

SENIOR PHYSICISTS

THE ADVANCED MATERIALS RESEARCH AND DEVELOPMENT LABORATORY OF Pratt & Whitney Aircraft, a scientific laboratory located in the New Haven, Connecticut area is currently operating in the areas of physical and chemical metallurgy, alloy studies, materials and processes studies, mechanical behavior studies, chemistry, and physics of materials. The senior staff is largely composed of individuals who have already demonstrated an ability to make significant contributions to science and technology.

In support of the long term objectives of the company, the physics group is presently seeking several scientists with advanced degrees who can carry on company-funded research in any one of the following areas . . .

- PLASMAS
- SOLID STATE
- SURFACE PHYSICS
- DEVICE PHYSICS

. . . in connection with thermionic energy converters. Directly related experience, although not required, would be highly desirable.

We believe these career positions will be of unusual interest to the scientist who desires a professional atmosphere of growth and accomplishment. Ample opportunity will be given for publication of papers.

You are invited to write in full professional confidence to Mr. E. F. Carlson, Pratt & Whitney Aircraft, North Haven, Connecticut—an equal opportunity employer.

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ternational Exchange of Persons, 2101 Constitution Ave., Washington, D.C. 20418. Applications for graduate awards should be addressed to the Institute of International Education, 809 United Nations Plaza, New York, N.Y.

Nuclear energy education

A new edition of a handbook of educational programs in nuclear energy and related fields at 268 American Institutions has been prepared by the University Relations Division of the Oak Ridge Institute of Nuclear Studies. *Educational Programs and Facilities in Nuclear Science and Engineering* (3rd ed.) provides information on degrees attainable, courses offered, facilities and special programs, and financial assistance; it also lists the names of persons to whom inquiries should be made. Information is included on those special fellowships in nuclear science and engineering and in health physics which are administered by the Institute and offered by the Atomic Energy Commission.

Free copies of the handbook can be obtained from the University Relations Division, ORINS, PO Box 117, Oak Ridge, Tenn. 37831.

Graduate fellowships

Nine or more Daniel and Florence Guggenheim Fellowships will be awarded for graduate study during 1965-66 at three major centers for research on rockets, space flight, and flight structures. Four or more jet propulsion fellowships will be awarded for study at the Guggenheim Laboratories for Aerospace Propulsion Sciences, Princeton University, two or more jet propulsion fellowships for study at the Guggenheim Jet Propulsion Center, California Institute of Technology, and three or more flight structures fellowships for study at the Guggenheim Institute of Flight Structures, Columbia University.

Each fellowship provides full tuition and stipends of up to \$2400. Candidates should apply directly to the University they wish to attend, and must file credentials by March 1. More detailed information can be ob-

tained from the Dean of Graduate Studies at Princeton and Caltech, from the Dean of the School of Engineering at Columbia, or from the Daniel and Florence Guggenheim Foundation, 120 Broadway, New York, N. Y. 10005.

The Smithsonian Astrophysical Observatory at Cambridge, Mass., in cooperation with the National Academy of Sciences, is establishing a postdoctoral fellowship program for research associates. Open to US citizens and to scientists from other countries as well, the associateships will be offered to individuals pursuing postdoctoral studies in the general fields of applied and theoretical space sciences, astronomy, astrophysics, and celestial mechanics.

Beginning this month, the program will offer two appointments, with two additional appointments available in July. The appointments are of two kinds; regular associateships for scientists at the immediate postdoctoral level, and senior associateships for those five years past their doctorates and who are already engaged in research resulting in publication or recognition in their fields. The stipend for the regular postdoctoral research associateship is \$10 000 per year, with appointments normally made for one year.

The National Academy of Sciences—National Research Council will administer the program, and all associates will be selected by a board of review named by the Academy. Further information and applications can be obtained from the NAS-NRC, 2101 Constitution Ave., NW, Washington, D. C. 20560.

College loans

Effective December 9th, the nation's 2000 federal savings and loan associations, which were previously largely restricted to making construction loans, have been permitted to loan up to \$10 000 to individuals for college and university education expenses. Under new Federal Home Loan Bank regulations, up to five percent of the assets of an association, an estimated \$3 billion for the nation as a whole, may be offered for

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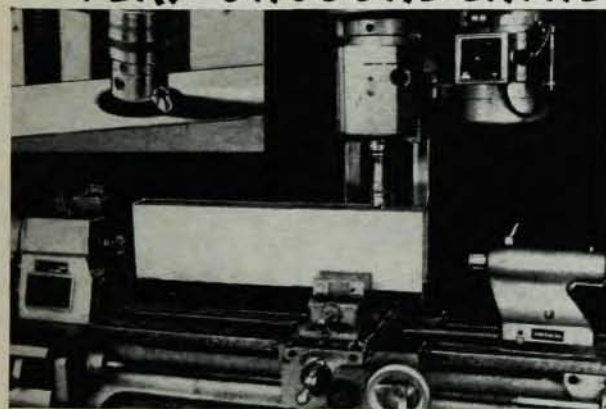
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SENIOR PHYSICIST

Section Leader

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This work is primarily product-oriented, applied research. However, it also encompasses some investigation of basic phenomena in vacuum physics. Our objectives are new ultra high vacuum techniques, new concepts in vacuum instrumentation and process equipment, broader industrial applications for the products of vacuum research.

In-depth experience in vacuum physics highly desirable but not essential. We need a good fundamental scientist who also is and wants to be a versatile, creative experimentalist. Background in one or more of the following areas would be an asset: physical electronics, solid state physics, thin film technology, physics research in instrumentation.

Interested candidates are invited to write H. A. Steinherz, Technical Director, Equipment Division.



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Interpretation by William Thonson

Reactor Materials Evaluation

PROBLEM: The application of electron microscope and metallographic techniques to the basic analysis of the microstructure of high-temperature, gas-cooled, graphite reactor components. Of particular interest are fuel migration, matrix integrity, and cladding efficiency. This is typical of many such problems facing the materials evaluation scientists in the Los Alamos Scientific Laboratory.

Qualified applicants interested in research and development at Los Alamos are invited to send resumes to:
Director of Personnel,
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Science education meeting

A conference on science programs for general education and the preparation of elementary teachers will be held on February 12 at Long Beach State College in California. Arranged by the Commission on the Education of Teachers of Science of the National Science Teachers Association, the meeting is designed for college science teachers concerned with science courses for nonscience majors.

Ten discussion groups are planned, covering major problems related to general education science courses, as well as addresses by Lee A. DuBridge, president of California Institute of Technology, and Richard Feynman, professor of physics at Caltech.

Persons interested in attending the conference should write to Dr. Albert F. Eiss, Assistant Executive Secretary, NSTA, 1201 Sixteenth Street, NW, Washington D. C. 20036.

Sigma Pi Sigma

During the annual meeting of the executive committee of Sigma Pi Sigma at Oak Ridge, a program of expansion was authorized which will include chartering of several new chapters, both in the latter part of 1964 and the spring of 1965. Approval was also given for updating the membership records of some 25 000 persons who have been received into the Society since its founding in 1921, and all data pertaining to them will be put on punched cards. The policy of joint sponsorship of the physicists' luncheons held in connection with the annual meetings of Section B of the American Association for the Advancement of Science was also endorsed by the executive committee.

The next meeting of the Council of the Society was arranged for June 16th at ORINS, one day before the summer meeting of the American Association of Physics Teachers at the University of Tennessee.