AMERICAN PHYSICAL SOCIETY











## The AMERICAN PHYSICAL SOCIETY strives to:

Be the leading voice for physics and an authoritative source of physics information for the advancement of physics and the benefit of humanity;

Collaborate with national scientific societies for the advancement of science, science education, and the science community;

Cooperate with international physics societies to promote physics, to support physicists worldwide, and to foster international collaboration;

Have an active, engaged, and diverse membership, and support the activities of its units and members.

Cover photos: *Top*: Complementary effect in flowing grains that spontaneously separate similar and well-mixed grains into two charged streams of demixed grains (Troy Shinbrot, Keirnan LaMarche and Ben Glass) *Middle*: Face-on view of a simulation of Weibel turbulence from intense laser-plasma interactions. (T. Haugbolle and C. Hededal, Niels Bohr Institute).

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ast year, 2007, started out as a very good year for both the American Physical Society and American physics. APS' journals and meetings showed solidly growing impact, sales, and attendance — with a good mixture of US and foreign contributions. In US research, especially rapid growth was seen in biophysics, optics, astrophysics, fundamental quantum physics and several other areas. High hopes were raised by the possibility of new physics, particularly in relation to impressive new investments in computers and major international facilities.

However, in the end, 2007 was a very frustrating year for US funding of science. A last-minute government turnabout damaged both our immediate hopes for new scientific and educational projects and our long-term plans for contributions to international research. Scientists and economic leaders had made great efforts to show the importance of scientific innovation and education for the long-term economic health of the country. The President and Congress appeared to agree with this view. With broad support they signed into law the America COMPETES Act aimed specifically at extending and improving research and education in the physical sciences. However, the appropriation of the required funds did not happen. At the very last minute, the President and the Senate refused to carry through on the programs they had advocated. After a veto threat from the President, most of the physical science increase was dropped from the funding bill. Our lobbying staff, APS members, and others are now trying to turn this action around. It will be very hard.

APS education and outreach programs grew substantially during 2007. Our flagship program, PhysTEC, aims to increase the number of well-educated physics teachers. Working with our sister societies — the American Association of Physics Teachers and the American Institute of Physics — and with a growing number of universities, we are moving this program toward national recognition. In parallel, we run Physics Quest, which has the goal of bringing the excitement of scientific exploration to middle school students.

Over the years, APS has exerted policy leadership in technical areas by making careful and reasoned statements and publications about important issues. This year has been especially busy, with important work on topics including "creation science" in the schools, the training of workers for a possibly resurgent nuclear industry, a boycott of Israeli scholars, the training of scientists for nuclear forensics, and research programs for energy efficiency.

In 2007, Martin Blume retired after 10 years of meritorious service as APS Editor-in-Chief, leaving APS journals in very good shape . His replacement, Gene Sprouse, has put into place exciting new initiatives, including the printing of authors' names in their homeland's characters and an awards program to recognize our most successful referees. The journals continue to be a major success.

APS volunteers provide outstanding service to the Society and to physics. The entire APS leadership joins me in thanking the people who help choose and improve papers for APS journals and equally the many members who share in the planning, oversight, and operation of APS activities.

Kadonth

Leo Kadanoff APS 2007 President



Map showing magnetic flux lines for nickel nanoparticles (Courtesy of Brookhaven National Laboratory).



ournal Innovations (JIN) was a major effort of the APS Editorial Office in 2007, with the goal of highlighting and supplementing traditional journal articles with new content and new services. This effort followed the very successful PRL Suggestions program begun in 2006, which drew attention to particularly interesting and well-written articles in *Physical Review Letters*. JIN leaders carried out surveys and focus groups at the 2007 March and April Meetings to assess interest and get direction from journal constituencies. As a result of input from both readers and authors, a major JIN project will be *Physical Review Select*. This new online periodical will provide expert points of view and summaries for selected important papers, raising awareness and understanding of some of the best material published in the journals. Planning and hiring staff for *PR Select* got firmly underway in 2007, with the launch expected in 2008. Also under JIN in 2007 was a significant redesign of the journals' homepages and individual websites.

With 30,300 submissions each year, a new manuscript arrives roughly every three minutes during working hours. *Physical Review Focus* (focus.aps.org), which produces news-style stories describing selected recent papers from the *Physical Review* journals, was moved into the JIN project in 2007. Focus will be integrated with the new *PR Select* website so that readers can see the latest Focus stories alongside the new essays and summaries that will appear there. *Focus* was ranked as one of the top three sites for physics news by SciCentral, a major science news aggregating service.

