

Table 3. Immigration of physicists to US from July 1956 to June 1961. (Data for fiscal-years 1957 and 1961 and for 5-year period from July 1956 to June 1961).

Area of origin	1957	1961	Total for 5 years
Europe	99	113	517
Asia	9	12	61
Latin America	2	3	32
Canada	31	43	181
Others	4	7	38
Total	145	178	829

fifth of those entering in the same period came from Canada, and another fifth came from Germany.

Asia has supplied an average of only twelve immigrant physicists per year in the same five-year period. During these years an average of more than 750 Asians per year were studying physics in the United States.

Immigration laws favor the admission of people with special skills or abilities: fifty percent of a country's quota is allotted to them under the "first preference" provision. However, a US firm or organization must sponsor the alien. Relatively few scientists and engineers have actually been admitted under this arrangement. Only one percent of the Asians admitted in the fiscal year 1961, for example, were scientists and engineers.

Commission on College Physics

The Commission on College Physics, pressed by demands for further services to physicists and institutions, has expanded its staff and moved to larger quarters at 1062 Lancaster Avenue, Rosemont, Pa.

Edward D. Lambe has been granted an additional year's leave of absence from his position at the State University of New York at Stony Brook in order to continue serving as executive secretary of the Commission. He has held this post since September 1962. During the present academic year, E. Leonard Jossem, on leave from Ohio State University, and Arnold A. Strassenburg, on leave from the University of Kansas, will serve as full-time members of the staff. Alfred M. Bork of Reed College spent the past summer as staff consultant to the Commission.

Lecture Demonstration Material Wanted

The Demonstration Book Committee of the American Association of Physics Teachers, which has been engaged in collecting material for a reference source of physics lecture demonstrations, has issued a final call for contributions from individuals or groups having suitable material for inclusion in the book but who have not yet submitted it. All such contributions must be received by the Committee by December 31, 1963.

Information concerning requirements for the preparation of copy is contained in a brochure which was distributed early last year and which is available on request. Although the brochure suggests the maximum

content of submitted copy, the Committee emphasizes that simple demonstrations and brief descriptions are also acceptable and are desired.

Contributed material, requests for brochures, or other correspondence having to do with the program should be sent to Professor Harry F. Meiners, Demonstration Book Project, Science Center, Rensselaer Polytechnic Institute, Troy, N. Y.

Doctoral Programs

Beginning this fall, the University of Maryland is offering a PhD program in chemical physics as a joint endeavor of the Departments of Chemistry and Physics and the Institute for Molecular Physics. Students with backgrounds in physics, chemistry, mathematics, or engineering are eligible for the program. Those interested in obtaining further information should contact Professor Joseph T. Vanderslice, Chairman, Committee on Chemical Physics, Institute for Molecular Physics, University of Maryland, College Park, Md.

The Physics Department of the University of California at Santa Barbara has announced the inauguration this semester of a graduate program leading to the PhD in physics. Applications from prospective graduate students are now being received and reviewed.

Information concerning the program can be obtained from Professor Glen Schrank, Department of Physics, University of California, Santa Barbara, Calif.

Rocket and Satellite Astronomy

Since September, the Office of Naval Research and the National Science Foundation have been collaborating in a new program of graduate and postgraduate research in rocket and satellite astronomy at the Naval Research Laboratory in Washington, D. C. Emphasizing studies of astrophysics, planetary atmospheres, and the interplanetary medium, the program is conducted at NRL's recently established E. O. Hulburt Center for Space Research, which was named in honor of a former director of research at the Laboratory. Dr. Hulburt, a pioneer in space physics who devoted almost his entire career to Navy science, retired in 1955.

