

AIP

1961

annual report

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 the AIP, March 24, 1962.

THE activities of the American Institute of Physics during 1961 are reported here in topical form with numerous headings and subheadings to facilitate the finding of those sections in which the reader has greatest interest. Two matters, however, deserve special mention; both of them having arisen as a result of the recent phenomenally rapid growth of physics. They will be discussed briefly in this introduction as well as in their appropriate places in the body of the report.

The first of these has to do with the production and distribution of research journals. With the ever increasing number of pages in our journals, the problems of maintaining an adequate staff of copy editors and a sufficient capacity of high-quality typesetting, and of adhering to a very tight publishing schedule have become unusually severe and require much administrative attention. Even more severe, however, is the problem of distribution where the number of journals to be addressed seems to be increasing almost exponentially and where during the past year alone the number of regular society and special mailings increased close to 100 percent. Punched-card equipment installed only two years has had to be supplemented with new equipment severalfold faster than that currently in use to keep abreast of this constantly growing load of addressing journals, notices, dues bills, etc. Unfortunately, during the past summer, because

of equipment and personnel difficulties, delays in entering subscriptions and in answering inquiries developed which have caused regrettable inconvenience to a number of physicists. The patience and understanding which the latter have shown during this period have been greatly appreciated by the staff. Although a few difficulties still exist, it is anticipated that, with the increased staff and equipment, subscription handling and other addressing will soon be back on a normal basis.

The second important item arising out of the rapid growth of physics is the urgently needed addition to the headquarters building which is now under construction. Fortunately, some years ago, the vacant lot next to our present building was purchased. The new wing now being built will be the same height as the existing building and will offer approximately 70 percent additional space. One of its features will be the attractive Niels Bohr Library, the funds for which were generously provided by the late Dannie N. Heineman. It will also provide working space, for a while at least, for the added personnel required to carry out the tasks assigned to the Institute. As an added feature it will provide a convenient committee meeting room with a separate entrance for physicists meeting in New York at times when the rest of the building is closed. Good progress is being made, and the building should be ready for occupancy in the summer of 1962.

1. PUBLISHING ACTIVITIES

The volume of journal publishing at the Institute continued its upward spiral in 1961. The total number of pages published, exclusive of Russian translations, showed a growth of 10 percent over 1960. The total number of subscriptions to journals handled by the Institute, again exclusive of the translations, rose from

128 949 in 1960 to 139 201. The charts indicate the increases in publishing and circulation activities since 1957. In carrying out this program Hugh C. Wolfe, Director of Publications, has had the helpful assistance of the AIP Publication Board and three advisory committees, namely, the Joint APS-AIP Science

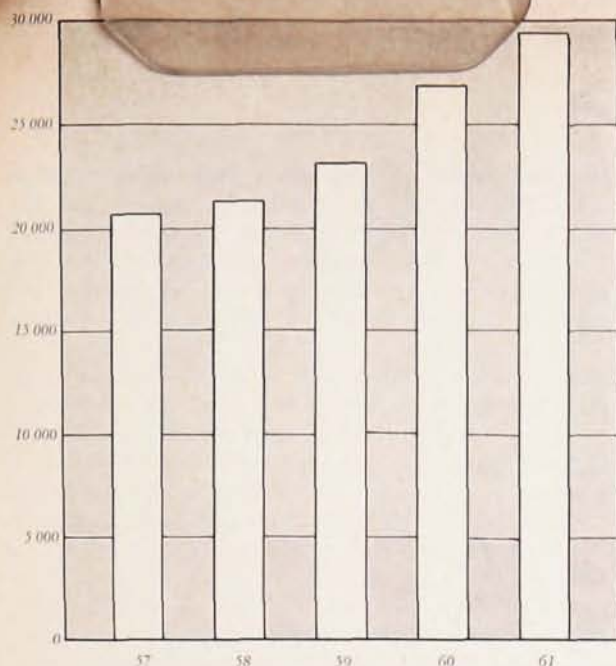


Fig. 1. Total number of pages published (exclusive of translations)

