SCIENCE EDUCATION

Fulbright-Hays program

The Committee on International Exchange of Persons has announced the availability of three overseas lectureship openings in the field of physics under the Fulbright-Hays program.

Two awards are for India, the first of which is for Rajasthan University (Jaipur, Rajasthan), from July or August 1965 to April 1966. The subject areas include theoretical solid-state physics, statistics, and quantum mechanics. Classes consist of about thirty students at the MS level. The grantee would work not only with students but with the faculty and research scholars in developing the curriculum in these fields. The second award is for Bangalore University, from July 1965 to June 1966, and covers the areas of electronic or solid-state physics. The grantee will assist in establishing a new department in a new university and teach either undergraduate honors students or those at the master's level.

Another Fulbright-Hays lecturing award is for the Republic of China at the Provincial Cheng Kung University, during the period from September 1965 to June 1966. The courses to be taught include theoretical physics, quantum mechanics, and solid-state physics, all at the undergraduate level.

Further information on the awards can be obtained from the Committee on International Exchange of Persons, 2101 Constitution Ave., N. W., Washington, D. C. 20418.

NSF reorganization

A reorganization of the National Science Foundation's activities in support of science education has resulted in the establishment of three new divisions to administer programs concerned with the pre-college, undergraduate, and graduate levels, respectively. With the formation of the new divisions, the former Division of Scientific Personnel and Education was disbanded.

The Division of Pre-College Education in Science, headed by Keith Kelson, will be responsible for NSF programs in support of supplementary training for elementary and high-school teachers, for continuing the development of curricular materials, and for helping improve the education of students in science and mathematics. The Undergraduate Education in Science Division, headed by Leland Shanor, will administer NSF programs at the undergraduate level, including individual training and course improvement. Thomas Fontaine, who is in charge of the Division of Graduate Education in Science, will administer the Foundation's educational activities for teachers and students at the graduate level, including projects to improve graduate instruction.

In addition to these three divisions, there will be a Planning and Evaluation Unit to carry out program development and analysis for NSF education activities, and an Operations Unit for processing and record-keeping functions of the three new divisions.

Hazards in sponsored research

The American Council on Education and the Council of the American Association of University Professors joined in December in issuing a statement on the prevention of conflicts of interest in government-sponsored research at universities.

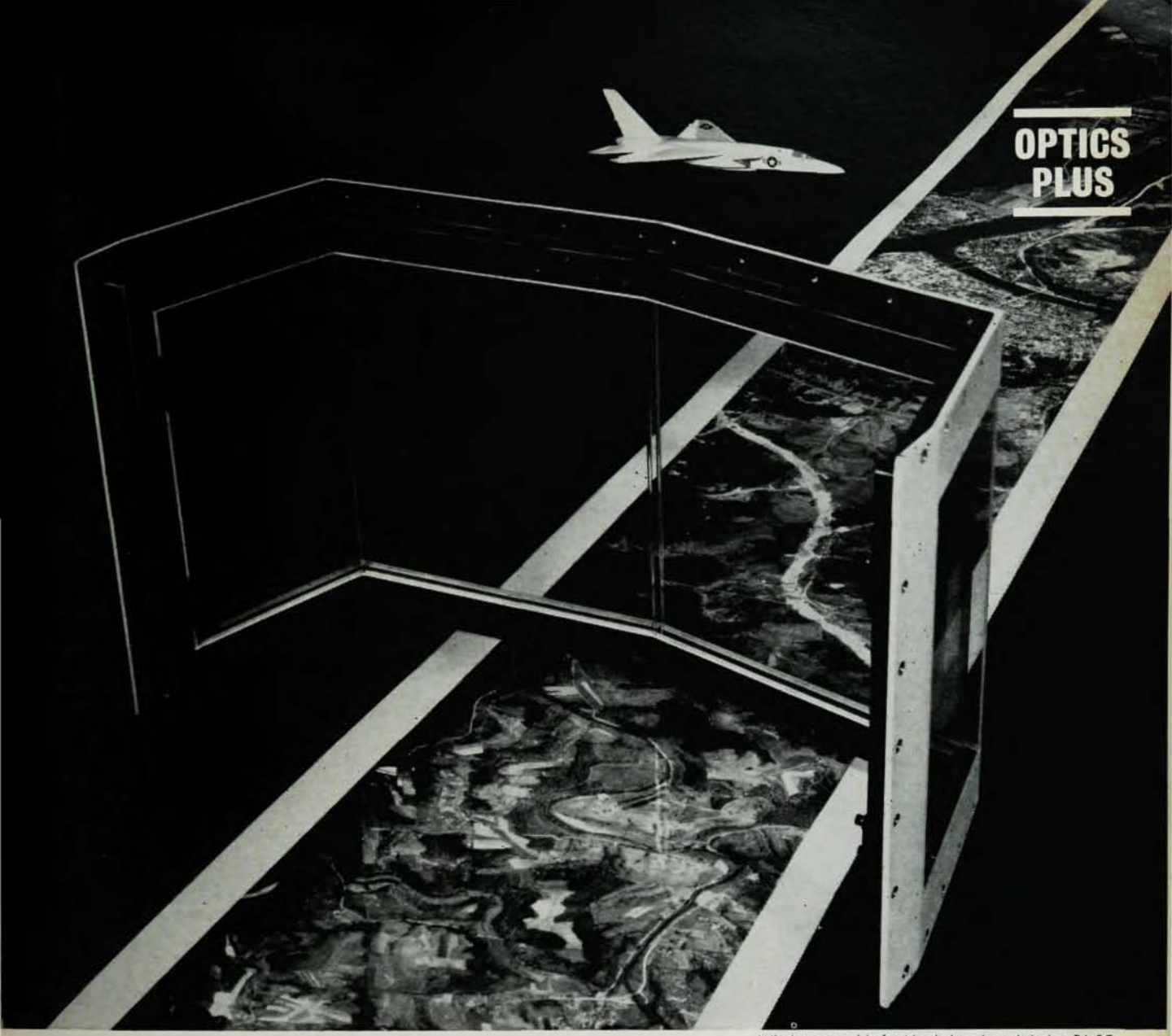
"The increasingly necessary and complex relationships among universities, government, and industry," the joint statement said, "call for more intensive attention to standards of procedure and conduct in government-sponsored research. The clarification and application of such standards must be designed to serve the purposes and needs of the projects and the public interest involved in them and to protect the integrity of the cooperating institutions as agencies of higher education.

