

APS/Users Monthly Operations Meeting

Brian Stephenson

March 26, 2014

Agenda

- APS Update - Brian Stephenson
- APS Upgrade Update – Glenn Decker
- Exploring Emergent Electronic Behavior with Intermediate Energy X-Rays at the New Sector 29 - Jessica McChesney



Keep Focused on Safety

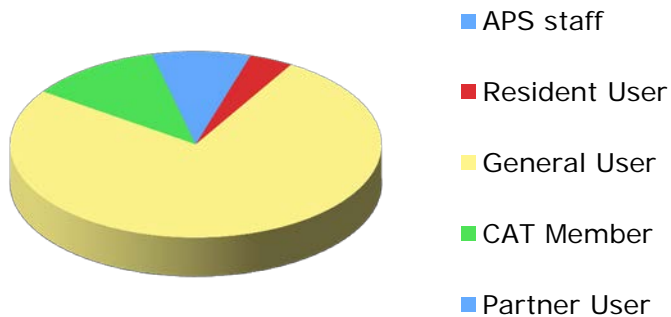
- Winter weather
 - Wear proper foot wear and use cleared pathways
 - Report slippery conditions to Rick Janik (2-6068) or FMS Grounds (2-2582)
- "Spring Fever" can bring increase in accidents



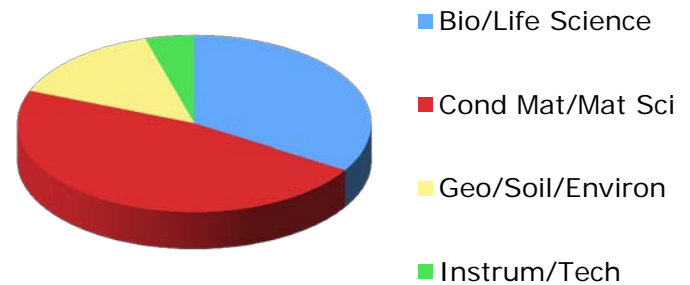
FY13 APS Users Survey Results

