

AIP in 1984: A year for review and endorsement

This annual report reviews a period that saw continued growth for the Institute as well as an endorsement of its role and its governance by its Member Societies.

In 1931, five leading US physics societies incorporated the American Institute of Physics. As a society of societies, AIP complements and supports the activities of its Member Societies; as these Societies have grown, AIP has also grown. What started out in the early 1930s as a small contract operation involved only in publishing has grown in staff and budget: A staff of 24 in 1945 grew to 63 in 1955, 165 in 1965, 360 in 1975, and 450 at the end of 1984; and while AIP's budget in the first year of operation must have been only a few hundred dollars, the expense budget in 1984 totaled approximately \$34 million. The nine present Member Societies will remember 1984 as the year in which there was a major review of AIP operations and an endorsement by them of the role AIP plays on their behalf.

In 1984, a task force studied AIP and its Society relationships and reported to the Governing Board in October. Recognizing the tremendous growth in both the Societies and the Institute, the task force found that AIP has in fact taken on those roles that are best performed by a central agency, that is, the roles that focus on business and administrative matters. The Societies are thus free to focus on scientific and technical matters; AIP is involved in such activities when they can best be accomplished collectively or centrally.

AIP carries out a large publishing program, both for the Member Societies and for its own journals and books. The net income from AIP's own publications provides the funds to car-

ry out educational programs in history, public information, manpower, with the Society of Physics Students, and for publishing *PHYSICS TODAY*. AIP provides services—which include fiscal and educational services in addition to the publishing services—for its Member Societies at cost.

To reflect the role AIP now plays and to strengthen the contributions it can make to its Societies in the future, the task force recommended, and the Board approved, rewriting the governance instruments of the Institute—the constitution, the by-laws, and the memorandum of agreement among AIP and its Member Societies. This Annual Report makes clear that the Member Societies actively use and share AIP's programs and services and thereby endorse AIP and the role it plays.

Publication production services

In 1984, the two publishing branches of the Institute produced about 110 000 pages—in journals, bulletins, directories, books and other special publishing projects.

Production I Division carries out editorial and production work on six AIP-owned primary journals, seven primary journals owned by five AIP Member Societies, 19 Soviet translation journals, the *Journal of Physical and Chemical Reference Data*, published by the American Chemical Society and AIP for the National Bureau of Standards, and *Chinese Physics*, a selective translation journal drawn from 13 Chinese publications. These journals together totaled about 73 000 pages in 1984.

The division also handled more than 40 special publishing projects in 1984. These included monographs, proceedings, physics glossaries, membership directories, indexes, SPS publications, AVS short courses, *Astrophysics Today*

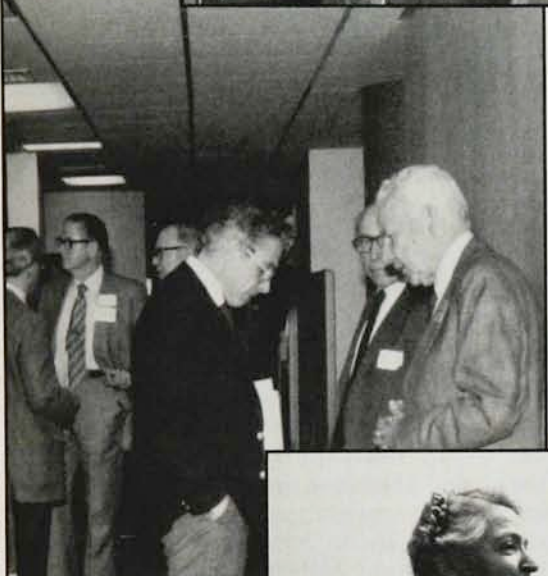
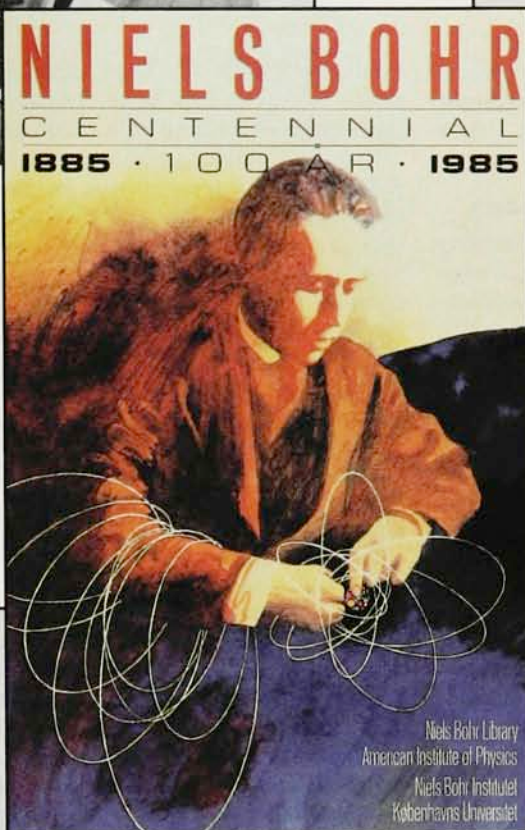
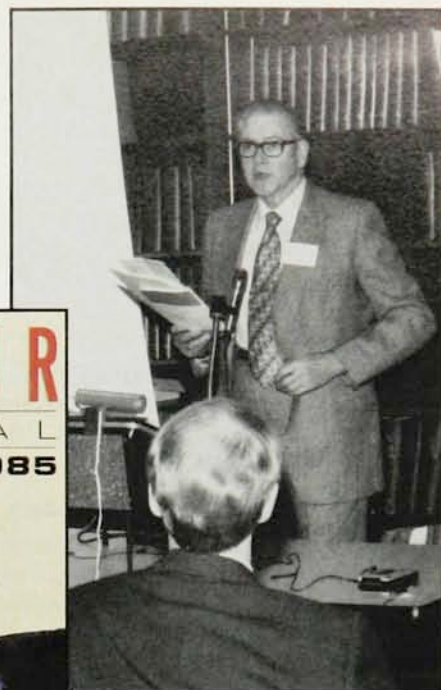
(a book of reprints from *PHYSICS TODAY*), the 1984–85 *PHYSICS TODAY Buyers' Guide*, the *Directory of Physics and Astronomy Staff Members*, and the *1984–85 Directory of Graduate Programs in Physics, Astronomy & Related Fields*.

