



# AOD TO INCREASE USER SUPPORT

*"If we build it they will come" has never been truer than when applied to the APS and its users. More than 5,000 members of the synchrotron radiation research community are signed up to carry out research at the APS. As the number of APS users continues to grow, the facility is evolving, finding new ways (and improving on established practices) to better serve our client base. Whether these changes involve reorganizing divisions or technological innovation, the goal is always to provide an environment where users can make the most of their time here. In this first of a series, we look at ways the APS Operations Division (AOD) is responding to these challenges.*

As one of his performance goals for the APS, ALD Murray Gibson committed to allocating more of the FY03 budget to user support; in real terms, a 20% increase. For AOD Director Bill Ruzicka, that increase includes the creation of one new group and the filling of three open positions, all dedicated to improving services for and communication between the APS and its users. "Rethinking and reapplying our resources will have the immediate effect of making AOD more proactive and helping us move forward in our role as a service organization that links the users to the rest of the facility," Ruzicka said. "One person was filling three important roles within the division. The responsibilities for user policy and planning, user technical interface, and beamline technical support will now be given to three new persons, and a new group responsible for user safety will be formed."

## The User ESH Support Group

Safety must be a primary consideration in any workplace. That is especially true for technologically complex environments such as the one here at the APS, which has had an enviable safety record from the first day of construction to the present. This is not luck. A proactive approach to awareness and training on the part of APS safety personnel, the support of APS management, and the cooperation of APS employees and users have combined to keep accidents and injuries at the APS to a minimum.

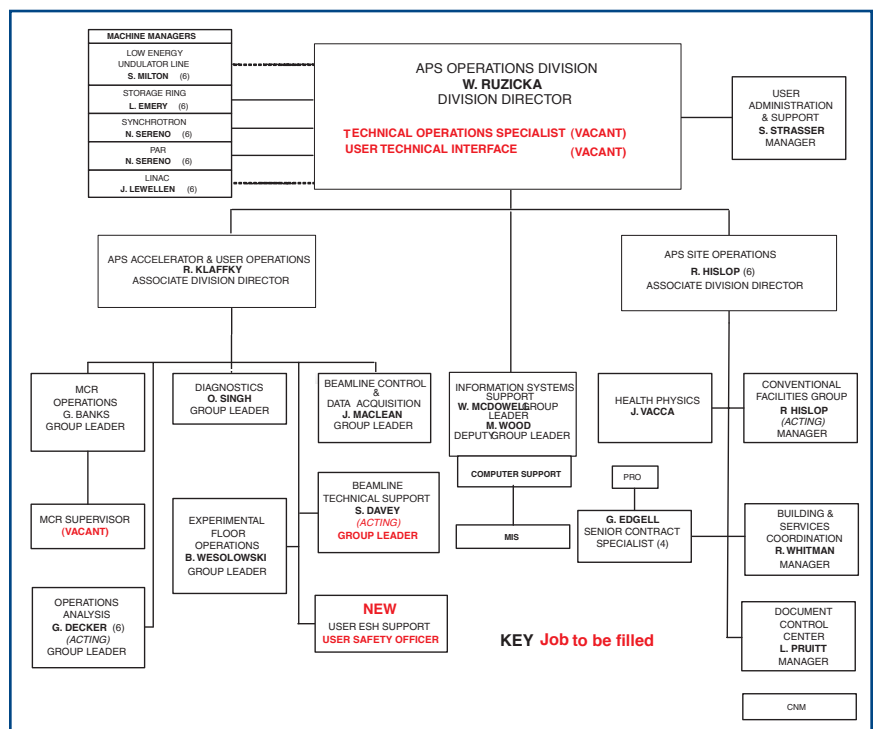
This approach also seen the facility pass successfully through inspections by the DOE, OSHA, and other reviewers.

AOD continues this tradition of "safety first" with the formation of a new User ESH Support Group (UES). The UES group will have specific responsibility for continuing to assure a safe working environment for users in the experiment hall and related facilities, consolidating support for user safety, and focusing on oversight responsibilities. The group will be led by the User Safety Officer, a new position within AOD. The UES group will also support preparations for experiment safety reviews and oversee user radiation safety and Health Physics functions.