Submissions to APS journals continue their inexorable increase, and were up by 5.4% in 2007. With 30,300 submissions each year, a new manuscript arrives roughly every three minutes during working hours. The editorial staff has been increased to keep pace with the additional submissions, but thanks to high-efficiency tools and systems, hard work, and the new espresso and cappuccino machine, the journal operations department has been able to handle the heavier load without requiring additional staff.

In March 2007, APS gained a new Editor-in-Chief, Gene Sprouse, succeeding Martin Blume, who had served admirably in this position for 10 years. Later in the year, Dan Kulp replaced Stanley Brown as Editorial Director.

Sprouse came to APS from Stony Brook University and quickly undertook two major initiatives. The first was an annual program to recognize volunteer referees who have provided extraordinary service to the APS. An initial list was generated using some 20 years of archival records of the 42,000 referees in the database. By the end of the year, 540 outstanding referees had been selected. About 125 referees will be recognized annually in future years.

The second initiative undertaken by the Editor-in-Chief was inspired by the numerous submissions from international authors, particularly those with Chinese, Japanese, and Korean names. Sprouse decided to offer these authors the option to have their names appear in the characters of their native languages, following their transliterated names. One day after the December 3rd announcement the first resubmission in the new style arrived, and the first publication appeared several weeks later, with many more in the pipeline.

Open access (OA) remains a topic of controversy and concern in the scholarly publishing community. Sprouse and Michael Peskin (SLAC) organized a symposium on OA at the spring meeting of the Publication Oversight Committee. It featured a panel of speakers including Martin Blume, Paul Ginsparg (Cornell), Molly White (Librarian, UT Austin), Michael Lubell (APS), and Salvatore Mele (CERN).

The reinvigorated colloquium program at the Editorial Office brought a number of distinguished visitors to Ridge in 2007, including Lawrence Krauss (Case Western Reserve), John Hertz (Nordita), Txema Pitarke (U. of the Basque Country), Pierre Meystre (U. of Arizona), and Malcolm Bowman (Stony Brook ).

With office space getting tight, the option of telecommuting is more and more attractive, and the electronic editorial system makes it entirely practical as well. For employees, the ability to work at home occasionally or regularly is a significant benefit and it saves gasoline and commuting time too. Unannounced tests of the business continuity plan (BCP), wherein a particular staff group is informed just prior to working hours that they are to work from home that day, have shown that productivity and continuity of services remain strong under these conditions. Mirroring of key systems and records, including a new West Coast mirror site in San Jose, and other redundant systems that are also part of the BCP would enable the APS Editorial Office to keep the journals open for business in the event of a serious weather incident or a major facility problem.



he annual March and April Meetings in 2007 were again very successful. The March Meeting, held in Denver, was one of the largest in its history. More than 7,000 people attended, with more than 6,700 abstracts being presented in invited, contributed, and poster sessions. The total number of attendees included 2,500 students and 1,600 international attendees from more than 50 countries. Both numbers have increased considerably in recent years.

Several pre-meeting programs were held at the March Meeting including a short course, tutorials, and two workshops, one on opportunities in biology for physicists, and one on professional skills development for women physicists. Several special sessions were held during the meeting, including evening sessions entitled 50 Years of BCS Theory, and Congress: Change in Control, Change for Science?

The 2007 April Meeting held in Jacksonville attracted more than 1,200 attendees. The program consisted of approximately 200 invited talks and 700 contributed talks. The plenary talks, added to the program several years ago, continue to be popular, drawing large crowds even though they begin early in the morning. The two recipients of the 2006 Nobel Prize in Physics, John Mather and George Smoot, gave presentations in a special session. Several evening sessions were very well attended. These included a special policy talk on energy by Ray Orbach, Undersecretary for Science, Department of Energy, a town-hall meeting on the next decadal survey of astronomy and astrophysics, and an evening public lecture on the physics of NASCAR racing.

Throughout 2007, APS units sponsored many other scientific meetings, including the meetings of the Divisions of Nuclear Physics, Atomic, Molecular and Optical Physics, Fluid Dynamics, and Plasma Physics, as well as a number of meetings sponsored by Topical Groups and Sections. Simulation of a lead-lead collision in the ALICE detector at the large Hadron Collider (CERN).



uring the last year, APS continued its practice of providing timely advice to Congress and the Administration on critical physics-related issues. Working through the Panel on Public Affairs (POPA), APS initiated a study of the nuclear workforce and, in conjunction with AAAS, a study of nuclear forensics. The forensics analysis will provide the first unclassified review of the current state of the field and an assessment of the potential for preventing and identifying un-attributed nuclear attacks.

