Report on AIP–1971

Highlights of the Institute's year included changes in publishing methods, new products from the physics-information division, and internal reorganization for better service.

"A year of sobering reflection for US physicists after a year of unemployment shock and crisis in 1970." This is how H. William Koch, Director of the American Institute of Physics, characterizes 1971 in his introduction to AIP's annual report where he summarizes what has been learned from this "sobering reflection" as background and context for the particulars that follow.

The body of the report details the work of the Institute in all its various programs during 1971: The publications division continued to find ways to lower costs and shorten publication times; the physics information program got underway with its first products; the education and manpower divisions energetically addressed the current difficulties in their fields, and the physics-history and public-information divisions continued their programs of documenting the history of the subject and bringing current developments to the public's attention. Less visible but very important was the work of the office services, subscription fulfillment and accounting divisions of AIP in keeping the Institute running as smoothly as it does.

In his introduction to the report, Koch suggests as some of the possible causes of the abrupt change in physics funding:

- Emphasis shifting away from science toward domestic problems and social issues
- Earlier over-stimulation, through Federal funding, of academic research and production of physicists
- Over-extension in size and number of graduate physics departments
- Under-appreciation of the significance of the end of the student boom and the end of teacher shortages.

Changes in the future

Looking to the future, he sees that prospects for physics employment will improve if the discipline can break away from the tradition of sending 60% of the new PhD's back into academic employment. To illustrate the point that career choices made by students and new advanced-degree holders can respond to supply-and-demand factors if the individuals concerned are kept well informed, he gives two examples: The percentage of new physics bachelors who continue on to graduate programs in physics peaked at 55% in 1967 and decreased to 31% in 1971; and the first-year graduate physics enrollments at doctorate-granting institutions have been decreasing at the rate of approximately four percent per year for the past six years.

The attitudes of students, new degree holders and their professors, Koch continues, have changed markedly in one year. Employment opportunities are still available in applied physics and interdisciplinary programs, and new physics-degree holders have been choosing challenging careers outside the more traditional areas of the discipline. To help them find and select among these "new" career choices, AIP and its societies are emphasizing the collection and rapid dissemination of appropriate data and are assisting physicists in their contacts with employers seeking prospective employees. The Institute is generally trying to expand professional activities in every way possible within its existing charter.

Recognizing that physics is dynamic and must continually change and be renewed, Koch points out that as well as a continuing attention to fundamentals there must be increased attention to applications and to the users. Some research areas may have to be de-emphasized so that national resources and physicist energies can be redirected into new and more fruitful directions. Koch notes that the needs for change are highlighted by today's national stirring of interest on technology assessments, consumerism, common causes and public-interest sciences; the future prospects for physics in this context, he believes, will be a welcome

change from the employment and program difficulties of 1970 and 1971.

Publishing activities

Economy and efficiency were the watchwords for AIP's publications division in 1971; both were helped by a complete shift away from letterpress toward offset printing and by the increased use of typewriter composition.

The Institute's new publishing operation at Brookhaven National Laboratory, established in 1971 to handle two journals (*Physical Review C* and *Physical Review D*) for The American Physical Society, was responsible for the major increase in typewriter composition. The Brookhaven facility, with a staff of 54, takes care of every operation, from copy editing through composition to paste-up, in the preparation of pages ready for photo-offset printing.

Back in New York at the main publications-division offices (now located at 800 Second Avenue, a couple of blocks from AIP headquarters at 335 East 45th Street), typewriter composition again took a greater part in the production of AIP and member-society journals. In-house composition by typewriter is now used for *Applied Physics Letters, Journal of Applied Physics, Bulletin of the American Physical Society, Bulletin of the American Astronomical Society,* and various newsletters, pamphlets, indexes and brochures. Typewriter composition by outside contract was expanded in 1971 to include the *Journal of Mathematical Physics.*

During 1970 many papers, accepted for publication by AIP-owned journals, were delayed because the optional publication charges were not honored by their authors. To avoid financial disaster, the AIP had to establish, for most of its own journals, the maximum number of unhonored pages that could be published in that year, and the remainder had to be held over to 1972. Almost 3000 pages originally scheduled for 1971 are in this position.