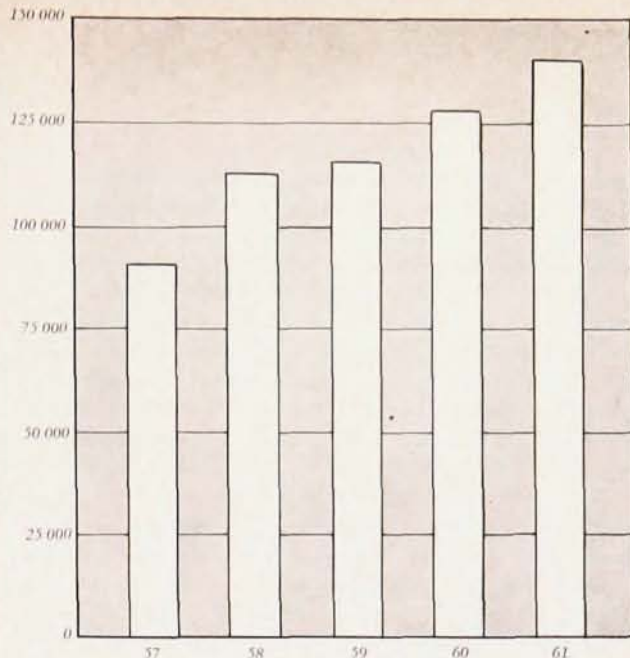


Fig. 2. Total number of subscriptions (exclusive of translations)

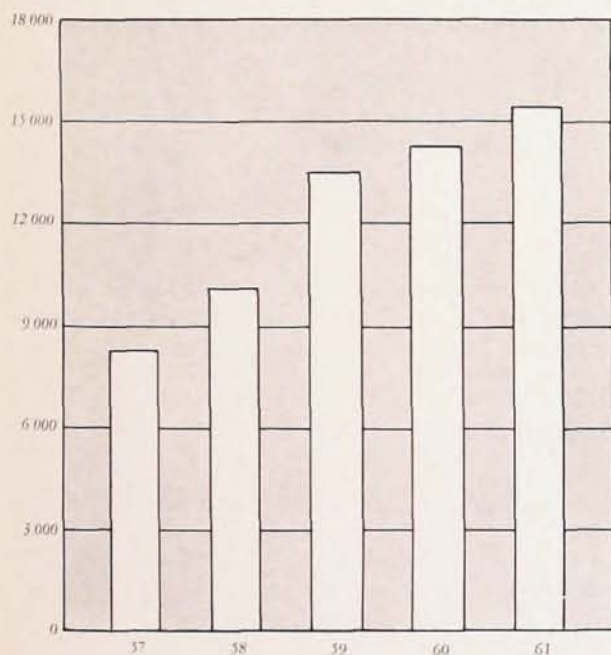


Fig. 3. Russian pages translated

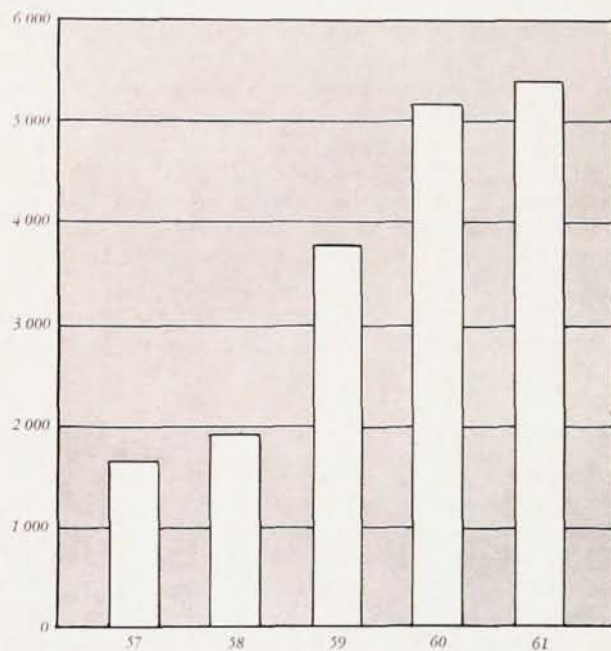


Fig. 4. Circulation of translated journals

Abstracts Committee, the Advisory Board on Translations, and the Advisory Committee on Documentation Research.

Journal Publication. The number of journals published by the AIP for its Member Societies and in its own name remained at fourteen, excluding translations. However, frequency of publication was increased in two instances. The American Association of Physics Teachers began publishing the *American Journal of Physics* twelve times a year rather than nine. *Physics of Fluids* was published monthly rather than bimonthly. Also, more conference proceedings were published in or as supplements to journals than heretofore, including

one for the first time in *The Review of Scientific Instruments*. The Institute cooperated with the Optical Society of America in plans made during 1961 for publication by the society of their new bimonthly journal *Applied Optics*. Plans were also made during the year by the Acoustical Society of America for issuance in 1962 of *Sound—Its Uses and Control*, a bimonthly successor to *Noise Control*.