Building on previous POPA reports, APS had its key recommendations on nuclear power and proliferation resistance adopted in the Fiscal Year 2008 Omnibus Appropriations Bill and in the "Nuclear Safeguards and Supply Act of 2007." In collaboration with AAAS, APS succeeded in incorporating into the Defense Authorization Bill the perspective provided by the *Reliable Replacement Warhead Report*, on which APS had previously assisted AAAS.

In another joint effort with AAAS, APS helped establish the Campaign Education Project aimed at teaching scientists and engineers the rudiments of running for local and state political office. Following the success of a workshop held in July, eight additional science and engineering organizations joined the Project to plan additional tutorials in 2008.

Science funding played a high-profile role in APS activities, beginning in January with an intense effort to save federal research and education programs from the budgetary freeze that resulted when the 109th Congress failed to pass any domestic spending bills prior to leaving office in December 2006. With APS in the lead, lobbying by science coalitions, professional societies, high-tech industry and academic associations ultimately persuaded the leadership of the 110th Congress to grant science a rare waiver in the ensuing year-long Continuing Resolution. The resulting February agreement allowed DOE Science, NSF and NIST's Core Programs to post significant gains, although somewhat below the levels suggested in the President's American Competitiveness Initiative (ACI).

The ink had hardly dried on the Continuing Resolution when Congress began work on the Fiscal Year 2008 budget. As late as September, and after major efforts by the scientific community to "make the case," it appeared as though the ACI doubling profile for physical science research funding would become a reality. But the Senate failed to act on domestic appropriations in a timely fashion, and the White House refused to agree to any spending that exceeded its \$955 billion request for discretionary programs. In late December, three months into the new fiscal year, Congress capitulated and enacted an omnibus spending bill that eliminated many planned increases for domestic programs, science among them.

Months earlier, capping a decade-long effort, APS and other science advocates had celebrated when the President signed into law the America COMPETES Act, which authorized the physical science research doubling called for in the America Competes Initiative. But neither the authorization bill, which had enjoyed extraordinary bipartisan support, nor the thousands of letters scientists sent to Congress in December managed to save the FY 2008 science budget from the clash between Capitol Hill and the White House. As 2007 came to a close, APS was marshalling its resources to make the case for emergency supplemental funding for the most affected areas, including high-energy physics, the DOE user facilities, and ITER, an international project that aims to demonstrate the feasibility of fusion power.

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n 2007, the largest education effort of APS continued to be improving the number and quality of physics and physical science teachers through the Physics Teacher Education Coalition project, which completed the sixth year of a major grant from the NSF. The project encompasses two main initiatives — PhysTEC (www.phystec.org), which provides significant funding to a limited number of institutions who are active partners in improving teacher education; and PTEC (www.ptec.org), which is a network of institutions that have committed to improving their physics and physical science teacher education programs. APS leads the project with substantial support from the American Association of Physics Teachers (AAPT) and the American Institute of Physics (AIP).

The biggest PhysTEC event of the year was the selection of four new funded sites — Cornell University, Florida International University, the University of Minnesota, and the University of North Carolina at Chapel Hill. Their applications demonstrated that they were prepared to develop programs to graduate significant numbers of highly qualified teachers. By the end of the year, each had hired a local master teacher to serve as "Teacher-in-Residence" and begun aggressively recruiting teachers and working to improve courses taken by prospective teachers. Each site has also begun a program called "Learning Assistants," that gives talented undergraduates first-hand teaching experiences in college classrooms. PhysTEC's eight previously funded sites continued to produce teachers at more than twice their pre-funding rate, and many are staying engaged with their graduates through mentoring programs.

PTEC also had a very active year. The annual conference in March brought 125 faculty from institutions around the country to Boulder, Colorado to learn from national leaders about strategies for recruiting prospective teachers and about other elements of successful teacher education programs. PTEC also held its first regional workshop in Chapel Hill, North Carolina in August to build on interest in science teacher education at the state level. Representatives from 14 out of 16 UNC institutions attended the one-day workshop. In October, PTEC coordinated a topical workshop in Boulder, Colorado, where 22 faculty from 14 institutions spent two days learning how to develop Learning Assistant programs on their home campuses. By the end of 2007 PTEC membership reached 88 institutions, demonstrating broad engagement with the challenge of preparing enough highly qualified physics teachers and physical science teachers.