During the year, AIP published 68 673 pages in 16 primary journals and 5 society bulletins—about 4% less than in 1970. In addition 26 341 pages were translated and published from Russian journals. A new translation added to the list in 1971 was *Soviet Journal of Quantum Electronics.*

Plans made in 1971 to take effect in 1972 concerned another Russian journal, a new quarterly publication and a change in page size for three AIP-owned journals. The new translation will be *Soviet Journal of Particles and Fields,* starting with the Russian volume 3 (volumes 1 and 2 were not published originally as journals).

PHYSICS TODAY, reporting developments in physics for some 62 000 readers, carried 588 editorial pages in 1971, a reduction from 645 in 1970. The June issue of the magazine celebrated AIP's fortieth anniversary with a picture-history and special articles, and issues on "Lasers" and "Physics at Low Temperatures" were published in March and August respectively.

This magazine is one of nine publications carrying advertising sold by AIP's advertising division. In 1971, the total of 1474 advertising pages in all nine was 20% lower than in 1970. Advertising was discontinued in three journals (*Journal of Applied Physics, Journal of the Acoustical Society of America* and *Journal of the Optical Society of America*) which between them had accounted for 200 pages of ads in 1970. But the *Program of the Acoustical Society of America* included advertising during 1971, and carried 33 pages in its spring and fall programs.

Other projects of the advertising division in 1971 included the new reader-service card bound into PHYSICS TODAY and *Applied Optics,* and its customary work associated with scientific exhibits for member and affiliated societies—the Physics Show, the Acoustical Show, the International Vacuum Show and the book exhibit at the spring APS meeting.

Rounding out the publishing pro-

gram is AIP's new series of conference proceedings; volume 2, *Particles and Fields–1971*, appeared in December, and four others are planned for 1972.

Physics information

The aim and scope of AIP's physics-information activities, which offer the physicist timely and economical access to most of the world's physics literature, were described in detail in the article "Keeping up with what's going on in physics" in the November 1971 issue of PHYSICS TODAY (page 23). During 1971, with support from the National Science Foundation, the Current Physics Information program was inaugurated as the first products of the system—journals, microfilm and magnetic tape—appeared.

Searchable Physics Information Notices (SPIN) is the magnetic-tape memory store that is the cornerstone of the whole system. The tape was available in 1971. Products available on a regular subscription basis in 1972 fall into three groups—*Current Physics Advance Abstracts* (CPAA), *Current Physics Titles* (CPT) and *Current Physics Microform* (CPM). The advance abstracts, CPAA, are in the form of three separate monthly preview abstract journals, for solid state, nuclei and particles, and atoms and waves respectively; they each contain abstracts of articles accepted for publication in a selected set of physics journals, usually two months prior to publication of the complete articles. CPT is a group of three monthly journals (again divided into solid state, nuclei and particles, and atoms and waves) that will alert the reader to articles appearing in 70 of the world's leading physics journals. Each entry gives the usual bibliographic reference plus key words and phrases that serve as "miniabstracts." And CPM is a monthly microfilm of all AIP-published journals, designed to enable libraries and information centers to supply the full texts on demand. The CPM reel and frame number of the front page of each article on the microfilm are carried in the appropriate section of CPT and SPIN.

Negotiations continued with The Institution of Electrical Engineers (London) to establish an international physics information exchange that will provide cosponsorship of AIP's program and IEE's comprehensive physics information system. Mutual distribution by each organization of the other's products in selected parts of the world is to start in 1972.