Composition I Division acquired a third Atex CPU. This will allow the division to add six more terminals to the Atex system, increasing the total to 31, and allow the system to act as host for a remote Atex system located in the New York editorial office of *PHYSICS TODAY*. Composition output of the system reached an annual rate of about 65 000 pages by the end of 1984. Another acquisition, a Kurzweil Data Entry Machine, went into full-time service in October 1984. Experience has shown that it can produce the equivalent of two Atex input stations from selected manuscripts that are particularly suitable for optical scanning. There is sufficient work of this kind to keep the machine in full-time service.

Production II Division is responsible for editorial mechanics and production on publications of The American Physical Society: all the sections of *Physical Review (A, B, C, D)*, *Reviews of Modern Physics*, *Bulletin of The American Physical Society*, *BAPS Annual Index*, and *Physical Review Abstracts*. The division is also responsible for special projects for The American Physical Society, including various newsletters and gazettes.

Composition II Division performs the composition for these publications and special projects of The American Physical Society, using a Digital VAX 11/780 computer running under the UNIX operating system. The development of UNIX software is coordinated by the APS liaison office based in Woodbury, N.Y. The annual output of Composition II Division is approximately

Submitted by the Director and accepted by the Governing Board of the American Institute of Physics as its annual report to the Member Societies of AIP, 15 March 1985.



37 000 composed pages. In 1985, Composition II will begin to experiment with an Imagen Imprint-10 laser printer for proofing output.

Journals, books, news and reports

Among the more important decisions made by the AIP Executive Committee in 1984 were the elimination of publication charges for *Review of Scientific Instruments* and the reduction—for the second consecutive year—of publication charges for the other five AIP archival journals—*Applied Physics Letters*, *Journal of Applied Physics*, *the Journal of Chemical Physics*, *Journal of Mathematical Physics* and *The Physics of Fluids*. The new publication charge schedule is to be effective in 1985. The 1983 reduction caused a decrease of publishing income of approximately \$440 000; the 1984 reduction of \$15–\$20 per page is expected to result in a further reduction of about \$510 000. This reduction of publication charges will, we hope, make the AIP archival journals more attractive to authors of original research papers. To help offset this reduced income, the Executive Committee also approved an increase in nonmember subscription rates of approximately 15% for the six AIP journals for 1985.

Following a practice established in 1983, the page budgets for *the Journal of Chemical Physics*, *the Journal of Mathematical Physics* and *the Journal of Applied Physics* were increased in 1984 to reduce the publication delay imposed on papers whose authors' institutions do not honor the publication charge. The delay for such "nonhonored" papers decreased to about three months from last year's four to seven

months. The 1985 page budgets for these journals will keep the delay in the range of two to three months.

The Institute also launched a book-publishing program, based in part on the successful AIP conference-proceedings series. Among the projects for the new program is a series of readings from *PHYSICS TODAY*. The first of these, *Astrophysics Today*, was published in late 1984; it will be followed in 1985 by readings on the history of physics and on optics. Other book-publishing plans include translation of Soviet books, reprints of out-of-print classics, collections of article reprints, and monographs.

