Agenda

2:30 p.m. – Refreshments

2:45 p.m. – Introduction – Murray Gibson

3:00 p.m. – Supervisor of the Year Award Presentation – Murray Gibson

3:10 p.m. – Storage Ring Temperature Control Update – Marvin Kirshenbaum

3:25 p.m. – LBNL/APS Collaboration on Fast CCD Development – John Weizeorick

3:45 p.m. – Adjourn

Argonne NATIONAL LABORATORY

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U.S. Department of Energy

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Office of Science U.S. DEPARTMENT OF ENERGY

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APS/Users Operations Monthly Meeting

October 25, 2006

Introduction

J. Murray Gibson

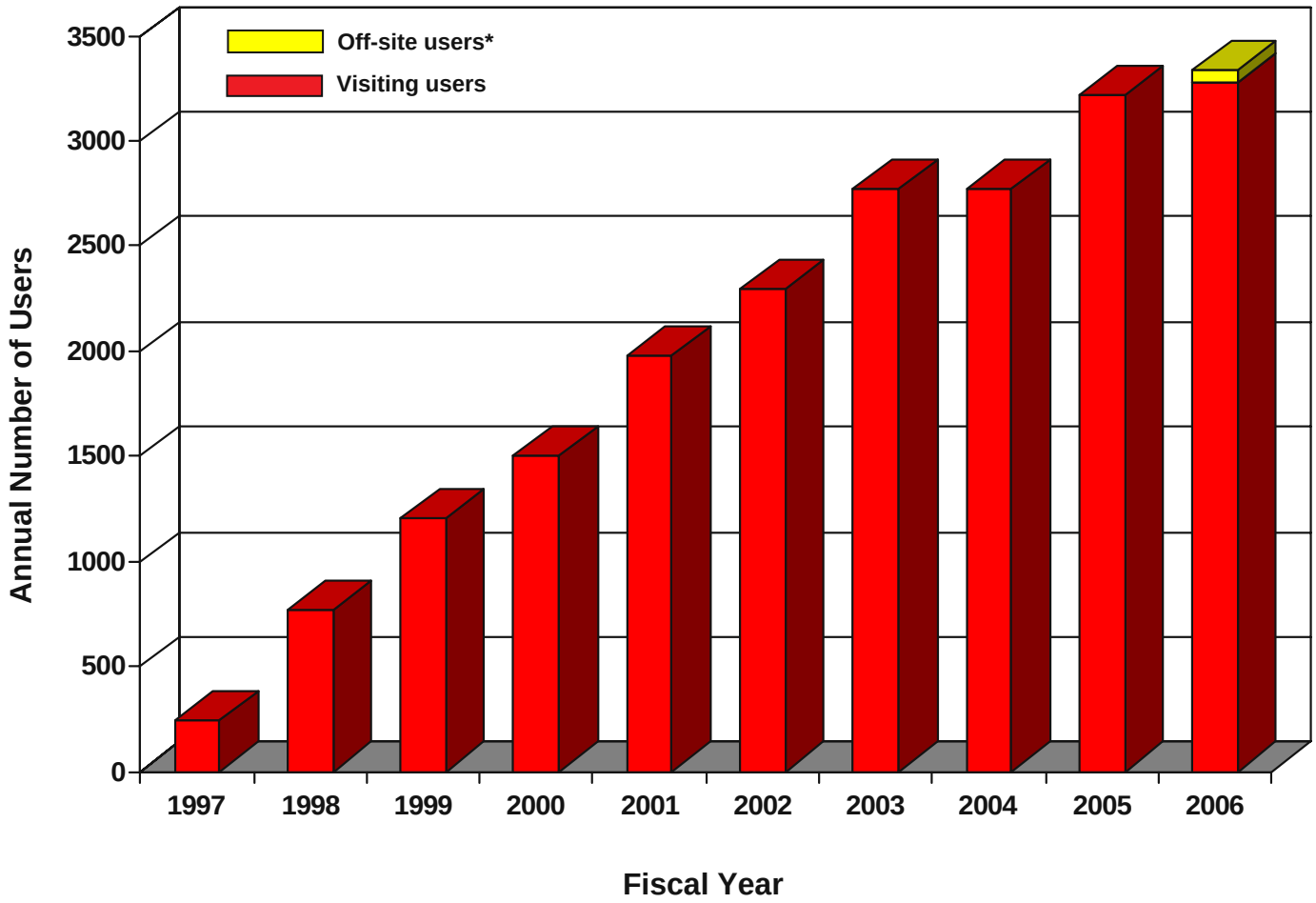
Update on APS Safety Issues

- New gas cylinder storage cages are here to relieve overcrowding

- No airborne particulates were detected from recent breaks of beryllium vacuum windows
  - Cleanup procedure is being revised to clarify responsibilities and log keeping
  - Skin contact remains a concern and PPE is still required for this