Cooperation between the publications and physics-information divisions continued in 1971: subject and author indexes, for example, can be prepared for the journals by computer-assisted photocomposition from material contained in the information store. Such

American Institute of Physics Inc — **Balance S**

ASSETS

Operating Fund			
Cash in banks and on hand		$ 407 592.06	
Fixed time deposits	$ 799 700.40		
Add: Accrued interest receivable thereon	6 397.52	806 097.92	
Other time deposits		19 229.51	
Due from member societies:			
American Association of Physics Teachers	$ 16 933.12		
American Crystallographic Association	13 610.98	30 544.10	
Due from affiliated societies:			
American Association of Physicists in Medicine	$ 4 729.98		
Society for Applied Spectroscopy	10 486.84	15 216.82	
Sundry debtors		1 154 649.38	
Deposits		7 675.00	
Deferred charges:			
Engraving costs applicable to 1972	$ 5 703.54		
Printing costs applicable to 1972	70 770.22		
Translation costs applicable to 1972	17 538.00		
Computer installation expense	140 614.37		
Improvements to leasehold—304 East 45th Street	54 683.53		
Stationery, office and printing supplies—inventory	20 028.70		
Prepaid insurance	1 072.61		
Prepaid postage	5 491.95		
Other deferred charges	38 661.04	354 563.96	
			$ 2 795 56
Special Purpose Funds			
Karl Taylor Compton Fund:			
Cash	$ 89.00		
Investments—mutual funds	11 003.94		
	$ 11 092.94		
Less: Due to operating fund	404.65	$ 10 688.29	
John T. Tate Memorial Fund:			
Investments—mutual funds		18 824.63	
Albert A. Michelson Memorial Fund—Cash		1 321.47	
Meggers Coin Collection—appraised value	$ 41 893.75		
Less: Expense of coin collection (Due to operating fund)	3 961.39	37 932.36	
Meggers Memorial Fund—cash		3 105.41	
Friends of the Niels Bohr Library Fund—cash	$ 5 121.58		
Less: Due to operating fund	195.96	4 925.62	
Investment Advisory Account:			
Investments—at cost (Market value—$623 379.50)	$ 435 927.12		
Cash	7 754.89		
	$ 443 682.01		
Less: Fee due Bankers Trust Company	1 457.00	442 225.01	
Amounts due for funds expended for special projects for the account of others		46 680.09	
Due from operating fund		520 774.14	1 086 47
Property and Equipment Fund			
Land		$ 266 535.36	
Building	$ 1 331 503.70		
Less: Accumulated depreciation thereon	588 085.42	743 418.28	
Furniture and Fixtures	$ 349 167.31		
Less: Accumulated depreciation thereon	219 949.48	129 217.83	1 139 17
			$ 5 021 21

ecember 1971

LIABILITIES

erating Fund

le accounts payable		$ 466 587.47
missions payable		14 831.86
ued interest payable		1 646.82
ertising rebates payable		775.50
dry creditors		26 309.48
to member societies:		
e American Physical Society	$ 124 554.97	
tical Society of America	13 782.08	
oustical Society of America	1 219.89	
ciety of Rheology	17 175.56	
erican Astronomical Society	7 852.07	164 584.57
to affiliated societies:		
erican Vacuum Society		29 195.36
erred credits:		
bscriptions received applicable		
to issues of journals to be		
published subsequent to		
December 31, 1971	$ 1 342 497.39	
es—corporate—year 1972	58 038.00	
es—student sections—year 1972	11 492.59	
ndry receipts—re 1972 activities	115 870.10	
her deferred credits	3 149.59	1 531 047.67
to special purpose funds		516 212.14
mulated income		44 377.88
		$ 2 795 568.75

cial Purpose Funds

l Taylor Compton Fund	$ 10 688.29
n T. Tate Memorial Fund	18 824.63
ert A. Michelson Memorial Fund	1 321.47
ggers Fund	37 932.36
ggers Memorial Fund	3 105.41
nds of the Niels Bohr Library Fund	4 925.62
ount received for special projects for	
e account of others (net after	
penditures thereon)	286 822.91
serve for replacement of building	572 856.33
lications reserve	150 000.00
	1 086 477.02

perty and Equipment Fund

rtgage payable, 5 5/8% due	
November 1977, amortization quarterly	$ 175 661.15
perty and equipment capital	963 510.32
	1 139 171.47
	$ 5 021 217.24

dited by Conroy, Smith and Company, Certified Public Accountants

indexes were prepared in 1971 for the *Journal of Chemical Physics* and *Applied Physics Letters* (each for the second year) and for *Journal of Applied Physics* and *Journal of Mathematical Physics* (for the first time). Future plans include the use of the information store to compose the "head" and "tail" of each article (title, author, abstract, references) for the journals.