PHYSICS TODAY, AIP's magazine for the physics and astronomy community, expanded its news coverage from Washington, D.C. and published the first annual *PHYSICS TODAY Buyers' Guide*, which appeared in the August 1984 issue. Some 82 000 copies of the magazine were printed monthly. During 1984 there were four special issues devoted to single topics: fluids out of equilibrium (January); advances in computers for physics (May); instrumentation (August); and materials research (October).

Distribution and marketing

The efforts in subscription fulfillment, publication sales, marketing services, advertising and exhibits are aimed at making Member Society and AIP journals, as well as technical information about physics and astronomy, readily available.

Subscription fulfillment activities for 1984 involved dues billings for eight Member Societies and journal subscriptions for 63 publications. As the table

below shows, this involved some 66 000 invoices to members—some 2000 more than in 1983—as well as 12 400 invoices to nonmembers. As in previous years, nonmember billings for 1985 were sent out in August. The total billing for 1985 at \$27.3 million is \$3.3 million larger than last year. In 1984, microfiche editions of the *Journal of the Acoustical Society of America* and *Medical Physics* joined the AIP, APS and OSA microfiche editions.

In 1984, AIP appointed Kinokuniya Co Ltd of Japan as its exclusive agent for all nonmember subscribers in Japan. Kinokuniya offers air-freight services to all nonmembers and, at sea-mail rates, to members who choose to pay their dues through Kinokuniya.

In 1984, the Publication Sales Section processed some 25 000 orders, covering approximately 40 000 issues of journals—in hard copy or on microfilm—and AIP conference proceedings.

Marketing services provided exhibits of journals and books for AIP and its Member Societies at meetings of the APS and AAPT in January, the March APS meeting, the Pittsburgh Analytical Conference, the American Vacuum Society meeting, and meetings of the American Astronomical Society, the Materials Research Society, the Special Libraries Association, the American Library Association and the AAAS. Selected publications were sent to meetings of the Medical Library Association, CLEO, and the London and Frankfurt Book Fairs.

Advertising and exhibits. By the end of 1984, some 1622 pages of advertising appeared in the six publications handled by the Advertising Division, up 12% from the 1984 figure of 1446. A new project for the division was the first annual *PHYSICS TODAY Buyers' Guide*. An integral part of the August 1984 issue of the magazine, the guide provided a directory of equipment for physics research, offering easy access to over 1000 physics-related products. The second annual *PHYSICS TODAY Buyers' Guide*, revised and expanded, will be part of the August 1985 issue of *PHYSICS TODAY*.

The division also organized, sold and managed the physics show at the APS-AAPT Annual Meeting, the March APS show, the ASA show, the AVS show, and for the first time, the MRS

Subscription fulfillment billing statistics for 1985

	Number of invoices	Number of subscriptions	Value of billing
Members billed			
Spring	35 000	24 000	\$ 2 300 000*
Fall	31 300	20 000	2 000 000*
On membership (included in dues)	—	136 000	—
Nonmembers billed			
Subscription agency	9 000	58 000	15 000 000
Direct to AIP	3 400	20 000	8 000 000
Total	78 700	258 000	\$ 27 300 000

*includes dues



show. The AVS show, managed on behalf of the American Vacuum Society, featured some 226 booths and was the largest in the Society's history. The MRS show made its first appearance at the Fall 1984 meeting of the Materials Research Society, one of the new Affiliated Society members of AIP.

A Copyright Committee was established as a Subcommittee of the Publishing Policy Committee. At its first meeting, the Committee recommended a legal review of the AIP transfer-of-copyright form in the light of possible new publishing arrangements, such as purely electronic dissemination of data, to ensure that AIP has the right to enter into these new agreements.

Fiscal matters

The general ledger, the backbone of AIP's financial data, has been available on-line from the Data General computer located at AIP's Woodbury facility for over a year. During 1984, specifications were agreed upon for the modification of accounts-payable software, which will be installed early in 1985. Having the general ledger and the accounts payable available on-line will allow the Accounting Division to enter and print out all necessary reports—including checks—at the AIP Headquarters in New York as well as in Woodbury. An on-line accounts-receivable system developed by AIP's staff should be ready for installation soon after the payables.

These programs for the Data General computer are major improvements

over the batch versions currently running on the Univac computer, which is to be phased out. At present, our staff, with some guidance from consultants, is attempting to computerize the detailed cost-accounting process, referred to as prorations, that is used to bill the Member Societies for AIP services. This process will rely heavily on the current general ledger software as well as an electronic spreadsheet.

Realty tax. The New York City Corporation Counsel approved a stipulation of settlement for a refund of taxes paid on the Institute's property for tax bills covering the period from July 1980 to December 1983, totaling \$407 932. The property on which the New York Headquarters stands has been restored to the exempt tax rolls for the tax year 1 July 1984 to 30 June 1985.