"The government and institutions of higher education, as the contracting parties, have an obligation to see that adequate standards and procedures are developed and applied; to inform one another of their respective requirements; and to assure that all individuals participating in their respective behalfs are informed of and apply the standards and procedures that are so developed.

"Consulting relationships between university staff members and industry serve the interests of research and education in the university. Likewise, the transfer of technical knowledge and skill from the university to industry contributes to technological advance. Such relationships are desirable, but certain potential hazards should be recognized."

Foremost among the hazards mentioned in the statement are the dangers of favoring outside interests when a university staff member is engaged in government-sponsored work and at the same time has a significant financial interest in a private business or is engaged in outside consulting arrangements. Actual or apparent conflict situations to be avoided, according to the statement, include those in which the staff member's university research is undertaken or oriented to serve the research or other needs of the private firm without the university or sponsoring agency having been so informed; in which equipment or materials are purchased from the firm for university research without full disclosure of the facts; in which government-sponsored work products, results, materials, records, or information that are not made generally available are transmitted to the firm or are otherwise used for personal gain; in which unauthorized use is made of privileged information acquired in connection with the staff member's government-sponsored activities; in which contract negotiations between the university and the firm are influenced by the staff member; and in which gratuities are accepted from private organizations with which the university may conduct business in connection with government-sponsored research, or in which gratuities are offered to employees of the sponsoring agency.

In addition, the statement pointed out, another kind of conflict situation involving the distribution of effort can arise because of the often com-



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peting demands of research, teaching, committee work, and outside consulting on the energies of a faculty member. "The way in which he divides his effort among these various functions," the statement said, "does not raise ethical questions unless the government agency supporting his research is misled in its understanding of the amount of intellectual effort he is actually devoting to the research in question. A system of precise time accounting is incompatible with the inherent character of the work of a faculty member, since the various functions he performs are closely interrelated and do not conform to any meaningful division of a standard work week. On the other hand, if the research agreement contemplates that a staff member will devote a certain fraction of his effort to the government-sponsored research, or he agrees to assume responsibility in relation to such research, a demonstrable relationship between the indicated effort or responsibility and the actual extent of his involvement is to be expected. Each university, therefore, should—through joint consultation of administration and faculty—develop procedures to assure that proposals are responsibly made and complied with."

A third possible conflict can arise when a faculty member engaged in government-supported research is also engaged as a consultant to a federal agency, although here his conduct is subject to the provisions of the conflict of interest statutes and the President's memorandum of May 2, 1963, "Preventing Conflicts of Interest on the Part of Special Government Employees".

"When he consults for one or more government contractors, or prospective contractors, in the same technical field as his research project," the statement continued, "care must be taken to avoid giving advice that may be of questionable objectivity because of its possible bearing on his other interests. In undertaking and performing consulting services, he should make full disclosure of such interests to the university and to the contractor insofar as they may appear to relate to the work at the university or for the contractor."

It is the responsibility of the university when it accepts government funds for research, the statement emphasized, to establish organizational and administrative procedures designed to prevent the occurrence of conflicts of interest. At the same time, "The process must, of course, be carried out in a manner that does not infringe on the legitimate freedoms and flexibility of action of the university and its staff members that have traditionally characterized a university."

Physics education newsletter

An international newsletter entitled *Physics Education* will be inaugurated early in 1965 by the American Institute of Physics, through its Information Center on International Physics Activities. The publication will be edited by F. Behn Riggs, Jr., director of the AIP Information Center, and will be prepared in collaboration with the International Commission on Physics Education, a special commission of the International Union of Pure and Applied Physics.

It will contain reports of programs throughout the world for developing news of educational pilot projects and new curricula, announcements of educational conferences of unusual interest, and notices of selected articles, books, and reports. Initially, the newsletter will be published in English, and later perhaps in both English and French. It will be issued several times a year, depending upon available information.

Distribution will be on a worldwide scale with copies sent free of charge to teachers, educators, and administrators active in new programs in physics education and to others with special interests in educational development. It is hoped that the relatively small group of persons receiving the publication will bring to the attention of their colleagues items of special interest.

To publish a newsletter that accurately reflects local affairs, the Center will rely on sources of information in each country, and physics educators are cordially invited to contribute all pertinent items, announcements, and reports on physics educa-