

# APS Monthly Operations Meeting

## May 25, 2011

APS Update -- *Brian Stephenson*

Synchrotron Powder Diffraction Simplified:  
Mail-In and In-Situ Data Collection at 11-BM –  
*Matthew Suchomel*

# APS Update

- Safety: ISM Day, LN<sub>2</sub> Hand Trucks
- Lehman Review of APS Upgrade Project
- BER Workshop
- Advanced Protein Crystallization Facility
- Upcoming DOE and University of Chicago Reviews of APS



# Yearly "Integrated Safety Management" Day

- Each division having all-hands meetings, followed by smaller activities
  - XSD: Tuesday 10 AM
  - AES: Tuesday 1 PM
  - ASD: Thursday 9 AM
- The methods of strong science and strong safety are the same – imagine, evaluate prior knowledge, propose, plan, bring to bear the right tools, document results, watch for the unexpected, pause and re-evaluate, analyze, communicate, improve
- Have a long-term perspective



# Hand Truck Safety



## PHOTON SCIENCES SAFETY NOTICE

### Liquid-Gas Cylinder Hand-Truck Awareness

Liquid-gas cylinder hand trucks similar to the Harper Model ULG65050-51 (A) use a spring-loaded hook assembly (B) to engage with the liquid nitrogen Dewar support ring.

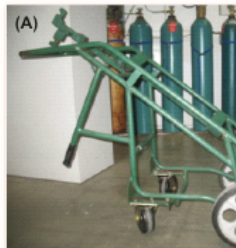
This provides a positive point of contact allowing the Dewar to be tilted onto the hand truck for transport.

Failure of this spring assembly can result in a loss of control, allowing the Dewar to become separated from the hand truck, leading to a very dangerous situation.

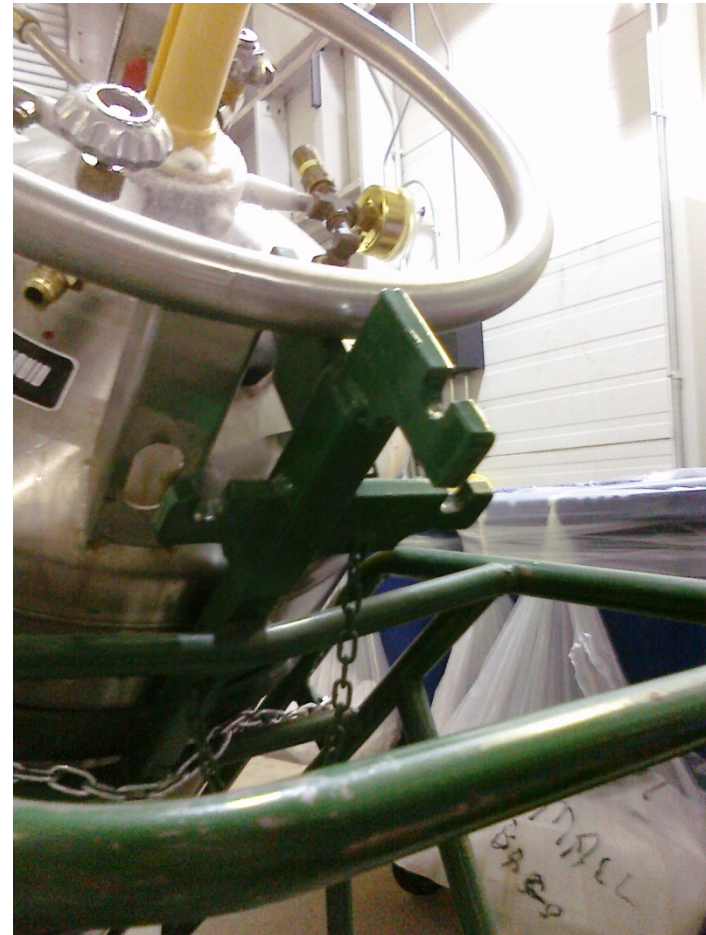
If the spring is weak such that it fails to fully engage the Dewar, replacement springs can be purchased through welding suppliers using part number HDW-SP-UL650-8

The entire cart assembly can be replaced with a newer model from Harper (model number 650-50-51).

