opening comments
The Political Landscape

- Because of financial realities the entire US HEP portfolio under scrutiny.
- At the May 18-19 meeting* of High Energy Physics Advisory Panel Robin Staffin, Associate Director, Office of HEP stated: “Resources to pursue ... opportunities will only become available through redirection” and asked for “a new roadmap for the next decade.”
- P5 Charge: “At what time would the significant resources that are now invested in operations of [the Tevatron and PEPII] have a greater scientific impact if they were to be deployed otherwise?”
- There was several scenarios suggested including planned termination or early termination of one or both Tevatron and PEPII programs as early as 2006.
- Draft recommendations end of September, final report October.
- May 31, in a joint meeting with the Staffin, Pier Oddone, and CDF spokes we pointed out that it is too early to re-evaluate precise termination dates:
  - E-cooling not proven until the end of 2005.
  - Analysis from 1fb⁻¹ will not be available until 2006.
  - LHC pilot run scheduled for end 2007, physics run 2008 - it will take some time to understand the detectors
- However June 2nd in an address to Fermilab staff/ users the charge was not significantly altered.


JBlazey, June 2005
The Current Status

- June 8th, at the UEC meeting Staffin presented a modified charge to P5*, verbatim (including font):
  - “We plan to run the Tevatron collider through FY09, and for PEP-II running to stop by the end of FY08.
  - We are asking for P5’s help:
    - What factors or considerations might lead to stopping B-factory operations one year, or two years earlier than planned? When would we be in a position to make such a determination and what information would be needed?
    - Similarly, for the Tevatron collider, what factors or considerations might lead to stopping operations one year, or two years earlier than now planned? What might lead to running longer than now planned? Again, when would we be in a position to make such a determination and what information would be needed
  - Note changes from earlier draft on basis of input received.”

- The new charge
  - Asks for factors - not scenarios
  - Does not include 2006 and 2007 → 4fb⁻¹


JBlazey, June 2005
Building the case for 2008 and 2009

- The physics case for the Tevatron is compelling:
  - Higgs sensitivity to $\sim 130$ GeV
  - Indirect sensitivity through top and W mass measurements
  - Discover or constrain SUSY and other sources of new physics
  - New physics in the B sector
- **Helping ourselves**
  - Complete preparation of our 1fb⁻¹ data set.
  - Complete timely installation and commissioning of the upgrades
  - Increase BW to 150Hz to support high \( p_T \) program and enhanced B program.
  - Complete MOUs to plan operations and analysis and address premature drift to LHC. (Discussed at IB meeting.)
- With Oddone and CDF we will work to extend the EPP2010 results and assemble a Tevatron document for P5 addressing physics, detector status, and manpower
We continue to have great success...

- **Operations (T. Yasuda, Thursday)**
  - Run IIa: 0.77 fb\(^{-1}\) data at 83% eff.
  - v14 ready, a 440 filter achievement!
  - Run IIa total: ~0.95 fb\(^{-1}\)

- **Algorithms**
  - p17 in production with EM calibration
  - Hadron calibration in progress (A. Haas, Thursday)
  - Do need to converge on p17 MC!

- **Computing (D. Wicke, Thursday)**
  - Keeping up with reconstruction & simulation
  - Reprocessing 25% done, about half remotely, Reached 10M events on one day, ETC October!

- **Physics program continues to prosper**
  - Publishing at a rapid clip...
A Measure of our Success: Publications