Manpower

The Institute's education and manpower division became two divisions during 1971; after 1 July the manpower activities (statistical studies of physics manpower production and utilization, and the placement service) began to operate independently of the education division's work. Raymond W. Sears, who joined AIP as Placement Counselor, was appointed director of the manpower division at the time of the reorganization. The new division operates with financial assistance from APS.

Placement registers were operated as usual at the joint APS–AAPT meeting in February and at the APS Spring meeting in Washington; a third register, at the December APS meeting in Cambridge, Mass., was new. In 1971, fewer academic institutions, laboratories, and industrial employers sought the services of physicists than in previous years, and more physicists seeking employment signed up with the register. Associated with these registers were workshops and individual counseling sessions designed to help those looking for positions.

The year-round placement service at AIP headquarters expanded its operation as well. The employers can now list their vacancies in "closed" fashion (without revealing their identity) as well as in the traditional "open" style. A new optical-access storage system has improved the speed with which the placement office can respond to employers' requests for candidates with particular specializations and skills.

The manpower division initiated a postdoctoral information pool for APS in the late summer of 1971. It is essentially a clearinghouse for postdoctoral and junior faculty positions and candidates; actual employment negotiations are conducted directly between the institution and candidate after the information pool has brought the parties together. At the end of the year 70 institutions and 500 candidates were listed.

Regular manpower statistics studies were conducted as in past years. The enrollment and degrees, physics bachelors, and graduate-student surveys all showed minor changes; the 5% and 7% drops in undergraduate and graduate enrollments directed special attention to the number of 1971–72 first-year graduates, which also contin-

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American Institute of Physics

The Corporate Associates of the American Institute of Physics are a group of corporations, institutions, and laboratories who believe it is valuable to them and to America to maintain a vigorous advance in the physical sciences. By their participation and membership dues they aid the Institute significantly in carrying out its purpose: the advancement and diffusion of knowledge of the science of physics and its applications to human welfare. The Institute is grateful for their assistance.

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Minnesota Mining & Manufacturing Co.
Mobil Oil Company, Inc.
Monsanto Company
North American Philips Corporation
North American Rockwell
Science Center
Northrop Corporation
Olin Corp.
Olivetti Underwood Corporation
Owens-Corning Fiberglas Corporation
Owens-Illinois, Inc.
The Perkin-Elmer Corp.
Phillips Petroleum Company
Pilkington Brothers Limited
Plenum Publishing Corporation
Polaroid Corporation
PPG Industries, Inc.
Princeton Applied Research Corporation
The Procter & Gamble Company
Sanders Associates, Inc.
Sandia Laboratories
Schering Corporation
Scientific American
Shell Development Company
The Singer Company
Sun Oil Company
Texaco, Inc.
Texas Instruments Incorporated
TRW Systems
Union Carbide Corporation
Union Oil Company of California
Uniroyal, Inc.
United Aircraft Corporation
United States Steel Corp.
The Upjohn Company
Varian Associates
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ued to decline—4.5% from 1970–71 and 23% from 1965–66. Although the number of bachelor's, master's and doctoral degrees in physics remained fairly stable, a smaller percentage of physics bachelors were found to be going into physics graduate study.

The third annual employment survey, carried out in December 1971, followed up the new graduates from the previous year. Its preliminary results for new PhD's showed little change from the 4% figure for actual unemployment among this group, but a strong increase in the number of postdocs was indicated.

With the termination in 1971 of the NSF-supported National Register of Scientific and Technical Personnel, the manpower division of AIP is currently looking for an alternative way of obtaining the data that AIP traditionally gathered for the physics part of the National Register.