Demographics of Users Responding

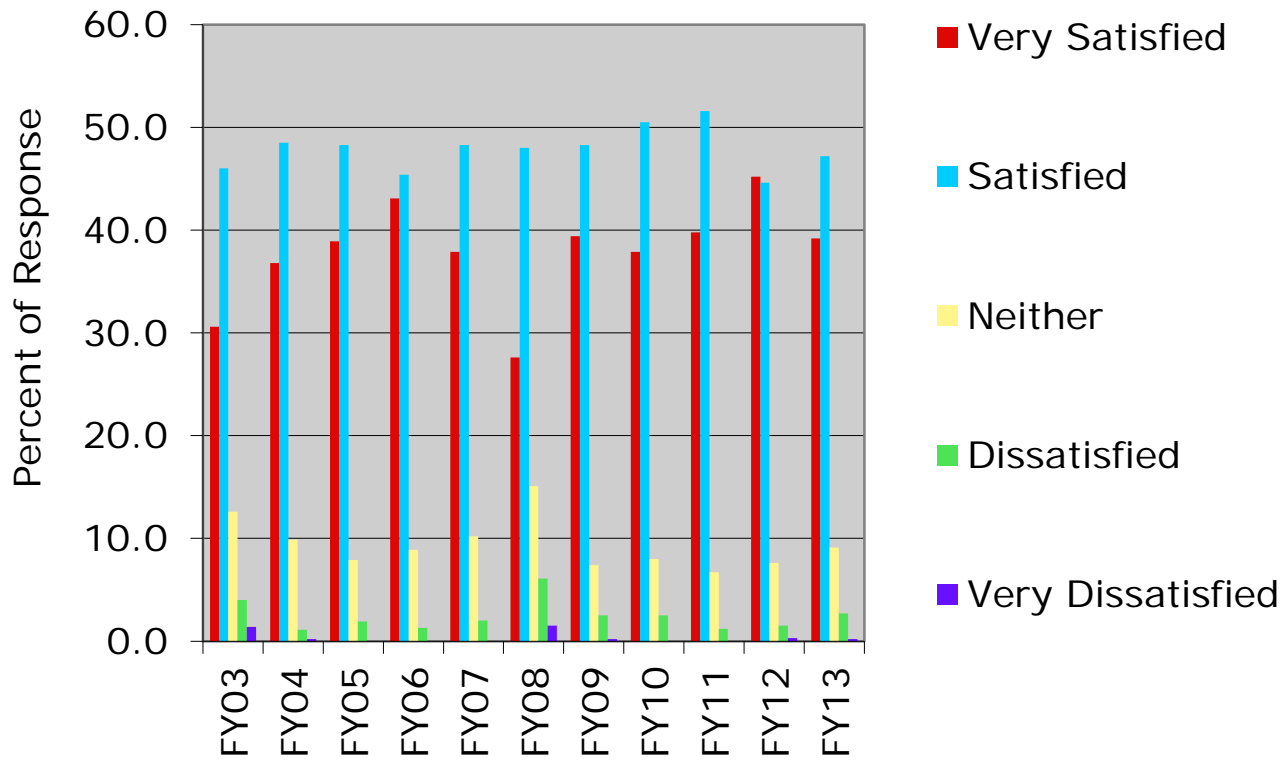
**FY13 Respondents
Affiliation**



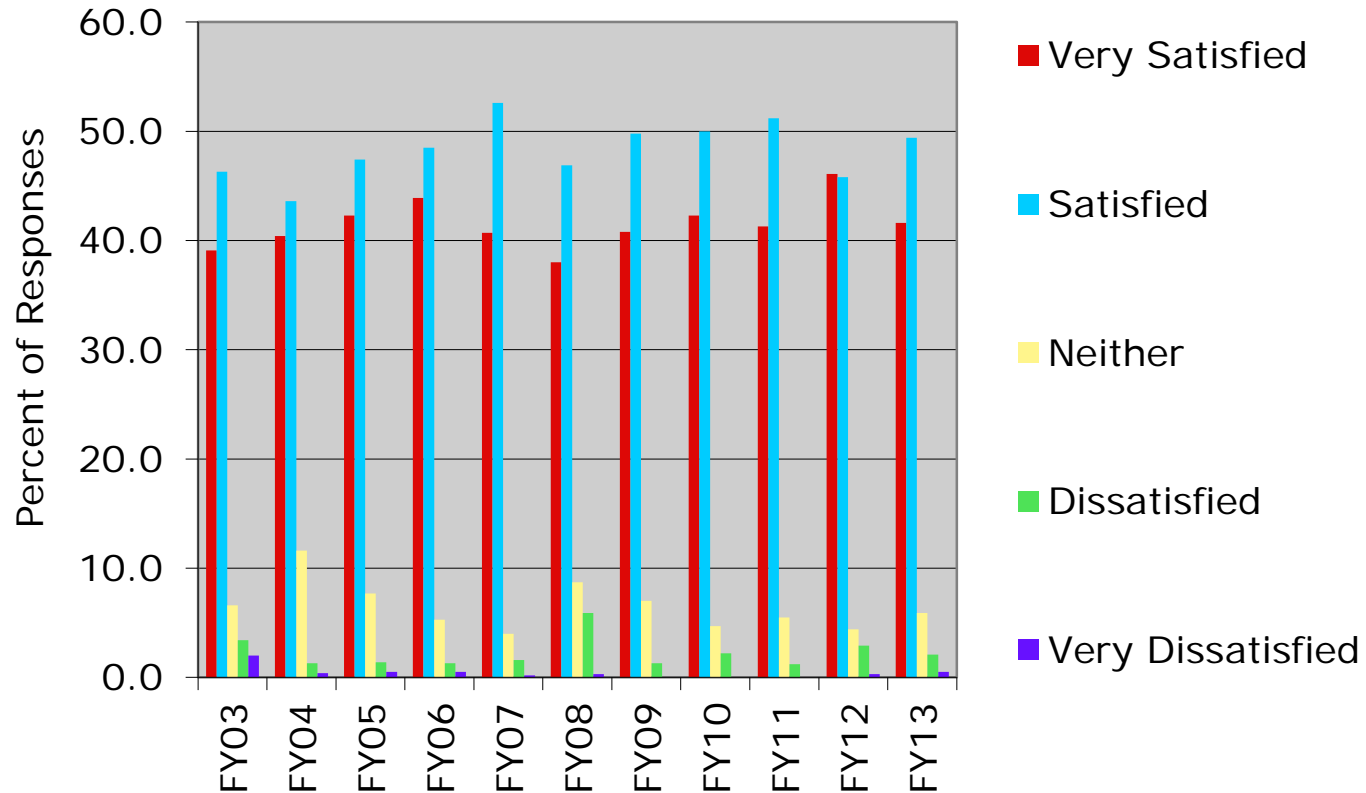
**FY13 Respondents
Field of Research**



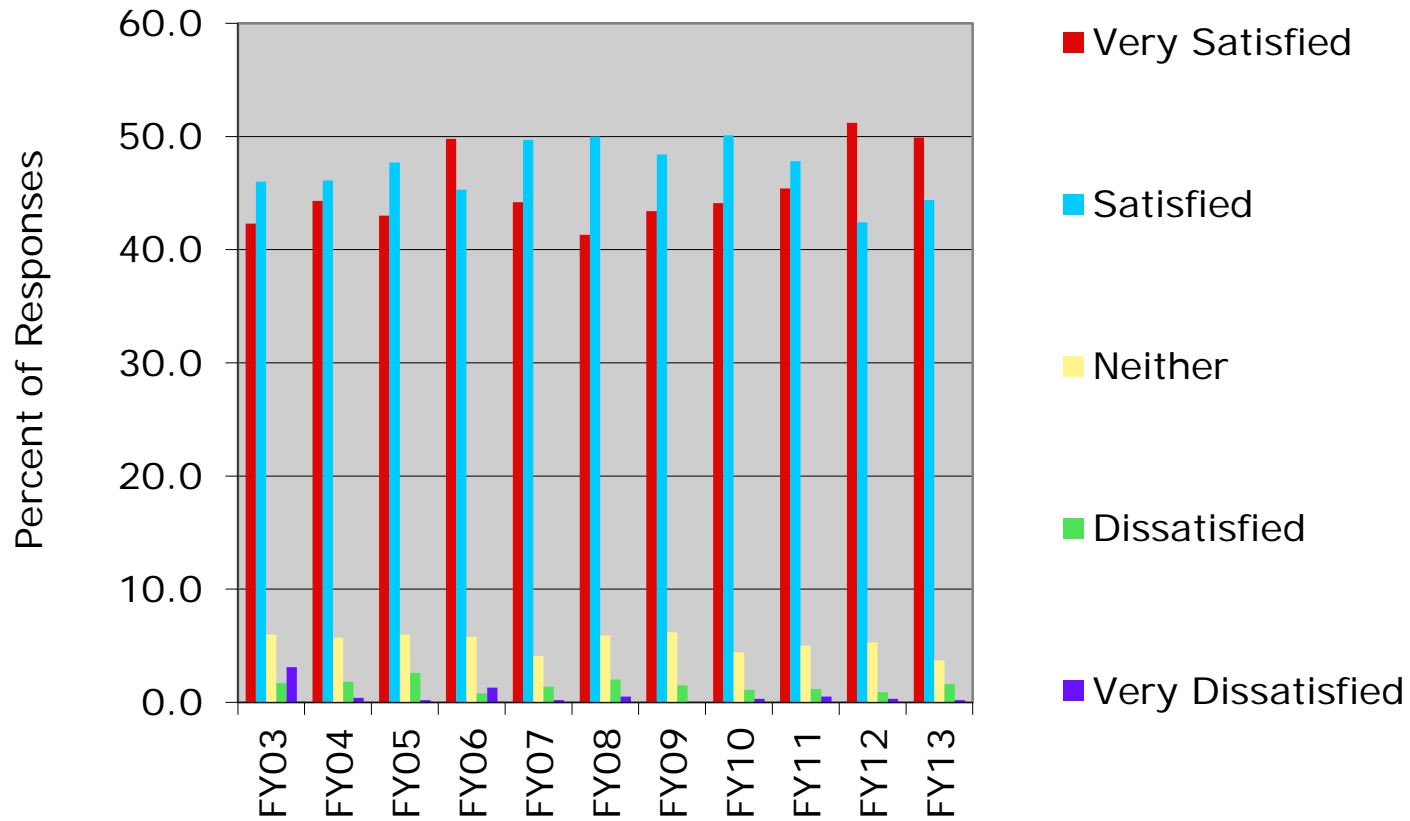
1. How satisfied were you with the fraction of the year that the facility operates?