Information collection and analysis

The Institute provides an important resource for the physics and astronomy community by collecting and analyzing information about education, employment and history.

Trends in education and employment. The annual statistical survey of students carried out by the Manpower Statistics Division showed:

► Physics degrees awarded in 1982-83 comprised more than 900 PhDs, 1400 master's and nearly 4800 bachelor's degrees. While the number of PhDs has remained nearly constant for the past four years, the figures for bachelor's degrees showed a marked increase over the previous year, reaching their

highest level since 1972-73.

► Foreign citizens, who have been forming an increasing proportion of the graduate-student population in recent years, are beginning to emerge from the doctoral pipeline; they represented over one-quarter of new PhDs in 1982-83.

► The military continued to attract an increasing proportion of new physics bachelor's-degree recipients, which probably reflects the additional training available from the military as well as the job security it offers to college graduates.

The Manpower Statistics Division wrote a chapter on education and employment for the National Academy of Sciences' Physics Survey Committee, headed by William F. Brinkman of Sandia Labs. In addition to outlining the changing patterns in the supply and employment of physicists over the past two decades, the chapter presents projections of supply and demand in both academic and nonacademic sectors through the year 2001. The chapter concludes, "we project a precarious balance between supply and demand through the early 1990s. Beyond that, there are likely to be more opportunities than new physicists to fill them."

The division began to analyze extensive data—from the National Center of Educational Statistics—on secondary-school students, their high-school science preparation and their entry into college and the workplace. Accurate data on secondary-school teachers



Kurzweil page scanner. This page reader converts typed manuscripts directly into Atex files, eliminating one stage of keyboarding. Because it "learns" how the typed characters of each manuscript should be interpreted, the Kurzweil scanner can read an extremely wide variety of typefaces.

American Institute of Physics Incorporated Balance sheets

	Assets	
	31 December	
	Unaudited	
	1984	1983
Current assets		
Cash and short-term cash equivalents and short-term investments, at cost	\$ 13 061 520	\$ 11 948 802
Accounts receivable, net of allowance for doubtful accounts of \$ 70 000	2 059 110	1 225 923
Due from Member Societies	72 839	232 578
Other current assets	1 134 945	806 992
Total current assets	16 328 414	14 214 295
Property, plant and equipment, at cost, less accumulated depreciation of \$ 3 957 197 and \$ 3 248 928	7 464 104	7 029 978
Long-term investments, at cost	4 823 060	2 924 900
Other assets	71 171	59 843
Total assets	\$ 28 686 749	\$ 24 229 016
Liabilities and fund balances		
Current liabilities		
Trade accounts payable and accrued expenses	\$ 2 342 203	\$ 2 097 388
Due to Member Societies	1 535 643	204 407
Current maturities of long-term debt	34 981	35 031
Deferred subscription income	7 393 855	9 138 451
Other current liabilities	2 548 217	918 790
Total current liabilities	13 854 899	12 394 067
Long-term debt	2 014 774	2 052 806
Total liabilities	15 869 673	14 446 873
Fund balances		
Designated for special purposes	6 432 453	3 924 320
Net equity in property, plant and equipment	5 414 349	4 942 141
General fund	200 000	200 000
Restricted funds	770 274	715 682
Total fund balances	12 817 076	9 782 143
Total liabilities and fund balances	\$ 28 686 749	\$ 24 229 016

are not yet as readily available; to collect them, the division plans cooperative efforts with other scientific societies and national groups. The division also worked closely with APS and AAPT in designing questionnaires directed to chairmen of physics departments regarding undergraduate programs and departmental reviews.

History of physics. The Laser History project conducted many oral-history interviews with scientific and industrial pioneers. Some of these interviews involved security-classified material, for secret research has played an important role in laser development; we hope that most of this material will eventually be declassified. The AIP Center for History of Physics transcribed the other interviews.

The International Project in the History of Solid State Physics entered its final stages. Historians working for the AIP Center, in close collaboration with historians in Germany and elsewhere, completed drafts of several monographs—virtually the first extended historical treatments ever written on this highly important field. Some have already been published in historical journals, and others are being assembled in a book. With all of the project's oral-history interviews completed, cataloging and indexing the interviews, along with many other unpublished source materials created or located by the project, occupied the Center in 1984; a catalog is planned for 1986.

Other historical research supported by the AIP Center in 1984 included work on the biography of Henry Norris Russell (under a grant that ended in December), a draft of a book on the history of public images of nuclear energy, and a collection of historical articles for the PHYSICS TODAY reprint book series.