## The Beamline Technical Support Group

The Beamline Technical Support Group (BTS) will concentrate a wide range of beamline-related knowledge in one place. The BTS Group will include scientific associate-level support staff among its members. Working off the

*Cont'd. on page 6*



*The new AOD organization chart. Open positions are in red.*

# Polarization Work Earns U. of C. Award for XFD's Srajer

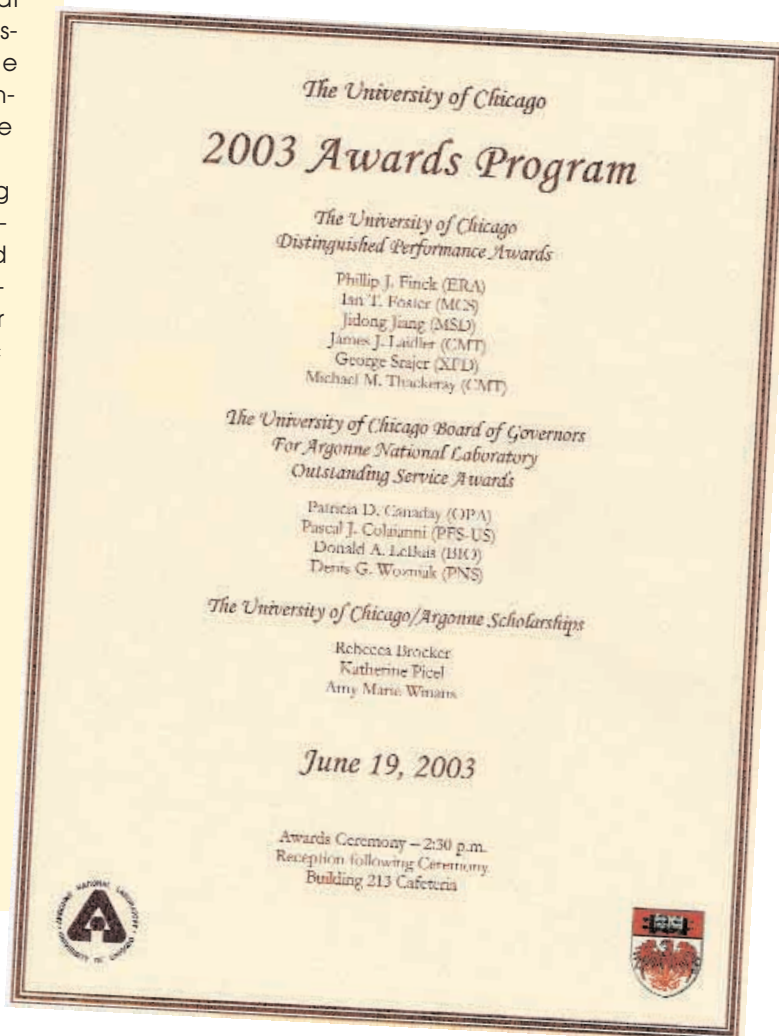
GEORGE SRAJER (XFD) and JIDONG SAMUEL JIANG (MSD) shared one of this year's University of Chicago Distinguished Performance Awards for their work in innovative synchrotron radiation instrumentation and its application to the systematic study of magnetic multilayers at the APS. This achievement has established an important scientific and technical milestone in both synchrotron radiation and materials science.

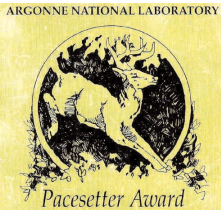
Srajer (leader of the Polarization Studies Group in XFD) headed up development of the versatile instrumentation at X-ray Operation and Research sector 4 of the APS. This instrumentation includes a diamond-crystal-based system that allows command of a unique property of synchrotron radiation x-ray beams: their high degree of polarization. Using the sector 4 instrumentation, synchrotron x-ray polarization can be controlled over a wide range of x-ray energies to match the needs of a particular experiment. This flexibility allows researchers to fully exploit the properties of x-ray beams produced at third-generation sources, such as the APS. The system, in combination with a unique and versatile spectrometer, high magnetic field, and low-temperature capabilities, represents the state of the art for this type of instrumentation.

