

# News and views

## Visiting Scholars

### Physics and the Fulbright Program

Foreign scholars assured of funds to support them while they are in the United States are eligible to apply for Fulbright travel grants to cover transportation to and from this country.\* During 1951-52, a total of 28 foreign physicists received such aid in carrying on physics research or teaching in this country. They were part of a group of some 380 scholars from other countries who obtained Fulbright travel grants under that year's program—an increase of approximately 25 percent over the number for the previous year. Of these, 119 worked in some phase of the physical sciences and 113 in biological fields. The 1952-53 figures show the number of those in physics to have remained about the same.

The 28 who were concerned specifically with physics during 1951-52 came from 9 different countries and worked in the United States in 19 separate universities and research institutions. Their periods of residence in these establishments varied from two to 22 months—the average being a little over 10 months. The specific areas of physics with which they were concerned numbered 15 in terms of their own descriptions of their activities. A breakdown of these figures for particular institutions, countries, and phases of physics shows the following:

### U. S. Institutions Where Work Was Done

|                                        |   |
|----------------------------------------|---|
| Bureau of Standards                    | 1 |
| California Institute of Technology     | 1 |
| University of California               | 2 |
| Carnegie Institute of Technology       | 1 |
| Catholic University                    | 1 |
| University of Chicago                  | 1 |
| Columbia University                    | 2 |
| Cornell University                     | 2 |
| Fisk University                        | 1 |
| University of Illinois                 | 1 |
| University of Maryland                 | 1 |
| Massachusetts Institute of Technology  | 4 |
| Oak Ridge Institute of Nuclear Studies | 1 |
| Ohio State University                  | 1 |
| University of Pennsylvania             | 1 |
| Princeton University                   | 4 |
| Purdue University                      | 1 |
| University of Rochester                | 1 |
| University of Wisconsin                | 1 |

### Countries Represented

|                |   |             |   |
|----------------|---|-------------|---|
| Australia      | 1 | Iran        | 1 |
| Egypt          | 1 | Italy       | 3 |
| France         | 2 | Netherlands | 7 |
| India          | 2 | Norway      | 2 |
| United Kingdom |   | 9           |   |

### Fields of Physics

|                     |   |                      |   |
|---------------------|---|----------------------|---|
| Acoustics           | 1 | Molecular Spectra    | 1 |
| Aerodynamics        | 1 | Nuclear Physics      | 8 |
| Applied Mathematics | 1 | Radiological Physics | 3 |
| Biophysics          | 1 | Relativity           | 1 |
| Cosmic Rays         | 2 | Solid State Physics  | 1 |
| Electronics         | 2 | Theoretical Physics  | 3 |
| Infrared Spectra    | 1 | Ultrasonics          | 1 |
| Wood Physics        |   | 1                    |   |

Following his tour of research or teaching in the United States, each visiting scholar is asked to answer a series of questions designed to provide information that would aid the sponsoring committee in evaluating and improving the effectiveness of the program. Complete answers from 18 of the 28 foreign physicists were available as this article was being prepared. Of particular interest, perhaps, are the responses to queries which brought out facts about publications stemming from the scholars' work in this country and concerning their professional contacts and experiences beyond those connected directly with their institutions of residence. The 18 physicists thus reporting attended some 33 special symposia and professional society meetings. They gave a total of over 40 lectures before professional societies and other groups external to the institutions to which they were attached. Their reports mention about 20 journal papers based on their U. S. work which either already have appeared or are in process of active preparation for publication.

As indicated earlier, to be eligible for a Fulbright travel grant a foreign scholar must have assurance of other support to cover his living expenses during the time he is in this country. The total funds so expended during 1951-52 amounted to a little over \$988,000, of which more than half (54%) came from private sources, including U. S. colleges, universities, foundations, professional associations, religious groups, and friends and relatives of the scholars. U. S. government funds—chiefly under the provisions of the Smith-Mundt Act—accounted for 38 percent, with the remaining 8 percent coming from foreign sources. The total amount in 1952-53 increased to a little over one million dollars and showed an interesting percentage-breakdown shift from the previous year's figures. The amount of U. S. government support dropped to 24 percent while that obtained from private agencies and individuals increased to 66 percent, with 10 percent being derived from foreign sources.