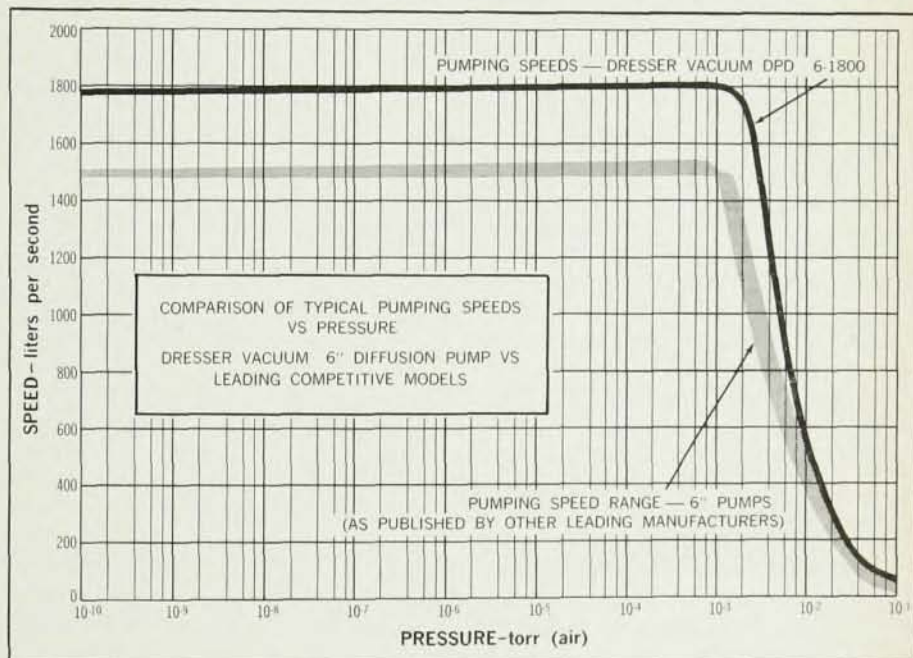
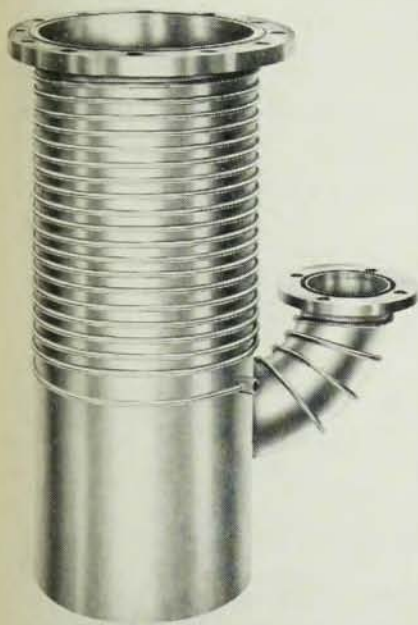
The Hulburt Center is designed to provide additional support and scope to the rocket and satellite astronomy program of the Laboratory and to open the facilities of that program to the participation of graduate students, postgraduates, and faculty members of academic institutions. The Center is directed by Herbert Friedman, superintendent of NRL's Atmosphere and Astrophysics Division. Visiting scientists' projects are coordinated with the space-research programs carried out by NRL's Rocket Spectroscopy Branch (headed by Richard Tousey) and the Upper Air Physics Branch (headed by Talbot A. Chubb).

Research appointments made under grants from the National Science Foundation will support the tenure of visiting scientists at the Center for periods normally

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covering one year, with a possibility of renewal. Approximately ten appointments will be made per year. The permanent staff of the Center includes fifty NRL scientists and technicians actively committed to rocket and satellite research programs. To support the additional research carried out by those appointed as visiting scientists, fifteen new permanent staff positions have been established under funds provided by the Office of Naval Research. Five of the new permanent staff members are physicists and astronomers; the remainder are engineers and technicians. The National Science Foundation's support to the Center will be adequate to provide for the costs of rockets, satellites, and the instrumental payloads for the research programs in which the visiting scientists are involved.