Education

With the reorganization of AIP's education and manpower activities, the education division became a separate entity. It is now entirely housed on the campus of the State University of New York at Stony Brook; Arnold Strassenburg is its director.

New programs in 1971 included a consultant's program, a study of high-school physics teaching, and a major curriculum development project. These efforts are all supported by NSF grants.

The consultants program provides, for US colleges and universities, a service of advice and information by mail, telephone and personal visits on a variety of problems in undergraduate physics education. A number of visits were completed in 1971, and scores of enquiries from physicists were answered; conference reports and other documents of interest were sent to hundreds of teachers. An important part of the program is the information pool—a library of selected reports, reprints and catalogues containing information on resources. The pool was considerably enlarged in August when it received the remaining reports and records of the Commission on College Physics.

The high-school physics teaching study, being carried out by George Ivany, professor of science education at Teacher's College, Columbia University, has two purposes: to develop and test techniques for recording classroom-observation data objectively, and to record and publish typical goals and procedures of practicing high-school teachers. Ivany and several of his graduate students are making 45 one-week visits to selected high schools to gather information. Their final report is expected during the summer of 1972.

Centers in Cambridge, Binghamton, Oak Ridge and St Louis are working on the curriculum development project. Each of the centers began in 1971 to generate instructional materials designed to teach physics to future engineering technicians. Their work is coordinated and reviewed by a National Tech Physics Steering Committee. The NSF grant to AIP enables the ed-

Summary Statement of Operations—Year Ended 31 December 1971
Including Activities Carried on for Member Organizations

Income	*Total*	*American Institute of Physics, Inc*	*For Account of Member Societies*
Subscriptions	$ 3 648 838.61	$ 2 102 084.05	$ 1 546 754.56
Contributions for the Dissemination of Research Information	3 450 741.98	1 413 908.06	2 036 833.92
Reprint Sales	197 320.93	84 071.25	113 249.68
Back Number Sales	350 944.39	200 064.85	150 879.54
Advertising	579 610.52	409 318.45	170 292.07
Contributions from Member Societies	58 106.00	58 106.00	
Corporate Associates Dues	118 505.00	118 505.00	
Income from Investments	40 094.44	40 094.44	
Income from Special Projects, Administrative Fees, Royalties, etc	2 547 954.38	2 547 954.38	
Miscellaneous Income	74 046.68	74 046.68	
Other Receipts for Accounts of Member Societies	1 774 963.29		1 774 963.29
Total Income	$ 12 841 126.22	$ 7 048 153.16	$ 5 792 973.06
Expenses			
Printing, Engraving and Mailing Journals	$ 3 864 992.26	$ 1 593 783.18	$ 2 271 209.08
Printing and Mailing Reprints	92 907.73	40 419.07	52 488.66
Handling Costs—Reprint Sales	38 756.03	15 959.30	22 796.73
Expense re Dissemination of Research Information	310 202.82	140 087.92	170 114.90
Back Numbers, Reprinting, Handling and Distribution	129 475.79	57 655.45	71 820.34
Translation, Composition, Printing and Mailing Soviet Journals	764 562.57	683 951.75	80 610.82
Advertising—Printing, Distribution and Selling	228 752.15	159 847.60	68 904.55
Editorial and Editorial Mechanics	1 400 474.36	774 387.34	626 087.02
Circulation Promotion	1 302.56	1 302.56	
Corporate Associates Expense	19 747.96	19 747.96	
Subscription Handling	380 833.82	197 343.71	183 490.11
Administrative and Organizational Services	895 109.21	895 109.21	
Special Projects	2 282 967.92	2 282 967.92	
Other Disbursements for Accounts of Member Societies	455 667.92		455 667.92
Total Expense	$ 10 865 753.10	$ 6 862 562.97	$ 4 003 190.13
Net Charge to Societies to Balance Accounts	1 789 782.93		1 789 782.93
	$ 12 655 536.03	$ 6 862 562.97	$ 5 792 973.06
Net Income Before Transfer to Publications Reserve	$ 185 590.19	$ 185 590.19	
Transferred to Publications Reserve	150 000.00	150 000.00	
Net Income Transferred to Accumulated Income	$ 35 590.19	$ 35 590.19	

ucation division to provide staff support for this committee's activities.