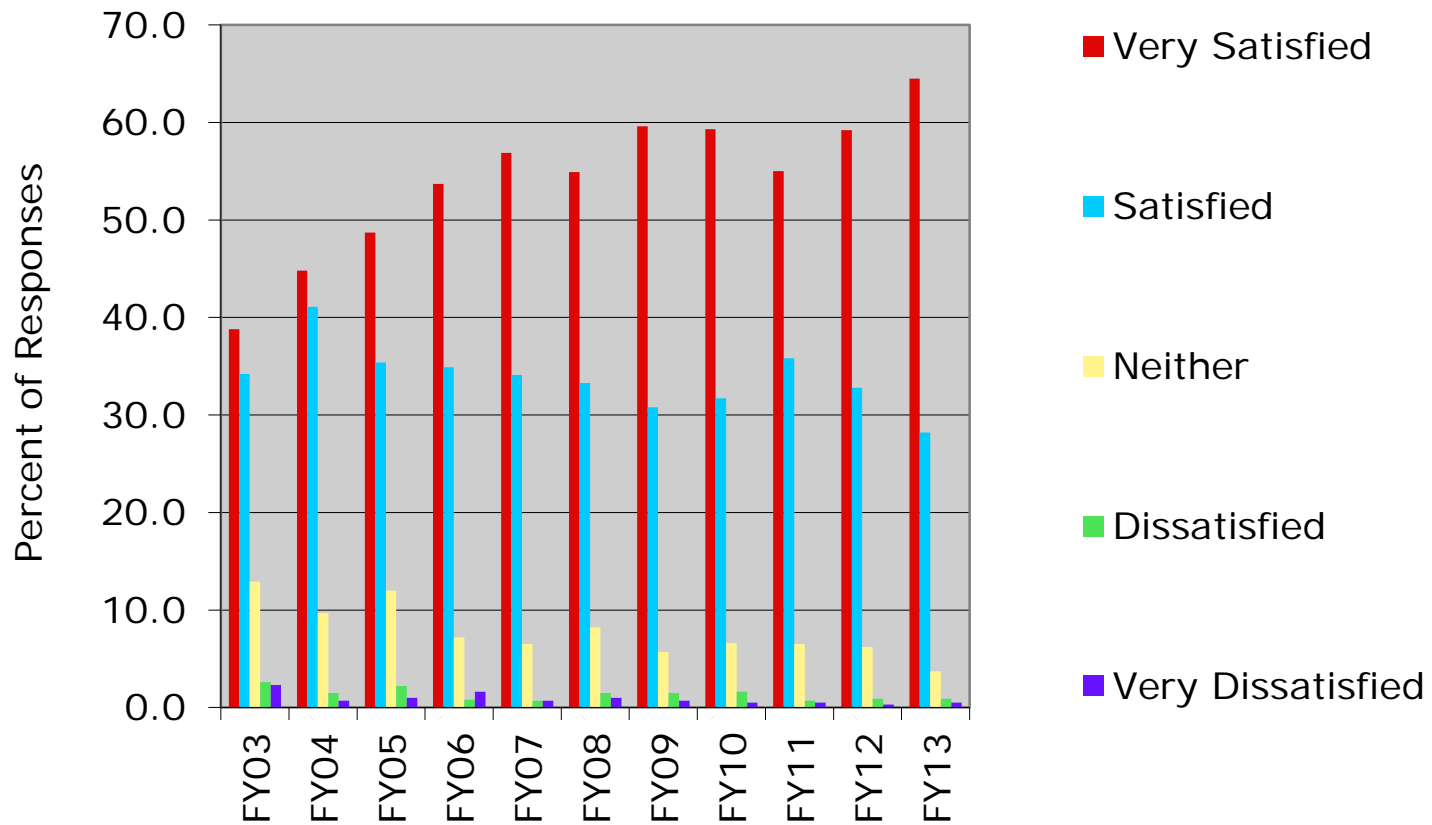
2. How satisfied were you with the schedule or service?