The collaboration between Srajer and Jiang focused on nanoscale magnetic thin films, multilayers, and superlattices. These materials are used as model experimental systems to probe fundamental questions in physics and as the basis for the development of high-performance magnetic materials and devices. Recently, Jiang, Srajer, and their colleagues used x-ray scattering and absorption techniques to separate the contributions of different magnetic species in complex systems. They measured, with unprecedented accuracy, parameters characterizing buried magnetic interfaces in Fe/Gd magnetic multilayers (Haskel et al., *Phys. Rev. Lett.* **87**, 207201 [2001]). They were also able to independently probe surface and magnetic states in these multilayers and provide clear experimental evidence of the surface nucleation of a twisted magnetic state (*ibid.*, *Phys. Rev. B* **67**, 180406 [2003] and *J. Appl. Phys.* **93**, 6507 [2003]). This state was predicted more than 15 years ago, but it went undetected until these studies. ○



*George Srajer (second from right) receives his University of Chicago Distinguished Performance Award from (left to right) Don Randel, President, The University of Chicago; Tom Rosenbaum, University of Chicago V.P. for Research and Argonne National Laboratory; and Hermann Grunder, Director, Argonne National Laboratory.*





# RECENT PACESETTER AWARDS

Photo at right: APS Director Murray Gibson (left), ASD Director Rod Gerig (far right) and ASD-CTL Group Leader Ned Arnold (second from left) present Pacesetters to Janet Anderson, Marty Kraimer, and Andrew Johnson (all ASD-CTL) for making the Experimental Physics and Industrial Control System software freely available under an Open Source license.



Photo at left: Mike Douell (ASD-RF) was presented with a Pacesetter for his dedication in calibrating the test equipment used by the RF Group. Present for the ceremony were (left to right) ASD Director Rod Gerig, Geoff Pile, ASD-RF Group Leader, Douell, and APS Director Murray Gibson.

Photo at right: Bruce Stockmeier (AOD-CO) was awarded a Pacesetter for his work on the hazard analysis program for the soon-to-be-constructed Center for Nanoscale Materials (CNM). Left to right in the photo are Derrick Mancini (XFD-OFM), Bev Hartline (CNM Acting Director/ANL-OTD), Stockmeier, AOD Director Bill Ruzicka, and APS Director Murray Gibson.



Development and implementation of the online APS general user program (GUP) earned Pacesetters for James Broniarczyk (AOD-MIS/TUSC), Mohammad Jamal (AOD-MIS/TUSC), and Jane Andrew (AOD-UAS). Left to right in the near photo: APS Director Murray Gibson, Susan Strasser (Manager, AOD-UAS), Broniarczyk, Jamal, Andrew, AOD Director Bill Ruzicka, and Marcia Wood (AOD-MIS). Lisa Keefe (Illinois Institute of Technology, Director of IMCA-CAT) headed a task force of users and staff who designed the new program. While she could not be given a Pacesetter, her efforts did not go unrewarded. She is shown in the far right photo receiving a box of designer chocolates from Gibson during an APS milestone celebration.



## PERSONNEL...

**ACCELERATOR SYSTEMS DIVISION:** JOSEPH XU, Computer Scientist, has joined the Controls Group • **APS OPERATIONS DIVISION:** GREG BANKS has been promoted to the position of Main Control Room Group Leader • STAN PASKY has been promoted to Chief of Operations • JOHN MACLEAN, formerly with ASD, has accepted the position of Group Leader for the Beamline Control & Data Acquisition Group • CHRISTOPHER KLAUS has been hired to serve as the APS Webmaster • MICHAEL BORLAND has returned to APS full time. Michael will continue in his previous role as Operations Analysis Group Leader

## PERSONAL...

Congratulations to JILLIAN FREDERICKS (UNI-CAT) on the birth of MADALYN LEIGH FREDERICKS, on Monday, June 16th. Maddy arrived at 11:50 p.m. weighing in at 7 lb, 12 oz and measuring an even 20 in. long. Mom, dad, baby, and big brother TANNER are all doing fine • Congratulations to JON (XFD-XRP) and JENNIFER ALMER, whose son, OWEN DAVID ALMER, was born on June 19 at 6:00 p.m. Owen weighed in at 8 lb, 9 oz and was 21 in. long. Mom, dad, and baby are all well