Researchers have strongly welcomed the AIP Niels Bohr Library's program of making unpublished correspondence and similar materials available by loaning microfilms. Historians around the world are now able to strengthen their research with the "raw data" they would otherwise have difficulty seeing. To broaden this program, the Center microfilmed most of the interviews conducted under its Sources for History of Modern Astrophysics project.

Public dissemination

Over the years, AIP has made an effort through its Public Information Division to reach outside of the physics community to gather and disseminate reliable information about physics and its progress.

Television and radio programs. AIP produces and funds "Science TV Report," a series of two-minute science



Meeting at AIP. Beverly Porter and Lewis Slack of the AIP staff confer during a break at the Assembly of Society Officers, held in Woodbury.

news reports sent to commercial television stations around the country to be incorporated into their local news programs; 75 stations in large cities air these reports. They were also placed on several cable-television systems, in science museums and other institutions. The National Science Foundation supported the project until 1982. Since then, AIP has funded the project, though at a reduced level. AIP funds enabled the production of a five-part series on communications.

In addition to these news programs, the Public Information Division produced and marketed videocassettes of AIP's 1983 Corporate Associates Meeting held at the Xerox Palo Alto Research Center, as well as cassettes from the 1984 meeting at McDonnell Douglas in St. Louis.

Science Report, AIP's radio program, is designed to educate the public to the scope of physics research and development; each record includes topics from the realm of physical sciences that are of interest to the lay public. The program is currently aired by some 500 radio stations across the country, both commercial and noncommercial. We are considering the possibility of increasing commercial stations' use of the program by shortening its segments.

Newsrooms and special releases. The Public Information Division operated newsrooms for press conferences and other contacts between physicists and journalists at two Member Society meetings in 1984. Sets of releases from AIP and several other science societies continue to be mailed to 540 weekly and small daily newspapers, and to college dailies.

The Public Information Division also organized two seminars for science writers in 1984: one on medical physics

in Washington, D.C., and one on lasers in New York. AIP published glossaries of technical terms to provide further support material for journalists in these areas.

To provide a capsule summary of the year's physics research developments for science journalists, students and teachers, AIP published *Physics News in 1984*, the 17th in the series. The material was also published as a supplement to the January 1985 issue of *PHYSICS TODAY*.

AIP-United States Steel Foundation science writing awards in physics and astronomy for 1984 went to journalist John Tierney of *Science 84* magazine, and to physicist George Greenstein of Amherst College.

New projects. The Public Information Division launched two projects in 1984. One was a poster campaign directed at high-school students to induce more students to study physics. Four posters have been designed, and one is ready to be distributed. The division is now seeking funding for printing and distributing the posters to high schools.

Educational publications. The format of the 1984-85 *Directory of Physics & Astronomy Staff Members* was revised to make it easier to find information about individuals and to reduce the production cost of the volume. Several Member Societies decided to distribute the book to their members or to offer it at a special member rate. The *Directory's* distribution thus expanded from 2300 to over 40 000 copies. The next edition is scheduled for publication in the Fall of 1986.

The 1984-85 *Graduate Programs in Physics, Astronomy and Related Fields* continued to offer excellent coverage of graduate programs, with 298 departments in the United States, Canada and Mexico listed. Over 3000 copies

were distributed to departments offering at least a bachelor's degree in physics or a related field, to Society of Physics Students chapters, to libraries and to individuals.

Educational uses of historical materials. To commemorate the 1985 Centennial of Niels Bohr, the AIP Center for History of Physics is working on a poster; it will feature a full-color portrait of Bohr. The Center also produced a catalog of over 200 photographs of Bohr from the archives of its Niels Bohr Library and from the Niels Bohr Institute in Copenhagen; this catalog is available on loan for those seeking photographs.

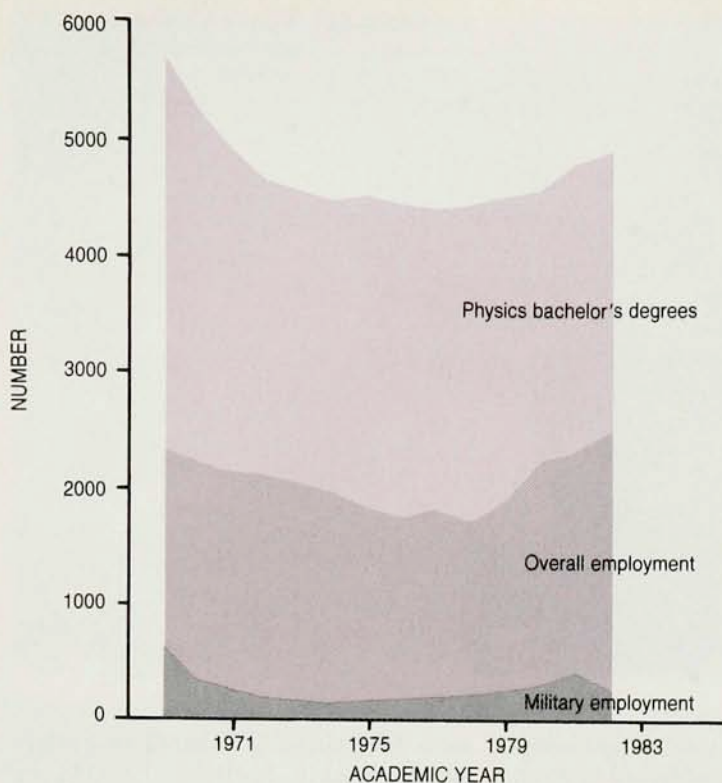
Moments of Discovery uses historical materials to foster appreciation of the human side of science; the package, containing two tape cassettes, illustrated scripts, teachers' guides, and slides, went into production and is being offered to high-school and college teachers.