In nearly every education initiative, the Society partners with AAPT and in many cases with the American Astronomical Society. In 2007, efforts were begun on a joint AAPT/APS initiative to work toward doubling the number of students receiving an undergraduate degree in physics. Specific goals underlying this initiative were to increase the number of high school physics teachers and the fraction of women and under-represented minorities who major in physics. The PhysTEC project (described above) is the main AAPT/APS program increasing the number of high school physics teachers. Other efforts include working to bring more students to APS meetings; building a careers website for physics undergraduates; and a variety of projects aimed at improving the undergraduate curriculum to incorporate advances in physics education research. Another joint effort is the New Faculty Workshop — an annual event that brings together faculty members early in their teaching careers to learn about their role as educators and help them manage their numerous responsibilities.

As it does each year, the APS sponsored Teachers' Days at the March and April APS Meetings. Seventy-six teachers attended the March Teachers' Day in Denver, which featured a talk on the Physics Education Technology simulations by Nobel Laureate Carl Wieman; an additional 55 teachers attended the April Teachers' Day in Jacksonville, Florida. The department also provides technical assistance to APS Units to encourage them to produce their own teachers' days. A starburst of wrinkles form in a thin film material when a drop of water is placed on the film as it floats in water (Jiangshui Huan, University of Massachusetts, Amherst).

The annual conference in March brought 125 faculty from institutions around the country to Boulder, Colorado to learn from national leaders about strategies for recruiting prospective teachers and about other elements of successful teacher <u>education programs.</u> When filled with molten sodium and stirred at up to 26 revolutions per second, this tank generates a magnetic field — similar to the way Earth's core creates a field (VKS Collaboration). Phys Rev Lett 98, 044502 (2007).



n 2007 several APS programs underscored its ongoing commitment to physics colleagues throughout the developing world. For example, APS enabled collaborative research between its members and developing-country physicists through its International Travel Grant Award Program, which continues to grow. Awardees received up to \$2,000 for travel for visits of a month or more to an APS member in the US.

Physicists in developing countries could also enjoy free APS journal access through three different channels: 1) online access for non-profit institutions located in eligible countries; 2) email access to APS journal articles through the Electronic Journals Delivery Service administered by the Abdus Salam International Centre for Theoretical Physics (ICTP); and 3) CD-ROMs of APS journals distributed to academic and research institutions in developing countries. APS is also one of the partners in the Iraqi Virtual Science Library portal, which provides Iraqi universities and research institutes with access to millions of articles from over 17,000 scientific and engineering journals in an effort to rebuild the educational and scientific infrastructure in Iraq.

This past year, APS created a new international partnership with the Indo-US Science and Technology Forum with the goal of sponsoring annual exchanges of physicists between the United States and India. The Forum will fund the awards, while APS will administer the program. The exchange program will have two separate components, one for professors and another for graduate students. The Society hopes that the new partnership with the Forum will provide an ongoing, sustainable exchange program for years to come.

APS continues to underscore its commitment to serve international physicists through the Beller Lectureship Awards, which sponsor physicists from abroad to give lectures at APS meetings. Recently expanded to provide even more opportunities, the Beller Lectureship awardees were from Israel, Germany and Austria in 2007. In addition, the Marshak Lectureship award provided travel support for physicists from developing nations or the Eastern Bloc who were invited to speak at APS meetings.

In partnership with the Canadian Association of Physicists and the Sociedad Mexicana de Fisica, the APS co-sponsored the 2007 Canada-America-Mexico Physics Graduate Student Conference (CAM2007), which was held in Montréal. APS student leaders worked with their international counterparts to organize the conference. By promoting international scientific exchanges and networking among young physics researchers, the series of CAM conferences is expected to have a long-term impact on the graduate student attendees.

Throughout 2007, APS continued its vigilance regarding important US government policies that impact international scientific collaboration, in particular those regarding visas and export controls. Lastly, the Society continued to advocate for the rights of scientists around the world and responded to calls to assist those scientists in need, including special attention this year to allegations against scientists in Bangladesh and Russia.