All in all, both the foreign scholars themselves and the certifying officials in the U. S. institutions where these scholars worked seem unanimous in their belief

\* Gray, D. E. "The Fulbright Program," *Physics Today*, IV: 4: 12 (April 1951).

that scientific accomplishments of significance were achieved under this program and that the time, effort, and funds devoted to the activity were very profitably spent. Beyond this, the high degree of enthusiasm which these scholars, almost without exception, expressed concerning their extra-curricular experiences with people, practices, and institutions in this country indicates that a substantial added dividend is being obtained in the currency of international good-will and understanding. Comparison of the above data with corresponding figures for U. S. scholars going abroad under Fulbright grants shows that physics suffers somewhat percentage-wise in the latter case. The 28 foreign physicists mentioned previously constituted about 7½ percent of the total of such visiting scholars for 1951-52. Of some 250 U. S. lecturers and research scholars at the post-doctoral level who went abroad that year with complete Fulbright support, physicists made up barely 4 percent. They came from eight different universities and research agencies in this country and lectured or studied in seven foreign countries. This percentage of Fulbright-supported, U. S. physicists going abroad has stayed about the same in 1952-53, with the institutions of origin increasing to ten and the countries visited dropping to six.

It should be emphasized with regard to the foreign scholar phase of the Fulbright program that invitations from American institutions are vital to its successful operation. Only to the extent that such opportunities are provided will the number of foreign participants increase and the program as a whole be truly reciprocal. The Committee under whose administration this part of the Fulbright work falls has available a list of foreign scholars who have indicated their desire to teach in American universities or colleges during the academic year 1953-54. Each person so listed is considered by the U. S. Educational Foundation (or Commission) in his own country to be fluent in English and qualified by teaching experience and professional training for a lecturing appointment in a U. S. university. A number have international reputations in their fields of specialization.

Copies of this list, together with complete information regarding the mechanics of obtaining the services of the foreign scholar described therein, can be obtained from the Committee on International Exchange of Persons, Conference Board of Associated Research Councils, 2101 Constitution Avenue, N.W., Washington 25, D. C.

Dwight E. Gray  
*Library of Congress*

## AEC Semiannual Report

### Weapons Tests and Public Safety

The Thirteenth Semiannual Report of the Atomic Energy Commission, released in January under the title, *Assuring Public Safety in Continental Weapons Tests*, summarizes the principal activities of the AEC during the last half of 1952 and includes a section of forty-

nine pages given over to a discussion of atomic detonations and relevant safety measures carried out at the Commission's test site near Las Vegas, Nevada.

Quantitative aspects of the AEC program are reviewed in the form of a condensed financial statement and in the usual series of appendices devoted to AEC organization, isotope distribution, publications lists, and other miscellaneous information.

The Commission's total assets at the end of the 1952 fiscal year amounted to about \$4.7 billion, of which \$3.5 billion was invested in plant facilities. Appropriations authorized by Congress last summer, however, represent the largest amount yet set aside for the AEC's production program, and it is estimated that when the construction for which funds have been appropriated is complete, the nation's capital investment in atomic energy will be about \$7.5 billion. The net cost of AEC operations during the 1952 fiscal year amounted to \$682 million, of which almost two-thirds was spent on the development and production of weapons and of fissionable materials. About five percent of the total operating costs were listed for physical research, with the amount spent on research in physics being \$17.6 million.

For the 1953 fiscal year, according to the report, approximately \$24.9 million was allocated to the support of basic physical research. About two-thirds of this went to AEC laboratories and about one-third to universities and private research institutions. Of the latter category, \$2.7 million went into contracts administered through a joint program with the Office of Naval Research. Applied research and development in the physical sciences required an additional \$14 million, most of which was allocated to the national laboratories of the AEC.

In connection with the section of the report which deals with tests and public safety, it is pointed out that twenty atomic explosions had already taken place at the Nevada proving ground by the end of 1952. While nearly all of the physical damage produced by the detonations has been confined to the 640 square miles of desert which make up the site, sufficient public and scientific apprehension has been evident as to the possibility of blast and radiation dangers beyond this area to warrant a full review of the extensive public safety program carried on by the Commission. The report undertakes to "explain the precautions taken against hazard to the public from blast or fall-out," and goes on to describe the nation-wide system of monitoring fall-out radioactivity and to assess the possible effect of recorded fall-out levels upon the public health.

The safety record has been impressive, considering the number of test detonations: fall-out radioactivity has in all cases been below tolerance levels, accumulation of radioactive material in the soil has not occurred, and no one has been injured by blast (although plaster has been cracked and windows broken in areas adjacent to the proving ground). The decision to use a continental location whenever possible, in preference to the more remote site at Eniwetok Atoll, was made primarily for reasons of convenience and economy and