## MEETINGS, ETC.

The monthly APS Colloquium Series benefits the APS and Argonne by bringing distinguished scientists in all disciplines to lecture on topics of general interest. The lectures are generally scheduled for the first Wednesday of each month at 3:00 p.m. in the APS Auditorium, Bldg. 402. Coming next in the series, on

October 1, is PROF. NIGEL GOLDENFELD (University of Illinois at Urbana-Champaign) speaking on "My

Manhattan Project: A Physicist's Adventures on Wall Street" • The National School on

Neutron and X-ray Scattering (NSNXS) returns to Argonne on August 10-24,

2003. The NSNXS, which is supported by the DOE Office of Basic Energy

Sciences, educates graduate students attending U.S. universities on the utilization

of major neutron and x-ray facilities. Tutorial

lectures on the principles of scattering theory, the

characteristics of neutron and synchrotron x-ray sources, and the application of scattering methods to condensed matter

research are augmented by hands-on experiments at both the IPNS and APS. Topics from many disciplines (including materials

science, condensed matter physics, chemistry, biology, and geology) are included in both the experiments and lectures.

Lecturers drawn from universities, national laboratories, and industry throughout the U.S. are internationally regarded leaders

in their fields. See [www.dep.anl.gov/nx/index.html](http://www.dep.anl.gov/nx/index.html).



*William G. Stirling (front, fourth from left), Director General of the ESRF; Murray Gibson (to Stirling's left), Director of the APS; and Akira Kira (to Gibson's left), Director of JASRI/SPring-8, and participants in the recent 3-Way Meeting at the APS.*

Technical and scientific representatives from the world's third-generation, high-brilliance, high-energy light sources met at the APS on June 2-3, 2003, for the latest in the series of "3-Way Meetings." These meetings, which are attended by technical experts from the APS, the European Synchrotron Radiation Facility (ESRF) in France, and the 8-GeV Super Photon Ring (SPring-8) in Japan, provide a venue for intensive but informal exchanges of information on advances in synchrotron science and updates on the research programs at the three facilities. The next 3-Way Meeting will be held at SPring-8. Presentation topics this year included "20-Year Facility Vision and Initiatives," "Facility Operational Experience," "Source Developments," "Detector Developments," "Optics Developments," "Beamline Controls," "New Scientific Programs and Initiatives," and "Facility and Personnel Outreach." In conjunction with the 3-Way Meeting, the APS Optics Fabrication and Metrology Group hosted the "3-Way X-ray Optics Workshop II." An agenda and PDFs of all talks are on the Web at: [http://www.aps.anl.gov/conferences/3way2003/Meeting\\_Program.html](http://www.aps.anl.gov/conferences/3way2003/Meeting_Program.html). ○

# ASKED & ANSWERED

Do you have a suggestion for improving the workplace environment at the APS? Facility employees and users are invited to submit suggestions via the "APS Improvement Suggestion and Concern Page" found on the Web at: [http://beam.aps.anl.gov/pls/apsweb/sug\\_entry\\_form\\_pkg.start\\_page](http://beam.aps.anl.gov/pls/apsweb/sug_entry_form_pkg.start_page),

or by contacting a member of the APS Employee Advisory Committee (APSEAC), whose members are listed below. Management takes these communications seriously and seeks remedies to the issues raised. Below are selections from the first round of suggestions, together with actions taken.

One employee expressed concern over inappropriate content on bulletin-board postings at the APS. Bulletin boards in all facility buildings are monitored regularly. But if you notice bulletin-board material that you feel is in violation of ANL policy, contact Rose Torres (APS-PA) at 2-7951.

Not surprisingly, a number of computing issues were raised. Regarding the APS Web site, one correspondent wrote that "The new Web pages are extremely unfriendly to users of non-graphical browsers ...." while another found that "It is very difficult to find anything..." As noted elsewhere in this issue of *The Source*, AOD has hired a full-time Webmaster, Chris Klaus (klaus@anl.gov), who is improving the APS Web site to make it as user-friendly as possible. Suggestion Box submissions are an excellent form of client feedback, so keep them coming.

A suggestion that "There should be a link to anl.gov on the APS home page" is easy to answer: The ANL link is in the text under the aerial photo on the APS home page, together with links to the U.S. Department of Energy, the Office of Science, and the Office of Basic Energy Sciences.

