection with acceptable losses is an unsolved Booster / Main Injector combined problem
- Getting any beam at all depends on a healthy Linac

Modifications, Collaboration, Organization

- **Modifications**

- The Linac needs minimal modifications (or a new front end?!?!)
- The Booster is implementing some modifications aimed at reducing or controlling losses with present level of batch intensities
- The Main Injector has begun planning for 3 programs
 - This situation is changing as we meet ... as it should.

- **Collaboration**

- Not addressed yet in the committee in any detail, but has worked in the past and the present ... and why not even better in the future?

- **Organization**

- Not started yet in the committee... but Fermilab DOES have the Director's Office, the Beams and Technical Divisions, real and potential collaborators, and “organizers” and people who can be “organized”.

A Few Comments from People Upon Seeing the Membership

- “There is no one from Run II on it, and that is the Lab’s highest priority.”
- “Only two experiments are represented, and mine is not one of them.”
- “You need someone from external beams.”

My Responses to the Comments - 3

- The Chair still thinks he can adequately represent Run II (given enough good advice). And this particular chair - after discussions with the 2nd floor - has taken the view he does not have a conflict of interest by being on MiniBooNE.
- The Chair now recognizes if the team were reinvented today, it would not have the same membership.
 - But that's why the members are supposed to interview people, and why the draft report will be read by some non-Members.
 - For example, I'd add Jeff Appel (he who will juggle experiments for a living) and Craig Moore (extraction and beam lines) and Ioanis Kourbanis (Main Injector strong man and RF gymnast) and drop one or more others so the committee does not get too big. (Is it already too big?)