A potential replacement is an upright style cart such as the EZ Load 4L for SAFTCART (C). This is a cart designed for any location where handling and maneuverability are paramount. Its phenolic wheels and swivel caster move easily and soundlessly over good terrain. Loading large liquid cylinders is simple due to the cart's low, front-loading platform. The cart can be used with platform scales to prevent the slamming of cylinders on scales. Grainger Item #5WXG3



PSC\_11.05



Note to CATs: Please respond to Tom Barkalow's e-mail regarding whether or not you have any of these hand trucks (only DND, IMCA, SBC had responded as of noon today)

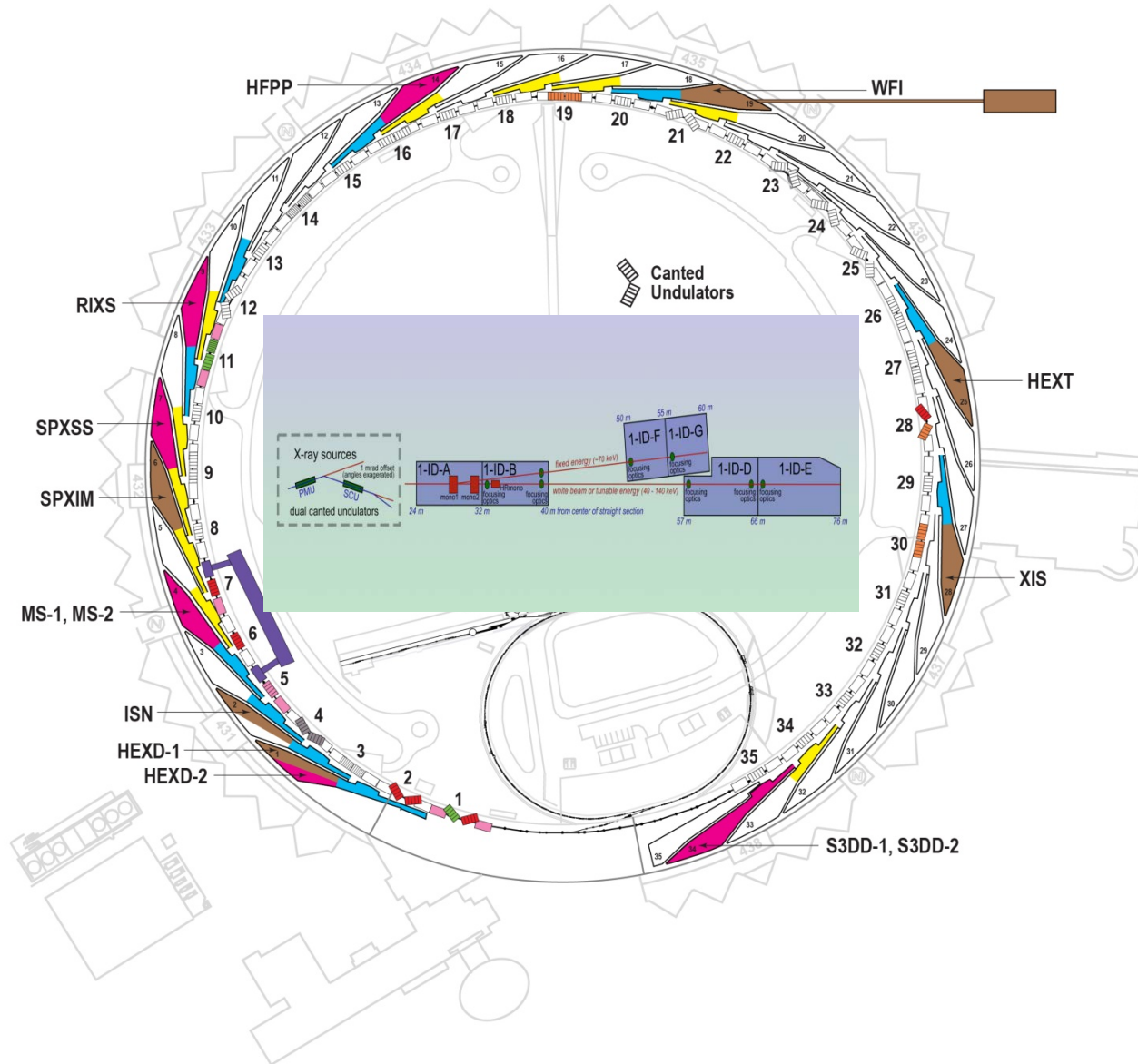
# Lehman Review Recommends CD-1

- Lehman Review of Conceptual Design for APS Upgrade, May 17-19
- Unanimously recommended that APS Upgrade project receive CD-1 approval; allows significant project funding in FY12
- At close out, several reviewers commended our staff's evident professionalism and the quality of presentations
- Many people throughout APS, the lab, and our user community contributed strongly to get us to this most significant milestone yet
- Celebration with pizza for lunch on Thursday: noon in Gallery
- Lehman committee gave extensive useful recommendations for the next phase: development of Preliminary Design, and CD-2 (anticipated at end of FY12)
- In coming weeks, we will be finishing the work for CD-1 and developing our strategy and schedule to get to CD-2