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# INFORMING THE PUBLIC ABOUT PHYSICS

Magneto-optical image of magnetic fields within a YBCO superconductor showing electrically connected grains (yellow) and grain boundaries (green) that form barriers to superconducting currents (D.C. van der Laan, NIST and Justin Schwartz, NHMFL-FSU).

new ad hoc Committee on Informing the Public held its first meetings in 2007, reviewing activities and budgets, and suggesting ideas for new APS activities. APS hosted two successful public lectures in 2007. "Thursday Night Football with Tim Gay" and "Built for Speed: NASCAR Physics with Diandra Leslie-Pelecky" were presented at the March and April meetings, respectively. APS continued its popular PhysicsQuest program for middle school science classrooms. The 2007 version, "Marie Curie's Floating Classes," challenged students to perform experiments that investigate heat, temperature, and energy in order to locate Marie Sklodowska Curie's next class on a map of Warsaw, Poland. APS distributed this year's PhysicsQuest to over 11,000 classrooms across the US. In fall 2007, APS partnered with the American Chemical Society and the American Geological Institute to present a Physical Science and Earth Science Strand Day at the National Science Teachers Association regional meetings in Detroit, MI and Denver, CO. Over 200 middle and elementary school teachers took part in the all day, hands-on workshops designed to improve their content knowledge in physical and earth sciences. More information about APS public outreach programs can be found at www.physicscentral.com/projects.

Media relations efforts at the APS focus on enhancing coverage of physics research in the popular media, and helping science journalists stay informed on the latest physics news. In 2007 an increasing effort was made to reach out to informal media outlets such as blogs, online-only news services and webpages. APS distributes biweekly Tip Sheets and other press releases to highlight items of broad interest in APS Journals and meetings. In 2007, featured items from these Tip Sheets and press releases were regularly covered in all of the major US newspapers and abroad, and increasingly led to web-based news stories. As in past years, a large portion of physics research coverage in 2007 was directly attributable to the coordinated activities of APS Media Relations, APS's *Physical Review Focus*, and AIP *Physics News Update*. Beginning in mid-2007, APS established a Science Writing Internship, with the intern involved in writing short news items for bi-weekly press releases, compiling full length press releases on breaking physics news topics, writing for the PhysicsCentral blog, and contributing to media activities related to APS annual meetings.

The APS Historic Sites Committee engaged in its third year of selecting historic US physics sites and arranged for ceremonies at these sites. In 2007, five plaques were presented: on April 20 at Yale University, honoring J. Willard Gibbs; on April 27 at the Albany Academy, honoring Joseph Henry; on October 5 at MIT, honoring the MIT Rad Lab; on October 11 at the University of Illinois, honoring BCS theory; and on December 10 at the University of California, Berkeley, honoring Lawrence and Livingston.

APS distributed this year's PhysicsQuest to over 11,000 classrooms across the US. Scanning electron micrograph of a strongly crumpled graphene sheet on a silicon wafer (Foundation of Fundamental Research on Matter, the Netherlands).



hrough private donations, the Society has been able to continue its very successful APS Scholarship Program for Minority Undergraduate Physics Majors. In 2007, 26 minority students received scholarships through this program. APS also produced a new brochure, "Explore, Understand, Succeed: Physics," to encourage minority students in grades 7-12 to study physics and consider physics careers. This full-color brochure highlights a number of minority physicists at various levels in their careers, working in diverse environments and fields of physics. It also provides information on educational paths, careers, and salaries. The brochure and the newly redesigned poster "Conquer your universe, master physics," will be sent to teachers, parents, and community leaders, and a related website will be developed.

In May 2007, APS held a workshop entitled "Gender Equity: Strengthening the Physics Enterprise in Universities and National Laboratories," that brought together chairs of 50 large, research-oriented academic physics departments as well as managers of 15 major national research laboratories. The workshop sought to provide participants with tools to help double the number of women in physics in the next 15 years, and was funded by the Department of Energy and the NSF. The workshop report can be found at http://www.aps.org/programs/women/workshops/gender-equity/report.cfm. In addition, APS offered two NSF-funded workshops for 54 women in industry and national research facilities at the March and April APS Meetings. Participants worked in small groups with four professional facilitators to improve their communication and negotiation skills.

The third Blewett scholarship was awarded this year. The Society received the last installment of the endowment of \$1.5M for these scholarships to women who are returning to physics careers after interruptions for family reasons. It should now be possible to give two scholarships in future years.



n 2007, APS updated the popular Professional Development Resource Guide for 2007, and continued to work on improving the careers website (www.aps.org/careers). One important addition is a presentation entitled "Help with Physics Jobs" to help students looking for jobs in physics and to help faculty members, who may wish to modify it for their students' needs. In addition, the Society developed a small Career Travel Grant Program to support departments that wish to invite alumni or other physicists to give career talks. The APS Online Career Center (careers.aps.org) saw an 11% increase over 2006 in Jobseeker registrations, and a total of 220 jobs were posted, also marking an increase over the previous year.