"The 'Internal Pages' tab on the APS home page," one person noticed, "is not visible to anyone not sitting in (bldg. 401)..." rendering some group pages inaccessible from off site. Management Information Systems (MIS) has added an "APS Org." tab to the top of the home page menu bar to solve this access problem.

The large number of addresses visible on mass e-mails from the ALD office were the target of two suggesters, who felt that the amount of scrolling needed to find the body of the message was counterproductive. MIS has fixed this problem; the recipient lists are now BCC'ed.

Moving on from cyber space to real space, a request was made for "a sign at the entrance to the experiment hall from Bldg. 401 indicating that sector 1 is to the left and sector 33 is to the right." That sign is now in place.

The doors between the experiment hall and the corridor containing the TLD racks were pointed out as a potential hazard due to the lack of a window in one of the doors. Both doors are now equipped with windows and latches, as well.

Another party felt that the workout room on the ground floor of bldg. 402 was an auditory and olfactory distraction to people passing through the general area and wondered, "Is there any way we can keep the doors closed?" According to Bob Whitman (AOD-BLD), both doors have automatic closers on them. These doors are open only when custodial personnel are moving furniture in and out of the storage cage, which is located in the same area as the workout room.

Air quality was also the concern of two employees who objected to smoking near the main entrances to bldg. 401.



Signs have now been posted prohibiting smoking in those areas, enforcing the ANL policy.

The APS holiday party drew two suggestions that the event be "a regular nighttime Christmas party...at a hotel or ballroom...like most companies do." The APS Spectrum Club Steering Committee, whose members organize social events such as the holiday party, recently sent around a survey to determine employee and resident-user sentiments on a number of matters, including parties. Given the choice of a holiday lunchtime buffet, evening dinner, or evening cocktail party at the Guest House, the 402 Gallery, or off site, majorities of 59% and 54% voted for the lunchtime buffet and the Guest House, respectively, and a plurality of 43% picked Friday as the best day of the week. So be it. (More on the survey next issue.)

"Conference rooms A1100 and E1100/1200 and the Auditorium need (activated) phone jacks for temporary phones when a conference or workshop is in progress," one person opined. All of these rooms, except the Auditorium, have activated phone jacks; phones are available upon request to AOD-BLD's Ed Russell (ext.2-7716) or Becky McCauley (ext.2-4913).

Two correspondents addressed custodial issues, including the need to clean office chairs and a perceived drop-off in service. If you have a concern in this area, please contact Becky McCauley or Ed Russell. If you need cleaning done in a lab or anywhere on the experiment hall floor, special arrangements must be made; custodial services cannot access those areas without prior notification. Again, call Becky.

A number of Suggestion Box submissions were forwarded to ANL for consideration. These included changes to the ANL day-care system, better communication between ANL-HR and employees on policy changes, earlier hours for the on-site post office, access to vacation/sick leave balances, the placement of silverware in the cafeteria, and obtaining scooters for on-site use by students staying in Lab lodging. ○

## The members of the APSEAC are:

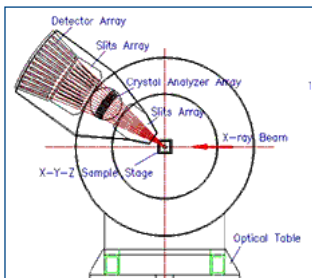
JANET ANDERSON	ASD	2-7192; jba@aps.anl.gov
YELDEZ AMER	AOD	2-6822; yga@aps.anl.gov
LAHSEN ASSOUFID	XFD	2-2774; assoufid@aps.anl.gov
CHRISTA BENSON	XFD	2-9526; benson@aps.anl.gov
LINDA DEVITO	AOD	2-1367; devito@aps.anl.gov
JOHN LEWELLEN	ASD	2-5252; lewellen@aps.anl.gov
DAVID MEYER	ASD	2-9427; meyer@aps.anl.gov
JİYONG ZHAO	XFD	2-9195; jzhao@aps.anl.gov

If you haven't visited the APS News page, located at the URL above, here's a sample of the latest items (be sure to bookmark the page for future visits).