The continuing projects of the division included the visiting-scientists program in physics (170 visits by outstanding research physicists to two-year and four-year colleges) and work on behalf of the Society of Physics Students. With 4500 active members at 436 chapters, SPS continued its vigorous program of activities during 1971; the national office helped arrange regional meetings and sessions at national meetings at which students and physicists spoke about their research activities. Bendix Corporation's awards this year amounted to $3500 for the support of research projects at 12 SPS chapters. Sigma Pi Sigma, the honor society within SPS, celebrated its 50th anniversary at the fall meeting of the Southeast section of APS.

Some programs were terminated when the education and manpower divisions separated; the AIP Educational Newsletter and the AIP Career booklets published their final issues.

Closer cooperation between AIP's education division and AAPT is expected to come from the appointment of two AIP representatives to AAPT's new policy-making body, the Council of Physics in Education, which will become involved with the implementation of new physics education projects.

Public information

Known as the "public-relations division" until the first quarter of 1971, the renamed and reorganized public-information division now has a broader scope to its activities to match its new name. These efforts now lie in two main areas: press relations, and the promotion of AIP products. Since the reorganization the division has been headed by Donald W. McCormick.

Press-relations activities, with the general aim of keeping the public aware of developments in physics, include press conferences, releases and special services at meetings. In 1971, AIP staff provided on-the-spot press services at meetings held in New York, Washington and Cleveland. Arrangements for local public-relations officers to provide press-room management in consultation with AIP were made for meetings in Tucson, Beloit, Pittsburgh, Ames, Ottawa, Denver and Boston. Throughout the year, frequent news releases were prepared in the form of popularizations of articles appearing in AIP and member-society journals. And the popular annual review, highlighting the most important developments in physics, is now in its fourth year.

The AIP-US Steel science-writing awards, also in their fourth year, were presented to Kenneth Weaver (of *National Geographic*) for the competition among journalists and to Robert March (University of Wisconsin) for the scientists' competition.

A new project for AIP in 1971 was its work, together with NSF and the Public Broadcasting System, toward the production of two half-hour films for television. Dealing with astronomy and biophysics, respectively, the films are supported by a grant from NSF. AIP's role in these productions is to supply guidance on coverage and technical accuracy.

The promotional efforts of the reorganized public-information division have been mainly directed toward the sale of the physics-information division's CPI products. To help develop a market for these products, the division has prepared pamphlets and direct-mail pieces, placed advertisements in PHYSICS TODAY, sent out news releases and conducted a market-research study in a major city. The sale of other AIP products, such as the new conference-proceedings series and various new journals, has also benefitted from promotional work by the public-information division.

History and philosophy

The Institute's Center for History and Philosophy of Physics lies at the focus of a worldwide network of collaborative efforts by historians and archivists. Its work encompasses the collection and preservation of materials, oral-history interviews, and historical and sociological studies of physics and astronomy.

The preservation of historically significant materials occupies a high priority on the Center's program. A new booklet, *Scientific Source Materials: A Note on their Preservation* (AIP Pub. no. R-240), provides general guidance for physicists and archivists in preserving letters, notebooks, manuscripts and apparatus, and encouragement and assistance was extended by the Center to particular individuals and institutions for this purpose.

The joint American Physical Society–American Philosophical Society project on sources for the history of quantum physics neared completion in 1971, and the Center's participation accordingly intensified; it included cataloguing papers of Ernest Rutherford, Paul Ehrenfest and Pieter Zeeman.

The current project to document recent astronomy and astrophysics continued in 1971 as Center staff guided the cataloguing of Percival Lowell's papers and the records of the Lowell Observatory. A checklist of source materials in recent astronomy and astrophysics was published by the Niels Bohr Library in 1971 as AIP Publication no. R-244.