Face-on view of a simulation of Weibel turbulence from intense laser-plasma interactions (T. Haugbolle and C. Hededal, Niels Bohr Institute).

Separation of dark matter (blue) from hot gas (red) in the galaxy cluster Abell 520 (NASA, Chandra X-ray Observatory Center, Canada-France-Hawaii Telescope, University of Victoria; A. Mahdavi, et al.; see chandra.harvard.edu/photo/2007/a520).



he official APS member count this year, 46,269, was roughly the same as the previous year. Retention efforts by APS staff continue to be a main focus. This will ensure that growth from ongoing recruitment efforts will be achieved in future years. Most APS units also increased their memberships, with the Forum on Graduate Student Affairs reaching the number required to have a representative on the APS Council. This will be the first student representative on Council.

In an effort to continue to improve customer service for members, students joining APS through the Free Trial Student Membership offer can now join online. With only a quick staff review required now to complete an application, membership approval and notification times have improved greatly. In addition, paying student members can now keep up to two unit memberships at no cost for as long as they are a student. Current student members are being notified prior to their renewal so they may select the unit memberships they would like to keep, making their membership renewal more affordable.

A new member benefit option was also made available in 2007. Added to the list of subscriptions available to members at a reduced cost is a Joint APS/AIP Article Pack. The Joint Article Pack is a more flexible option compared to the APS Article Pack added a year ago. As requested by APS industrial members, the new offering allows members to access articles across APS and AIP journals under one subscription and allows either a 15 or 30 article option.

In 2007, APS carried out a survey of members' international activities and awareness of APS international programs. The online survey was sent to a random sampling of approximately 6,000 US members. Topics included such things as where members earned their academic degrees, their international work experience and the extent of their international collaborations, as well as their opinions about APS international programs. These results will be used for planning future activities.



A drop of water balances perfectly on a plastic surface invented by researchers at Ohio State University (Jo McCulty, Ohio State University).

# PRIZES, AWARDS, FELLOWSHIPS

n 2007, APS bestowed 46 prizes and awards on a total of 66 individuals, covering a broad range of physics research as well as contributions by physicists to the physics community and to society at large. Nineteen prizes were presented at the March Meeting, seventeen at the April Meeting, and ten at various divisional meetings throughout the year. The award for Excellence in Physics Education was presented for the first time. This award is specifically for groups, rather than individuals, and the first award recognized the development of PSSC physics. In addition, in 2007 Council approved a new biannual prize for the Industrial Applications of Physics, which is intended to recognize physicists working in small companies as well as large. The first selection will take place in 2008, and the first prize will be presented at the March Meeting in 2009.

The Society also elected 231 Fellows in the fall of 2007. Election to Fellowship represents recognition by one's professional peers, and is highly competitive because it is restricted to at most 1/2 of 1% of the Society membership in any given year.



DECEMBER 31, 2007

he tables and charts in this section summarize the financial operations of the Society as of December 31, 2007. The table headed Statement of Financial Position shows the final financial position of the Society for 2006 and 2007. The table headed Statement of Activities shows the financial activities of the various components of the Society for the 2006 and 2007 fiscal years. The distribution of operating revenues and expenses across the components of the Society is also displayed graphically in the accompanying figures.

During the fiscal year 2007, the total assets of the American Physical Society grew from \$125.0M to \$135.1M. The Society's liabilities were \$30.9M, almost unchanged from \$31.4M the previous year. Net assets at the end of fiscal year 2007 were \$104.2M, compared with \$93.5M at the end of 2006. These net assets include \$10.4M in restricted net assets and \$93.8M in unrestricted net assets. The restricted net assets are funds for prizes and awards and for the programs of the current capital campaign. The unrestricted net assets are primarily the Society's reserves, which may be used for any of the operations of the Society. The Society's reserves are invested in equities and fixed income issues. During 2007 these investments had a net income of \$7.1M. The budget of the Society is constructed to allow, on average over time, a portion of the income from investments to augment contributions from members in support of the Society's programs, while the remaining portion of this income is reinvested to allow the reserves to grow with inflation.

During 2007, the APS adopted FASB Statement 158, Employers' Accounting for Defined Benefit Pension and Other Post-retirement Plans. Statement 158 requires APS to show the unfunded status of its post-retirement health plan as an accrued liability, and to show as part of net assets the net deferred and unrecognized gains and losses related to the plan. Previously, the net deferred and unrecognized gains and losses were netted in the accrued liability recorded for the post-retirement health plan. The impact on the balance sheet was a decrease of \$326,762 in the accrued liability for post-retirement benefits and an addition of \$326,762 to the unrestricted net assets.