**Crystal Structure of SARS Protease Determined Using APS** Using x-ray beams from the U.S. Department of Energy's Advanced Photon Source, Structural GenomiX, Inc., a San Diego, California-based, structure-guided drug discovery company, has completed the three-dimensional crystal structure of the main protease from the Coronavirus that causes Severe Acute Respiratory Syndrome.



For more highlights from research at the APS, including information a new design for variable-period undulators, see: <http://www.aps.anl.gov/highlights/nanotherapyfrnt.html>, where new experimental results are posted regularly.



**DEDICATED POWDER DIFFRACTION BEAMLINE FUNDED BY DOE-BES** A new high-resolution powder diffractometer beamline will be funded by the U.S. Department of Energy's Office of Basic Energy Sciences for construction at APS sector 11-BM. This state-of-the-art, dedicated powder instrument will be part of APS facility beamlines that provide a majority of beam time (80%) for general users. The project is a collaborative effort among APS scientists Peter Lee, Mark Beno, and Robert von Dreele, and ANL Materials Sciences Division scientists John Mitchell and James Jorgensen.

**HP-CAT to Lead the Way in New Research under NNSA Grant** The High Pressure Collaborative Access Team at APS sector 16 will be a primary location for research carried out under a new grant from the National Nuclear Security Administration (NNSA). The \$5.9-million, 2.75-year NNSA grant to the Geophysical Laboratory of the Carnegie Institution in Washington, D.C., under the Stewardship Science Academic Alliances program, will fund research into the behavior of materials under extreme pressure conditions.



**APS TECHNOLOGY SUPPORTS SSRL SUB-PICOSECOND PARTICLE SOURCE** A new photon source, the Sub-Picosecond Particle Source (SPPS), that promises to image the movement of objects down to the atomic level in subpicosecond time scales will benefit from the contributions of the APS, the Optics Fabrication and Metrology Group of the Experimental Facilities Division, and BioCARS (The University of Chicago).

**APS RESEARCH FUELS ENGINEERING INTEREST** Award-winning research on the characteristics of fuel sprays from injectors is one of the featured articles in the May 2003 issue of Mechanical Engineering and on the Web site of that magazine.



**WINNERS NAMED IN APS EXHIBIT CONTEST** Two teams of high-school students tied for first place in an interactive-exhibit design contest sponsored by the APS.

"AOD" cont'd from page 1

premise that each sector need not require its own complement of specialists, this group will apply technical and administrative expertise to user instrument and facility engineering and design; develop and administrate a proposed user support lab; add equipment to the spare-equipment pool; obtain a dedicated material handler; and facilitate access to a variety of APS resources, such as AutoCAD. The new BTSG Group Leader will also chair beamline review committees and act as liaison between users and conventional facilities engineering support staff. Biology specialists will also be added to the group.

### The User Technical Interface

The User Technical Interface (UTI) is a person, not a device. She or he will be the primary contact point between users and the three APS divisions in matters related to beamline technical information. She or he will assure the quality and availability of the huge storehouse of documentation needed by APS operations staff, as well as the users, for successful beamline operations. It's not all streaming information in this job; there will be an element of diploma-

cy required in order to establish working relationships with the various parties and to resolve technical issues in accordance with APS policies.

### User Policy and Planning

This individual will work with users to establish the policies and procedures that govern user's access to the APS and their workplace activities while they're here. He or she will coordinate user support activities that require interaction between APS organizations, including records and material handling; interdivisional beamline construction schedules; exchanges between users and APS technical staff on installation of beamline shielding, utilities, personnel safety systems, front ends, and insertion devices; and in reviews of beamline design and management and safety plans. As the first-ever APS ombudsman, this person will also provide a conduit to APS for other issues raised by users.

Already in place is a new Webmaster, Chris Klaus, who is busy redesigning the APS Web site and making himself available to users with Web problems and projects. ○

## APS Holiday E-Card Design Contest Announced

Is it too early to start thinking about the 2003 winter holidays?

Not if you're thinking about the 2003 APS winter holiday e-card, which will be sent to all APS employees and users and to a multitude of others in the world of synchrotron x-ray science. A graphic or photograph that you design for that card might make you the winner of this year's "APS Holiday E-Card Design Contest."