Paper Category: PUBLISHED
- Search for Doubly-charged Higgs Boson Pair Production in the Decay to \( \mu^+ \mu^+ \mu^- \mu^- \) in p\( \overline{p} \)p Collisions at \( \sqrt{s} = 1.96 \) TeV
- Observation and Properties of the \( X(3872) \) Decaying to \( J/\psi \) \( \pi^+ \pi^- \) in p\( \overline{p} \) Collisions at \( \sqrt{s} = 1.96 \) TeV
- Search for Supersymmetry with Gauge-Mediated Breaking in Diphoton Events at DZero
- Measurement of the \( B_s^0 \) Lifetime in the Exclusive Decay Channel \( B_s^0 \rightarrow J/\psi \phi \)
- A Search for the Flavor-Changing Neutral Current Decay \( B_s^0 \rightarrow \mu^+ \mu^- \) in p\( \overline{p} \) Collisions at \( \sqrt{s} = 1.96 \) TeV
- Measurement of the Ratio of \( B^+ \) and \( B^0 \) Meson Lifetimes
- Measurement of the \( \Lambda^b - B \) Lifetime in the Decay \( \Lambda^b \rightarrow J/\psi \Lambda \) With the D0 Detector
- A Search for W\( \tau \) and WH Production in p\( \overline{p} \) Collisions at \( \sqrt{s} = 1.96 \) TeV
- Measurement of the WW Production Cross Section in p\( \overline{p} \) Collisions at \( \sqrt{s} = 1.96 \) TeV
- A Measurement of the Ratio of Inclusive Cross Sections p\( \overline{p} \) \( \rightarrow Z/\gamma \) p\( \overline{p} \) \( \rightarrow Z/\gamma \) at \( \sqrt{s} = 1.96 \) TeV
- A search for anomalous heavy-flavor quark production in association with W bosons
- First measurement of \( \sigma(pp\overline{p} \rightarrow Z) \times \text{Br}(Z \rightarrow \tau \tau) \) at \( \sqrt{s} = 1.96 \) TeV
- Search for first-generation scalar leptoquarks in p\( \overline{p} \) collisions at \( \sqrt{s} = 1.96 \) TeV
- Measurement of the p\( \overline{p} \) \( \rightarrow W\gamma + X \) Cross section and Limits on Anomalous WW\( \gamma \) Couplings at \( \sqrt{s} = 1.96 \) TeV
- Measurement of Dijet Azimuthal Decorrelations at Central Rapidities in p\( \overline{p} \) Collisions at \( \sqrt{s} = 1.96 \) TeV

Paper Category: ACCEPTED
- Measurement of inclusive differential cross sections for Upsilon(1S) production in p\( \overline{p} \) collisions at \( \sqrt{s} = 1.96 \) TeV

Paper Category: SUBMITTED
- Study of Z\( \gamma \) events and limits on anomalous \( ZZ\gamma \) and \( Z\gamma\gamma \) couplings in p\( \overline{p} \) collisions at \( \sqrt{s} = 1.96 \) TeV
- Production of WZ Events in p\( \overline{p} \) Collisions at \( \sqrt{s} = 1.96 \) TeV and Limits on Anomalous WWZ Couplings
- Search for neutral supersymmetric Higgs bosons in multijet events at \( \sqrt{s} = 1.96 \) TeV
- Measurement of the t\( \tau \) production cross section in p\( \overline{p} \) collisions at \( \sqrt{s} = 1.96 \) TeV using kinematic characteristics of lepton plus jets events
- Measurement of the t\( \tau \) production cross section in p\( \overline{p} \) collisions at \( \sqrt{s} = 1.96 \) TeV using lepton plus jets events with lifetime b-tagging
- Search for supersymmetry via associated production of charginos and neutralinos in final states with three leptons
- Search for Randall-Sundrum Gravitons in Dilepton and Diphoton Final States
- Measurement of the W helicity in top quark decays
- Search for single top quark production in p\( \overline{p} \) collisions at \( \sqrt{s} = 1.96 \) TeV
- Measurement of the t\( \tau \) production cross section in p\( \overline{p} \) collisions at \( \sqrt{s} = 1.96 \) TeV in dilepton final states

26 and counting...!
A Comment!

• Please read these papers, you are all authors.

• On average receive comments from only 12 readers during collaboration review.

• The accuracy and clarity of the papers clearly benefits from collaboration review.

• And besides... it’s good/important for juniors and seniors both!
The Upgrade

• Hardware a year early, a great success! We owe a modest-sized crew a great deal.

• Important Dates
  - After PPD review and Run II PMG presentation last week Provisional Shutdown Start Date: Oct 31, 2005
  - Provisional Duration: 14 weeks

• We have frequent meetings with Directorate and PPD to evaluate status, PPD extremely helpful.

• Vancouver is our final push to examine manpower and resources.

• There will be a series of reviews to evaluate technical readiness, particularly for Layer 0 and L1CAL

• Final decisions for installation thereafter. We are considering ad hoc committees. Your thoughts on format welcome.
Thanks to Outgoing and Incoming Coordinators!

- A very big thanks to Jianming Qian as Physics Coordinator, and to Greg Landsberg as Deputy. As you saw on a previous slide our physics output has reached a very high level - much to their credit. Welcome to John Hobbs as the new Physics Coordinator and Volker Buescher as Deputy.

- A big thanks also to Gustaaf Brooijmans for his leadership of Core Software and Computing. We’ve got over 750 pb$^{-1}$ of data to tape and reprocessing is well underway. Welcome to Gavin Davies.