Business Continuity Plans (BCPs) are in place for the College Park, Washington, and Ridge offices. The BCPs provide action plans in the event of a disruption of normal operations by natural or manmade events. The BCPs include contact names, checklists of orderly procedures, and plans for off-site operations if necessary. The BCPs are updated annually and a report on their status is made to the audit committee.



# STATEMENT OF FINANCIAL POSITION

AS OF DECEMBER 31, 2007 AND 2006

| ASSETS   |    |             |         |             |
|--|----|-------------|---------|-------------|
| Cash and cash equivalents                              | \$ | 17,373,017  | \$      | 21,234,312  |
| Investments, at fair value                             |    | 105,534,845 |         | 90,977,690  |
| Accounts receivable:                                   |    |             |         |             |
| American Institute of Physics                          |    | 4,713,752   |         | 6,006,839   |
| Other, net of allowance for doubtful accounts of       |    |             |         |             |
| \$179,000 and \$242,000 in 2007 and 2006, respectively | 1  | 1,104,656   |         | 753,613     |
| Bequest receivable                                     |    |             |         | 186,336     |
| Pledges receivable, net                                |    | 278,844     |         | 338,928     |
| Prepaid expenses and other assets                      |    | 769,467     |         | 632,631     |
| Equity interest in American Center for Physics         |    | 854,064     |         | 407,104     |
| Land, building and equipment, net                      |    | 3,934,425   |         | 3,929,496   |
| Beneficial interest in perpetual trust                 |    | 495,594     |         | 486,447     |
| Total assets   | \$ | 135,058,664 | \$<br>) | 124,953,396 |
|  |    |             |         |             |
| LIADULITICS AND NET ACCETS                             |    |             |         |             |

2007

2006

#### LIABILITIES AND NET ASSETS

| Liabilities:                                   |                   |                   |
|--|-------------------|-------------------|
| Accounts payable                               | \$<br>2,534,869   | \$<br>2,309,218   |
| Deferred revenues:                             |                   |                   |
| Publications                                   | 16,161,312        | 17,231,482        |
| Membership dues                                | 2,577,963         | 2,528,737         |
| Other  | 42,679            | 241,703           |
| Liability for post-retirement medical benefits | 9,576,501         | 9,127,704         |
| Total liabilities                              | 30,893,324        | 31,438,844        |
|  |                   |                   |
| Commitments and contingencies                  |                   |                   |
| Net assets:                                    |                   |                   |
| Unrestricted                                   | 93,787,828        | 83,982,870        |
| Temporarily restricted                         | 8,234,350         | 7,429,978         |
| Permanently restricted                         | 2,143,162         | 2,101,704         |
| Total net assets                               | 104,165,340       | 93,514,552        |
| Total liabilities and net assets               | \$<br>135,058,664 | \$<br>124,953,396 |