The contest parameters are few and straightforward:

1. The design must be associated with the APS and with the winter holiday season.
2. If the design incorporates elements that are under copyright, you must obtain written permission for use from the copyright holder.
3. The contest is open to all APS employees and users.
4. Entries must be received or postmarked no later than October 1, 2003.

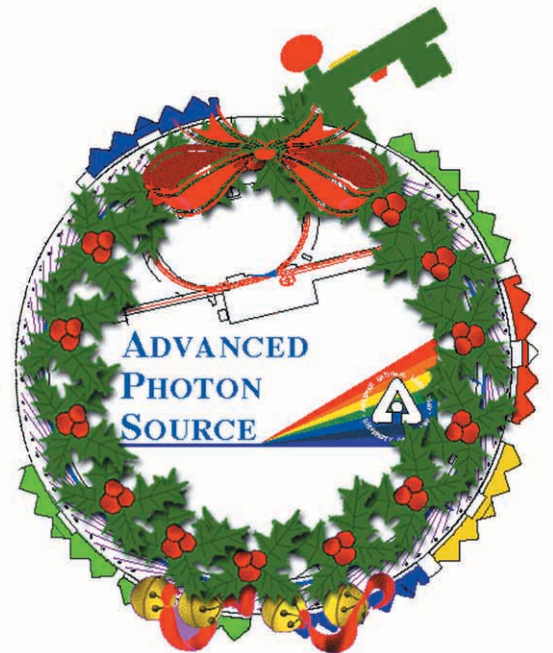
Because the winter holiday e-card will be distributed in electronic format, all entries must be submitted either as files that are high-quality originals (EPS, TIFF, BMP, or high-resolution JPEG; editable PowerPoint slides are fine, but no PDF files, please) or as paper-based artwork not larger than 8.5 in. x 11 in. (so that we will be able to scan it). Please include your name, work e-mail address, and telephone number; entries without that information cannot be considered.

Entries will be judged by a jury drawn from the ranks of APS employees and resident users (judges may not be participants in the contest). Entries will be evaluated on the basis of originality and creativity.

The winner will have his or her (or their, if it's a collaboration) name(s) and a short biography included with the e-card, leading to both local and worldwide renown.

Send your submissions and any questions to: [apsinfo@aps.anl.gov](mailto:apsinfo@aps.anl.gov), with "Card Contest" in the Subject line, or by interoffice mail to Card Contest, 401/A4128.

Ready? Start now. ○



*This festive variation on the APS plan view by Ralph Bechtold (ASD) was the winner of the last APS holiday card design contest.*