Liaison activities

The Institute maintains close ties with its Member Societies, its Corporate Associates and individual physicists—including members of the Society of Physics Students. In addition, the Institute interacts with government and many outside organizations with common interests.

With Member Societies. The Assembly of Society Officers, held in March, had as its theme: "Challenges for Science and Science Societies." A two-day symposium included sessions on subjects such as trends in society memberships and programs, the outlook for science, the crisis in science and math education, and reports on office computerization.

AIP, in cooperation with two Member Societies, awards two prizes: the



Plans for postgraduate work. This graph, based on statistics obtained by the AIP Manpower Statistics Division, shows the number of students receiving bachelor's degrees and their postbaccalaureate plans as a function of time.

Dannie Heineman Prize for Mathematical Physics, in cooperation with The American Physical Society; and the Dannie Heineman Prize for Astrophysics, in cooperation with the American Astronomical Society. Robert B. Griffiths of Carnegie-Mellon University received the prize for mathematical physics; Martin Rees of the Institute of Astronomy, University of Cambridge, won the astrophysics prize.

With corporate members. 1984 membership in the Corporate Associates program of the American Institute of Physics remained constant, at 113. Companies that employ physicists, companies that sell their products to the physics community, and companies that require a science-oriented climate to thrive, all derive benefits from being AIP Corporate Associates.

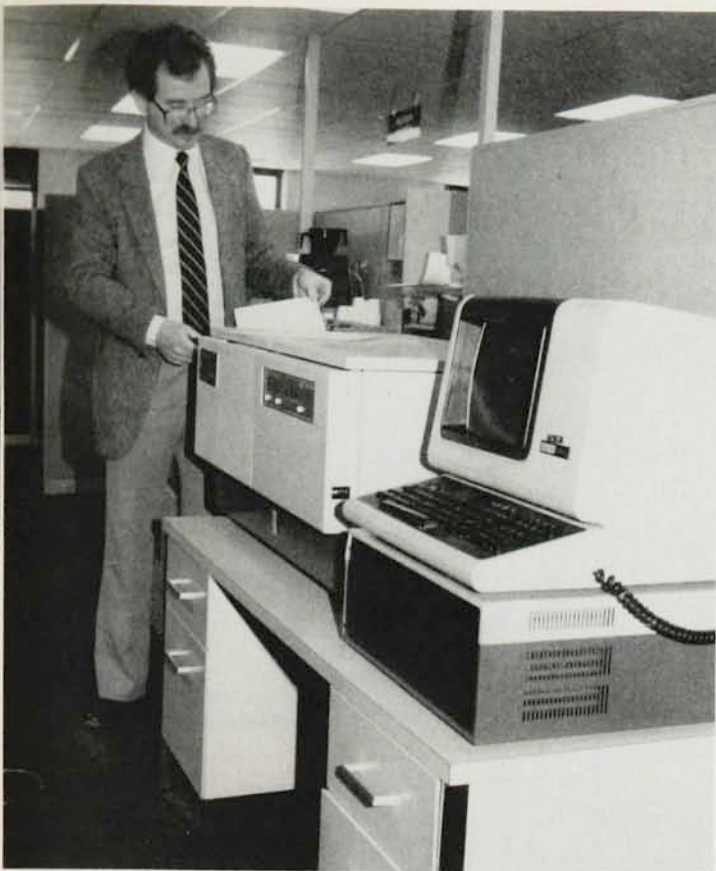
The 1984 meeting of the Corporate Associates drew over 200 participants to the McDonnell Douglas Corporation in St. Louis, Missouri. With a theme that focused on the physics of high-performance materials, the meeting presented attendees with a full and informative two-day program, including tours of the McDonnell Douglas Physics Research Labs, the Microelectronics Center and the McDonnell Douglas Aircraft Flight Simulation Facility.