Translated Journals. Under the extensive Soviet journal translation program of the Institute, a total of 15 276 Russian pages were translated in 1961, an increase of 7 percent over 1960. *Soviet Physics—Doklady* was published monthly rather than bimonthly.

The eight translated journals are published with the financial support of the National Science Foundation.

Physics Today. With a circulation of approximately 34 000, up 10 percent from 1960, *Physics Today* is an effective instrument for bringing to physicists articles on subject fields and physics education, reports of meetings, book reviews, and news of research programs, physicists, and Institute and Society activities. It serves as the principal means of communication among all physicists.

Subscription and Membership Records. The Institute's first year of operation with its punched-card system for handling subscription and membership records as well as journal addressing presented many problems. The change-over was undertaken at a time when the Institute was witnessing its greatest growth in journal circulation and in society membership. In addition, ever-increasing demands were made to use the same punched cards for special list runs for society meeting notices and programs, ballot mailings, membership directories, and other purposes. The growth in the maximum monthly addressing load of the Circulation Department over the past three years has been phenomenal, going from 167 503 in 1959, to 211 986 in 1960, to 250 462 in 1961. With such demands on the system, necessarily complex because of the nature of the operation, delays in servicing occurred. A concentrated effort is being made to iron out the difficulties and to get back to normal schedules. Toward the end of 1961, a Data Processing Department was established which is expected to be

responsible for all machine operations involved in circulation handling, dues billing, accounting, and possibly other activities. In spite of the past year's difficulties, it has been made abundantly clear that punched cards present the only satisfactory long-range solution to the Institute's data-processing operations.

Documentation Research. With new staff additions, the Documentation Research Project gained impetus, and work was undertaken, under the NSF grant which supports the project, to develop a reference-retrieval system for physicists. Prepared under the project as a check list for physicists and librarians and issued in September, 1961, was a booklet entitled *Annual Physics Book List—1960*. It is a compilation of the 1960 "Books Received" listings in *Physics Today*, with citations of those reviewed in *Physics Today*.

Advertising. The number of pages of advertising carried in seven journals in 1961 increased 7 percent over that of 1960. The table below gives the actual figures over the past five years:

Year	No. of Pages of Advertising
1957	1758
1958	1625
1959	1921
1960	2008
1961	2151

The advertising carried in three of the Institute-owned journals has served as an important source of Institute income.

2. PUBLIC INFORMATION SERVICES

The Institute contributed to the further public understanding of science in 1961 by means of intensified press coverage of meetings, seminars for the nation's science writers, and distribution of many thousands of copies of career booklets and other literature. Eugene H. Kone, director of the Public Relations Department, had charge of the programs in this area.

Press Rooms & News Releases. Press rooms were established at eight meetings of the Member Societies and assistance was rendered at other meetings, such as the special international symposia on temperature and magnetism. A gratifyingly large number of physicists wrote popular versions of their research papers, and these were distributed to the press by AIP in conjunction with the society meetings. By way of press releases, over 100 stories were sent out to home-town newspapers and radio and TV stations in connection with visiting scientist programs and other physics announcements. The new AAPT-AIP Regional Counselor Program to strengthen physics education was

implemented by the Public Relations Department through distribution of announcements covering the Regional Counselor in each state. This news material often enabled physicists to establish better relationships with state educational authorities.

Seminars for Science Newswriters. Three seminars, sponsored by AIP and the National Association of Science Writers, with assistance from the National Science Foundation, were held during 1961. On March 1, a seminar on optics and spectroscopy was held in Pittsburgh in conjunction with a meeting of the Optical Society of America. The second, on high-energy physics, was held May 19 at AIP headquarters, and the third, in Chicago on November 6, dealt with nuclear physics. Glossaries of terms frequently used in each of these fields were published in connection with the seminars. Plans were initiated by the Institute for an international science writers seminar to be held at the Century 21 Exposition in Seattle, August 1962, in cooperation with the American Chemical Society and American Institute of Biological Sciences.

Public Information. More than 10 000 individual requests were filled for career material, glossaries, and various other AIP booklets. Those for which the demand was greatest are listed below.