- Doing better in limiting lead in LOM Machine Shops, BUT diligence must be maintained in closing doors when no one is inside, even for a few minutes.

APS User History



3274
visiting users
FY 2006

*Partial year

First spectrum with IXS HERIX spectrometer

+

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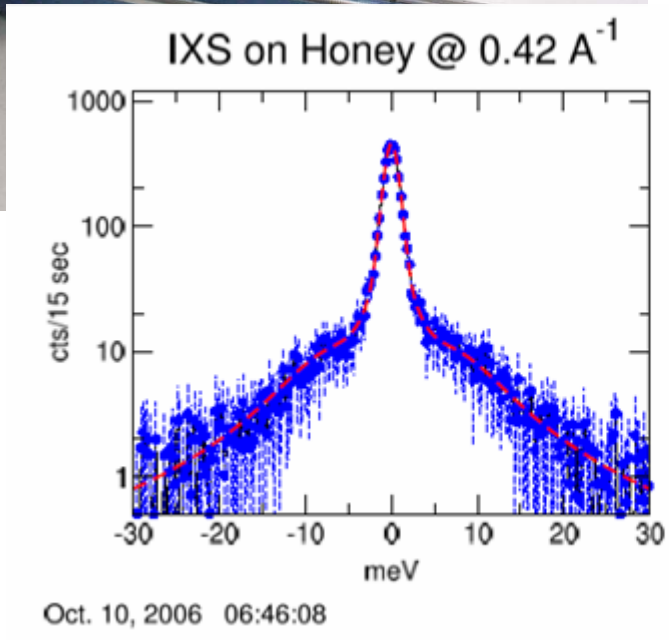


FWHM central line = 1.83 meV
position side peaks = 7.40 meV
FWHM side peaks = 12.21 meV
DHO sound velocity: 3400 m/s

APS Upgrade Option Summary

Option	*Type*	*Current (mA)*	*Bunch repetition rate (MHz)*	*x Emittance (nm)*	*y Emittance (pm)*	*RMS Bunch length (ps)*	*ID length (m)*	*Max. 1st Harmonic Brightness (stand. units)*	*Possible # ID Beamlines*
present operations	storage ring	100	0.3 ~ 88	3.1	25	40	2.4	5×10^{19}	>35
present + crab cavity	storage ring	16 (hybrid bunch)	0.3	3.8	25	1~4	2.4	flux ~1% of normal	1
APS 1nm	storage ring	200	0.3 ~ 88	1.0	10	~40	8.0	1×10^{21}	35
APSx3	storage ring	200	0.3 ~ 88	1.5	20	~40	8.0	6×10^{20}	105
ERL@APS Stage 1	ERL (APS beamlines only)	25	1300	0.013	7	2	4.8	2×10^{21}	35
ERL@APS Stage 2	ERL (new beamlines)	25	1300	0.007	7	2	4.8 or 8.0	8×10^{21}	35+60