With students. Membership in the Society of Physics Students remained high at over 6700 members. Over 500 students took advantage of the joint-membership arrangements SPS has made with APS, OSA, ASA, AAPT, AAS and AVS. There are now 520 collegiate SPS chapters in the US and Canada, with over 350 of those chapters also having a chapter of Sigma Pi Sigma, the physics honor society.

In 1984, SPS created two new programs, the SPS Scholarship and the Outstanding SPS Chapter Adviser Award. The \$1000 SPS Scholarship will support students in the final year of undergraduate study. The Outstanding SPS Chapter Adviser Award will include a \$500 grant to the recipient's institution to support a talk by a distinguished lecturer on the occasion of the formal presentation of the award. Both programs are supported by the Sigma Pi Sigma Trust Fund.

American Institute of Physics Incorporated Statements of revenue and expense

	Year ended 31 December	
	1984	1983
Revenue		
Publishing operations		
Subscriptions	\$ 10 124 845	\$ 9 454 114
Voluntary page/article charges	1 667 741	2 079 499
Advertising sales	2 022 809	1 550 362
Back number and microfilm sales	727 732	672 818
Member Society dues	71 800	76 750
Other	673 765	612 775
	<u>15 288 692</u>	<u>14 446 318</u>
General operations		
Grant and contract activities	751 292	408 054
Educational activities	495 927	449 176
Member Society and Corporate Associates dues	131 548	171 857
	<u>1 378 767</u>	<u>1 029 087</u>
Other operations		
Investment income (net of \$ 23 843 paid to Societies in 1984)	1 023 929	860 771
Special projects	52 115	121 414
Other	286 868	313 314
	<u>1 362 912</u>	<u>1 295 499</u>
Total revenue	<u>18 030 371</u>	<u>16 770 904</u>
Expense		
Publishing operations	11 854 481	11 130 556
General operations	2 124 457	1 859 039
General and administrative	730 485	606 228
Other	340 608	298 285
	<u>15 050 031</u>	<u>13 894 108</u>
Total expense	<u>15 050 031</u>	<u>13 894 108</u>
Excess of revenue over expense	<u>\$ 2 980 340</u>	<u>\$ 2 876 796</u>



Laser printer, capable of printing about two pages a minute, is now producing proofs of all articles for *Physical Review* and *Reviews of Modern Physics*.

The *Journal of Undergraduate Research in Physics*, sponsored by SPS, entered its third year of publication. The journal, which is published by Guilford College for SPS and AIP, encourages undergraduates to publish results of their research and provides a forum for undergraduates to air their concerns. Students from the US, Canada and Europe have submitted papers. The number of subscriptions has increased by over 30% from the previous year to over 600. The journal, whose start-up costs were supported through a grant from AIP, has been self-supporting for the past two years.

Seven SPS chapters received SPS-Bendix Awards to support research projects, and seven SPS chapters received Marsh W. White Awards to support programs to promote interest in physics among students and the general public. Starting in 1985, the SPS-Bendix Awards will become the SPS-Allied Awards, reflecting the acquisition of the Bendix Corporation by the Allied Corporation. SPS further expanded the *SPS Information Book* to include information on its new programs and published the twelfth edition of *Speakers, Tours and Films*, which now contains 1250 up-to-date listings of US and Canadian sources useful in planning programs for SPS chapters and others.

With government and outside organizations. AIP staff participated in activities of the Council of Engineering and Scientific Society Executives, the National Federation of Abstracting &

Information Services, the International Union of Pure and Applied Physics, the International Council of Scientific Unions Abstracting Board, the American National Standards Institute and other organizations. And, to provide lawmakers with up-to-date information about the physics community, AIP continues to send *PHYSICS TODAY* to all members of Congress.

With employers. The Manpower Placement Division held placement centers at the APS-AAAPT Annual Joint Meeting in San Antonio, Texas, at the APS March Meeting in Detroit, Michigan, and at the APS Spring Meeting in Washington, D.C. At these placement centers, the ratio of applicants to jobs improved slightly over last year—from approximately two applicants per job to approximately $1\frac{1}{2}$ applicants per job. A placement center was also held at the meeting of the Division of Plasma Physics of APS in October and at the Materials Research Society meeting in November. The division registered about 600 applicants in its Employment Referral Service, and searched for suitable candidates among registrants when employers asked for referrals. The division also published a monthly *Summary of Open Positions*, sent to about 2500 subscribers, and a monthly newsletter for heads and employment-information officers of physics departments.

The division continued to work with high schools to help eliminate the shortage of qualified science and mathematics teachers. To assist physically

handicapped scientists or engineers with their careers, the division continued to gather information, which it shares with the Project on the Handicapped in Science of the American Association for the Advancement of Science.