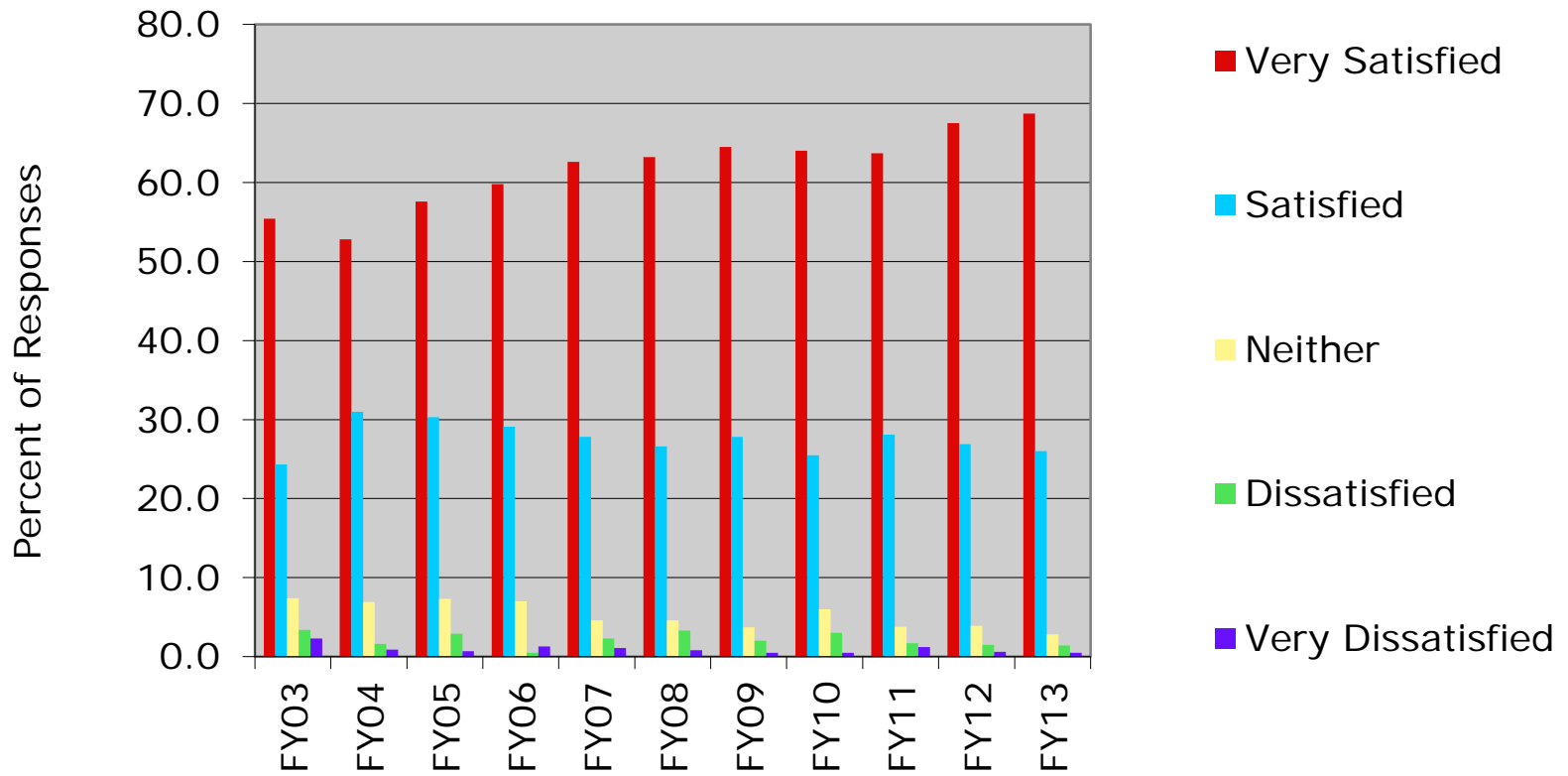
3. How satisfied were you with the performance? (i.e. was the service delivered on schedule and was downtime kept to a minimum)



4a. How satisfied were you with the support for users provided by the facility staff?



4b. How satisfied were you with the support for users provided by the beamline staff?