The NRL's work in rocket astronomy dates back to 1946, when the first use was made of V-2 rockets in the United States. Since that time, studies carried out at the Laboratory have dealt with the ultraviolet and x-ray regions of the solar spectrum, the ultraviolet fluxes of early-type stars, and the structure of the terrestrial atmosphere and its geocorona. The first astronomy experiments intended for satellite payloads also were designed at NRL in connection with the Vanguard program. The Center's rocket program is built around the Aerobee-Hi rocket, although other sounding rockets may also be used. A continuing small satellite program will instrument two or more launchings per year, and the Center will also compete for payload space in NASA-sponsored spacecraft. In the past, the Naval Research Laboratory has taken part in the Explorer VII and the Ranger I and II programs, and it is involved in NASA's Orbiting Solar Observatory (S-17) and Geophysical Observatories (EOGO and POGO).

The visiting scientists and permanent staff of the Hulburt Center have access to the many shop facilities and engineering services of the NRL as well as to expert consulting assistance from the various divisions of the Laboratory. Navy facilities at the White Sands and the Pacific missile ranges will be used for rocket launchings in the astronomy program, and fleet support will be available for experiments carried out at sea. In addition to their direct participation in rocket and satellite astronomy, the visiting scientists will have opportunities for contact with other NRL research programs ranging from radio astronomy to laboratory astrophysics. They will also be expected to participate in a regularly scheduled program of relevant scientific lectures and colloquia.

Applications for research appointments at the Center will be accepted from US citizens associated with academic institutions. Generally, graduate students will be considered only after having completed all requirements for the PhD degree, except thesis and examination on the thesis. With university approval, research carried out at the Center may be used in thesis preparation. Additional information can be obtained by writing to the E. O. Hulburt Center for Space Research, US Naval Research Laboratory, Washington 25, D. C.

Fulbright Grants

Overseas opportunities for university lecturing and advanced research assignments in physics under the Fulbright-Hays Act are still available in a dozen countries for the 1964-65 academic year, according to the Committee on International Exchange of Persons, which administers the Fulbright program.

All applicants must be United States citizens. For lecturing, at least one year of college or university teaching experience is required at the level for which application is made; for research, the applicant must either have received a doctoral degree at the time of application or have achieved recognized professional standing. In some cases, a knowledge of the language of the host country is a requirement for eligibility.

Applications for the awards listed below should be submitted by January 1, 1964. Those interested are advised to consult the Committee for detailed information on specific assignments, particularly with regard to the financial terms of the grants, which vary from country to country. Additional details and application forms can be obtained by writing to the Committee on International Exchange of Persons, Conference Board of Associated Research Councils, 2101 Constitution Avenue, N.W., Washington 25, D. C.

In addition to the specific lecturing and research opportunities listed, awards are also available for lecturing in a number of countries with which the United States does not have agreements for the use of foreign currencies for programs of educational exchange. These grants ordinarily cannot be announced in advance and are, therefore, generally filled by recruitment. Qualified individuals who are interested and who wish to indicate their availability for such overseas assignments may complete biographical data forms so that their names will be included in the Committee's *Register of Scholars*. Registration forms will be provided by the Committee upon request.

The regular open competition for 1965-66 awards will take place next year. Applications for lecturing and postdoctoral research assignments in Australia, New Zealand, and Latin America must be submitted between March 1 and April 15, 1964. The competition for awards involving appointments in Europe, the Near and Middle East, South and East Asia, and Africa will open on May 1; the probable closing date is August 1.

The current list of overseas assignments for 1964-65, for which awards have not yet been granted, is given below.

Grants for University Lecturing and Advanced Research Under the Fulbright-Hays Act (1964-65)

BRAZIL (Period of Award: March 1964-December 1964)

The São Carlos School of Engineering, University of São Paulo: Two lecturer-researchers in solid-state physics are requested to continue a five-year teaching and research program initiated with Fulbright assistance in 1963. The