Information services

Timely information services are direct by-products of AIP's publishing programs. Computer-based typesetting allows us to use the original keyboarding of a complete journal article not only for digitized, typesettable versions of an article, but also for a number of other functions. For example, the article title and author entries are available for subject and author indexes—both annual and cumulative—for the journal; and the title, author, abstract and subject categories for an article are published in *Current Physics Index* and the SPIN tape of abstracts, which is available for on-line searching throughout the world. Selected items are also sent on computer tape semimonthly to produce *Energy Research Abstracts* for the US Department of Energy. The complete computer tape of abstracts is sent semimonthly to Fachinformationszentrum Energie, Physik, and Mathematik to produce *Physics Briefs*, a comprehensive, printed abstracts journal, and to the *Physics Briefs* data base.

Other efforts last year involved two new ways of disseminating journal abstracts, one involving advance abstracts and the other a complete

Assembly of Society Officers. A break during the meeting allows officers of the AIP Member Societies to chat and to confer about matters of mutual interest.



network accessible by telephone. The first of these, *General Physics Advance Abstracts*, contains the abstracts of papers accepted for publication in the journals of AIP and those Member Society journals published by AIP (except for *Physical Review*, *Physical Review Letters*, and *Reviews of Modern Physics*). It was ready to be published 10 January 1985 and will be published alternately with *Physical Review Abstracts*. Together with *Physical Review Abstracts*, it provides a comprehensive abstract collection that is easy to scan and thus may call researchers' attention to relevant work they might otherwise miss.

Chemical Abstracts Service and FIZ are engaged in a joint enterprise, Science and Technology Network International, a computer network linking CAS in Columbus, Ohio, with FIZ in Karlsruhe, Germany. Users throughout the world can connect their computer terminals to the STN International system through their local telephone networks. The SPIN tapes that are sent to FIZ become part of the *Physics Briefs* database available on STN International, so that physicists have easy and economical access to the physics information provided by AIP for *Physics Briefs*, in addition to the wide variety of other literature available from CAS and FIZ. The new FIZ-AIP data base and the new computer network were demonstrated at the National Online Meeting, the Special Libraries Association meeting, the Online Conference and the AVS meeting.

General administration

AIP's sixth annual Long Range Planning Report was presented to the Ex-

ecutive Committee at its September meeting and to the Governing Board for approval. Parts of the 1984 plan that received special consideration included:

- Status of Ongoing Improvement and Development Plans, which reviews previously formulated plans
- Electronic Communications Development Plan, which highlights accomplishments and recommendations in word processing, electronic mail, electronic transmission of abstracts and on-line database services
- AIP-Society Relations Development Plan, which proposes strengthening the important contributions AIP is making to the US physics and astronomy community, improving AIP and Society fund-raising procedures, and making changes in the governing instruments of the Institute.

Personnel. The major efforts of the Personnel Division in 1984 focused on upgrading AIP's salary-grade structure, reviewing and improving our current dental-care plan and starting a tax-advantaged 401(k) savings plan.

By the end of 1984, AIP had approximately 450 full and part-time employees, 325 located at Woodbury and 125 at the New York headquarters. With AIP's continued efforts to improve working conditions, the overall employee turnover rate has stabilized at approximately 25%.

Facilities. The expansion and upgrading of AIP's facilities in New York City and Woodbury continued through 1984. To make room for the expanded staffs of APS and AAPM, AIP leased and renovated office space at 216 East 45th Street in New York for the Advertising and PHYSICS TODAY Divisions; at Woodbury, we undertook major ren-

ovations and rearrangements to accommodate both the growing needs of Composition I Division and the scheduled move of the ASA office from New York to Woodbury. Improvements at Woodbury included a new two-color press, a new roof and additional parking places.

Constitutional changes. At its March 1984 meeting, the Governing Board changed Article X of the by-laws of the Institute; this article sets the amount of dues paid to the Institute. Beginning in 1985 the dues are to be two dollars per member.

The AIP-Society Relations Task Force reviewed, for the first time in 53 years, the relationship between AIP and its Member Societies. The task force found, among other things, that the constitution, by-laws, and memorandum of agreement are increasingly out of date. At its October 1984 meeting, the Governing Board assigned responsibility for preparing recommendations for revisions to the Committee on Constitution and By-Laws, headed by James C. Gerhart. Among other subjects, the Committee is considering the questions posed by joint sponsorship—by AIP and Member Societies—of journals, meetings and groups.

Finances

The significant increase in assets on the AIP balance sheet for 1984 results from increased subscription income.

Our total revenue for 1984 amounted to \$18 030 371 while our total expenses came to \$15 050 031, resulting in net revenues of \$2 980 340. The large increase in net revenues over earlier years came primarily from subscriptions. The net revenues are being used to replenish our liquid reserves. □