	<i>No. of Requests</i>	<i>Copies Requested and Mailed</i>
<i>Physics As A Career</i>	5238	20 636
<i>Why Should You Study Physics in High School?</i>	2081	13 073
<i>The Periodical Literature of Physics</i>	905	12 423

3. EDUCATION AND MANPOWER

The AIP programs on education and manpower, formerly separate within the Institute structure, were joined in 1961 and placed under the direction of William C. Kelly. There will continue however to be special advisory committees for education and for manpower as well as advisory committees on projects carried out jointly with the Member Societies. These committees have met frequently and have been very helpful in formulating effective programs. Developments in each area are covered in the regular monthly *Educational Newsletter*.

Design of Physics Buildings. This AAPT-AIP project culminated in the publication of a 324-page book, *Modern Physics Buildings*, written by R. R. Palmer and W. M. Rice and published by Reinhold Company. About 2500 copies were distributed without charge to physics departments in colleges and universities under an extended grant from the Educational Facilities Laboratories, Inc., to assist these institutions in designing new physics quarters or renovating present ones. An additional 25 000 copies of *Laboratories and Classrooms for High School Physics*, containing the material of Chapter 12 of the buildings report, were distributed to high schools throughout the country by EFL.

AAPT-AIP Apparatus Drawings Project. Supported by grants from the National Science Foundation, a series of 30 sets of complete shop drawings and construction notes were completed on modern physics apparatus developed in colleges and universities throughout the country. A final portfolio of drawings is being published by Plenum Press. As a part of this project, a survey was made of the need for new apparatus among physics departments, and the results of this "market study" were reported widely to the apparatus industry and to physics departments.

AAPT-AIP Regional Counselor Program. Physicists have been appointed as Regional Counselors in 47 states and Puerto Rico to work closely with the national physics organizations and with local educa-

The Department also answered numerous inquiries for general information on physics, the Institute, and its Member Societies. It provided authors with background information for articles, including, for example, one which named a woman physicist of the year. In addition, the Department cooperated with Channel 13 (WNTA, Newark, N. J.) and the National Educational TV Association in presenting scientific information on TV, and touched upon plans for a possible motion picture on physics. The publications *Public Relations Newsletter* and *Physics in the News* continued to be issued to inform and assist physicists and their organizations in publicizing teaching and research.

tional authorities to improve physics teaching. A newsletter, *Regional Counselor Reports*, has been established by the Regional Counselor Office at AIP to keep the Counselors informed of each other's activities and of educational developments at the national level. Among the measures being considered by the Counselors in their several states are steps to improve the preparation of high-school physics teachers, surveys of enrollments and teacher qualifications, assistance to schools in selecting apparatus and textbooks, and consultation on state syllabuses for physics.

History of Physics Project. The Project on the History of Recent Physics in the United States got under way with the appointment of W. J. King as director in July. The two-year project, supported by a grant from the National Science Foundation, has as its goal the location, indexing, and preservation of source materials that document significant work by twentieth-century physicists in the United States.

AAPT-AIP Visiting Scientists Programs. Now in their fifth year, these programs continued to flourish, this year under the direction of R. W. Lefler. At the college level, 76 visitors, including ten distinguished physicists from abroad, visited a total of 143 institutions, while 486 high schools were visited by 178 physicists.

Booklets on Careers in Physics. Texts were completed, under an NSF grant, for three new career booklets. They deal with careers for women in physics, careers in college teaching, and careers in high school teaching. In addition, a revised edition of *Physics As A Career* appeared during the year.

Student Sections Program. The number of Sections rose to 179 from 145 in 1960; the number of students belonging to Sections is now approximately 5500. Special lectures for Section members were arranged on four different occasions in conjunction with meetings of the Optical Society of America, the American

committee members who, by their voluntary help, guided and assisted the Institute in its many undertakings.

Particular thanks are due the following members of the Governing Board who retired during 1961 or early 1962 after serving for the periods indicated:

George E. Pake	1958-61
James G. Baker	1959-62
Clarence J. Overbeck	1959-62
John H. Elliott	1960-62
William R. Willets	1960-62

A warm welcome is extended to their successors: C. Guy Suits, Stanley S. Ballard, Malcolm Correll, John D. Ferry, and John C. Miller.

Respectfully submitted,
Elmer Hutchisson, *Director*

AMERICAN INSTITUTE OF PHYSICS, INC.