LN₂ Distribution System Improvements

Work to be Done during April/May Shutdown:

- Replace the 3,000 gallon tanks serving
 - Module B (Sectors 10-17) and
 - Module C (Sectors 18-27)with new 9,000 gallon tanks.
- Install a new Pressure Stabilization Unit (PSU) with each new tank to maintain better pressure stability (Sectors 10-27).
- Install a new fill line with each new tank to reduce the introduction of contaminants into the system (Sectors 10-27).
- Replace Module D LNDS Control PLC (Sectors 28-35)



9000 Gallon tank at 222/ESB

Benefits of the LN₂ Improvements

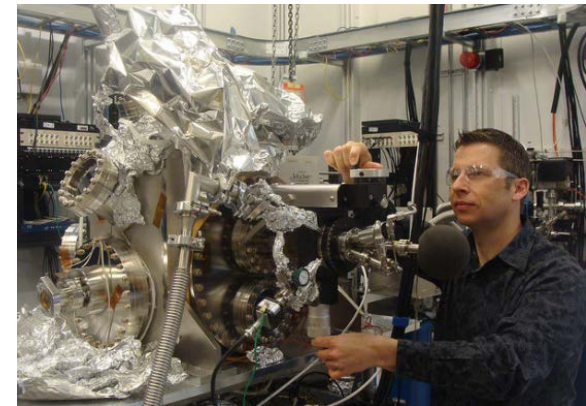
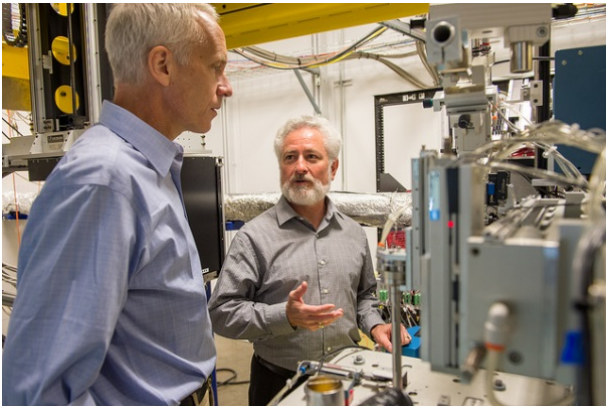
- Larger capacity tanks with more buffer capacity eases delivery schedule concerns and reduces potential for interruption of LN₂ supply to beamlines
- Fewer deliveries causing less disruption to pressure, less contamination of the system.
- Reduced delivery expense.

Planning Meeting

- There are potential risks that LN₂ supplies for ALL the beamlines could be affected during the installation, not just those for the Sector 10-27 beamlines.
- User input and communication is desired.
- A planning meeting will be held on Thursday March 27.
- Please attend or send a rep:
 - 3/27/2014
 - 1:00pm to 2:00 pm
 - 401, A1100

Updating the APS Strategic Plan

- We are in the process of updating our strategic plan in light of the new Upgrade plans
- The strategic plan will be used to prioritize activities throughout APS
- We will produce a more extensive document than we have had before
- Structure of the document:
 - Future objectives
 - Strategies to achieve objectives



APS Strategic Objectives

- ***Provide the world-leading high-brightness hard X-ray user facility to enable outstanding science by users and staff***
 - Maintain safe and excellent user science and satisfaction
 - Enhance user programs with forefront capabilities and needed capacity in strategic scientific areas
- ***Upgrade the APS with the best feasible technology to maintain world leadership***
 - Rebuild the storage ring with a multi-bend achromat design to provide the U.S.'s first fourth-generation storage ring X-ray source
 - Develop next-generation undulators to produce the highest x-ray brightness from the low storage ring emittance
 - Develop advanced beamlines that fully exploit the high-brightness source
- ***Enable continued progress in light sources and their utilization***

Outlining Our Strategies to Achieve Objectives

- Management and Overall
 - safety, staff development, diversity
- Accelerator and Undulator Systems
 - storage ring, injector
 - stability, diagnostics, RF, power, controls
 - undulators
- X-ray Science and Beamline Systems
 - science areas: physics/materials, chemistry, earth/environment, life sciences
 - x-ray techniques: imaging, scattering, spectroscopy
 - optics, detectors, data
- Facilities and Support
 - building infrastructure, lab and office space
 - IT, engineering, utilities

It will also be useful to collect the strategies by activity type (e.g. a Mission Readiness plan) and organization (each has its own review/approval processes)



Upcoming Events

May 12-15: Users Week – APS/CNM/EMC Users Meeting

May 28-30: University of Chicago Annual Review
(will use to prepare for DOE review)

June 24-27: DOE Triennial Review of APS Operations

September 2-5: Coherence 2014 conference on the
Northwestern University campus
<http://coherence2014.aps.anl.gov>