|   |      | 2007        | 2006                                    |
|---|------|-------------|---|
| Changes in Unrestricted Net Assets  |      |             |   |
|   |      |             |   |
| Revenues  |      |             |   |
| Research publications   | \$   | 34,142,275  | \$<br>33,588,651                        |
| Scientific meetings   |      | 3,974,203   | 3,496,905                               |
| Membership operations   |      | 3,335,004   | 3,311,932                               |
| Public affairs and programs   |      | 1,600,948   | 1,535,027                               |
| Net assets released from restrictions   |      | 568,884     | 728,707                                 |
|   |      | 43,621,314  | 42,661,222                              |
| Expenses  |      |             |   |
| Research publications   |      | 27,017,933  | 27,106,551                              |
| Scientific meetings   |      | 3,878,662   | 3,308,046                               |
| Membership operations   |      | 3,533,830   | 3,475,145                               |
| Public affairs and programs   |      | 4,646,516   | 4,164,530                               |
| Prizes and related costs  |      | 568,884     | 728,707                                 |
| Total program services  |      | 39,645,825  | 38,782,979                              |
| Supporting convices   |      |             |   |
| Fundraising   |      | 447 981     | 381 046                                 |
| General and administrative  |      | 1 571 0/7   | 1 301 681                               |
| Total supporting sorvices   |      | 2 010 028   | 1,501,001                               |
| Total expenses  |      | 11 664 853  | 1,002,727                               |
| iotal expenses  |      | 1,004,000   | 40,403,700                              |
| Income from operations  |      | 1,956,461   | 2,195,516                               |
| Non-operating activities  |      |             |   |
| Income from investments   |      | 5 292 250   | 4 178 278                               |
| Net unrealized and realized gains on investments  |      | 1 782 524   | 5 218 674                               |
| Fauity interest in American Center for Physics  |      | 446 960     | 340 237                                 |
| Equity interest in American center for mysics   |      | 7 521 734   | 9 737 189                               |
|   |      |             | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |
| Increase in unrestricted net assets before effect of adop   | tion |             |   |
| of FASB Statement No. 158   |      | 9,478,195   | 11,932,705                              |
|   |      |             |   |
| Effect of adoption of FASB statement No. 158  |      | 326,762     |   |
| Increase in unrestricted net assets   |      | 9,804,957   | 11,932,705                              |
|   |      |             |   |
| Changes in temporarily restricted net assets  |      |             |   |
| Contributions   |      | 768,299     | 278,355                                 |
| Income from investments   |      | 604,958     | 549,777                                 |
| Net assets released from restrictions   |      | (568,884)   | (728,707)                               |
| Increase in temporarily restricted net assets   |      | 804,373     | 99,425                                  |
| Channes in normalized and the second s |      |             |   |
| Contributions   |      | A1 AF0      | EE E 40                                 |
|   |      | 41,458      | 55,548                                  |
| increase in permanently restricted net assets   |      | 41,458      | 55,548                                  |
| Increase in net assets  |      | 10.650.788  | 12.087.678                              |
| Net assets at beginning of year   |      | 93.514.552  | 81.426.874                              |
| Net assets at end of year   | Ś    | 104.165.340 | \$<br>93.514.552                        |
|   | ,    | ,,          |   |

# STATEMENT OF Activities

FOR THE YEARS ENDED
DECEMBER 31, 2007 AND 2006

# **2007 CONTRIBUTIONS & GIFTS**

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Brookhaven Science Associates Department of Energy National Science Foundation Open Society Institute *Physics of Fluids,* AIP Stanford University Southeastern Universities Research Association Universities Research Association University of Iowa PS is grateful for contributions from corporations, governmental agencies, national and international labs, foundations and individuals. These gifts are vital to the continuation and expansion of APS education and outreach, international and public affairs programs. There are numerous areas to which donors contributed in 2007, including the 21<sup>st</sup> Century Campaign, new and existing prizes and awards, the annual giving fund, the Bequest Society, special Divisional funds, and journal support.

This year, the 21<sup>st</sup> Century Campaign began to focus more on individual gift fundraising through an outstanding committee led by William Brinkman. At year's end, \$2.8 million had been raised towards the Campaign's goal of \$3.5 million. The Campaign's funds are supporting key APS programs that improve science education, inspire teachers and students, and attract greater numbers of women and under-represented minorities to the sciences.

There were many prize and award achievements in 2007. Arrangements were made to endow the Polymer Physics Prize at the \$200,000 level as of 2010 thanks to Dow Chemical Company and individual Division of Polymer Physics member gifts. The Panofsky Prize was endowed at the \$200,000 level thanks to contributions from SLAC and the Division of Particle and Fields. The J. J. Sakurai Prize stipend was raised to the \$10,000 level beginning with the 2008 prize. A new biennial APS Prize for Industrial Applications of Physics was established and will be awarded in 2009 thanks to the support of General Motors Corporation. The first Dawson Award (formerly the Excellence in Plasma Physics Award) was presented during the fall of 2007 after the successful completion of a joint fundraising effort with UCLA. Elsevier renewed its support of the Metropolis Award for the years 2008-2012. Finally, the Plyler Prize received renewed support from Newport Corporation for the years 2008-2010.

Planned giving continues to gain momentum, and in 2007, as in recent years, an estate planning session was conducted at the March Meeting in Denver. Planned giving brochures were distributed during the session and made available to members responding to a follow-up article in *APS News*. In 2007, APS received the last installment of the M. Hildred Blewett bequest that totaled over \$1.5 million.

In 2007, APS members gave over \$300,000 in conjunction with their membership renewals or at year end. A new brochure highlighting programs benefiting from member giving was developed and mailed to all donors. The Development Office now benefits from the advice of a new Development Advisory Committee, which held its first meeting in 2007.

We are grateful to all donors to the Society and are pleased to provide special recognition to those contributing \$100 or more annually by listing their names in this Annual Report.

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