APS Upgrade Machine Advisory Committee

Klaus Balewski	DESY: Hamburg, Germany
Max Cornacchia	Retired from Stanford Linear Accelerator Center: California
John Galayda	Stanford Linear Accelerator Center: California
Georg Hoffstaetter	Cornell University: New York
Andrew Hutton	Thomas Jefferson National Accelerator Facility: Virginia
Sam Krinsky	National Synchrotron Light Source, Brookhaven National Laboratory: New York
Annick Ropert	European Synchrotron Radiation Facility: Grenoble, France
Elaine Seddon	Daresbury Laboratory: Cheshire, UK
Vic Suller (Chair)	Center for Advanced Microstructures and Devices, Louisiana State University: Louisiana

Machine Advisory Committee
Review of APS Accelerator Upgrade Options

Final Draft Agenda

Talks at
http://www.aps.anl.gov/News/Conferences/2006/APS_Upgrade/index.html

Wednesday, November 15, 2006 – Conference Room A5000

8:00 a.m.	Committee Executive Session – V. Suller
8:30 a.m.	Welcome – B. Rosner
8:35 a.m.	Introduction – M. Gibson
9:00 a.m.	Overview of Goals and Options – E. Gluskin
9:30 a.m.	ERL Parameter Review and Physics Issues – M. Borland
10:30 a.m.	Break
10:45 a.m.	ERL Integration: Outfield Option – G. Decker
11:05 a.m.	ERL Integration: Infield Option – N. Sereno
11:25 a.m.	Greenfield ERL and Option Comparisons – M. Borland
11:45 a.m.	ERL RF Systems – A. Nassiri
12:15 p.m.	Working Lunch (continued discussions, Room A5000)
1:00 p.m.	Overview of APS SR Upgrade Options – L. Emery
1:25 p.m.	1-nm Lattice Design – A. Xiao

Machine Advisory Committee
Review of APS Accelerator Upgrade Options

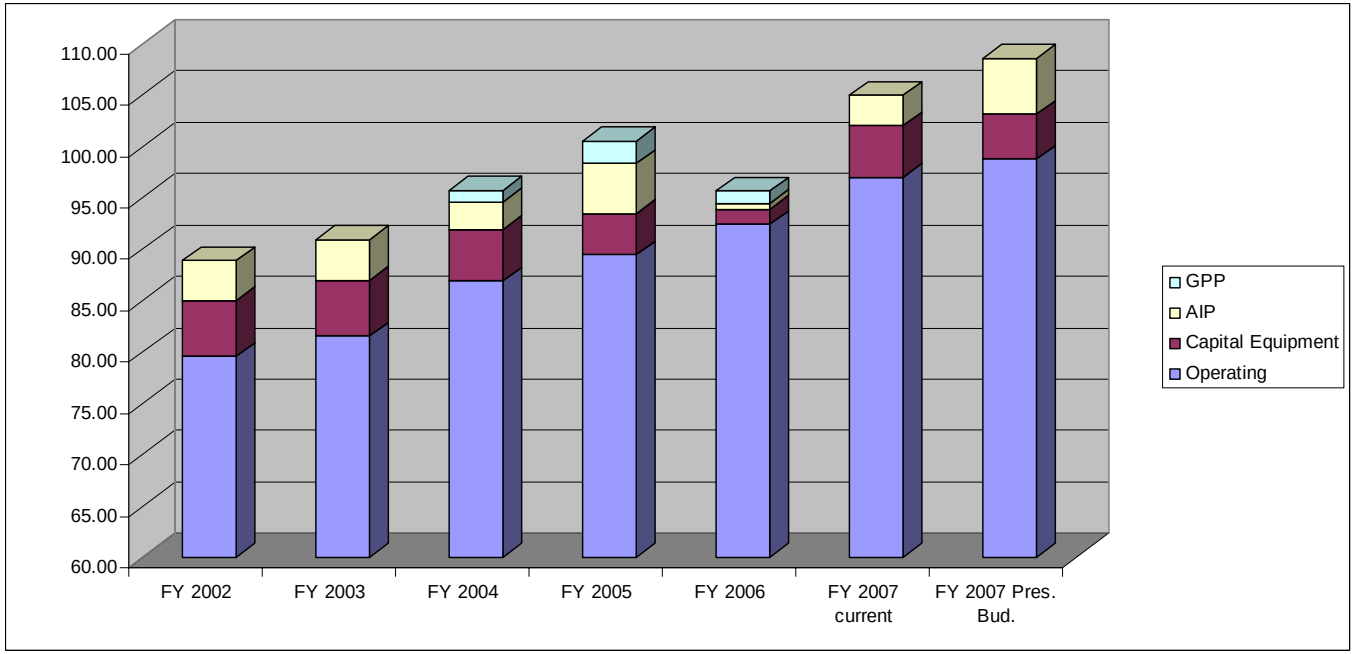
Wednesday, November 15, 2006 (cont'd)