# APS-U Project Baseline Scope

- 10 Renovated Front Ends
- 11 New Front Ends
- 4 Long Straight Sections
- 5 Planar Undulators
- 2 Polarized Undulators
- 6 Revolver Undulators
- 3 Superconducting Undulators
- SPX SRF Cavities and Cryostats
- 6 New Beamlines
- 8 Beamline Upgrades





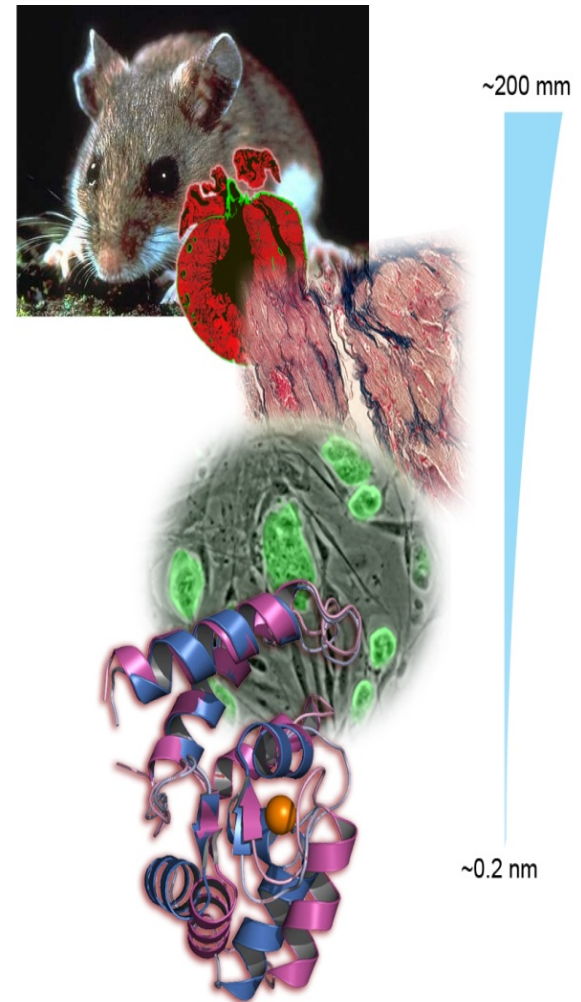
# Office of Biological and Environmental Research (BER) Workshop “Applications of New DOE National User Facilities in Biology”

- May 9-11, Rockville, MD
- Purpose: To outline scientific needs of biology community and how they map onto new and upgraded facilities
- Written documents and presentation solicited from NSLS-II, APS-U, LCLS, NGLS, SNS
- Our delegation:
  - Brian Stephenson, Argonne
  - Brian Kobilka, Stanford University
  - Tatjana Paunesku, Northwestern University
  - Carol Giometti, Argonne
  - Andrzej Joachimiak, Argonne
  - Ken Kemner, Argonne
  - Chris Jacobsen, Argonne and Northwestern



# Future Biological Science Facilities at APS: Determining Structure and Dynamics from Proteins to Organisms

- Wide-Field Imaging
- BioNanoprobe II
- Cryo Sample Preparation Facility
- Enhanced SAXS/WAXS
- Enhanced 100-ps Pump-Probe
- Microfocus Macromolecular Crystallography





# Advanced Protein Crystallization Facility

Design underway,  
funded by State of  
Illinois



Site Plan

The Advanced Photon Source is an Office of Science User Facility operated for the U.S. Department of Energy Office of Science by Argonne National Laboratory



# Advanced Protein Crystallization Facility

Utilities installation work  
scheduled for Fall 2011



The Advanced Photon Source is an Office of Science User Facility operated for the U.S. Department of Energy Office of Science by Argonne National Laboratory



# U of C and DOE Reviews of APS

- DOE Review of APS scheduled for September 12-15
- U of C Review of APS scheduled for July 27-29
- Agendas being drafted; combination of plenary talks, posters, lunch discussions with users and committees, and breakout session discussions with staff