Original source materials acquired by the Niels Bohr Library, now in its tenth year, included the papers of Henry A. Barton, first director of AIP, correspondence and notebooks of Fritz Reiche, records of the Society of Rheology and microfilms of correspondence of Niels Bohr and Samuel A. Goudsmit.

During 1971 the Center's director, Charles Weiner, spent a period in Europe as a Guggenheim Fellow; there he was able to add some 54 hours to the Center's collection of tape-recorded oral-history interviews. The collection now amounts to 490 hours of taped and transcribed interviews.

The staff research project on the historical and sociological aspects of growth in new research fields, supported by NSF, neared the final stage of its emphasis on nuclear physics.

Fiscal branch

Dealing as it does with subscriptions, accounts, dues billings and general office services, the fiscal branch of AIP is involved with the kind of routine activities that often escape notice. Yet no branch is more affected by the continuing growth in Institute and member-society size and operations.

During the 40-year history of AIP both membership and subscriptions have more than doubled every ten years, and accounting procedures have been periodically reorganized to suit the larger scale of the work involved. The most recent change, a switch to computerization of the dues and subscription-fulfillment operations, occurred in 1968. Unanticipated growth in AIP and society operations in the few years since then has, however, resulted in the need for yet another redesign; the data-processing division started work on this new design during 1971, and they expect that it will meet the anticipated needs of the next seven years.

The activities of the fiscal branch during 1971 have to be summarized numerically, although the numbers involved are frequently too large for the imagination to grasp.

AIP performs dues billing and collection activities for ten societies and 16 divisions of three of those societies. About 55 400 joint member bills and 20 000 nonmember renewal notices were processed during the year. Subscription-fulfillment services were provided for 64 publications in 1971 (56 in 1970); of the approximately 300 000 subscriptions handled, about 154 000 were billed and the remainder were "on membership" subscriptions. Dues and subscription income amounted to about $6 million.

The accounting division disbursed approximately $18 850 000 in more than 18 000 checks during 1971. This division maintains accounts for 10 societies, 56 publications, 37 organiza-

tional units, 14 grants and contracts and 18 special projects.

Administration

H. Richard Crane was elected chairman of AIP's governing board during the year; he succeeds Ralph A. Sawyer, who had served for 12 years. As chairman, Crane is an officer of the Institute. Also designated a corporate officer in 1971 was Robert H. Marks, associate director for publishing and information activities.

AIP staff numbered 355 at the end of 1971. The 22% increase from the previous year is largely accounted for by the opening of the new publishing facility at Brookhaven.

Liaison with affairs in the nation's capital continued to be provided by the Washington office of the Institute.

A new affiliated society, the American Geophysical Union, joined the AIP family of seven member societies and 18 affiliated societies. Individual members of the member societies, about 49 100 in all, are also members of the Institute.

The reorganizations already noted in the general-activities branch of AIP (in the placement and manpower-statistics areas, education activities, public-relations and physics-history divisions) came about as the result of recommendations by the Society-Member Programs Review Committee (advisory to the governing board).

The Committee on Physics and Society continued its work in 1971; focussing on long-range issues, it defines and recommends how the physics institutions can appropriately become involved beyond the physics community itself.

The Corporate Associates program also continued, with AIP's fortieth anniversary being the theme of the Annual Meeting of Society Officers and Corporate Associates, held as usual in the fall at Rockefeller University. There were 109 Corporate Associates in 1971, a drop of 26 from the previous year.

Finance

The accompanying Summary Statement of Operations and audited Balance Sheet show that the Institute income, including activities for member societies, rose to $12 841 126 ($12 435 649 in 1970) and expenses amounted to $12 655 536 ($12 399 136 in 1970).

Publishing remains by far the major activity of the Institute. Of the net income of $185 590, $150 000 has been set aside as a "publications reserve" for AIP-owned journals to enable the Institute to cope with fluctuations in publishing expenses in an inflationary economy. Some of these funds must be available to reduce the backlog of accumulated pages for which page charges were not honored. □