1:50 p.m.	APSx3 Lattice Design – V. Sajaev
2:15 p.m.	Instability Estimates – Y. Chae
2:35 p.m.	Booster Upgrade Requirements and Possibilities – N. Sereno
3:00 p.m.	Break
3:15 p.m.	Engineering/Scheduling Options – J. Noonan
3:30 p.m.	Short X-ray Pulses Project at the APS – K. Harkay
4:00 p.m.	Committee Executive Session
6:00 p.m.	Adjourn

Thursday, November 16, 2006 – Conference Room A5000

8:00 a.m.	Committee Executive Session
8:30 a.m.	Questions/Responses with APS Staff as Needed
10:00 a.m.	Committee Report Writing Session
12:00 p.m.	Continue Report Writing: Working Lunch
1:00 p.m.	Closeout with APS Management

Budget



- FY2007 numbers still under Continuing Resolution
- Planning to evaluate and prioritize project proposals for capital and AIP funds (open meetings, Nov, Dec – to be announced)

Miscellaneous

- Electrical equipment inventory
  - Best efforts required by December, we will have four years to complete review and approvals
- Proprietary fees
  - IG report to DOE Argonne Site Office for management response
    - *Argues for 2006 retroactive increase to rate based on actual hours and beamlines*
    - *Our proposal for a phased increase appears to be acceptable to ASO and BES*
    - *Would mean ~20% increase this year and next*

- Awards and Recognition……

2007 Robert R. Wilson Prize

Lee Teng has been awarded the prestigious 2007 Robert R. Wilson Prize from the American Physical Society.

The citation reads as follows:

“For invention of resonant extraction and transition crossing techniques critical to hadron synchrotrons and storage rings, for early and continued development of linear matrix theory of particle beams, and for leadership in the realization of a facility for radiation therapy with protons.”

APS physics

Guess who has 45 years of experience at ANL?

SUF Employee Advisory Committee (SUF-EAC)

Membership:

Julie Cross, XSD-CEP

Debra Eriksen-Bubulka, AES-MOM

Daniel Haskel, XSD-MM

Albert Hillman, ASD-PS

Yifei Jaski, AES-MED

David Leibfritz, AES-IT

Evan Maxey, IPNS

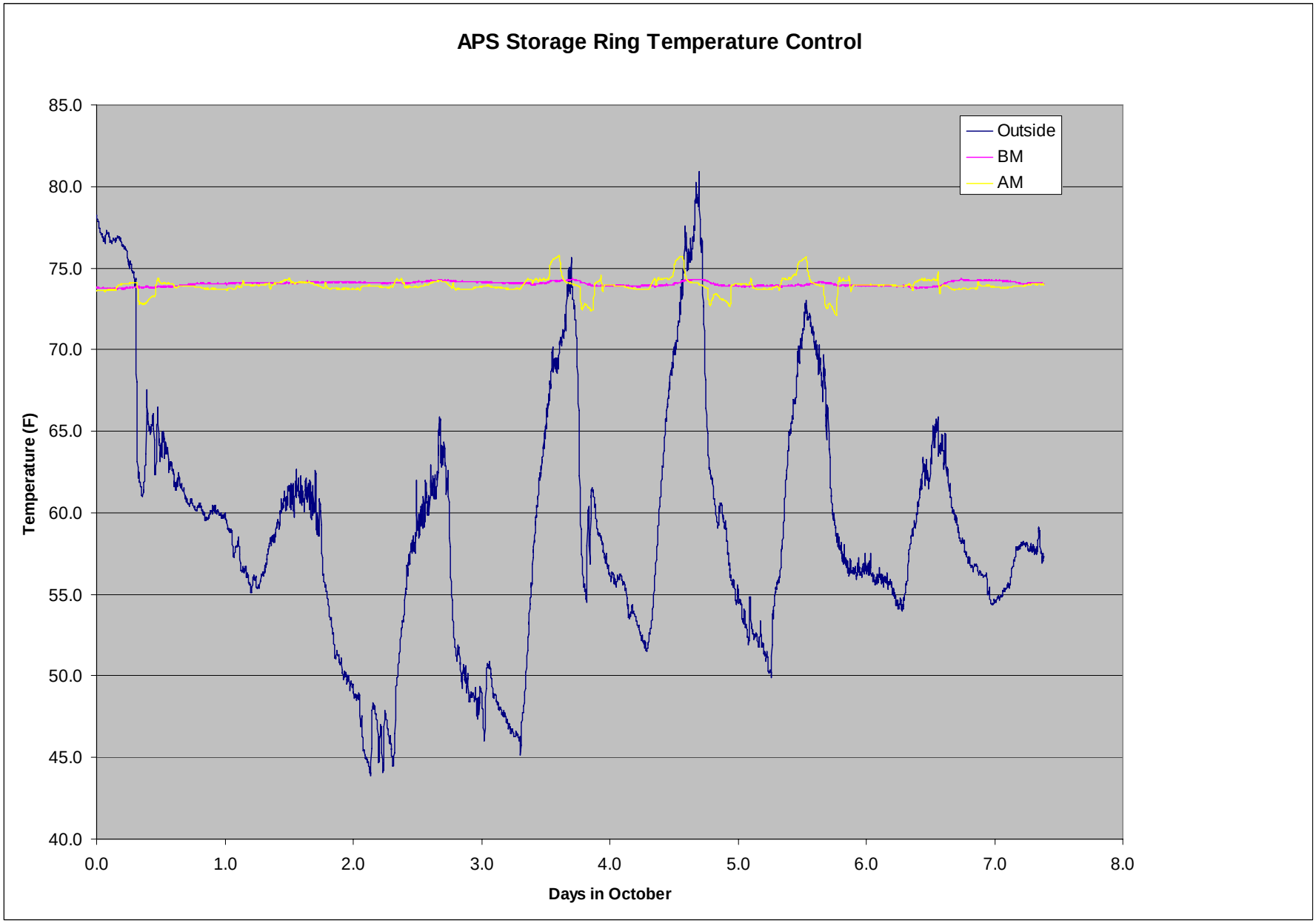
Diane Wilkinson, ASD-DIA

SUF Supervisor of the Year:

This award is given annually to the supervisor who is considered to be an outstanding manager by the people who work for him or her. Nominations can be made only by employees of the potential awardee. The nomination form requires a short description of the reasons for the nomination and the signature of three employees who work for the supervisor. The selection panel for this award will comprise the members of the SUF Employee Advisory Committee who will make recommendations to the SUF ALD.

2006 Supervisor of the Year

Michael Borland has lead a seamless transition in the combination of the APS AOD Operations Group and the Operations Analysis Group. Michael is responsible for significant improvements in control room operations morale, technical proficiency, and organizational improvements. Michael has been essential in providing a link between Operations Analysis personnel and control room operations personnel to improve overall AOS and ASD-OA group performance. Michael has also provided much needed leadership to control room personnel in the areas of project management and completion.


APS Storage Ring Temperature Control
Outside
BM
AM
Temperature (F)
85.0
80.0
75.0
70.0
65.0
60.0
55.0
50.0
45.0
40.0
0.0
1.0
2.0
3.0
4.0
5.0
6.0
7.0
8.0
Days in October