- And thanks to Laurent Duflot for leadership of Software Algorithms. Our physics output and the capabilities of p17 show he has admirably filled the post! Welcome to Mike Hildreth.
Other Transitions

- Thanks to
  - Kristian Harder as SMT Leader. Welcome to Mike Kirby
  - Pierre Petroff as CALOP leader and welcome to Norm Buchanan
  - Rick Jesik as L3 Leader and welcome to Daniela Bauer
  - Adam Lyon as SAM Liaison. Welcome to Shaohua Fu
  - Sarah Eno as Simulation leader and welcome Thorsten Kuhl
  - Ursula Bassler as CALGO leader and welcome to Patrice Verdier
  - Marco Verzocchi and Sarah Eno as W mass leaders and thanks to Jan Stark and Pierre Petroff
  - Pierre Petroff as IB Chair. Congratulations Darien Wood.

- New Groups:
  - TRALGO group will be chaired by Peter Ratoff and Mike Strauss. (Includes tracking, vertexing, and B-1D)
  - V15 trigger force will be led by Marco Verzocchi. He’s joined by a very talented crew. (See talk by Marco Tuesday AM.)

- Keep tuned for more announcements, we are reconsidering physics organization.
Shift Changes

• To improve the productivity of the experiment as a whole the GM and Captain shift responsibilities were merged June 1st.
• Reduction of shift number alleviates difficulty filling other shifts.
• GM coordinators Elliott Cheu and Nayeem Naimuddin are working hard to ensure a smooth transition and improve GM infrastructure, please work with them. There will be GM and SAM tutorials this week.
• Former remote GMs should consider SAM shifts as an alternative way to serve remote shifts: Monitor of SAM servers, project submission, file delivery functionality, mailing lists and respond to user requests for database maintenance or reports of problems. SAM shifters responsibilities include RecoCert evaluation.
• Former local GMs are encouraged to help operate tracking detectors via CFT and SMT shifts.
• We believe primary and tertiary data quality will benefit from this consolidation.
Other News

• NIMs
  - Muon paper accepted last Friday. Congratulations!
  - Full paper and author list
    - Now finalized, paper will be submitted soon.
    - Thanks to readers: Drew Alton, John Butler, Dave Cutts, Paul Grannis, Breese Quinn, Nikos Varelas,
    - And a special thanks to Sue Blessing and Dmitri Denisov

• AFE II - t (M. Hildreth, Thursday)
  - Improve CFT performance and provide timing information, will help with occupancy issues at high luminosity.
  - Approved by the Fermilab Directorate last April
  - Project fully planned, staffed, installation in fall 2006

• UEC
  - Vote in the election! DZero Nominees: Wyatt Merritt, Tom Diehl, Yurii Maravin
  - Taking comments on the constitution
Calendar

- **Collaboration Meetings**
  - September 26-30, 2005 @ FNAL
  - December 5-9, 2005 @ FNAL
  - **March 6-10, 2006 @ FNAL**
  - June 19-24, 2006 @ Manchester
  - September 11-15 2006 @ FNAL
  - December 4-8, 2006 @ FNAL

- **Upcoming Conferences**
  - LP2005 Presentations, June 23(?), 2005, Hurricane Deck
  - Tevatron Connection, June 24-25, FNAL
  - LP2005, June 30-July 5, 2005, Uppsala
  - HCP05, July 4-8, Les Diablerets, Switzerland
  - PIC05, July 6-9, Prague

2006 dates have been discussed, expect to finalize here.
Workshop

• Given the landscape workshop goals are even more timely than expected! The case for Run IIb is strengthened by successful analysis of Run IIa data and successful upgrades.

• Physics with the Run IIa 1fb$^{-1}$ Dataset
  - What are the most compelling physics prospects?
  - What demands do these prospects place on: RECO and ID, calorimeter calibrations, understanding of dead material, data quality?
  - Review progress towards certified p17 dataset by December.

• The Upgrade Endgame (Run IIb)
  - Finalizing installation, integration, commissioning, and certification plans
  - Evaluation of online and offline software preparedness
  - Development of v15 Trigger List.
Final Words

• Once again we have a beautiful summer venue. Thanks to the local and program committees. And thanks to those back at DZero

• We will soon have $1 fb^{-1}$ accumulated, processed, and published. This is a fun part!

• And we have the potential for much more.

• These are our two best arguments for the successful completion of Run II

• Lets enjoy our surroundings and future potential!