# EXPECTING VISITORS?

## DON'T LET THEM LEAVE UNINFORMED

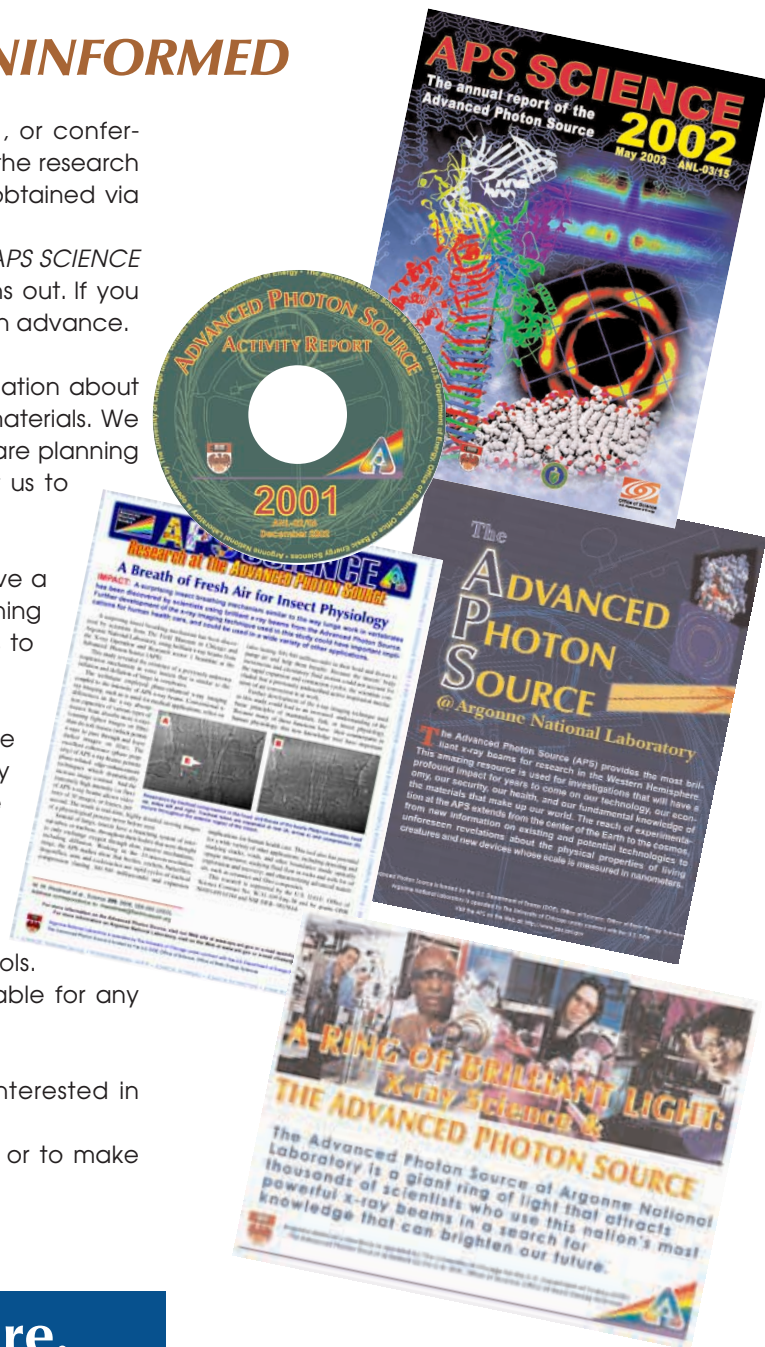
If you're hosting visitors; organizing a workshop, meeting, or conference; or would just like to spread the word about the APS and the research carried out here, a variety of informational materials can be obtained via the contact e-mail at the end of this article:

- Copies of the 4-color, 152-page 2002 APS annual report (*APS SCIENCE 2002*). We will distribute these as requested until our supply runs out. If you are planning a large meeting, you may want to reserve copies in advance.
- A 4-color, enameled-stock APS folder is imprinted with information about the facility. Two interior pockets provide space for additional materials. We have a limited quantity of these for visitors to the facility. If you are planning a large meeting and would like to use these folders, contact us to arrange for additional printing (please allow two weeks).
- The 2001 APS Activity Report is available on CD-ROM. We have a limited quantity of these for visitors to the facility. If you are planning a large meeting and would like to distribute these, contact us to arrange for copies (please allow one week).
- One-page hand-outs with brief, public-level descriptions of the APS, users, and research highlights are available from the display rack in the atrium (small quantities) or in large quantities via the contact e-mail below.
- A poster that describes the APS and highlights some recent research was developed in collaboration with the ANL Division of Educational Programs for distribution to high schools. These are not appropriate for technical visitors, but are available for any kids who are interested in science and the APS..

More products are under consideration. We're always interested in ideas for new info materials.

For information on any of the materials described above, or to make suggestions, send an e-mail to:

[apsinfo@aps.anl.gov](mailto:apsinfo@aps.anl.gov)



## Who's the Source? You Are.

Without you, there is no *Source*.

We'd like to publish *The Source* at least once a month. But we can't do that if we don't have content.

That's where you, the APS employees and resident users, come in.

You are our best source for the latest from around the facility. Send us newsworthy items about recent or impending developments, innovations, accomplishments, and any other work-related matters you think your colleagues would like to read about.

Brief descriptions of upcoming APS-sponsored meetings, workshops, etc., are of great interest and value.

We also welcome news of recent births in your immediate families for our "Around the APS" section.

Some items we receive may be posted on the APS Web site under "APS News" (see page 6) and some will run here in *The Source*.

Input to: [apsinfo@aps.anl.gov](mailto:apsinfo@aps.anl.gov)

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The *Source* is a vehicle for enhancing communications within the APS community on matters of employee and user interest, technical progress, ES&H, research programs, and management news.

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