Summary Statement of Operations

Including Activities Carried on for Member Societies

Year Ended December 31, 1961

	Total	American Institute of Physics	For Account of Member Societies
<i>Income:</i>			
Subscriptions	\$ 808 547.03	\$ 394 101.76	\$ 414 445.27
Publication charges and reprint sales	753 395.07	351 744.32	401 650.75
Back number sales	78 023.86	38 013.43	40 010.43
Contracts for publication	38 763.58	38 763.58	
Advertising	427 266.36	369 263.50	58 002.86
Support from member organizations	38 226.01	38 226.01	
Associate (corporation) dues	75 616.50	75 616.50	
Income from investments and rent	11 702.81	11 702.81	
Income from special projects, administrative fees, royalties, etc.	715 735.31	715 735.31	
Miscellaneous income	48 673.19	48 673.19	
Receipts for accounts of member societies	295 045.85		295 045.85
<i>Total</i>	<i>\$3 290 995.57</i>	<i>\$2 081 840.41</i>	<i>\$1 209 155.16</i>
<i>Expense:</i>			
Printing, engraving, and mailing journals	\$1 285 878.28	\$ 595 769.56	\$ 690 108.72
Printing and mailing reprints	92 277.07	48 862.56	43 414.51
Handling publication charges and reprint sales	30 251.68	14 669.23	15 582.45
Back number handling and distribution	29 581.60	11 706.73	17 874.87
Advertising—printing, distribution, and selling	211 331.81	178 032.95	33 298.86
Editorial and editorial mechanics	292 642.03	217 709.50	74 932.53
Circulation handling	156 540.11	66 606.03	89 934.08
Administrative and organizational services	310 079.21	310 079.21	
Special projects	633 999.75	633 999.75	
Taxes and investment expense	4 882.39	4 882.39	
Disbursements on behalf of member societies	98 469.78		98 469.78
	\$3 145 933.71	\$2 082 317.91	\$1 063 615.80
Net to societies to balance accounts	145 539.36		145 539.36
	\$3 291 473.07	\$2 082 317.91	\$1 209 155.16
<i>Net</i>	<i>\$ (477.50)</i>	<i>\$ (477.50)</i>	
Credited from operating reserve	2 448.98	2 448.98	
<i>Net income</i>	<i>\$ 1 971.48</i>	<i>\$ 1 971.48</i>	

Balance Sheet—December 31, 1961

Assets

<i>Operating fund:</i>			
Cash		\$644 665.96	
Investments in U. S. Government securities		29 110.43	
		\$673 776.39	
Less: Special purpose funds investments		196 566.55	
		\$477 209.84	
<i>Due from member organizations:</i>			
American Physical Society	\$ 53 636.43		
Optical Society of America	1 921.51		
Acoustical Society of America	19 976.15		
American Association of Physics Teachers	5 161.31		
Astronomical Society	4 976.95	85 672.35	
<i>Accounts receivable:</i>			
Publication charges and reprints	\$133 682.03		
Advertising	45 206.26		
Miscellaneous	20 185.12	199 073.41	
Deposits		425.00	
<i>Deferred charges:</i>			
Contribution to retirement plan	\$ 26 831.23		
Engraving and printing costs	24 787.80		
Prepaid insurance	5 121.14		
Prepaid group life and major medical insurance	4 975.01		
Other	27 603.51	89 318.69	\$ 851 699.29
<i>Special purpose funds:</i>			
Karl Taylor Compton Fund		\$ 11 832.82	
Investment Advisory account		304 195.48	
Special purpose funds investments included in operating funds		196 566.55	512 594.85
<i>Building and equipment fund:</i>			
Land		\$266 535.36	
Building	\$623 573.83		
Less: Accumulated depreciation	133 882.25	489 691.58	
Building addition		143 136.39	
Furniture and fixtures	\$ 95 135.77		
Less: Accumulated depreciation	25 653.98	69 481.79	968 845.12
			\$2 333 139.26

Liabilities

<i>Operating fund:</i>			
Trade accounts payable		\$296 777.57	
Commissions payable		11 827.99	
New York State income tax withheld		4 165.40	
Due to member organizations:			
Society of Rheology		5 094.35	
Sundry creditors		399 923.57	
<i>Deferred credits:</i>			
Subscriptions applicable to future years	\$145 811.98		
Corporate dues applicable to future years	59 316.00		
Other	1 274.00	206 401.98	
Operating reserve		24 275.32	
Accumulated deficit		(96 766.89)	\$ 851 699.29
<i>Special purpose funds:</i>			
Karl Taylor Compton Fund		\$ 11 832.82	
Fund for future physicists		6 000.00	
John T. Tate Memorial Fund		14 834.82	
Building Reserve		123 941.42	
Amounts received for special projects for accounts of others (net after expenditures thereon)		355 985.79	512 594.85
<i>Building and equipment fund:</i>			
Building and equipment capital			968 845.12
			\$2 333 139.26